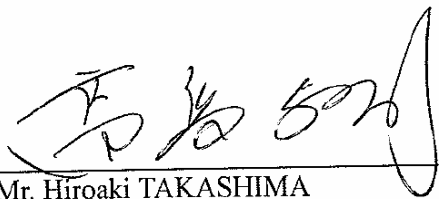


SCOPE OF WORK
AND
MINUTES OF MEETINGS

SCOPE OF WORK
FOR
THE STUDY
ON
IMPROVEMENT OF WATER ENVIRONMENT
IN
VIENTIANE CITY,
LAO PEOPLE'S DEMOCRATIC REPUBLIC

AGREED UPON BETWEEN
MINISTRY OF PUBLIC WORKS AND TRANSPORT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

VIENTIANE, 3rd November, 2008



Mr. Hiroaki TAKASHIMA
Chief Representative
Laos Office
Japan International Cooperation Agency



Mr. Sommad Pholsena
Minister
Ministry of Public Works and Transport
(MPWT)

I. INTRODUCTION

In response to the request from the Government of Lao People's Democratic Republic (hereinafter referred to as "the Government of Lao PDR"), the Government of Japan has decided to conduct "the Study on Improvement of Water Environment in Vientiane City, Lao People's Democratic Republic" (hereinafter referred to as "the Study") in accordance with the relevant laws and regulations in force in Japan.

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

The present document sets forth the Scope of Work with regard to the Study.

II. OBJECTIVE OF THE STUDY

The specific objectives of the Study are:

1. To survey and analyze the existing conditions of water environment in the Study area
2. To formulate a master plan for water environment management in Vientiane City
3. To transfer the technique on how to formulate a master plan for water environment management to Lao counterparts

III. STUDY AREA

The Study area is seven (7) districts (Sikhottabong, Chanthabury, Sissatanak, Xaisetha, Hadxaifong, Xaithany, Pakngum) especially Mak Hiao river basin in Vientiane city as shown in the attached sheet of Annex I.

IV. SCOPE OF THE STUDY

To achieve the above objectives, the Study will cover the following items:

Phase I

Baseline Survey and making draft master plan for water environment management in Vientiane City

1. Review of the existing data and information such as governmental environment policy, related legal system, hydrology, meteorology, geography, geology, natural and social environmental information and related existing reports
2. Monitoring survey for natural conditions in the Mak Hiao river basin
3. Survey of current situation of the storm water and wastewater management systems in the Study area
4. Review of the existing urban development plan, water supply project plan, wastewater treatment plan, urban drainage plan in the Study area
5. Formulation of the draft master plan for water environment management in Vientiane City including following items
 - (1) Water Environment Improvement Strategy for 2020
 - (2) Implementation plan based on the strategy
 - 1) Improvement plan of drainage water quality in Vientiane City
 - 2) Promotion plan of environmental education for water environment improvement

- 3) Consolidation plan of the legal framework for water environment
- (3) Implementation of Initial Environmental Examination (IEE)
- (4) Identification of priority items(s) among each plan showed in above: 5.(2). 1),2)and 3).
- (5) Recommendations
6. Selection of the target item(s) from priority ones showed in 5.(2).1)2)and 3) for a pilot project and a pre-Feasibility Study
7. Conducting (a) seminar(s) and/or (a) workshop(s)

Phase II

Implementation of a pilot project and a pre-Feasibility Study (pre-F/S)

1. Implementation of an environmental education pilot project
2. Implementation of a pre-F/S
 - (1) To conduct field survey at the construction site (Topographic survey, Environmental survey)
 - (2) To formulate a construction plan and a procurement plan
 - (3) To formulate an operation and maintenance plan
 - (4) To estimate the project cost
 - (5) To conduct the IEE survey (See attached Annex II)
 - (6) To evaluate the project by economical, financial, technical, social and environmental aspects)
3. Finalization of the master plan based on the result of 1) and 2) of Phase II.
4. Conducting (a) seminar(s) and/or (a) workshop(s)

V. STUDY SCHEDULE

The Study will be carried out in accordance with attached tentative schedule shown in the Annex III. The schedule is tentative and subject to be modified when both parties agree upon and any necessity that arises during the course of the Study.

VI. REPORTS

JICA shall prepare and submit the following writing reports and a digital data to the Government of Lao PDR.

1. Inception Report:
Twenty five (25) copies in English at the commencement of the Study
2. Progress Report (1)
Twenty five (25) copies in English during Phase I
3. Interim Report:
Twenty five (25) copies in English at the end of Phase I
4. Progress Report (2)
Twenty five (25) copies in English during Phase II
5. Draft Final Report:
Twenty five (25) copies in both English and Lao at the end of Phase II
The Government of Lao PDR shall submit its comments within one (1) month after receipt of the Draft Final Report.
6. Final Report:
Fifty (50) copies in both English and Lao within one (1) month after receipt of the comments on the Draft Final Report from the Government of Lao PDR.

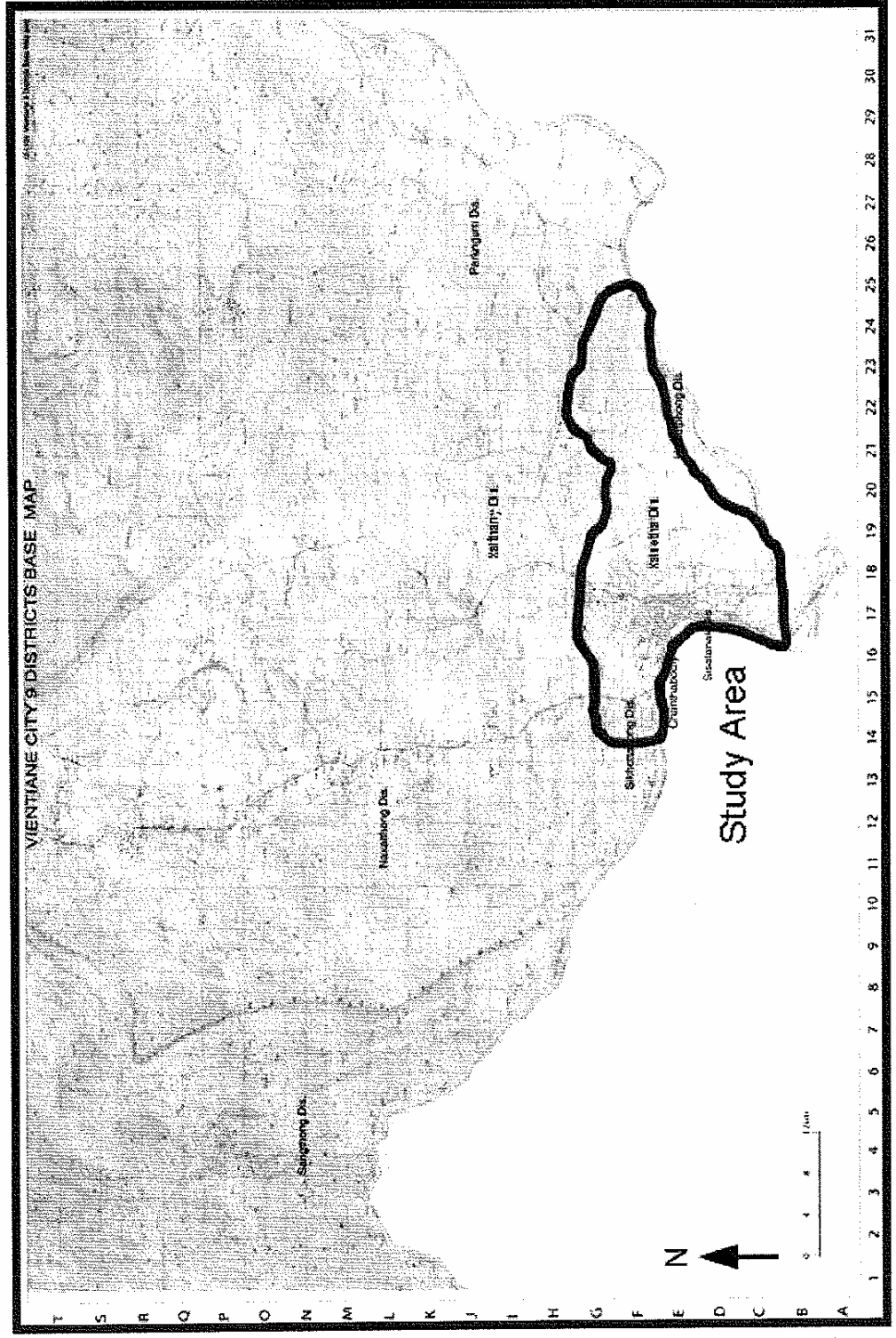
VII. UNDERTAKING OF THE GOVERNMENT OF LAO PDR

1. To facilitate smooth conduct of the Study, the Government of Lao PDR shall take the following necessary measures ;
 - (1) To secure the safety of the Japanese study team (hereinafter referred to as "the Team"),
 - (2) To permit the members of the Team to enter, leave and sojourn in Lao People's Democratic Republic (hereinafter referred to as "Lao PDR") for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees,
 - (3) To exempt the members of the Team from taxes, duties, fees and any other charges on equipment, machinery and other materials brought into and out of Lao PDR for the conduct of the Study,
 - (4) To exempt the members of the Team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Team for their services in connection with the implementation of the Study,
 - (5) To provide necessary facilities to the Team for remittance as well as utilization of the funds introduced into Lao PDR from Japan in connection with the implementation of the Study,
 - (6) To secure permission for the Team to enter into private properties or restricted areas for the implementation of the Study,
 - (7) To secure permission for the Team to take all data and documents including maps and photographs related to the Study out of Lao PDR to Japan, and
 - (8) To provide medical services as needed. Its expenses will be chargeable to the members of the Team.
2. The Government of Lao PDR shall bear claims, if any arises, against the members of the Team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the member of the Team.
3. Public Works and Transport Institute (hereinafter referred to as "PTI") shall act as counterpart agency to the Team and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.
4. PTI and the related organizations shall nominate a counterpart team that will work closely with the Team throughout the study period.
5. PTI shall, at its own expense, provide the Team with the followings, in cooperation with other organizations concerned:
 - (1) available data and information related to the Study,
 - (2) counterpart personnel,
 - (3) suitable office space with necessary equipment such as desks, chairs, telephone,
 - (4) credentials or identification cards to members of the Team,
 - (5) necessary permission by security authorities for field surveys of the Team, and
 - (6) information on as well as support in obtaining medical services.
6. Ministry of Public Works and Transport (MPWT) will be the executing agency for the Study. A Steering Committee will be organized under the chairmanship of MPWT consisting of all the concerned organizations, such as PTI, DHUP, the related departments of the Water Resources and Environment Administration (WREA), Department of Public Works and Transport of Vientiane city and Vientiane Urban Development Administration Authority (VUDAA). The Committee will be convened at times when there is a need to discuss and resolve critical issues related to development policies and strategy.

VIII. OTHERS

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

Map of the Study Area



k

W

Terms of Reference for the Environmental and Social Considerations Study

Environmental and Social Considerations Study (IEE Level)

1. Analysis of environmental baseline data
 - (1) Social and economic conditions
population, economy, employment, infrastructure/public facilities (water supply, sewerage, etc.), land use, water use, landownership, public health, local conflicts, religious groups, cultural heritage/historical site, hazards(risk), accident, protection/reserve area, etc.
 - (2) Natural conditions
Topography, geology, soil, ground water, meteorology, hydrology (water level, tidal current, wave, etc.), ecology (fauna & flora), vegetation/forests, water bodies (river, canal, reservoir, pond, etc), erosion, landscape, natural disaster, etc.
 - (3) Polluted situations
Air pollution/quality, water pollution/quality, soil contamination, noise and vibration, land subsidence, offensive odor, waste materials, etc.
 - (4) Laws
Laws concerning Environmental Impact Assessment, compensation and resettlement and environmental issue, etc.
2. Scoping
“scoping” means deciding alternatives to be analyzed, and grasping a range of significant and likely significant impacts, and considering study methods.
3. Initial environmental examination and study on mitigation measures (including study on alternatives)
4. Consultations with stakeholders (stakeholders meetings) at the appropriate study stage.

Tentative Schedule of the Study

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Work Schedule	Phase I																Phase II													
Reports	△ IC/R		△ PR/R(1)						△ IT/R				△ PR/R(2)						△ DF/R		△ F/R									

IC/R : Inception Report

IT/R : Interim Report

PR/R : Progress Report

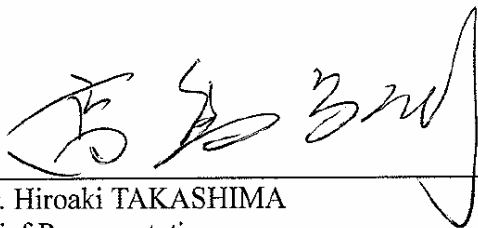
DF/R : Draft Final Report

F/R : Final Report

MINUTES OF MEETINGS
ON
THE STUDY
ON
IMPROVEMENT OF WATER ENVIRONMENT
IN
VIENTIANE CITY,
LAO PEOPLE'S DEMOCRATIC REPUBLIC

AGREED UPON BETWEEN
MINISTRY OF PUBLIC WORKS AND TRANSPORT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

VIENTIANE, 3rd November, 2008



Mr. Hiroaki TAKASHIMA
Chief Representative
Laos Office
Japan International Cooperation Agency



Mr. Sommad Pholsena
Minister
Ministry of Public Works and Transport
(MPWT)

1. COUNTERPART ORGANIZATION

Department of Housing and Urban Planning (DHUP), Ministry of Communication, Transport and Construction (MCTPC) requested the proposal of the Study in August, 2007. After that MCTPC was reorganized and changed its name to Ministry of Public Works and Transport (MPWT) in 12 October, 2007. MPWT assigned PTI (the former URI: Urban Research Institute) as the counterpart agency for the Study.

PTI shall nominate a counterpart team that work closely with the Japanese Study Team throughout the Study period. And related organization such as DHUP, the related departments of the Water Resources and Environment Administration (WREA), Department of Public Works and Transport of Vientiane city and Vientiane Urban Development Administration Authority (VUDAA) shall nominate member(s) of the counterpart team mentioned above. Lao side will provide a list of counterpart team personnel before commencement of the Study.

2. STUDY PERIOD

The duration of the Study will be two (2) years and six (6) months.

3. COLLECTING DATA AND INFORMATION

Both sides agreed that PTI will provide JICA Study Team with all available data and information related to the Study. PTI will also make best efforts to provide data and information of other organizations. JICA Study Team will utilize those data and information for the purpose of the Study.

Necessary information and data should be provided by Lao side before formulating a master plan for Water Environment Management in Vientiane City, such as quality and quantity of water discharge to That Luang Marsh and Mak Hiao River basin and those related to legal framework changes with respect to EIA.

Especially, "Vientiane New Town Project" will affect the contents of the Study in quality and quantity. Lao side shall provide JICA Study Team with basic design including target population, planned standard quality of effluent from residents, facilities etc as pre-condition for the Study.

4. STEERING COMMITTEE

Both sides agreed that PTI would set up a steering committee for the smooth implementation of the Study. It will consist of the representatives of relevant organizations under the chairpersonship of MPWT. Organizations as follows are assumed to join the committee at the present moment. The JICA Study Team and JICA representative will also attend the committee.

- (1) Ministry of Public Works and Transport (MPWT) (Chair)
- (2) Vientiane city
- (3) PTI
- (4) WREA
- (5) Department of Housing, and Urban Planning (DHUP)
- (6) Department of Public Works and Transport (DPWT), Vientiane city
- (7) Health Department, Vientiane city
- (8) Agriculture and Forestry Department, Vientiane city
- (9) Industry and Commerce Department, Vientiane city
- (10) Environment Office, Vientiane city
- (11) Vientiane Urban Development Administration Authority (VUDAA)
- (12) Vientiane New Town Project, Vientiane City
- (13) Other related organizations

5. Local sub contractor

The Japanese study team will contract local specialists to assist the Study. The Lao study director and Japanese Study Team Leader are responsible for preparing terms of the references (TOR) for recruiting the local specialists and their work plans. The finalization of contract of local sub-contractor(s) will be carried out under rules and regulations of JICA

6. Equipment for the study

JICA would provide an equipment and supplies for the Study, if necessary. The equipment will remain the property of JICA for the duration of the Study. Its ultimate ownership shall be decided by JICA in consultation with Lao side.

7. Counterpart fund

Lao side shall bear the allocation of the counterpart fund for the study, in accordance with the Agreement on Technical Cooperation between the Government of Japan and the Government of Laos signed on 12 December in 2003.

8. Dispatch of Japanese study team

JICA will dispatch, at its own expense, the Japanese study team to Laos. The Japanese study team will jointly work with Laos study team and pursue technology transfer to ensure the effective management of water environment in Vientiane City in the course of the Study.

9. Disclosure of the reports

MPWT and JICA agreed that the final reports specified in the S/W would be disclosed to all interested parties to facilitate the dissemination of the Study.

Minutes of Meeting
on
the First Steering Committee
of
The Study on Improvement of Water Environment in Vientiane City
agreed upon between
Public Works and Transport Institute, Ministry of Public Works and
Transport
and
Japan International Cooperation Agency

February 6, 2009
Vientiane, LAO PDR

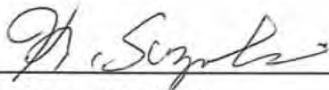


Mr. Kanehiro MORISHITA
Leader of the Study Team
Japan International Cooperation Agency



Mr. Keophilavanh APHAYLATH
Director General of Public Works and Transport
Institute
Ministry of Public Works and Transport

Witness



Mr. Kazuya SUZUKI
Director of Environmental Management Division 1
Global Environment Department
Japan International Cooperation Agency



Mr. Bounchanh SINTHAVONG
Vice Mayor of Vientiane City

I. General

The Government of Japan, in response to the official request of the Government of Lao People's Democratic Republic (hereinafter referred to as "the Government of Lao PDR"), decided to conduct the Study on Improvement of Water Environment in Vientiane City (hereinafter referred to as "the Study") and the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Study Team to Lao PDR in March 2008.

Based on the above study results, Ministry of Public Works and Transport (hereinafter referred to as "MPWT") and JICA Laos Office signed on and exchanged agreement on the Scope of Work (hereinafter referred to as "S/W") and Minutes of Meetings (hereinafter referred to as "M/M") for the Study in November 2008.

JICA has prepared the Study according to the S/W and M/M, and dispatched the Study Team, headed by Mr. Kanehiro MORISHITA of CTI Engineering International Co., Ltd., to Lao PDR from January 20, 2009.

At the commencement of the Study, the Study Team explained the overall activities described in the Inception Report to Lao organizations concerned (hereinafter referred to as "Lao side"), and Lao side and the Study Team (hereinafter referred to as "Both sides") had a discussion on the Inception Report, which was chaired by Mr. Bounchanh SINTHAVONG, Vice Mayor of Vientiane City. Finally the Committee members agreed upon work components and work plan contained in the Inception Report. The list of attendance in the meeting is attached in Attachment.

II. Discussions and Suggestions

1. Agreement upon the Study Framework

The chairman mentioned that (1) boundary of the study area, (2) study approach and methodology, (3) planning strategy and (4) study period of 30 months, which were explained by the Study Team, could be agreed upon by the Lao side.

2. Comments from VUDAA

Vice president of VUDAA pointed out the followings: (1) information on drainage system as shown in 2.1.2 of the Inception Report is not fully covered over the VUDAA projects, (2) responsibility of planning should be included into present capacity of VUDAA as shown in 2.1.3 of the Inception Report, and (3) local authorities of districts and villages should be involved in the proposed pilot project. The Japanese side replied that (1) the drainage information mentioned would be collected in the course of the Phase 1 Study, (2) The planning would be included in the responsibility of VUDAA,

and (3) the local authorities should be involved in the future activities on the pilot project.

3. Comments from DOAF, Vientiane City

Since the Mak Hiao River basin is suitable for agriculture and inland fishery, water quality management is important for agricultural activities. Director of DOAF suggested that the newly surveyed data would be provided to the Study Team.

4. Comments from DOH, Vientiane City

Deputy Director of DOH mentioned that the sanitary village projects had been progressed and villages of 255 were already completed so far. He also promised providing the information on the project to the Study Team and further cooperation.

5. Comments from DOE, WREA

Deputy Director of DOE suggested that (1) drainage network consists of primary, secondary and tertiary canals so that such entire network should be examined in the Study, (2) DOE had much experience widely covered over the entire stakeholders, and (3) DOE strongly agreed upon the collaborative work with the Study Team and relevant agencies mentioned in the Inception Report. He also added that the comments on the report would be provided to the Study Team in a week.

6. Request from JICA HQ

Mission leader of JICA HQ requested for providing the counterpart list from relevant agencies, and Deputy Director of PTI promised it in a week.

III. Summary and Closing Remarks

The chairman summarized the discussion results. Finally he gave closing remarks to expect the further progress of the study and the meeting was closed.

ATTACHMENT

List of participants in the Steering Committee Meeting for Presentation of Inception Report on February 5, 2009 at the Meeting Room of Ministry of Public Works and Transport (MPWT)

Lao Side

Mr. Bounchan SINTHAVONG	Vice Mayor	Vientiane Capital City
Mr. Keophilavanh APHYLATH	Director General	Public Works and Transport Institute
Mr. Thenekham Thongbon	Deputy Director	Public Works and Transport Institute
Mr. Ketkeo SIHALATH	Vice President	VUDAA
Mr. Khamthavi Thaipachan	Director	Department of Housing and Urban Planning
Mr. Khampadith KHAMMOUNHEUANG	Deputy Director	Department of Environment, (WREA)
Mr. Oudong NHENGVANNAVONG	Deputy Director	Department of Public Works and Transport
Mr. Sengthong BIRAKOUNE	Deputy Director	Department of Health
Mr. Laisanivong AMARTHITHAJA	Director	Department of Agriculture and Forestry
Ms. Viengphone VIRAVONG	Deputy Director	Department of Industry and Commerce
Mr. Boutsady SIPHILOM	Deputy Director	Water Resources and Environment Office
Mr. Saythivi NHENGVANNAVONG	Chief of Secretariat	Vientiane New City Development Project
Ms. Ketmany BANDASACK	Deputy Director	Department of Education
Ms. Maniseng DOUANGNOULACK	Project Coordinator	Public Works and Transport Institute
Mr. Vongsack MIXAY	Project Coordinator	Public Works and Transport Institute
Mr. Thatsakone CHOULAMOUNTRY	Project Coordinator	Public Works and Transport Institute

Japanese Side

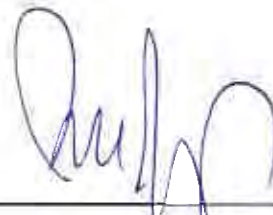
Mr. Kazuya SUZUKI	Director	Environmental Management Division 1, Global Environment Department, JICA
Ms. Hiroko KAMATA	Senior Advisor	JICA
Mr. Yasutoshi SAGAMI	Associate Expert	Environmental Management Division 1, JICA
Mr. Sota SEKINE	Assistant Resident Representative	JICA Laos Office
Mr. Kanehiro MORISHITA	Team Leader	JICA Study Team
Mr. Yasuhiko KATO	Environmental Education	JICA Study Team
Ms. Kyoko MISHIMA	Ecological Conservation/EIA	JICA Study Team
Mr. Hiroshi SHIMOKOCHI	Sanitation/Water Quality	JICA Study Team
Mr. Makoto KODAMA	Drainage Planning	JICA Study Team
Mr. Yunshan BAI	GIS	JICA Study Team

Minutes of Meeting
on
the Second Steering Committee
of
The Study on Improvement of Water Environment in Vientiane City
agreed upon between
Public Works and Transport Institute, Ministry of Public Works and
Transport
and
Japan International Cooperation Agency

September 9, 2009
Vientiane, LAO PDR



Mr. Kanehiro MORISHITA
Leader of the Study Team
Japan International Cooperation Agency



Mr. Thenekham THONGBON
Deputy Director of Public Works and Transport
Institute
Ministry of Public Works and Transport

I. General

The Government of Japan, in response to the official request of the Government of Lao People's Democratic Republic (hereinafter referred to as "the Government of Lao PDR"), decided to conduct the Study on Improvement of Water Environment in Vientiane City (hereinafter referred to as "the Study") and the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Study Team to Lao PDR in March 2008.

Based on the above study results, Ministry of Public Works and Transport (hereinafter referred to as "MPWT") and JICA Laos Office signed on and exchanged agreement on the Scope of Work (hereinafter referred to as "S/W") and Minutes of Meetings (hereinafter referred to as "M/M") for the Study in November 2008.

The Japan International Cooperation Agency (hereinafter referred to as "JICA") has prepared the Study according to the Scope of Work (hereinafter referred to as "S/W") and Minutes of Meetings (hereinafter referred to as "M/M") exchanged in November 2008, and dispatched the Study Team, headed by Mr. Kanehiro MORISHITA of CTI Engineering International Co., Ltd., to Lao People's Democratic Republic (hereinafter referred to as "Lao PDR") from January 20, 2009.

At the end of first half of phase 1 in the Study, the Study Team explained the overall results in the Progress Report 1 to Lao organizations concerned (hereinafter referred to as "Lao side"), and Lao side and the Study Team (hereinafter referred to as "Both sides") had a discussion on this Report, which was chaired by Mr. Sithong THONGKEO, Vice Minister of Ministry of Public Works and Transport. Finally the Committee members agreed upon the work results and work plan for formulation of master plan contained in the Progress Report 1. The list of attendance in the meeting is attached in Attachment.

II. Discussions and Suggestions

1. Comments and Questions from Department of Housing and Urban Planning, MPWT

Acting Director of DHUP mentioned (1) Water Supply Law was already issued through the Cabinet Council, and formulation of the Wastewater Management Strategy was almost completed, (2) Installation of septic tank to individual houses was important to solve the sanitation improvement, and (3) Community-based sanitation (CBS) system should be developed in Vientiane since decentralized system might be suitable to our country. In addition, capacity building for survey and designing of CBS system should be required for the DHUP staff.

The study team replied to the above questions (2) and (3). (2) Installation of septic tank shall be basically made by building owner so that administrative guidance shall be strengthened for increase of

coverage of modern toilet system. (3) Regarding CBS system, the JICA team will cooperate with LIRE (Lao Institute for Renewable Energy), which is planning to install CBS in Vientiane and has much experiences in Indonesia, and will conduct environmental education in the same community where LIRE is planning the installation.

2. Questions and Comments from National University of Laos

Vice Dine of Faculty of Science, National University of Laos, asked why BOD value decreases in accordance with going downstream, and requested to share the experiences and data together between the university and the study team.

The study team answered that water quality purification occurred through SS settling by vegetation filter and increase of DO by photosynthesis of algae and natural aeration effects by shallow flow. The team agreed upon future continuous cooperation.

3. Questions from WWF

WWF representative mentioned that remaining marshes should be conserved to maintain their flood retention and water purification functions, but how secured their areas in future.

The team replied that urban planning study under JICA would start in the near future, and urban planning could be suitable tools for conservation of That Luang marsh as well as remaining marshes in the urban areas.

4. Comments from Department of Health, Vientiane City

Deputy Director of DOH emphasized that propagation of mosquitoes would be one of the problems after water environmental improvement, and DOH needed to work cooperatively with the team in phase II.

The team agreed upon the comments and promised to collect the information prevention of mosquitoes' propagation.

5. Comments from Department of Public Works and Transport, Vientiane City

Technical staff of DPWT made the following comments; (1) Recommendation on water quality standard as a target of the master plan was agreeable, but situation on wastewater in both countries, Laos and the Philippines, might be different. (2) There was no suitable treatment system for New City Development. (3) What kind of wastewater treatment should be done in the industrial area. (4) What kind of facilities the team considered for communal sanitation system.

The team replied as follows; (1) The standard which the team mentioned was set up by water usage, e.g. for fishery, or for agriculture. Fish species and agricultural products were similar in both countries so that the standard of the Philippines could be applied to Laos. (2) There is a large wastewater treatment pond constructed by EU in the New City Development area. Thus DPWT should consider

how utilize the EU pond for wastewater treatment. (3) “The Preparatory Survey on Industrial Zone Development in Laos” under JICA was being carried out. Outcomes in the survey could be used for industrial wastewater treatment facilities.

Project manager of BORDA explained their CBS (Community Based Sanitation) and DEWATS (Decentralized Wastewater Treatment System) with experiences in Indonesia.

6. Comments from Public Works and Transport Institute (PTI)

Deputy Director of PTI suggested; (1) The major issue of popular use of septic tank was how the house owners could willingly install the septic tank. Some budgetary support such as a subsidy might be necessary for this purpose. (2) Another issue was how the sites of priority projects could be secured. Land of canal was not owned by VUDAA, but drainage structures were maintained by VUDAA.

7. Comments from JICA Expert, MPWT

According to the experiences in Japan, it took a considerable time to appear the effects of improvement works in water environment. The proper measures should be taken in a sustainable manner with a long-range perspective.

8. Comments from VUDAA

In recent years, landscape and land use in Vientiane City had been changed drastically due to rapid urbanization. Severe flooding might be apprehensive about frequent occurrence in the outskirts of the City area. Thus additional new drainage canal system should be necessary to prevent such situation.

III. Summary and Closing Remarks

For and on behalf of the chairman, Deputy Director of PTI summarized the discussion results. Finally he gave closing remarks to expect the further progress of the study and the meeting was closed.

ATTACHMENT

List of participants in the Steering Committee Meeting for Presentation of Progress Report 1 on September 9, 2009 at the Meeting Room of Ministry of Public Works and Transport (MPWT)

Lao Side

Ministry of Public Works and Transport

Mr. Sithong THONGKEO	Vice Minister	
Mr. Thenekham THONGBON	Deputy Director	Public Works and Transport Institute
Mr. Khamthavi THAIPACHAN	Acting Director	Department of Housing and Urban Planning
Mr. Bounphanh	Deputy Director	Department of Water Way
Ms. Vanh VIRAPANT	Staff	Department of Housing and Urban Planning
Mr. Koyen MURAOKA	JICA Expert	MPWT
Mr. Vongsack MIXAY	Project Coordinator	Public Works and Transport Institute

Water Resources and Environment Administration (WREA)

Mr. SengKeo TASAKET	Technical staff	Department of Environment
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Vientiane City

Mr. Oudong NHENGVANNAVONG	Deputy Director	Department of Public Works and Transport
Mr. Somechayvang DETOUDOM	Technical Staff	Department of Public Works and Transport
Mr. Ketkeo SIHALATH	Vice President	VUDAA
Mr. Sonetavy PHIMMASAN	Deputy Head	Housing section, VUDAA
Mr. Dr. Khamtanh BOUNPHAYVANH	Deputy Director	Department of Public Health
Mr. Amphone	Deputy Director	Department of Agriculture and Forestry
Mr. Sompath SENEPHEMMACHAK	Technical Staff	Department of Agriculture and Forestry
Ms. Viengphone VIRAVONG	Deputy Director	Department of Industry and Commerce
Mr. Sounalath SOUKCHALEAR	Staff	Department of Industry and Commerce
Ms. Boutsady SIPHILOM	Deputy head	Water Resources and Environment Office
Mr. Sommith SANDCHONGHAK	Engineer	Water Resources and Environment Office
Mr. Sengaloon VONGPHOUTHONE	Head of Admin.	Department of Education
Mr. Saythivi NHENGVANNAVONG	Chief of Secretariat	Vientiane New City Development Project
Mr. Silavanh	Staff	Department of Science and Technology

National University of Laos

Ms. Dr. Somechan BOUNPHANMY	Vice Dean	Faculty of Science
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NGO

Ms. Pauline GERRAD	Project Manager	WWF
Ms. Noica DESTALINA	Project Manager	BORDA
Mr. Sengdeuan	Project Assistant	LIRE

Japanese Side

Mr. Koichi TAKEI	Senior Representative	JICA Laos Office
Ms. Yoko HATTORI	Representative	JICA Laos Office
Mr. Kayasith	PO	JICA Laos Office
Mr. Kanehiro MORISHITA	Team Leader	JICA Study Team
Mr. Yasuhiko KATO	Environmental Education	JICA Study Team
Ms. Kyoko MISHIMA	Ecological Conservation/EIA	JICA Study Team
Mr. Hiroshi SHIMOKOCHI	Sanitation/Water Quality	JICA Study Team

The Study on Improvement of Water Environment in Vientiane City

ລາຍຊື່ຜູ້ເຂົ້າຮ່ວມ ກອງປະຊຸມລາຍງານຄວາມຄືບໜ້າຂອງໂຄງການສຶກສາບົບປຸງ ລະບົບລະບາຍນ້ຳ ມະຄອນຫຼວງວຽງຈັນ, ວັນທີ 9 ເດືອນ ກັນຍາ ປີ 2009

Progress Report Meeting, Sep 9/09/2009

No.	ຊື່ ແລະ ນາມສະກຸນ		ຕຳແໜ່ງ	ພາກສ່ວນ	ໂທລະສັບ	ເບີແຟກ		ອີເມວ	ລາຍເຊັນ
	Name and Surname	Position				Organization	Telephone		
1	Mme Viengkham VIRAVONG	Dept. Director.	Department of Industry & Commerce in VTE cap.		5504720	415377	viengkham.viravong@vte.gov.la	[Signature]	
2	Mr. Sornmalath	Official			5629215			[Signature]	
3	Ms. Kayasithi	PO	JICA.		6414995	241104	jicala-inf@jica.go.jp	[Signature]	
4	Mr. Sornthany Phimsavane	Deputy of housing	YUDAA		8200669	212104	sornthany.phimsavane@yudaa.or.jp	[Signature]	
5	Mr. Somnith Sornthany	Engineer.	WIREA		2101226	210123	sornthany.somnith@wirea.la	[Signature]	
6	Mr. Khamsavay	Acting DG	DHUP		576353	412284	khamsavay@dhup.la	[Signature]	
7	Mr. Sengkeo Tavakot	Technical	WIREA, DAE		2001722	021 21817	sengkeo.tavakot@wirea.la	[Signature]	
8	Mr. Bounthong HACHAOH	Vice President	VUDAA		520213	212104	bounthong.hachao@vudaa.or.jp	[Signature]	
9	Ms. Theuekhan	DDG	PTI		574533		theuekhan@pti.la	[Signature]	
10	Dr. Khamsam	Deputy-director	Public Health of VTC		161853		khamsam@vth.vtc.la	[Signature]	
11	Mr. Kayen Mueo	JICA Expert	MPWT		5509255	444893	kayen.mueo@mpwt.go.jp	[Signature]	
12	Ms. Somsa		ສາມສາມ		551079	48003	somsa@333.com	[Signature]	
13	Ms. Saykhaui	ນັກວິຊາ	ໂຄງ-ໜີ້ຫຳນຳ		2210999	264818	saykhaui@333.com	[Signature]	
14	Ms. Somsa	ວິຊາ	ສາມສາມ		5414978		somsa@333.com	[Signature]	
15	Ms. Somsa	ວິຊາ	ສາມສາມ		810651	810659	somsa@333.com	[Signature]	
16	Ms. Somsa	ວິຊາ	ສາມສາມ		2008767	657926	somsa@333.com	[Signature]	
17	Ms. Somsa	ວິຊາ	ສາມສາມ		5155390	353128	somsa@333.com	[Signature]	
18	Public General	Project Manager	WWF		020653405		public.general@wwf.or.jp	[Signature]	
19	Noka Notalina	Proj. Mgr	BOB-DA		0207425881		noka@borda.de	[Signature]	
20	Songdeuan	Project Assistant	Live		7896696		songdeuan@live.org	[Signature]	

Minutes of Meeting
on
the Third Steering Committee and Workshop
of
The Study on Improvement of Water Environment in Vientiane City
agreed upon between
Public Works and Transport Institute, Ministry of Public Works and
Transport
and
Japan International Cooperation Agency

March 11, 2010
Vientiane, LAO PDR



Mr Kiengkham PHOUTCHANTHAVONGSA
Deputy Director of Public Works and
Transport Institute
Ministry of Public Works and Transport

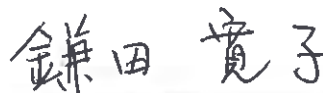


Mr. Kanehiro MORISHITA
Leader of the Study Team
Japan International Cooperation Agency

Witness



Mr. Bounchanh SINTHAVONG
Vice Mayor of Vientiane City



Ms. Hiroko KAMATA
Senior Advisor
Japan International Cooperation Agency

I. General

The Government of Japan, in response to the official request of the Government of Lao People's Democratic Republic (hereinafter referred to as "the Government of Lao PDR"), decided to conduct the Study on Improvement of Water Environment in Vientiane City (hereinafter referred to as "the Study") and the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Study Team to Lao PDR in March 2008.

Based on the above study results, Ministry of Public Works and Transport (hereinafter referred to as "MPWT") and JICA Laos Office signed on and exchanged agreement on the Scope of Work (hereinafter referred to as "S/W") and Minutes of Meetings (hereinafter referred to as "M/M") for the Study in November 2008.

The Japan International Cooperation Agency (hereinafter referred to as "JICA") has prepared the Study according to the Scope of Work (hereinafter referred to as "S/W") and Minutes of Meetings (hereinafter referred to as "M/M") exchanged in November 2008, and dispatched the Study Team, headed by Mr. Kanehiro MORISHITA of CTI Engineering International Co., Ltd., to Lao People's Democratic Republic (hereinafter referred to as "Lao PDR") from January 20, 2009.

At the end of phase 1 in the Study, the Study Team explained the overall results in the Interim Report to Lao organizations concerned (hereinafter referred to as "Lao Side"), and Lao side and the Study Team (hereinafter referred to as "Both Sides") had a discussion on this Report, which was chaired by Mr. Bounchanh SINTHAVONG, Vice Mayor of Vientiane City. The list of attendance in the meeting is attached in Attachment.


II. Discussions

1. Interim Report

Interim Report and its explanation by the Study Team are accepted by the Lao Side. The Lao Side expects that the Master Plan in the Interim Report will be revised based on the comments proposed by the Lao Side as well as the results of in the Phase II study. In addition, Both Sides agreed that the future applicability of centralized wastewater treatment system to Vientiane City will be studied in more detail.

2. Community Based Sanitation (CBS)

CBS is feasible for the improvement of the water environment of the urban drainage systems in Vientiane City considering the natural and social conditions of the area, where major pollution load is domestic wastewater.



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3. Selection of Pilot Project Sites

The Lao Side accepted the selection of two pilot project sites, namely (1) units 10, 11 and 12 and its vicinity, Thongkhankham village (Community Based Sanitation, Hong Thong drainage area) and (2) Khoualuang primary school, Khoualuang village (School Based Sanitation, Hong Pasak drainage area). The Lao Side expects the other types of communities such as market will be considered in a future study.

4. Data Share among Studies and Projects

The Both Sides agreed that as the each study and project has a limited scope of work and time frame, data share among the related studies and projects such as JICA's Master Plan Study for Vientiane City Planning, those of WWF and WSP, should be promoted in order to improve their results and effectiveness.

5. Groundwater Quality



The Lao Side questioned the quality of groundwater and its function for the improvement of water quality. The Study Team replied that that the importance of the groundwater for the improvement of water environment is fully recognized and it is considered to a certain extent in the Study but as it is out of the scope of work, groundwater is not described in detail in Interim Report.

6. Responsible Government Authority for CBS

The Both Sides agreed that the responsible government authority is indispensable for wide dissemination and smooth implementation, and that it should be clarified in the Phase II study.

III. Summary and Closing Remarks

The chairman summarized the discussion results. Finally he gave closing remarks to expect the further progress of the study and the meeting was closed.

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ATTACHMENT

List of participants in the Steering Committee Meeting for Presentation of Interim Report on March 10, 2010 at the Meeting Room of Novotel.

Lao Side

Vientiane City

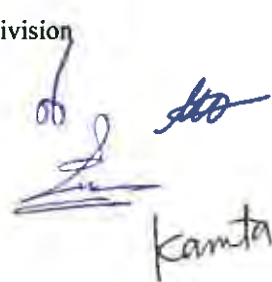
Mr. Bounchanh SINTHAVONG	Vice Mayor of Vientiane City
Mr. Keophilavanh APHAILATH	Deputy Director of DPWT
Mr. Oudone NGENGVANTHNAVONG	Deputy Director of DPWT
Mr. Chansamone	Mekong River Integrated Management Project
Mr. Nousone MEUNVISETH	Deputy Director of VUDAA
Mr. Somechayvang DETOUDOM	Technical Staff, Department of PWT
Mr. Sonetavy PHIMMASANTH	Deputy Head, Housing section of VUDAA
Dr. Khamtanh BOUNPHAYVANH	Deputy Director of Department of Public Health
Mr. Amphone SIONXAY	Director, Department of Agriculture and Forestry
Ms. Tovanh NOUPHAPTHAVONGSY	Department of Industry and Commerce
Mr. Phavanh SIHAVONG	Water Resources and Environment Office
Ms. Boutsady SIPHILOM	Deputy Head, Water Resources and Environment Office
Mr. Phouvisuck VONGPHOUTHONE	Department of Education
Mr. Saythivy NHENGVANNAVONG	Vientiane New City Development Project
Mr. Daophet ALOUN	Director of Science and Technology Office

Ministry of Public Works and Transport (MPWT)

Mr. Bounxom SOMSIHAKHOM	Science and Technical Council
Mr. Phouthasen	Deputy Director of Housing and Urban Planning Division
Ms. Vanh VIRAPANT	Department of Housing and Urban Planning

Public Works and Transport Institute, MPWT

Mr. Khiengkham PHUTHAVONGSA	Deputy Director Public Works and Transport Institute
Ms. Phonesavanth PHENGSIDA	Director of Administration Division
Ms. Saykham TAMMANOSOUTH	Director of Cooperation and Planning
Ms. Phongeun SOUVANHNAVONG	Director of Environment
Mr. Chanthala PHIMMACHACK	Deputy Director of Housing and Urban Planning Division
Mr. Chanthavangso OUDOMDETH	Director of Infrastructures and Transport Division
Ms. Maniseng DOUANGNOULACK	Coordinator of PTI (Project)
Mr Vongsack MIXAY	Coordinator of PTI (Project)



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Water Resources and Environment Administration (WREA)

Mr. Loankham Director of Division, Department of Environment
Mr. Vanhxay Department of Environment
Mr. Phongsavath YINGYONG Water Resources and Environment Institute

Japanese Side

Ms. Hiroko KAMATA Senior Advisor, JICA Head Quarters
Mr. Yasutoshi SAGAMI Associate Expert, JICA Head Quarters
Ms. Yoko HATTORI Representative, JICA Laos Office
Mr. Kanehiro MORISHITA Team Leader, JICA Study Team
Mr. Makoto YAJIMA Co-Team Leader, JICA Study Team
Mr. Kazuhiro NAKAMURA Hydrology, JICA Study Team
Mr. Hiroshi SHIMOKOCHI Sanitation/Water Quality, JICA Study Team
Mr. Kazuyoshi FUJIMOTO Administrative Coordinator, JICA Study Team

NGO/International Organization

Ms. Pauline GERRAD Project Manager, WWF
Ms. Aurilie PIMMASONE Project Coordinator, LIRE
Mr. Sengdeuan Project Assistant, LIRE
Mr. Bounchan KHAMPHILAYVONG Design Engineer, LIRE
Ms. Noka DESTALINA Project Manager, BORDA
Ms. Kieu Ly Doan Project Manager, BORDA
Mr. Viengsamay VONGKHAMSAO Country Team Leader, WSP (World Bank)

JICA Study Team of Master Plan Study on City Planning

Mr. Yuichi HASHIMOTO Water Engineering
Mr. Chanthasack Head of Section of PTI
Ms. Chatsopa CLINPUN Environmental Engineering



ATTACHMENT 2

PROGRAM OF STEERING COMMITTEE WORKSHOP FOR THE DRAFT MASTER PLAN ON WATER ENVIRONMENT MANAGEMENT IN VIENTIANE CITY

Date: Wednesday, 10 March 2010

Venue: Conference room of NOVOTEL Vientiane

Program

1. 13:15 – 13:30 Registration
2. 13:30 – 13:40 Explanation of the Steering Committee Workshop
Representative of PTI
3. 13:40 – 13:50 Opening by the Chairman of the Steering Committee
4. 13:50 – 14:30 Explanation about the Draft Master Plan for the Water
Environment Management in Vientiane City
Mr. Morishita, Team Leader, JICA Study Team
5. 14:30 – 15:00 Explanation about CBS and future plan of BORDA-LIRE
Ms. Noka Destalina, BORDA Liaison Officer, BORDA
6. 15:00 – 15:15 (Break)
7. 15:15 – 15:45 Improvement of Sanitation in Laos
Ms. Kamata, Senior Adviser, JICA
8. 15:45 – 16:30 Question and Answer and Free Discussion (Participants)
9. 16:30 – 16:40 Closing by the Chairman of the Steering Committee
10. 17:00 – Dinner at Novotel Hotel Restaurant