

# **Development of Curriculum for the Land Management and Land Tenure Programs in Cambodia**

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**Key words:** Professional Education, Curriculum, Bachelor Degree, Land Management, Land Tenure.

## **SUMMARY**

Land Management is defined as a system of planning and management methods and techniques that aims to intergrate ecological with social, economic and legal principles in the management of land for urban and rural development purposes to meet changing human needs, while simultaneously ensuring the long-term productive potential of natural resources and the maintenance of their environmental and cultural functions.

In Cambodia, no such education was ever offered before the establishment of the Faculty of Land Management and Land Administration in the Royal University of Agriculture and consequently there were poor human resources available to develop the Faculty.

To provide a solution for a long term, the Ministry of Land Management, Urban Planning and Construction together with the Royal University of Agriculture decided to set up a Bachelor program. The initiative is financially supported by the loan from the World Bank and technical assistance from the Government of Germany. Implementation is carried out with the Royal University of Agriculture and the Land Management and Administration Project Component 2, Institutional Development and it will provide support to establishment of a land management and administration education program.

The curriculum for a four years Bachelor program was developed at the same time but it is not yet fully agreed. However, the faculty started the Bachelor program 2003. The multi-donor supervisory mission in a meeting in May 2004 with the Royal University of Agriculture and the Ministry of Land Management, Urban Planning and Construction agreed that future accreditation of the course would be considered after an external expert review of the course. The review and action plan is agreed to improve quality of the education.

At the moment there are 7 staff members working in the faculty. The number of students in the first and second academic years is 102

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## **1. INTRODUCTION**

### **1.1 Country Context**

Cambodia's recent history is well known. In 1975, after the revolution by the Khmer Rouge, the post-colonial society was completely reformed. The individual ownership of land was banned, cities emptied and people were forced to live in communes that engaged massive irrigation projects. The infrastructure was literally destroyed and most educated people were killed. In 1979, Vietnamese forces overthrow the Khmer Rouge from the main parts of Cambodia even the Khmer Rouge still continued to occupy some parts of the country. In 1993, the general elections facilitated by the United Nations started a democratization and normalization process. In 1998, the Khmer Rouge finally gave up all resistance, and the legitimate government gained control of all the territory for the first time over thirty years. Today, Cambodia is a member of ASEAN and has completed negotiations for joining the WTO. Even there are lot of progress made, still the reconstruction of the society is very much an on-going process.

### **1.2 Professionals and Education**

Due to the restless history, Cambodia has an increasing need for professionals in land management, land administration and surveying. Re-introduction of private ownership to land, mapping required for forestry monitoring and agricultural development and works implemented by the Mekong River Commission demands a lot of human resources. In addition the Land Management and Administration Project (LMAP) implemented and funded with the Ministry of Land Management, Urban Planning and Construction (MLMUPC), the World Bank, the Government of Finland and the Government of Germany requires a large number of different specialist. For example, the main component, the implementation of systematic land registration for one million parcels in four years (2003 - 2007) and the development of a modern land registration system will require more than 700 professional staff. It is estimated that it will take 10 to 15 years to complete systematic land registration in whole country. At same time other project components provides support to improve land administration and management, urban and rural planning in Cambodia that will also require human resources. Many new tasks are introduced and especially decentralization of responsibilities to provincial and district level will lead to a higher need of academic professionals in all levels.

### 1.2.1 Staffing

Total number of academic land surveyors that are active within the cadastre is about 220. Only about 15 of them has a Master's Degree and less than 10 has a Bachelor Degree obtained during the 1990's, mainly from the Universities from the former Soviet Union.

To re-establish a cadastral organization with this amount of academic professionals in a country like Cambodia was not realistic. To implement land registration activities the Land Title Department (LTD, since 1999 the General Department of Cadastre and Geography) organized special in-house training courses during the 1989 – 1990 to provide professional education to the provincial officers. The courses included seven months of intensive training for about 100 employees. (Payne, 1996)

The Prek Leap Agriculture College (PLAC) was introduced 1992 and it has provided a diploma on cadastre for 200 students. The college provided 2.5 years education and it was functioning during the 1992 – 97. There has not been any detailed research of the qualification of the students, but it is estimated that educational level "a diploma educated" is equivalent to a primary or lower secondary school education to full secondary education in Australia (Payne, 1996). From 400 technical staff who were directly involved land titling and registration less than 50 % had attended to internal training at Phnom Penh or have graduated at the Prek Leap Agriculture College.

Payne prepared recommendations and objectives for short-term training 1996 that were provided by LTD and donor projects, the Cambodian Cadastral Project (CCP) implemented by the FINNMAP International and the Land Management Project (LMP) implemented by the GTZ during 1997 - 2000. Most of training objectives were related to very practical technical, legal and administrative issues. Payne also highlighted the need to review objectives in light of technical and political changes and involvement of possible donor assistance.

- Törhönen and Suon prepared a study of the human resources in some of the provinces in 1999. The study highlighted main findings related to human resources as:
- Situation in provinces varies from desperate to adequate, being worst in poor areas,
- Even with trained personnel there is no proper culture for quality assurance,
- While administrative rules and regulations are well followed, the technical execution is poor. (Törhönen & Suon, 1999).

Province	Takeo	Kampong Speu	Sihanoukville	Kampot	Kep	Prey Veng	Svay Rieng	Kandal	Siem Reap
Advanced Surveying Skills	exist								exist
Simple Surveying Skills	exist	poor	some	exist	poor	exist	poor	exist	some
Legal Skills	basic	basic	basic	basic	weak	-	-	weak	-

**Table 1:** Estimation of skill level in some of the Provinces 1999. (Törhönen & Suon, 1999)

Province	Takeo	Kampong Speu	Sihanouk ville	Kampot	Kep	Prey Veng	Svay Rieng	Kandal	Siem Reap	TOTAL
M Sc										0
B Sc										0
Diploma <sup>1</sup>	7	6	3	3	1	2	1	9	8	40
Technician <sup>2</sup>		7		2	4	3		34		50
Internal training	11	11	8	12	3	17	8	35		105
Additional training	12	33		47		29	27			148
pre-1975 staff	5	1	2		3					11
no training	52		41		2	45		66		206
TOTAL staff -99	75	57	56	52	13	79	36	144	67	579

**Table 2.** Education levels in some of the Provinces 1999. (Törhönen & Suon, 1999)

After the LMAP project started 2002 recruitment has been intensive. In mid 2003, approximately 1.000 staff were working with the MLMUPC and the LMAP. In March 2004, there were 1.969 staff in the Ministry working in the LMAP target provinces and four departments at the central level. In July 2004, there were 460 people working in land registration teams in eight target provinces and 90 more participating in training before systematic land registration proceeds to three new provinces. In the central level at the General Department of Cadastre and Gartography (GDCG) there are about 200 employees. Figures presented includes staff for administration, land management and cadastre.

The situation is still today that despite all the training provided to the land registration teams or provincial staff during 1992 – 2003 most of them are lacking basic knowledge with computers, practical experience of using modern equipment, and have poor understanding of the latest technology and theory. It was already foreseen 2002 that only comprehensive educational program can support development of sustainable land management and administration in long term meanwhile short term training can provide adequate skills for routine technical tasks.

## 2. FACULTY OF LAND MANAGEMENT AND LAND ADMINISTRATION

### 2.1 Background

Land Management is defined as a system of planning and management methods and techniques that aims to intergrate ecological with social, economic and legal principles in the management of land for urban and rural development purposes to meet changing human needs, while simultaneously ensuring the long-term productive potential of natural resources and the maintenance of their environmental and cultural functions. In Cambodia, no such

<sup>1</sup> Diploma from Prek Leap Agricultural College, three years

<sup>2</sup> One and half year program

education was offered and consequently there are poor human resources in the field. (Draft Curriculum for Bachelor program, 2003).

To provide a solution for a long term, the Ministry of Land Management, Urban Planning and Construction together with the Royal University of Agriculture (RUA) decided to set up a Bachelor program (4 years) and set up a short-term education (2 years) to obtain a Diploma. A MoU between the MLMUPC and the RUA was signed December 2003 to establish the Faculty of Land Management and Land Administration in the RUA in Phnom Penh under the support of the LMAP. The initiative is financially supported by the loan from the World Bank and technical assistance from the Government of Germany. Implementation is carried out with the RUA and the LMAP under Component 2, Institutional Development and it will

- Long-term institutional development of the Ministry,
- Project management to implement the project,
- Establishment of a land management and administration education program in an established university,
- Development of the private surveying industry.

provide support to four main areas including:

## 2.2 Development Objectives

The specific objectives are to produce human resources in land management and administration that meets the needs of the socio-economic development of Cambodia and to promote the formulation of special joint projects. Education program is supported by the GTZ, in forms of technical assistance to develop curriculum, provide basic teaching material and equipment. In addition, the German Government is providing one international expert through Integrated Expert Program (CIM) to work two years at the university, until October 2005 (Annual report 2002/2003).

- Develop structure of the faculty,
- Draft curriculum for a Diploma and a Bachelor program,
- Draft course descriptions including main topics,
- Create a concept for the capacity building of academic staff in the RUA and the MLMUPC, (Werhmann, 2003)

The main objectives of the GTZ supported project to develop curriculum are:

The objective for the diploma program is to qualify students by providing them a basic understanding in land issues in general and to give them specialized training in land management or land administration to improve their career and provide Cambodia more urgently needed technical staff. Applicants to the Diploma program can be new students after graduation from primary education or after passing the RUA entry exam or persons who have at least three years of practical experience with the MLMUPC.

The project objective also includes development of the private sector with licensed surveyors, land and real estate agents, valuers and land developers that will create more employment

opportunities in future. In addition the project has supported the Faculty to establish a library and provided some basic equipment and software. As a complementary action five Cambodian project staff have been supported to undertake scholarships for the Master program in Land Tenure and Land Management at the University of Munich (Annual report 2002/2003). They are already providing some of the lectures in the Faculty.

### **2.3 Development Procedure**

The first step to develop a new curriculum was to review some international recognized curricula on land management, land administration, surveying, land economic and land resources with different educational level. Based on the review an ideal curriculum in land management and land administration for students from developing countries was developed. Curriculum was mainly adapted to situation in Cambodia. Based on the ideal curriculum, a draft curriculum for a diploma and a bachelor program was developed in collaboration of the RUA and the MLMUPC. After the draft curriculum, the needs, selection and training requirement for academic staff were defined.

The structure of the Faculty was developed in collaboration with the RUA and the MLMUPC. Based on the needs assessment and available resources it was decided to establish five departments:

- Land Policy
- Surveying and Mapping
- Land Administration
- Land Management
- Geomatics

The provided course today is the Bachelor in Land Management and Administration and in near future the plans includes providing a Diploma in Cadastral Surveying and Land Administration, a Diploma in Land Management and Land Policy, special classes in Land Management and Land Administration based on demand and special short term courses for the Ministry staff in field of Cadastral Surveying, Land Administration, Land Management, Land Policy GIS and Remote Sensing.

In January 2003, the curriculum for a two years diploma program was in principal agreed by the RUA and the MLMUPC. However, there are still some open questions related to implementation of the Diploma program. Initially three specialization subjects were discussed; Land Management, Land Administration and Land Rights. The developed curriculum includes now two and further discussions are needed to define if Land Rights should be its own specialization or it is included subjects already agreed. Also the content of fourth semester shall be discussed if more courses shall be provided or time for preparing the final report could be shorter than proposed. The Diploma program has not started due to the lack of resources.

The curriculum for a four years Bachelor program was developed at the same time but not finally agreed by the RUA and the MLMUPC. However, the Faculty started 2003 with the first generation of students. At the moment there are 7 staff members working in the Faculty

while two lectures are still continuing their studies with international Master and PhD courses at the University of Munich, Germany and Hanoi, Viet Nam. The number of students at the first academic year is 38, and in the second academic year 64. Among the students there are 18 females.

The multi-donor supervisory mission in a meeting in May 2004 with the RUA and the MLMUPC agreed that future accreditation of the course would be considered after an external expert review of the course. The review shall include: student selection procedures, examinations and assessment procedures, curriculum, financial arrangements, student fees, both formal and informal and academic salaries. The review and action plan is now agreed to improve quality of the education.

The GTZ-CIM expert should supervise development of detailed “teaching plans”, guarantee with lecturers that minimum standards are followed, courses are not overlapping and all major subjects are covered during the lectures. The Wehrmann proposed that the lecturers from Ministries and other institutions should get an introduction to pedagogy to become more familiar with teaching. Equally she proposed that the Ministry staff should brief the lecturers from the University about practical issues related to qualifications and work.

#### **4. CURRICULUM**

According to the draft curriculum for the Bachelor program, the educational goals are to educate students to obtain the technical and scientific qualification, morality and practical ability in land management and administration to respond to the requirements of a sustainable development. Students will receive courses on:

- Ecological, economic and social aspect of land management,
- Legal aspect such as land rights, land law and land policy,
- Technical methods needed for surveying, land administration and land information management,
- Financial issues related to land such as land taxation
- Land management such as urban and rural land use planning ,and
- development. Students will receive courses on: Conflict management to deal with land disputes.

Studies will take four years, a study year is divided to two semester with both 16 weeks of duration. The whole program is divided to three phases;

- Two semester for general education,
- Five semester for specialized education,
- One semester for research and thesis writing.

The course descriptions are developed with information of the duration divided to theory and practice, objective and course contents. The tables below shows how the curriculum for a Bachelor program is divided in different knowledge areas and groups.

<b>Knowledge</b>	<b>Credits</b>	<b>Percentage</b>
General Education Courses	43	28 %
Specialized Education Courses	103	67 %
Student Thesis	8	5 %
<b>TOTAL</b>	<b>154</b>	<b>100 %</b>

**Table 1:** Credit courses, Bachelor Program

The General Education Courses are divided to social, natural and economic sciences, natural sciences having the main weight. The Specialized Education Courses are divided to Basic Courses, Land Policy, Surveying and Mapping, Land Management, Land Administration, Geomatics and Foreign Languages.

<b>Groups of Knowledge</b>	<b>Credits</b>	<b>Percentage</b>
Social Sciences	2	4.5 %
Natural Sciences	29	68 %
Economic Sciences	6	14 %
Languages	4	9 %
Computer Science	2	4.5 %
<b>TOTAL</b>	<b>43</b>	<b>100 %</b>

**Table 2:** General Education Courses, Bachelor Program.

Elective Courses are mainly focused to applicative areas in Land Management and Administration as natural resources management, environment, agriculture, urban and rural development. During the academic year 2003 – 2004 the Faculty provides first time in Cambodia 43 subjects as compulsory courses and additional 10 – 16 elective courses.

<b>Knowledge</b>	<b>Credits</b>	<b>Percentage</b>
Compulsory Courses	88	85.5 %
Elective Courses	12	11.5 %
Field Work and Undergraduate Seminar	3	3 %
<b>TOTAL</b>	<b>103</b>	<b>100 %</b>

**Table 3:** Specialized Education Courses, Bachelor Program.

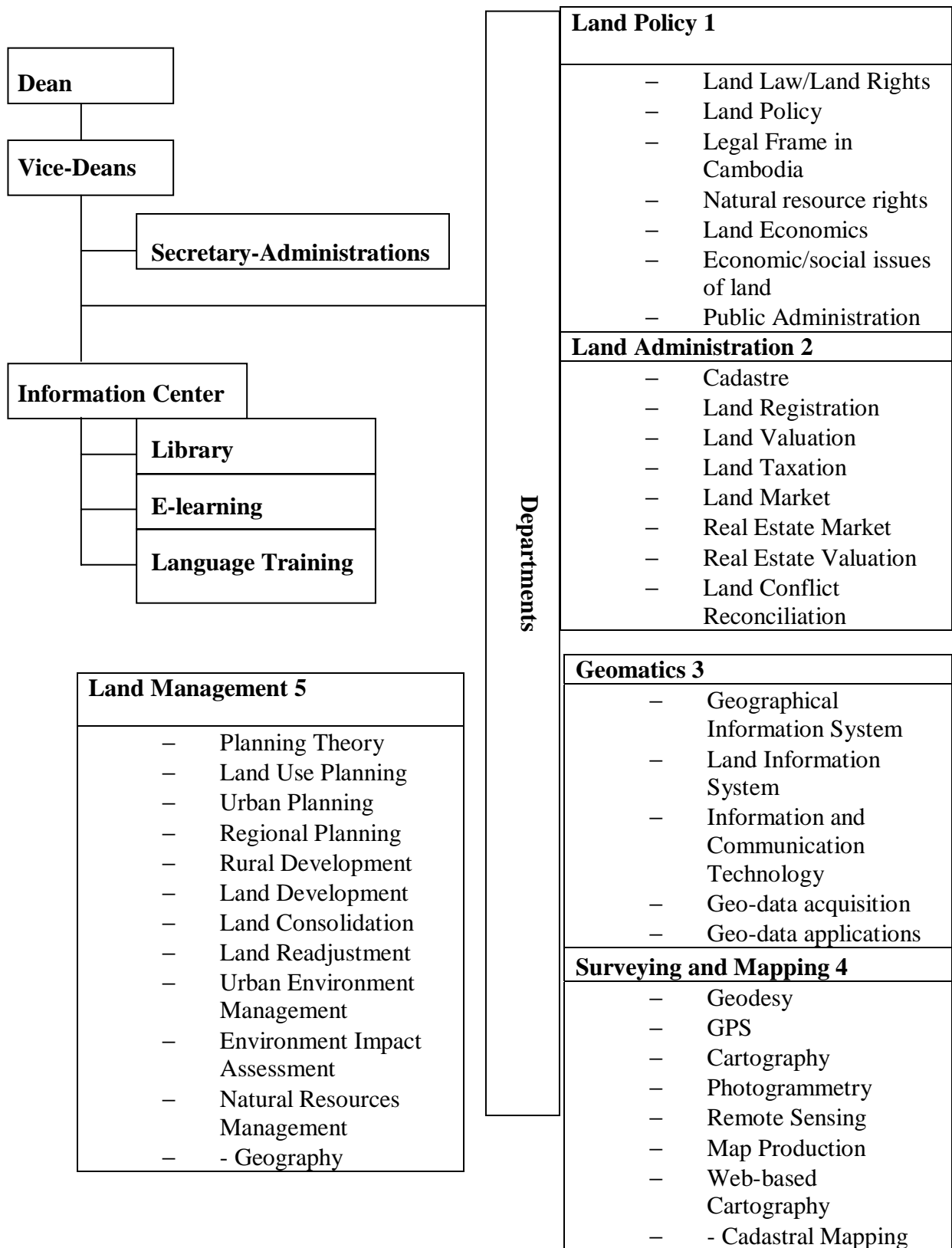
The Diploma program for Land Management and Administration takes 2 years, including 4 semesters each 16 weeks of duration. The Diploma Course is more focus to teach technical staff to improve their profession and provide new technical staff with good basic technical and practical skills. The first phase with two semesters will focus on a general introduction of land issues. The second phase also with two semesters focus on specialized education in two different fields of choice. All students must also participate in a field exercise and prepare a report on their field of specialty.



<b>Knowledge</b>	<b>Credits</b>	<b>Percentage</b>
Basic/Introductory Courses	27	52 %
Specialized Education Courses	14	27 %
- Field Exercise	1	
- Undergraduate seminar	1	
Language	3	6 %
Student's specialized report	8	15 %
<b>TOTAL</b>	<b>54</b>	<b>100 %</b>

**Table 4:** Curriculum for Diploma Program.

Faculty of Land Management and Administration: Structure



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## BIOGRAPHICAL NOTES

**Mr. Suon Sopha** is the Deputy Project Director of the Land Management and Administration Project at Ministry of Land Management, Urban Planning and Construction. Mr. Suon has a Master's Degree from Geography at the University of Kharkov (the Republic of Ukraine). He was the Manager of the Project Implementation Team for the Cambodian Cadastral Project 1997 – 2002.

**Mr. Pertti Onkalo** is the Assistant Team Leader of the Finnish Technical Assistance Team from FINNMAP International. Mr. Onkalo has a Master's Degree from Land Surveying at the Technical University of Helsinki. He was previously Technical Advisor of the Kosovo Cadastral Support Programme 1999 – 2003 supporting the re-establishment of cadastral organization in Kosovo in a post-conflict situation.

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