

# **Successful Capacity Building of the Cambodian Land Administration: Finnish Technical Assistance Combined with the Local Khmer Expertise, Traditions and Culture**

**Jouni Johannes ANTTONEN, Finland**

**Key words:** Land Administration, Digital Cadastre, Capacity Building, Technical Assistance, Developing Countries, South-East Asia, Cambodia, Finland

## **SUMMARY**

The main goals of the Finnish development co-operation policy are poverty reduction, social stability and economic development as well as protection of environment and promotion of human rights, equity and democracy. It can be concluded that increasing land tenure security contributes to the achievement of all these goals.

In Cambodia, the Government of Finland through technical assistance (TA) by FM-International Oy FINNMAP has supported the policy, legal and technical development and implementation of systematic, sporadic and subsequent land registration, modern digital multi-purpose cadastre and the whole Cambodian Land Administration system continuously since 1997. The step-by-step capacity building approach in all fields of surveying expertise has so far resulted in training, equipping and supervision of more than 1,000 cadastral officers and training of more than 8,000 local level legal decision-makers in 16 provinces and municipalities (out of the total 24) to implement highly cost-effective systematic land registration and maintain the land register, technology transition from old-fashioned manual paper-based to modern digital cadastre and e.g. establishment of countrywide geodetic network and digital orthophoto coverage to support the whole land sector and all geo-referenced social and economic development of Cambodia.

Successful technical assistance for sustainable knowledge and technology transfer must be based on real local needs, requirements and capacities, mutual trust and understanding and be culture-sensitive, building heavily on the history, traditions and systems of the recipient country of foreign aid. Strong local ownership and commitment with proper coordination, co-operation and real team work with all land sector stakeholders and various development partners involved is essential to maximise benefits, avoid overlapping and minimise the waste of efforts, time and money to be in line with the Paris Declaration on Aid Effectiveness.

This paper briefs the history, highlights the results and achievements so far and recognises the current and future challenges of improving the Cambodian land administration system to support the post-conflict country's all social and economic development.

# Successful Capacity Building of the Cambodian Land Administration: Finnish Technical Assistance Combined with the Local Khmer Expertise, Traditions and Culture

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## 1. MAIN GOALS OF THE FINNISH DEVELOPMENT CO-OPERATION POLICY

The main goals of the Finnish development co-operation policy are poverty reduction, social stability and economic development as well as protection of environment and promotion of human rights, equity and democracy (MFAF, 2007). It can be concluded that increasing land tenure security in developing countries, especially through systematic land registration, contributes to the achievement of all these main goals, as follows:

**Poverty reduction and economic development:** Poverty reduction and economic development is facilitated through increased security of land tenure, support to increased investments on land, more productive use of land and natural resources and increased state revenues, capacity building and good governance.

**Social stability:** Social stability increases through reduction, prevention and resolution of land disputes in transparent and participatory processes. During the systematic land registration process, most land disputes can be solved and the results of the land registration agreed upon by the stakeholders. If the problems of insecure land tenure are not solved, there could undeniably be a potential for social unrest, because if people lose their land, they have nothing to lose - and in any society it is always dangerous to have people who have nothing to lose.

**Environmental protection:** Environmental protection is strengthened through improved state land administration and management by clarified state land boundaries, including protected areas. Systematic land registration defines the boundaries between privately owned land and State land in all adjudication areas. Crucial to the protection of the environment, the boundaries and management responsibilities of the forests, protected areas, natural reserves and cultural sites will be for the first time reliably clarified. The protection of the areas is often hindered by the fact that their physical extents are not known, which enables both intentional and unintentional encroaching.

**Human rights:** Human rights are promoted through securing land rights of all *legal* landowners in systematic land registration areas. Land rights are human rights and their promotion in Cambodia is crucial as especially rural families' land holdings are usually close to all their wealth.

**Equity:** Equity is achieved through full and equal participation of all people, women and men, poor and rich, in the transparent systematic land registration process covering all parcels in the land registration areas.

**Democracy:** And finally, democracy is promoted through decentralised and transparent land registration processes, people's participation, strengthened rule of law and local-level responsibilities and decision-making on land registration.

In other words, successful implementation of Land Administration projects, including a systematic land registration component, as a form of development co-operation can contribute potentially to the achievement of all main goals of the Finnish development co-operation policy, as well as to the achievement of the United Nations' (UN) Millennium Development Goals (MDG) for poverty eradication, environmental sustainability and gender equality.

## **2. RECENT HISTORY AND RE-START OF THE CAMBODIAN LAND ADMINISTRATION**

### **2.1 Khmer Rouge and Vietnamese Communist periods (1979-89)**

During the ultra-communist Khmer Rouge regime (1975-79) in Cambodia, the private ownership of land was abolished and it remained unrecognised also during the following 10-year long Vietnamese-backed communist government (1979-89). All land-related documents, including the land register, maps and geodetic networks were systematically destroyed as well as most of professionals and educated people eliminated during the tragic 1975-79 period. The '*Year Zero*' (1979) was cold reality in Cambodia, both on paper and in practice in the land sector as well as in each and every other sector of the society. Only from the year 1989 onwards the private ownership of land was re-introduced in Cambodia after decades of turmoil, anarchy, confusion and collective ownership (Anttonen, 2006).

### **2.2 Re-introduction of Private Land Ownership (1989) and Sporadic Land Registration (1990's)**

After the end of the Vietnamese occupation and re-introduction of private land ownership in 1989, in the early- and mid-1990's the Royal Government of Cambodia (RCG) made an effort for a large campaign of registering privately possessed land parcels, but soon turned out to be technically, financially and practically unable to process effectively and efficiently the 4.5 million registration applications filed in the Cadastral Offices countrywide through the existing sporadic land registration system.

The existing sporadic land registration procedure and the whole land registration system turned out to be too complex, lengthy, over-centralised, over-bureaucratic and expensive especially for the poor majority of Cambodians. In addition, the manual paper-based system was technically inaccurate, as, if not all but most parcels lacked georeference and coordinates, i.e. proper cadastral surveys and maps, which had a potential to lead to overlapping land claims, overlapping parcel boundaries and consequently land disputes. Insecure land tenure surely was not to contribute to the social stability and economic development of, then still fragile, post-conflict country.

During the first 10 years of private land possession and ownership, only around 550,000 land parcels were registered by the Land Titles Department (until 1998) and the following newly established General Department of Cadastre and Geography (GDCG) of the Ministry of Land Management, Urban Planning and Construction (MLMUPC, from 1998 onwards). It was concluded that without more effective and efficient system for land registration, the Cambodian Cadastre was to remain far from complete for ages (Anttonen, 2006).

### **2.3 Requests for European Donor Support for the Land Administration System (1995, 1997)**

In mid-1990's, the Royal Government of Cambodia (RCG) requested the Governments of Germany (1995) and Finland (1997) to support the development of the Cambodian Land Administration system, focusing first as the priority on a suitable and affordable systematic land registration system that could be applied countrywide for an effective and efficient covering land registration programme.

The requests from Cambodia were accepted by the both European donor countries, who to date still remain as the key Development Partners (DP) for the development and implementation the Land Administration system of the country. Being still some 30 years behind of many other countries in the region in all development due to its unfortunate tragic recent history, Cambodia cannot afford to have inefficient, ineffective, inaccurate and costly old-fashioned and outdated cadastral system. A need for a for a successful modern Cadastre, as defined by FIG (1995), in Cambodia was obvious, and the long-term patient work for it started virtually from the very scratch (Anttonen, 2006).

## **3. FINNISH TECHNICAL ASSISTANCE (TA) FOR THE CAMBODIAN LAND ADMINISTRATION SINCE 1997**

In Cambodia, the Government of Finland through technical assistance (TA) by FM-International Oy FINNMAP has supported the policy, legal and technical development and implementation of systematic, sporadic and subsequent land registration, modern digital multi-purpose cadastre and the whole Cambodian Land Administration system continuously

since 1997. The history of the Finnish TA support includes briefly so far the following four phases with their main focuses and results.

### **1997-1999: Cadastral Mapping and Land Registration Pilot Project (CMLRPP)**

The very first two years of the Finnish support (CMLRPP 1997-99) to the Cambodian Land Administration focused on resource reviews in the fields of land policies, land registration and land legislation as well as the system development. Special attention was paid to the development of locally applicable cadastral surveying and mapping, digital Cadastre and systematic land registration as well as training of the Cambodian Cadastral Administration staff. The system development resulted in the establishment of a local cadastral GIS based on simple software and then already locally available technology, method for the systematic parcel-by-parcel land registration supported by digital orthophotos and field surveys and the drafting of its legal provisions for a Sub Decree. FINNMAP delivered the TA support for all above fields of legal and technical expertise. The initial number of the local Cambodian counterpart staff in this very first pilot project was only six (6) (CCP, 2002A).

### **2000-2002: Cambodia Cadastral Project (CCP)**

The overall objective of the second phase of the Finnish support, known as Cambodia Cadastral Project (CCP 2000-2002), was to facilitate and accelerate the introduction of security of tenure on land creating a cornerstone for the rehabilitation of the fragile society of Cambodia and the purpose of the project was to introduce a fair and just land registration system benefiting the poor majority of Cambodians.

CCP facilitated the land policy and land legislation development including the final drafting and official adoption of the *Sub Decree* on systematic registration, finalised the development of the systematic land registration system, planned and demonstrated its countrywide application by establishing two provincial 'Sub Offices' for the implementation, training their local staff and launching the systematic registration work as well as helped improve the technical performance of the sporadic land registration and improved the human resources and technical capacities of the Cambodian Cadastral Administration in general. Also other important topics such as land valuation, cost recovery and outsourcing, socio-economic aspects and public awareness promotion were focused on during this project phase. Apart from starting the concrete systematic registration work, the project facilitated the start of a larger systematic registration campaign by carrying out new aerial photography in selected areas likely to face systematic registration during the next few years.

In general, the concrete policy and legal development in the Cambodian land sector was rapid during this 2nd project phase and clearly showed that Cambodia was committed to putting the land issues in order after three decades of turmoil, confusion and anarchy. The drafted *Sub Decree on Establishing Cadastral Index Map and Land Register (Systematic Land Registration)* was adopted in March 2000 by the Council of Ministers (CoM). The three key areas of the Cambodian Land Policy (Land Administration, Management and Distribution)

were identified in July 2000 and The *Council for Land Policy (CLP)* was established in December the same year. The *Statement of Royal Government on Land Policy* was passed in May 2001. The enactment of the long-prepared new *Land Law* took place finally in August 2001 and the necessary *Sub Decrees on Systematic and Sporadic Land Registration* and *Cadastral Commission (Land Dispute Resolution)* to effectively implement the Land Law were drafted and passed in May 2002. In 2002, also the *Strategy of Land Policy Framework* was finalised.

In this project phase, FINNMAP delivered TA for all the main sectors of the Land Administration work involved; land policy and legal development, aerial photography and orthophoto production, geodesy and land surveying, IT and GIS, media, land valuation, cost recovery, outsourcing and socio-economic studies. Also the technical quality of sporadic surveys were improved by a countrywide Province Office Training (POT) programme including delivery of new surveying equipment to the provinces.

In the end of this project phase, 83,500 parcels were in the systematic registration process. The number of the local Cambodian counterpart staff with the Finnish TA had now increased to around 60, including the central level (GDCG) and the two established provincial 'Sub Offices'. The Finnish-supported work was closely coordinated with the parallel German-supported *Land Management Project (LMP)* implemented by GTZ from 1995, which apart from supporting systematic land registration focused also on land management issues (the Finnish- and German supported projects together had total around 100 local staff implementing systematic land registration in four provinces).

The successful CCP project implementation, among others, and the development in the fields of land policy and land legislation encouraged the Royal Government of Cambodia (RCG) to apply a loan from the World Bank (WB) and start the preparations for a big *Land Management and Administration Project (LMAP)*. By June 2002, the Governments of Cambodia, Finland and Germany with WB had prepared together a comprehensive, originally five-year multi-donor LMAP, which continued the started development work and expanded the implementation of systematic land registration activities from the four pilot provinces to 11 provinces/municipalities out of the total 24, covering a big part of the most populated and fertile areas as well as important land market areas of Cambodia (CCP, 2002B).

### **2002-2008: Land Management and Administration Project (LMAP), Component 3: Land Titling Program and Development of a Modern Land Registration System**

The multi-donor *Land Management and Administration Project (LMAP)* (2002-2008) was the first phase of the larger *Land Administration, Management, and Distribution Program (LAMDP)* of the Royal Government of Cambodia as defined in the 2001 *Statement on Land Policy* (RCG, 2001). The overall goals of LMAP were to reduce poverty, promote social stability, and stimulate economic development. The specific objectives of the project were to improve land tenure security and promote the development of efficient land markets. These objectives were to be achieved through: a) Development of national policies, the regulatory

framework, and institutions for land administration; b) Land registration and issuance of titles in urban and rural areas; and c) Establishment of an efficient and transparent Land Administration system (LMAP, 2001).

LMAP was divided into five Components: Component 1: Development of land policy and regulatory framework; Component 2: Institutional development; Component 3: Land titling program and development of a modern land registration system; Component 4: Strengthening mechanisms for land dispute resolution; and Component 5: Land management (LMAP, 2001). The Component 3 was the core of LMAP, under which most of the concrete activities were carried out and tangible results achieved. Technical assistance (TA) to the project was provided by the Government of Finland (through FM-International Oy FINNMAP, Component 3) and the Government of Germany (through GTZ, Components 1,2,4 and 5). It is recognised that although the project was divided into five Components and responsibilities of several development partners and TA teams, LMAP was only one project implemented by MLMUPC through its existing Central and Provincial Departments without establishing parallel separate project structures and all interlinked Components both supported and were depending on each other for the project to be successful as a whole. Especially the Component 3 performing the main role of LMAP depended also on the successful functioning of the other four Components (Anttonen, 2006).

*The Component 3: Land titling program and development of a modern land registration system* was divided into four Subcomponents: A. Information dissemination and community participation; B. Systematic land titling program; C. Sporadic land titling program; and D. Development of a modern land registration system. The two key performance indicators of the Component 3 were that ‘*Land titles are issued effectively and efficiently*’ and the ‘*Land registration system is functioning well*’. Among the various output indicators there were expectations that one million land parcels would be systematically registered in the original five-year project period and that the average cost of a land title would be less than US\$ 30,-. The Subcomponent D, ‘Development of a modern land registration system’ was supporting the ‘development of a sustainable, efficient, transparent and effective land registration system that will ensure the security of titles and transactions, full participation in registration of land transactions, and efficient service delivery’. That included *Review of land registration system and operational procedures; Improved office facilities, equipment furniture and materials; and Establishment of land registration database* (LMAP, 2001). Especially this Subcomponent involved a great deal of both legal and technical development work supported by TA. In addition, in 2006 MLMUPC strongly emphasised the importance of land registration for the development of Cambodia and publicly announced land registration to be the most important sector of the Ministry’s work at the moment and in the future. The official targets in registration were declared by MLMUPC to be 32% of all parcels by 2010 and up to 65% by 2015 (MLMUPC, 2006). It is clear that this kind of goals can be achieved only by a successful and modern, effective and efficient cadastral system in place.

During LMAP 2002-2008, FINNMAP delivered continuous comprehensive legal and technical assistance to MLMUPC according to the official agreement between the

Governments of Finland and Cambodia. The Finnish TA package to support the project implementation included, largely long-term, international and local TA for project management, land policy and legal development, adjudication, media, public awareness, community participation, gender issues, orthophoto production, digital cartography, cadastral mapping, geodesy, land surveying, land registration, IT, GIS, One-Window Cadastral Service development and institutional economics.

In the end of 2008, the main indicators, targets and goals of the Finnish-supported LMAP Component 3 were achieved and exceeded. More than one million land parcels were systematically adjudicated and surveyed, more than 800,000 land titles issued effectively and efficiently and more than 760,000 title certificates delivered to the beneficiaries at a cost less than 30 USD per parcel. The final results of systematic registration were: More than 1.3 parcels surveyed and adjudicated, 1 million titles issued and 960,000 title certificates delivered to the landowners at a record-low cost of 9 USD/parcel. For the systematic registration campaign, 800 Cambodian cadastral officers were trained, equipped and supervised in 14<sup>1</sup> provinces and municipalities to implement systematic registration according to the developed and continuously improved comprehensive *Land Registration Team (LRT) Manual*. Around 4,800 geodetic ground control points for surveying and orthophoto production were established. 60,000 km<sup>2</sup> of digital orthophotos were locally produced with the established modern digital orthophoto production line and also 190,000 procured orthophotos were quality controlled under the project. More than 6,500 Administrative Commission (AC) members were trained for legal, decentralised local-level decision-making in land registration. In the end of 2008, systematic land registration was completed or going on by 34 Land Registration Teams (LRTs) in 41 districts and 484 communes consisting of almost 2,000 villages (WB, 2009, LMAP, 2009). To support the systematic registration, a successful Public Awareness and Community Participation (PACP) concept was developed and established, resulting in the high landowners' participation rate of 99.8%<sup>2</sup> in the systematic land registration. A modern digital Cadastral Database/Geodatabase system was developed locally and established to support effective and efficient systematic, sporadic and subsequent land registration. Lessons learnt, team building and training workshops, on-the-job and hands-on training, international study tours and continuous supervision played an important role in the capacity building of the local cadastral staff.

Apart from supporting mainly the *Component 3 - Land Titling Program and Development of a Modern Land Registration System* of LMAP, the Finnish technical assistance (TA Finland) team supported continuously also the Component 1 - Land Policy and Regulatory Framework to ensure the development and establishment of all necessary policies and legal documents (*Sub Decrees* and *Ministerial Instructions*) for the Cambodian Land Administration system.

### **2009-2012: Land Administration Sub Sector Program (LASSP), Component 3: Land Titling Program and Development of a Modern Multi-Purpose Cadastral System**

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<sup>1</sup> Canana also joined LMAP with TA support and financing land registration in three additional provinces.

<sup>2</sup> Only 2,000 parcels out of 1,000,000 are lacking data in systematic registration (LMAP, 2009).

From the beginning of 2009, the Government of Finland continued to support MLMUPC without a break in the designed next four-year phase after LMAP, entitled the *Land Administration Sub Sector Program (LASSP) 2009-2012*. The year 2009 was a transitional period from the previous, largely donor-led project to a more comprehensive Cambodian Government-led program implementing the key area of Land Administration under the Cambodian *Land Policy*. FINNMAP continues to deliver comprehensive legal and technical assistance to MLMUPC according to the TA requirements defined in the *Outline for LASSP* (MLMUPC, 2008).

The ongoing LASSP continues smoothly to develop, implement and improve the main areas of the work started under LMAP, with expanded and more comprehensive scope to tackle new important topical issues of the Cambodian Land Administration. While continuing the development and improvement of needed land-related policies and legal framework, institutional development, land titling program and development of the land registration system, the scope of LASSP includes also the start of the development of an official Land Valuation system, One-Window Cadastral Services and widened scope of public awareness and information dissemination for creating a land registration culture in Cambodia and developing the established modern land registration system further towards a modern digital multi-purpose cadastral system and Land Information System (LIS). Also the development of Public-Private Partnerships (PPP) for Land Administration, improved sporadic registration countrywide, registration of condominiums (co-owned properties) and state land registration issues are within the LASSP scope and are to be launched during the ongoing program (MLMUPC, 2008).

In the end of 2009, the local Cambodian staff working full-time at LASSP had increased already to 1,000 out of which 200 had been recruited from the private sector as the first step in the development of Public-Private Partnerships (PPP) for Land Administration. The total number of parcels registered or in the systematic registration process was 1.7 million, out of which 1.2 million were already officially registered (Sar, 2010). For 2010, MLMUPC has announced the annual target to be 350,000 new systematically registered parcels in 16 provinces and municipalities (MLMUPC, 2010).

#### **4. FINNISH-SUPPORTED CAPACITY BUILDING APPROACH AND ITS RESULTS FOR THE CAMBODIAN LAND ADMINISTRATION**

As a summary, the Finnish-supported step-by-step capacity building approach in all fields of surveying expertise has so far resulted in training, equipping and supervision of more than 1,000 cadastral officers and training of more than 8,000 local level legal decision-makers in 16 provinces and municipalities (out of total 24) to implement highly cost-effective systematic land registration and maintain the established Land Register, technology transition from old-fashioned manual paper-based to modern digital cadastre and e.g. establishment of countrywide geodetic network and digital orthophoto coverage to support the whole land sector and all geo-referenced social and economic development of Cambodia. The current

speed of systematic registration is at a steady level of 25,000-30,000 parcels per month and all official subsequent transactions are being registered in the established system.

As an important and remarkable part of the capacity building of the whole Cambodian land sector, simultaneously under LMAP and LASSP, the Government of Germany through GTZ has supported the establishment and operation of a new Faculty of Land Management and Administration (FLMA) at the Royal University of Agriculture (RUA) in Phnom Penh. The total number of the new generation B.Sc.'s graduated or graduating is around 300, who all are contributing to the development and implementation of the Cambodian land sector, already currently or in the near future. In addition, a new development partner to MLMUPC in the ongoing LASSP, CIDA through its contracted Canadian TA is focusing on capacity building in the program Components under their support, including Land Valuation as well as issues of gender, environment and mine awareness in Land Administration. CIDA also finances currently systematic land registration in three (3) provinces.

## **5. KEYS TO SUCCESSFUL TECHNICAL ASSISTANCE (TA) FOR SUSTAINABLE KNOWLEDGE AND TECHNOLOGY TRANSFER**

Successful technical assistance (TA) for sustainable knowledge and technology transfer must be based on real local needs, local requirements and local capacities, mutual trust and understanding and be culture-sensitive, building heavily on the history, traditions and systems of the recipient country of the foreign aid.

Strong local ownership and commitment with proper coordination, co-operation and real team work with all land sector stakeholders and various development partners involved<sup>3</sup> is essential to maximise benefits, avoid overlapping and minimise the waste of efforts, time and money to be in line with the *Paris Declaration on Aid Effectiveness* (Paris, 2005).

As noted above, FINNMAP has been an active partner for the Cambodian Land Administration system development continuously since 1997, and provided TA services to all previous projects; *Cadastral Mapping and Land Registration Pilot Project* (1997-1999), *Cambodia Cadastral Project* (2000-2002) and *Land Management and Administration Project* (2002-2008). According to FINNMAP's culture-sensitive approach, the company and its long-term experts are fully accustomed and adapted to the local conditions, culture and practices, which is essential also for implementing the ongoing *Land Administration Sub Sector Program* (2009-2012). Having also established a local company in the country in 1999, it can well be argued that FINNMAP is Cambodian.

FINNMAP's long-term Technical Assistance (TA) approach in Cambodia has worked well and turned out to be successful in supporting MLMUPC to achieve good, concrete and sustainable results ever since the beginning of the technical co-operation in 1997. FINNMAP's TA support is based on long experience and lessons learnt from the development and practical implementation of the cadastral, surveying and mapping work in Cambodia. The

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<sup>3</sup> In Cambodia, Technical Working Group on Land (TWG-L) coordinates donor efforts in the land sector.

qualified and experienced international and local professionals with the local counterparts know the history and continue to analyse the current status, recognise issues and challenges and plan and propose next concrete steps to move from the LASSP vision to action, from action to results and from results to real impact for the development of Cambodia.

The TA work supports MLMUPC's initiatives and work plans and leads to concrete results; policy and legal documents, *Ministerial Instructions* and *Manuals*, adopted technical solutions and training, supervision, advising and supporting the current 1,000 local counterparts. It has been learnt along the way that long-term TA is essential for achieving sustainable results and effective transfer of knowledge, and can occasionally be combined with focused short-term TA inputs for specific topics when needed. It has become clear that a TA approach of only short-term expert missions to projects is likely to confuse systems rather than support them.

## 6. CURRENT AND FUTURE CHALLENGES OF THE CAMBODIAN LAND ADMINISTRATION SYSTEM

After a comprehensive multi-stakeholder dialogue on all the three key areas of the *Land Policy* in 2008, the Royal Government of Cambodia adopted the *Declaration on Land Policy* in 2009. The *Declaration* defines the goals of the three key areas, i.e. *Sub Sectors* of *Land Policy* – Land Administration, Land Management and Land Distribution - as well as the main fields of activities under each Sub Sector. The *Land Administration Policy* under the *Declaration on Land Policy* clearly recognises the current and future challenges of improving the Cambodian land administration system to support the post-conflict country's all social and economic development:

*The goals of land administration are to clearly register ownership and other rights over immovable properties (State and private), to conduct official transfer of those rights, to prevent and resolve land disputes in order to strengthen land tenure security, and ensure reliability and efficiency of land market.*

*Land registration shall comply with principles of good governance, transparency, decentralization and de-concentration, and gender equity in order to develop a culture of land registration, and to increase trust in land registration system. This has to be simple, clear, quick, accessible and at low cost. It shall develop Land Information System to provide accurate information regarding immovable properties at a reasonable cost (RGC, 2009).*

The declared nine (9) main fields of activities of Land Administration are:

1. *To develop and strengthen the implementation of **laws and regulations** in relevant fields such as expropriation law, pre-emption law, law on agricultural land, land transfer, land consolidation, land subdivision, land taxation, land valuation and land market, land banking, and land survey etc. as well as to amend certain articles of laws and regulations related to the land law, fiscal law...in accordance with the evolution of the country situation;*

2. To gradually establish a clear and complete **inventory of State immovable properties** (land and buildings) in a unified database system in order to enhance the efficiency of State immovable properties management;
3. To conduct **land registration** throughout the country in a transparent and effective way for both State land (public and private State land), and individuals' private land:
  - 3.1 To proceed with both sporadic and systematic land registration procedures;
  - 3.2 To carry out subsequent registration and update cadastral information in a timely manner/rapidly so as to increase State revenue;
  - 3.3 To carry out inscription of all mortgages, antichrèses, immovable property pledges long-term leases, economic land concession or easement that are created over an immovable properties;
  - 3.4 To accelerate co-ownership registration;
  - 3.5 To pay attention to land registration of indigenous communities;
  - 3.6 To accelerate State land registration (public and private State land);
  - 3.7 To develop Land Information System (LIS) that can be able to provide customers with accurate information. Land Information System is a basis for National Spatial Data Infrastructure and for multi-purpose use.
4. To establish **geology information system and soil classification** based on natural characteristic of land.
5. To develop a unified **Geographic Information System** across the country:
  - 5.1 To develop a unified Geographic Information System under the coordination of the Ministry of Land Management, Urban Planning, and Construction. It shall create a unit in charge of printing and distributing master maps.
  - 5.2 To continue to install horizontal Geodetic Network throughout the country and create vertical Geodetic (Levelling) Network;
  - 5.3 To establish Permanent GPS Base Station.
6. To develop a participatory, transparent, and officially recognized **Land Valuation System**. Land Valuation shall base on the natural quality of soil and also include land and improvements in order to create a basis for sale, purchase, lease, investment, loan, taxation (annual tax, tax on land transfer, tax on lease, tax on profit, tax on unused land), cadastral service and compensation.
  - 6.1 To issue licenses to private immovable property valuers;
  - 6.2 To build and enhance capacity of immovable property valuers;
  - 6.3 To continue to implement the policy of not imposing tax on family-sized agricultural land. In the meantime, reseach shall undertaken on an annual tax on immovable properties besides family-sized farming land;
  - 6.4 To develop immovable properties valuation maps;
  - 6.5 To carry out valuation of immovable properties in urban and rural areas, and monitor the valuation.
7. To encourage participation of **private sector** in land surveying under the control of the cadastral administration;
8. To continue the extra-judicial mechanism for **land dispute resolution** through Administrative Commission, Cadastral Commission at all levels (National level,

*Capital/Provincial level and Municipal/District/Khan levels, and mobile teams), and National Authority for Land Dispute Resolution especially for multi-party cases;*

9. To develop **self-financing system for land administration**, starting from revenue from land registration and cadastral services in order to support and speed up a nationwide land registration process (RCG, 2009).

It can be concluded that the abovementioned goals of the Cambodian *Land Administration Policy* for the land registration and cadastral system are completely in line with the *FIG Statement on the Cadastre* (FIG, 1995) and that most of the main fields of activities are already being tackled under the ongoing *Land Administration Sub Sector Program* (LASSP), currently supported by the Governments of Finland, Germany and Canada (MLMUPC, 2008).

## **7. COMPARISON OF THE RESULTS OF THE MAIN LAND ADMINISTRATION AND LAND REGISTRATION PROJECTS IN SOUTH-EAST ASIA**

To put the concrete achievements and results of the post-conflict Cambodian Land Administration since the mid-1990's into a regional and international perspective, the various major land administration and land registration projects in South-East Asia are currently under comparison (Cooper, 2010). The tentative results of the comparison indicate that:

- Cambodia has managed and continues to register systematically annually more than 10 (ten) times more land parcels than e.g. Lao PDR and more than one thousand (1,000) times more than e.g. The Philippines.
- In Cambodia, the land registration/titling cost per land parcel (USD 9) is only one third to half of the cost in other countries in the region (USD 20-50).
- Cambodia is the only country in the region, which uses fully the latest modern digital technology to support the land registration and cadastral system, producing real land information and data, and does not have to finance and implement very costly, time-consuming and labour-intensive digitalisation campaigns afterwards.
- Cambodia is the only country in the region, which has received serious long-term European; Finnish and German technical assistance (TA) for the development and implementation of the Land Administration system (most other countries have relied on Australian TA).

Both manual and digital solutions have been developed and used by the Land Administration and cadastral systems in the South-East Asia region, naturally with different local features, technologies and costs. Conventional and conservative approaches have been often criticised and characterised as inefficient and ineffective. Debates among experts have still continued to date, whether paper-based manual systems should be given preference in developing countries in the region or could perhaps optimised utilisation of modern information technology provide

cheaper, more effective and efficient and more accurate solutions to benefit the whole society, or like FIG has envisioned, “*provide better access to the information, better quality, and better legal and physical security than other systems and in the long run more cost effectiveness and greatly facilitate data exchange and coordination between different agencies*” (FIG, 1995)?

For example, 10-15 years ago it was recognised that “*...Information technology (IT) is playing an increasing role in all land administration projects in most stages: in acquisition, analysis, storage, and the dissemination of all associated data. However it is not easy...*” (Holstein, 1996). More than 10 years later, critical issues in many countries are still argued to be the relatively low level of technology and the low skill level of staff. In most of the Asian countries lower levels of technology are being used, in part because some high technology measures have been tried, tested and failed, so the existing systems are mainly paper driven (Lunnay, 2005). An exception to this is the former *Land Management and Administration Project (LMAP)* and the current *Land Administration Sub Sector Program (LASSP)* in Cambodia where a reasonably high technology approach has been adopted.

In South-East Asian Land Administration development projects, maintaining the status quo of low level of technology has been justified by many experts in many ways. Projects with narrow focus and main emphasis on producing hand-written and –drawn land title certificates based on old-fashioned manual systems imported to the developing country, are satisfied with an ever-increasing number of physical paper documents, even though little or no digital cadastral data is produced. In some cases, the partially unsuccessful international donor support in IT sector to assist in the introduction of information technology has been recognised to be one reason for maintaining low-tech (WB, 2003). Some projects have been cautious from the very beginning to involve even simple forms of IT and modern surveying technology due to the assumed limitations of the project country’s cadastral staff to learn new technologies, etc.

However, in Cambodia, one of the poorest countries with the smallest number of educated land administration staff in the region, modern information technology solutions have been developed locally in the long run with international development partners and TAs step by step, tested, applied and are being developed further to support effectiveness and efficiency at all stages of the Land Administration, land registration and cadastral work; digital orthophotography, latest surveying technology, cadastral databases, GIS and use of computers are now all integral part of the daily work of the Cambodian Land Administration (Anttonen, 2006).

Should there be enough will, financial and human resources and professionals, capacity can be built!

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## **BIOGRAPHICAL NOTES**

Jouni Johannes Anttonen (M.Sc. Surv.) is a long-serving Team Leader and Land Administration Expert in Cambodia, having worked at FM-International Oy FINNMAP with the Ministry of Land Management, Urban Planning and Construction (MLMUPC) of the Royal Government of Cambodia (RCG) on the development and implementation of the Cambodian Land Administration system continuously for a decade since May 2000. Mr Anttonen has so far been officially awarded degrees and medals twice for his contributions to the development of the Cambodian land sector. Jouni Johannes Anttonen graduated from the Department of Surveying of the Helsinki University of Technology, Finland having made his Master's Thesis on the land management and land tenure issues of developing countries. Before accepting the current long-term assignment in Cambodia in 2000, Mr Anttonen had a career of broad spectrum in modern cadastral and land surveying, digital mapping, GIS, land use planning and infrastructure planning both in private and public sectors, both in Finland and overseas.

## **CONTACTS**

Mr Jouni Johannes Anttonen, M.Sc. (Surv.)  
FM-International Oy FINNMAP  
Team Leader, Land Administration Sub Sector Program (LASSP)  
Ministry of Land Management, Urban Planning and Construction (MLMUPC)  
Phnom Penh  
CAMBODIA  
Tel. +855 12 333730  
Email: [jouni.anttonen@online.com.kh](mailto:jouni.anttonen@online.com.kh)  
Web site: [www.finnmap.com](http://www.finnmap.com)