# **Community Participation Supporting Cost Effective Surveying Methods**

## Davuth LOR, Cambodia and Pertti ONKALO, Finland

**Key words**: Land Administration, Land Registration, Cost Effective, Surveying Technology and Methods, Community Participation.

#### SUMMARY

To an agricultural dominated society like Cambodia, land has been always a fundamental asset for the population. Land rights and land management structures have changed significantly during different historical periods. As the latest development the Land Law, adopted in 2001 incorporates a number of significant changes and enchancements and provides a firm foundation for land administration and land management. It extended private ownership to residential and agricultural land and established a single land registry authority for Cambodia. It also enables delegation of power of land administration from the central level to provincial and district level and charges the land registry with responsibility to implement first land registration and cadastral mapping of all State and private properties.

The Land Management and Administration Project was established with overall goal to reduce poverty, stimulate economic development, and promote social stability. The objectives of the project are to improve land tenure security and facilitate the development of land markets. The first project implementation period is 2002 - 2007. The project component 3 supports systematic and sporadic registration and development of a modern registration system.

Community participation is the keyword of successful implementation of systematic land registration and it is in fact an essential part of the current systematic land registration process in Cambodia. The Community participation of the systematic land registration is very high, with a recorded 100 per cent participation in many communes. People have not only the legal right, but also the duty to participate in the registration. Considering history of Cambodia and absence of documented property rights only an approach with full transparency and publicity will meet the requirement of equality.

Basic principles introduced for the first systematic land registration are:

- The landholders are used as an assistants during the field work,
- every parcel is visited by the land registration officers,
- verbal testimonies are collected as evidence,
- all interested parties have an access to the meetings and fieldwork, and
- all collected information is available to public during the appeal process.

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## 1. BACKGROUND

To an agricultural dominated society like Cambodia, land has been always a fundamental asset for the population. Land rights and land management structures have changed significantly during different historical periods. To understand the basis of the issues highlighted in the new land policy it is important to be aware of these historical facts.

Traditionally, before the French colonial period, landholders had exclusive rights to possess, use and inherit agricultural land. The French colonial period (1863 - 1953) introduced the first legal framework for land administration and management in Cambodia. The Land Act that recognized private property rights was promulgated 1884. There was a slow progress in the beginning due the resistance of the farmers. However, by 1930 most of the rice fields were registered as a private property and land markets started slowly to develop. The Independence period (1953 – 1975) development of land markets continued and the census 1962 shows that 84 per cent agricultural families were "owners only". During the Democratic Kampuchea or the Khmer Rouge period (1975 – 1979) private property rights were abolised and all land records destroyed. All land belonged to the State. During the period of the People's Republic of Kampuchea (1979 - 1989) collectives were establihed to occupy and use land for agricultural and residental purposes. The post -89 period (1989 -) re-established the private property rights in 1989. First, all property rights established prior to 1979 were declared null and void and land was declared to the State. However the State allowed farmers to claim possession and use rights of plots up to five hectares, and households ownership right to residential plots up to 2,000 square meters (Davuth, 2003)

The Land Policy and new Land Law, adopted in 2001 incorporates a number of significant changes and enchancements and provides a firm foundation for land administration and land management. It extends private ownership to residential and agricultural land. It also enables delegation of power of land administration from the central level to provincial and district level and charges the land registry with responsibility to implement land registration and cadastral mapping of all State and private properties. It established a single land registry authority for Cambodia. During 2002 and 2003 several Sub-Decrees related to land registration are adopted to support land administration and management (Setha, 2002).

# 2. LAND MANAGEMENT AND ADMINISTRATION PROJECT

Based on findings and positive results of three pilot projects during 1997 – 2000, financed by the governments of Finland, Germany and France, the Royal Government of Cambodia decided commence a country wide programme to register ownership and issue land titles. The programme, Land Management and Administration Project (LMAP) includes

development of the land policies, introduction and renewal of legislative framework, institution building in terms of infrastructural and functional development, systematic and

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sporadic land registration, development of dispute solving mechanism as well as an initiation of land management activities.

In order to facilitate the vast investment the Government contacted the World Bank and requested financing, in form of a soft loan, for a 5-year project which could be the first phase of the 15 -20 year programme. The Governments of Finland and Germany joined the LMAP as co-financiers for the project. The project started in the beginning of June 2002. Other geovernments has joined the LMAP later with different sub-projects. The Asean Development Bank, JICA, SIDA, CIDA and South Korea have contributed to the development of land administration and management in Cambodia.

The overall goal of the LMAP is to reduce poverty, stimulate economic development, and promote social stability. The objectives of the project are to improve land tenure security and facilitate the development of land markets. These objectives should be achieved through:

- Development of national policies, regulatory framework, and institutions for land administration and management,
- Issuance and registration of titles in urban and rural areas, and
- Establishment of an efficient and transparent land administration and land registration system.

The project has five components:

- Development of Land Policy and Regulatory Framework,
- Institutional Development,
- Land Titling Program and Development of a Land Registration System,
- Strengthening Mechanism for Dispute Resolution,
- Land Management.

The Component 3 can be described as the core of the project based on the volume of works and budget. It contains the following sub-components:

- Information Dissemination and Community Participation,
- Systematic Land Titling,
- Sporadic Land Titling,
- Development of a Modern Land Registration System. (World Bank, 2001)

The 5th multi-donor supervisory mission in May 2004 led by the World Bank found that the project implementation is going well. Systematic land registration is ongoing in eight provinces with 17 teams and later this year seven new teams and three new provinces will commence activities. As the first part of the LMAP project, the General Department of Cadastre and Gartography distributed 80.000 titles from the pre-LMAP phase. The systematic land registration during the LMAP, from October 2003 – June 2004, has collected information for 100.000 parcels, more than 40.000 parcels are under the Public Appeal period or titles are approved by the Adjudication Committee and are waiting for distribution to landholders. It is estimated that 15.000 titles could be issued every month this year, rising to around 20.000 titles per month next year. (World Bank, 2004)'

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# 3. PUBLIC INFORMATION AND COMMUNITY PARTICIPATION

It is recognized that one of the most important factors behind a success with first systematic land registration is good design and implementation of public information campaign that will lead to very high community participation in a target village. Public information campaign and community participation are integral parts of the systematic land registration process. Community participation and general acceptance of the systematic land registration is very high especially in rural areas, with a recorded 100% participation in many communities.

The Provincial Project Management Office organizes an opening meeting before the registration process starts. Already during the opening meeting people are informed what will happen in their village in next two – three months and how they are required and expected to facilitate the process. The opening meeting is a launch to the public information campaign. The LMAP disseminates public information through mass media (television, radio and newspapers), leaflets and posters about systematic, sporadic land titling program and land transaction registration. A special drama presentation is developed and the drama group is scheduled to make a presentation especially in rural areas.

The public information dissemination includes also more focused support information to villagers undergoing systematic adjudication through focus groups discussions and workshops to explain the project objectives, rationale and benefits, and also explain the forms, the procedures and legal rights to each household. The project hires one person from the village to work as a focal point in collaboration with the village chief during the registration process to ensure that especially vulnerable groups (such as illiterate or disabled, both common in Cambodia) are well informed and supported.

During the public information campaign the land registration team collects data for the village land profiles. The village land profile defines village boundaries, describes general land distribution in the village, analyzes land market activities and tries to identify any preexisting land disputes. This information is used in the planning of the systematic land registration and later for monitoring the socio-economic impacts of the project as well as supporting overall development and land management of the village.

Participation of the stakeholders is the keyword for successful implementation of systematic land registration and it is in fact an essential part of the current systematic land registration process in Cambodia. People have not only the legal right, but also the duty to participate in the registration including the fieldwork and the public appeal of cadastral maps and adjudication records. Considering the turbulent history of land management and administration and complete absence of documented property rights only an approach with full transparency and publicity will meet the requirement of equality. Basic principles introduced for the first systematic land registration are:

- every parcel shall be visited,
- verbal testimonies are collected as evidence,
- all interested parties have an access to the meetings and fieldwork, and
- all collected information is available to public during the appeal process.

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### 4. DEMARCATION AND SURVEY METHODS

During the demarcation, parcel's physical dimensions are defined. Each boundary corner and line is clarified. The present boundaries in rural Cambodia are fixed boundaries, although boundary lines do follow permanent build structures for example in rice fields. Presently no regulations are made concerning boundary marks. It is recommended to adapt a system where boundary marks could be placed by the request of the landowner under owners' own cost.

During the surveying each parcel is located into a national coordinate system. One of the aims for the pilot projects was to develop a system that can be handled by a single survey officer utilizing landholders as surveying assistants. To reduce the registration cost selected surveying methods shall require relatively cheap investments and use cost effective working methods. Therefore demarcation and surveying should also happen simultaneously. The selected methods are implemented area by area, parcel by parcel and, the most important, with one parcel – one visit principle.

Three different surveying methods were introduced during the pilot projects and are used also for the LMAP systematic land registration

- 1. Photo interpretation using 1:1.000 orthophoto map. This method can be utilized in the rural open areas with good visibility of permanent structures in the field when aerial photography is taken recently.
- 2. Photo interpretation using 1:1.000 orthophoto map combined with rectangular or polar method with steel tape, range poles, right-angle prism/optical square or compass/bussol to prepare a sketch. This method can be utilized in areas where aerial photography is older and some parcels on the ground has changed after aerial photography or some parcels are not visible on the orthophoto map due to the vegetation,
- 3. Total station or GPS surveys in the residential and urban areas.

Today the most commonly used method is the second option. An aerial photography for Cambodia was carried out during 1992 and 1993 in scale 1:25.000. On most of the rural areas orthophotos produced from this aerial photography are still useful. However, a new aerial photography flight started March 2004 and will continue next flying season in registration areas. It is expected that with the new aerial photography adjudication and demarcation will be more effective and will result to a better quality of the cadastral index map. On the other hand it will most likely increase cost for the registration. The progress, results, quality and costs have to be analyzed and compared to the other methods or use of old older material after registration is completed in some communes using method one and new orthophotos.

After the field work is completed, all data, both textual and graphical, is digitized according the developed data-model using common ArcGis8.3 application and MS Access database software and is integrated through Unique Parcel Reference Number (UPRN). The records are accessed through a common interface and outputs, title certificates, land books and cadastral index maps can be produced semi-automatically. The main policy and principle for

the development of the modern land registration system is to use software and technology solution with reasonable cost that is locally available.

## 5. IMPLEMENTATION

Experiences have demonstrated that one of the biggest bottlenecks for the land registration work is the mobilization of the landholders. Therefore, the system had to go to the people instead of waiting them to show up in an office. Similarly, the landholders shall be motivated to participate actively through the whole registration process and recognize that through participation they will benefit somehow in short term, possibly with a lower registration fee. Community participation will also guarantee transparency and control quality of the registration process.

A successful mobilization of villagers has turned out to play the most important role in the smooth implementation of the work from parcel to parcel and village to village. Whenever possible, the adjudication and demarcation is done simultaneously, not to bother landholder several times and minimize cost of registration (transport, allowances, etc.) In practice, adjudication officer, demarcation officer, survey officer, landholder of the parcel with landholders of the adjudicate parcels goes to the parcel on the agreed date and time. They will demarcate and adjudicate parcels and proceed to the next parcel with landholders involved. Survey officer will measure the parcel with landholder and his/her neighbors if they decide to follow the survey. Adjudication officer can continue filling the parcel form together with the landholder in village later and check all presented supporting documents as identity cards, family books, birth certificates etc. and compile the parcel file.

The village chief and the Field Manager have a crucial role organizing work schedule. The project implementation has demonstrated that when this cooperation is functioning well the whole registration procedure works well and problems are rare. The land registration team consist of 27 officers, including staff for public information, field and office work. A team is divided to 3 - 4 sub-teams working in different part of the village. Team is usually accommodated to the village and sub-teams can coordinate their work on daily basis.

One Land Registration Team is collecting and preparing information for the public appeal process between 1000 - 1500 parcels per month in rural areas. In urban areas results are between 250 - 700 parcels. One person in a team is processing information from 0.9 to 5 parcels per day depending on the type of the area. The quality commitment procedures are introduced through the organization and the Quality Management Team shall make control to five per cent of the all registered parcels.

The estimated cost for registration of one parcel for the LMAP period is close to USD 20:-. Today the cost without printing and distribution cost is USD 18,50 for the first 100.000 registered parcels. This cost estimation includes all expenditures from the Kingdom of Cambodia, the World Bank and Technical Assistance from Finland and Germany. However, in the first stage of the project a lot of investment are carried out to provide equipment to Provincial Project Management Offices and Central Project Management Office. The cost per parcel is expected decrease and to be about USD 16:- when costs required for new ministry building and provincial and district offices is not included. The building cost in increase registration cost per parcel up to USD 20 - 25.

When comparing information from the pre-LMAP phase or other Word Bank financed projects in the region for first systematic land registration LMAP has managed to keep cost low. The calculated cost per parcel was USD 15:- during the Cambodian Cadastral Project, the average cost in Thailand was US\$ 33 and in Indonesia US\$ 25 (World Bank, 2001).

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### **BIOGRAPHICAL NOTES**

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