

RECORD OF DISCUSSIONS

ON

THE STUDY ON DRAINAGE AND SEWERAGE IMPROVEMENT
PROJECT
IN PHNOM PENH METROPOLITAN AREA
IN
KINGDOM OF CAMBODIA


AGREED UPON BETWEEN

PHNOM PENH CAPITAL CITY


AND

JAPAN INTERNATIONAL COOPERATION AGENCY




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H.E. Mr. Pa Socheatevong
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Phnom Penh, 29 May 2014 192 775

Based on the minutes of meetings on the Detailed Planning Survey on the Study on Drainage and Sewerage Improvement Project in Phnom Penh Metropolitan Area (hereinafter referred to as "the Study") signed on 10th April 2014 between Phnom Penh Capital City (hereinafter referred to as PPCC) and the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA held a series of discussions with PPCC and relevant organizations to develop a detailed plan of the Study.

PPCC and JICA (hereinafter referred to as "both parties") agreed on the details of the Study and the main points discussed as described in the Appendix 1 and the Appendix 2 respectively.

Both parties also agreed that Department of Public Works and Transport of Phnom Penh Capital City (hereinafter referred to as DPWT/PPCC), as the counterpart in cooperation with JICA, would be responsible to conduct the Study and coordinate with other relevant organizations. DPWT/PPCC also ensures the self-reliant implementation of the result of the Study in order to contribute to social and economic development of Kingdom of Cambodia.

The Study will be implemented within the framework of the Agreement on Technical Cooperation signed on 17th June 2003 and the Note Verbal exchanged on 5th May 2014 between the Government of Japan (hereinafter referred to as "GOJ") and the Royal Government of Cambodia (hereinafter referred to as "RGC").

Appendix 1: Study Description

Appendix 2: Main Points Discussed

Appendix 3: Minutes of Meetings on the Detailed Planning Survey

STUDY DESCRIPTION

Both parties confirmed that there is no change in the Study Description agreed on in the minutes of meetings on the concerning Detailed Planning Survey on the Study signed on 10th April 2014 (Appendix 3).

I. BACKGROUND

PPCC is located at the west side of the confluence of Mekong River and Tonle Sap. The city has been often threatened by flooding from the Mekong River due to the insufficient safeness of flood dikes. Urban drainage facilities in the city are not functioning well due to the superannuated facilities constructed from the beginning of 1900s as well as poor maintenance during the civil war in the 1970s. As a result, the city suffers from habitual inundation by local rainfall. Flood protection and drainage improvement are thus indispensable to social and economic development.

RGC accordingly made a request for technical cooperation and JICA conducted a master plan study in 1999. Based on the master plan, implementations of urgent components of the priority projects were requested and the Government of Japan has conducted Grant Aid projects (Phase I, II, III) for the purpose of strengthening drainage capacity in the city area and protects the city from flooding.

In spite of these efforts, drainage problems have been generated in areas other than the areas of Phase I, II, and III. Especially, middle area including the Phnom Penh International Airport has been experiencing very fast urban growth rate but drainage systems have not been provided at the same rate. The target year of the master plan was 2010, so the land use condition assumed in the master plan study has already changed greatly. DPWT/PPCC is conducting management of the drainage systems while the need of increasing the drainage capacity to cope with the latest rapid urbanization has not been fulfilled. Therefore, it needs to revise and update the master plan on urban drainage improvement for PPCC, which have been expanded nearly double by adding with 20 communes of Kandal Province.

Meanwhile, the sewer system in Phnom Penh had been constructed until the end of 1960s with city development. Only human excreta are held on plot in septic tanks and domestic waste water flows directly to public sewer pipes and open channels through house connection pipes. Overflow effluent from the septic tanks runs into the combined sewer system. Specifically, water in the open channels lying in the city as well as in the ponds located in the downstream of the watersheds where were used as retention ponds is black and smells terribly. Waste water together with storm water collected by the combined system is finally pumped out of the city area to swamps in the south and north of the city core. The swamps are currently functioning as natural oxidation ponds. However, due to rapid urbanization, these swamps are invaded by houses, factories and

other activities and decreasing the capacity of detention, and cannot demonstrate the natural purification any longer as the amount of waste water increased according to the population growth and city development. Therefore, the water-environment in the city has been affected and deteriorated seriously, and the water quality of Mekong River, Sap River and Bassac River that are the final disposals of waste water from the city is also polluted.

Taking the above conditions into consideration, revision of the master plan on urban drainage improvement as well as consideration of wastewater treatment is necessary for improvement of urban water environment.

II. OUTLINE OF THE STUDY

1. Title of the Study

The Study on Drainage and Sewerage Improvement Project in Phnom Penh Metropolitan Area

2. Objective of the Study

- To formulate a master plan for sewage and urban drainage management
- To carry out Pre-Feasibility Study on priority project/s selected from the master plan
- To enhance planning capacity of institutions responsible for sewage and urban drainage management in PPCC

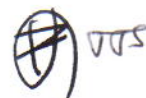
3. Activities

a) Basic data collection

- Natural and socio-economic conditions in the Kingdom of Cambodia and PPCC including rainfall, geological and topographical data
- Present condition and issues of sewage and urban drainage management sector in the Kingdom of Cambodia and PPCC
- Present condition and issues of the water supply system in PPCC
- Present condition and issues of existing sanitary facilities in PPCC
- Present condition of water quality in PPCC and its surrounding area
- Laws, regulations, institutions and financial condition related to sewage and urban drainage management
- Relevant development plans in PPCC including Urban Transport Master Plan supported by JICA and land use plans.
- Social survey on sanitary condition, inundation condition, sewage and urban drainage management, and inventory survey on existing sewage and drainage facilities in PPCC

b) Formulation of the master plan for sewage and urban drainage management

- Confirmation of objectives, target area and target year for the master plan
- Evaluation of effect on water quality improvement in public water bodies by the installation of sewerage facilities
- Setup of concept for planning and designing
- Formulation of a sewage management plan(on-site and off-site facilities)
- Formulation of a urban drainage management plan
- Establishment of an economic and financial plan including study on



- potential private sector finance and alternative financial sources for sewage and drainage management
- comparative analysis of alternatives with appropriate criteria and justification of proposed projects in the master plan
- Selection of priority projects
- Establishment of a phased implementation schedule
- Establishment of an operation and maintenance plan, a human resource and institutional development plan
- Environmental and social consideration survey
- Consultation among stakeholders
- c) Pre-Feasibility Study
 - Preliminary design
 - Cost estimation
 - Economic and financial analysis
 - Environmental and social consideration survey
 - Establishment of an implementation schedule
 - Procurement plan
- d) Strengthening of planning capacity of counterpart
 - On-the-job training (OJT)
 - Periodical meeting for information sharing
 - Training in Japan and other areas
 - Organizing workshops

4. Input

(1) Input by JICA

(a) Dispatch of Japanese experts

Team Leader
 Drainage Planning
 Sewage Treatment Planning and Designing
 Sewerage Planning and Sewage Collection System
 Construction Plan / Cost Estimate
 Natural Condition Survey
 Hydrological Analysis
 Land use and City Planning
 Organization and Institutions
 Economic Analysis
 Environmental and Social Considerations

(b) Equipment

Necessary equipment for the Study

(c) Training of Cambodian personnel in Japan and other areas

Input other than indicated above will be determined through mutual consultations between JICA and DPWT/PPCC during the implementation of the Study, as necessary.

(2) Input by DPWT/PPCC

DPWT/PPCC will take necessary measures to provide at its own expense:

- (a) Services of DPWT/PPCC's counterpart personnel and administrative personnel as referred to Annex IV;
- (b) Suitable office space with necessary equipment;
- (c) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Study other than the equipment provided by JICA;
- (d) Information as well as support in obtaining medical service;
- (e) Credentials or identification cards;
- (f) Available data (including maps and photographs) and information related to the Study;
- (g) Running expenses necessary for the implementation of the Study; and
- (h) Expenses necessary for transportation within Kingdom of Cambodia of the equipment referred to in II-4 (1) as well as for the installation, operation and maintenance thereof.

5. Implementation Structure

The Study organization chart is given in the Annex I. The roles and assignments of relevant organizations are as follows:

(1) Implementation Body of the Study is DPWT/PPCC. PPCC will be responsible for overall administration and implementation of the Study.

(2) Steering Committee

The Study sets a steering committee for monitoring and supervising the Study. The steering committee will be established in order to facilitate inter-organizational coordination for the Study. The steering committee will be held periodically and whenever deems if necessary. A list of the members and functions of the steering committee are shown in the Annex II.

(3) Technical Committee

A technical committee will be established for providing necessary technical advice for the Study. A list of members and functions of the technical committee are shown in the Annex III.

6. Study Site and Beneficiaries

The Study will cover the whole administrative area of the PPCC.

The direct beneficiaries of the Study will be around 1.6 million people living in the PPCC.

7. Duration

Eighteen (18) months from the latest, August, 2014

8. Reports

JICA will prepare and submit the following reports to the DPWT/PPCC.

- (1) Thirty five (35) copies of Inception Report in English at the commencement of the first work period in the Kingdom of Cambodia

- (2) Thirty five (35) copies of Interim Report in English at the time about six (6) months after the commencement of the first work period in the Kingdom of Cambodia
- (3) Thirty five (35) copies of Progress Report in English at the time of twelve (12) months after the commencement of the first work period in the Kingdom of Cambodia
- (4) Thirty five (35) copies of Draft Final Report in English at the end of the last work period in the Kingdom of Cambodia
- (5) Forty (40) copies of Final Report in English and ten (10) copies of Final Report (main report and summary) in Khmer within one (1) month after receipt of comments on the Draft Final Report

9. Environmental and Social Considerations

DPWT/PPCC agreed to abide by JICA Guidelines for Environmental and Social Considerations' in order to ensure that appropriate considerations will be made for environmental and social impacts of the Study.

III. UNDERTAKINGS OF DPWT/PPCC AND RGC

1. DPWT/PPCC and RGC will take necessary measures to:

- (1) ensure that the technologies and knowledge acquired by the Kingdom of Cambodia nationals as a result of Japanese technical cooperation contributes to the economic and social development of Kingdom of Cambodia, and that the knowledge and experience acquired by the personnel of Kingdom of Cambodia from technical training as well as the equipment provided by JICA will be utilized effectively in the implementation of the Study; and
- (2) grant privileges, exemptions and benefits to members of the JICA experts referred to in II-4 (1) above and their families, which are no less favorable than those granted to experts and members of the missions and their families of third countries or international organizations performing similar missions in Kingdom of Cambodia.

IV. MONITORING AND EVALUATION

JICA will conduct the following evaluation and surveys to mainly verify sustainability and impact of the Study and draw lessons. The DPWT/PPCC is required to provide necessary support for them.

1. Ex-post evaluation three (3) years after the Study completion, in principle
2. Follow-up surveys on necessity basis

V. PROMOTION OF PUBLIC SUPPORT

For the purpose of promoting support for the Study, PPCC will take appropriate measures to make the Study widely known to the people of Kingdom of Cambodia.

VI. MUTUAL CONSULTATION

JICA and PPCC will consult each other whenever any major issues arise in the course of the Study implementation.

VII. AMENDMENTS

The record of discussions may be amended by the minutes of meetings between JICA and PPCC.

The minutes of meetings will be signed by authorized persons of each side who may be different from the signers of the R/D.

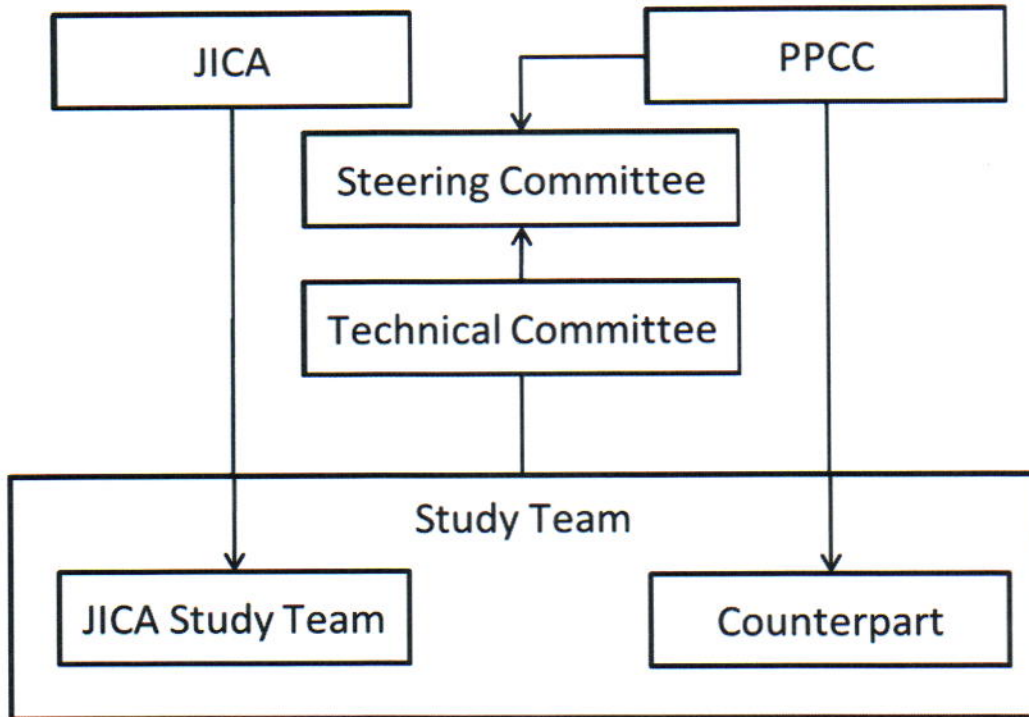
Annex I The Study Organization Chart

Annex II Members and Functions of the Steering Committee

Annex III Members and Functions of the Technical Committee

Annex IV List of Counterparts

The Study Organization Chart



Members and Functions of the Steering Committee

1. Functions of the Steering Committee

The Steering committee shall;

- (1) monitor and supervise the entire Study,
- (2) review and approve the Reports,
- (3) coordinate and harmonize the Study and ensure commitment of the concerned districts and agencies,
- (4) facilitate the necessary endorsement procedures of the Study, and
- (5) arbitrate, if necessary.

2. Members of the Steering Committee

The Steering Committee shall be composed of:

- (1) Governor of PPCC,
- (2) Vice Governor of PPCC,
- (3) Representative of Ministry of Interior,
- (4) Representative of Ministry of Public Works and Transport,
- (5) Representative of Ministry of Economy and Finance,
- (6) Representative of Ministry of Water Resources and Meteorology,
- (7) Representative of Ministry of Environment,
- (8) Director of Department of Public Works and Transport of PPCC,
- (9) Director of Department of Land Management, Urban Planning, Construction and Land Registration of PPCC,
- (10) Director of Department of Water Resources and Meteorology of PPCC,
- (11) Director of Urbanization Division of PPCC,
- (12) Director of Department of Planning of PPCC,
- (13) Director of Department of Environment of PPCC,
- (14) Director of Department of Industry and Handicraft of PPCC,
- (15) Director of Department of Health of PPCC,
- (16) Director of Department of Rural Development of PPCC,
- (17) Director of Department of Social Affairs of PPCC,
- (18) Director of Department of Agriculture, Fishery and Forestry of PPCC,
- (19) Director of Department of Economy and Finance of PPCC,
- (20) Governor of Khans* and
- (21) Representatives of JICA.

*"Khan" is local administration which is one level lower than the PPCC.

Members and Functions of the Technical Committee

1. Functions of the Technical Committee

The Technical Committee shall;

- (1) support the Study team and provide necessary arrangements,
- (2) examine and analyze the technical aspects of the Reports,
- (3) monitor and evaluate the Study,
- (4) coordinate and harmonize the stakeholders of the Study, and ensure involvement of the concerned agencies, and
- (5) perform any other functions that the Steering Committee will request to the Technical Committee for technical assistance.

2. Members of the Technical Committee

The Technical Committee shall be composed of the following members

- (1) A Vice Governor of PPCC,
- (2) Representative/s of Ministry of Public Works and Transport,
- (3) Representative/s of DPWT/PPCC
- (4) Representative/s of Department of Land Management, Urban Planning, Construction and Land Registration of PPCC,
- (5) Representative/s of Department of Environment of PPCC
- (6) Representative/s of Urbanization Division of PPCC.
- (7) Representative/s of Department of Water Resources and Meteorology of PPCC
- (8) Representative/s of Public Relations and International Cooperation Office of PPCC
- (9) Representative/s of Waste Management Division of PPCC

List of Counterparts

No.	Name	Position	Position in Counterpart Unit
1	Mr. Sam Piseth	Director of DPWT	Manager
2	Mr. Chou Kimtry	Deputy Director of DPWT	Deputy Manager
3	Mr. Chhorng Vantha	Vice Chief of Drainage and Sewerage Division of DPWT	Technician
4	Mr. Sim Lyda	Technical Staff of Drainage and Sewerage Division of DPWT	Engineer
5	Mr. Seng Sam Soth	Technical Staff of DPWT	Architect
6	Miss. Pheng Pharinet	Technical Staff of DPWT	Engineer
7	Mr. Moeung Sophan	Advisor to DPWT	Engineer
8	Mr. Mao Panha	Technical Staff of Department of Water Resources and Meteorology of PPCC	Engineer
9	Mr. Khim Nora	Chief of Waste Management Office, Department of Environment of PPCC	Engineer

MAIN POINTS DISCUSSED

1. DEFINITION OF THE MASTER PLAN

Both parties confirmed that the master plan would be formulated focusing on sewage and urban drainage management with necessary recommendations on issues of flood control relevant to the urban drainage system in PPCC.

2. STUDY AREA AND TARGET YEAR OF THE SEWAGE AND URBAN DRAINAGE MANAGEMENT MASTER PLAN

Both parties confirmed that the target area of the master plan will be within the administrative area of PPCC with consideration of watershed affecting PPCC with the target year of 2035.

3. REPORTS

Both parties agreed that the reports of the Study shall be made available to stakeholders and open to the public.

4. ENVIRONMENTAL AND SOCIAL CONSIDERATIONS

Both parties agreed that the Study should comply with both Cambodian Environment related laws and regulations, and JICA Guidelines for Environmental and Social Considerations.

At stage of conducting a "pre-feasibility study" for the prioritized projects, the project owner should prepare an Initial Environmental Examination (IEE) report. For next feasibility study stage, the project owner has to conduct Environmental Impact Assessment (EIA) process.

5. PRESERVATION OF LAKES/RESERVOIRS AND CONTROL OF LAND USE INCLUDING RECLAMATION

The Cambodian side understands the importance of preservation of lakes/reservoirs considering rapid development in PPCC. Both parties confirmed that the master plan would be prepared with consideration of the land use plan of PPCC.

PPCC expects that the master plan should include the recommendation of appropriate land reclamation practice based on the proposed drainage networks.