

APPENDIX I MASTER PLAN

I. Overall Goal

Public policy and regulation on water environment conservation in the metropolitan area will become effective.

II. Project Purpose

MARN's implementation capacity of public policy and regulations for water environment conservation in the metropolitan area will be reinforced.

III. Project Outputs

0. PDM (DRAFT) and, PO (DRAFT) to be implemented in Stage 2 will be elaborated.
1. Strategy formulation and implementation capacity for water environment conservation will be reinforced.
2. Implementation of water discharge regulation will be prepared.
3. Compilation and administration of water quality information will be systematized.
4. Environmental education, diffusion on water environment conservation will be implemented by MARN, based on the collaboration with related organizations.

IV. Activities

- 0-1 To review MARN's present condition regarding water environment conservation (legislation, strategies, activities, etc.).
- 0-2 To examine feasibility of Activities: 1-1 to 1-2, 2-1 to 2-3, 3-1 to 3-5, 4-1 to 4-2.
- 0-3 To review and finalize PDM and PO for the stage 2 based on the 0-2 activity.

1-1 To review current strategies of government water policy and to develop strategies on water environment conservation in the metropolitan area.

1-2 To recommend institutional and organizational improvement regarding water environmental conservation.

2-1 To review and improve existing implementation plan of water discharge regulation.

2-2 To elaborate guideline for water discharge regulation.

2-3 To implement training for MARN's staff regarding application of water discharge regulation.

3-1 To elaborate water quality monitoring plan in collaboration with other related



organizations.

3-2 To establish inter-institutional collaboration for data collection.

3-3 To collect water quality data from other related organizations.

3-4 To develop and manage water quality database.

3-5 To implement training on monitoring data administration.

4-1 To publish water environment information.

4-2 To implement environmental education, awareness raising, diffusion, and activities regarding water environment conservation in collaboration with other related organizations.

APPENDIX II. LIST OF EXPERTS

- For Stage 1

- Experts (Public policy formulation, Water management, Project design)

- For Stage 2

- Experts (Public policy formulation for water environment, Water discharge regulation, Water quality information, and Environment education and awareness-raising)

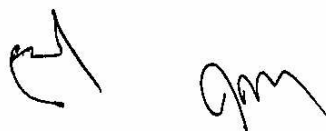
The detail of the experts dispatched in Stage 2 will be decided according to results of Stage 1.

APPENDIX III LIST OF MACHINERY AND EQUIPMENT

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APPENDIX V LIST OF BUILDINGS AND FACILITIES

1. Office space and necessary facilities for the Japanese Experts
2. Office space and necessary facilities for the Guatemalan counterpart personnel.
3. Lecture rooms and meeting rooms when necessary
4. Building, facilities, storage and space necessary for the installation, operation, and/or storage of the machinery, equipment and materials in case JICA provides.
5. Other facilities mutually agreed as necessary for the implementation of the project.



APPENDIX IV LIST OF GUATEMALAN COUNTERPART AND ADMINISTRATIVE PERSONNEL

1. Project Director

The Minister, Ministry of Environment and Natural Resources

2. Deputy Project Director

The Vice Minister of Environment, Ministry of Environment and Natural Resources

3. Project Manager

The Manager of Watershed Management and Water Resources Unit, Ministry of Environment and Natural Resources

4. Administrative counterpart personnel

Alma de Estrada, Watershed Management and Water Resources Unit, Ministry of Environment and Natural Resources

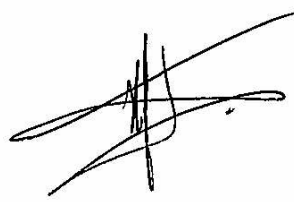
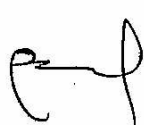
5. Technical counterpart personnel

Nadia Mijangos López, Watershed Management and Water Resources Unit (WMWRU)
Ministry of Environment and Natural Resources

Ricardo Serrano, WMWRU

Mario Pineda, WMWRU

Enrique Miranda, WMWRU



APPENDIX VI JOINT COORDINATING COMMITTEE

1. Functions

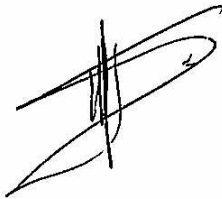
The Joint Coordinating Committee (hereinafter referred to as "JCC") will meet at least once a year or whenever necessary.

- 1) To formulate the annual plan of the Project;
- 2) To review the progress of the annual work plan;
- 3) To review and exchange opinions on major issues that may arise during the implementation of the Project;
- 4) To discuss any other issue(s) pertinent to the smooth implementation of the Project.

2. Composition

- 1) Chairperson: Minister, Ministry of Environment and Natural Resources
- 2) Members of Guatemala Side:
 - a. The Vice Minister of Environment, Ministry of Environment and Natural Resources
 - b. Director General of Environment Management and Natural Resources, Ministry of Environment and Natural Resources
 - c. Manager of Watershed management and Water Resources Unit, Ministry of Environment and Natural Resources
 - d. Representative of SEGEPLAN
 - e. Representative of other related organizations.
- 3) Members of the Japanese Side:
 - a. Resident Representative of JICA Guatemala Office
 - b. Experts
 - c. Other personnel concerned, to be assigned by JICA, if necessary

Note: Official(s) of the Embassy of Japan in the Republic of Guatemala may attend as observer(s).



Annex II

PROJECT DESIGN MATRIX

Project Title : Capacity Development of Water Environment Conservation in the Metropolitan Area
 Period : Target Area : The Metropolitan Area of Guatemala,
 Target Group : Staff of the Ministry of Environment and Natural Resources
 (Prepared/ Revised : September 8, 2005)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p><Overall Goal> Public policy and regulation on water environment conservation in the metropolitan area will become effective.</p>	<p>The mitigation measures for water pollution are introduced.</p>	<p>Reports published by municipal governments and EMPAGUA, and the registration record of MARN</p>	<p>Governmental policy for water environment conservation is maintained.</p>
<p><Project Purpose> MARN's implementation capacity of public policy and regulations for water environment conservation in the Metropolitan Area will be reinforced.</p>			<p>The MARN's budget is not reduced considerably. The collaboration system for water environment conservation is maintained.</p>
<p><Output 0> PDM and, PO to be implemented in Stage 2 will be elaborated.</p>	<p>The modified PDM and PO are furnished.</p>	<p>Project monitoring report</p>	
<p><Output 1> Strategy formulation and implementation capacity for water environment conservation will be reinforced.</p>	<p>International agencies and donors (except IICA) give positive evaluation to the MARN's capacity of strategy formulation and implementation. The recommendation for organizational improvement is accepted.</p>	<p>Interview survey MARN's annual report</p>	

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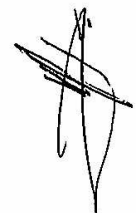
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Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p><Output 2> Implementation of water discharge regulation will be prepared.</p>	<p>The modified implementation plan of water discharge regulation is furnished. The guideline for water discharge regulation is established. The capacity of MARN's staff is improved.</p>	<p>Project monitoring report Project monitoring report Interview survey</p>	<p>Trained staffs continue to work for the same task.</p>
<p><Output 3> Compilation and administration of water quality information will be systematized.</p>	<p>The water quality monitoring plan is furnished. The agreement on the collaboration signed is furnished. The water quality database is furnished. The capacity of MARN's staff is improved.</p>	<p>Project monitoring report Project monitoring report Project monitoring report Interview survey</p>	<p>Trained staffs continue to work for the same task.</p>
<p><Output 4> Environmental education, diffusion on water environment conservation will be implemented by MARN, based on the collaboration with related organizations.</p>	<p>Water quality report is published. Activities concerned with education and diffusion of water environment conservation are conducted.</p>	<p>Project monitoring report Project monitoring report</p>	
Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p><Activities> 0-1: To review MARN's present condition regarding water environmental conservation (legislation, strategies, activities, etc.). 0-2: To examine feasibility of Activities: 1-1 to 1-2, 2-1 to 2-3, 3-1 to 3-5, 4-1 to 4-2. 0-3: To review and finalize PDM and PO for Stage 2 based on the 0-2 activity.</p>	<p><Input> <Japanese Side> 1. Experts - For Stage 1 • Experts (Public policy formulation, Water management, Project design)</p>		

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p>1-1: To review current strategies of government water policy and to develop strategies on water environment conservation in the metropolitan area.</p> <p>1-2: To recommend institutional and organizational improvement regarding water environmental conservation.</p>	<p>- For Stage 2</p> <ul style="list-style-type: none"> • Experts (Public policy formulation for water environment, Water discharge regulation, Water quality information, Environment education and awareness-raising) 	<p>2. Equipment and materials</p>	
<p>2-1: To review and improve existing implementation plan of water discharge regulation.</p> <p>2-2: To elaborate guideline for water discharge regulation.</p> <p>2-3: To implement training for MARN's staff regarding application of water discharge regulation.</p>	<p>3. Training in Japan or the third country</p>	<p>3. Training in Japan or the third country</p>	
<p>3-1: To elaborate water quality monitoring plan in collaboration with other related organizations.</p> <p>3-2: To establish inter-institutional collaboration for data collection.</p> <p>3-3: To collect water quality data from other related organizations.</p> <p>3-4: To develop and manage water quality database.</p> <p>3-5: To implement training on monitoring data administration.</p>	<p><Guatemalan Side></p> <p>- For Stage 1 and Stage 2</p> <ol style="list-style-type: none"> 1. Counterpart personnel <ul style="list-style-type: none"> • Chairman of Joint Coordination Committee (1 person) • Project Director (1 person) • Project Manager (1 person) • Project members 2. Facilities for Japanese side <p>The Guatemalan side will provide office space under the secure conditions. The facilities will be equipped with desks, meeting tables, communication equipment, etc.</p> 3. Equipment and materials <p>The Guatemalan side will provide other necessary equipment and materials necessary for project implementation.</p> 4. Budget for project operation <p>The Guatemalan side will provide salary and allowance for the staff of the Guatemalan side, including budget for travel expenses and operation expenses required under the project.</p> 	<p><Precondition></p> <p>Staffs of MARN and other associated functions are assigned to the Project by an official instruction.</p>	
<p>4-1: To publish water environment information.</p> <p>4-2: To implement environmental education, awareness raising, diffusion, and activities regarding water environment conservation in collaboration with other related organizations.</p>			

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Annex III Plan of Operation (Tentative)

Activities	1Q	2Q	3Q	4Q	5Q	6Q	7Q	8Q	9Q	10Q	11Q	12Q	13Q	14Q
<p>0. PDM (DRAFT) and PO(DRAFT) to be implemented in Stage 2 will be elaborated.</p> <p>0-1 To review MARN's present condition regarding water environmental conservation(legislation, strategies, activities, etc).</p> <p>0-2 To examine feasibility of Activities: 1-1 to 1-2, 2-1 to 2-3, 3-1 to 3-5, 4-1 to 4-2.</p> <p>0-3 To review and finalize PDM and PO for the stage 2 based on the 0-2 activity.</p>	██████████	██████████												
<p>1. Strategy formulation and implementation capacity for water environment conservation will be reinforced.</p> <p>1-1 To review current strategies of government water policy and to develop strategies on water environment conservation in the metropolitan area.</p> <p>1-2 To recommend institutional and organizational improvement regarding water environmental conservation.</p>		██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
<p>2. Implementation of water discharge regulation will be prepared.</p> <p>2-1 To review and improve existing implementation plan of water discharge regulation.</p> <p>2-2 To elaborate guideline for water discharge regulation.</p> <p>2-3 To implement training for MARN's staff regarding application of water discharge regulation.</p>			██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
<p>3. Completion and administration of water quality information will be systematized.</p> <p>3-1 To elaborate water quality monitoring plan in collaboration with other related organizations.</p> <p>3-2 To establish inter-institutional collaboration for data collection.</p> <p>3-3 To collect water quality data from other related organizations.</p> <p>3-4 To develop and manage water quality database.</p> <p>3-5 To implement training on monitoring data administration.</p>					██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████
<p>4. Environmental education, diffusion on water environment conservation will be implemented by MARN, based on the coordination with related organizations.</p> <p>4-1 To publish water environment information.</p> <p>4-2 To implement environmental education, awareness raising, diffusion, and activities regarding water environment conservation in collaboration with other related organizations.</p>														██████████

