

Chapter 1

Introduction

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1.1 Background of the Study

Agriculture is the basic sustenance in Cambodia and the cultivation area for rice production accounts for approximately 90% of total cultivation acreage in Cambodia. Rice production is the most significant industry for the prospective development of Cambodian society and economy including its food security.

The government of Cambodia targeted poverty alleviation and rural development as the primary goal in First National Development Plan of Society and Economy (1996-2000). The government also established their target in agricultural sector for the “Food security by increasing rice production” and “Acquisition of foreign exchange and economic developments by exports of agricultural products”.

Although rice production has covered the national demand of rice since 1995 in the statistic, due to poor distribution system and inadequate post-harvest practices, there are many issues to be overcome in rice quantity and quality in Cambodia.

In 1995, Ministry of Agriculture, Forestry and Fisheries (MAFF) requested the Japanese government a technical cooperation on the formulation of Master Plan on Post-harvest Quality Control of Rice. Ministry of Commerce (MOC) also requested a technical cooperation on the formulation of Master Plan on Marketing System of Rice in 1996. After all, the both Ministries jointly submitted the request of the technical cooperation on the formulation of Master Plan on the improvement of Marketing System and Post-harvest Quality Control of Rice in January 1999.

In response, the Japanese government sent a preliminary study mission to discuss and define the Scope of Work (S/W) for the Study and it was signed by the both governments in December 1999. Based on this S/W, the Study was conducted in the period from March 2000 to August 2001.

1.2 Objectives of the Study

The objectives of the Study are:

- (a) To formulate the Master Plan for improvement of the marketing system and post-harvest quality control of rice taking into account of strengthening national food security.
- (b) To transfer technologies to Cambodian counterpart personnel through on-the-job training in the course of the Study.

1.3 Scope of the Study

1.3.1 Study Area

The Study Area covers the following 10 provinces.

Provinces of the Study area	Area (km ²)	Population	Paddy Production (ton)	Paddy Production (kg) per capita
1. Kandal	3,669	1,105,948	230,800	208.7
2. Prey Veang	4,847	973,619	425,945	437.5
3. Kampong Cham	6,358	1,656,382	438,600	264.8
4. Svay Rieng	4,847	492,511	175,700	356.7
5. Takaev	3,430	813,515	443,680	545.4
6. Kampong Spueu	6,756	616,130	119,500	193.9
7. Kampong Chhnang	5,278	429,569	165,300	384.8
8. Bat Dambang	12,501	815,831	336,980	413.0
9. Siem Reab	15,726	787,000	252,310	320.6
10. Phnom Penh	402	1,026,069	15,290	14.9
Total in Study area	63,814	8,716,574	2,604,105	298.8
Total in Cambodia	181,535	11,746,760	3,509,871	298.8

Source: Agricultural Statistics 1998/1999, MAFF

1.3.2 Study Period

The Study was carried out in the period from March 2000 to August 2001 with following steps.

Phase I

- Preparatory work in Japan (from early March 2000 to middle of April 2000)
- First field study (from middle of April 2000 to early January 2001)
- Additional field study (from middle of February 2001 to end of February 2001)
- First home office work (from middle of January 2001 to early March 2001)

Phase II

- Second field study (from end of May 2001 to early July 2001)
- Second home office work (from middle of July 2001 to end of August 2001)

1.3.3 Scope of the Study

The Study focused on the fields of marketing system and post-harvest quality control of rice in Cambodia. In order to comprehend these fields, following sectors were analyzed simultaneously.

- Market Policy
- Economic Development/ Market-oriented economy
- Marketing System
- Market Infrastructure

- Agriculture/ Post-harvest Processing
- Rural Society/People's Participation

The major preconditions for the formulation of the master plan are as below:

- Scale/level of the plan : To cover the whole country
- Planning time span : 10 years divided into 2 phases
- Excluded field : Social safety net as a social service for food security

1.4 Methodology of the Study

1.4.1 Overall Design of the Study

The entire study process is shown in the following flow chart. The Study was divided into two phases, and the basic approach of each phase was as follows.

Phase I : March 2000 ~ March 2001

Data collection, review of the present status and existing policies/plans, identification of development potential and constraints, preparation of development scenarios, and formulation of a development plan, preparation of the draft final report

Phase II : May 2001 ~ August 2001

Explanation and discussion on the draft final report, and technology transfer seminar

1.4.2 Questionnaire Survey

Five (5) types of Questionnaire Survey targeted to Farmer, Trader, Miller, Consumer and Restaurant were conducted in order to understand real situation surrounding to stakeholders. Collected data and information were used as the basis of performing detailed analysis of development needs. The detail of analysis and results are mentioned in each relevant sector and the Supporting Report. The number of collected samples (respondents) were as follows:

Object group	Number of sample	Place of survey
Farmer	900	9 provinces (exclude Phnom Penh)
Trader	143	10 provinces
Miller	131	10 provinces
Consumer	159	Phnom Penh
Restaurant	40	Phnom Penh

FLOWCHART OF THE ENTIRE STUDY

Phase	Phase I (First Year)											Phase II (Second Year)						
Year	2000											2001						
Month	March	April	May	Jun	July	August	September	October	Nov.	Dec.	Januar	February	March	April	May	June	July	Aug
Study	Preparation work in Japan			1st Field Survey								1st Homework			2nd Field Survey			2nd Homework
Step	1.Preparation of field survey			2. Analysis and assessment of current condition				3. Verification of hypotheses			4. Setting up development		5.Preparation of Master Plan		6. Explanation/ Discussion/ Seminar			7.Completion of M/P
Report Submission	IC/R			PR/R								IT/R		Text DF/R			F/R	
Flow Chart	<p>The flowchart details the following steps:</p> <ul style="list-style-type: none"> [1] Data collection, review of existing plans/documents, preparation of questionnaire [2] Preparation of the survey schedule/plan [3] Consideration of method of technical transmission [4] Preparation and submission of inception report [5] Explanation and discussion about inception report [6] Discussion about guideline of technical transmission and preparation of its spectral action plans [7] Data/information collection (Market policy, Economic development/Market oriented economy) [8] General survey of current situation [9] Field survey (Agricultural product, Marketing system, Market infrastructure, Rural society/People's Participation, Assessment of loss of post-harvest, Post-harvest process) [10] Assessment of loss of post-harvest [11] Classification of the problems and hypothesizing of market mechanism [12] Selection of target area for case study (distribution channel) [13] Preparation, submission and discussion of progress report [14] Case study (Verification of assumed solution) (Workshop at village, Market tracing survey, Assessment of loss of rainfed rice) [15] Consideration of solution to difficulties [16] Settlement of tentative development concept [17] Planning of technology transfer seminar and training [18] Preparation, submission and discussion of Interim report [19] Preparation of Master Plan [20] Preparation and submission of draft final report [21] Preparation of text for technical transmission seminar [22] Explanation and discussion of draft final report [23] Execution of technical transmission seminar [24] Preparation and submission of final report 																	
Contents of main survey	Questionnaire survey Field Survey & Hearing Assessment of loss of recession rice											Case Study Assessment of loss of rainfed rice						
Workshop/ seminar												PCM Workshops Study tour			Technology transfer seminar			

1.4.3 Loss Assessment Survey

Loss and quality assessment was conducted in the different stages, provinces and seasons. The results of the loss assessment were referred to the relevant sectors, especially Post-harvest Processing. The detail of analysis and results are stated in the Supporting Report. The number of collected data were as follows:

	Dry season cropping	Wet season cropping	Total
Harvesting	73	79	152
Drying	12	23	35
Transporting	9	22	31
Threshing	9	21	30
Storing	18	23	41
Custom mill	35	52	87
Commercial mill	13	15	28

1.4.4 PCM (Project Cycle Management) Workshops

Three (3) times of PCM workshops for rice growing farmers were conducted in Kampong Cham (9, 10, 11 of October), Bat Dambang (18, 19, 20 of October), and Takaev (7, 8, 9 of November) Provinces. Also, a workshop for commercial rice millers was conducted in Phnom Penh (21, 22, 23 of November). The results of PCM Workshops were referred to the each sector and they are stated in the Supporting Report.

1.5 Technology Transfer

1.5.1 Working Group

Following “Special Working Groups (SWG)” were organized by the counterparts for efficient working process. Through the activity of SWGs, the technology transfer to the counterparts by the Team were carried out.

Loss assessment : The SWG for loss assessment studied the required contents of the Master Plan Study, then planed the procedure, methodology, and schedule of the loss assessment survey. Member of the SWG also studied necessary data for making the balance sheet, calculation method of coefficient, total loss percentage, average quantity of seed, animal feed and self-consumption for eating. The loss assessment of dry season cropping were carried out in April and May 2000 and its wet season cropping were carried out during October and December 2000. Two (2) counterparts from MOC and another two (2) from MAFF were involved in this SWG.

Questionnaire survey : The SWG for the questionnaire survey of farmers, traders and millers was in charge of the survey designing and management of field activities. This SWG discussed the contents of each questionnaire, targeted on farmers, traders and millers and planed the schedule of execution. They were also responsible for supervision of the local surveyors in the field activity. Main members were nominated, two (2) counterparts from MOC and another two (2) from MAFF, respectively. The activity of this SWG started in June 2000 and completed in August 2000.

PCM workshop : Three (3) counterparts from MOC and six (6) counterparts from MAFF were trained as a moderator or a supporter in the PCM workshops through the three-day PCM Method Training Course in the beginning of October. The training course was conducted in English and Khmer. After the training course, they received the certificate of “PCM Method Training Course in the Study in accordance with their attendance and also the results of small tests. They participated four (4) workshops as moderator or supporter.

Quality control and inspection methodology : The SWG for quality control and inspection methodology was organized by the staff of Camcontrol, who is inspection agency under the Ministry of Commerce. They analyzed the collected samples of paddy and rice in the loss assessment survey.

1.5.2 Training Seminar in Japan

Two (2) counterparts participated in the training course in Japan.

Course Title : Group Training Course on Post-Harvest Rice Processing
Duration : August 21, 2000 – November 17, 2000
Participants : Mr. IR ORITHY,
Chief of Marketing Section of Export Promotion Department, MOC
Mr. KUY HOUT
Deputy Director of Department of Agricultural Extension, MAFF

1.5.3 Technology Transfer Seminar

Technology Transfer Seminar in the PHASE II of the Study was purposed to transfer the technology and knowledge on the marketing systems and posh-harvest quality control of rice to MOC’s staff, MAFF’s staff, farmers and marketing agents. Then, following three (3) kinds of course were arranged according the participant and total five (5) times of the seminars were carried out.

Course A was purposed to transfer the knowledge about a methodology of development planning and outcomes of the Study to officials concerned.

- A-1 for MOC/MAFF staff and DOC/DAFF staff in the provinces around Phnom Penh.
- A-2 for DOC/DAFF staff in the northwest provinces.

Course B was purposed to transfer the practical knowledge of farm level post-harvest technology to agricultural extension officers in the provinces, then to farmers. Topics of this course were about the results of the loss assessment survey, problems and improvement of farm level practices (harvesting/transporting/threshing/drying/storing), method for quality check, improvement of custom milling, etc.

Course C was purposed to transfer the practical knowledge and technology about quality control in the process of rice milling to commercial rice millers. Topics of this course were about methods for improving milling yield, method for rice/paddy quality analysis, improvement of milling system/facility, way of material procurement, etc. Due to the large number of participants, this course was conducted two times.

Course	Date	Place	Participants
Course A-1	20 – 22 June	Phnom Penh	39
Course A-2	26 – 28 June	Battambang	23
Course B	2 – 6 July	Phnom Penh	45
Course C-1	12 – 15 June	Phnom Penh	41
Course C-2	19 – 22 June	Phnom Penh	34

Details about the seminar, such as program for each course and participants list, is stated in the Supporting Report.

1.5.4 Counterparts

The counterpart agencies of the Study, MOC and MAFF, formed the Steering Committee and the Task Force for the Study. The members of the Steering Committee and the Task Force are shown in the following list.

Member List of the Steering Committee and the Task Force for the Study

Ministry of Commerce			Ministry of Agriculture, Forestry and Fisheries		
Name	Position in MOC	Position/In-charge in the Study	Name	Position in MAFF	Position/In-charge in the Study
I. Steering Committee Member					
HE. Sok Siphana	Secretary of State	Co-chairman	HE. Chan Tong Yves	Secretary of State	Co-chairman
HE. Mao Thora	Director General MOC	Member	Mr. Kith Seng	Deputy Director DPSC	Member
Mr. Prak Nork	Director Export Promotion Dept.	Member			
II. Task Force Member					
Mr. Prak Nork	Director Export Promotion Dept.	Head	Mr. Kith Seng	Deputy Director DPSC	Head
Mr. Inn Vanny	Director Green Trade Company	Deputy Head	Mr. Srey Vuthy	Chief, Agri-Marketing Office, DPSC	Deputy head, MAFF Coordinator rice quality standards and inspection
Mr. Ou Prum Virak	Chief Export Promotion Dept.	post-harvest loss assessment	Mr. Mead Yady	Vice Chief Agri-Statistics Office, DPSC	Post-harvest loss assessment
Mr. Mom Narong	Staff Green Trade Company	questionnaire	Mr. Lim Soady	Vice Chief Agri-Marketing Office, DPSC	post-harvest loss assessment, case study 3
Mr. Mao Chamreun	Staff Green Trade Company	post-harvest loss assessment	Mr. Lach Sovath	Staff DPSC	questionnaire, case study 2
Mr. Ir Orithy	Staff, Technical Bureau Export Promotion Dept.	post-harvest loss assessment	Mr. Om Pich	Staff Dept. of Agronomy	Member
Mr. Khun Bun Nak	Staff Export Promotion Dept.		Mr. Sar Bunna	Staff Dept. of Agronomy	questionnaire
Mr. Chhum Watary,	Staff Export Promotion Dept.	case study 1	Mr. Heang Rattana	Staff, DA, DALI	post-harvest loss assessment, case study 1
Mr. Seng Ramy	Staff Foreign Trade Dept.	case study 2	Mr. Thong Aun	Staff DPSC	case study 3

Ministry of Commerce			Ministry of Agriculture, Forestry and Fisheries		
Mr. Lek Mithi	Staff Foreign Trade Dept.	case study 3	Mr. Chan Narith	Staff DPSIC	case study 4
Mr. Lay Chreav	Staff Foreign Trade Dept.	case study 4	Mr. Khieu Sopheak	Chief, Agricultural Coop. Office, DAE	case study 5
Mr. Keo Sophea	Staff Foreign Trade Dept.	case study 5	Mr. Chea Sareth	Agricultural Extension Dept.	workshop
Mr. Kep Vutha	Staff Export Promotion Dept.	work shop 1	Mr. Khieu Sopheak	Chief, Agricultural Extension Office, DAE	workshop
Ms. Lay Sophol	Staff Export Promotion Dept.	work shop 2	Mr. Long Kim San	Agricultural Extension Dept.	workshop
Mr. Pheng Poch	Staff Export Promotion Dept.	post-harvest loss assessment, work shop 3	Mr. Ouk Saroeun	Staff, DAE	workshop
Mr. Enng Punna	Chief, Inquiry Bureau, Camcontrol	rice quality standards and inspection	Mr. Ham Phalla	Agricultural Extension Dept.	workshop
Mr. Saroeun Kessara	Deputy chief, Laboratory, Camcontrol	rice quality standards and inspection	Mr. Hen Kra	Staff, DPSIC	workshop
Mr. Sin Sadeth	Staff, Laboratory, Camcontrol	rice quality standards and inspection	Mr. Sar Bunna	Staff, DALI, DAE	questionnaire
Mr. Pen Pheareth	Staff, Information Bureau, EPD		Mrs. Sakahan Sophany	Technical staff, Seed Production, CARDI	rice quality standard and inspection
Mr. Pheng Poch	Staff, Technical Bureau, EPD	post-harvest loss assessment	Mr. Lack Sovath	Staff, Agricultural Marketing Office, DPSC	questionnaire
Mr. Mao Chamreun	Staff, Green Trade Company	post-harvest loss assessment			
Mr. Pech Sokpo	Staff, Technical Bureau, EPD	questionnaires			
Mr. Tren Vithol	Staff, Information & Publication Bureau, EPD	questionnaire			
Mr. Khun Soponnak	Staff, EPD	questionnaire			
Mr. Van Narith	Deputy Director, EPD	MOC coordinator			

1.6 Reports

The following shows the reports to be prepared and submitted to Cambodian side.

Report	Time of submission	Composition & Language
Inception Report	Phase I beginning of the Field study April 2000	English
Progress Report	Phase I middle of the Field study September 2000	English Khmer (summary only)
Interim Report	Phase I end of the Field study January 2001	Main report and ANNEX English Khmer (main report only)
Draft Final Report	Phase II in the Field study June 2001	Main report and Supporting report English Khmer (main report only)
Final Report	September 2001 (to be submitted)	Main report and Supporting report English Khmer (main report only)