

Attachments

Minutes of Meeting of the 2nd Joint Coordinating Committee
March 19, 2001

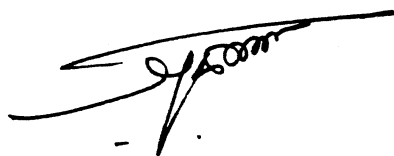
Minutes of Meeting of the 3rd Joint Coordinating Committee
June 12, 2001

Minutes of Meeting of the 4th Joint Coordinating Committee
June 28, 2001

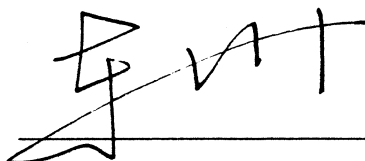
Minutes of Meeting of the 6th Joint Coordinating Committee
December 4, 2001

**MINUTES OF MEETING
OF
THE 2ND JOINT COORDINATING COMMITTEE
FOR
THE STUDY ON THE REHABILITATION AND RECONSTRUCTION
OF AGRICULTURAL PRODUCTION SYSTEM
IN THE SLAKOU RIVER BASIN,
THE KINGDOM OF CAMBODIA**

Phnom Penh, March 19, 2001



H.E. Mr. Bun Hean
Director General of Technical Affairs,
Ministry of Water Resources
and Meteorology



Toshikazu HIGASHIKAWA
Leader,
Study Team
Japan International Cooperation
Agency

In accordance with the Scope of Work for “the Study on the Rehabilitation and Reconstruction of Agricultural Production System in the Slakou River Basin, the Kingdom of Cambodia” (hereinafter referred to as “the Study”) agreed on October 09, 2000, the Study Team had a meeting on the Progress Report (1) with “the Joint Coordinating Committee for the Study” (hereinafter referred to as “the JCC”) organized by “the Ministry of Water Resources and Meteorology” (hereinafter referred to as “MOWRAM”) at MOWRAM on March 19, 2001.

The meeting was chaired by H.E. Mr. Bun HEAN, Director General of Technical Affairs, MOWRAM. The participants of the meeting are listed in ANNEX-I. Firstly, the Team Leader of the Study Team briefed i) the objective of the meeting, ii) the surveys and investigation conducted in this Phase I First Field Work from January 31, 2001 to March 19, 2001, and iii) a general time schedule of the Study. He expressed his sincere thanks for the cooperation extended to the Study Team by the Royal Government of Cambodia on behalf of the Team members. Secondly, the Study Team explained the contents of the Progress Report (1) to the participants at the meeting. Then, the Progress Report (1) was generally approved by the JCC and both sides agreed to proceed to the next step.

List of Attendants (1/2)

**Joint Coordinating Committee for
the Study on the Rehabilitation and Reconstruction of
Agricultural Production System in the Slakou River Basin**

H.E. Mr. Bun Hean	Director General of Technical Affairs, Ministry of Water Resources and Meteorology (MOWRAM), as the Chair Person.
Mr. Ma Sovanna	Civil Work & Procurement Assistance of Planning-Accounting Office, Department of Agronomy and Soil Management, Ministry of Agriculture, Forestry and Fisheries (MAFF).
Mr. Ou Sophanna	Program Officer in Charge of Agriculture Section, Cambodia National Mekong Committee (CNMC).

MOWRAM

H.E. Mr. Nei Lorn	General Directorate, MOWRAM
H.E. Mr. Chuon Bithol	Deputy Director General of Technical Affairs, MOWRAM
Mr. Chornng Seng Im	Director of Finance, MOWRAM
Ms. Seth Vannareth	Director of Meteorology, MOWRAM
Mr. Pich Veasna	Director of Planning and International Cooperation Department, MOWRAM
Mr. Theng Tara	Director of Water Resources Management and Conservation Department, MOWRAM
Mr. Te Navuth	Director of Hydrology and River Works Department, MOWRAM
Mr. Mey Ly Huoth	Director of Engineering Department, MOWRAM
Mr. Loeung Sotheachanny	Deputy Director of Irrigation and Drainage, MOWRAM
Mr. Cheam Sar	Vice Chief of Urban Water Supply Office, Water Supply and Sanitation Department, MOWRAM
Mr. Yin Savuth	Hydraulic Engineer, Department of Hydrology, MOWRAM
Mr. Chhuy Hy Karona	Irrigation Engineer, Department of Engineering, MOWRAM
Mr. Men Mlob Bonn	Hydrologist, Department of Irrigation, MOWRAM
Mr. Masao Miyazaki	JICA Expert, MOWRAM

List of Attendants (2/2)

JICA Study Team for the Study on the Rehabilitation and Reconstruction of Agricultural Production System in the Slakou River Basin

Mr. Toshikazu Higashikawa	Team Leader
Mr. Nobuo Sambe	Agricultural Production Infrastructure (1)
Mr. Hiroyoshi Matsuura	Water Utilization / Hydrology
Mr. Seiji Itaya	Rural Society / Participatory Approach
Mr. Shinichi Yano	Farmer Water User Community
Mr. Hisashi Ishikawa	Agriculture / Pedology
Mr. Akeshi Mori	Agro-product Processing / Marketing
Mr. Norihiko Inoue	Environment
Mr. Makoto Yokota	Coordinator

**MINUTES OF MEETING
OF
THE 3RD JOINT COORDINATING COMMITTEE
FOR
THE STUDY ON THE REHABILITATION AND RECONSTRUCTION
OF AGRICULTURAL PRODUCTION SYSTEM
IN THE SLAKOU RIVER BASIN,
THE KINGDOM OF CAMBODIA**

Phnom Penh, June 12, 2001



H.E. Mr. Bun Hean
Director General of Technical Affairs,
Ministry of Water Resources
and Meteorology



Foshikazu HIGASHIKAWA
Leader,
Study Team
Japan International Cooperation
Agency



In accordance with the Scope of Work for “the Study on the Rehabilitation and Reconstruction of Agricultural Production System in the Slakou River Basin, the Kingdom of Cambodia” (hereinafter referred to as “the Study”) agreed on October 09, 2000, the Study Team had a meeting on the Master Plan (Draft) with “the Joint Coordinating Committee for the Study” (hereinafter referred to as “the JCC”) organized by “the Ministry of Water Resources and Meteorology” (hereinafter referred to as “MOWRAM”) at MOWRAM on June 12, 2001.

The meeting was chaired by H.E. Mr. Bun HEAN, Director General of Technical Affairs, MOWRAM. The participants of the meeting are listed in ANNEX-I. Firstly, the Team Leader of the Study Team expressed his sincere thanks for the cooperation extended to the Study Team by the Royal Government of Cambodia on behalf of the Team members. Secondly, the Team Leader briefed i) the objectives of the meeting, and ii) the general time schedule of the Study. Thirdly, he briefed the master plan (draft) including the priority projects to the participants at the meeting. After this, JCC members and the Study Team exchanged questions and answers. The meeting was over at 11:00. The summary of the discussion was as follows :

- 1) The Study Team proposed “alternative 3-1” having an irrigation area of 3,500 ha in terms of economic viability as Upper Slakou River Irrigation Reconstruction Plan (USP) of the master plan under the following conditions, and explained i) how to estimate run-off, ii) alternative study cases, and iii) water balance study :
 - i) The water resource is very much limited in the three reservoir sites.
 - ii) The Study has been conducted on condition that the existing irrigation facilities be rehabilitated to an original level or similar level.
 - iii) The water resources development under high dam and reservoirs in the upstream of the Tumnap Lok reservoir are not studied.MOWRAM said that according to Cambodian planning methodology, an irrigation area of alternative 3-1 based on water resources estimated by the Study Team, would be about 6,000 ha to 7,000 ha by use of return flow. MOWRAM also added that “alternative 3-4” having an irrigation area of 3,900 ha be preferable to “alternative 3-1”.
- 2) Priority projects proposed in the master plan were agreed upon by both sides.
- 3) The Study Team said that Initial Environmental Impact Assessment (IEIA) in accordance with the Cambodian EIA sub-decree would not be required for the priority project because the total irrigation area of the priority projects for feasibility study was less than 5,000 ha.
- 4) The JCC asked whether the rehabilitation of reservoirs of USP would give negative

impacts to some existing reservoirs and irrigation areas located on the downstream of the Slakou River ? The Study Team answered that it would not happen, because the catchment area between the Tumnap Lok reservoir and National Road No.2 is much bigger than that of Tumnap Lok reservoir, say 1.5 times..

- 5) The JCC recommended that ponds in the Small Pond Development Plan should be used for multi-purpose, such as fishery and domestic use. The Study Team answered that the multi-purpose be considered in the feasibility study.
- 6) The JCC asked whether irrigation by using groundwater was studied or not. The Study Team answered "No", and added the following presently available information :
 - i) The Study Team studied another JICA study report on groundwater development in southern Cambodia in 1996-1999.
 - ii) According to the report, three tubewells of 40-60 m depth were tested in the Study Area. It says that estimated discharge on average is 1.5 - 150 m³/day equivalent to 0.017 - 1.7 lit/sec.
- 7) The members of JCC will conduct a site-visit to the Study Area on June 22, 2001.
- 8) The next meeting with JCC about Progress Report (2) will be held at MOWRAM at 9:00 am on June 28, 2001.

List of Attendants (1/2)

**Joint Coordinating Committee for
the Study on the Rehabilitation and Reconstruction of
Agricultural Production System in the Slakou River Basin**

H.E. Mr. Bun Hean	Director General of Technical Affairs, Ministry of Water Resources and Meteorology (MOWRAM), as the Chair Person.
Mr. Ma Sovanna	Civil Work & Procurement Assistance of Planning-Accounting Office, Department of Agronomy and Soil Management, Ministry of Agriculture, Forestry and Fisheries (MAFF)
Mr. Pich Dun	Director of Projects Department, Cambodia National Mekong Committee (CNMC)
Mr. Smel Chan Phalla	Official of Management and Coordinator of Bilateral Japanese Grant Aid and Asia and the Pacific, Councils for the Development of Cambodia (CDC)
Mr. Nuon Pichuimith	Chief of Small Irrigation Office of Department of Rural Water Supply, Ministry of Rural Development (MRD)

MOWRAM

Mr. Yin Savuth	Hydraulic Engineer, Department of Hydrology, MOWRAM
Mr. Men Mlob Bonn	Hydrologist, Department of Irrigation, MOWRAM
Mr. Masao Miyazaki	JICA Expert, MOWRAM

MAFF

Mr. Rany Vireak	Agro-economist, Department of Agronomy and Agricultural Land Improvement, MAFF
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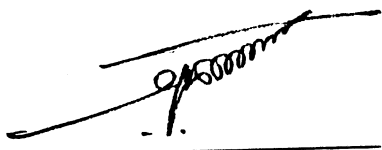
List of Attendants (2/2)

JICA Study Team for the Study on the Rehabilitation and Reconstruction of Agriculture Production System in the Slakou River Basin

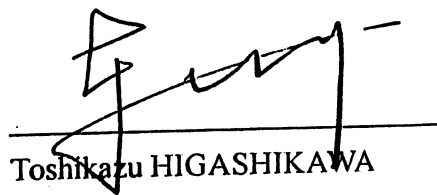
Mr. Toshikazu Higashikawa	Team Leader
Mr. Nobuo Sambe	Agricultural Production Infrastructure (1)
Mr. Hiroyoshi Matsuura	Water Utilization / Hydrology
Mr. Seiji Itaya	Rural Society / Participatory Approach
Mr. Hisashi Ishikawa	Agriculture / Pedology
Mr. Norihiko Inoue	Environment
Mr. Makoto Yokota	Coordinator

**MINUTES OF MEETING
OF
THE 4TH JOINT COORDINATING COMMITTEE
FOR
THE STUDY ON THE REHABILITATION AND RECONSTRUCTION
OF AGRICULTURAL PRODUCTION SYSTEM
IN THE SLAKOU RIVER BASIN,
THE KINGDOM OF CAMBODIA**

Phnom Penh, June 28, 2001



H.E. Mr. Bun Hean
Director General of Technical Affairs,
Ministry of Water Resources
and Meteorology



Toshikazu HIGASHIKAWA
Leader,
Study Team
Japan International Cooperation
Agency

In accordance with the Scope of Work for “the Study on the Rehabilitation and Reconstruction of Agricultural Production System in the Slakou River Basin, the Kingdom of Cambodia” (hereinafter referred to as “the Study”) agreed on October 09, 2000, the Study Team had a meeting on Progress Report (2) including the Master Plan with “the Joint Coordinating Committee for the Study” (hereinafter referred to as “the JCC”) organized by “the Ministry of Water Resources and Meteorology” (hereinafter referred to as “MOWRAM”) at MOWRAM on June 28, 2001.

The meeting was chaired by H.E. Mr. Bun HEAN, Director General of Technical Affairs, MOWRAM. The participants of the meeting are listed in ANNEX-I. The chairman asked the Study Team to brief the master plan since participants of Ministry of Environment (NOE) attended the meeting for the first time. Firstly, the Team Leader of the Study Team expressed his sincere thanks for the cooperation extended to the Study Team by the Royal Government of Cambodia (RGC) on behalf of the Team members, since all the works of Phase-I Field Work was successfully over. Secondly, he briefed the master plan, and also briefed i) the objectives of the meeting, and ii) the general time schedule of the Study. Thirdly, he explained the following major difference between the draft and Progress Report (2) :

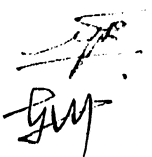
- 1) The minutes of meeting of the 3rd JCC held on June 12, 2001 is attached as Attachment 5.
- 2) The results of 20 times workshops are included in Chapter 6.13.
- 3) The following is added to Chapter 5.2.1; “The development alternatives were studied on condition that the existing reservoirs be rehabilitated or reconstructed to a present level or similar level. The development alternatives under high dam and reservoirs in the upstream of the three existing reservoirs sites were not studied”.

After this, the Chairman asked the participants to give opinions and questions on the master plan in addition to the last minutes of meeting signed on June 12, 2001. Some questions and answers were exchanged. No additional comments were raised. Finally, the report was accepted on condition that both parties understand a different view of Upper Slakou River Irrigation Reconstruction Plan’s irrigation area between MOWRAM and the Study Team as stated in the minutes of meeting held on June 12, 2001. The meeting was over at 11:00. The summary of the discussion was as follows :

- 1) There are farmers cultivating inside the reservoirs. Before construction is started, RGC’s actions to them will be necessary.



- 2) About investigation of landmines and Unexploded Ordnance (UXO) to be conducted at Phase II Third Work, MOWRAM will try to undertake this investigation under responsibility of RGC without assistance of JICA.
- 3) About IEIA, the Study Team said that according to the related Cambodian sub-decree, the IEIA would be unnecessary since the irrigation area was less than 5,000 ha.
- 4) The Study Team will send the Interim Report to MOWRAM one week before the arrival of Study Team. The 5th meeting with JCC about the Interim Report will be held at MOWRAM at 9:00 am on August 13, 2001.



List of Attendants (1/2)

**Joint Coordinating Committee for
the Study on the Rehabilitation and Reconstruction of
Agricultural Production System in the Slakou River Basin**

H.E. Mr. Bun Hean	Director General of Technical Affairs, Ministry of Water Resources and Meteorology (MOWRAM), as the Chair Person.
Mr. Ma Sovanna	Civil Work & Procurement Assistance of Planning-Accounting Office, Department of Agronomy and Soil Management, Ministry of Agriculture, Forestry and Fisheries (MAFF)
Mr. Ou Sophanna	Project Officer, Cambodia National Mekong Committee (CNMC)
Mr. Yin Samray	Deputy Director, Ministry of Environment (MOE)

MOWRAM

Mr. Em Bunthoeun	Director of Water Supply and Sanitation, MOWRAM
Mr. Am Norin	Deputy Director of Water Resources Management and Conservation, MOWRAM
Mr. Ok Chealy	Deputy Director of Planning, MOWRAM
Mr. Cheam Sar, MSE	Vice Chief of Urban Water Supply Office Department of Water Supply and Sanitation, MOWRAM
Mr. Chhuy Hy Karona	Irrigation Engineer, Department of Engineering, MOWRAM
Mr. Yin Savuth	Hydraulic Engineer, Department of Hydrology, MOWRAM
Mr. Men Mlob Bonn	Hydrologist, Department of Irrigation, MOWRAM
Mr. Masao Miyazaki	JICA Expert, MOWRAM

MAFF

Mr. Rany Vireak	Agro-economist, Department of Agronomy and Agricultural Land Improvement, MAFF
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MOE

Mr. Kay Pheng	Vice Chief Office, MOE
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List of Attendants (2/2)

**JICA Study Team for
the Study on the Rehabilitation and Reconstruction of
Agriculture Production System in the Slakou River Basin**

Mr. Toshikazu Higashikawa	Team Leader
Mr. Nobuo Sambe	Agricultural Production Infrastructure (1)
Mr. Seiji Itaya	Rural Society / Participatory Approach
Mr. Hisashi Ishikawa	Agriculture / Pedology
Mr. Makoto Yokota	Coordinator

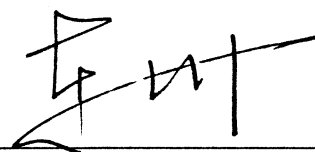


**MINUTES OF MEETING
OF
THE 6TH JOINT COORDINATING COMMITTEE
FOR
THE STUDY ON THE REHABILITATION AND RECONSTRUCTION
OF AGRICULTURAL PRODUCTION SYSTEM
IN THE SLAKOU RIVER BASIN,
THE KINGDOM OF CAMBODIA**

Phnom Penh, December 4, 2001



H.E. Mr. Bun Hean
Director General of Technical Affairs,
Ministry of Water Resources
and Meteorology



Toshikazu HIGASHIKAWA
Leader,
Study Team
Japan International Cooperation
Agency

In accordance with the Scope of Work for “the Study on the Rehabilitation and Reconstruction of Agricultural Production System in the Slakou River Basin, the Kingdom of Cambodia” (hereinafter referred to as “the Study”) agreed on October 09, 2000, the Study Team had a meeting on the Draft Progress Report (3) with “the Joint Coordinating Committee for the Study” (hereinafter referred to as “the JCC”) organized by “the Ministry of Water Resources and Meteorology” (hereinafter referred to as “MOWRAM”) at MOWRAM on December 4, 2001.

The meeting was chaired by H.E. Mr. Bun HEAN, Director General of Technical Affairs, MOWRAM. The participants of the meeting are listed in ANNEX-I. The chairman asked the Study Team to brief the Draft Progress Report (3). Firstly, the Team Leader of the Study Team explained the objectives of the meeting, and secondly briefed the Report, concentrating on “Part III : Alternative Study on the Irrigation Area of USP” and “Part IV : Feasibility Study for the Priority Projects”, since “Part I : General Information and Background”, and “Part II : Master Plan Study for the Study Area” were agreed upon between the JCC and the Study Team. After the briefing, he explained a general schedule of the Study Team, such as PRA workshops on December 5 and 6, submittal of Progress Report (3) - Final Version, the 7th meeting on December 20, seminar on “Planning Guideline for Rehabilitation and Reconstruction of Irrigation Systems (Draft)” on December 21, and departure date of the Study Team on December 23, 2001. The chairman said to the participants whether or not they had questions and comments on the Report. The opinions, questions and answers were exchanged, and the summary of discussion was as follows:

Summary of Discussion:

Q: Cathment area of Tumnap Lok Reservoir is 3 32 km² and that of Kpob Trobek Reservoir is 1 37 km². However, the effective storage volume of Tumnap Lok Reservoir is 1 MCM, which is smaller than 2.63 MCM of Kpob Trobek Reservoir. What is the reason ?

A: This is due to different topographic condition of reservoir areas. The topography of reservoir area of Tumnap Lok Reservoir is steeper than that of Kpob Trobek Reservoir. For utilization of water resources of two reservoirs, rehabilitation of diversion canal between two reservoirs is proposed.

Q: Period of training to farmers on FWUC formation is only 8 months. Isn't it short ?

A: Training to farmers on FWUC formation will be continued during 3 years. Two steps are proposed. Firstly, experts deployed by MOWRAM will train project office

staff, and secondly the trained project office staff will train farmers. The institutional development and capacity building is a must for FWUC formation and sustainable management / operation of FWUC.

Q: If all the ponds proposed in the master plan, are constructed in the Study area, aren't the USP and SRP areas affected by ponds ?

A: No, they will not be affected, because the size of ponds are very small and water source is rainfall. Ponds are proposed in the area other than USP and SRP.

Q: Who will be responsible for water quality contaminated by fertilizer ?

A: It is difficult to answer it. In order to avoid such thing, it is proposed that the project office and technical supervision and assistance unit (MOWRAM) should conduct monitoring of water quality. For this, MOE and DOE, Takeo are requested to cooperate with MOWRAM.

Q: What is relationship between FGs proposed by feasibility study and VDCs ?

A: It is proposed that FGs for credit service, agricultural extension and seed production should be organized under VDCs which have been organized under the SEILA program.

Q: What is cost estimate basis ? and what is exchange rate used for cost estimate ?

A: The cost estimate basis is shown in Chapter IV-6, and the exchange rates are shown at the end of table of content.

Q: Is it technically possible to raise the canal bed of the existing Koh Kaek Canal to reduce the cost of rehabilitation ?

A: When we consider HWL and LWL of Kpob Trobek Reservoir, it is technically and economically not viable.

Finally, the study results described in the Draft Progress Report (3) that were presented by the Study Team were generally accepted.

List of Attendants (1/2)

**Joint Coordinating Committee for
the Study on the Rehabilitation and Reconstruction of
Agricultural Production System in the Slakou River Basin**

H.E. Mr. Bun Hean	Director General of Technical Affairs, Ministry of Water Resources and Meteorology (MOWRAM), as the Chair Person.
Mr. Im Sour	Management and Coordination of Bilateral Japanese Grant Aid and Asia and the Pacific, CRDB, Councils for the Development of Cambodia (CDC)
Mr. Ma Sovanna	Civil Work & Procurement Assistance of Planning-Accounting Office, Department of Agronomy and Soil Management, Ministry of Agriculture, Forestry and Fisheries (MAFF)
Mr. Pich Dun	Director of Projects Department, Cambodia National Mekong Committee (CNMC)

MOWRAM

H.E. Mr. Nei Lorn	Director General, General Inspection, MOWRAM
Mr. Em Bunthoeun	Director, Water Supply and Sanitation Department, MOWRAM
Mr. Te Navuth	Director, Hydrology and River Works Department, MOWRAM
Mr. Sok Moniratana	Deputy Director, Water Supply and Sanitation Department, MOWRAM
Mr. Long Vuth	Deputy Director, Finance Department, MOWRAM
Mr. Chea Chhunkeat	Deputy Director, Administration Office, MOWRAM
Mr. Chhuy Hy Karona	Irrigation Engineer, Engineering Department, MOWRAM
Mr. Yin Savuth	Hydraulic Engineer, Hydrology and River Works Department, MOWRAM
Mr. Men Mlob Bonn	Hydrologist, Irrigation and Drainage Department, MOWRAM
Mr. Masao Miyazaki	JICA Expert, MOWRAM

MAFF

Mr. Rany Vireak	Agro-economist, Department of Agronomy and Agricultural Land Improvement, MAFF
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List of Attendants (2/2)

**JICA Study Team for
the Study on the Rehabilitation and Reconstruction of
Agriculture Production System in the Slakou River Basin**

Mr. Toshikazu Higashikawa	Team Leader
Mr. Nobuo Sambe	Agricultural Production Infrastructure (1)
Mr. Shinichi Yano	Farmer Water User Community
Mr. Hisashi Ishikawa	Agriculture / Pedology
Mr. Yutaka Niikawa	Design / Cost Estimation