

A practical guide to preparing,  
implementing and ensuring  
sustainability of reforms to property  
rights registration systems.

# Real Estate Registration and Cadastre

Practical Lessons and  
Experiences - Annex 2.  
Abbreviations and Glossary.

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## Annex 2 - Abbreviations and Glossary

This glossary focusses on words and phrases utilised in this book. The definitions and descriptions are partly taken from the glossary in book reference 7 in Annex 1 (with permission of the authors) and some information supplied by Tony Lamb in his work for the FAO over the past few years. The glossary in book reference 7 contains more definitions and explanations.

Adjudication	The process of making a decision by applying the law to the facts as identified.
Adjudication of title	The process in which the parcel boundaries, ownership and rights to land are officially determined and then registered in a government run registry. Adjudication does not change the rights or boundaries, but rather it recognises rights and the location of boundaries that already exist.
Adverse possession	The occupation of another person's land without that person's permission, also known as 'squatting'. The possession by the trespasser, occupier or squatter is 'adverse' (in the sense of 'against') the owner. Adverse possession for a long period (usually set in law) gives the person possessing the land certain rights, the most common of which is the right of ownership over the land, although easements can also be created in some legal systems by long-term use.
Allocation	The process of assigning rights to land to a person (or corporation) within the rules defined by the land tenure system. Rights can be assigned by the sovereign power (nation state or indigenous) through original grants or through reallocations following expropriation, purchase or reallocation. Rights can also be allocated by private persons to others through sales, leases, inheritance, etc.
Allodial Title	A title that is authoritative and absolute, and not held through the State (as with a tribal king or paramount chief in many African countries). Land ownership in the USA is allodial. Contrast with 'fee simple' in which the rights are held subject to an overlord, such as the State or monarch.
Amalgamation	The joining or unification of two or more basic property objects (such as land parcels) into one object.
Appraisal	An estimation of the market value of real property using one of several methods.
Assignment	The process or the document of transfer of property rights from one person to another, for example in a sale, lease or mortgage.
Blockchain	A system in which a record of transactions made (usually using bitcoin or another cryptocurrency) are maintained across several computers that are linked in a peer-to-peer network. Some countries are experimenting with the use of blockchain for registration systems.
Cadastre	A key land administration record, which is based on land parcels, that is used for land management purposes. The International Federation of Surveyors (FIG) defines the cadastre as follows: <i>A cadastre is normally a parcel based and up-to-date land information system containing a record of interests in land (i.e. rights, restrictions and responsibilities). It usually includes a geometric description of land parcels, usually represented on a cadastral map, linked to other records describing the nature of the interests, and ownership or control of those interests, and often the value of the parcel and its improvements. It may be established for fiscal purposes (e.g. valuation and equitable taxation), legal purposes ..., to assist in the management of land and land use (e.g. for planning and other administrative purposes), and enables sustainable development and environmental protection.</i>

	<p>Related terms:</p> <p><i>Cadastral index map</i>: a map showing all land within a specific area, including parcel boundaries, administrative boundaries, unique parcel identifiers, road reserves and administrative names. A map showing all the properties that are registered in the land registry can be known as a ‘registry index map’.</p> <p><i>Cadastral map</i>: an official map showing a land parcel’s boundaries, its unique parcel number and, often, details of the adjoining parcels and roads. Cadastral maps may also show forms of land use such as buildings.</p> <p><i>Cadastral surveying</i>: the identification, measurement and recording of land parcel boundaries and other objects.</p>
Civil Law	A legal system originating in Europe as a heritage of the Roman Law. Core principles are codified into a referable system which serves as the primary source of law.
Collective Ownership	Situation in which the holders of the tenure rights are clearly defined as a collective group, whether as a group of individuals or as members of an association.
Common Law	A legal system originating from England which is based on judge-made decisions that provide authority through precedent.
Communal Ownership	Ownership of tenure rights by the community as a whole. It often includes rights to pastures and forest that the whole community can exercise but excludes private homes and fields. In communal ownership, members of the community have the right to use, but they might not have the right to transfer their right to others, or they may have very limited rights to transfer. Decisions about the communally owned rights are made by the community as a whole. A person obtains ownership of communal rights by becoming a member of the community, such as by birth or marriage. The names of the whole community cannot be listed on a register of rights and normally a representative group would be recorded in trust for the community.
CORS – Continuously Operating Reference System	A network of linked reference stations with accurate known coordinates that link with Global Navigation Satellite Systems (GNSS) and provide correction data to commercially available GNSS receivers so that these receivers can accurately record the coordinates of points to be surveyed.
Condominium	A system for dividing a property into parts that are owned by two or more individuals, with a commonly owned area, and also a “condominium association” (which is a type of company) to own and manage the commonly owned area. This form of co-ownership of property is common for apartment blocks and offices but can be also used for any type of property where there is some commonly owned area. Also known as “strata title” in some legal systems and “commonhold” in the UK.
Conveyance	A method or document whereby rights in land are transferred from one owner to another. <i>Also</i> , Conveyancer is the person who is permitted or licensed to prepare the documentation and register the transaction with the authorities.
Co-ownership	Where two or more people own a property together, with each person having the right to use the property without restrictions. A co-owner can usually sell his or her share without the other owner’s agreement and can leave his or her share by inheritance to another person.
Customary tenure	The holding of land in accordance with customary law. Local rules, institutions and practices governing land have, over time and use, gained social legitimacy and become embedded in the fabric of a society. Although customary rules are not often written down, they enjoy widespread social acceptance and are generally adhered to by members of a local population. Customary tenure is usually associated with indigenous communities and administered in accordance with their customs.
CV – Curriculum Vitae	A brief account of a person’s education, qualifications and previous occupations.
Deed	A document that has a legal effect when signed, such as a transfer of land or mortgage.

Deeds registry	A government run office at which deeds can be officially recorded. Often, a copy of the deed is kept at the deeds registry, and an indexing system allows anyone to find a deed in relation to a particular seller, buyer or (sometimes) property.
De facto rights	Rights that exist in reality or “on the ground” but do not follow the requirements specified in laws. They may be different from de jure rights.
De jure rights	Rights that exist because of formal law, which may be different from de facto rights.
Digitising	The process of converting analogue data such as graphic maps or paper documents into digital form, which often includes the capture of metadata about the maps or documents, such as the names, type of document, date and land parcel identifiers.
Disaster copy	A copy of the record that is kept in a secure location in case the main record is damaged or destroyed, for example by flood, fire or even theft. Also known as “disaster recovery copy” or “back up copy”
DMS – Document Management System	Term usually used in information technology to refer to a system for tracking, managing and storing documents in electronic form. It would also normally track different versions of documents and references to the persons who created and modified the documents.
Easement	A right to do something on another person’s land on a non-exclusive basis, such as to walk or drive across the land. Known as “servitude” in many legal systems, particularly civil law systems.
EDM – Electronic Distance Measurement	Term used to refer to surveying equipment that measures distances using electromagnetic waves.
Eminent domain	In the USA and some other countries, the right of the government to take private property for public use, usually accompanied by the payment of just compensation to the property owner. See also ‘expropriation’.
Expropriation	The compulsory deprivation or taking away of an owner’s rights to property by the State. Common reasons for the expropriation of land include for public infrastructure such as construction of roads and railways, for easements for power cables and pipelines, for hospitals, schools and public housing. In some countries, it may also for example form a part of land reform policy to compulsorily acquire land for redistribution. The processes of expropriation, which is also known as ‘compulsory acquisition’ and ‘resumption’, vary from country to country, but they usually include obligations and timetables for the procedures, such as giving notices. In most countries, there is a constitutional guarantee that where property is expropriated, then the deprived owner will receive compensation. Other people with interests in the property, such as tenants, can also be compensated. The legislation will often include rules on the basis for setting compensation for the loss of the owner expropriated.
FIG	Fédération Internationale des Géomètres or International Federation of Surveyors, established in 1878, and is the UN recognised global organisation for the profession of surveying.
First registration	The process of investigating ownership and other rights, and locating the boundaries of land, which leads to the creation of a written (or digital) record in a government-run record-keeping system. First registration can be conducted by means of ‘sporadic registration’ or ‘systematic registration. See also ‘adjudication of title’.
Fit for Purpose	In developing and maintaining registration and cadastre systems, the term commonly used to promote the most logical approach to completing the task at a reasonable cost, time and level of precision in order to meet the needs of society – as opposed to an alternative view that precise measurements and detailed information are required in all instances.
Fixed boundary	The legal boundary of a property where the precise position or location has been agreed by the neighbouring parties and recorded in accordance with the rules and standards defined in law. A fixed boundary is usually defined by special marks or markers placed by a surveyor

	when the surveyor establishes the boundary, except where natural or artificial features are adopted. Natural or artificial features can include corners of buildings, fence posts, banks of rivers, etc. See Chapter 7.
General boundary	A boundary that is defined by a physical feature on the ground, such as a wall, fence, hedge, tree line or water course, but for which the precise location of the boundary line on the feature has not been officially determined.
Geodetic framework or network	A spatial framework of points whose position has been precisely determined on the surface of the earth.
Geocode	A set of geographical coordinates corresponding to a location. When utilised in registration and cadastre systems, the centre point of a parcel or object is sometimes geocoded and then used as a unique identifier for the land parcel or object.
Geodesy	The science of accurately measuring and understanding the Earth's geometric shape, orientation in space and gravitational field.
Geospatial data	Information that identifies the geographic location of features and boundaries. Geospatial technology refers to all the technology used to acquire, manipulate and store geographic data, such as remote sensing, GIS, GNSS (see below), etc.
GIS – Geographic Information System	A system for capturing, storing, checking, integrating, analysing and displaying data about the Earth that are spatially referenced. It is normally taken to include a spatially referenced database and appropriate applications software.
GNSS – Global Navigation Satellite System	The generic term for the system of fixing positions on the surface of the earth by measuring signals from satellites orbiting the earth.
GPS – Global Positioning System	The GNSS that was established and is maintained by the USA. Russia has a similar system called GLONASS, China has one called BeiDou and the European Union has one called Galileo.
Guaranteed title	A title for which the government registration authority is responsible for paying compensation if any losses occur in relation to the ownership, such as losses due to errors in the title and, in some countries, due to fraud. See 'indefeasible title'.
ICT – Information Communication Technology	Similar to IT (Information Technology), it is the term used to cover the inclusion of communications and integration of telecommunications in the IT part, which commonly refers to the software and hardware required for computer systems.
Immovable property	Land and the things that are permanently attached to the land, such as buildings. Known as 'real estate' in English (common law) systems.
Indefeasible title	A government record of title to land that cannot be challenged, even in court. Some indefeasible title systems have a small number of exceptions, and they also have a compensation system to cover losses due to errors or fraud.
Indemnity	An obligation to provide monetary (or other) compensation to the owner of land or other tenure right holder in case the land is taken, destroyed or damaged.
Informal tenure	Ownership and other rights and duties relating to land or other natural resource based on custom, tradition or some other form of non-official tenure rules. Informal tenure can be just as legitimate as formal tenure, but its source or basis lies not in the country's laws but in custom, tradition, etc. See 'customary tenure'. It may also refer to fairly recent ways of acquiring or transferring real property rights in urban or peri-urban areas where residents will not, or cannot, use more formal systems because of the complexity, cost or other difficulties in using formal systems.

Joint ownership	In English law, joint ownership is a sub-category of co-ownership with specific rules. Under joint ownership, when one owner dies, then the other owner(s) gets the land automatically, without the need for inheritance. Often, people use co-ownership and joint ownership interchangeably, particularly in countries with non-English legal (or common law) systems.
LADM – Land Administration Domain Model	ISO standard 19152:2012 that can be used specifically for establishing computerised land administration systems. See ‘land administration’.
Land administration	<p>The processes of determining, recording and disseminating information about land and the ownership, value and use of land. Land administration includes the set of systems and processes for making land tenure rules operational. It includes the administration of land rights, land use regulations, and land valuation and taxation. Land administration can be carried out by government agencies, or through customary leaders. Land administration, whether formal or informal, comprises an extensive range of systems and processes to administer:</p> <ul style="list-style-type: none"> <li>• Land rights: the allocation of rights in land; the delimitation of boundaries of parcels for which the rights are allocated; the transfer from one party to another through sale, lease, loan, gift or inheritance; provision of land related information to the public; and the adjudication of doubts and disputes regarding rights and parcel boundaries.</li> <li>• Land-use regulation: land-use planning and enforcement and the adjudication of land use conflicts.</li> <li>• Land valuation and taxation: the valuing of land rights, collection of revenues through based-on-land values and rates of taxation, and the adjudication of land valuation and taxation disputes.</li> <li>• Land development: the processes related to implementation of new neighbourhoods, utilities, infrastructures and construction works. These processes may include expropriation and any necessary planning and building permits etc.</li> </ul>
Land certificate	In a land title registry, a document issued by the government to the owner, containing details of the land (such as its location and unique number), the owner’s name and rights, and any obligations relating to the property. It is a copy of the record for the land that is kept in the registration system. The land certificate provides strong evidence of the owner’s rights to the land.
Land consolidation	The process through which small parcels or shares in land are exchanged for one or more larger parcels that are approximately equivalent in value to the original holding. It creates parcels of more economic and rational size, shape and location.
Land management	<p>The activities associated with making informed decisions about the allocation, use and development of natural resources. It includes resource management, land administration, land policy and land information management. The objective is to put the country’s natural resources to best use and achieve social, environmental and economic sustainable development. The International Federation of Surveyors (FIG) has proposed the following definition:</p> <p><i>the process of managing the use and development of land resources. Some of the critical, and sometimes conflicting, objectives that must be addressed by land management policies today include:</i></p> <ul style="list-style-type: none"> <li>• <i>improving the efficiency of land resource use to support the rapidly growing population of many countries;</i></li> <li>• <i>providing incentives for development, including the provision of residential housing and basic infrastructure such as sewer and water facilities;</i></li> <li>• <i>protecting the natural environment from degradation;</i></li> <li>• <i>providing equitable and efficient access to the economic benefits of land and real estate markets;</i></li> <li>• <i>supporting government services through taxation and fees related to land and improvements.</i></li> </ul>

Land parcel	A specific area of land with defined boundaries. The boundaries are represented by a closed polygon. Also known as ‘lot’ or a ‘plot’ in some systems.
Land policy	The set of intentions embodied in one or more policy documents that are adopted by the government to organise land tenure and land use. Land policy will usually be guided by a set of basic principles, some of which owe their origin to international agreements, others to specific national circumstances. These principles can include: <ul style="list-style-type: none"> <li>• encouragement of efficiency and promotion of economic development;</li> <li>• promotion of equality and social justice;</li> <li>• preservation of the environment and sustainable patterns of land use.</li> </ul> Not all countries have a coherent, consciously integrated and formally stated land policy.
Land reform	A generic term for modifications in the legal and institutional framework governing land policy. Land reform is intended to deliver the desired changes in areas of politics, economics and society. The most common types of land reform are probably those dealing with reallocations of land and those redistributing legal rights of ownership. Land reform is generally a part of agrarian reform. There is a common perception that land reform is the prerogative of developing and transforming economies. The reality is that land policy and the legislative and institutional framework implementing that policy are constantly changing in all societies as political, economic and social circumstances change.
Land register	A record or list of each land parcel, which shows the ownership details and rights associated with each land parcel. The land register is also used to record the transactions with the rights. Changes to land parcel boundaries should also be recorded in the land register. The land register is usually open to the public to find out details of the land parcels, ownership and rights. Two main objectives of the land register are to protect rights in land and make it easier and cheaper to sell, leave by inheritance, gift, lease or mortgage those rights.
Land registrar	The official who is responsible for keeping the land register at the land registry office.
Land registration	The process of recording details of land parcels, the rights in relation to them and the ownership of those rights, usually in a government run registration office.
Land registry or registration office	The government institution or office responsible for the land register and land registration. The name of the office and the responsibilities vary considerably between countries, as does the staffing and equipment of the office. Land registry offices can be decentralised, with two or more around the country, or centralised, with a single office servicing the entire country.
Land rights	Entitlements that affect land, such as the right to use, to occupy, to sell and to leave by inheritance. More than one person may hold rights to a parcel of land, which gives rise to the concept of a ‘bundle of rights’ in English law.
Land tenure	The relationship, whether legally or customarily defined, among people, as individuals or groups, with respect to land and associated natural resources (water, trees, minerals, wildlife, etc.). Rules of tenure define how property rights in land are to be allocated within societies. Land tenure determines who can use what resources, for how long, and under what conditions.
Land title	An official document, which is usually issued to the owner by the land registry, showing the details of the land parcel, the name of the owner, the rights in relation to the land parcel, and the name and rights of any other persons, such as a tenant or lender. The land title provides evidence of a person’s rights to the land. A land title can also be called a ‘certificate of title’ or ‘title deed’.



Land use	<p>The arrangements, activities and inputs people undertake on land to produce, change or maintain it. A more inclusive definition of land use is often used in practice and land usage is often monitored and restricted by local government. Any given area of land is usually used to satisfy multiple objectives or purposes. Land use information provides answers to one or more of the following questions concerning the current use of the land:</p> <ul style="list-style-type: none"> <li>• What: the purpose of activities undertaken - e.g. the specific products and services, that are sought.</li> <li>• Where: the geographic location and extent of the spatial unit under consideration.</li> <li>• When: the temporal aspects of various activities undertaken - e.g. the sequence of carried out operations like planting, weeding, etc.</li> <li>• How: the technologies employed - e.g. technological inputs/ materials such as fertilizer, irrigation, labour, etc.</li> <li>• How much: quantitative measures - e.g. areas, products.</li> <li>• Why: the reasons underlying the current land use - e.g. land tenure, labour costs, market conditions, etc.</li> </ul>
Land use planning	The systematic assessment of land's potential, alternative patterns of land use and other physical, social and economic conditions, for the purpose of selecting and adopting land use options which are most beneficial to society and land users without degrading the resources or the environment, together with the selection of measures most likely to encourage such land uses.
Lease	An agreement between an owner (known as the landlord or lessor) and another person (known as the tenant or lessee) that gives the tenant certain rights over the property for a limited time. The rights usually include the right to occupy the property and occasionally the right to transfer the lease to another person, sub-lease, build on the property and mortgage the lease rights. A lease can be in writing or by oral agreement. It is usually for a fixed period and involves the payment of rent to the landlord.
Licensed Surveyor	A person (or company) who has completed a course of study and is professionally qualified as a land surveyor, and (usually) has passed a test demonstrating an understanding of land law. Once licensed, they are allowed to be responsible for undertaking parcel boundary surveys for attachment to a deed or inclusion in the cadastre as part of the registration index map. Not all countries require licensing, and in some countries only government surveyors are permitted to undertake property boundary surveys.
LIS – Land Information System	A system for acquiring, processing, storing and distributing information about land. The International Federation of Surveyors (FIG) has proposed the following definition:... <i>a tool for legal, administrative and economic decision-making and an aid for planning and development. A land information system consists, on the one hand, of a database containing spatially referenced land related data for a defined area and, on the other, of procedures and techniques for the systematic collection, updating, processing and distribution of the data. The base of a land information system is a uniform spatial referencing system, which also simplifies the linking of data within the system with other land-related data.</i>
LGAF – Land Governance Assessment Framework	A diagnostic tool to help diagnose and benchmark land governance factors to help countries prioritise reforms and monitor progress with those reforms. See book reference 10 in Annex 1.
LiDAR – Light Detection and Ranging	Remote sensing method that uses light in the form of a pulsed laser to measure distances to objects. It can be used for accurate mapping from the air (aeroplanes, drones or helicopters), on vehicles or carried on a back-pack.
M&E – Monitoring and Evaluation	To gather information on something from time to time, often using a pre-agreed set of indicators. The information can then be compared over time. The results would be evaluated so that decisions on changes to approach and outcomes can be made.

Monument	Also, boundary markers. An object placed on the corner or turning point of a property boundary to show the limits of the boundary. Occasionally on very long boundaries they may be placed ‘on-line’ between two corner points. Monuments may have to be made of set materials (such as an iron rod or concrete block) or have a specific size and shape, but are also often made from brick or local materials.
NGO – Non Governmental Organisation	Usually a non-profit organisation that operates independently of government and whose purpose is to address social or political issues. In land administration and management such organisations often monitor the fairness of any land reform measures to ensure that poorer members of society, the environment, women’s rights, indigenous people, etc. benefit from the reforms.
Notary	A legally qualified person who formalises transactions with property. There are two main types of notaries: those in the German/Swiss tradition and those in the French/Spanish tradition. Their roles vary depending on the tradition, but in general, they make a transaction official by affixing their stamp and signature. In many places, they keep an archive of all transactions. They generally report to the Ministry of Justice. Not all countries utilise notaries for transactions with property.
Open Source	Software for which the original source code is made freely available and may be redistributed and modified.
Orthophotomap	A map that looks like an aerial photograph or satellite image, but which has been rectified to make it geometrically accurate. Similarly, orthophotograph, orthoimage, orthophotoplan.
PAD – Project Appraisal Document	Term used by the World Bank for the document produced by the World Bank team to assess (and appraise) a project prepared and proposed by a government body for funding or support. A list of PADs is contained in Annex 3.
PIU – Project Implementation Unit.	Also, PMU – Project Management Unit. The team responsible for managing and implementing a project. See Chapter 5.
PPP – Public Private Partnership	A long-term contract between a private party (usually a company) and a government entity (public body) that delegates some of its government responsibilities to the private party and in which the private party bears the risk and management responsibility for the task and remuneration is linked to performance. This arrangement has been utilised for land registration in some countries.
Prescription	The process of gaining rights over another person’s land by occupying it over an extended period of time, either without the owner’s permission or against the owner’s objection. The period of time varies from country to country, and sometimes also depends on whether the occupation was innocent or not. Other terms used are ‘prescriptive rights’, ‘adverse possession’ and ‘squatter’s rights’.
Projection	In mapping this is the method of showing the features on the Earth (which is approximately spherical in shape) on a flat piece of paper. Any method for doing this will involve some distortions and the projection utilised will depend on the purpose of the map and the area covered.
Real estate or real property	In common law (English) systems, real property means land and any things attached to the land, including buildings, apartments and other constructions and natural objects such as trees. Known as ‘immovable property’ in civil law systems.
Regularisation of ownership	In cases of informal or illegal occupation of land, the process where the State recognises the rights as legal. The process is usually authorised by a law, and it gives the occupiers the ownership rights to the land. It commonly occurs in peri-urban areas where large numbers of people have established their homes, often out of necessity due to conflict, famine or natural disaster. Regularisation can also apply to buildings that were built without official permission. Regularisation is another form of allocation of land.
Restitution	The restoration of rights in land to a former owner (or that person’s descendants) where the land was taken by the State. This occurred on a massive scale after the countries of Central and Eastern Europe changed from socialist economies to market economies and returned land (or paid compensation) to the descendants of the people who had land taken from them under communist regimes.
Root of title	The series of legal documents (or deeds) that prove ownership or other rights to a real estate object. The series of documents would normally

	show the transfer of the rights from the original grant through each transfer to the current legal right holder. In many jurisdictions it is not required to trace the root of title back to the original grant and a set time period is utilised so that if you can show uninterrupted and clear title going back for, say, 30 years it is considered that the root of title is complete.
SDI – Spatial Data Infrastructure	A framework of geographic data and metadata, users and tools that are connected in order to use the spatial data in an efficient and flexible way. It can also be described as the technology, policies, standards, human resources and related activities that are necessary to acquire, process, distribute, use, maintain and preserve spatial data.
Sporadic registration	Registering land and the rights associated with it on a case-by-case basis for the first time (‘first registration’). Sporadic registration is usually based on a specific action of the owner of the property to start the registration process. The owner is responsible for submitting an application for ‘first registration’, and needs to provide all the necessary documents (such as a description of the parcel, often with a survey plan prepared by a surveyor), and evidence of the rights (such as ownership, any leases or mortgages, any easements or servitudes, which is usually prepared by a lawyer). Sporadic registration has the advantage that it may be less expensive in the short-term than systematic registration (for the government, at least) and that it tends to target most economically active property first. It has the disadvantage that it will take much longer to achieve complete coverage of all titles within the jurisdiction, it is more costly on a per parcel basis, and it is not such a public, open process as systematic registration.
Sustainable Development Goals	Developed by the United Nations as a blueprint to achieve a better and more sustainable future for all. They address global challenges including those related to poverty, inequality, climate change, environmental degradation, peace and justice. There are 17 Goals to be achieved by 2030. Land issues are covered within: Goal 1 to reduce poverty (target 1.4); Goal 2 to reduce hunger (targets 2.3 and 2.4); Goal 5 to promote gender equality (target 5.a); Goal 11 to provide sustainable cities and communities (targets 11.1, 11.3 and 11.7); and Goal 15 to improve life on land (targets 15.1, 15.2 and 15.3).
Systematic registration	Registering land for the first time (‘first registration’) using a systematic approach to surveying, adjudicating and registering parcels on a regular, area by area basis that covers all the land in each area. It has typically been done through a government program. Systematic registration is relatively expensive in budgetary terms due to the typically large numbers of parcels being dealt with, although on a per parcel basis the average cost may be significantly lower than with sporadic registration as a result of economies of scale. Systematic registration has the advantage that it will provide more comprehensive land information within a given time frame. It will also give more people improved rights more quickly, thus supporting the general development impact of increased security of ownership and reduced transaction costs.
Tenure	The relationship, whether legally or customarily defined, between people as individuals or groups, with respect to land and other natural resources. The rules of tenure define how access is granted to rights to use, control and transfer resources, as well as associated responsibilities and restrictions. Tenure is often expressed in terms of the rights (and also the duties) that someone has in relation to a particular parcel of land. Tenure is another way of referring to the rights to possess, occupy and use, harvest and collect produce, sell, gift, mortgage, lease out, leave by inheritance, etc. Tenure rights can also include the right to exclude others from occupying or using the land, particularly where a person has an exclusive right to all the land. There are also other cases where people are not the owners of the land, but they still have tenure rights, such as a use right, a lease or license, or non-exclusive rights, such as a right to collect food, water or other material from the land, even though someone else has the main rights related to that land.
Theodolite	A precision optical instrument for measuring angles between points. When undertaking a survey the process normally involved measuring angles using a theodolite and measuring distances using another means, then calculating the positions of points from this information.

	Theodolites are now rarely used as Total Stations (see below) and GNSS equipment are commonly utilised.
Title	The document giving evidence of a person's right to land, or 'entitlement', which is usually in the form of a document known as a "certificate of title", 'land title', 'title deed' or 'title certificate'. Title is also used to mean "ownership".
Title registration system	A government run system for recording properties, ownership and transactions with property rights. The title registration system shows details of the property and the name and rights of the owner and others (such as tenant, lender). The registration of title system differs from a deeds registration system because: 1) the transaction only becomes effective on registration, 2) the land registry issues an updated copy of the register (sometimes called a 'certificate of title') to the owner after it has registered a transaction, and 3) the registration of title system commonly has some form of guarantee as to the accuracy of the information. Because a transaction is only legally effective once it is registered, a person only becomes the 'owner' after he or she has registered the transfer or inheritance documents at the land title registry. This system has been described as 'title by registration', because it is the act of registration that makes someone the owner of the land. In a deeds system, which is 'registration of title', the person is already the owner by means of the deed, and he or she is simply recording his or her ownership at the deeds registry.
Total Station	A precision electronic and optical instrument, which now also includes computational capabilities, used for land surveying. It effectively combines the process of measuring angles and distances in one instrument. Some total stations include a capacity to do all calculations and drawings necessary for field survey work.
Traverse	A method of field survey in which a series of field survey points along a route from one known coordinated control point to another known coordinated control point are measured in order to establish a number of new known coordinated points. The methodology uses bearings (angles) and distances to calculate the coordinates of each subsequent point. Each coordinated point can then be used as a basis for surveying property boundaries, buildings or other features, and including them in a plan or a map.
TS – Technical Specifications	Documented requirements to be satisfied by a material or for a design, product or service. In this book the term has been used to refer to the production of an ICT system.
UN FAO	United Nations Food and Agricultural Organization. A specialised agency of the United Nations that leads international efforts to defeat hunger. It is the agency responsible for developing the VGGT (see below) through its Land Tenure unit.
Unique parcel identifier (UPI)	A number (or sometimes a combination of numbers and letters) that identifies a land parcel or unit in a certain area that is used only for that land parcel. Parcel identifiers sometimes incorporate letters or numbers referring to the administrative area, such as the district or province.
Urban planning	An approach to investigating and making decisions about how land will be used in urban areas, whether for housing, commerce, industry, recreation or other purposes. It aims to take into account all the urban society's needs and identify land that can be used to meet those needs in the most efficient and harmonious way.
VGGT	The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security. See book reference 9 in Annex 1 for more details.
VHR – Very High Resolution	Term used to describe satellite imagery that has sub-metre resolution and can therefore be used for large-scale mapping and used for cadastral surveying and mapping.