

FIT FOR PURPOSE

- The term “fit-for-purpose” is not new at all, but what is new is relating it to building sustainable land administration systems.
- The approach used for building land administration systems in less developed countries should be flexible and focused on citizens’ needs rather than focusing on top-end technical solutions and high accuracy surveys.
- The fit-for-purpose approach is participatory and inclusive – it is fundamentally a human rights approach.
- It is about flexibility in terms of demands for accuracy, demands for spatial information and recording of legal and social tenure, and in shaping the legal framework to accommodate societal needs.
- Another key characteristic is incremental improvement. The systems should be designed for initially meeting the basic needs of society today and have the capability to be incrementally improved over time.

- At the outset, the systems may vary from being very simplistic in some (rural) areas of the country while other (densely populated) areas are covered by more accurate and legally complete applications, especially where land is of high value and in short supply.
- Through updating and upgrading procedures the systems can then, in turn, develop into modern and fully integrated systems for land information and administration, where appropriate.
- The key point is that the systems should enable secure land rights for all and cover all land as a basis for land valuation and land use control.
- Legal flexibility should be introduced as a basis for identifying and recording the spatial units in a more flexible way.
- The spatial framework, can then be developed using a flexible approach and the various legal and social tenure rights can be recorded in a participatory way.

BASIC COMPONENTS

The basic components of the fit-for-purpose concept are threefold:

- Using affordable modern technologies for building a spatial framework, e.g. orthophotos, showing the way land is occupied and used. The scale and accuracy of the mapping may vary according to building density, topography and other requirements.
- Using a participatory approach to identifying and recording the various legal and social tenure rights associated with occupancy and use of the land.
- Adopting a legal framework that accommodates the flexibility necessary for implementing a fit-for-purpose approach. This framework may be established up front or it may be developed incrementally.

KEY ELEMENTS

- **Flexible** in the spatial data capture approaches to provide for varying use and occupation.
- **Inclusive** in scope to cover all tenure and all land.
- **Participatory** in approach to data capture and use to ensure community support.
- **Affordable** for the government to establish and operate, and for society to use.
- **Reliable** in terms of information that is authoritative and up-to-date. –
- **Attainable** in relation to establishing the system within a short timeframe and within available resources.
- **Upgradeable** with regard to incremental upgrading and improvement over time in response to social and legal needs and emerging economic opportunities.

The fit-for-purpose concept directly supports what is called “Continuum of Continuums”.

- The concept “Continuum of Continuums” has many continuum dimensions:
- It recognizes that a continuum of tenure exists in terms of social tenure relationships, such as occupancy, informal rights, customary rights, indigenous right and nomadic rights among others.
- Parties may also not only be natural or legal persons, but could be a family, tribe, community, village, or a farmers’ cooperative.
- Also the spatial unit may not only be a land parcel, but can also vary according to where the rights and social relationships apply.
- Continuum of data acquisition methods or technologies that will include what could be called “continuum of accuracy”.
- Continuum of land recording and credit accessibility, ranging from informal land offices in an informal settlement to a governmental land registry.

BUILDING FIT-FOR-PURPOSE LAND ADMINISTRATION SYSTEMS

- Security of tenure does not in itself require accurate surveys of the boundaries.
- The important aspect is identification of the land object in relation to the connected legal or social right.
- Different accuracy requirements for the planning and management of rural and urban settings.
- Such a flexible approach to building land administration systems also relates to the legal and institutional frameworks.

The Spatial Framework

- The spatial framework is the basic large scale mapping showing the way land is divided into spatial units for specific use and occupancy.
- It provides the basis for dealing with land administration functions.
- In many developed regions of the world this countrywide spatial framework has been developed over about two centuries as large scale cadastral mapping and maintained through property boundary surveys conducted to a high accuracy according to long standing regulations and procedures.
- Considering requirements for building spatial frameworks in less developed countries, the concepts predominantly used in developed countries may well be seen as the end target, but not as the point of entry.

- Using such advanced technical standards of adjudication, boundary marking and field surveys are far too costly, too time consuming and capacity demanding, and in most cases simply not relevant, for providing an initial suitable spatial framework.
- The focus should therefore be on methods that are **fast, cheap, complete, and reliable**.
- The spatial framework can then be upgraded and updated whenever necessary.
- Also, the framework may well include volunteered information provided by citizens (continuum of accuracy).
- The key focus should be on providing secure tenure for all, and managing the use of land and natural resources for the benefit of local communities and society as a whole.
- The fit-for-purpose approach for providing the spatial framework can be outlined in four key principles:

Four Key Principles

- **General boundaries rather than fixed boundaries**

- Whose position has not been precisely determined while “fixed” means that it has been accurately recorded.
- Using general boundaries will be sufficient for most land administration purposes especially in rural and semi-urban areas.
- It is argued that use of a general boundary concept will be adequate and sufficient for incorporating the unsurveyed 70 percent under more formalised land administration procedures.
- Fixed boundaries can then be used where relevant.

- **Aerial imageries rather than field surveys.**
 - The use of high resolution satellite imagery or orthophoto imagery, will be sufficient for most land administration purposes.
 - The required scale of the mapping depends on topography and density of development.
 - Boundaries can easily be identified on the imagery in most cases, depending on the visibility of the physical features.
 - The remaining smaller number of non-visual boundaries can be added using hand held GPS or field survey measurements.
 - The use of imageries (including using – UAV) are considerably cheaper than field surveys.

- It is estimated that compared to satellite / orthophoto imagery, field surveys are about three times more costly in rural areas and about five times in urban areas.
- Furthermore, the mapping methodology using imageries provides not only the spatial framework of spatial units, but also the general topography of land use and buildings and infrastructure, that is fundamental for the planning and land development functions of the land administration systems.

- **Accuracy relates to the purpose rather than technical standards**
 - Accuracy of the land information such as the parcel boundaries, should be understood as a relative issue related to the use of this information, rather than being driven by technical standards that are often inflexible and “over the top” for the purpose.
 - In general, the need for accuracy is clearly lower in rural areas than in urban regions, where accurate field surveys may be justified.
 - But, more importantly, the need for accuracy of the various features should be determined by the purpose of using this information for supporting the various land administration functions.

- In this regard, the registration of legal and social tenure rights requires identification of objects, but the process does not call for a high accuracy in itself.
- Also, planning and land development processes mainly require sufficient mapping for identifying physical and spatial objects rather than high accuracy per se.
- Any demand for accuracy may stem from issues such as high land value in dense urban areas or implementation of costly construction works.
- High accuracy through field surveys should therefore only be provided when needed and be paid for by the beneficiaries.

- **Opportunities for updating, upgrading and improvement**

- Building the spatial framework is not a one off process – it should be seen in a perspective of opportunities for on-going updating, sporadic upgrading, and incremental improvement whenever relevant
- This of course requires that all mapping and surveys are linked to a national grid system through a positioning infrastructure based on the Global Navigation Satellite Systems (GNSS).
- The requirement for on-going, updating procedures is essential in order to ensure that all data are complete and reliable.
- The procedures should ensure that any new boundaries or changes of existing boundaries are recorded through measurements related to the existing boundaries or through provision of new imageries.
e.g. by using UAVs once the subdivision boundaries are established.

The Legal Framework.

- In most LDCs the legal framework for land administration reflects colonial times and often serves only the elite.
- The processes for land registration are complex, costly, time consuming and with high demands for accuracy of boundary surveys and often unnecessary legal interventions by notaries, lawyers and the court.
- The existing legal framework is therefore often a significant barrier for implementing a flexible approach to building land administration systems and the underlying spatial framework as described above.
- So, as well as the spatial framework, the legal framework should be flexible and be designed along administrative rather than judicial lines.

- Must support both legal and social tenure, flexible regulations are enshrined in the laws and support a fit-for-purpose approach.
- The Social Tenure Domain Model (STDM), supports the continuum of land rights.
- The STDM is a concept rather than a software package.
- The concept is flexible and enables all legal and social tenure rights to be captured (FIG/GLTN, 2010).

The Institutional Framework

- There is an over-prescription of systems with high-end, expensive to maintain, enterprise geographic information systems and relational databases.
- Alternatives, such as open source solutions should be considered, e.g. the UN-FAO Open Source Cadastre and Registration Software (SOLA).
- The positioning/measuring equipment and systems advocated by consultants and vendors is also often over-prescribed.
- It is recognised, however, that establishing the institutional framework in terms of efficient, accountable government workflows for making the systems operational is often an even bigger, expensive obstacle.

- This issue relates to a large extent to the political and administrative culture of the country and to the need for building sufficient capacity at societal, organisational and individual levels.

CONSTRAINTS AND BARRIERS

These are often perceived to be

- Political constraints, colonial legacy, lack of basic financial resources, and even lack of political will.
- These are many times influenced by the professionals such as surveyors, lawyers etc.

KEY BENEFITS.

- It is participatory and can be accomplished by using less professional personnel in the field.
- The use of imageries/orthophotos enables a number of further uses for land management.
- Flexible to accommodate both in terms of accuracy needs and budgetary allowance.
- Achieving a functional system covering all land and people within a short time, for relatively low and affordable costs, and supporting incremental improvement when relevant and required.
- This again will enable achievement of political aims and objectives in relation to economic growth, social and gender equity, and environmental sustainability.

What are the opportunities for Land Professionals?

Even if the land professionals may to some extent be reluctant to comply with this kind of fit-for-purpose approach, it actually offers a range of opportunities.

- Wide client base covering the whole country.
- Managerial role for land professionals.
- System establishment, training, managing and supporting the locally trained staff to carry out the field work.
- This managerial role also includes quality assurance and auditing as well as custodians of land information management.

- In the longer term the professional status of the land professionals will be improved through contributing to the overall aims and objectives for societal development.
- The profession is being seriously challenged to solve land issues faster.
- Land professionals are at a very significant juncture and if a comprehensive journey of change is not successful then other professions or government generalists will most possibly fill the vacuum.
- Land professionals need to seize this moment and great opportunity.

THANKS FOR LISTENING