

LAND RIGHTS FOR WOMEN AND THE POOR

Secure Land Tenure

Success factors in secure land-tenure policy include robust collection of geospatial, anthropological and sociological data, acknowledging customary rights and land rights of women and the poor, and law enforcement capable of penetrating urban and rural areas and avoiding conflicts between statutory and customary law. The authors address these issues for developing countries and present their geospatial technology-based, in-house developed methodology for establishing secure land tenure.

Security in a customary land-tenure environment first of all requires capturing large volumes of data in a form that is retrievable, searchable, reliable and durable. Or, as Grover, Törhönen and Palmer state: 'Securing and protecting tenure rights [...] requires the creation of land-tenure databases rather than just proprietorship registers [...] the full range of land tenure rights should be secured and protected by being recorded in order to ensure that justice and human rights prevail, as well as by the development of effective policies for environmental protection, food security and economic development.'

Geospatial Technology

Developing countries have much in common when it comes to creating automated land registries. Ownership records are often non-existent or in a state of disarray, while a budget for creating new registry, cadastre and tax databases may be lacking. A major challenge is thus creating databases within a short time and at lowest possible cost. GPS surveying, (web-based) GIS and photogrammetry can be of great help and, together with land policy, play a unified role in securing land tenure in developing countries.

Mobile GIS

GPS is used to determine centrelines of paved and unpaved streets potentially having buildings in the vicinity. The centrelines form the basis for data collection. To each centreline connecting midpoints measured at street intersections is assigned a name adopted from the government street-names database. All this data is stored in the street database (Figure 1). Recent advancements in GPS receivers, wireless communications and rugged handheld devices have resulted in mobile GIS which incorporates display, keyboard and GPS receiver in one integrated unit. Mobile GIS plays an important role in the creation of centreline and address databases, and in 'Cadastral Sweep', an ownership determination methodology developed by ourselves.

Total-Stations

Bluetooth, a high-speed, low-power microwave wireless link between devices (see Technology in Focus, GIM, October 2004) has played a prominent role in greatly simplifying the capture, storage, updating, manipulation, analysis and display of data in the field. [Total station](#)s are used to determine angles and distances from centrelines to build centroids consisting of features such as property ingress and egress or main entrance. Data is wirelessly transmitted by Bluetooth to a rugged data collector which facilitates final review using GIS tools, while the screen shows the parcel or structure map, GPS-embedded photo of the property, and attribute data entry fields (Figure 2).

Web-based GIS

The data generated during the Land Registry automation project includes aerial mapping, orthophotos, scanned registry documents, parcel maps and title records. All the data is stored in government-managed databases, accessible through a web portal that allows authenticated subscribers to download a variety of the data via a secure network. Payment is by credit card, generating revenue for the government. The web portal also provides services to the general public (Figure 3).?

Cadastral Sweep

A Cadastral Sweep involves property ownership being determined by interviewing property owners or occupiers within a jurisdiction such as a municipality. Many factors may affect the answers; for example, an individual may not wish to disclose intended use. Furthermore, the surveyors and para-legal workers conducting the interviews must respect local customs and events, including religious holidays, and should dress appropriately and behave with respect and courtesy. The objectives of the interview have, with due professionalism and neutrality, to be clearly explained. Also crucial for success is a well-planned and designed public information campaign.

Land Policy

A land tenure solution does not consist only of data and (web-based) GIS systems, but also includes policy and enforcement. Land tenure thus not only concerns representation of ownership and property information, but also multidimensional sociological, economic and geographical components. One has therefore to look beyond the database-only contexts of mapping, surveying, photogrammetry, cadastral sweeps, GIS and so on. Operational data for securing rights, managing public assets etc differs from data needed for policy development. The role of property rights in economic growth, governance, conflict abatement and resource management is increasingly recognised. This awareness has matured from the development of national laws defining formalised land transfer and titling processes, procedures and technologies, to include other aspects. These cover not only recognition of the existence of customary land transactions but also acknowledge the need to embrace such customary rights and transactions, including those of women and the poor. ??

Enforcement

Influence may be brought to bear upon information production and use. Or, as Le Meur puts it: 'As with all information, land-tenure information can also be manipulated, controlled or monopolised by various persons, depending on their interests, goals and positions. Disruption in the chain of land-data production and circulation can reflect technical and institutional dysfunction, as well as individual or collective strategies of control over information flows.' Policy-makers should be able to develop sustainable and enforceable land tenure policies so as not to (un)intentionally marginalise certain groups. Poorly conceived land-tenure policies may be just as effective as no policy at all in terms of keeping groups 'out' of the land-tenure system.

Concluding Remarks

The link between data and decision-making is a matter of negotiation, alliance and compromise. The development of public policy based on land information is a matter of accessibility, knowledge and understanding.

Further Reading

- Bisio, R., 2004; Bluetooth Brings a Smile to Mobile GIS Users. GEO World .
 - Grover, R., Törhönen, M-P., Palmer, D., 2006; The Importance of Land Tenure Data in Decision-making. Land Reform: Land Settlement and Cooperatives . FAO, ISSN 0251-1894.
 - Le Meur, P.-Y., 2006; Reflections on Land Information and Policy-making in Sub-Saharan Africa, Land Reform: Land Settlement and Cooperatives, FAO, ISSN 0251-1894.
 - McKenna, J., 2004; Land Registry Automation in Central America, The Organization of American States (OAS) and the Central American Cadastre, Registry and Tax Systems Conference, Guatemala City, Guatemala.
- Land Tenure according to Grover, Törhönen and Palmer
'Land tenure defines the relationship between people and land and other natural resources [...] A land-tenure system means that a number of interests can exist simultaneously in the same parcel of land [...] The ability of a land-tenure system to allow for the creation of a number of different and intersecting rights over land makes it likely that there will be a number of people who have interests in the same parcel of land. Land tenure is concerned with regulation of these different interests and overcoming potential conflicts among them.'
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