

3. ミニッツ

MINUTES OF MEETING
 BETWEEN
 THE JAPANESE EVALUATION TEAM AND THE MINISTRY OF WATER RESOURCES
 AND METEOROLOGY OF THE ROYAL GOVERNMENT OF CAMBODIA
 ON THE JAPANESE TECHNICAL COOPERATION FOR
 THE TECHNICAL SERVICE CENTER FOR IRRIGATION SYSTEM PROJECT
 IN THE KINGDOM OF CAMBODIA

The Japanese Evaluation Team (hereinafter referred to as "the Japanese Team") organized by Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Ryuzo NISHIMAKI, Senior Researcher of JICA, visited the Kingdom of Cambodia from July 10, 2005 to July 27, 2005 in order to conduct the final evaluation on the Technical Service Center for Irrigation System Project in Cambodia (hereinafter referred to as "the Project").

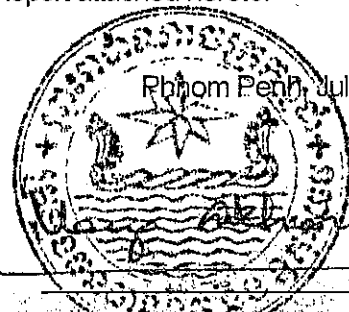
The Cambodian Evaluation Team (hereinafter referred to as "the Cambodian Team") was organized by the Ministry of Water Resources and Meteorology (MOWRAM) of the Royal Government of Cambodia and headed by Mr. PRUM Saroeun, Deputy General Inspector of MOWRAM.

For the final evaluation of the Project, the Japanese Team and the Cambodian Team formed the Joint Evaluation Team (hereinafter referred to as "the Team"). After conducting study and analysis of the activities and achievements of the Project, the Team prepared the Joint Evaluation Report (hereinafter referred to as "the Report") and presented the evaluation results to the Joint Coordinating Committee of the Project.

The Joint Coordinating Committee accepted the Report and agreed to recommend to the respective governments the matters referred to the Report attached hereto.



Mr. Ryuzo NISHIMAKI
 Leader
 Japanese Final Evaluation Team
 Japan International Cooperation Agency
 Japan



Rhnom Penh, July 26, 2005

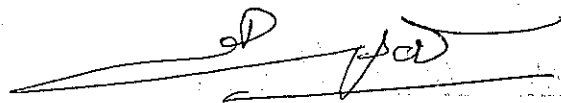
H.E. Mr. VENG Sakhon
 Secretary of State
 Ministry of Water Resources and
 Meteorology
 The Kingdom of Cambodia

JOINT EVALUATION REPORT
ON
THE TECHNICAL SERVICE CENTER
FOR IRRIGATION SYSTEM PROJECT IN CAMBODIA

Phnom Penh, July 26, 2005



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1. Evaluation of the Project

1.1 Objectives of Evaluation

- (1) To evaluate the overall achievement of "The Technical Service Center (TSC) for Irrigation System Project (hereafter referred to as "the Project") based on the Record of Discussions (R/D), Project Design Matrix (PDM) and Plan of Operations (PO).
- (2) To identify remaining problems and recommend appropriate measures that need to be undertaken by the relevant government agencies after the completion of the Project, and
- (3) To consider the lessons obtained from the project activities in order to reflect them on future projects in the interest of making them more effective and efficient.

1.2 Methodology

(1) Joint Evaluation

The Project was evaluated by the Cambodian and Japanese evaluation teams (hereinafter referred to as "the Joint Evaluation Team") in accordance with the R/D, the PDM and the PO. The evaluation activities included report analysis, field survey, and interview with staff of the Ministry of Water Resources and Meteorology (hereinafter referred to as "MOWRAM"), Japanese experts and other concerned personnel in the Project were conducted based on the five Evaluation Criteria. The Joint Evaluation Team was composed of five members from the Cambodian side and four members from the Japanese side who were not involved in the project activities.

(2) Five Evaluation Criteria

1) Relevance

Relevance refers to the validity of the Project Purpose and the Overall Goal in connection with the development policy of the Royal Government of Cambodia (hereinafter referred to as "RGC") as well as the needs of beneficiaries.

2) Effectiveness

Effectiveness refers to the extent to which the expected benefits of the Project have been achieved as planned. It also examines whether these benefits have been brought about as a result of the Project.

3) Efficiency

Efficiency refers to the productivity of the implementation process. It examines whether the inputs of the Project have been efficiently converted into outputs.

4) Impact

Impact refers to direct and indirect, positive and negative impacts caused by the implementation of the Project, including the extent to which the overall goal has been attained.

5) Sustainability

Sustainability refers to the extent to which the Project can be further developed by RGC, and the extent to which the benefits generated by the Project can be sustained under national policies, technology, systems and financial state.

1.3 Members of the Joint Evaluation Team

(1) Japanese Evaluation Team

1) Mr. Ryuzo NISHIMAKI (Team Leader)

Senior Researcher (Rural Development), Rural Development Department, JICA

2) Mr. Yoshihiro DOI (Irrigation Technology)

Deputy Director, Overseas Land Development Cooperation Office, Rural Development Bureau, Ministry of Agriculture, Forestry and Fisheries

3) Mr. Kenji SAKURAI (Cooperation Management)

Paddy Based Farming Area Team III, Group I, Rural Development Department, JICA

4) Mr. Isao DOJUN (Evaluation and Analysis)

Sub-Section Chief, Rural Development, International Project Department

Chuo Kaihatsu Corporation

(2) Cambodian Evaluation Team

1) Mr. PRUM Saroeun (Team Leader)

Deputy General Inspector, MOWRAM

2) Mr. CHEA Chhunkeat

Director of Administration and Human Resources Department, MOWRAM

3) Mr. PICH Veasna

Director of Planning and International Cooperation Department, MOWRAM

4) Dr. THENG Tara

Director of Water Resources Management and Conservation Department, MOWRAM

5) Mr. EM Bunthoeun

Director of Engineering Department, MOWRAM

1.4 Schedule of the Evaluation

The schedule is attached as ANNEX I.

2. Outline of the Project

2.1 Background of the Project

Agriculture is the prime industry of the Kingdom of Cambodia. Agricultural production contributes to approximately 37% of the country's GDP, and more than 80% of the national population relies on agriculture for their living in 2000.

Despite abundant farmland and water resources, agricultural productivity of the country has rather been low mainly due to deficient irrigation systems, which is one of the essential development issues of the country.

RGC made a request to the Government of Japan (GOJ) for a technical cooperation that aims at technical transfer on rehabilitation of existing irrigation systems such as survey, planning, design, construction, operation and maintenance.

In response to the request, JICA dispatched the Preliminary Study Team and the Supplementary Study Team to confirm the need for assistance and to discuss the details of the Project with Cambodian side. The Implementation Study Team signed the Record of Discussions on the Project on September 21, 2000. This 5-year project started from January 10, 2001 and will be completed in January 9, 2006.

2.2 Objective of the Project

The Project Purpose is "The technical capacity of the engineers and technicians of MOWRAM and PDWRAM is improved in the fields of survey, planning, design, construction management and water management with participation of farmers for irrigation systems". The framework of the Project is shown in the PDM modified in October 2003 (See ANNEX II). The organizational structure for the Project is shown in ANNEX III.

2.3 Inputs

(1) Japanese side

1) Expert assignment

A total of ten (10) long-term experts have been dispatched. Fields of specialty are Chief Advisor, Coordinator/ Farmers Survey and Training, Survey/ Planning, Design/ Water Management, and Construction Management, as shown in the ANNEX IV.



Sixteen (16) short-term experts completed their assignment in the above fields. Three (3) more short-term experts will be dispatched by the end of the Project.

2) Training in Japan

Fifteen (15) counterparts of MOWRAM have participated in the training in Japan as shown in ANNEX V.

3) Provision of equipment

JICA procured equipment locally and from Japan for the implementation of the Project as shown in ANNEX VI.

4) Local cost

Local costs such as running expenses and expenses for facilities and activities have been provided by JICA. The total amount of expenditure is expected to the amount to 575,317 US dollars as shown in ANNEX VII.

(2) Cambodian side

1) Assignment of personnel

Cambodian counterpart personnel assigned to the Project is shown in ANNEX V. At present, eleven (11) full-time counterparts are assigned in the field of Survey, Planning, Design, Construction Management, and Water Management. Five (5) counterparts are assigned in the field of Management and Administration.

2) Local Cost

The budget allocated by MOWRAM for the Project is shown in ANNEX VIII. The total amount of expenditure is expected to the amount to 217,994 US dollars including salary of counterparts.

3) Provision of the office and training rooms

Cambodian side constructed a building of the Technical Service Center in 2002 for the use by the Project. The building has appropriate space as office, training room and laboratory for the project activities.

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3. Achievement of the Project

3.1 Activities

See Annex IX for the achievement of activities of the Project.

3.2 Outputs

The achievement of each output is described below:

- (1) Output 1: The technical capacity of the full-time counterparts in the fields of survey, planning, design, construction management and water management with participation of farmers is improved through the On-the-Job Training (OJT).

Targeted technical capacity by the Project means knowledge and skills on tertiary irrigation canals and related structures in the fields mentioned above.

Verifiable indicators of the Output 1 and achievements are as follows.

Verifiable Indicators	Achievements (as of July 2005)					
1.1 Irrigation and drainage facilities are appropriately built by C/Ps with the use of techniques learned through OJT by the end of the project.	Tertiary canals and related facilities in the model site (beneficiary area: 260ha) of the Project in the Kandal Stung Irrigation System have been built by C/Ps with the use of techniques learned, which are techniques on survey, planning, design, construction management, and water management with participation of farmers, through OJT.					
	Data of tertiary canals constructed is as follows.					
		No. of tertiary canal	Benefited area (ha)	New construction or rehabilitation	Length (meter)	Year constructed
	1	T3.2.0 (partially)	167	Rehabilitation	857m + 487m	2003/2004
	2	T3.4.0	24	New	656m	2005
	3	T3.5.0	23	Rehabilitation	760m	2004
	4	T3.6.0	20	New	860m	2005
		234ha				
5	Poipot No. 62		Rehabilitation	293m		
	Related structures such as intake, off-take, distribution box, check structure, crossing and outlet also have been constructed in the model site.					
	Survey result products, drawings, bill of quantity, construction planning reports, construction reports etc. have been produced by C/Ps. As for water management field, activities on workshops among farmers and group work have been promoted. Reports on those activities have been prepared.					

1.2 Manuals related to survey, planning, design, construction management and water management with participation of farmers are produced by the end of the project.

Manuals related to survey, planning, design, construction management and water management have been prepared and some of the manuals were utilized as texts for the training courses. There are also manuals under preparation.

As for water management field, documents on activities above mentioned such as workshops among farmers and group work, and also rules made by farmers are under preparation as case study report.

Number of manuals for each field and progress of manuals are as follows.

Field	Number of Manuals	Progress		
		Completed	Under preparation	Target Deadline
Survey	8	2	6	Dec. 2005
Planning	2		2	Dec. 2005
Design	7	5	2	Sep. 2005
Construction Management	7	2	5	Dec. 2005
Water management	3	1	2	Sep. 2005

Details see the list of manuals.

Table: List of Manuals

Field	No	Title	M/T	Progress					Target Deadline
				Plan	Ongoing	Completed in English	Translating into Khmer	Completed in Khmer	
S	1	The text of basic survey course	T					○	Finished
	2	Manual on Survey (Basic Topographic Survey, Survey study)	M/T					○	Finished
	3	Manual on Survey (Route survey)	M		△				Dec. 2005
	4	Manual on Survey (Traverse survey)	M/T			△			Sep. 2005
	5	Manual of Theodolites Survey	M/T			△			Dec. 2005
	6	Observation Manual of Meteorology (Draft)	M/T	□					Sep. 2005
	7	Manual on Discharge Measurement	M/T			△			Dec. 2005
	8	Manual of Topographic Survey	M			△			Sep. 2005
P	9	Manual on Water Requirement	M/T			△			Sep. 2005
	10	Manual of Calculation for Water Balance (Draft)	M/T	□					Dec. 2005
D	11	Basic Hydraulic	M/T					○	Finished
	12	Basic Design	M/T		△				Sep. 2005
	13	Survey Practice for New C/P	M/T					○	Finished
	14	Manual on Design of Small Irrigation Canals and Related Structure, 2002	M/T			○	No need Translating		Finished
	15	Manual on Design of Small Irrigation Canals and Related Structure, 2003	T			○	No need Translating		Finished
	16	Supplementary Side Reading for Manual on Design for Small Scale Irrigation Canals	T			○		○	Finished
	17	Practical Design Manual on Small Scale Irrigation Canals and Related Structures	T			Draft Complete	No need Translating		Aug. 2005

CM	18	General Specifications on construction of tertiary canal	M			△	No need Translating		Aug. 2005
	19	Criteria of construction control for tertiary canal	M					○	Finished
	20	Manual for Construction Work Process	M/T		△				Sep. 2005
	21	Manual for Marking Fixed Ruler	M/T					○	Finished
	22	Manual on Earth Work Process	M/T		△				Sep. 2005
	23	Manual for Concrete Work Process	M/T		△				Dec. 2005
	24	Outline of Construction Management	M/T			△			Dec. 2005
WM	25	General Guideline of Farmers Survey	M			○		○	Finished
	26	Manual on operation and maintenance of irrigation structures on-farm level	M		△				Aug. 2005
	27	Water management techniques on-farm level	M		△				Sep. 2005

Remarks: "S" is Survey Section, "P" is Planning Section, "D" is Design Section, "CM" is Construction Management Section, "WM" is Water Management Section, "M" is Manual, and "T" is Text Book, "○" is completed, "△" is ongoing, "□" is plan.

- (2) Output 2: Series of training courses are organized to transfer skills in survey, planning, design, construction management and water management with participation of farmers to other engineers and technicians of MOWRAM and PDWRAM. (PDWRAM: Provincial Department of Water Resources and Meteorology)

Verifiable indicators of the Output 2 and achievements are as follows.

Verifiable Indicators	Achievements (as of July 2005)																																
Texts and curricula for training courses on survey, planning, design, construction management and water management with participation of farmers are produced by the end of the project.	Most of manuals produced or to be produced are utilized as text for the training courses of the Project. In total 19 texts will be produced by the end of the Project. (7 out of 19 texts are already produced.)																																
	<p>Number of texts by field is as follows.</p> <table border="1"> <thead> <tr> <th rowspan="2">Field</th> <th rowspan="2">Number of text</th> <th colspan="3">Progress</th> </tr> <tr> <th>Completed</th> <th>Under preparation</th> <th>(Target for completion)</th> </tr> </thead> <tbody> <tr> <td>Survey</td> <td>5</td> <td>1</td> <td>4</td> <td>Dec. 2005</td> </tr> <tr> <td>Planning</td> <td>2</td> <td>0</td> <td>2</td> <td>Dec. 2005</td> </tr> <tr> <td>Design</td> <td>7</td> <td>5</td> <td>2</td> <td>Sep. 2005</td> </tr> <tr> <td>Construction Management</td> <td>5</td> <td>1</td> <td>4</td> <td>Dec 2005</td> </tr> <tr> <td>Water Management</td> <td>0</td> <td>0</td> <td>0</td> <td>-</td> </tr> </tbody> </table> <p>By the Project, curricula for 6 kinds of training courses are produced and training courses had been conducted once per training course. Three (3) more kinds of training course will be conducted.</p> <p>Titles of training courses conducted already are as follows.</p>	Field	Number of text	Progress			Completed	Under preparation	(Target for completion)	Survey	5	1	4	Dec. 2005	Planning	2	0	2	Dec. 2005	Design	7	5	2	Sep. 2005	Construction Management	5	1	4	Dec 2005	Water Management	0	0	0
Field	Number of text			Progress																													
		Completed	Under preparation	(Target for completion)																													
Survey	5	1	4	Dec. 2005																													
Planning	2	0	2	Dec. 2005																													
Design	7	5	2	Sep. 2005																													
Construction Management	5	1	4	Dec 2005																													
Water Management	0	0	0	-																													

	<ol style="list-style-type: none"> 1) Basic Survey 2) Basic Hydraulic for Design of Irrigation Canals 3) Basic Construction Control 4) Construction Control 5) Basic Survey II 6) Practical Design for Small Scale Irrigation Canals and Related Structures <p>Titles of training courses to be conducted are as follows.</p> <ol style="list-style-type: none"> 7) Discharge Measurement and Water Requirement 8) Design of Related Structures 9) Construction Planning and Management
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3.3 Project Purpose

"The technical capacity of the engineers and technicians of MOWRAM and PDWRAM is improved in the fields of survey, planning, design, construction management and water management with participation of farmers for irrigation systems."

Verifiable indicators of the Project Purpose and achievements are as follows.

Verifiable Indicators	Achievements (as of July 2005)
<ol style="list-style-type: none"> 1. The 10 full-time C/Ps obtain the technical capacity to conduct training on irrigation systems by the end of the project. 2. More than 100 engineers and technicians of MOWRAM & PDWRAM improve their technical capacity through trainings at TSC by the end of the project. 	<ol style="list-style-type: none"> 1. Main focus of the capacity development by the Project had been given to strengthening technical capacity of full-time counterparts. (This is based on the results of modification PDM at the mid-term evaluation of the Project in 2003.) Technical capacity of full-time counterparts in the field of survey, planning, design, construction management, and water management with participation of farmers will be improved to a quite satisfactory level in respective fields in regard to tertiary canal level irrigation system. Conduction of various kinds of training courses is one of the means to strengthen technical capacity of full-time counterparts. And training courses had been conducted something like trial. Therefore, full-time counterparts have acquired knowledge and skills to conduct training course to some extent, but it is necessary to grade up their capacity through conducting and experiencing more training courses and improving textbooks. 2. Up to now, 92 engineers and technicians of MOWRAM and PDWRAM improved their technical capacity through participation to the training courses of the Project. 51 more engineers and technicians will improve their technical capacity through training courses, which will be conducted by the end of the Project. So, in total 143 engineers and technicians will improve their technical capacity.

3.4 Prospect to achieve the Overall Goal

"Irrigation projects are properly implemented by MOWRAM and PDWRAM."

Verifiable Indicators	Prospect on achievement (by 2011)
<p>More than 10 projects will be implemented with techniques that were transferred at the TSC project by 2011.</p>	<p>Secondary and tertiary canals in Kandal Stung irrigation area, excluding tertiary canals in the model site of the Project, will be developed utilizing techniques that were transferred by the Project (survey and design of canals are ongoing by the MOWRAM). (Main irrigation facilities of Kandal Stung Irrigation area are going to be constructed by the Japanese grant aid project.)</p> <p>There are 27 irrigation projects implemented by the government using own budget this year in 2005. There are also expected more than 8 planned irrigation projects by the government. In regard to irrigation projects under Japanese Grant Aid of Grass Roots Scheme, 10 irrigation projects have been implemented in past 5 years since 2000, there are 2 committed and 5 proposed irrigation projects.</p> <p>Considering the number of projects under implementation using own budget of the government and past tendency of implementation of irrigation project using fund of Japanese Grant Aid for grass roots projects, there are many irrigation projects in which techniques that were transferred by the Project can be utilized.</p> <p>Therefore, there is possibility to achieve the Overall Goal by 2011.</p>

4. Result of the Evaluation

4.1 Relevance

(1) National development policy of RGC

There are 3 main policies and strategies of RGC, i.e. 1) the Second Five Year Socioeconomic Development Plan (2001-2005), 2) the National Poverty Reduction Strategy (2003-2005) and 3) the Rectangular Strategy that was presented by RGC in 2004. These policy and strategies emphasize poverty reduction, enhancement of agricultural sector, improvement of rural livelihoods, and capacity building and human resource development, etc.

In Cambodia most of the people live in rural area. Therefore, to reduce poverty and improve rural livelihoods through irrigation/agricultural development is necessary. Improvement of irrigation systems and proper management of irrigation water offer good contribution on improvement of agricultural productivity.

The Project has aim to make contribution to improving proper irrigation facilities and managing them appropriately through enhancement of technical capacity of engineers and technicians of MOWRAM who are working in irrigation sector. And this aim is consistent with above mentioned plan and strategies of RGC. Therefore, the Project is relevant with policies and strategies of RGC.

(2) Japan's Official Development Assistance (ODA) Policy to Cambodia

One of the priority areas of the Japanese government is "Agriculture and Rural Development and the Improvement of Agricultural Productivity". One of the priority subjects in this priority area is provision of irrigation facilities, improvement of water management, and development of water users associations for irrigation. JICA also gives priority on improvement of irrigation facilities and organizing farmers for operation and maintenance of irrigation facilities and irrigation water management.

The overall goal of the Project is "Irrigation projects are properly implemented by MOWRAM and PDWRAM". Therefore, the Project is relevant with policy of Japan

(3) Needs of capacity building of engineers and technicians of MOWRAM

Many irrigation engineers and technicians in Cambodia were lost during Khmer-rouge regime (1975-1979). MOWRAM was established in 1999, and has to strengthen and build up capacity of engineers and technicians on developing irrigation systems and supporting farmers in regard to operation and maintenance.

Because of frequent flood and drought occurred in recent years, needs of

improvement of irrigation facilities and human resources development in irrigation sector are increasing. Also, engineers and technicians of PDWRAMs should support farmers in water management after improvement of irrigation facilities.

Therefore the Project is consistent with needs of irrigation engineers and technicians of MOWRAM.

(4) Needs of farmers

In Cambodia, more than 80% of population is engaged in agriculture. Rice is staple food in Cambodia. Due to insufficiency of irrigation facilities, rice production in most of the area depends on unstable rainfall. Cultivated area per household is small and less than 1 ha.

Therefore, supplementary irrigation in rainy and dry season is necessary. Stabilizing rice production through stable supply of irrigation water is very important and necessity of farmers. In this sense, need of improvement of capacity of staff working in irrigation sector is high and consistent with needs of farmers.

4.2 Effectiveness

As described in chapter 3, most of the Outputs of the Project will be achieved by the end of the Project.

The Project Purpose, which is "The technical capacity of the engineers and technicians of MOWRAM and PDWRAM is improved in the fields of survey, planning, design, construction management, and water management with participation of farmers for irrigation systems", will be mostly achieved by the end of the Project. Technical capacity of the 11 full-time counterparts has been improved satisfactorily. And technical capacity of engineers and technicians of MOWRAM and PDWRAM have been improved through the training courses of the Project. Total number of participants to the training courses is 92 up to now. Technical capacity of 51 engineers and technicians of MOWRAM and PDWRAM will be improved through the training courses by the end of the Project.

Full-time counterparts have improved their technique on how to communicate, facilitate and support farmers for organizing water users' group and operation and maintenance of irrigation facilities.

The Project provided technical support on survey techniques of TSC to staff of the MOWRAM team, who are engaged in survey works for construction of tertiary canals in Kandal Stung irrigation area. This is also one of the results of capacity development of the

Project.

Moreover, around 10 operators and mechanics have improved their capacity on operation and maintenance of construction machinery through participation in the project activities.

The achievement of the Outputs has contributed to the achievement of the Project Purpose. Therefore, it is considered that effectiveness of the Project is satisfactorily high.

4.3 Efficiency

(1) Appropriateness of the Inputs by both Japanese side and Cambodian side

Most of the inputs have been provided appropriately in terms of quantity, quality and timing. The followings are several attributes that facilitated the smooth implementation of the project:

- Cambodian side made an effort to provide good working facilities for the Project using budget of the government. A new building for TSC was constructed in 2002 with suitable space for the office, a training room and a laboratory for the Project.
- Cambodian side took necessary actions and measures in the UXOs search and clearing in the model site. So, the Project can safely implement its activities on schedule in the model site.

There were some inputs that have not been provided appropriately as shown below. These had affected certain degree on efficiency of the Project negatively, but both sides had provided effort to reduce negative effect on efficiency of the Project.

- Due to the low salary of officials of government, many of full-time counterparts did not work in the office at full-time basis in the beginning of the Project. And there were cases that some full-time counterparts were replaced. In such case, it was needed to start technical transfer to new full-time counterparts from the beginning. To solve this problem, the Project has provided additional allowances for their work.
- Because some of full-time counterparts did not have sufficient capacity in English language, there was difficulty in conducting technical transfer from Japanese experts to them smoothly. At present, their English capacity was improved with their own learning effort and training provided by the Project.
- There were cases that it took long period of time for procuring equipment. Such delay of

procurement affected the project activities and the Project had to reschedule them.

- There were some cases that timing of dispatch of short-term experts delayed. These had affected implementation of project activities.

(2) Project management and consensus building

Monthly meetings have been held and chaired by the Sub-Manager of the Project. The monthly meetings facilitate the sharing of information regarding the progress and plans of the activities.

Good communication and relationship between full-time counterparts and Japanese experts has contributed to smooth technical transfer and implementation of the project activities.

The Project held some seminars and distributed monthly reports to concerned persons. Through such activities, higher officials understood the progress and situation of the project activities.

The Project has activities cooperated with other donor agencies such as Aus-Aid (concerning training to farmers on improvement of rice cultivation by AQIP scheme) and Japanese Institute of Irrigation and Drainage (concerning investigation of effect of field canal in paddy field). This kind of cooperation has made good effect on efficiency of the Project.

4.4 Impacts

(1) Prospect of achieving the Overall Goal

The Overall Goal of the Project is "Irrigation projects are properly implemented by MOWRAM and PDWRAM".

As mentioned in 3.4, tertiary canals and related structures in Kandal Stung irrigation area will be developed utilizing techniques that were transferred by the Project. MOWRAM team conducting survey work in the area is applying technique that was introduced by the Project, such as specifications and procedures of survey. Construction work of tertiary canals and related structures will be done directly by Engineering Department applying technique of the Project.

RGC is increasing budget for irrigation projects this year. Some irrigation projects have implemented and other projects are being proposed by MOWRAM to RGC. MOWRAM is also proposing some irrigation projects using fund of Japanese Grant Aid for Grass Roots Scheme.

Therefore, there is possibility to achieve the Overall Goal by 2011, in case engineers and technicians of MOWRAM and PDWRAM obtain knowledge and skills properly and

implement irrigation projects applying those knowledge and skills, which have been learned at TSC.

(2) Other Impacts

1) Road construction on bank of tertiary canals in the model site of the Project.

Banks of some tertiary canals, which were constructed in the model site of the Project through OJT, were constructed as farm road. These farm roads are used by farmers for carrying out harvested rice from paddy field and carrying in agricultural input like chemical fertilizer. Workload on transportation is reduced and farmers recognized well about usefulness of farm road. Also the farm road provides good access for children to go to school.

2) Preparation of rules of water users' groups by farmers themselves

The Project promoted and supported to organize water users' group in the model site. 2 water users' groups, which members are using same tertiary canal for irrigation. Total number of farmers is 68. As a result of activities with farmers, these farmers' groups have made rules and regulations of their groups by themselves. The Project is providing support on farmers meetings and the full-time counterparts in the field of water management are acting as facilitators. Important point is that the rules of water users' groups were prepared with farmers initiatives. This experience will provide good influence on policy of MOWRAM for promotion of water users' group.

3) Promotion for organizing water users' group in the model site.

Irrigated Agriculture Department of MOWRAM has started to organize water users' group by utilizing techniques of TSC on water management with participation of farmers.

4) Field canals connected with tertiary canal, which convey irrigation water to each plot of paddy field, constructed by farmers themselves

Japanese Institute of Irrigation and Drainage (JIID) had constructed a field canal in the model site for investigating effectiveness of it in cooperation with the Project. After knowing usefulness of the field canal, other farmers had constructed field canals by themselves. The Project provided technical assistance to them. Traditional way of water delivery at field level is plot-to-plot irrigation. Irrigation by this method may take long time depending on water condition of paddy field of upper part. Understanding of usefulness of field canal by farmers will make more impact on extending construction of

field canals.

5) Increase of rice production in the model site

Some farmers, who are beneficiaries of a tertiary canal constructed by the Project, said that rice production was increased and they could get surplus of rice for sale. Before the construction of the canal, rice production was not enough for self-sufficiency.

6) Knowledge sharing with other staff of PDWRAM

Participants of the training courses have shared knowledge and skills learned with several staff who are working in same office of PDWRAM by explaining or doing their jobs. This is a good impact of training courses on extending knowledge and skills transferred at TSC to other staff of PDWRAM.

7) Recognition of importance of basic knowledge and skills, and effectiveness of capacity development through practice-oriented technical transfer (OJT)

Not only the full-time counterparts but also higher officials of MOWRAM have recognized importance of basic knowledge and skills, and effectiveness of capacity development through practice-oriented technical transfer.

4.5 Sustainability

(1) Organizational sustainability

Although the name of the Project is "the Technical Service Center (TSC) for Irrigation System", TSC is not an official organization authorized by governmental law. The full-time counterparts belong to Engineering Department and Irrigated Agriculture Department of MOWRAM.

In order to continue the activities of TSC, which is the capacity development of technical staff of MOWRAM and PDWRAM, and to strengthen its roles and functions, TSC should be established as an official organization in MOWRAM by law or ordinance of RGC. Organizational sustainability of TSC will be ensured when TSC is established officially with clear roles, functions and structure.

(2) Financial sustainability

RGC is facing financial difficulty in general. Annual budget of MOWRAM is indicated in the following table.

Table: Annual budget of MOWRAM from 2001 to 2004

Annual Budget	2001	2002	2003	2004
(Unit: Riel)	7,740,000,000	7,500,000,000	11,345,000,000	13,000,000,000
(US dollar)	2,015,626	1,953,125	2,954,427	3,385,417

Remark: Exchange rate of US dollar= 3,840 Riel

MOWRAM has disbursed budget for the Project, such as expenses for construction of the TSC building (about 155 thousand US dollars), expenses for operation and maintenance of facilities, expenses for utilities like electricity, water supply and fuel for vehicles, etc. MOWRAM has made effort to provide budget for the Project, especially for construction of TSC building. However, if excluding amount of construction cost of TSC building and salary of staff, annual expenditures for the Project are between 4,000 and 5,000 US dollars.

Expenses for the training courses of the Project are around 3,000 to 4,000 US dollars per training course. Therefore, it is necessary for MOWRAM to get certain amount of budget for activities of TSC like training courses in order to assure financial sustainability of TSC.

(3) Technical sustainability

Main objectives of capacity development of the full-time counterparts are to strengthen technical knowledge and skills in the fields of survey, planning, design, construction management, and water management with participation of farmers for irrigation systems, and to get capacity to conduct the training courses of the Project as instructor. It is judged that 11 full-time counterparts have acquired those capacity mentioned above in quite satisfactory level. If those counterparts continue to work at TSC as instructor for the training courses of the Project, technical sustainability will be ensured. To ensure this technical sustainability, organizational establishment of TSC, regular implementation of the training courses of the Project and provision of incentive, which enables full-time counterparts to continue working at TSC, are necessary.

(4) Important aspect for sustainability in a short period

RGC and JICA agreed to implement the phase II project of TSC. To ensure sustainability of the Project and also for the phase II project, necessary measures have to be taken in remaining period of the Project.

5. Conclusion

The Project is in conformity with the development policy of RGC and needs of engineers and technicians of MOWRAM and PDWRAM and also with the cooperation policy of Japan. It is judged that the Project Purpose and the Outputs of the Project will be achieved satisfactorily by the end of the Project. Various kinds of positive impacts have been produced as results of the project activities, while sustainability of the Project is a subject to be considered organizationally, financially and technically.

Taking all the evaluation results into consideration, it can be judged that the Project has been successfully implemented and achieved the Project Purpose with good effectiveness and positive impacts. In regard to sustainability of the Project, appropriate measures should be taken for sustaining outcomes of the Project.

Based on the abovementioned achievement, it is concluded that the Project will be completed on January 9, 2006 as planned.

6. Recommendations

(1) Items to be implemented during the remaining period of the Project (until January 2006)

- 1) To accomplish scheduled activities in the remaining period of the Project.
- 2) To conduct 3 kinds of the scheduled training courses
- 3) To accomplish preparation of manuals and texts
- 4) To conduct a seminar for presenting outcomes and good examples of the Project to higher officials of MOWRAM and PDWRAM.

(2) Items to be implemented after the period of the Project (after January 2006)

- 1) Follow up study on the training courses

Follow up study to the ex-participants of the training courses of the Project should be conducted to know whether ex-participants utilized knowledge and skills learned at the training course for their jobs and also to know what kinds of knowledge and skills are necessary for them. Results of the follow up study should be utilized for improving the training courses.

- 2) Duration of the training courses.

There are opinions that the durations of training courses are too short for

understanding well about contents of the training course. Durations of the training courses should be examined.

3) Further improvement of manuals and texts

It is necessary to continue improving contents of manuals and texts. And also some manuals and texts are necessary to translate in Khmer language.

4) Provision of tools and instruments to PDWRAM

It is recommended to provide PDWRAM with tools and instruments that are necessary to maximize training results and to share knowledge and skills with staff of PDWRAM such as theodolite and leveling instrument.

5) Accomplishment of construction work of irrigation system in the model site

Irrigation facilities have been constructed in the model site, but it is not possible to accomplish within the project period. Therefore it is necessary to accomplish construction work of tertiary canals and related structures.

6) Extension and scale up of activities of TSC

TSC has to extend the outcomes of the Project and also scale up activities of TSC.

7. Lessons Learned

One of good points of the way of technical transfer by Japan is capacity development with steady progress by experiencing practices through having direct instructions by Japanese experts at field. The purpose of technical transfer at field is to obtain good experiences for engineers and technicians. It is very important for this good point to be recognized not only by counterparts but also by persons concerned of the implementing agency, donor agencies and other stakeholders.

ANNEX I Schedule of the Japanese Evaluation Team

The Technical Service Center (TSC) for Irrigation System Project

	Date		Activities	
			Team Leader, Irrigation Technology, Planning Management	Evaluation Analysis
1	July 10	Sun		Narita→Bangkok→Phnom Penh
2	July 11	Mon		<ul style="list-style-type: none"> •8:00am Courtesy call to H.E. Mr. VENG Sakhon, Secretary of State, MOWRAM •8:30am-10:00 Expalanation of evaluation method to members of the Cambodia Evaluation Team, •11:00-12:00 Meeting with Japanese Experts •13:00-15:00 Visit to mdel site •15:00-17:00 Intrview with Japanese experts •17:30 Meeting with JICA staff at JICA Cambodia Office
3	July 12	Tue		8:30-17:00 Interview with full-time counterparts and counterpart in the filed of management
4	July 13	Wed		8:30-17:00 Interview with counterparts in the filed of management, and Japanese experts
5	July 14	Thu		Data collection and analysis
6	July 15	Fri		8:30-17:00 Site visit (interview with farmers of model site and staff of the district office of MOWRAM) and data nalysis
7	July 16	Sat		data analysis
8	July 17	Sun		data analysis
9	July 18	Mon	Narita→Bangkok→Phnom Penh	<ul style="list-style-type: none"> •8:00-12:00 Interview with participants to the training courses of the Project •15:00-16:30 Interview with directors of Provincial of MOWRAM
10	July 19	Tue		<ul style="list-style-type: none"> •8:30 Meeting at JICA Office •11:15 Courtesy call to the Embassy of Japan •15:00 Courtesy call to MOWRAM (H.E. Mr, Veng Sakhon) •16:00 Visit to TSC
11	July 20	Wed		<ul style="list-style-type: none"> •8:30-12:00 Visit to TSC and interview with Japanese experts •14:00 Joint Evaluation Team Meeting at meeting room of MOWRAM headquarters (First meeting with Cambodia evaluation team member and Japanese evaluation team member)
12	July 21	Thu		•8:30-12:00 Study on progress of the project activities and outcomes, presentation by Cambodian counterparts and Questionan & Answer (at training room of TSC)
13	July 22	Fri		<ul style="list-style-type: none"> •8:30-12:00 Site survey (model site of the Project and interview with farmers) •15:00 Second Joint Evaluation Meeting (discussion on draft evaluation report)
14	July 23	Sat		Data analysis and preparation of evaluation report
15	July 24	Sun		Data analysis and preparation of evaluation report
16	July 25	Mon		•9:00 Third Joint Evaluation Meeting (finalize evaluation report) at meeting room of MOWRAM headquarters
17	July 26	Tue		<ul style="list-style-type: none"> •9:00 Fourth Joint Evaluation Meeting, Sign the Joint Evaluation Report (at meeting room of MOWRAM headquarters) •15:00 Joint Coordination Committee (sign the M/M) (at meeting room of MOWRAM headquarters)
18	July 27	Wed		Report to JICA Office, report to the Embassy of Japan
				(Team Leader & Planning Management) Join to the other evaluation work (Irrigation Technology & Evaluation Analysis) Phnom Penh→Bangkok→(Japan)

ANNEX II Project Design Matrix
(PDM3: revised on October 28, 2003)

Project Title: The Technical Service Center (TSC) for Irrigation System Project
 Target Group: Full-time Counterparts (C/Ps) of TSC, and engineers & technicians of the Ministry of Water Resources and Meteorology (MOWRAM) & the Provincial Department of Water Resources and Meteorology (PDWRAM)
 Target Area: All over Cambodia
 Project Site: Tuk Thla, Phnom Penh (Project office), Kandal Stung, Kandal Province (model farm)
 Implementor: MOWRAM including PDWRAM and Japan International Cooperation Agency (JICA)

Duration: 5 years (2001 Jan. 10 – 2006 Jan. 9)
 Version 3, Revised on 2003 Oct. 28

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>OVERALL GOAL Irrigation projects are properly implemented by MOWRAM and PDWRAM</p>	<p>More than 10 projects will be implemented with techniques that were transferred at the TSC project by 2011</p>	<p>MOWRAM document</p>	
<p>PROJECT PURPOSE The technical capacity of the engineers and technicians of MOWRAM and PDWRAM is improved in the fields of survey, planning, design, construction management and water management with participation of farmers for irrigation systems.</p>	<p>1. The 10 full-time C/Ps obtain the technical capacity to conduct training on irrigation systems by the end of the project. 2. More than 100 engineers and technicians of MOWRAM & PDWRAM improve their technical capacity through trainings at TSC by the end of the project.</p>	<p>1. Project documents 2. Training report</p>	<p>1. Engineers and technicians who received training remain at MOWRAM and PDWRAM. 2. The financial resources for MOWRAM are secured.</p>
<p>OUTPUTS 1. The technical capacity of the full-time counterparts in the fields of survey, planning, design, construction management and water management with participation of farmers is improved through the On-the-Job Training (OJT). 2. Series of training courses are organized to transfer skills in survey, planning, design, construction management and water management with participation of farmers to other engineers and technicians of MOWRAM and PDWRAM.</p>	<p>1.1 Irrigation and drainage facilities are appropriately built by C/Ps with the use of techniques learned through OJT by the end of the project. 1.2 Manuals related to survey, planning, design, construction management and water management with participation of farmers are produced by the end of the project. 2. Texts and curricula for training courses on survey, planning, design, construction management and water management with participation of farmers are produced by the end of the project.</p>	<p>1.1 Project documents, accomplishment of the model site 1.2 Manuals 2. Texts and curricula</p>	

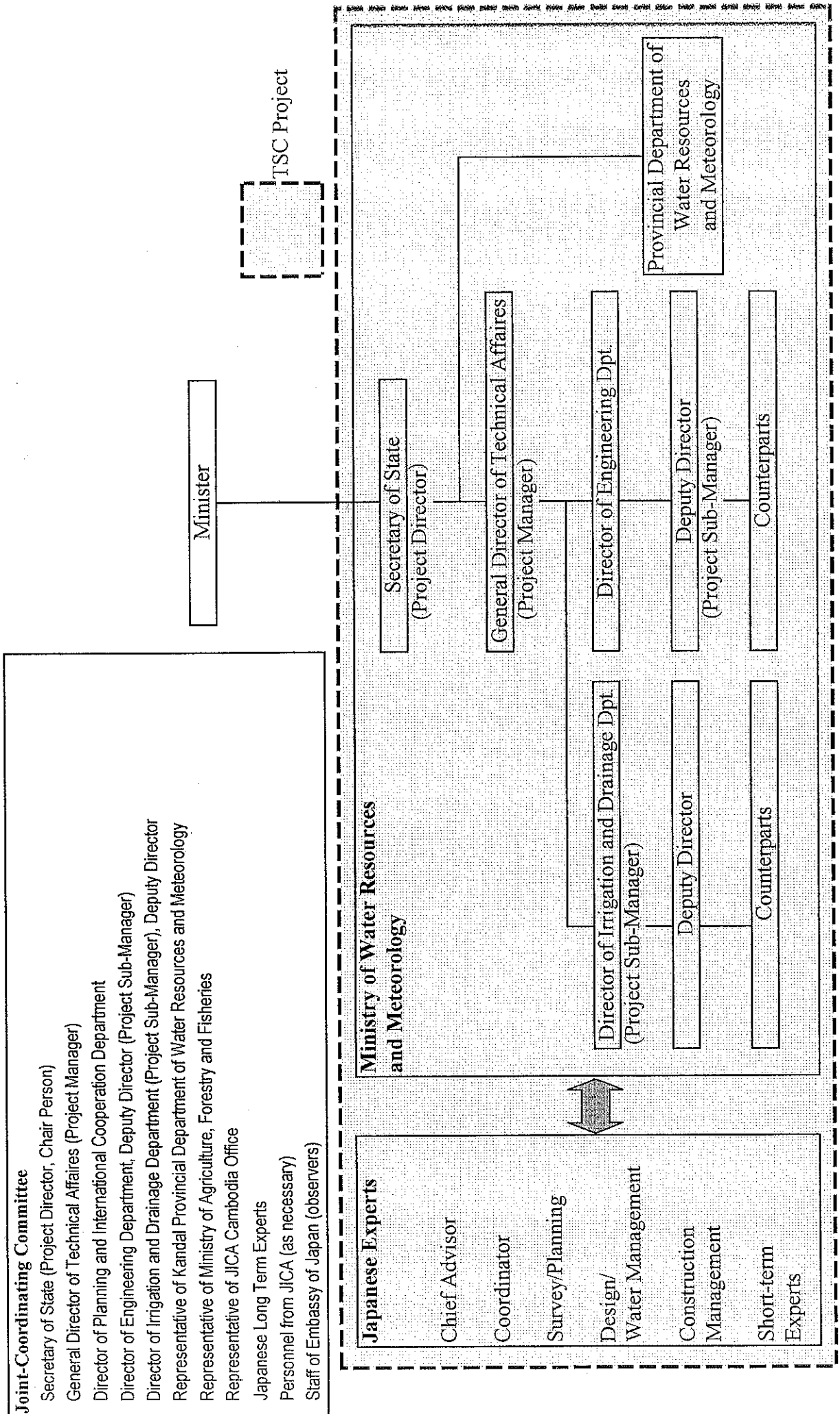
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ACTIVITIES	INPUTS		
	(Japanese Side)	(Cambodian Side)	
1. Assessment of technical capacity and setting of technical level 1.1 Collect data 1.2 Assess present technical capacity in the field of survey 1.3 Assess present technical capacity in the field of planning 1.4 Assess present technical capacity in the field of design 1.5 Assess present technical capacity in the field of construction management 1.6 Assess present technical capacity in the field of water management 1.7 Set the level of skills to be transferred in each field 2. Transfer of technology through OJT 2.1 Transfer survey techniques through OJT 2.2 Transfer planning techniques through OJT 2.3 Transfer design techniques through OJT 2.4 Transfer construction management techniques through OJT 2.5 Transfer water management techniques with participation of farmers through OJT 3. Production of manuals 3.1 Produce manuals on survey technique 3.2 Produce manuals on planning technique 3.3 Produce design standards and manuals on design techniques and project evaluation 3.4 Produce manuals on construction management techniques 3.5 Produce manuals on water management techniques with participation of farmers 4. Training 4.1 Conduct training on survey techniques 4.2 Conduct training on planning techniques 4.3 Conduct training on design techniques 4.4 Conduct training on construction management techniques 4.5 Conduct training on water management techniques with participation of farmers	1. Dispatch of experts: (1) Long-term experts: several persons/year such as: - Chief advisor, - Project coordinator/ Farmers Survey, and - Experts in the fields of 1) Survey / Planning 2) Design/ Water Management 3) Construction Management (2) Short-term experts will be sent according to necessity. 2. Provision of equipment 3. Training of Cambodian counterpart personnel in Japan	1. Assignment of counterpart personnel and other supporting staff members. (1) Project Director (2) Project Manager (3) Project Sub-Managers (4) Full-time counterpart personnel in the fields of: 1) Survey/ Planning 2) Design/ Water Management 3) Construction Management 4) Short-term experts (5) Administrative Staff (6) Technical Staff 2. Provision of land, buildings and facilities related to the project. 3. Provision of machinery necessary for the Project. 4. Allocation of budget for: (1) operation and maintenance of irrigation systems (2) personnel expenses of counterparts and other supporting staff (3) operating expenses necessary for the implementation of the Project	The full-time counterparts continuously work with the Project. PRECONDITIONS 1. Adequate number of qualified counterparts are assigned. 2. Farmers are not against the Project.

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ANNEX III Organizational Structure for the Project



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ANNEX IV Dispatch of Japanese Experts

1) Long-term Japanese Experts

No.	Name of Expert	Field	Period of Assignment							
			From	To	2001	2002	2003	2004	2005	2006
1	Mr. Mamoru Ishikawa	Chief Advisor	01 February 2001	31 March 2002	■					
2	Mr. Akira Miyazaki	Chief Advisor	02 June 2002	09 January 2006		■				
3	Ms. Mikayo Yamazaki	Coordinator / Farmers Survey and Training	10 January 2001	09 January 2004	■	■				
4	Mr. Kenji Yasuda	Survey / Planning	01 April 2001	31 March 2004	■	■				
5	Mr. Yoji Ebihara	Design / Water Management	10 January 2001	30 April 2004	■	■				
6	Mr. Yoichi Ihara	Construction Management	10 January 2001	31 May 2003	■					
7	Mr. Kenji Sekijima	Construction Management	26 May 2003	09 January 2006			■			
8	Mr. Koji Kanemaru	Coordinator / Farmers Survey and Training	20 December 2003	09 January 2006				■		
9	Mr. Masayuki Horiuchi	Survey / Planning	10 April 2004	09 January 2006					■	
10	Mr. Kenji Tsujishita	Design / Water Management	04 May 2004	09 January 2006						■

2) Short-term Japanese Experts

No.	Name of Expert	Field	Period of Assignment							
			From	To	2001	2002	2003	2004	2005	2006
1	Mr. Satoru Nishio	Topographical Survey / Topographical Mapping	15 November 2001	12 December 2001	■					
2	Mr. Kazuhiko Kamachi	Operation and Maintenance of Construction Machinery	13 February 2002	12 April 2002		■				
3	Mr. Kiyoji Asai	Planning Theory	30 March 2002	13 April 2002		■				
4	Mr. Kiyoji Asai	Planning Theory	05 September 2002	24 September 2002			■			
5	Mr. Yasushi Osato	Design on Small Scale Canals and Related Structures	30 September 2002	16 November 2002			■			
6	Mr. Yoichi Hayashida	Construction Material Test	25 November 2002	21 December 2002			■			
7	Mr. Norihumi Shinmura	Operation and Maintenance of Construction Machinery	16 March 2003	13 April 2003				■		
8	Mr. Yasushi Osato	Design on Small Scale Irrigation Structures	01 July 2003	31 August 2003					■	
9	Mr. Yukihiro Yamamoto	Participatory Water Management	01 September 2003	04 October 2003						■
10	Mr. Yoichi Hayashida	Construction Material Test	18 November 2003	14 December 2003						■
11	Mr. Norifumi Shimmura	On-Sight Construction Management	11 January 2004	24 April 2004						■
12	Mr. Naoki Horikawa	Monitoring Planning	22 January 2004	19 February 2004						■
13	Mr. Takashi Kurauchi	Check and maintenance for gate structures	07 March 2004	30 April 2004						■
14	Mr. Yasushi Osato	Practical Design on Small-scale Canals and Related Structure	01 July 2004	31 August 2004						■
15	Mr. Manabu Kawaguchi	Topographical Mapping	21 October 2004	14 December 2004						■
16	Mr. Itsuo Kinara	On-Sight Construction Management	19 February 2005	30 March 2005						■

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ANNEX V Assignment of Counterpart and Training in Japan

No.	Name of Counterpart	Field	Present Post	Remarks	Period of Assignment												Training in Japan	
					From	To	2000	2001	2002	2003	2004	2005	Year	Name of Training Course	Duration			
1	H.E. Veng Sakhon	Project Director	Secretary of State Under Secretary of State		January 2001	January 2006									2000	Capacity Building for Irrigation Engineers	10 Dec 2000 ~ 16 Dec 2000	
2	H.E. Bun Hean	Project Manager	Director General of Technical Affairs		January 2001	January 2006												
3	Mr. Te Ouv Kim	Project Sub-Manager	Director, Dep. of Irrigated Agriculture		January 2001	January 2006									2001	Capacity Building for Irrigation Engineers	14 May 2001 ~ 25 May 2001	
4	Mr. Ngoun Pich	Project Sub-Manager	Deputy Director, Dep. Engineering		January 2001	January 2006									2001	Capacity Building for Irrigation Engineers	14 May 2001 ~ 25 May 2001	
5	Mr. Klouk Sam Ang	Management and Administration	Chief, International Cooperation Dep. Of Planning		January 2001	January 2006												
6	Mr. Mao Rath	Survey	Official, Engineering Dep.	Personnel changes	January 2001	August 2004									2002	Irrigation, Drainage and Rural Development	14 April 2002 ~ 13 July 2002	
7	Mr. Uch Hing	Survey	Official, Engineering Dep.		January 2001	January 2006									2002	Irrigation, Drainage and Rural Development	13 June 2003 ~ 23 Sept 2003	
8	Mr. Im Veasna	Planning	Official, Engineering Dep.	Personnel changes	January 2001	September 2002												
9	Mr. Sari Chhoun Sangha	Planning	Official, Engineering Dep.	Studying abroad	January 2001													
10	Mr. Meas Savoeun	Planning	Official, Irrigated Agriculture Dep.		May 2002	January 2006									2004	Irrigation, Drainage and Rural Development	27 June 2004 ~ 25 Sept 2004	
11	Mr. You Sotha	Planning	Official, Irrigated Agriculture Dep.		November 2002	January 2006									2005	Irrigation, Drainage and Rural Development	9 May 2005 ~ 19 July 2005	
12	Mr. Teav Vutha	Design	Official, Irrigated Agriculture Dep.		May 2002	January 2006									2005	Irrigation, Drainage and Rural Development	9 May 2005 ~ 19 July 2005	
13	Mr. Hay Bunteoun	Design	Official, Engineering Dep.		May 2002	January 2006									2005	Irrigation, Drainage and Rural Development	9 May 2005 ~ 19 July 2005	
14	Mr. Seru Samnag	Design	Official, Engineering Dep.	Personnel changes	January 2001	May 2002												
15	Mr. Buopa Marylux	Design	Official, Engineering Dep.	Personnel changes	January 2001	May 2002												
16	Mr. Phiv Phalkun	Construction Management	Official, Engineering Dep.	Personnel changes	January 2001	May 2002												
17	Mr. Ung Kotaro	Construction Management	Official, Engineering Dep.		January 2001	January 2006									2005	Irrigation, Drainage and Rural Development	14 April 2002 ~ 13 July 2002	

No.	Name of Counterpart	Field	Present Post Post at assignment time	Remarks	Period of Assignment				Training in Japan					
					From	To	2000	2001	2002	2003	2004	2005	Year	Name of Training Course
18	Mr. Touch Bun Leng	Construction Management	Official, Engineering Dep.	Personnel changes	May 2002	July 2002								
19	Mr. Noun Vannarith	Construction Management	Official, Engineering Dep.		August 2002	January 2006								27 June 2004 ~ 25 Sept 2004
20	Mr. Huot Chandarith	Water Management Farmer Survey	Official, Irrigated Agriculture Dep.	Personnel changes	January 2001	August 2004								15 July 2002 ~ 24 October 2002
21	Mr. Pnum Kanthel	Water Management Farmer Survey	Official, Irrigated Agriculture Dep.		January 2001	August 2004								30 July 2001 ~ 17 October 2001
22	Mr. Teng Tong Heng	Water Management Farmer Survey	Official, Irrigated Agriculture Dep.		April 2005	January 2006								
23	Mr. Sok Korn	Water Management Farmer Survey	Official, Irrigated Agriculture Dep.		September 2004	January 2006								
24	Mr. Maen Seang	Survey	Official, Engineering Dep.		September 2004	January 2006								

List of JCC members trained in Japan

25	Mr. Em Buntthoeun	JCC Member	Director, Engineering Dep.		August 2002	September 2002								2002	Management Methods for Irrigation System Projects	31 Aug 2002 ~ 13 Sep 2002
26	Dr. Theng Tara	JCC Member	Director, Director of Water Resources Management and Conservation Dep.		August 2002	September 2002								2002	Water Resources Management	31 Aug 2002 ~ 13 Sep 2002

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ANNEX VI Provision of Equipment by Japanese side

Note: R/P: Route of Procurement (E: Technical Equipment from Japan, J: Equipment for Experts, L: Equipment of Local Activities, T: Equipment transferred from other JICA Projects)
 Frequency of Use (A: Daily, B: Monthly/Weekly, C: Use in specific period, D: Use less than 5 times / year, *: refer to list of equipment)
 Condition (A: Good - B: Fair - C: Bad)

No.	Date of Arrival	Description		Model Number	R/P	QTY	Unit Price JPY	S-total JPY	Unit Price US\$	S-total US\$	Place of Storage		Frequency of Use	Condition	Remarks
		Item	Manufacture								Location	Person in Charge			
2000 E 001	30 3 2001	4WD Vehicle (Land Cruiser Station Wagon), Chassis No. JT-CB-09J1-5000285, Engine No. 0351091	Toyota	HZJ-105LGMMSV	E	1		US 38,500.00	US 38,500.00		HINAWAR Parking lot #1 H.	Mr. Te. Av. RSM	A	A	One project car is parked at apartment hotel (Mr. Miyazaki's residence) for emergency.
2000 E 002	30 3 2001	Pickup Truck (Hi-Lux 4WD), Chassis No. JTFDE826-0-0053380, Engine No. 3L-5031776	Toyota	LNT166L-PRMDS	E	1		US 22,500.00	US 22,500.00		HOWRAM Parking lot	Mr. Te. Av. RSM	A	A	
2000 E 003	30 3 2001	Pickup Truck (Hi-Lux 4WD), Chassis No. JTFDE 62800053415, Engine No. 3-5032095	Toyota	LNT166L-PRMDS	E	1		US 22,500.00	US 22,500.00		HOWRAM Parking lot	Mr. Te. Av. RSM	A	A	
2000 E 004	30 3 2001	Copy Machine	Canon/Comair	NP-721D	E	1		USD 5,054.00	USD 5,054.00		Tuk Thla TSC	Mr. Te. Av. RSM	A	A	
2000 E 005	30 3 2001	Laser Printer	Canon	LBP-800	E	1		USD 360.00	USD 360.00		Tuk Thla TSC	Mr. Te. Av. RSM	A	A	
2000 E 006	30 3 2001	Laser Printer	Canon	LBP-800	E	1		USD 360.00	USD 360.00		Tuk Thla TSC	Mr. Te. Av. RSM	A	A	
2000 E 007	30 3 2001	Desktop Computer	IBM	300GL	E	1		USD 1,519.00	USD 1,519.00		Tuk Thla TSC	Mr. Te. Av. RSM	A	A	
2000 E 008	30 3 2001	Desktop Computer	IBM	300GL	E	1		USD 1,519.00	USD 1,519.00		Tuk Thla TSC	Mr. Te. Av. RSM	A	A	
2000 E 009	30 3 2001	Desktop Computer	IBM	300GL	E	1		USD 1,519.00	USD 1,519.00		Tuk Thla TSC	Mr. Te. Av. RSM	A	A	
2000 E 010	30 3 2001	Desktop Computer	IBM	300GL	E	1		USD 1,519.00	USD 1,519.00		Tuk Thla TSC	Mr. Te. Av. RSM	A	A	
2000 E 011	30 3 2001	Desktop Computer	IBM	300GL	E	1		USD 1,519.00	USD 1,519.00		Tuk Thla TSC	Mr. Te. Av. RSM	A	A	
2000 E 012	30 3 2001	Wireless Telephone	MOTOROLA	GP88 UHF	E	1		USD 180.00	USD 180.00		HOWRAM Project	Mr. Te. Av. RSM	A	B	
2000 E 013	30 3 2001	Wireless Telephone	MOTOROLA	GP88 UHF	E	1		USD 350.00	USD 350.00		Tuk Thla TSC	Mr. Te. Av. RSM	A	B	
2000 E 014	30 3 2001	Wireless Telephone	MOTOROLA	GM950I	E	1		USD 350.00	USD 350.00		Tuk Thla TSC	Mr. Te. Av. RSM	A	B	
2000 E 015	30 3 2001	Wireless Telephone	MOTOROLA	GM950I	E	1		USD 350.00	USD 350.00		Tuk Thla TSC	Mr. Te. Av. RSM	A	B	
2000 E 016	30 3 2001	Wireless Telephone	MOTOROLA	GM950I	E	1		USD 350.00	USD 350.00		Tuk Thla TSC	Mr. Te. Av. RSM	A	B	
2000 E 017	30 3 2001	Wireless Telephone	MOTOROLA	GM950I	E	1		USD 350.00	USD 350.00		Tuk Thla TSC	Mr. Te. Av. RSM	A	B	
2000 E 018	30 3 2001	Motorola Mobile Antenna		UHF	E	3		USD 75.00	USD 225.00		Tuk Thla TSC	Mr. Te. Av. RSM	A	B	
2000 E 019	12 10 2001	Auto Level	Topcon	AT-M3	E	1	JPY 159,000	JPY 159,000			Tuk Thla TSC	Mr. Te. Av. RSM	C	A	
2000 E 020	12 10 2001	Theodolite	Topcon	TL-20G	E	1	JPY 482,000	JPY 482,000			Tuk Thla TSC	Mr. Te. Av. RSM	C	A	
2000 E 021	12 10 2001	Plate Table Set	Tamaya	TPT-SET Tamura	E	1	JPY 35,000	JPY 35,000			Tuk Thla TSC	Mr. Te. Av. RSM	C	A	
2000 E 022	12 10 2001	Planimeter	Tamaya	PLANIX7	E	1	JPY 80,500	JPY 80,500			Tuk Thla TSC	Mr. Te. Av. RSM	C	A	
2000 E 023	12 10 2001	Planimeter	Tamaya	PLANIX7	E	1	JPY 80,500	JPY 80,500			Tuk Thla TSC	Mr. Te. Av. RSM	C	A	
2000 E 024	12 10 2001	Conc. Perimeter	Marui	MS-243-1-01	E	1	JPY 390,000	JPY 390,000			Tuk Thla TSC	Mr. Te. Av. RSM	*	A	activities completed
2000 E 025	12 10 2001	Motorized Direct Shear Test	Marui	MIS-243-1-02	E	1	JPY 1,615,000	JPY 1,615,000			Tuk Thla TSC	Mr. Te. Av. RSM	D	A	
2000 E 026	12 10 2001	Compaction Set Apparatus	Marui	MIS-217-1-01	E	1	JPY 287,000	JPY 287,000			Tuk Thla TSC	Mr. Te. Av. RSM	C	A	
2000 E 027	12 10 2001	Falling-Head Permeameter	Marui	MIS-227-1-03	E	1	JPY 789,600	JPY 789,600			Tuk Thla TSC	Mr. Te. Av. RSM	*	B	For short-term expert in Sep 2005
2000 E 028	12 10 2001	Drafting Machine	MAX	MD-3000, PM-912SR	E	1	JPY 290,800	JPY 290,800			Tuk Thla TSC	Mr. Te. Av. RSM	C	A	
2000 E 029	12 10 2001	Drafting Machine	MAX	MD-3000, PM-913SR	E	1	JPY 290,800	JPY 290,800			Tuk Thla TSC	Mr. Te. Av. RSM	C	A	
2000 J 001	14 3 2001	Paddy Field Recorder	Daiki	DIK-4300	J	1		USD 1,875.00	USD 1,875.00		Tuk Thla TSC	Mr. A. Miyazaki	C	A	
2000 J 002	14 3 2001	Laptop Computer	IBM	ThinkPad I Series 1800	J	1		USD 2,408.00	USD 2,408.00		Tuk Thla TSC	Mr. A. Miyazaki	*	C	since May 2003, broken
2000 J 003	14 3 2001	Laptop Computer	IBM	ThinkPad I Series 1800	J	1		USD 2,408.00	USD 2,408.00		Tuk Thla TSC	Mr. A. Miyazaki	*	C	since May 2003, broken
2000 J 004	14 3 2001	Color Printer	Canon	BJ-F6600	J	1		USD 307.00	USD 307.00		Tuk Thla TSC	Mr. A. Miyazaki	A	B	
2000 J 005	14 3 2001	Color Scanner	Canon	CanoScan N1220U	J	1		USD 140.00	USD 140.00		Tuk Thla TSC	Mr. A. Miyazaki	C	A	
2000 J 006	14 3 2001	Wireless Print Server	BUFFALO	AHP's LPV-WL1T	J	1		USD 192.00	USD 192.00		Tuk Thla TSC	Mr. A. Miyazaki	*	C	since April 2003, wire LAN network installed, broken
2000 J 007	14 3 2001	Wireless Lan Station	BUFFALO	AirStation WLAR-L11-M	J	1		USD 275.00	USD 275.00		Tuk Thla TSC	Mr. A. Miyazaki	*	C	since April 2003, wire LAN network installed, broken
2000 J 008	14 3 2001	Digital Camera	Canon	IXY Digital	J	1		USD 492.00	USD 492.00		Tuk Thla TSC	Mr. A. Miyazaki	*	C	since Jan 2005, broken
2000 J 009	14 3 2001	Laptop Computer	Fujitsu	FMV-BIBLO NEE/65DR	J	1		USD 2,292.00	USD 2,292.00		Tuk Thla TSC	Mr. A. Miyazaki	C	C	
2000 J 010	14 3 2001	Laptop Computer	IBM	ThinkPad I Series 1800	J	1		USD 1,917.00	USD 1,917.00		Tuk Thla TSC	Mr. A. Miyazaki	*	C	since May 2003, broken
2000 J 011	14 3 2001	Glassfibre Tape Measure 50m	KDS	211-1852	J	1		USD 48.00	USD 48.00		Tuk Thla TSC	Mr. A. Miyazaki	C	A	
2000 J 012	14 3 2001	Measure Rope 100m	Sekisui	210-1803	J	1		USD 90.00	USD 90.00		Tuk Thla TSC	Mr. A. Miyazaki	C	A	
2000 J 013	14 3 2001	Aluminum Measurement Rod	Harakeikisha	232-2135	J	1		USD 2,250.00	USD 2,250.00		Tuk Thla TSC	Mr. A. Miyazaki	C	A	
2000 J 014	3 2001	Current Meter	Harakeikisha	types 10	J	1		USD 150.00	USD 150.00		Tuk Thla TSC	Mr. A. Miyazaki	C	A	
2000 J 015	14 3 2001	Curve Ruler	Harakeikisha	103-2011	J	1		USD 111.00	USD 111.00		Tuk Thla TSC	Mr. A. Miyazaki	C	A	
2000 J 016	14 3 2001	Drawing Instruments	Harakeikisha	120-3581	J	1		USD 350.00	USD 350.00		Tuk Thla TSC	Mr. A. Miyazaki	C	A	
2000 J 017	14 3 2001	Bronometer	Harakeikisha	271-3591	J	1		USD 34.00	USD 34.00		Tuk Thla TSC	Mr. A. Miyazaki	C	A	
2000 J 018	14 3 2001	Iron Spirit Level	Harakeikisha	4621	J	1		USD 34.00	USD 34.00		Tuk Thla TSC	Mr. A. Miyazaki	C	B	
2000 L 001	7 3 2001	Water Cooler and Heater	National	Milux	L	1		USD 150.00	USD 150.00		HOWRAM Project	Mr. A. Miyazaki	A	A	
2000 L 002	7 3 2001	Electric Pot	National	9-21	L	1		USD 30.00	USD 30.00		HOWRAM Project	Mr. A. Miyazaki	A	A	
2000 L 003	9 3 2001	Sofa Set	Cheer Luck		L	1		USD 275.00	USD 275.00		HOWRAM Project	Mr. A. Miyazaki	A	A	
2000 L 004	9 3 2001	Refrigerator	Hitachi	180J	L	1		USD 250.00	USD 250.00		HOWRAM Project	Mr. A. Miyazaki	A	A	
2000 L 005	20 3 2001	Refrigerator	Hitachi	180J	L	1		USD 250.00	USD 250.00		Tuk Thla TSC	Mr. A. Miyazaki	A	A	

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Notes: R/P-Route of Procurement (E: Technical Equipment from Japan, J: Equipment for Experts, L: Equipment of Local Activities, T: Equipment transferred from other JICA Projects)
 (A: Daily, B: Monthly/Weekly, C: Use in specific period, D: Use less than 5 times / year, *: refer to list of equipment)
 (A: Good - B: Fair - C: Bad)

No.	Date of Arrival	Item	Description		R/P	QTY	Unit Price JPY	S-total JPY	Unit Price USD	S-total USD	Place of Storage		Frequency of Use	Condition	Remarks
			Manufacture	Model Number							Location	Person in charge			
2000	L 005	20	3	2001	Soft Set	L	1		USD 275.00	USD 275.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 007	26	3	2001	Desk and Drawers	L	1		USD 255.00	USD 255.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 008	26	3	2001	Desk and Drawers	L	1		USD 255.00	USD 255.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 009	26	3	2001	Desk and Drawers	L	1		USD 255.00	USD 255.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 010	26	3	2001	Desk and Drawers	L	1		USD 255.00	USD 255.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 011	26	3	2001	Desk and Drawers	L	1		USD 255.00	USD 255.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 012	26	3	2001	Desk and Drawers	L	1		USD 255.00	USD 255.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 013	26	3	2001	Desk and Drawers	L	1		USD 255.00	USD 255.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 014	26	3	2001	Desk and Drawers	L	1		USD 255.00	USD 255.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 015	26	3	2001	Desk and Drawers	L	1		USD 255.00	USD 255.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 016	26	3	2001	Desk and Drawers	L	1		USD 255.00	USD 255.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 017	26	3	2001	Desk and Drawers	L	1		USD 255.00	USD 255.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 018	26	3	2001	Desk and Drawers	L	1		USD 255.00	USD 255.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 019	26	3	2001	Desk and Drawers	L	1		USD 255.00	USD 255.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 020	26	3	2001	Desk and Drawers	L	1		USD 255.00	USD 255.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 021	26	3	2001	Desk and Drawers	L	1		USD 255.00	USD 255.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 022	26	3	2001	Desk and Drawers	L	1		USD 255.00	USD 255.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 023	26	3	2001	Office Chair	L	1		USD 65.00	USD 65.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 024	26	3	2001	Office Chair	L	1		USD 65.00	USD 65.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 025	26	3	2001	Office Chair	L	1		USD 65.00	USD 65.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 026	26	3	2001	Office Chair	L	1		USD 65.00	USD 65.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 027	26	3	2001	Office Chair	L	1		USD 65.00	USD 65.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 028	26	3	2001	Office Chair	L	1		USD 65.00	USD 65.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 029	26	3	2001	Office Chair	L	1		USD 65.00	USD 65.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 030	26	3	2001	Office Chair	L	1		USD 65.00	USD 65.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 031	26	3	2001	Office Chair	L	1		USD 65.00	USD 65.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 032	26	3	2001	Office Chair	L	1		USD 65.00	USD 65.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 033	26	3	2001	Office Chair	L	1		USD 65.00	USD 65.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 034	26	3	2001	Office Chair	L	1		USD 65.00	USD 65.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 035	26	3	2001	Office Chair	L	1		USD 65.00	USD 65.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 036	26	3	2001	Office Chair	L	1		USD 65.00	USD 65.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 037	26	3	2001	Office Chair	L	1		USD 65.00	USD 65.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 038	26	3	2001	Office Chair	L	1		USD 65.00	USD 65.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 039	26	3	2001	Bookshelf	L	1		USD 135.00	USD 135.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 040	26	3	2001	Bookshelf	L	1		USD 135.00	USD 135.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 041	26	3	2001	Bookshelf	L	1		USD 170.00	USD 170.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 042	26	3	2001	Desk	L	1		USD 380.00	USD 380.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 043	26	3	2001	Leather Chair	L	1		USD 190.00	USD 190.00	Tuk Thia TSC	Mr.A.Miyazaki	A	A	
2000	L 044	26	3	2001	Camera	L	1		USD 210.00	USD 210.00	Tuk Thia TSC	Mr.A.Miyazaki	C	A	
2000	L 045	29	3	2001	Camera	L	1		USD 37.00	USD 37.00	Tuk Thia TSC	Mr.A.Miyazaki	C	A	
2000	L 046	29	3	2001	Electric Fan	L	1		USD 37.00	USD 37.00	Tuk Thia TSC	Mr.A.Miyazaki	C	A	
2000	L 047	29	3	2001	Electric Fan	L	1		USD 37.00	USD 37.00	Tuk Thia TSC	Mr.A.Miyazaki	C	A	
2000	L 048	29	3	2001	Electric Fan	L	1		USD 37.00	USD 37.00	Tuk Thia TSC	Mr.A.Miyazaki	C	A	
2000	L 049	29	3	2001	Electric Fan	L	1		USD 37.00	USD 37.00	Tuk Thia TSC	Mr.A.Miyazaki	C	A	
2000	L 050	29	3	2001	Hall Puncher	L	1		USD 4.80	USD 4.80	Tuk Thia TSC	Mr.A.Miyazaki	C	A	
2000	L 051	29	3	2001	Hall Puncher	L	1		USD 14.90	USD 14.90	Tuk Thia TSC	Mr.A.Miyazaki	C	A	
2000	L 052	29	3	2001	Stapler	L	1		USD 35.00	USD 35.00	Tuk Thia TSC	Mr.A.Miyazaki	C	A	
2000	L 053	29	3	2001	Paper Cutter	L	1		USD 38.00	USD 38.00	Tuk Thia TSC	Mr.A.Miyazaki	C	A	
2000	L 054	29	3	2001	Fax Machine	L	1		USD 270.00	USD 270.00	Tuk Thia TSC	Mr.A.Miyazaki	D	A	
2001	E 030	11	9	2001	Concrete Test Hammer	E	1	JPY 174,000	JPY 174,000			Mr.Te Av/KM	D	A	
2001	E 031	11	9	2001	Record Paper (9-Rollies)	E	1	JPY 6,100	JPY 6,100			Mr.Te Av/KM	D	A	
2001	E 032	11	9	2001	30cm Triangular Scale	E	9	JPY 1,700	JPY 15,300			Mr.Te Av/KM	B	A	
2001	E 033	11	9	2001	Straight Ruler with Sectional Scale&Cutter	E	4	JPY 1,950	JPY 7,800			Mr.Te Av/KM	B	A	
2001	E 034	11	9	2001	30cm Triangles Set	E	4	JPY 900	JPY 3,600			Mr.Te Av/KM	B	A	
2001	E 035	11	9	2001	Flexible Curve Ruler	E	4	JPY 950	JPY 3,800			Mr.Te Av/KM	B	A	
2001	E 036	11	9	2001	Protector	E	4	JPY 2,550	JPY 10,200			Mr.Te Av/KM	B	A	
2001	E 037	11	9	2001	50m Measuring Tape	E	4	JPY 3,500	JPY 14,200			Mr.Te Av/KM	B	A	
2001	E 038	11	9	2001	100m Measuring Rope	E	1	JPY 3,000	JPY 3,000			Mr.Te Av/KM	B	A	
2001	E 039	11	9	2001	Roller with Case for Measuring Rope	E	1	JPY 3,000	JPY 3,000			Mr.Te Av/KM	B	A	
2001	E 040	11	9	2001	Aluminum Staff with Circular 5-Section	E	2	JPY 9,200	JPY 18,400			Mr.Te Av/KM	B	A	

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 Frequency of Use (A: Daily, B: Monthly/Weekly, C: Use in specific period, D: Use less than 5 times / year, *: refer to list of equipment)
 Condition (A: Good - B: Fair - C: Bad)

No.	Date of Arrival	Description		Model Number	QTY	Unit Price JPY		S-total JPY	Unit Price USD	S-total USD	Place of Storage		Frequency of Use	Condition	Remarks
		Item	Manufacture			Per Person	Location								
2001 E 041	11/9/2001	2m Pole, 2-Sections, Graduation 20cm	Autocad 2002 (E)	Autocad 2002 (E)	E 1	JPY 515,500	JPY 515,500		USD 38,950.00	US 38,950.00	Tuk Thla TSC	B	A		
2001 E 042	11/9/2001	3m Pole, 3-Sections, Graduation 20cm	Printer	Desjact 1125C	E 1	JPY 41,100	JPY 41,100				Tuk Thla TSC	B	A		
2001 E 043	11/9/2001	Compass(Dumping Fluid)	Manul	MIC-101-D-02	E 1	JPY 5,030,000	JPY 5,030,000				Tuk Thla TSC	B	A	need to repair	
2001 E 044	11/9/2001	50m Tape Red Graduation, 20cm	Manul	MIC-109-1-61	E 1	JPY 3,490,000	JPY 3,490,000				Tuk Thla TSC	B	A		
2001 E 045	4/12/2001	4WD Vehicle (Lamd Cruiser Station Wagon), Chassis No. JTECB-09203004306, Engine No. 1H20373416	Komatsu	CD60R-1A	E 1	JPY 8,500,000	JPY 8,500,000				Tuk Thla TSC	B	A		
2001 E 046	21/12/2001	Software Autocad	Toyko Kuuki Seisakush	TPB-40	E 1	JPY 850,035	JPY 850,035				MONFRAM Parking lot	A	A		
2001 E 047	21/12/2001	Printer	Manul	MIC-135-0-01	E 30	JPY 2,800	JPY 84,000				Tuk Thla TSC	C	A	spare parts	
2001 E 048	21/12/2001	Compression Apparatus	Denyo	DIS-180SS	E 1	JPY 386,000	JPY 386,000				Tuk Thla TSC	C	A	spare parts	
2001 E 049	21/12/2001	Concrete Mixer	Denyo	DCA-60SPI	E 1	JPY 272,000	JPY 272,000				Tuk Thla TSC	C	A	spare parts	
2001 E 050	21/12/2001	Crawler Carrier	Denyo	312C	E 1	JPY 328,000	JPY 328,000				Tuk Thla TSC	C	A	spare parts	
2001 E 051	21/12/2001	Spare Parts for Crawler Carrier	Chittipillar	312C	E 1	JPY 13,700,000	JPY 13,700,000				Tuk Thla TSC	C	A	spare parts	
2001 E 052	21/12/2001	Concrete Breaker	Caterpillar	DSMXL	E 1	JPY 13,500,000	JPY 13,500,000				Tuk Thla TSC	C	A		
2001 E 053	21/12/2001	Spare Parts for Concrete Breaker	Hokutsu Kougyou	BW715AD	E 1	JPY 2,700,000	JPY 2,700,000				Tuk Thla TSC	C	A	spare parts	
2001 E 054	21/12/2001	Air Compressor	Hokutsu Kougyou	BW755	E 1	JPY 1,000,000	JPY 1,000,000				Tuk Thla TSC	C	B		
2001 E 055	21/12/2001	Spare Parts for Air Compressor	Hino	FD3HESD-AAVDJUMP	E 1	JPY 2,800,000	JPY 2,800,000				Tuk Thla TSC	C	A	spare parts	
2001 E 056	21/12/2001	Generator	Sony	VPL-Q33	E 1	USD 2,850.00	USD 2,850.00				Tuk Thla TSC	C	A	spare parts	
2001 E 057	21/12/2001	Spare Parts for Generator	Sharp	20G3P	E 1	USD 320.00	USD 320.00				Tuk Thla TSC	D	A		
2001 E 058	21/12/2001	Hydraulic Excavator, Chassis No. CAT0512C1, Engine No. 21150	Sharp	V60S	E 1	USD 128.00	USD 128.00				Tuk Thla TSC	D	A		
2001 E 059	28/12/2001	Bulldozer, Chassis No. 4LS00602, Engine No. 2DY01958	Kodak	EKTA Lite 330, 220V	E 1	USD 1,250.00	USD 1,250.00				Tuk Thla TSC	D	A		
2001 E 060	28/12/2001	Spare Parts for Bulldozer D5M XL	Kodak	EKTA Graphic II ATS, 230V	E 1	USD 2,250.00	USD 2,250.00				Tuk Thla TSC	D	A		
2001 E 061	28/12/2001	Vibratory Roller	Topcon	TL-20G	E 10	JPY 1,620	JPY 16,200				Tuk Thla TSC	B	A		
2001 E 062	28/12/2001	Vibratory Roller	Topcon	TL-192	E 10	JPY 300	JPY 3,000				Tuk Thla TSC	B	A		
2001 E 063	28/12/2001	Vibratory Roller	Topcon	ALG-55Y	E 4	JPY 5,100	JPY 20,400				Tuk Thla TSC	B	A		
2001 E 064	28/12/2001	Spare Parts for 115AD&755	Topcon	AT-M3	E 1	JPY 134,000	JPY 134,000				Tuk Thla TSC	B	A		
2001 E 065	25/2/2002	Dump Truck, Chassis No. 10094	Topcon	AT-M3	E 1	JPY 134,000	JPY 134,000				Tuk Thla TSC	B	A		
2001 E 066	25/2/2002	Spare Parts for Dump Truck	Myxon	EX-3	E 2	JPY 20,300	JPY 40,600				Tuk Thla TSC	B	A		
2001 E 067	28/3/2002	LCD data projector	Myxon	EX-3	E 1	JPY 90,800	JPY 90,800				Tuk Thla TSC	D	A		
2001 E 068	26/3/2002	Television	Tamaya	Planix 7	E 1	JPY 90,800	JPY 90,800				Tuk Thla TSC	D	A		
2001 E 069	26/3/2002	VCR	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 070	26/3/2002	Overhead Projector	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 071	26/3/2002	Slide Projector	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 072	26/3/2002	Projector Screen	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 073	23/7/2002	Triangle Scale	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 074	23/7/2002	Triangle Scale	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 075	23/7/2002	Measuring Rope	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 076	23/7/2002	Staff Table	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 077	23/7/2002	Level	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 078	23/7/2002	Level	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 079	23/7/2002	Theodolite	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 080	23/7/2002	Drawing Board	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 081	23/7/2002	Prism Aridade Set	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 082	23/7/2002	Prism Aridade Set	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 083	23/7/2002	Area-line Meter	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 084	23/7/2002	Area-line Meter	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 085	23/7/2002	Tracing Board with spare fluorescent	Tamaya	Planix 7	E 1	JPY 68,700	JPY 68,700				Tuk Thla TSC	D	A		
2001 E 086	23/7/2002	Drawing Film	Tamaya	Planix 7	E 10	JPY 22,800	JPY 228,000				Tuk Thla TSC	C	A		
2001 E 087	23/7/2002	Roll Film	Tamaya	Planix 7	E 10	JPY 27,000	JPY 270,000				Tuk Thla TSC	C	A		
2001 E 088	23/7/2002	Hand Level	Tamaya	Planix 7	E 1	JPY 8,750	JPY 8,750				Tuk Thla TSC	C	A		
2001 E 089	23/7/2002	Field Note	Tamaya	Planix 7	E 3	JPY 17,000	JPY 51,000				Tuk Thla TSC	C	A		
2001 E 090	23/7/2002	Field Note	Tamaya	Planix 7	E 60	JPY 600	JPY 36,000				Tuk Thla TSC	C	A		
2001 E 091	23/7/2002	Erasing Shield	Tamaya	Planix 7	E 10	JPY 570	JPY 5,700				Tuk Thla TSC	C	A		
2001 E 092	23/7/2002	Black Board	Tamaya	Planix 7	E 2	JPY 2,270	JPY 4,540				Tuk Thla TSC	C	A		
2001 E 093	23/7/2002	Pin Pole	Tamaya	Planix 7	E 5	JPY 440	JPY 2,200				Tuk Thla TSC	C	A		
2001 E 094	23/7/2002	Pin Pole	Tamaya	Planix 7	E 5	JPY 540	JPY 2,700				Tuk Thla TSC	C	A		
2001 E 095	23/7/2002	Helmet	Tamaya	Planix 7	E 20	JPY 1,840	JPY 36,800				Tuk Thla TSC	C	A		
2001 E 096	23/7/2002	Field Density Apparatus	Tamaya	Planix 7	E 3	JPY 30,900	JPY 92,700				Tuk Thla TSC	C	A		

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 Condition (A: Good - B: Fair - C: Bad)

No.	Date of Arrival	Item	Description	Manufacture	Model Number	R/P	QTY.	Unit Price JPY	S-total JPY	Unit Price US\$	S-total US\$	Place of Storage		Condition	Remarks
												Location	Person in charge		
2001	E 097	23 7 2002	Solid Mold	SS-S-266		E	5	JPY 38,600	JPY 193,000			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 098	23 7 2002	Electronic Balance	AW-220		E	1	JPY 195,800	JPY 195,800			Tok Thla TSC	Mr.Te Av/AM	D	A
2001	E 099	23 7 2002	Electronic Balance	BL-2200H		E	1	JPY 81,700	JPY 81,700			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 100	23 7 2002	Electronic Scale	CG-60KE		E	1	JPY 220,200	JPY 220,200			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 101	23 7 2002	Oven	SSA-135		E	1	JPY 468,000	JPY 468,000			Tok Thla TSC	Mr.Te Av/AM	*	A never used, plan to install in 2nd Quarter in 2005
2001	E 102	23 7 2002	Desticator	SS-605		E	1	JPY 207,400	JPY 207,400			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 103	23 7 2002	Desticator	TokyoShimohara SS-605		E	1	JPY 207,400	JPY 207,400			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 104	23 7 2002	Desticator	TokyoShimohara SS-605		E	1	JPY 207,400	JPY 207,400			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 105	23 7 2002	Test Sieves			E	1	JPY 85,500	JPY 85,500			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 106	23 7 2002	Spatula	SS-S-251		E	10	JPY 220	JPY 2,200			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 107	23 7 2002	Infrared Moisture Meter	FD-600		E	1	JPY 143,700	JPY 143,700			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 108	23 7 2002	Beaker	B2-0045-1		E	30	JPY 210	JPY 6,300			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 109	23 7 2002	Beaker	B2-0046-1		E	30	JPY 220	JPY 6,600			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 110	23 7 2002	Beaker	B2-0047-1		E	30	JPY 280	JPY 8,400			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 111	23 7 2002	Beaker	B2-0048-1		E	30	JPY 420	JPY 12,600			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 112	23 7 2002	Pycnometer	SS-604		E	10	JPY 1,500	JPY 15,000			Tok Thla TSC	Mr.Te Av/AM	D	A
2001	E 113	23 7 2002	Digital Thermometer	SK-750MCH		E	1	JPY 24,350	JPY 24,350			Tok Thla TSC	Mr.Te Av/AM	C	B
2001	E 114	23 7 2002	Porcelain Mortar with Pestle	95-3707-4		E	5	JPY 4,460	JPY 22,300			Tok Thla TSC	Mr.Te Av/AM	C	B
2001	E 115	23 7 2002	Wash Bottle	927-22-16-31		E	5	JPY 130	JPY 650			Tok Thla TSC	Mr.Te Av/AM	C	B
2001	E 116	23 7 2002	Wash Bottle	927-22-16-33		E	5	JPY 160	JPY 800			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 117	23 7 2002	Filters for Automatic Water Distiller	91301085		E	5	JPY 420	JPY 2,100			Tok Thla TSC	Mr.Te Av/AM	*	A plan to be used
2001	E 118	23 7 2002	Filters for Automatic Water Distiller	91301090		E	5	JPY 420	JPY 2,100			Tok Thla TSC	Mr.Te Av/AM	*	B plan to be used
2001	E 119	23 7 2002	Mechanical Analysis Stirrer	GS-2000	Toyo	E	1	JPY 512,800	JPY 512,800			Tok Thla TSC	Mr.Te Av/AM	D	A
2001	E 120	23 7 2002	Mechanical Analysis Stirrer	LS-334		E	1	JPY 94,500	JPY 94,500			Tok Thla TSC	Mr.Te Av/AM	D	A
2001	E 121	23 7 2002	Hydrometer	JC-928B		E	3	JPY 5,400	JPY 16,200			Tok Thla TSC	Mr.Te Av/AM	D	A
2001	E 122	23 7 2002	Measuring Cylinder	74-0378-S		E	2	JPY 1,400	JPY 2,800			Tok Thla TSC	Mr.Te Av/AM	D	A
2001	E 123	23 7 2002	Measuring Cylinder	74-0381-S		E	3	JPY 9,900	JPY 29,700			Tok Thla TSC	Mr.Te Av/AM	D	A
2001	E 124	23 7 2002	Dispersion Powder	19913		E	5	JPY 10,200	JPY 51,000			Tok Thla TSC	Mr.Te Av/AM	D	A
2001	E 125	23 7 2002	Dispersion Powder	SVA5001		E	1	JPY 13,600	JPY 13,600			Tok Thla TSC	Mr.Te Av/AM	D	A
2001	E 126	23 7 2002	Liquid Limited Test Set	SS-S-243	Tokyo Shimohara	E	1	JPY 32,200	JPY 32,200			Tok Thla TSC	Mr.Te Av/AM	D	B
2001	E 127	23 7 2002	Gapping Glass	SS-S-243		E	3	JPY 750	JPY 2,250			Tok Thla TSC	Mr.Te Av/AM	D	A
2001	E 128	23 7 2002	Sample Extractor	SS-S-222		E	1	JPY 4,600	JPY 4,600			Tok Thla TSC	Mr.Te Av/AM	D	A
2001	E 129	23 7 2002	Straight Edge	SS-S-232		E	5	JPY 1,680	JPY 8,400			Tok Thla TSC	Mr.Te Av/AM	D	A
2001	E 130	23 7 2002	Scoop	SS-S-233A		E	5	JPY 880	JPY 4,400			Tok Thla TSC	Mr.Te Av/AM	D	A
2001	E 131	23 7 2002	Receives Depth Meter	D1K-4300	Daiikrikakougyo	E	1	JPY 140,000	JPY 140,000			Tok Thla TSC	Mr.Te Av/AM	C	B
2001	E 132	23 7 2002	Receives Depth Meter	D1K-4300	Daiikrikakougyo	E	1	JPY 140,000	JPY 140,000			Tok Thla TSC	Mr.Te Av/AM	C	B
2001	E 133	23 7 2002	Chapman Flask	74-0484-0		E	20	JPY 8,600	JPY 172,000			Tok Thla TSC	Mr.Te Av/AM	D	B
2001	E 134	23 7 2002	Sand Absorption Cone	SS-S-464		E	1	JPY 5,800	JPY 5,800			Tok Thla TSC	Mr.Te Av/AM	D	B
2001	E 135	23 7 2002	Coarse Aggregate Hydrometer	SS-C-468	TokyoShimohara	E	1	JPY 157,000	JPY 157,000			Tok Thla TSC	Mr.Te Av/AM	D	B
2001	E 136	23 7 2002	Volumeic Flask	74-0169-0		E	2	JPY 1,900	JPY 3,800			Tok Thla TSC	Mr.Te Av/AM	D	B
2001	E 137	23 7 2002	Slump Tester	SS-C-508A	TokyoShimohara	E	2	JPY 22,400	JPY 44,800			Tok Thla TSC	Mr.Te Av/AM	C	B
2001	E 138	23 7 2002	Roof-in Meter	SS-C-516A	TokyoShimohara	E	1	JPY 243,760	JPY 243,760			Tok Thla TSC	Mr.Te Av/AM	*	B for short-term expert in Sep. 2005
2001	E 139	23 7 2002	Vibrator	SS-C-507	TokyoShimohara	E	1	JPY 63,000	JPY 63,000			Tok Thla TSC	Mr.Te Av/AM	C	B
2001	E 140	23 7 2002	Strength Test Mould	SS-C-529B		E	3	JPY 5,200	JPY 15,600			Tok Thla TSC	Mr.Te Av/AM	D	B
2001	E 141	23 7 2002	Strength Test Mould	SS-C-529C		E	3	JPY 11,500	JPY 34,500			Tok Thla TSC	Mr.Te Av/AM	D	B
2001	E 142	23 7 2002	Instrument Shelter	H3-SF	Hisanao	E	1	JPY 102,000	JPY 102,000			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 143	23 7 2002	Thermo-Hydragraph, Chart Paper&Cartridge	No.3.1	Onakeiki	E	1	JPY 72,900	JPY 72,900			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 144	23 7 2002	Rain Gauge, Chart Paper& Cartridge 73-A	No.34	Onakeiki	E	1	JPY 132,500	JPY 132,500			Tok Thla TSC	Mr.Te Av/AM	C	A
2001	E 145	23 7 2002	Evaporation Pan	No.41	Onakeiki	E	1	JPY 38,800	JPY 38,800			Tok Thla TSC	Mr.Te Av/AM	*	A plan to use for training course in Sep 2005
2001	J 001	27 4 2001	Laptop Computer	NEC LAVIEC LG700J/64DR		J	1	USD 2,087.00	USD 2,087.00			Tok Thla TSC	Mr.AMiyasaka	D	B
2001	J 002	21 12 2001	Computer Software	12D-Earthworks 50K Base	Soelia	J	1	USD 1,920.00	USD 1,920.00			Tok Thla TSC	Mr.AMiyasaka	D	B
2001	J 003	21 12 2001	Computer Software	Autodesk AutoCAD2002	Autodesk	J	1	USD 4,144.00	USD 4,144.00			Tok Thla TSC	Mr.AMiyasaka	D	B
2001	J 004	21 12 2001	Color Printer	desk Jet 1125C	HP	J	1	USD 399.00	USD 399.00			Tok Thla TSC	Mr.AMiyasaka	C	B
2001	J 005	19 3 2002	Mechanical Tool Set	KO6010	KO6010	J	1	USD 2,520.00	USD 2,520.00			Tok Thla TSC	Mr.AMiyasaka	C	A
2001	L 001	12 4 2001	UPS	600VAN	Power Tree	L	1	USD 47.00	USD 47.00			Tok Thla TSC	Mr.AMiyasaka	A	A
2001	L 002	12 4 2001	UPS	600VAN	Power Tree	L	1	USD 47.00	USD 47.00			Tok Thla TSC	Mr.AMiyasaka	A	A
2001	L 003	12 4 2001	UPS	600VAN	Power Tree	L	1	USD 47.00	USD 47.00			Tok Thla TSC	Mr.AMiyasaka	A	A
2001	L 004	12 4 2001	UPS	600VAN	Power Tree	L	1	USD 47.00	USD 47.00			Tok Thla TSC	Mr.AMiyasaka	A	A

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			Manufacturer	Model Number							Location	Person in charge			
2001	L 005 12 4	2001	UPS	Power Trip	600VAN	L 1		USD 47.00	USD 47.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 006 4 5	2001	Transformer	HANSHIN	TR2002	L 1		USD 21.00	USD 21.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 007 4 5	2001	Cupboard	Makita	622DWE	L 1		USD 28.00	USD 28.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 008 12 5	2001	Electric Drill	HANSHIN	TR2002	L 1		USD 115.00	USD 115.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 009 4 5	2001	Transformer	Sony	SPP-68	L 1		USD 21.00	USD 21.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 010 12 7	2001	Cordless Telephone	COM-680	COM-690	L 1		USD 80.00	USD 80.00		Tuk Thla TSC	Mr. Miyazaki	*	C	since April 2003, new telephone system
2001	L 011 17 10	2001	Computer Table	Leoco	FC-014	L 1		USD 75.00	USD 75.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 013 17 10	2001	Book Shelf	Otani	S-S04	L 1		USD 78.00	USD 78.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 014 17 10	2001	Book Shelf	Otani	S-S02	L 1		USD 60.00	USD 60.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 015 17 10	2001	Book Shelf	Otani	S-S02	L 1		USD 48.00	USD 48.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 016 17 10	2001	Table			L 1		USD 85.00	USD 85.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 017 17 10	2001	Table			L 1		USD 85.00	USD 85.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 018 17 10	2001	Shelf			L 1		USD 60.00	USD 60.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 019 6 11	2001	Wireless Lmt Station	S-2136	S-2136	L 1		USD 315.00	USD 315.00		Tuk Thla TSC	Mr. Miyazaki	*	C	since Apr 2003, wire LAN network installed.
2001	L 020 20 11	2001	Desktop Computer	BUFFALO	AirStation W/LAR-L11-M	L 1		USD 1,580.00	USD 1,580.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 021 20 11	2001	Desktop Computer	MRT	Desktop Computer P111 800	L 1		USD 250.00	USD 250.00		MOWRAM Project	Mr. Miyazaki	A	A	
2001	L 022 20 11	2001	Printer	HP	Desktop Computer P111 800	L 1		USD 1,330.00	USD 1,330.00		MOWRAM Project	Mr. Miyazaki	A	A	
2001	L 023 29 11	2001	Paper Shredder	DOCU-SHRED	RD5-545	L 1		USD 135.00	USD 135.00		Tuk Thla TSC	Mr. Miyazaki	A	B	
2001	L 024 25 12	2001	Desk	Otani		L 1		USD 90.00	USD 90.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 025 12 3	2002	Key Box	Lucky		L 1		USD 50.00	USD 50.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 026 29 3	2002	CD-Writer	HP	4446g Plus (USB)	L 1		USD 240.00	USD 240.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 027 29 3	2002	2 Door Locker	SH-104	SH-104	L 1		USD 240.00	USD 240.00		Tuk Thla TSC	Mr. Miyazaki	C	B	
2001	L 028 29 3	2002	2 Door Locker	SH-104	SH-104	L 1		USD 240.00	USD 240.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 029 29 3	2002	2 Door Locker	SH-104	SH-104	L 1		USD 240.00	USD 240.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 030 29 3	2002	2 Door Locker	SH-104	SH-104	L 1		USD 240.00	USD 240.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 031 29 3	2002	2 Door Locker	SH-104	SH-104	L 1		USD 240.00	USD 240.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2001	L 032 29 3	2002	TV/VCR Table	Topcon	RT510-W	L 1		USD 70.00	USD 70.00		Tuk Thla TSC	Mr. Miyazaki	A	A	
2002	E 147 12 3	2003	Water Level Logger	Topcon	RT510-W	E 1	JPY 350,000	JPY 350,000			Tuk Thla TSC	Mr. Miyazaki	A	A	
2002	E 148 12 3	2003	Water Level Logger	Topcon	RT510-W	E 1	JPY 350,000	JPY 350,000			Tuk Thla TSC	Mr. Miyazaki	A	A	
2002	E 149 12 3	2003	Card Reader	COM-680		E 1	JPY 29,000	JPY 29,000			Tuk Thla TSC	Mr. Miyazaki	A	A	
2002	E 150 12 3	2003	Storage Box	COM-680		E 2	JPY 49,000	JPY 98,000			Tuk Thla TSC	Mr. Miyazaki	A	A	
2002	E 151 12 3	2003	Assembly parts	COM-680		E 2	JPY 330,000	JPY 660,000			Tuk Thla TSC	Mr. Miyazaki	A	A	
2002	E 152 31 3	2003	Desktop Computer	Compaq	Desk pro Pentium 4, 1.7Ghz	E 1			USD 932.00	USD 932.00	Tuk Thla TSC	Mr. Miyazaki	A	A	
2002	E 153 31 3	2003	Desktop Computer	Compaq	Desk pro Pentium 4, 1.7Ghz	E 1			USD 932.00	USD 932.00	Tuk Thla TSC	Mr. Miyazaki	A	A	
2002	E 154 31 3	2003	Desktop Computer	Compaq	Desk pro Pentium 4, 1.7Ghz	E 1			USD 932.00	USD 932.00	Tuk Thla TSC	Mr. Miyazaki	A	A	
2002	E 155 31 3	2003	Desktop Computer	Compaq	Desk pro Pentium 4, 1.7Ghz	E 1			USD 932.00	USD 932.00	Tuk Thla TSC	Mr. Miyazaki	A	A	
2002	E 156 31 3	2003	Desktop Computer	Compaq	Desk pro Pentium 4, 1.7Ghz	E 1			USD 932.00	USD 932.00	Tuk Thla TSC	Mr. Miyazaki	A	A	
2002	E 157 29 3	2003	Laser Jet Printer	HP	1200	E 1			USD 313.00	USD 313.00	Tuk Thla TSC	Mr. Miyazaki	A	A	
2002	E 158 25 3	2003	Laser Jet Printer	HP	1200	E 1			USD 313.00	USD 313.00	Tuk Thla TSC	Mr. Miyazaki	A	A	
2002	E 159 14 7	2003	Meteorological Station	JS-360	D1-015-8A	E 1	JPY 3,204,500	JPY 3,204,500			Tuk Thla TSC	Mr. Miyazaki	*	A	received July 2003, has not been installed
2002	E 160 14 7	2003	Hydro Scale	102257		E 2	JPY 7,800	JPY 15,600			Tuk Thla TSC	Mr. Miyazaki	*	A	
2002	E 161 14 7	2003	Truck (UNOX)Chassis No. JALPHR3M 3700	ISUZU	FT233M	E 1	JPY 7,400,000	JPY 7,400,000			Tuk Thla TSC	Mr. Miyazaki	*	A	
2002	E 162 14 7	2003	Share Parts for Truck	ISUZU		E 2	JPY 7,800	JPY 15,600			Tuk Thla TSC	Mr. Miyazaki	*	A	spare parts
2002	E 163 14 7	2003	Share Parts for Truck	ISUZU		E 2	JPY 7,800	JPY 15,600			Tuk Thla TSC	Mr. Miyazaki	*	A	spare parts
2002	E 164 14 7	2003	Buildzer.Engine No.03813	Komatsu	D20P-7	E 1	JPY 1,480,000	JPY 1,480,000			Tuk Thla TSC	Mr. Miyazaki	*	A	spare parts
2002	E 165 14 7	2003	Truck (machinery transport).Engine No. 10PCL 388806	ISUZU	CXZ81Q	E 1	JPY 2,500,000	JPY 2,500,000			Tuk Thla TSC	Mr. Miyazaki	*	A	spare parts
2002	E 166 14 7	2003	Spare Part for Truck			E 1	JPY 13,600,000	JPY 13,600,000			Tuk Thla TSC	Mr. Miyazaki	*	A	spare parts
2002	E 167 14 7	2003	Spare Part for Truck			E 1	JPY 2,220,000	JPY 2,220,000			Tuk Thla TSC	Mr. Miyazaki	*	A	spare parts
2002	E 168 14 7	2003	Spare Parts for Plotter			E 1	JPY 828,500	JPY 828,500			Tuk Thla TSC	Mr. Miyazaki	*	A	spare parts
2002	E 169 14 7	2003	Map Cabinet	1106BN		E 1	JPY 97,000	JPY 97,000			Tuk Thla TSC	Mr. Miyazaki	*	A	spare parts
2002	E 170 14 7	2003	Map Cabinet	1106BN		E 1	JPY 260,000	JPY 260,000			Tuk Thla TSC	Mr. Miyazaki	A	A	
2002	E 171 14 7	2003	Map Board	1157		E 5	JPY 4,100	JPY 20,500			Tuk Thla TSC	Mr. Miyazaki	A	A	
2002	E 172 14 7	2003	Book			E 1	JPY 4,000	JPY 4,000			Tuk Thla TSC	Mr. Miyazaki	D	A	
2002	E 173 14 7	2003	Book			E 1	JPY 2,900	JPY 2,900			Tuk Thla TSC	Mr. Miyazaki	D	A	
2002	E 174 14 7	2003	Software			E 2	JPY 50,000	JPY 100,000			Tuk Thla TSC	Mr. Miyazaki	D	A	
2002	E 174 14 7	2003	Software			E 2	JPY 100,000	JPY 200,000			Tuk Thla TSC	Mr. Miyazaki	D	A	

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2002 E 175	14/7/2003	Software		The computation of the sand volume (for Windows)		E	2	50,000 JPY	100,000			Tuk Thla TSC	Mr. Te Av KGM	D	A	
2002 L 001	14/5/2002	Book Shelf	30366B			L	1	115.00 USD	115.00	USD	115.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 002	14/5/2002	Book Shelf	30366B			L	1	115.00 USD	115.00	USD	115.00	MOWRAM Project	Mr. A. Miyazaki	A	A	
2002 L 003	15/5/2002	Cup Board Partition	LK-402			L	1	215.00 USD	215.00	USD	215.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 004	12/6/2002	Fax machine	KXF105			L	1	85.00 USD	85.00	USD	85.00	MOWRAM Project	Mr. A. Miyazaki	A	B	
2002 L 005	19/9/2002	General Table	UTF-80180			L	1	85.00 USD	85.00	USD	85.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 006	19/9/2002	General Table	UTF-80180			L	1	85.00 USD	85.00	USD	85.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 007	19/9/2002	General Table	UTF-80180			L	1	85.00 USD	85.00	USD	85.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 008	19/9/2002	General Table	UTF-80180			L	1	85.00 USD	85.00	USD	85.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 009	23/9/2002	Printer	Canon			L	1	515.00 USD	515.00	USD	515.00	Tuk Thla TSC	Mr. A. Miyazaki	A	B	
2002 L 010	5/2/2003	Floppy Disk Drive	Mitsumi			L	1	45.00 USD	45.00	USD	45.00	Tuk Thla TSC	Mr. A. Miyazaki	A	B	
2002 L 011	12/2/2003	Mobile Wireless Phone	Motorola		GP68	L	1	180.00 USD	180.00	USD	180.00	Tuk Thla TSC	Mr. A. Miyazaki	A	B	
2002 L 012	12/2/2003	Mobile Wireless Phone	Motorola		GP68	L	1	180.00 USD	180.00	USD	180.00	Tuk Thla TSC	Mr. A. Miyazaki	A	B	
2002 L 013	12/2/2003	Mobile Wireless Phone	Motorola		GP68	L	1	180.00 USD	180.00	USD	180.00	Tuk Thla TSC	Mr. A. Miyazaki	A	B	
2002 L 014	12/2/2003	Mobile Wireless Phone	Motorola		GP68	L	1	180.00 USD	180.00	USD	180.00	Tuk Thla TSC	Mr. A. Miyazaki	A	B	
2002 L 015	24/3/2003	Desk 1200*700*740	LEECO		BD127	L	1	118.00 USD	118.00	USD	118.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 016	24/3/2003	Desk 1200*700*740	LEECO		BD127	L	1	118.00 USD	118.00	USD	118.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 017	24/3/2003	Desk 1500*700*740	LEECO		BD167CH	L	1	135.00 USD	135.00	USD	135.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 018	24/3/2003	Desk 1200*700*740	LEECO		BD167CH	L	1	90.00 USD	90.00	USD	90.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 019	24/3/2003	Printer Table 1000*700*710	LEECO		BD1076E	L	1	90.00 USD	90.00	USD	90.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 020	24/3/2003	Printer Table 1000*700*710	LEECO		BD1080E	L	1	90.00 USD	90.00	USD	90.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 021	24/3/2003	Chair	LEECO		LSC-421 LG-F400	L	1	65.00 USD	65.00	USD	65.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 022	24/3/2003	Chair	LEECO		LSC-421 LG-F400	L	1	65.00 USD	65.00	USD	65.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 023	24/3/2003	File Shelf	LEECO		FS-410	L	1	90.00 USD	90.00	USD	90.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 024	24/3/2003	File Shelf	LEECO		FS-410	L	1	90.00 USD	90.00	USD	90.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 025	24/3/2003	File Shelf	LEECO		FS-410	L	1	90.00 USD	90.00	USD	90.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 026	15/3/2003	Floppy Disk Drive	OTANI		S-502	L	1	50.00 USD	50.00	USD	50.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 027	28/3/2003	Floppy Disk Drive	Mitsumi			L	1	44.00 USD	44.00	USD	44.00	Tuk Thla TSC	Mr. A. Miyazaki	B	B	
2002 L 028	30/3/2003	Rotary chair				L	1	44.00 USD	44.00	USD	44.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 029	30/3/2003	Rotary chair				L	1	44.00 USD	44.00	USD	44.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 030	31/3/2003	Cupboard	LEECO		30ASOB	L	1	123.00 USD	123.00	USD	123.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 031	31/3/2003	Cupboard	LEECO		30ASOB	L	1	123.00 USD	123.00	USD	123.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 032	31/3/2003	Cupboard	LEECO		30ASOB	L	1	123.00 USD	123.00	USD	123.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 033	31/3/2003	Cupboard	LEECO		30ASOB	L	1	123.00 USD	123.00	USD	123.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 034	31/3/2003	Cupboard	LEECO		30ASOB	L	1	123.00 USD	123.00	USD	123.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 035	31/3/2003	Locker	LEECO		CB07	L	1	80.00 USD	80.00	USD	80.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 036	31/3/2003	Table 1.8m				L	1	80.00 USD	80.00	USD	80.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 037	31/3/2003	Table 1.8m				L	1	80.00 USD	80.00	USD	80.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 038	31/3/2003	Table 1.8m				L	1	80.00 USD	80.00	USD	80.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 039	31/3/2003	Table 1.8m				L	1	80.00 USD	80.00	USD	80.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 040	31/3/2003	Table 1.8m				L	1	80.00 USD	80.00	USD	80.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 041	31/3/2003	Table 1.8m				L	1	80.00 USD	80.00	USD	80.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 042	31/3/2003	Table 1.8m				L	1	80.00 USD	80.00	USD	80.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 043	31/3/2003	Table 1.8m				L	1	80.00 USD	80.00	USD	80.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 044	31/3/2003	Table 1.8m				L	1	80.00 USD	80.00	USD	80.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 045	31/3/2003	Table 1.8m				L	1	80.00 USD	80.00	USD	80.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 046	31/3/2003	Meeting table	AT2010		AT2010	L	1	55.00 USD	55.00	USD	55.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 047	31/3/2003	Telephone table	AT420		AT420	L	1	160.00 USD	160.00	USD	160.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 048	31/3/2003	Telephone table	AT420		AT420	L	1	55.00 USD	55.00	USD	55.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 049	31/3/2003	Telephone table	AT420		AT420	L	1	55.00 USD	55.00	USD	55.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 050	31/3/2003	Meeting chair	MSN-S		MSN-S	L	1	25.00 USD	25.00	USD	25.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 051	31/3/2003	Meeting chair	MSN-S		MSN-S	L	1	25.00 USD	25.00	USD	25.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 052	31/3/2003	Meeting chair	MSN-S		MSN-S	L	1	25.00 USD	25.00	USD	25.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 053	31/3/2003	Meeting chair	MSN-S		MSN-S	L	1	25.00 USD	25.00	USD	25.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 054	31/3/2003	Meeting chair	MSN-S		MSN-S	L	1	25.00 USD	25.00	USD	25.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 055	31/3/2003	Meeting chair	MSN-S		MSN-S	L	1	25.00 USD	25.00	USD	25.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 056	31/3/2003	Meeting chair	MSN-S		MSN-S	L	1	25.00 USD	25.00	USD	25.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 057	31/3/2003	Meeting chair	MSN-S		MSN-S	L	1	25.00 USD	25.00	USD	25.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	
2002 L 058	31/3/2003	Storage shelf	S-2136		S-2136	L	1	60.00 USD	60.00	USD	60.00	Tuk Thla TSC	Mr. A. Miyazaki	A	A	

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 (A: Daily, B: Monthly/Weekly, C: Use in specific period, D: Use less than 5 times / year, *: refer to list of equipment)
 (A: Good - B: Fair - C: Bad)

No.	Date of Arrival	Item	Description		R/P	QTY	Unit Price JPY	S-total JPY	Unit Price US\$	S-total US\$	Place of Storage		Frequency of Use	Condition	Remarks
			Manufacture	Model Number							Location	Person in charge			
2002	L 058 31 3	2003 Storage shelf	S-2136	S-2136	L	1		USD 60.00	USD 60.00		Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 060 31 3	2003 Storage shelf	S-2136	S-2136	L	1		USD 60.00	USD 60.00		Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 061 31 3	2003 White board (180x90cm)	BS-90180	BS-90180	L	1		USD 130.00	USD 130.00		Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 062 31 3	2003 White board (180x90cm)	BS-90180	BS-90180	L	1		USD 130.00	USD 130.00		Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 063 31 3	2003 White board (180x90cm)	BS-90180	BS-90180	L	1		USD 130.00	USD 130.00		Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 064 31 3	2003 White board (180x90cm)	BS-90180	BS-90180	L	1		USD 120.00	USD 120.00		Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 065 31 3	2003 White board (180x90cm)	BS-90150	BS-90150	L	1		USD 120.00	USD 120.00		Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 066 31 3	2003 Camera	Olympus	MU 7000m 140 piano	L	1		USD 190.00	USD 190.00		Tuk Thla TSC	Mr.A.Miyazaki	D	B	
2002	L 067 31 3	2003 Camera	Olympus	MU 7000m 140 piano	L	1		USD 190.00	USD 190.00		Tuk Thla TSC	Mr.A.Miyazaki	D	B	
2002	L 068 31 3	2003 Digital camera	Canon	IXUS V2	L	1		USD 380.00	USD 380.00		Tuk Thla TSC	Mr.A.Miyazaki	*	C	since December 2004, broken
2002	L 069 31 3	2003 Digital camera	Canon	IXUS V2	L	1		USD 380.00	USD 380.00		Tuk Thla TSC	Mr.A.Miyazaki	A	B	
2002	L 070 31 3	2003 Digital camera	Canon	IXUS V2	L	1		USD 380.00	USD 380.00		Tuk Thla TSC	Mr.A.Miyazaki	A	B	
2002	L 071 31 3	2003 Printer	HP	DeskJet 1200 Color	L	1		USD 380.00	USD 380.00		Tuk Thla TSC	Mr.A.Miyazaki	C	B	
2002	L 072 31 3	2003 Printer	Canon	mxu 320	L	1		USD 1,277.00	USD 1,277.00		Tuk Thla TSC	Mr.A.Miyazaki	C	A	
2002	L 073 31 3	2003 Auto Level	TOPCON	AT-G4	L	1		USD 1,277.00	USD 1,277.00		Tuk Thla TSC	Mr.A.Miyazaki	C	A	
2002	L 074 31 3	2003 Auto Level	TOPCON	AT-G4	L	1		USD 1,277.00	USD 1,277.00		Tuk Thla TSC	Mr.A.Miyazaki	C	A	
2002	L 075 31 3	2003 Auto Level	TOPCON	AT-G4	L	1		USD 1,277.00	USD 1,277.00		Tuk Thla TSC	Mr.A.Miyazaki	C	A	
2002	L 076 31 3	2003 Generator	Deryo	KX-17730	L	1		USD 21,500.00	USD 21,500.00		Tuk Thla TSC	Mr.A.Miyazaki	C	A	
2002	L 077 31 3	2003 Telephone PBX System	Panasonic	KX-17730	L	1					Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 078 31 3	2003 Telephone	Panasonic	KX-17730	L	1					Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 079 31 3	2003 Telephone	Panasonic	KX-17730	L	1					Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 080 31 3	2003 Telephone	Panasonic	KX-17730	L	1					Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 081 31 3	2003 Telephone	Panasonic	KX-17730	L	1					Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 082 31 3	2003 Telephone	Panasonic	KX-17730	L	1					Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 083 31 3	2003 Telephone	Panasonic	KX-17730	L	1					Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 084 31 3	2003 Telephone	Panasonic	KX-17730	L	1					Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 085 31 3	2003 Telephone	Panasonic	KX-17730	L	1					Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 086 31 3	2003 Telephone	Panasonic	KX-17730	L	1					Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	L 087 31 3	2003 Telephone	Panasonic	KX-17730	L	1					Tuk Thla TSC	Mr.A.Miyazaki	A	A	
2002	J 001 12 11	2002 Plate Table Set	Tamaya	TPPT-SET	J	1		USD 292.00	USD 292.00		Tuk Thla TSC	Mr.A.Miyazaki	C	A	
2002	J 002 28 4	2003 Digital Camera	FUJIFILM	DS-260HD	J	1		USD 1,070.00	USD 1,070.00		Tuk Thla TSC	Mr.A.Miyazaki	C	A	
2002	J 003 28 4	2003 Super Plate	TOPCON	SUP-S	J	1		USD 270.00	USD 270.00		Tuk Thla TSC	Mr.A.Miyazaki	C	A	
2002	J 004 5 5	2003 Current Meter	Cat.No.3-2	Cat.No.3-2	J	1		USD 3,000.00	USD 3,000.00		Tuk Thla TSC	Mr.A.Miyazaki	C	A	
2002	J 005 5 5	2003 GPS	e-Trex Vista	e-Trex Vista	J	1		USD 542.00	USD 542.00		Tuk Thla TSC	Mr.A.Miyazaki	C	A	
2002	J 006 5 5	2003 GPS	e-Trex Vista	e-Trex Vista	J	1		USD 542.00	USD 542.00		Tuk Thla TSC	Mr.A.Miyazaki	C	A	
2002	J 007 5 5	2003 GPS	Type III	Type III	J	1		USD 1,186.00	USD 1,186.00		Tuk Thla TSC	Mr.A.Miyazaki	C	A	
2002	J 008 5 5	2003 Mirror Stereoscope	Matsumoto Seisakusho	for 312C	E	1		JPY 551,000	JPY 551,000		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 176 9 4	2004 Rubber Bucket	Matsumoto Seisakusho	for 312C	E	1		JPY 555,000	JPY 555,000		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 177 9 4	2004 Bank Forming Bucket	Matsumoto Seisakusho	for 312C	E	1		JPY 344,000	JPY 344,000		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 178 9 4	2004 Ingooidal Bucket	Matsumoto Seisakusho	for 312C	E	1		JPY 559,000	JPY 559,000		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 179 9 4	2004 Water-level Meter	Ogasawara Keiki	LR-5022	E	1		JPY 13,000	JPY 13,000		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 180 9 4	2004 Step-down Transformer	for Water-level Meter	for Water-level Meter	E	1		JPY 22,000	JPY 22,000		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 181 9 4	2004 Battery Box	Ogasawara Keiki	for Water-level Meter	E	1		JPY 172,000	JPY 172,000		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 182 9 4	2004 Manual (English/Japanese)	Mitsubishi	F42,150DBL	E	1		JPY 2,860,000	JPY 2,860,000		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 183 29 7	2004 Dump Truck, Chassis No.FH12150-	Mitsubishi	for FH12150DBL	E	1		JPY 288,000	JPY 288,000		Tuk Thla TSC	Mr.Te Av KGM	*	A	spare parts
2003	E 184 29 7	2004 Spare Parts for Dump Truck	TOPCON	GTS 229, Main unit	E	1		JPY 742,000	JPY 742,000		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 185 29 7	2004 Total Station	TOPCON	TP-110	E	1		JPY 18,500	JPY 18,500		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 186 29 7	2004 Tripod	TOPCON	Type 5	E	1		JPY 8,900	JPY 8,900		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 187 29 7	2004 Compass	TOPCON		E	1		JPY 114,000	JPY 114,000		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 188 29 7	2004 Reflector	TOPCON		E	1		JPY 114,000	JPY 114,000		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 189 29 7	2004 Reflector	TOPCON		E	1		JPY 5,000	JPY 5,000		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 190 29 7	2004 Transit Compass	TOPCON	Trough Compass-3	E	1		JPY 5,000	JPY 5,000		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 191 29 7	2004 Transit Compass	TOPCON	Trough Compass-3	E	1		JPY 5,000	JPY 5,000		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 192 29 7	2004 Transit Compass	TOPCON	Trough Compass-3	E	1		JPY 5,000	JPY 5,000		Tuk Thla TSC	Mr.Te Av KGM	C	A	
2003	E 193 29 7	2004 Current Meter	SANET SOKURYOUKI	Type 3	E	1		JPY 254,000	JPY 254,000		Tuk Thla TSC	Mr.Te Av KGM	D	A	
2003	E 194 29 7	2004 Tape Measure (main unit)	Hisanaga	Expert (Main Unit) STE-100	E	1		JPY 21,300	JPY 21,300		Tuk Thla TSC	Mr.Te Av KGM	D	A	
2003	E 195 29 7	2004 Tape Measure (main unit)	Hisanaga	Expert (Main Unit) STE-101	E	1		JPY 21,300	JPY 21,300		Tuk Thla TSC	Mr.Te Av KGM	D	A	
2003	E 196 29 7	2004 Tape Measure (Clamp Handle)	Hisanaga	CLH-S	E	1		JPY 1,000	JPY 1,000		Tuk Thla TSC	Mr.Te Av KGM	D	A	
2003	E 197 29 7	2004 Tape Measure (Clamp Handle)	Hisanaga	CLH-S	E	1		JPY 1,000	JPY 1,000		Tuk Thla TSC	Mr.Te Av KGM	D	A	
2003	E 198 29 7	2004 Tape Measure (Thermometer for measuring)	Hisanaga	GRH-S	E	1		JPY 6,000	JPY 6,000		Tuk Thla TSC	Mr.Te Av KGM	D	A	

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 Condition (A: Good - B: Fair - C: Bad)

No.	Date of Arrival	Item	Manufacture	Model Number	R/P	QTY	Unit Price JPY	S-total JPY	Unit Price USD	S-total USD	Place of Storage	Person in charge	Frequenc y of Use	Condition	Remarks
2003	E 199	29 7 2004	Tape Measure (Thermometer for measur	GRH-S	E	1	JPY 6,000	JPY 6,000			Tuk Thla TSC	Mr.Te Av/KM	D	A	
2003	E 200	29 7 2004	Tape Measure (Spring Balance)	SPB	E	1	JPY 4,300	JPY 4,300			Tuk Thla TSC	Mr.Te Av/KM	D	A	
2003	E 201	29 7 2004	Tape Measure (Spring Balance)	SPB	E	1	JPY 4,300	JPY 4,300			Tuk Thla TSC	Mr.Te Av/KM	D	A	
2003	E 202	29 7 2004	Tape Measure	NS-5DH	E	1	JPY 7,500	JPY 7,500			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2003	E 203	29 7 2004	Tape Measure	NS-5DH	E	1	JPY 7,500	JPY 7,500			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2003	E 204	29 7 2004	Tape Measure	NS-5DH	E	1	JPY 7,500	JPY 7,500			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2003	E 205	29 7 2004	Curvimeter	6936	E	1	JPY 2,300	JPY 2,300			Tuk Thla TSC	Mr.Te Av/KM	D	A	
2003	E 206	29 7 2004	Curvimeter	6936	E	1	JPY 2,300	JPY 2,300			Tuk Thla TSC	Mr.Te Av/KM	D	A	
2003	E 207	29 7 2004	Curvimeter	6936	E	1	JPY 2,300	JPY 2,300			Tuk Thla TSC	Mr.Te Av/KM	D	A	
2003	E 208	29 7 2004	Curvimeter	6936	E	1	JPY 2,300	JPY 2,300			Tuk Thla TSC	Mr.Te Av/KM	D	A	
2003	E 209	29 7 2004	Curvimeter	6936	E	1	JPY 2,300	JPY 2,300			Tuk Thla TSC	Mr.Te Av/KM	D	A	
2003	E 210	29 7 2004	Distance Meter	MODEL-2	E	1	JPY 33,700	JPY 33,700			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2003	E 211	29 7 2004	Level Gauge	E-30	E	1	JPY 2,500	JPY 2,500			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2003	E 212	29 7 2004	Level Gauge	E-30	E	1	JPY 2,500	JPY 2,500			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2003	E 213	29 7 2004	Level Gauge	E-30	E	1	JPY 2,500	JPY 2,500			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2003	E 214	29 7 2004	Staff Table	SSB-S	E	1	JPY 1,300	JPY 1,300			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2003	E 215	29 7 2004	Staff Table	SSB-S	E	1	JPY 1,300	JPY 1,300			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2003	E 216	29 7 2004	Staff Table	SSB-S	E	1	JPY 1,300	JPY 1,300			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2003	E 217	29 7 2004	Binocular	UCF ZOOM	E	1	JPY 1,300	JPY 1,300			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2003	E 218	29 7 2004	Binocular	UCF ZOOM	E	1	JPY 24,500	JPY 24,500			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2003	E 219	29 7 2004	Stand	SS-01	E	1	JPY 14,300	JPY 14,300			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2003	E 220	27 2 2005	Standard Tool for Dump Truck		E	1	JPY 71,242	JPY 71,242			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2003	L 001	10 9 2003	Locker	CB-1	L	1	USD 87.00	USD 87.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	L 002	10 9 2003	Locker	CB-1	L	1	USD 87.00	USD 87.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	L 003	10 9 2003	Locker	CB-1	L	1	USD 87.00	USD 87.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	L 004	10 9 2003	Locker	CB-1	L	1	USD 87.00	USD 87.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	L 005	10 9 2003	Locker	CB-1	L	1	USD 87.00	USD 87.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	L 006	11 9 2003	Water pump	SZ136	L	1	USD 100.00	USD 100.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	L 007	11 9 2003	Storage shelf	SZ136	L	1	USD 60.00	USD 60.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	L 008	11 9 2003	Storage shelf	SZ136	L	1	USD 60.00	USD 60.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	L 009	11 9 2003	Storage shelf	SZ136	L	1	USD 60.00	USD 60.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	L 010	11 9 2003	Bookshelf	304SGB	L	1	USD 130.00	USD 130.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	L 011	11 9 2003	Bookshelf	304SGB	L	1	USD 130.00	USD 130.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	L 012	19 9 2003	File cabinet	FC013	L	1	USD 68.00	USD 68.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	L 013	19 9 2003	Closet	304S	L	1	USD 91.00	USD 91.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	L 014	2 2 2004	Uninterrupted Power Supply	star 1200VA	L	1	USD 60.00	USD 60.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	L 015	25 2 2004	Storage shelf	SZ136	L	1	USD 3,000.00	USD 3,000.00			Tuk Thla TSC	Mr.A/Miyazaki	A	A	
2003	J 001	26 5 2003	Laptop Computer	DynaBook V7/513LMDW	J	1	USD 1,300.00	USD 1,300.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	J 002	14 7 2003	Total Station	GT5-229	J	1	USD 1,300.00	USD 1,300.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	J 003	14 7 2003	Prisma Target for Total Station	Value Star PC-VC500/7D	J	1	JPY 264,000	JPY 264,000			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	J 004	14 7 2003	Prisma Target for Total Station	PDD333-512	J	1	JPY 20,000	JPY 20,000			Tuk Thla TSC	Mr.A/Miyazaki	A	A	
2003	J 005	21 12 2003	Desktop Computer with 17 inch Monitor	PDD333-512	J	1	JPY 20,000	JPY 20,000			Tuk Thla TSC	Mr.A/Miyazaki	A	A	
2003	J 006	21 12 2003	Extension Memory 512MB	PDD333-512	J	1	JPY 21,000	JPY 21,000			Tuk Thla TSC	Mr.A/Miyazaki	A	A	
2003	J 007	21 12 2003	Extension Memory 512MB	PDD333-512	J	1	JPY 21,000	JPY 21,000			Tuk Thla TSC	Mr.A/Miyazaki	A	A	
2003	J 008	21 12 2003	Hard Disk Drive	DIL2-B160GB	J	1	USD 529.00	USD 529.00			Tuk Thla TSC	Mr.A/Miyazaki	C	A	
2003	J 009	31 3 2004	Digital Depth Sounder with accessory kit	PS-7FL 90101	J	1	USD 156,000	USD 156,000			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2004	E 221	18 5 2005	Boat for Observation Study	FMT-305	E	1	JPY 4,500	JPY 4,500			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2004	E 222	18 5 2005	Electric Pump	E8DMH-S	E	1	JPY 39,000	JPY 39,000			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2004	E 223	18 5 2005	Equipment for Inspection	E8DMH-S	E	1	JPY 3,000	JPY 3,000			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2004	E 224	18 5 2005	Kit for Repair	E8DMH-S	E	1	JPY 3,000	JPY 3,000			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2004	E 225	18 5 2005	Outboard Motor	E8DMH-S	E	1	JPY 150,000	JPY 150,000			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2004	E 226	18 5 2005	Manual (English/Albanese)	E8DMH-S	E	1	JPY 2,500	JPY 2,500			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2004	E 227	18 5 2005	Service Manual (English/Japanese)	E8DMH-S	E	1	JPY 15,000	JPY 15,000			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2004	E 228	18 5 2005	Spare Parts	E8DMH-S	E	1	JPY 2,945,000	JPY 2,945,000			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2004	E 229	18 5 2005	Hydraulic Excavator,Engine No.	CAT303CR	E	1	JPY 256,000	JPY 256,000			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2004	E 230	18 5 2005	Quick Coupler	CAT303CR	E	1	JPY 69,000	JPY 69,000			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2004	E 231	18 5 2005	Bucket for Excavator	CAT303CR	E	1	JPY 3,000	JPY 3,000			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2004	E 232	18 5 2005	Service Manual	CAT303CR	E	1	JPY 294,500	JPY 294,500			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2004	E 233	18 5 2005	Spare Parts	CAT303CR	E	1	JPY 7,900	JPY 7,900			Tuk Thla TSC	Mr.Te Av/KM	C	A	
2004	E 234	18 5 2005	Measuring Rope	5468	E	2	JPY 7,900	JPY 15,800			Tuk Thla TSC	Mr.Te Av/KM	C	A	

Note: R/P: Route of Procurement (E: Technical Equipment from Japan, J: Equipment of Local Activities, L: Equipment transferred from other JICA Projects)
 Frequency of Use (A: Daily, B: Monthly/Weekly, C: Use in specific period, D: Use less than 5 times / year, *: refer to list of equipment)
 Condition (A: Good - B: Fair - C: Bad)

No.	Date of Arrival	Description		R/P	QTY.	Unit Price JPY	S-total JPY	Unit Price USD	S-total USD	Place of Storage		Frequency of Use	Condition	Remarks
		Item	Manufacture							Model Number	Location			
2004	E 235 18 5 2005	Weight for Rope			E	2	3,350 JPY	6,700			Tuk Thla TSC	C	A	
2004	J 010 11 4 2004	Desktop Computer with 17 inch Monitor	Fujitsu		J	1	298,000 JPY	298,000			Tuk Thla TSC	A	A	
2004	J 011 11 4 2004	Hard Disk Drive	Buffalo		J	1	33,200 JPY	33,200			Tuk Thla TSC	A	A	
2004	J 012 5 5 2004	Pack Stick for Concrete Testing Machine	Amelur Type		J	1	61,200 JPY	61,200			Tuk Thla TSC	*	A	Plan to be used.
2004	J 013 5 5 2004	Joint Cable for Digital Current Meter	for DCM-1, sensor		J	1	30,000 JPY	30,000			Tuk Thla TSC	C	A	
2004	J 014 5 5 2004	Notebook Computer	Toshiba		J	1	270,000 JPY	270,000			Tuk Thla TSC	C	C	Display failure, under repair
2004	J 015 21 10 2004	Target Plate	Topcon		J	1	24,700 JPY	24,700			Tuk Thla TSC	C	A	
2004	J 016 21 10 2004	Prism Adapter	Topcon		J	1	21,680 JPY	21,680			Tuk Thla TSC	C	A	
2004	J 017 21 10 2004	tribrach w/Optical Plummet wild Type	Topcon		J	1	44,800 JPY	44,800			Tuk Thla TSC	C	A	
2004	J 018 21 10 2004	Aluminium Tripod	Topcon		J	1	24,500 JPY	24,500			Tuk Thla TSC	C	A	
2004	J 019 7 10 2004	Notebook Computer	IBM		J	1	66,600 JPY	66,600	USD 1,785.00	USD 1,785.00	Tuk Thla TSC	C	A	
2004	J 020 9 3 2004	Sand Density Apparatus	LS-489		J	1	66,600 JPY	66,600			Tuk Thla TSC	C	A	
2004	J 021 9 3 2004	Sand Density Apparatus	LS-489		J	1	66,600 JPY	66,600			Tuk Thla TSC	C	A	
2004	J 022 9 3 2004	Sieve			J	1	44,700 JPY	44,700			Tuk Thla TSC	D	A	
2004	J 023 9 3 2004	Sieve			J	1	33,700 JPY	33,700			Tuk Thla TSC	D	A	
2004	J 024 9 3 2004	Sieve			J	1	50,400 JPY	50,400			Tuk Thla TSC	D	A	
2004	J 025 9 3 2004	Sieve			J	1	56,600 JPY	56,600			Tuk Thla TSC	D	A	
2004	L 026 18 4 2004	Uninterrupted Power Supply	Sun Pac		L	1			USD 80.00	USD 80.00	Tuk Thla TSC	A	A	
2004	L 027 28 7 2004	Uninterrupted Power Supply	Sun Pac		L	1			USD 45.00	USD 45.00	Tuk Thla TSC	A	A	
2004	L 028 3 8 2004	On-Board Battery	TOPCON		L	1			USD 214.23	USD 214.23	Tuk Thla TSC	C	A	
2004	L 029 3 8 2004	On-Board Battery	TOPCON		L	1			USD 214.23	USD 214.23	Tuk Thla TSC	C	A	
2004	L 030 18 11 2004	Water Pump	HONDA		L	1			USD 220.00	USD 220.00	Tuk Thla TSC	C	A	
2004	L 031 18 11 2004	Water Pump	HONDA		L	1			USD 220.00	USD 220.00	Tuk Thla TSC	C	A	
2004	L 032 22 11 2004	Mobile Phone	Nokia		L	1			USD 73.00	USD 73.00	Tuk Thla TSC	A	A	
2004	L 033 22 11 2004	Mobile Phone	Nokia		L	1			USD 73.00	USD 73.00	Tuk Thla TSC	A	A	
2004	L 034 2 12 2004	Hard Disk Drive	40GB, IEEE USB, desk type, metal case		L	1			USD 70.00	USD 70.00	Tuk Thla TSC	C	A	
2004	L 035 13 1 2005	Water tank	1000L		L	1			USD 70.00	USD 70.00	Tuk Thla TSC	C	A	
2004	L 036 13 1 2005	Water tank	1000L		L	1			USD 26.00	USD 26.00	Tuk Thla TSC	A	A	
2004	L 037 19 1 2005	Memory card for digital camera	Compact Flash 128M		L	1			USD 26.00	USD 26.00	Tuk Thla TSC	A	A	
2004	L 038 19 1 2005	Memory card for digital camera	Compact Flash 128M		L	1			USD 26.00	USD 26.00	Tuk Thla TSC	A	A	
2004	L 039 19 1 2005	Memory card for digital camera	Compact Flash 128M		L	1			USD 26.00	USD 26.00	Tuk Thla TSC	A	A	
2004	L 040 19 1 2005	Memory card for digital camera	Compact Flash 128M		L	1			USD 26.00	USD 26.00	Tuk Thla TSC	A	A	
2004	L 041 3 2 2005	Digital Camera	Canon		L	1			USD 465.00	USD 465.00	Tuk Thla TSC	A	A	
2004	L 042 16 2 2005	Water tank	300L		L	1			USD 32.00	USD 32.00	Tuk Thla TSC	C	A	
2004	L 043 4 3 2005	Hard Disk Drive unit	40GB, 7200rpm		L	1			USD 65.00	USD 65.00	Tuk Thla TSC	A	A	

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List of Equipment

20-Jul-05

1) Activities completed

No.	Date of Arrival		Item	Description			QTY	Unit Price JPY	S-total JPY	Unit Price US\$	S-total US\$	Place of Storage		Condition	Remarks
	12	10		2001	Manufacture	Model Number						R/P	Location		
2000 E 024	12	10	2001	Cone Penetrometer	Marui	MIS-249-1-01	E	1	JPY 390,000	JPY 390,000	USD	Tuk Thla TSC	Mr.Te Av KIM	A	activities completed

2) Plan to be used

2000 E 027	12	10	2001	Falling-Head Permeameter	Marui	MIS-227-1-03	E	1	JPY 789,400	JPY 789,400	USD	Tuk Thla TSC	Mr.Te Av KIM	B	for short-term expert in Sep 2005
2001 E 101	23	7	2002	Oven		SSA-135	E	1	JPY 469,000	JPY 469,000	USD	Tuk Thla TSC	Mr.Te Av KIM	A	never used, plan to install in 2nd Quarter in 2005
2001 E 117	23	7	2002	Filters for Automatic Water Distiller		01301055	E	5	JPY 420	JPY 2,100	USD	Tuk Thla TSC	Mr.Te Av KIM	A	
2001 E 118	23	7	2002	Filters for Automatic Water Distiller		01301090	E	5	JPY 420	JPY 2,100	USD	Tuk Thla TSC	Mr.Te Av KIM	B	
2001 E 119	23	7	2002	Automatic Water Distiller	Toyo	GS-2000	E	1	JPY 512,800	JPY 512,800	USD	Tuk Thla TSC	Mr.Te Av KIM	B	
2001 E 139	23	7	2002	Roof-in Meter	TokyoShinohara	SS-C-516A	E	1	JPY 243,760	JPY 243,760	USD	Tuk Thla TSC	Mr.Te Av KIM	B	for short-term expert in Sep. 2005
2001 E 146	23	7	2002	Evaporation Pan	Oetakeiki	No.41	E	1	JPY 38,800	JPY 38,800	USD	Tuk Thla TSC	Mr.Te Av KIM	A	plan to use for training course in Sep 2005
2002 E 160	14	7	2003	Hydro Scale	102257	102257	E	2	JPY 7,800	JPY 15,600	USD	Tuk Thla TSC	Mr.Te Av KIM	A	
2004 J 012	5	5	2004	Rack Stick for Concrete Testing Machine	Amster Type	Amster Type	J	1	JPY 61,200	JPY 61,200	USD	Tuk Thla TSC	Mr.A.Miyazaki	A	

3) Broken

2000 J 002	14	3	2001	Laptop Computer	IBM	ThinkPad I Series 1800	J	1	USD 2,408.00	USD 2,408.00	USD	Tuk Thla TSC	Mr.A.Miyazaki	C	since May 2003, broken
2000 J 006	14	3	2001	Wireless Print Server	BUFFALO	AirP's LPV-WL11	J	1	USD 192.00	USD 192.00	USD	Tuk Thla TSC	Mr.A.Miyazaki	C	since May 2001, broken
2000 J 008	14	3	2001	Digital Camera	Canon	IXY Digital	J	1	USD 492.00	USD 492.00	USD	Tuk Thla TSC	Mr.A.Miyazaki	C	since Jan 2005, broken
2000 J 010	14	3	2001	Laptop Computer	IBM	ThinkPad I Series 1800	J	1	USD 1,917.00	USD 1,917.00	USD	Tuk Thla TSC	Mr.A.Miyazaki	C	since May 2003, broken
2002 L 068	31	3	2003	Digital camera	Canon	IXUS V2	L	1	USD 380.00	USD 380.00	USD	Tuk Thla TSC	Mr.A.Miyazaki	C	since December 2004, broken
2000 J 007	14	3	2001	Wireless Lan Station	BUFFALO	AirStation WLAR-L11-M	J	1	USD 275.00	USD 275.00	USD	Tuk Thla TSC	Mr.A.Miyazaki	C	since April 2003, wire LAN network installed, broken
2001 L 019	16	11	2001	Wireless Lan Station	BUFFALO	AirStation WLAR-L11-M	L	1	USD 315.00	USD 315.00	USD	Tuk Thla TSC	Mr.A.Miyazaki	C	since April 2003, wire LAN network installed, broken

4) Equipment not used (new system was installed)

2001 L 010	12	7	2001	Codeless Telephone	Sony	SPP-88	L	1	USD 80.00	USD 80.00	USD	Tuk Thla TSC	Mr.A.Miyazaki	C	since April 2003, new telephone system installed
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4) List of Spair Parts

No.	Date of Arrival	Item	Description			QTY	Unit Price JPY	S-total JPY	Unit Price US\$	S-total US\$	Place of Storage		Condition	Reason of idle
			Manufacture	Model Number	R/P						Location	Person in charge		
2001 E 051	21 12 2001	Spare Parts for Crawler Carrier			E	JPY 850,035	JPY 850,035				Tuk Thia Storehouse	Mr.Te Av KIM	A	spare parts
2001 E 053	21 12 2001	Spare Parts for Concrete Breaker			E	JPY 2,800	JPY 2,800				Tuk Thia Storehouse	Mr.Te Av KIM	A	spare parts
2001 E 056	21 12 2001	Spare Parts for Air Compressor			E	JPY 272,000	JPY 272,000				Tuk Thia Storehouse	Mr.Te Av KIM	A	spare parts
2001 E 058	21 12 2001	Spare Parts for Generator			E	JPY 328,000	JPY 328,000				Tuk Thia Storehouse	Mr.Te Av KIM	A	spare parts
2001 E 061	28 12 2001	Spare Part for 312C & Bulldozer DSM XL			E	JPY 2,700,000	JPY 2,700,000				Tuk Thia Storehouse	Mr.Te Av KIM	A	spare parts
2001 E 064	28 12 2001	Spare Parts for 115AD&75S			E	JPY 400,000	JPY 400,000				Tuk Thia Storehouse	Mr.Te Av KIM	A	spare parts
2001 E 066	25 12 2002	Spare Parts for Dump Truck			E	JPY 272,000	JPY 272,000				Tuk Thia Storehouse	Mr.Te Av KIM	A	spare parts
2002 E 162	14 7 2003	Spare Parts for Truck			E	JPY 1,480,000	JPY 1,480,000				Tuk Thia Storehouse	Mr.Te Av KIM	A	spare parts
2002 E 164	14 7 2003	Spare Parts for Bulldozer			E	JPY 2,500,000	JPY 2,500,000				Tuk Thia Storehouse	Mr.Te Av KIM	A	spare parts
2002 E 166	14 7 2003	Spare Part for Truck			E	JPY 2,720,000	JPY 2,720,000				Tuk Thia Storehouse	Mr.Te Av KIM	A	spare parts
2002 E 168	14 7 2003	Spare Parts for Plotter			E	JPY 97,000	JPY 97,000				Tuk Thia Storehouse	Mr.Te Av KIM	A	spare parts
2003 E 184	29 7 2004	Spare Parts for Dump Truck	Mitsubishi		E	JPY 288,000	JPY 288,000				Tuk Thia TSC	Mr.Te Av KIM	A	spare parts

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ANNEX VII Local Cost Implementation by Japanese Side

Unit: United States Dollar US\$

No.	Category	Budgetary Year							Amount
		JFY 2000	JFY 2001	JFY 2002	JFY 2003	JFY 2004	JFY 2005 (Plan)		
1	General Budget (Running Expenses)	19,089.99	48,208.50	61,536.68	65,114.00	53,136.66	51,215.00	298,300.83	
2	General Budget (Facilities, Activities)	9,848.70	14,805.40	0.00	0.00	91,662.10	40,600.00	156,916.20	
3	Project Budget (Facilities)	0.00	0.00	38,836.00	61,540.40			100,376.40	
4	Project Budget (Activities)	0.00	10,994.25	0.00	8,730.00			19,724.25	
5									
6									
7									
8									
Total		28,938.69	74,008.15	100,372.68	135,384.40	144,798.76	91,815.00	575,317.68	

*JFY: Japanese Fiscal Year (from April to March)

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ANNEX VIII Allocation of Budget by Cambodian Side

Unit: Cambodia Riel / United States Dollars

No.	Description	2001	2002	2003	2004	2005	Total
1	Salary of counterparts and supporting staff	26,880,360	52,997,250	5,541,125	56,065,300	34,331,592	175,815,627
	Expenditure (in Riel)						
2	TSC Building Construction	26,880,360	52,997,250	5,541,125	56,065,300	34,331,592	175,815,627
	Expenditure (in US\$)	US\$155,227.00					US\$155,227.00
3	Electricity / Water charges	US\$155,172.95					US\$155,172.95
	Received Budget	Electricity/water for project office	Electricity/water for project office	Electricity/water for project office	Electricity/water for project office	Electricity/water for project office	
4	Local Telephone Charges (2 lines)	US\$120.00	US\$480.00	US\$480.00	US\$480.00	US\$480.00	US\$1,080.00
	Expenditure (in US\$)	US\$120.00	US\$480.00	US\$480.00	US\$480.00	US\$480.00	US\$1,080.00
5	Fuel for Project Vehicles and Heavy Equipment	5,182,656	13,038,488	12,526,164	22,634,872	17,766,880	71,150,060
	Expenditure (in Riel)	5,182,656	13,038,488	12,526,164	22,634,872	17,766,880	71,150,060
Total Received Budget		32,063,016/US\$155,347.00	66,036,738/US\$480	18,067,289/US\$480	78,700,172	52,098,472	246,965,687/US\$156,307.00
Total Expenditure		32,063,016/US\$155,292.95	66,036,738/US\$480	18,067,289/US\$480	78,700,172	52,098,472	246,965,687/US\$156,252.95
Total Expenditure (Equivalent in US\$/4,000riel=\$1)		US\$163,308.70	US\$16,989.18	US\$4,996.82	US\$19,675.04	US\$13,024.62	US\$217,994.37

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ANNEX IX Achievement of Activities of the Project

Activities in Plan of Operations		Project Period					Implementation		Achieved rate (%)
							Activities	Results / Achievements	
		1st yr	2nd yr	3rd yr	4th yr	5th yr			
1. Assessment of technical capacity and setting of technical level	1-1. Collect data	1-1-1. Conduct general survey of existing conditions (construction work, operation and maintenance of facilities by the Cambodian side and international cooperation organizations)	●	●	●	●	●	●	100%
	1-2. Assess present technical capacity in the field of survey	1-2-1. Assess present technical capacity of survey	●	●	●	●	●	●	100%
	1-3. Assess present technical capacity in the field of planning	1-3-1. Assess present technical capacity of irrigation planning	●	●	●	●	●	●	100%
	1-4. Assess present technical capacity in the field of design	1-4-1. Collect design documents	●	●	●	●	●	●	100%
		1-4-2. Study cases of existing structures	●	●	●	●	●	●	100%
	1-5. Assess present technical capacity in the field of construction management	1-5-1. Assess present technical capacity in the field of construction management	●	●	●	●	●	●	100%
		1-5-2. Assess present knowledge of construction control	●	●	●	●	●	●	100%
	1-6. Assess present technical capacity in the field of water management	1-6-1. Collect manuals of water management as case studies	●	●	●	●	●	●	100%
		1-6-2. Evaluate present water management techniques through case studies	●	●	●	●	●	●	100%
	1-7. Set the level of skills to be transferred in each field	1-7-1. Set the level of skills to be transferred survey/planning	●	●	●	●	●	●	100%
		1-7-2. Set the level of skill in design/water management	●	●	●	●	●	●	100%

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Scope for Sustainability	Activities in Plan of Operations				Implementation				Achieved rate (%)			
	Items	Project Period				Activities	Results / Achievements	Final Target / Evaluation (Issues to be implemented)				
		1st yr	2nd yr	3rd	4th yr					5th yr	contact person	
2. Transfer of technology through OJT	1-7-3. Set the level of skill in construction management	●	●				- Selected the technical contents to be transferred in the Project based on the collected data and the present conditions of C/Ps.	- The technical transfer to C/Ps is to make construction management for small-scale irrigation canals, such as tertiary canals, including construction planning, construction control and process control.	- The target technical contents to be transferred to C/Ps in the Project were decided.	100%		
		This item aims to conduct study on the existing condition and to establish the technical contents to be transferred in the Project in order to formulate the detailed plan of operation. Therefore, it does not relate to sustainability.										
		2-1-1. Conduct general survey of existing conditions (social, farm system, water use, etc.)										
		2-1-1-A. Farmers survey						- Conducted a baseline study.	- The present situation of farmers in the model site become clear with the baseline study.	- Farmer Survey will be conducted as a activity of water management section.	100%	
		2-1-1-B. Confirmation of existing structures	●	●				- Conducted an inventory study on hydraulic structures in and near the model site.	- Prepared inventory of hydraulic structures in and near the model site.	- The study finished.	100%	
		2-1-1-C. Topographic map	●	●				- Collected topographic maps. - Made a topographic map of the model site and land use survey.	- Basic data for designing a layout of irrigation canals in the model site were prepared.	- The study finished.	100%	
		2-1-1-D. Hydrology and meteorology survey	●	●	●	●		- Installed a meteorological station and collected the data. - Arranged the meteorological data. - Collaborated with Dept. of Meteorology.	- C/Ps understood the methods of collecting meteorological data and the data arrangement.	- The data collection and arrangement will be continued. - Another station will be installed. - The collaboration with DDM will be continued.	80%	
		2-1-2. Conduct discharge survey										
		2-1-2-A. Water level measurement	●	●	●	●		- Conducted water level measurement along the main canal. - Installed automatic water level gauge and conducted consecutive water level observation at the intake. - data arrangement on the above measurements	- C/Ps acquired the methods of measuring level and velocity of water flow. - C/Ps acquired basic knowledge about H-Q curve. - C/Ps continued the observation and understood importance of maintenance.	- The water level observation at the intake and along the main canal will be continued. - The water level observation along a certain tertiary canal will be conducted.	90%	
		2-1-2-B. Discharge measurement	●	●	●	●		- Conducted flow rate measurement in accordance with the above water level observation along the main canal. - A trial for drawing a relation curve between water levels and flow rates (H-Q Curve).		- The flow rate observation will be conducted along the tertiary canal and check the canal capacity on flow rate.	70%	
2-1-3. Transfer survey techniques												
2-1-3-A. Basic survey skill	●	●	●	●	●	- Learned basic operation of survey instruments, such as levels, plane-tables and theodolite, and data arrangement and processing. - Conducted traverse survey.	- C/Ps acquired methods of operating survey instruments including data arrangement. - C/Ps acquired the method of closed traverse survey and its data arrangement.	- The connected traverse survey will be conducted.		90%		
2-1-3-B. Practical survey techniques for the model site	●	●	●	●	●	- Conducted a longitudinal survey along the bank of main canal. - Conducted route survey along tertiary canals. - Conducted training on making topographic maps.	- C/Ps acquired the methods of route survey and its data arrangement. - C/Ps acquired basic knowledge and skills on making topographic map using total-stations.	- Some difference in levels among the C/Ps were observed but most of the C/Ps attained sufficient results as a whole.		100%		
2-1-3-C. Application of the above techniques to the model site	●	●	●	●	●	- Conducted route survey and plan survey for designing tertiary canals in the model site.	- C/Ps acquired the methods of survey, such as route survey, for designing canals.	- Route survey for tertiary canals will be conducted in the model site.		80%		
Scope for Sustainability	Some difference among the C/Ps are observed in skills in survey but most of them acquired basic knowledge and skills. The C/Ps, therefore, will be able to do survey with their capacity obtained. The C/Ps also learned the basic knowledge and skills of making topographic maps with total-stations and they did fine job on it. However, they still need to learn more about mathematics and geometrics which are indispensable for such survey. In terms of other surveillance methods, the C/Ps acquired basic knowledge and methods of operating instruments, and therefore, knowledge for irrigation planning connected with these surveillance methods should be learned so that they can make planning for irrigation projects.											

Activities in Plan of Operations		Project Period					Implementation	Final Target / Evaluation (issues to be implemented)	Achieved rate (%)		
		Items									
		1st yr	2nd yr	3rd	4th yr	5th yr					
Scope for Sustainability	2-2. Transfer planning techniques through OJT	2-2-1. Transfer techniques of unit water requirement survey (Water requirement rate)		●●	●●	●●	<ul style="list-style-type: none"> - Learned methods of using water requirement survey apparatus. - Conducted water requirement survey. - Conducted the data arrangement. 	<ul style="list-style-type: none"> - The water requirement survey will be continued. - The calculation of unit water requirement rate will be tried. 	80%		
		2-2-2. Produce an irrigation plan for the model site		●●	●●	●●	<ul style="list-style-type: none"> - Conducted a study on layout of canal system for the model site. 	<ul style="list-style-type: none"> - The route and beneficiary area for each canal were decided. 	50%		
		2-3. Transfer design techniques through OJT	2-3-1. Basic design techniques for model site	●	●	●	<ul style="list-style-type: none"> - Learned basic knowledge on hydraulics, structural analysis and soil engineering. - Prepared the textbooks 	<ul style="list-style-type: none"> - C/Ps acquired basic knowledge for designing small irrigation canals. - Some textbooks were prepared. - Some supplementary materials were prepared. 	60%		
Scope for Sustainability		2-3-2. Practical design techniques for irrigation and drainage canals in the model site		●●	●●	●●	<ul style="list-style-type: none"> - Conducted hydraulic and structural analysis, drawing and making a material list in the design work for the model site. 	<ul style="list-style-type: none"> - C/Ps became able to design tertiary canals and related structures by themselves. 	80%		
		2-3-3. Practical design techniques for related structures in the model site		●●	●●	●●		<ul style="list-style-type: none"> - Practices will be conducted in designing box culverts and slab bridges which are not seen in the present design of the tertiary canals. 	80%		
		2-4. Transfer construction management techniques through OJT	C/Ps acquired most of the methods of designing small irrigation canals and their related structures. However, C/Ps will should acquire more about basic design technical knowledge so as to design large structures, such as dams, barrages and main canals. For the moment, C/Ps should learn designing methods for the related structures, such as checks, diversions, box culverts and slab bridges, so that they can design most of the structures in irrigation canal systems except for textbooks.		●	●	●				
Scope for Sustainability		2-4-1. Prepare for construction (road repair, etc.)		●●			<ul style="list-style-type: none"> - Conducted repair of the main canal bank as a practice in operation of construction machines. 	<ul style="list-style-type: none"> - Operators improved their skill in operating machines. - The existing skills of operators in MOWRAM were evaluated. 	<ul style="list-style-type: none"> - The activity finished. 	100%	
		2-4-2. Train operators of construction machinery		●●	●●	●●	<ul style="list-style-type: none"> - Conducted practices in operating construction machines. 	<ul style="list-style-type: none"> - Operators improved their skill in operating machines. - The existing skills of operators in MOWRAM were evaluated. 	<ul style="list-style-type: none"> - The activity finished. 	100%	
			2-4-2-B. Maintenance		●	●	●	<ul style="list-style-type: none"> - Contents of routine check and maintenance were decided. - C/Ps and the operators acknowledged importance of routine check and maintenance. 	<ul style="list-style-type: none"> - Routine check and maintenance will be continued every week. 	100%	
			2-4-3. Produce construction planning and design documents		●●	●●	●●	<ul style="list-style-type: none"> - Determined construction process for earth and concrete work. - Improved the construction process. - Conducted practices in setting fixed rulers. 	<ul style="list-style-type: none"> - The construction process will be examined and improved considering results of construction. 	90%	
			2-4-3-B. Design documents		●●	●●	●●	<ul style="list-style-type: none"> - Examined the design with the drawings and the material list. - Prepared construction plans. - Prepared construction schedule. 	<ul style="list-style-type: none"> - The practices will be continued so that C/Ps can prepare a construction plan and schedule by themselves. 	70%	
			2-4-4. Construct facilities		●●	●●	●●	<ul style="list-style-type: none"> - Conducted earth and concrete work in tertiary canal construction. - Conducted practice for supervising construction in the above construction. 	<ul style="list-style-type: none"> - C/Ps became able to read drawings and calculate amounts of materials correctly. - C/Ps acquired basic knowledge on construction planning and schedule. 	<ul style="list-style-type: none"> - The series of construction of tertiary canals finished in the five-year project period. 	100%
					●●	●●	●●			100%	
			2-4-5. Take construction control		●●	●●	●●	<ul style="list-style-type: none"> - Conducted schedule management of construction. - Wrote daily reports of work. 	<ul style="list-style-type: none"> - Data on progress will be arranged and analyzed after construction. - Planning and management of construction schedule will be learned. 	70%	
					●●	●●	●●				
					●●	●●	●●				

Activities in Plan of Operations		Project Period					contact person	Implementation		Final Target / Evaluation (Issues to be implemented)	Achievement rate (%)	
		1st yr.	2nd yr.	3rd	4th yr.	5th yr.		Activities	Results / Achievements			
	Items											
	2-4-5-B. Quality control (soil test, concrete test)		●	●	●	●		<ul style="list-style-type: none"> - Conducted practice on soil and concrete tests. - Conducted setting fixed rulers. - Conducted water content control of soil, density control at site and dimension control. - Conducted concrete mixing control, slump tests, compression tests, bar arrangement check and dimension control. - Conducted check on finished works in tertiary canal construction. - Arranged the checked data. 	<ul style="list-style-type: none"> - C/Ps acknowledged necessity of quality control and methods of control and testing at site. - C/Ps acknowledged roles and relations between soil tests in laboratory and quality control at site. 	Data on quality control will be arranged and analyzed after construction.	80%	
	2-4-5-C. Control of finished work quality		●	●	●	●		<ul style="list-style-type: none"> - C/Ps acknowledged necessity and methods of checking finished works and allowable errors between finished works and design. 	<ul style="list-style-type: none"> - C/Ps acknowledged necessity and methods of checking finished works and allowable errors between finished works and design. 	Data on checking finished works will be arranged and analyzed after construction.	80%	
Scope for Sustainability	Through the three lines of tertiary canal construction, C/Ps acquired a set of methods for constructing small irrigation canals, such as construction planning, construction control, data arrangement and reporting. C/Ps became able to make proper supervision in constructing small canals and concrete structures. C/Ps should acquire knowledge and skills in preparing budget plan of construction and control its execution. In addition, C/Ps will be expected to learn and experience construction management for larger and more sophisticated structures.											
	2-5. Transfer water management techniques through OJT with participation of farmers		●	●	●	●		<ul style="list-style-type: none"> - Conducted interview to farmers in the model site about the existing water use. 	<ul style="list-style-type: none"> - The existing water use and the farmers' thinking and attitudes for irrigation systems were acknowledged. 	<ul style="list-style-type: none"> - Group work among the farmers will be activated in maintenance activities. - Representatives of the farmer group will make study trips to some advanced area. 		70%
	2-5-1. Promote participation of farmers at the model site (Enhance of farmers' group capability)		●	●	●	●		<ul style="list-style-type: none"> - Conducted interview to farmers about changes in water use after the construction of canals in the model site. - Established farmer groups along T3.2.0 and conducted a series of workshops. - Assisted farmers with setting outlets to fields and crossings. 	<ul style="list-style-type: none"> - The farmers established their groups and discussed their own rules of water use and maintenance of the tertiary and delivery canals. - The groups voluntarily conducted cleaning of their tertiary canal. - C/Ps acknowledged needs of farmers in water use through experience of facilitators in discussion among the farmers. 	<ul style="list-style-type: none"> - The activities for stimulating the farmers' discussion will be continued to establish farmer groups and prepare their own rules 		
	2-5-2. Produce a water management plan with participation of farmers for the model site		●	●	●	●		<ul style="list-style-type: none"> - Conducted a study visit of farmers in the T3.2.0 area on a farmer water user community in Kompong Speu. 	<ul style="list-style-type: none"> - The farmers exchanged information and opinions on water management with farmers in another irrigated area. 	- The activity finished.		100%
	2-5-2-A. Study visit to existing water users associations		●	●	●	●		<ul style="list-style-type: none"> - Collected data on water management in Cambodia and from abroad. 	<ul style="list-style-type: none"> - Data on water management with farmers' participation were collected from Cambodia, FAO, Philippines and others. 	- The activity finished.		100%
	2-5-2-B. Collection of documents on water management planning		●	●	●	●		<ul style="list-style-type: none"> - Conducted interview to farmers about their water use, its stakeholders, and other group activities in the village. 	<ul style="list-style-type: none"> - Farmer groups in the community related to issues other than water were acknowledged on their existence, purposes and structures. 	<ul style="list-style-type: none"> - Data arrangement and preparing a report will be done. 		90%
	2-5-2-C. Reconnaissance survey and inventory of available resources		●	●	●	●		<ul style="list-style-type: none"> - Examined MOWRAM policy and strategies in water management. - Collected examples water management rules. 	<ul style="list-style-type: none"> - C/Ps studied policy, strategies and rules on water management through the data collection. 	<ul style="list-style-type: none"> - C/Ps will assist the farmer groups to establish water use rules for their groups. 		60%
Scope for Sustainability	It has been difficult to transfer water management technique, such as optimization and equity of water allocation, due to the delay of rehabilitation of main irrigation facilities funded by the Grant Aid, and farmers' expectation on absence of water. However, C/Ps assisted farmers to establish their own groups, formulate their own rules and collaborate on operation and maintenance in terms of water management in the tertiary and delivery canals. Through the activities, C/Ps has acknowledged farmers' needs on irrigation water.											

Activities in Plan of Operations		Project Period					Implementation	Final Target / Evaluation (issues to be implemented)	Achieved rate (%)
		Items							
		1st yr	2nd yr	3rd	4th yr	5th yr			
3. Production of manuals	3-1. Produce a manual on survey technique	3-1-1. Produce a manual of farmers survey	●	●				100%	
		3-1-2. Produce a manual on survey	●	●	●	●	<ul style="list-style-type: none"> - C/Ps learned methods of farmer survey. - C/Ps acquired basic knowledge on survey more firmly and appropriately through preparation of manuals. - C/Ps conducted training for irrigation engineers including other C/Ps with the manuals. 	80%	
		3-1-3. Produce a manual on hydrology and meteorology survey			●	●	<ul style="list-style-type: none"> - Is considering detailed contents, preparing process and methods. 	30%	
		3-1-4. Produce a manual on discharge measurement		●	●	●	<ul style="list-style-type: none"> - C/Ps acquired their knowledge more firmly and appropriately on methods of measuring flow rate and preparing H-Q curves. 	80%	
Scope for Sustainability		Land survey is the most necessary technique in survey work of irrigation in Cambodia, and we therefore, spent the most time for land survey in the section's activities. Preparing the manuals has technical manuals in the irrigation sector, it will contribute very much to technical extension and abilities of C/Ps are constraints for preparing manuals with the experts and additionally, there are few people who can translate English writings on irrigation into Khmer. If TSC prepares Khmer technical manuals in the irrigation sector, it will contribute very much to technical extension and capacity building.							
Scope for Sustainability	3-2. Produce manuals on planning technique	3-2-1. Produce a manual on design water requirement and drainage discharge		●	●		<ul style="list-style-type: none"> - Prepared a manual on unit water requirement survey. 	50%	
		The project set the technical target so that C/Ps can appropriately conduct a series of work for tertiary canals, after considering technical conditions of Cambodian irrigation engineers. To attaining the target for technical transfer, the Project focus on basic knowledge and skills in irrigation engineering including basic subjects, such as land survey, hydraulics, structural analysis and soil mechanics. In learning planning for irrigation projects, engineers should acquire basic technical knowledge and skills in irrigation engineering before learning irrigation planning methods, which includes various contents, such as farming plan, cost-benefit analysis and environmental study. Since water use plan is one of the most important plans in irrigation planning, C/Ps should understand basic knowledge in preparing a water use plan and conduct some practice on it. It will give some targets for their further study and understanding on importance in conducting the related survey.							
	3-3. Produce design standard and manuals on design techniques and project evaluation	3-3-1. Produce design manuals		●	●		<ul style="list-style-type: none"> - C/Ps have used design reports on six tertiary canals and two structures as textbooks or references for their design. 	80%	
		3-3-2-B. Related structures		●	●		<ul style="list-style-type: none"> - A manual will be prepared for designing box culverts and slab bridges as crossing structures over the irrigation canals. - The manuals will be translated into Khmer. 	70%	
Scope for Sustainability		The project set the technical target so that C/Ps can appropriately conduct a series of work for tertiary canals. According to the target, some practical manuals were prepared by using technical papers in OJT. C/Ps seems to understand the contents. They have become able to design canals by themselves, referring these manuals. However, C/Ps should learn more about basic subjects and design methods of various types of structures and larger and sophisticated structures, such as headworks and other main irrigation facilities.							
3-4. Produce manuals on construction management techniques		3-4-1. Produce specifications for construction		●	●		<ul style="list-style-type: none"> - Prepared general specifications for construction - Prepared criteria of construction control. 	90%	
		3-4-1-A. General specifications			●	●	<ul style="list-style-type: none"> - C/Ps understood important specifications in construction. 		
		3-4-1-B. Construction process (fixed ruler, banking, concrete structures)			●	●	<ul style="list-style-type: none"> - C/Ps acquired knowledge on fixed rulers and concrete mixing design more firmly and appropriately through the preparation of the manuals. 	50%	

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Scope for Sustainability	Activities in Plan of Operations				Implementation			Final Target / Evaluation (Issues to be implemented)	Achieved rate (%)
	Items	Project Period			Activities	Results / Achievements			
		1st yr	2nd yr	3rd			4th yr		
Scope for Sustainability	3-4-2. Produce manuals for construction control		●●			<ul style="list-style-type: none"> - Prepared a manual on schedule control, quality control and check of finished works using a Japanese construction control manual. - Prepared a education material for necessity and importance of construction control. 	<ul style="list-style-type: none"> - The materials is useful for C/Ps to understand necessity and importance of construction control during OJT. 	80%	
	3-4-2-B. Quality control (soil test, concrete test)		●●						
	3-4-2-C. Control of finished work quality		●●						
Scope for Sustainability	3-5. Produce manuals on water operation and maintenance of irrigation structures on-farm level		●●			<ul style="list-style-type: none"> - Collected and arranged the papers and data related to water management. - Examined the existing water use through the workshop with farmers. - Conducted a series of workshops with the farmers of the T3.2.0 area. 	<ul style="list-style-type: none"> - C/Ps examined and analyzed the papers and data. - The outline of water management manual were prepared. - C/Ps learned and confirmed process for activating farmer group work through conducting and reporting the workshops. 	<ul style="list-style-type: none"> - A guideline will be prepared for using irrigation facilities in the model site. - C/Ps will assist the farmers of T3.2.0 in making their own O&M plan. 	50%
Scope for Sustainability	3-5-2. Produce a manual on water management techniques on-farm level		●●					<ul style="list-style-type: none"> - A guidance will be prepared for solving problems in water management by farmers. - An example on establishing farmer groups and activating group work will be reported as an example of facilitation. 	50%
Scope for Sustainability	Different from engineering matters, water management has not been technically established, and issues to be tackled in participatory water management differ in places according to the area's history, irrigation, customary practices and socio-economic conditions. Considering short history in farmer group work for water management and short of experiences in water management of irrigation systems in Cambodia, TSC does not prepare manuals for established technique but reports on activities and process assisting farmers in establishing their own group and activating their group work. It will contribute to accumulation of experiences in the sector. In addition, C/Ps will acquire facilitating skills and knowledge for farmer group work through the activities.								
4. Training	4-1. Conduct training on survey			●●	●●	<ul style="list-style-type: none"> - Conducted two training courses on basic survey targeting engineers and technicians of provincial level: 12 participants in March 2004, 16 participants in March 2005 - Conducted a training course for participants from Mekong Sub-region according to the request from Mekong River Commission. 	<ul style="list-style-type: none"> - Provincial staff acquired basic knowledge and skills of survey. - C/Ps acquired the knowledge and skills more firmly through the experience of trainers in the lectures and practices. - JICA experts made lectures but C/Ps helped conducting practices at site utilizing their experience of the survey in the OJT. 	<ul style="list-style-type: none"> - The target of the project was attained and provincial staff should learn more and higher knowledge and skills in survey. 	100%
	4-1-1. Conduct training on survey			●●	●●				
	4-1-2. Conduct training on hydrology and meteorology survey			●●	●●				
Scope for Sustainability	4-1-3. Conduct training on discharge measurement			●●	●●			<ul style="list-style-type: none"> - A training course will be held in October 2005 with survey of flow rate and unit water requirement. 	0%
	4-2. Conduct training on- planning				●●			<ul style="list-style-type: none"> - A training course will be held in October 2005 with survey of unit water requirement and metro-hydrological observation. 	10%
Scope for Sustainability	4-2-1. Training on design water requirement and drainage discharge			●●	●●	<ul style="list-style-type: none"> - Conducted a training course for participants from Mekong Sub-region according to the request from Mekong River Commission. 	<ul style="list-style-type: none"> - JICA experts made lectures but C/Ps helped conducting practices at site utilizing their experience of the survey in the OJT. 	<ul style="list-style-type: none"> - A training course will be held in October 2005 with survey of flow rate and unit water requirement. 	10%
Scope for Sustainability	4-3. Conduct training on design techniques				●●	<ul style="list-style-type: none"> - Conducted a training course on basic hydraulics for designing small irrigation canals in March 2004. - Conducted a training course on practical design for small irrigation canals and its related structures in March 2005. 	<ul style="list-style-type: none"> - 10 participants from provincial departments acquired basic knowledge on hydraulics. - 15 participants from provincial departments experienced and learned design of small irrigation canals. - C/Ps acquired knowledge and skills more firmly through lectures and practices as lecturers. 	<ul style="list-style-type: none"> - A training course will be held for designing canal crossing structures in September or October 2005. 	70%
Scope for Sustainability	4-3-1. Conduct training on design of open canal			●●	●●				
Scope for Sustainability	4-3-2. Conduct training on design of related structures			●●	●●				
Scope for Sustainability	It was hard jobs for C/Ps to conduct training courses as lecturers just after their learning in the OJT and they have done fine jobs in such conditions and raise their own capabilities. Sustainability in conducting training courses on design have high priority in irrigation sector to implement more and better projects.								

Activities in Plan of Operations		Project Period					Implementation		Achieved rate (%)	
		1st yr	2nd yr	3rd	4th yr	5th yr	Activities	Results / Achievements		Final Target / Evaluation (Issues to be implemented)
Scope for Sustainability	4-4. Conduct training on construction management techniques				●●		<p>Conducted a training course on basic construction control including outline of construction control, reading drawings and setting fixed rulers in November 2004 with 20 participants.</p> <p>C/Ps acquired knowledge and skills more firmly through lectures and practices as lecturers.</p>	<p>many of provincial staff does not have experience in construction control and they understood its importance and need to practice very keenly.</p> <p>A training course will be held on construction planning and construction control in October 2005.</p>	100%	
	4-4-1. Conduct training on construction planning and design documents				●●		<p>Conducted a training course on practical construction control at the model site in January to April 2005 with 19 participants who joined the previous course.</p>	<p>The participants acquired more practical knowledge and skills through the experience in the real construction site.</p> <p>A training course will be held on construction planning and construction control in October 2005.</p>	50%	
Scope for Sustainability	4-5. Conduct training on water management techniques with participation of farmers				●●		<p>Considered farmers' needs in training through a series of workshops.</p> <p>Collected data from other areas</p> <p>Collected information on the visit place for leaders of farmer groups where the farmer groups are active.</p>	<p>Information from T'aken Province was collected and analyzed.</p> <p>Information on three targeted areas was collected.</p> <p>A draft of training plan was prepared.</p> <p>A part of education materials were prepared.</p>	<p>A training course will be held for the farmers in the model site in the second half of 2005.</p> <p>A workshop will be held for introducing the project activities on assistance of the farmer groups with participation of MOWRAM and PDWRAM staff in November 2005.</p>	40%
Scope for Sustainability	4-5-1. Conduct training on water management on farm level				●●					
Scope for Sustainability	4-5-2. Conduct training operation and maintenance of irrigation structure on farm				●●					
Scope for Sustainability	Training is practical and effective for farmers to assist their water management work. It is important to listen farmers' opinions through conversations with farmers and to establish a framework where the farmers join various kinds of their own activities in order to determine the farmers' needs appropriately. Through a series of workshops among farmers, C/Ps are acquiring methods of finding issues in water management, solving them, and mobilizing farmers into various activities and whereby C/Ps also learn their proper positions with the farmers and methods of communicating etc.									
Scope for Sustainability	The Project aims to raise a core group of irrigation engineers for technical supports and extension, based on the existing conditions of lack of technical supports and extension services, framework and human resources for conducting such services. The Project also recognized proper knowledge and skills in constructing small irrigation canals and their water management with establishing active farmer groups as a feasible technical target. It could be said that C/Ps have acquired basic capacities to implement these kinds of jobs properly in a sustainable manner. If we think about sustainability of technical support and extension services which are primary and the most important target of the Project, organizational capacity building including establishing an organization for the services and its management system will be required in combination with more individual capacity building of its staff after the Project attains a certain level of capacity building of the C/Ps.									

- Achievement rate should be described in percent of progress against the final target.

- "Scope for sustainability" should be described for each type of activity, such as OJT, manuals and training, of each section.

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