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#### 1. 実施細則 (S/W)

SCOPE OF WORK
FOR
THE STUDY ON
IMPROVEMENT OF MARKETING SYSTEM
AND
POST-HARVEST QUALITY CONTROL
OF RICE
IN CAMBODIA

#### AGREED UPON BETWEEN

## THE ROYAL GOVERNMENT OF CAMBODIA AND THE JAPAN INTERNATIONAL COOPERATION AGENCY

Phnom Penh, 9 December 1999

HE. Sok Siphana
Secretary of State
Ministry of Commerce
Royal Government of Cambodia

HE. Chan Tong Yves
Secretary of State
Ministry of Agriculture, Forestry
and Fisheries

Royal Government of Cambodia

Mr. Mitsuo Nakamura Leader of Preparatory Study Team Japan International Cooperation Agency

#### I. INTRODUCTION

In response to the request of the Royal Government of Cambodia (hereinafter referred to as "RGC"), the Government of Japan decided to conduct the Study on Improvement of Marketing System and Post-harvest Quality Control of Rice in Cambodia (hereinafter referred to as "the Study") in accordance with the relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programmes of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of RGC.

The present document sets forth the scope of works with regard to the Study.

#### II. COUNTERPART AGENCY

The Ministry of Commerce (hereinafter referred to as "MOC") and the Ministry of Agriculture, Forestry and Fisheries (hereinafter referred to as "MAFF") shall act as the counterpart agencies.

#### III. OBJECTIVES OF THE STUDY

The objectives of the Study are:

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

#### IV STUDY AREA

The Study area is covered by the provinces of Kandal, Prey Veng, Kampong Cham, Svay Rieng, Takeo, Kampong Speu, Kampong Chhnang, Battambang, Siem Reap and Phnom Penh. The location map is attached as ANNEX-1.

#### V. SCOPE OF THE STUDY

The Study would consist of two phases with the contents of following study items.

PHASE-I: the Master Plan Formulation

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- (a) To collect relevant data and information
- (b) To review development plan (s) and project (s)
- (c) To collect and analyze existing data and information and to conduct field surveys in the study area on the followings:
  - (1) framework of transitional economy
    - national policy
    - policies for agricultural and rural development
    - policies for marketing of rice and other agricultural products
    - current role / function of government and private sectors in marketing and post-harvest quality control of rice
    - others

#### (2) natural conditions

- meteorology
- topography
- geology
- water resources
- others
- (3) socio-cultural and socio-economic conditions of rural area
  - norm and culture
  - rural social structure
  - house-hold economy
  - credit
  - land tenure system
  - gender related issues
  - others

#### (4) agricultural conditions

- land use
- crop production
- farming practices including cropping pattern and livestock management
- farmer's organizations
- others
- (5) marketing system and infrastructure of rice
  - marketing channel
  - pricing mechanism
  - marketing facilities and their management systems
  - marketing information system
  - laws and regulations of international trade
  - others



- (6) post-harvest quality control of rice
  - qualitative and quantitative losses in the process of harvesting, threshing, cleaning, drying, milling, transporting and storing
  - post-harvest facilities and their management systems
  - technical assistance and training activities
  - quality control and requirements including standards
  - others

#### (7) demand / supply of rice

- national and regional balance between demand and supply
- the domestic demand forecast
- others
- (d) To identify problems and constraints for effective marketing and post-harvest quality control of rice
- (e) To formulate the Master Plan including recommendations for the policy mesures
  - (1) improvement of marketing system of rice
  - (2) improvement of post-harvest quality control of rice

#### PHASE- II: Technology transfer

- (a) To transfer the technology and knowledge on the marketing systems and postharvest quality control of rice to MOC's staff, MAFF's staff, farmers and others.
- (b) To train farmers on the improvement of post-harvest quality control of rice

#### VI. STUDY SCHEDULE

A tentative study schedule is attached in ANNEX-2.

#### VII. REPORTING

JICA shall prepare and submit the following reports to RGC:

Inception Report : Twenty (20) copies in English at the start of Phase-I field work
Progress Report : Twenty (20) copies in English at the middle of Phase-I field work
Interim Report : Twenty (20) copies in English at the end of Phase-I field work
Draft Final Report : Twenty (20) copies in English at the start of Phase-II field work;



RGC shall submit written comments on the DF/R to JICA within one (1) month after receiving the reports

Final Report

: Twenty (20) copies in English within two (2) months after the receipt of comments from RGC

#### VIII. UNDERTAKING OF RGC

- 1. To facilitate smooth conduct of the Study, RGC shall take necessary measures:
  - (a) To secure the safety of the Japanese study team(s);
  - (b) To permit the members of the Japanese study team(s) to enter, leave and sojourn in Cambodia for the duration of their assignment therein, and exempt them from foreign registration requirements and consular fees;
  - (c) To exempt the members of the Japanese study team(s) from taxes, duties, fees and any other charges on equipments, machinery and other materials to be brought into and out of Cambodia for the conduct of the Study;
  - (d) To exempt the members of the Japanese study team(s) from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Japanese study team for their services in connection with the implementation of the Study;
  - (e) To provide necessary facilities to the Japanese study team(s) for the remittance as well as the utilization of the funds introduced into RGC from Japan in connection with the implementation of the Study;
  - (f) To secure permission for the members of the Japanese study team(s) to enter into private properties and other areas for the implementation of the Study;
  - (g) To secure permission for the members of the Japanese study team(s) to take all data and documents related to the Study, including maps and photographs, out of Cambodia to Japan; and,
  - (h) To provide the Japanese study team(s) with medical services as needed, the expenses of which shall be chargeable to the members of the Japanese study team(s).
- 2. RGC shall bear claims, if any arises, against the members of the Japanese study team(s) resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Japanese study team(s).
- 3. MOC and MAFF shall act as the coordinating bodies in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.



- 4. MOC and MAFF shall provide, at their own expense, the Japanese study team(s) with the following, in cooperation with other organizations concerned:
  - (a) available data, information and maps related to the Study;
  - (b) counterpart personnel;
  - (c) suitable office space with necessary equipment and furniture including telephone and office assistants in Phnom Penh and in the field sites;
  - (d) credentials or identification cards; and,
  - (e) additional surveys related to the Study, if necessary.

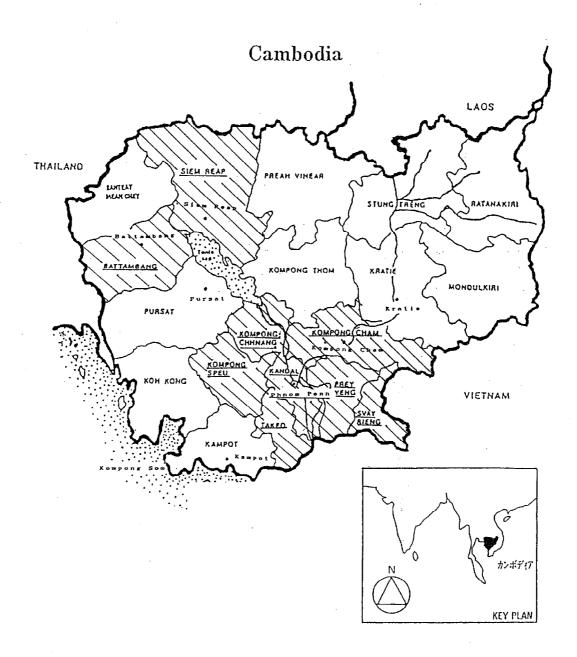
#### IX. UNDERTAKING OF JICA

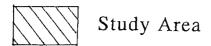
For the implementation of the study, JICA shall take the following measures:

- (a) To dispatch, at its own expense, study team(s) to Cambodia; and,
- (b) To pursue technology transfer to the Cambodian counterpart personnel in the course of the study.

#### X. CONSULTATION

JICA and RGC shall consult with each other in respect of any matters that may arise from or in connection with the Study.







#### TENTATIVE WORKING SCHEDULE

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Work in Cambodia				1.0	ð .										<b>35.</b>		0			
Work in Japan	Ę												П							
Phasing	•					PI	HASE:						<b>→</b>		•	PHA	SE 2	->		
Reports		Δ				1	7				Δ.				Δ.	<del> </del>		Δ		
		lc/R	<u> </u>			Ρ,	/R				It/R				Df/R			F/R		

lc / R : Inception Report

P/R : Progress Report

It / R : Interim Report

 $\mathsf{Df} \, / \, \mathsf{R} \qquad : \qquad \mathsf{Draft} \, \mathsf{Final} \, \mathsf{Report}$ 

F/R : Final Report

© : Submission of written comments on DF/R by Cambodian side

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#### 2. 協議議事録 (M/M)

MINUTES OF MEETING
ON
THE SCOPE OF WORK
FOR
THE STUDY
ON
IMPROVEMENT OF MARKETING SYSTEM
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POST-HARVEST QUALITY CONTROL
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and Fisheries
Royal Government of Cambodia

Mr. Mitsuo Nakamura Leader of Preparatory Study Team Japan International Cooperation Agency

#### I. INTRODUCTION

In response to the request of the Government of the Royal Government of Cambodia , the Preparatory Study Team headed by Mr. M. NAKAMURA was sent to Cambodia by the Government of Japan through the Japan International Cooperation Agency (hereinafter referred to as "JICA"), from 29th November to 10th December, 1999 for the purpose of discussing and confirming the Scope of Work for the Study on Improvement of Marketing System and Postharvest Quality Control of Rice in Cambodia (hereinafter referred to as "the Study").

The Preparatory Study Team had a series of discussions with the officials from the Ministry of Commerce (hereinafter referred to as "MOC") and the Ministry of Agriculture, Forestry and Fisheries (hereinafter referred to as "MAFF").

As a result of the discussion, the Cambodian Side and the Preparatory Study Team agreed on the Scope of Work of the Study. Important points discussed between both sides are recorded in the following section.

The list of participants is attached as ANNEX-1.

#### II. RESULTS OF DISCUSSIONS

#### 1. Study Area

Both sides agreed that the Study Team shall exclude a part of the study area from the Study, wherever security problems arise.

#### 2. Steering Committee

For smooth and effective implementation of the Study, both sides agreed to establish the Steering Committee which shall comprise institutions concerned with the Study.

#### 3. Counterpart personnel

Both sides agreed that RGC shall take responsibility for assigning enough number of qualified counterpart personnel prior to the arrival of the Study team.

#### 4. Necessary Equipment and Facilities for the Study

MOC promised to provide the Study Team with desks, chairs and the exclusive use of telephone lines in suitable office space both in the Phnom Penh and in the field sites.

The Cambodian side requested that vehicles for the Study should be provided by the Government of Japan.

#### 5. Interpreters for the Study

The Cambodian side requested that interpreters for Khmer-English who can conduct the Study with the Study Team should be provided by the Government of Japan.

#### 6. Expense for Field Surveys

The Cambodian side requested that expenses on counterpart personnels for field trip should be provided by the Government of Japan.



### 7. Training of Counterpart Personnel

The Cambodian side requested the counterpart training in Japan for an effective technology transfer. The Study team promised to convey the request to the Government of Japan for consideration.

#### 8.. Final Report

Both sides agreed that the final report of the Study would be made open and available to the public.



#### LIST OF PARTICIPANTS

#### Cambodian Side

#### Ministry of Commerce

Mr. Mao Thora

Director General

Mr. Prak Nork

Director, Export Promotion Department

Mr. Koh Yean

Deputy Director, Internal Trade Department

Mr. Sim Hong

Chief of Planning Office, Internal Trade Department

Ministry of Agriculture, Forestry and Fisheries

Mr. Srey Vuthy

Chief, Agricultural Marketing Office, Department of

Planning Statistics and International Cooperation (DPSC)

Mr. Lim Saody

Vice Chief, Agricultural Marketing Office, DPSC

Mr. Meach Yady

Vice Chief, Statistic Office, DPSC

Mr. Lach Sovath

Agricultural Marketing Office, DPSC

Mr. Sar Bunna

Department of Agronomy

Mr. Heang Ratana

Department of Agronomy

Mr. Op Pich

Department of Agronomy

Green Trade Company

Mr. In Vanny

Deputy General Director

#### Japanese Side

#### Preparatory Study Team

Mr. Mitsuo Nakamura

Team Leader

Mr. Shigeru Tamesue

Agriculture / Post-harvest

Mr. Makoto Takeuchi

Marketing Policy

Mr. Yasuhisa Kuroda

Transitional Economy

Mr. Masami Suda

Marketing System and Infrastructure

Ms. Suzuka Maruyama

Project Planning

JICA Expert

Mr. Hiroshi Kudo

Ministry of Agriculture, Forestry and Fisheries

Mr. Takehiko Ogawa

Ministry of Commerce

Application for the Technical Cooperation by the Royal Government of Cambodia

The Study
on
Improvement of Marketing System
and
Post-harvest Quality Control
of
Rice in Cambodia

September 1998

Ministry of Commerce Ministry of Agriculture, Forestry and Fisheries

KINGDOM OF CAMBODIA

#### Technical Cooperation by the Government of Japan

## **Application**

#### 1. Study Digest

#### (1) Study Title:

The Study on Improvement of Marketing System and Post-harvest Quality Control of Rice in Cambodia

#### (2) Location (Please attach a location map):

- a) Lowland reigion: Kandal, Prey Veng, Kampong Cham, Svay Rieng, Takeo
- b) Costal region; Kampot
- c) Plateau and mountain region: Kampong Speu
- d) Tonle Sap, Great lake region: Battambang, Siem Reap

Location map is as per attached ANNEX 1.

#### (3) Responsible Ministries:

- a) Name of Ministries: The Ministry of Commerce (MOC) and the Ministry of Ariculture, Forestry and Fisheries (MAFF) will be implementing agencies.
- b) Number of Staff at the Ministries: 2155 staff for MOC and 5194 for MAFF
- c) Budget Allocatd at the Ministries: as per attached ANNEX 2
- d) Organization Chart: as per attached ANNEX 3-a and ANNEX 3-b

#### (4) Justification of the Study

#### a) Present Situation of the Sector

With 85 percent of the population in the rural areas, the agricultural sector provides basic sustenance to the bulk of the population. Agriculture and its related subsectors such as livestock, fisheries and forestry contribute to about half of Cambodia's GDP and provides direct employment to nearly 80 percent of the labor force. Rice accounts for 90 percent of the cropped area, one-third of the total value of agricultural production and almost three quarters of caloric intake. Since 85 percent of the lower income group are farmer headed households, the key to the sustained economic growth, poverty

## Technical Cooperation by the Government of Japan

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alleviation and development of the rural economy is agriculture, expecially, rice production.

Regarding the marketing of rice, while Cambodia is transiting from a centrally-planned economy to a market-oriented economy, the state-owned trade sector has been reduced from its former role as an agricultural products purchaser and seller to just a mediator between traders and farmers/producers. Cambodia started to perceive troubles in the marketing mechanism, because the private traders are much more interested in undertaking fast earning trade activities rather than buying and selling agricultural products where so many constraints exist.

Although rice marketing has now been liberalized and a free market system exists, the food security problem is also related to the problem of internal communications within the country, affecting the distribution of rice. The lack of rural infrastructure for rice marketing as well as the lack of purchasing power by poor households will result in the situation where rice is exported to neighboring countries such as Thailand and Vietnam, and, at the same time, provinces and households within the country is acutely short of rice.

In addition to the problem of food insecurity, inefficiency of rice marketing will make Cambodia lose the opporunities of export of rice. Rice will be one of major exporting agricultural products to earn foreign currencies, if there are sufficient surpluses of rice, as was often the case in Cambodia before. A recent study has suggested that world rice import demand may increase by as much as 70 percent over the next 30 years. Inefficient marketing system of rice for export will also hamper the increase of rice export in future, even if there are surpluses of rice.

Meanwhile, the post-harvest control of rice is another critical problem. The Ministry of Agriculture, Forestry and Fisheries recently estimated that the average post-harvest paddy losses is approximately 15-17 percent. However, the estimate is rather based on the intelligent guesses of national and international experts, in the country than on reliable assessment of such losses. It is widely believed hat the extent of the post-harvest losses is generally much greater, as much as 50 percent of the total crop, and that the country's situation is far more serious than those of other Asian countries, where the post harvest paddy/rice losses range from 10 percent - 30 percent for the stages from harvesting to milling and marketing.

In spite of the seriousness of the problem, there is little clear-cut understanding on the situation and cause of losses and, therefore, no systematic measures have been taken to improve post harvest operations in the country. Thus, there is an urgent necessity to assess the current situation and identify the cause of post-harvest losses at all stages of the operation as well as to introduce improved post-harvest technologies aims at minimizing the losses and policy measures to facilitate the improvement.

#### b) Sectoral Development Policy of the National Government

The improvement of the marketing system as well as the post-barvest quality control for the reduction of losses of rice will significantly contribute to poverty alleviation and rural development, which is the primary objective of the First Socio-Economic Development Plan (SEDP) 1996-2000.

At the same time, the said improvement will also contribute to some of the following SEDP's basic goals in the agricultural sector:

- to ensure food security through expansion in the production of rice and other food crops;
- to contribute to economic growth and to foreign exchange earnings through exports;
- to improve income generation opportunities for farm households; and
- to add value to crop and livestock production.

#### c) Problems to be solved in the sector

Food insecurity is just one aspect of rural poverty, and reducing poverty across the country will need to be achieved not just by general agricultural development but also by the adoption of measures to impove the marketing system of rice, which is the major crop in Cambodia.

Immediate support for Cambodian farmers is essential to ensure them with optimum revenue from rice production. They endure abnormal losses during harvest, transportation, stockpiling and etc. At the same time, poor market infrastructure, technology and equipment for drying, storage and milling are the main problem to hamper the smooth marketing of rice. Although Cambodia was a significant exporter in the past, and it is endowed with the large proportion of total area under rice cultivation, Cambodia will lose a significant portion of opportunities of exports. In this way, the poor marketing system as well as the poor post-harvest quality control hampers the revenue increase for farmers as well as the earnings of foreign currencies in future.

#### d) Objectives of the Project

The objectives of the Project are:

- to survey the present situation of marketing and post-harvest quality control;
- to assess the constraints for marketing and post-harvest quality control;
- to suggest the policy measures for marketing and post-harvest quality control;
- to forecast the domestic and international demand for rice;
- to formulate the overall and long-term master plan for the improvement of the marketing system and post-harvest quality control of rice
- to select the priority areas for the feasibility study
- to preliminarily design the project components under the priority projects under the feasibility study
- to technically, finacially, economically, socially and environmentally evaluate the feasibility of the priority projects
- to train MOC's staff and MAFF's staff on the improvement of the marketing system of rice
- to transfer, through lectures and seminars, the technology and knowledge on the marketing system and post-harvest control of rice to MOC's staff, MAFF's staff and farmers

#### e) Goal of the Project

The goals of the Project are:

- to elminate the immediate position of rice deficit
- to provide for the anticipated increase in the urban population being supplied by rural production
- to increase the availability of rice among the most vulnerable segments of the population
- to provide the opportunities for the expansion of the export of rice
- to increase the rice production through reduction of losses
- to provide the efficiency of input initialization

#### f) Prospective Beneficiaries

The number of the direct beneficieries would be approximately 5,453,000 which is 70 percent of the total population of 7,790,000 and who are rice producing farmers and families in Kandal, Kampong Cham, Scey Rieng, Prey Veng, Takeo, Siem Reap Battambang, Kampot and Kampong Speu. In addition to the number of the direct beneficieries, the number of rice producing population of 2,910,000 in other provinces

would be indirectly benefitted from the project, since the results of the study could be applied to other provinces outside the Study area.

#### (5) Estimated Starting Date, Duration

The study should be preferably started at the beginning of April, 1999 with the duration of 21 months.

#### (6) Expected Funding Source after the Study Results

It is expected to apply for the grant aid programme of the Government of Japan.

#### (7) Other Related Projects, if any

- a) Project TCP/CMB/4452 supported by FAO that carried out a pilot survey on livestock and crop (MAFF)
- b) Crop assessment 1995/1996 (MAFF)
- c) Crop assessment 1996/1997 (MAFF)
- d) Project proposal of the grant aid for rehabilitation of existing rice mills (MOC)

#### 2. Terms of Reference (TOR)

#### (1) Necessity and Justification of the Study

Rice is by far the most important crop. Its cultivation is concentrated around the Tonle Sap Lake and the upper reaches of the Mekong delta.

Regarding the marketing of rice, while Cambodia is transiting from a centrally-planned economy to a market-oriented economy, the state-owned trade sector has been reduced from its former role as an agricultural products purchaser and seller to just a mediator between traders and farmers/producers. Cambodia started to perceive troubles in the marketing mechanism, because the private traders are much more interested in undertaking fast earning trade activities rather than buying and selling agricultural products where so many constraints exist.

Although rice marketing has now been liberalized and a free market system exists, the food security problem is also related to the problem of internal communications within the country, affecting the distribution of rice. The lack of rural infrastructure for rice marketing as well as the lack of purchasing power by poor households will result in the situation where rice is exported to neighboring countries such as Thailand and Vietnam,

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In spite of the seriousness of the problem, there is little clear-cut understanding on the situation and cause of losses and, therefore, no systematic measures have been taken to improve post harvest operations in the country. Thus, there is an urgent necessity to assess the current situation and identify the cause of post-harvest losses at all stages of the operation as well as to introduce improved post-harvest technologies aims at minimizing the losses and policy measures to facilitate the improvement.

#### (2) Necessity and Justification of Japanese Technical Cooperation

The government of Japan has been significantly contributing to the agricultural sector, and it is well recognized that the Government of Japan, through JICA, has been involved in a wide range of the projects for the improvement of marketing and post-harvest quality control of rice. Therefore, it is the most justifiable for Cambodia to apply for the Japanese technical cooperation programme.

#### (3) Objectives of the Study

#### a) Objectives for the improvement of the marketing system of rice

- to survey the present situation of the marketing of rice
- to assess the constraints for the effective marketing of rice
- to suggest the policy measures for the effective marketing of rice
- to forecast the domestic and international demand for rice
- to formulate the overall and long-term master plan for the improvement of the marketing system of rice
- to select the priority areas for the feasibility study
- to preliminarily design the project components under the priority projects under the feasibility study
- to technically, finacially, economically, socially and environmentally evaluate the feasibility of the priority projects
- to train MOC's staff on the improvement of the marketing system of rice
- to transfer, through lectures and seminars, the technology and knowledge on the marketing system of rice to MOC's staff and farmers

#### b) Objectives for the improvement of the post-harvest quality control of rice

- to survey the present situation of the post-harvest quality control of rice
- to assess the constraints for the effective post-harvest quality control of rice
- to forecast the demand for the post-harvest treatment
- to suggest the policy measures for the effective post-harvest quality control of rice
- to formulate the overall and long-term master plan for the improvement of the post-harvest quality control
- to select the priority areas for the feasibility study
- to preliminarily design the project components under the priority projects under the feasibility study
- to technically, finacially, economically, socially and environmentally evaluate the feasibility of the priority projects
- to train MOC's staff on the improvement of the post-harvest quality control of rice
- to transfer, through lectures and seminars, the technology and knowledge on the post-harvest quality control of rice to MOC's staff and farmers

#### (4) Area to be covered by the Study

Although the study should preferably cover the whole country, due to the constraints of budget and logistics, the study will be limited to the following 9 provinces which are main rice-producing areas. The amount of rice production for the last wet/dry seasons as well as the rice balance by province is as per attached ANNEX 4-a, 4-b and 4-c.

- a) Lowland region: Kandal, Prey Veng, Kampong Cham, Svay Rieng and Takeo
- b) Coastal region: Kampot
- c) Plateau and mountain region: Kampong Speu
- d) Tonle Sap, Great Lake region: Battambang, Siem Reap

#### (5) Scope of the Study

The study shall be divided into two phases of Phase I and Phase II.

#### a) Phase I: Master Plan Study

- i) Collection of basic data and information of the study area
  - National development plan
- Institutional and legal framework
- Natural conditions
- Socio-economic conditions
- agricultural production, consumption and trade
- ii) Survey on the present sitiuation
- Present situation of marketing of rice
- Present situation of post-harvest quality control

#### iii) Assessment of the constraints

- constraints for the effective marketing system of rice
- constraints for the effective post-harvest quality control of rice

#### iv) Suggestion for the policy measures

- policy measures for the improvement of the marketing system of rice
- policy measures for the improvement of the post-harvest quality control

#### v) Forecast of the demand of rice

- domestic demand
- international demand for the export market

#### vi) Formulation of the overall and long-term master plan

- Master plan for the improvement of the marketing system of rice
- Master plan for the improvement of the post-harvest quality control

#### vii) Selection of the priority areas for the feasibility study

- setting up the criteria for the selection
- selection of 4 priority provinces for the feasibility study

#### b) Phase II: Feasibility Study

#### i) Formulation of the basic programme for the priority areas

- Formulation of the basic programme by the participatory planning under PCM method
- Selection of the project components for the priority areas

## ii) preliminarily design the project components under the priority projects under the feasibility study

- Preliminary design of the project components
- Overall cost estimate of the project components

#### iii) Evaluation of the feasibility of the priority projects

- Technical evaluation
- Financial evaluation (FIRR)
- Economic evaluation (EIRR)
- Social evaluation
- Environmental evaluation (IIE)

#### iv) Transfer of the technology and knowledge

- Holding seminars for MOC's staff, MAFF's staff and beneficiaries
- Presentation of the results of the participatory planning under PCM method

#### (6) Study Schedule

The duration of the study will be approximately 21 months, and the proposed study schedule is as per attached ANNEX 5.

#### (7) Expected Major Outputs of the Study

The following English reports will be submitted to Cambodia

#### a) Incepion Report

Tweny (20) copies at the commencement of Phase I field work

#### b) Progress Report (1)

Twenty (20) copies at the end of Phase I field work

#### c) Interim Report

Twenty (20) copies at the commencement of Phase II field work

#### d) Progress Report (2)

Twenty (20) copies at the end of Phase II field work

#### e) Draft Final Report

Twenty (20) copies at the end of Phase II home office work

#### f) Final Report

Fifty (50) copies within two (2) months after the receipt of comments on the Draft Final Report

## (8) Request of the Study to other donor agencies, if any

Nothing in particular.

#### (9) Other Relevant Information

Nothing in particular.

#### 3. Facilities and Information for the Study Team

#### (1) Assignment of the counterpart personnel of the implementing agency

The Ministry of Commerce will be a main implementing agency, and the Ministry of Ariculture, Forestry and Fisheries will be a supporting implementing agency. The following 16 officials will be main counterparts in this Study.

Ministry	Number of Personnel	Expertise
MOC	1	Trading Management
мос	2	Marketing Planner
мос	2	Rice Trading Officer and Rice Mill Engineer
MOC	1	Designer for Marketing Facilities
мос	1	Cost Estimater for Marketing Facilities
мос	11	Economist
MAFF	1	Agricultural Management
MAFF	2	Agronomist
MAFF	2	Post-harvest Quality Control Specialist
MAFF	1	Designer for Post-harvest Quality Control Facilities
MAFF	1	Cost Estimater for Post-harvest Facilities
MAFF	1	Agro-economist

- (2) Available data, information, documents, maps, etc. related to the Study The following reports are available related to the Study
- a) First Socio-economic Development Plan 1996-2000 by Ministry of Planning
- b) Agricultural Statistics 1996-1997 by MAFF
- c) Report of Agricultural Marketing in Cambodia, MAFF and FAO
- d) Crop Assessment 1995/1996 by MAFF
- e) Crop Assessment 1996/1997 by MAFF In addition to the above, a wide range of data, information and documents are available in both MOC and MAFF.
- (3) Provision of the office space, public utilities, office equipment, local costs, etc. Both MOC and MAFF will provide the necessary office space, equipment and local costs with the Study team in accordance with the formalities and budget of the Royal Government of Cambodia.
- (4) Information on the security conditions in the Study areas and its access routes

The Government of Cambodia will secure the sefety of the study team as much as possible.

#### 4. Global Issues (Environment, Women in Development, Poverty, etc.)

#### (1) Environmental components in the Study, if any

Nothing in particular. Facilities for marketing and post-harvest quality control are not directly related to environmental components.

(2) Anticipated environmental impacts by the implementation of the Study, if any Nothing in paricular. Facilities for marketing and post-harvest quality control do not have negative impacts on the environment.

#### (3) Women as major beneficiaries or not

It is widely recognized that 75% of the agricultural activities are carried out by women, the improvement of the post-harvest control and the marketing system, which increases the farmers' income, will significantly enhance the living standard of women in the study area

- (4) Study components which should be paid special attention to women, if any When the facilities for the improvement of the marketing system and the post-harvest quality control are designed, special attention should be paid on the benefits of women.
- (5) Anticipated impacts on women by the implementation of the Study, if any No negative impacts on women will be anticipated.

#### (6) Poverty reduction components of the Study, if any

Although there are directly no poverty reduction components, the project components related to the marketing system and post-harvest quality control would indirectly contribute to the poverty reduction in the study area.

- (7) Any constraints against the low income people by the implementation of the Study, if any
  Nothing in particular.
- (8) Other negative social and cultural impacts by the implementation of the Study, if any
  Nothing in particular.

#### 5. Undertakings of the Government of Cambodia

In order to facilitate a smooth and efficient conduct of the Study, the Government of Cambodia shall take necessary measures:

- (1) To secure the safety of the Study Team
- (2) To permit the members of the Study team to enter, leave and sojourn in Cambodia in connection with their assignments theirin, and exempt them from foreign registration requirement and consular fees.
- (3) To exempt the Study team from taxes, duties and any charges on equipment, machinery and materials brought into and out of Cambodia for the conduct of the Study.
- (4) To exempt the Sudy team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Study team for their services in connection with the implementation of the Study.
- (5) To provide necessary facilities to the Study team for remittance as well as utilization of the funds introduced in Cambodia from Japan in connection with the implementation of the Study.

(6) To secure permission for entry into private properties conduct of the Study.

for the

- (7) To secure permission for the Study to take all data, documents and necessary materials related to the Study out of Cambodia to Japan
- (8) To provide medical services as needed. Its expenses will be chargeable to members of the Study team.

6.

The Government of Cambodia shall bear claims, if any arises against member(s) of the Japanese Study team resulting from, occurring in the course of or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the member of the Study team.

7.

The Ministry of Commerce and the Ministry of Agriculture, Forestry and Fisheries shall jointly act as counterpart agencies to the Study team and also as coordinating bodies in relation with other governmental and non-governmental organizations

concerned for the smooth implementation of the S

CHAM PRASIDH

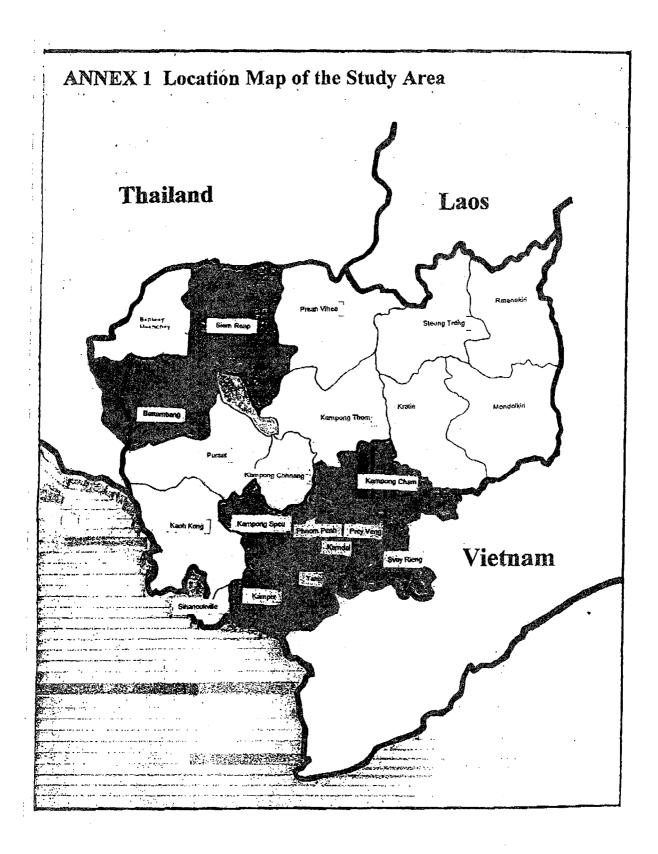
e Minister of Commerce

CHHEA\_SONG

Minister of Agriculture, Forestry and Fisheries

On behalf of the Royal Government of Cambodia

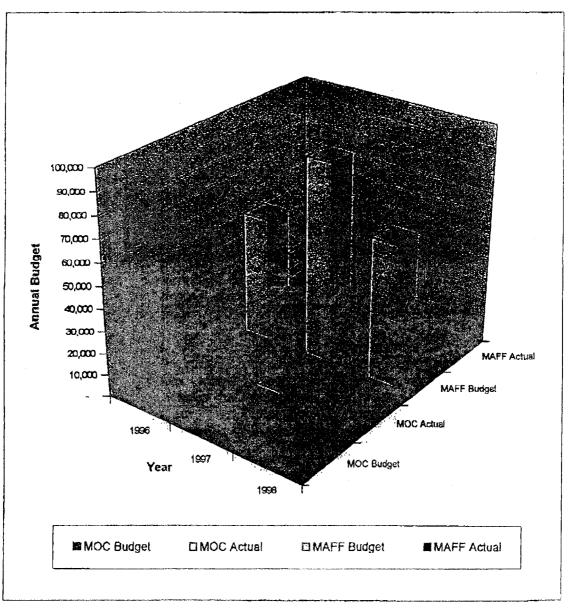
Date: September 25, 1998



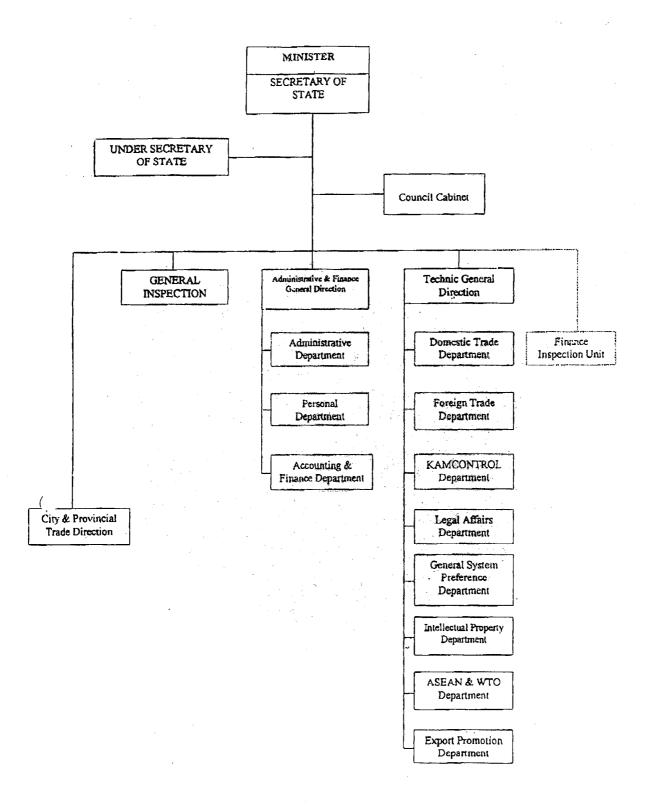
ANNEX 2 Budget for Ministry of Commerce and Ministry of Agriculture

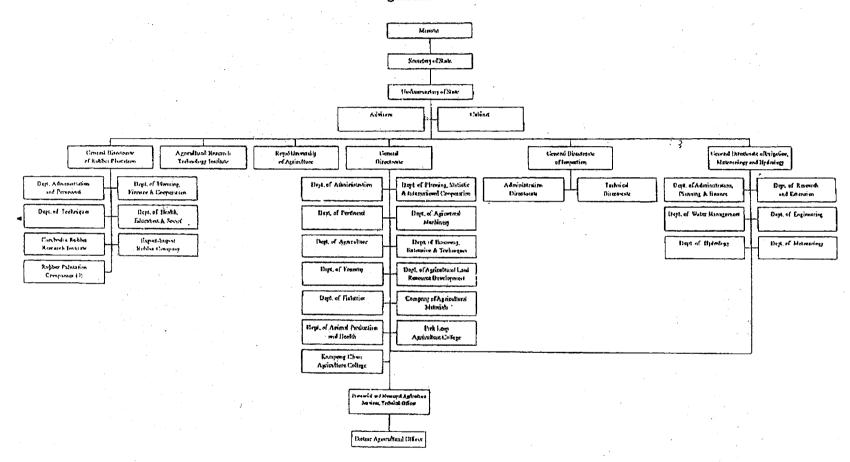
Unit: Million Riel

Year	MA	(FF	MOC						
real	Planned Budget	Actual Disbursement	Planned Budget	Actual Disbursement					
1996	56,510	11,631	2,399	1,153					
1997	90,750	17,105	2,870	1,322					
1998	63,895	n.a.	4,362	n.a.					



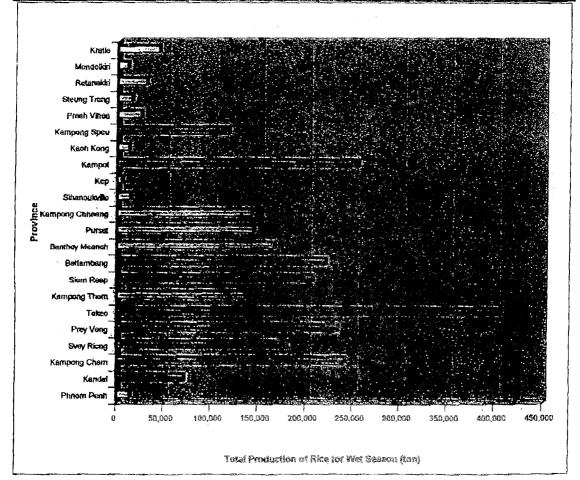
#### ANNEX 3-a Organization Chart of MOC





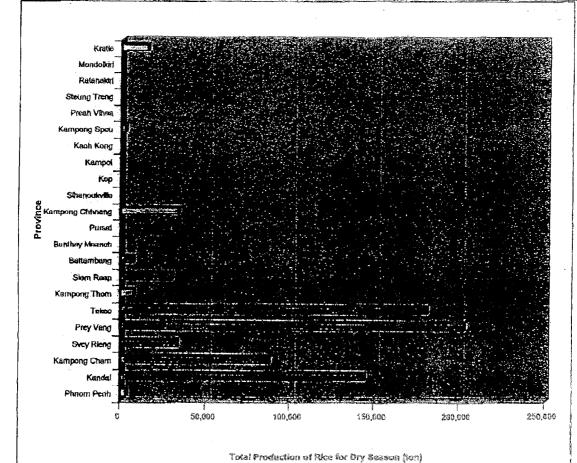
Annex 4-a Rice Production for Wet Rice Season 1997/1998

Province	Total Area Planted	Total Area Damaged	Total Area Harvested	Average Yield	Total Production
Unit	18	ng.	ha	ton per Ha	ton
Formula	(1)	(2)	(3)=(1)-(2)	(4)	(5)=(3)x(4)
Phnom Penh	7,845	155	7,689	1.70	13 071
LES TOTAL					
Kampung Thom	127,501	9,248	118.253	1.15	135,991
		9246 2.5 7.7			
Banthey Meanch	149,250	20,000	129,250	1,28	165,440
Pursat	76,028	1,500	74,526	1.93	143,839
Kampong Chhnang	84,110	483	83,627	1,69	141,330
Sihanoukville	9,450	1,700	7,750	1.70	13,175
Кер	2,594	0)	2,594	1.69	4,384
Kaoh Kong	7,340	-0	7,340	1.53	11,230
logista Pari					3.35.
Presh Vihea	15,755	0	15,756	1.52	23,948
Stelling Treng	14,262	5,349	6,913	1.59]	14,172
Ratanakiri	19,883	944	18,839	1.55	29,355
Mondolidri	6,185	0	6,185	1,57	9,710
Kratle	27,145	935	26,180	1.63	42,641
Cambodia Total	1,827,328	182,622	1,684,906	1.61	2,672 <i>5</i> 96



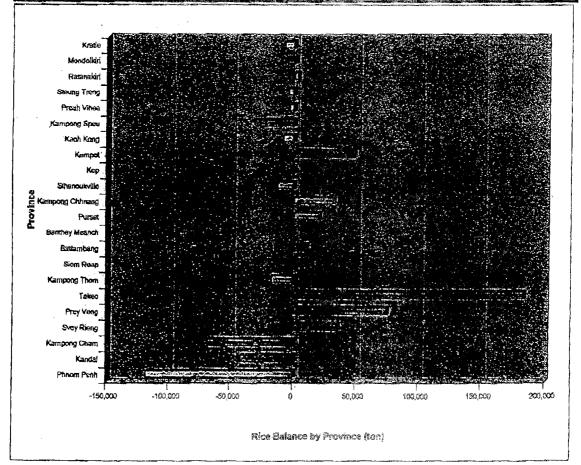
Annex 4-b Rice Production for Dry Rice Season 1998

Province	Total Area Planted	Total Area Damaged	Total Area Harvested	Average Yield	Total Production
Unit	ha	ha	13	ton per Ha	lon
Formula	(1)	(2)	(3)=(1)-(2)	(4)	(5)=(3)x(4)
Phnom Penh	1,200	50	1,150	2.50	2,875
	50503		5.00		- Cure
		361			
		1		*****	to the state of th
		and the same of th			
					· V
Kampong Thom	3,498	200	3,298	2:16	7,124
	and the second		and the second		
			and the second of the second		
Banthey Meanch	150	0	1501	3.00	450
Pursat	100	Q	100	234	234
Kampong Chhnang	10,250	100	10,150	3.26	33,089
Sihenouk/file	0	0	0	0,00	Ō
Kep	G	0	0	0.00	0
Kaoh Kong	D	0	0	cap	. 0
					* K
Preah Vihea	0	0	0	0.00	0
Steung Treng	0	0	0	0.00	0
Ratanaidri	0	0	0	0.00	0
<b>Mondolkiri</b>	0	0	٥	0.00	0
Cratie	6,000	100	5,900	250]	14.750
Cambodia Total	248,683	5.000	243 (63)	2.99	741,931



Annex 4-c Rice Balance by Province

Province	Total Paddy Production	Seed Requirement and Harvest Loss (17%)	Remaining Paddy for Consumption	Remaining Milled Rice for Consumption (62%)	Requirement for Consumption	Rice Balance
Unit	ha	ton	ton	ha	lon	ton
Formula	(1)	(2)=(1)x17%	(3)=(1)-(2)	(4)=(3)x62%	(5)	(6)=(4)-(5)
Phnom Penh	15,946	2,711	13,235	8,206	127,071	-118,865
Kancione Trom	149,104	24,328	118,776	73,641	91,99%	-19.353
Lia de la companya de		45000	i.	1105		
Barthey Meanch	165,890	28,201	137,009	85,367	85,957	-590
Pureat	144,073	24,492	119,581	74,140	54,142	19,996
Kampong Chhnang	174,396	29,648	144,750	69,746	58,340	31,405
Sihanoukville	13,175	2,240	10,835	6,780	20,414	-13,634
Kep	4,384	746	3,639	2,256	4,341.	-2,085
U		5.0. si				G . 1,740
Kach Kong	11,230	1,909	9,321	5,779	14,856	-9,077
Proah Vities	23,947	4,071	19,876	12,323	16,761	4,438
Staung Treng	14,172	2,409	11,763	7,293	12:341	-5,048
Ratenaldri	· 20,355	4,990	24,348	15,108	12,550	2,556
Mondolidri	9,711	1,651	8,060	4,397	4,379	618
Kretie '	57,391	9,756	47,635	29,533	37,578	-8,046
Cambodia Total	3,414,918	SBC,536	2,534,552	1.757.317 ]	1,630,266	104,052



### **ANNEX 5 PROPOSED STUDY SCHEDULE**

Year .							rear									2	nd Ye	ar			
Month	Apr	May	Jun	Ju)	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Phase						Ph	sel								<u> </u>		hase				
Master Plan Study																					Π
1) Collection of Basic Data and information of the Study Area																		·		-	
2) Survey on the Present Situation of Marketing and Post-harvest Quality Control of rice																					
<ol> <li>Assessment of the Constraints for Effective Marketing and Post- hervest Quality Control of Rice</li> </ol>		NO PERSONAL PROPERTY AND ADDRESS OF THE PERSONAL		eggeratura mana contra de la contra del contra de la contra del l				17 TO 18 TO													
Suggestion of the Policy Measures for Improvement of Marketing and Post-harvest Quality Control of Rice						-															
5) Forecast of Domestic and International Demand of Rice		ACTUAL DESCRIPTION OF THE PARTY																			
B) Formulation of the Long-term Master Plan Study for marketing and Post-harvest Quality Control of Rice			Andrew Commerce and Market																		
7) Selection of the Priority Areas for the Feasibility Study					***************************************			The contract of the contract o													
Feasibility Study							****														
1) Formulation of the Project Components for the Priority Areas		A COLUMN TO THE PARTY OF THE PA							·												
2) Preliminary Design of the Project Components for the Priority Areas		and the second s			NOTE THE REAL PROPERTY.			ACTION OF THE SECTION OF					·								
3) Technical, Financial, Economic, Social and Environmental Evaluation of the Priority Projects												;									
4) Transfer of the Technology on Marketing and Post-harvest Quality Control of Rice through PCM Seminar																					

#### 4. ドナー訪問面談記録

#### 1. UNDP

訪問日時:12月6日(月) 10:00AM

面談者: Tony Knowles, Manager

Don Bishop

・農村開発については、CARERE プロジェクトを実施、その中でカンボディア の競争力強化を目的として民間セクター育成・強化事業を行っている。 CARERE I (1992-95) は既に終了、現在は CARERE II (1996-99)。

- ・地方での労働雇用吸収力を持つ事業として精米業及びレンガ・タイル製造業に着目、それぞれの事業協会の結成及び協会を通した事業活動の支援を行っている。精米事業では、Battambang Prov., Battambang District 及び Banteay Meanchey の 3 箇所で協会を設立、計 85 社が会員として協会に参加している。
- ・CARERE II は協会を通して、近隣市場の紹介及び事業改善に必要な項目の調査を行っている。近隣市場の調査ではタイの協会を招聘し、実情を見てもらい意見交換を行った。シンガポールの輸入業者を招いて市場についてのセミナーを併せて実施した。事業改善必要項目としては、①帳簿と記録の完備、資金調達、市場戦略の策定、②精米技術の向上、③経営方法の訓練、④精米規格の整備等がある。
- ・タイの協会代表からは、精米設備は大きな問題ではなく、むしろ経営改善及 び農民に対する米の品質改善指導が重要であるとの指摘を受けた。
- ・米の流通はこれまでプノンペンの一握りの業者に支配されてきたが、協会の 地位を高めることにより、これらに対抗する勢力に育てるべきである。
- ・協会は当初は会員の熱意で運営されてきたが、今後は資金へのアクセスあるいは新技術の導入といった具体的なメリットがついてこないと成長は望めない。
- ・CARERE II は今年度で終了する。来年からは Enterprise Development Cambodia Project として事業が継続される。今後 1 年間で 6 協会を追加し、合計 9 協会で全国協会の結成を目指す。
- ・政府の行うべき施策で最も遅れている分野は金融制度の整備。金融機関は資金の融資に消極的で貿易金融が中心。民間企業は資金が逼迫状態。金融に関する法制度の整備が遅れており、銀行と民間の信頼関係も欠如している。

#### 2. FAO

訪問日時:12月7日(火) 14:00AM

面談者: Nico Janssen, Associate Professional Officer

- ・ 最近の支援プログラムは以下のようなもので構成されている。
  - ① 農業統計支援:農水省に統計の専門家を1名派遣
  - ② 食料安全保障プログラム:農業普及と Integrated Pest Management(IPM)で

構成、農業普及は肥料使用方法の訓練を主体として4州の7コミューンで実施、IPM は米と野菜が対象。FAO のプロジェクトとしてスタートしたが、カ国の全国事業に拡大することを指向。

- ③ Natural Resource Management Program: 住民参加型の事業により水産及び森林資源の保全と有効活用を目的とする。
- ④ Agricultural Market Information System: 1997年に開始、プノンペン及び 10 州の集荷場及びマーケットにおける価格情報を収集、ラジオ等を通じて国民に提供。FAO の支援は本年 5 月に終了したが、ADB によって継承されている。
- ・ 流通システムにおける主たる問題点・制約要因としては以下のものが挙げられる。
  - ① 農民に情報が行き届いていない。
  - ② 道路整備が遅れているため、農民に増産意欲が湧かない。生産は自家消費が主目的となる。
  - ③ 農民が組織化されていない。
  - ④ 農民の農業技術に関する専門知識が乏しい。

#### 3. 世界銀行

訪問日時:12月8日(水) 14:00AM

面談者: Gregory Cullen, Seed Industry Specialist, Agricultural Productivity Improvement Project (APIP)

- ・APIP は5つのコンポーネントから構成されている。1997 年に開始、2001 年 4月終了の予定。
  - ① Agronomy
  - 2 Animal Husbandry
  - (3) Fisheries
  - 4 Statistics
  - 5 Project Management Unit
- ・上記のうちの Agronomy はさらに 6 つのサブプロジェクトからなっている。
  - ① 研究・調査の改善
  - ② 農業データの収集
  - ③ 試験場整備
  - ④ 種子改善
  - ⑤ 環境保全と農民の健康維持
  - ⑥ 農業普及員に対する技術指導
- ・農民の組織化は農民が自主的に進めるならば有効であるが、政府が強制して 進めるべきではない。農民の組織化と同様に種子生産者、種子トレーダー、 穀物検査等の事業についても協会の結成による組織化が望ましい。
- ・カ国の種子事情は殆どの農家が自家生産に頼っており、品質は劣悪である。 種子生産農場は米についてはバタムボンとプノンペンの 2 箇所、他にカンポンチャムに豆類の生産農場がある。

・流通システムにおいてインフラ整備の他に遅れている分野としては法律・規則の未整備が指摘される。種子法、検疫規則、輸出政策、種子生産政策等の整備が必要である。また、政府による政策決定の多くが個人的な発想によって行われており、国民的な議論 を経た上でのコンセンサスに基づいていない。

#### 4. アジア開発銀行

訪問日時:12月13日(火) 14:00AM

面談者: Mr. Masahiro Otsuka, Senior Project Economist, Agriculture & Social Sectors Department (West), Manila Headquarter

・ 1997 年に Rural Credit Review 調査を実施したが、その結果を踏まえ、本年は Rural

Credit & Saving Project の審査を実施した。借款総額 20 百万ドル、農村開発銀行をホールセール銀行として、NGO をリテール窓口とするツーステップローンを提供する。順調に進めば来年 3 月には役員会の承認が得られる見込み。

・カ国では本年 11 月に銀行法改正法が成立、これにより銀行の最低資本金が 15 百万ドル

に引き上げられ、自己資本比率 8 %を維持することが義務付けられた。今後商業銀行の再編が予想されている。また、同法により、NGO が信用機関として免許を取得することができることになった。NGO の上位が信用機関に移行することになっており、借款の実施機関としてはこれら免許を取得した NGOを起用する。

・現在、中央銀行が管理している NGO は 34 組織、融資の総残高は約 13 百万ドルに達し

ている。NGO の上位 2 組織である ACLEDA 及び GRET の推定によると資金の総需要は 136(ACLEDA)、138(GRET)百万ドルとされている。NGO が現在カバーしている州は 13 州、全農家数の 15%程度が顧客数とされている。

- ・借款の概要は以下の通り
  - ①借入れ適格者:農家、農民の共同による事業体、精米、農産物流通業者、 小売業、絹織物等
  - ②金額:農家 100~150 ドル、精米業 1000~1500 ドル、流通業 5000 ドル 程度を限度とする。(初回融資は小額に抑え、順調に返済できた借入人には次回以降増額を可能とする)
  - ③通貨:ドルまたはリエル
  - ④期間:6~12ヵ月
- ⑤金利:NGO の貸付金利は制限せず。現行の月利 3~6%が適用される。農村開発銀行のマージンを年利 4%以下に制限。
- ⑥担保:グループ結成による連帯保証
- ・農村開発銀行は職員 23~4 名、内銀行業務経験者は 5~6 名。ADB は別途 T/A を供与、

開発金融の専門家1名を派遣して組織の育成を指導する。

・農村金融とは別に、金融セクター全般に対する支援計画を進めている。アン ダーセン・コンサルティングを起用して調査を行っている。

#### 5. AusAID

訪問日時:12月6日(月) 14:00AM

面談者: Bill Costello, First Secretary, Development Cooperation, Australian Embassy

- ・農業における取組みの重点はリサーチ、農業普及及び制約要因の解消の 3 点においている。
- ・現在は以下の3プロジェクトを中心に取り組んでいる。
  - (1) IRRI Project

1987 年に開始、品種の近代化及び伝統品種の再定着を目指している。 カ国のリサーチ能力向上を目的として Cambodia Agricultural Research Development Institute 設立を進めている。来年度から予算化することが決 まっている。リサーチ対象の分野は、Soil Management, Pest Control, Farm System, Socio-Economic Development, Agricultural Engineering である。

- ② 農業普及プロジェクト 農水省との共同事業で推進、sustainable extension system の確立を目指している。全国の各 District 単位で各 2~3 名、総勢 500 名の体制を指向している。普及事業は民間との共同実施が有効と考え、精米業者経由でパンフレットの配布等の策を講じている。
- ③ Agricultural Quality Inprovement Project カ国の現状は、良質の種子不足、収穫後処理の不備、流通(特に野菜)システムの不備が大きな問題である。種子についてはスヴェイリエン、カンダール、タケオ等 4 箇所で種子生産農場の育成を支援している(州政府と民間の合弁企業)。AusAID が 3 年間支援し、その後は商業ベースに委ねる。

収穫後処理分野においては、穀物管理の状態不良が指摘される。精米業者における技術面の改善が必要。精米業者にとって砕米率が高い方が利益が大きくなる料金制度にも問題がある。訓練、意識改革及び視察により改革への意識を高めることから始めなければならない。野菜の流通に関しては、特にプノンペン地区においては仲買人の関与を排除して生産者が市場に対して直接販売する形態の整備を進めている。

#### · JICA 調査への期待

米の品質管理と規格整備(投入材と生産物の双方)についての取組みを期待する。市場経済の環境における支援を進めるべきであり、農民への補助金支給による支援は価格形成を歪め、sustainability に欠けることを留意すべきである。

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2	Agricultural Development Plan, Long, Medium and Short Term, 1999-2010	図書	0				MAFF、工藤専門家	JR · CR( →SC	
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12	The Services Group & International Economics, Washington, <cambodia: &="" development="" for="" foundation="" industrial="" strengthening="" the="" trade=""></cambodia:>	複写	0				MOC,小川専門家	JR · CR(—) · SC	
13	CARERE, <enterprise cambodia="" development="">, undated</enterprise>	複写	0				CARERE	JR · CR(→)SC	
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23	Rural Development & Settlement Project, <technical cooperation=""></technical>	図書	0				JICE,藤田専門家	JR · CR()SC	
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29	<bibliography, agris="" caris="" national="">, Agricultural Scientific Document Cen</bibliography,>	複写	0				MAFF	JR · CR(─)SC	
30	<bibliography, agris="" system=""></bibliography,>	複写	0				MAFF	JR · CR(−)- ·SC	
31	<bibliography, forest_wildlife="" information="" system="">, Library of Forestry-Wildlife</bibliography,>	複写	0				MAFF	JR · CR( -) · SC	
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