

3. 事前調査団ミニッツ (第1次、第2次)

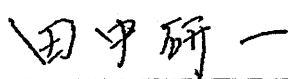
**MINUTES OF MEETINGS BETWEEN  
JAPANESE PREPARATORY STUDY TEAM AND  
THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF  
THE UNITED MEXICAN STATES  
ON JAPANESE TECHNICAL COOPERATION FOR  
"COASTAL WATER QUALITY MONITORING NETWORK PROJECT"**


The Japanese Preparatory Study Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") headed by Mr. TANAKA Kenichi, visited the United Mexican States from August 1 to August 21, 2005, for the purpose of clarifying the framework of the technical cooperation program concerning the "Coastal Water Quality Monitoring Network Project" (hereinafter referred to as "the Project") in the United Mexican States.

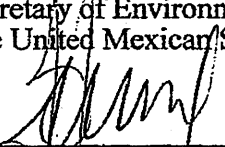
During its stay in the United Mexican States, the Team exchanged views and had a series of discussions with the Mexican authorities concerned with respect to the Project.

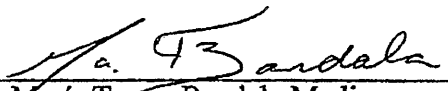
As a result of the discussions, and in accordance with the provisions of the Agreement on Technical Cooperation between the Government of Japan and the Government of United Mexican States signed in Tokyo on December 2, 1986 (hereinafter referred to as "the Agreement") and the Embassy of Japan's Note No. 145-128/04 dated June 25, 2004 and the Ministry of Foreign Affairs of the United Mexican State's Note No. CTC-09186 dated September 23, 2004, both the Team and the Mexican authorities concerned agreed to recommend to their respective Governments the matters referred to in the document attached hereto.

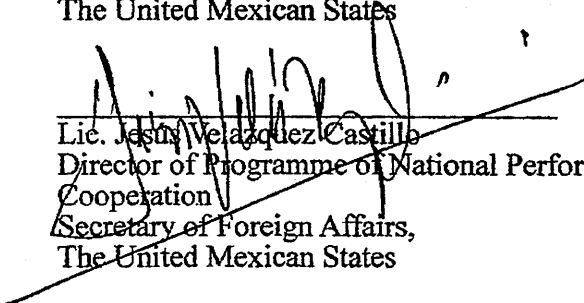
Mexico City, August 10, 2005

  
\_\_\_\_\_  
Mr. TANAKA Kenichi  
Leader  
Japanese Preparatory Study Team  
Japan International Cooperation Agency  
Japan

  
\_\_\_\_\_  
Dr. Felipe I. Arreguín Cortés  
Deputy Director General (Technical area)  
National Water Commission (CONAGUA),  
Secretary of Environment and Natural Resources,  
The United Mexican States

  
\_\_\_\_\_  
Ing. César Herrera Toledo  
Deputy Director General (Planning area)  
National Water Commission (CONAGUA),  
Secretary of Environment and Natural Resources,  
The United Mexican States

  
\_\_\_\_\_  
Lic. María Teresa Bandala Medina  
General Director of International Cooperation  
Secretary of Environment and Natural Resources,  
The United Mexican States

  
\_\_\_\_\_  
Lic. Jesús Velázquez Castillo  
Director of Programme of National Performance  
Cooperation  
Secretary of Foreign Affairs,  
The United Mexican States

THE ATTACHED DOCUMENT

**I. TENTATIVE OUTLINE OF THE PROJECT**

1. Title of the Project

Both sides agreed the title of the Project shall be referred to as "Coastal Water Quality Monitoring Network Project".

2. The Implementing Organization

The Project shall be implemented at the National Water Commission (CONAGUA), Ministry of Environment and Natural Resources.

3. Duration of the Project

The duration of the Japanese Technical Cooperation for the Project shall be 3 years.  
Both sides confirmed that the date of the commencement of the Project will be determined later.

4. The field of technical cooperation

- 1) Coastal Water Quality Monitoring
- 2) Assistance for development of Standard Methods for Coastal Water Quality Analysis
- 3) Water Quality Data collection and management
- 4) Assistance for development of Mexican Standards for Coastal Water Quality

5. Project Design Matrix (PDM)

Both sides confirmed the draft PDM shown in Annex I as an implementation guideline for the Project management. The draft PDM will be finalized through the discussions later between JICA and the Mexican authorities concerned. Both sides confirmed that the Plan of Operation (PO) for the Project Period will be discussed later.

**II. MEASURES TO BE TAKEN BY JICA**

1. Dispatch of Japanese experts

JICA will provide the services of the Japanese experts. The provision of Article IX of the Agreement will be applied to the Japanese experts.

2. Provision of machinery and equipment

JICA will provide machinery and equipment and other materials (hereinafter referred to as

“the Equipment” necessary for the implementation of the Project within the budget allocated for the technical cooperation.

The provision of Article VIII-1 of the Agreement will be applied to the Equipment.

3. Training of counterpart personnel in Japan

JICA will receive the Mexican personnel connected with the Project for technical training in Japan.

**III. MEASURES TO BE TAKEN BY MEXICAN SIDE**

1. Measures to sustainability

Mexican side will take necessary measures to ensure that the self-reliant operation of the Project will be sustained during and after the period of Japanese technical cooperation, through full and active involvement in the Project by all related authorities, beneficiary groups and institutions.

2. Measures to contribute the development of the country

In accordance with the provisions of Article IV of the Agreement, Mexican side will ensure the technologies and knowledge acquired by Mexican nationals as a result of Japanese technical cooperation will contribute to the economic and social development of the United Mexican States.

3. Measures to be taken for Japanese experts

In accordance with provisions of Article VIII of the Agreement, Mexican side will take necessary measures to grant in United Mexican States privileges, exemptions and benefits to the Japanese experts referred to in II-(1) above and their families.

4. Effective use of knowledge and experiences of training in Japan

Mexican side will take necessary measures to ensure that the knowledge and experience acquired by Mexican counterpart personnel of the Project through technical training in Japan will be utilized effectively in the implementation of the Project.

5. Assignment of counterpart personnel

In accordance with the Provision Article V-(b) of the Agreement, The Mexican side will assign counterpart personnel as shown in Annex II.

Note: Japanese Preparatory Study Team requested the Mexican authorities concerned that

sufficient number of counterpart personnel would be assigned, and that the availability of the time of counterpart personnel for the Project activities would be confirmed.

6. Assignment of administrative personnel

The Mexican side will assign the administrative personnel necessary for the smooth implementation of the Project as shown in Annex II.

7. Building and facilities

The followings will be prepared by the Mexican side for the initiation of the Project: the building and facilities necessary for the implementation of the Project, including electric and water supply and air conditioning facilities.

The principal facilities which are necessary to implement the Project are as follows:

- a. Administrative offices
- b. Japanese experts' room
- c. Rooms for the installation of the machinery and equipment
- d. Meeting room

8. Expenses necessary for the implementation of the Project

In accordance with the laws and regulations in force in the United Mexican States, running expenses necessary for the implementation of the Project will be covered by Mexican side.

9. The cost of value-added tax (IVA)

In accordance with the laws and regulations in force in the United Mexican States, the Mexican side covers the cost of value-added tax (IVA) and delivery in the United Mexican States for the equipment provided through JICA, and to supply or replace at its own expense machinery, equipment, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the Equipment provided through JICA under II-2 above.

**IV. ADMINISTRATION OF THE PROJECT**

1. Deputy Director General (Technical area) of CONAGUA, as the Project Director, will be responsible for the overall administration and implementation of the Project.

2. General Manager of Water Quality and Sanitation of CONAGUA, as the Project Manager, will be responsible for the management and technical matters of the Project.

3. Manager of the Water Quality and Environmental Impact Project of Northern Gulf Regional Bureau of CONAGUA, as the Deputy Project Manager, will assist the Project Manager for the smooth implementation of the Project.
4. The Japanese experts are to give necessary advice to Project Director, Project Manager and Deputy Project Manager.

#### **V. JOINT COORDINATING COMMITTEE**

A Joint Coordinating Committee will be established for the effective and successful implementation of technical cooperation of the Project. The function and composition of the Joint Coordinating Committee are described in ANNEX III.

#### **VI. THE DATE OF COMMENCEMENT OF THE PROJECT**

Both sides confirmed that the date of the commencement of the Project will be determined later, based on the timing of input of the Equipment and the dispatch of the experts.

#### **VII. THE CONCEPT OF ENVIRONMENTAL AND SOCIAL CONSIDERATION BASED ON JICA'S NEW GUIDELINES**

The Team explained the background of JICA's new environmental and social consideration guidelines. The Team emphasized on the proponent's responsibility in conducting the environmental and social considerations, information disclosure, participation of stakeholders from the early stage of the Project and that the new basic approaches shall be accordingly applied to the Project. Mexican side agreed in principle to these responsibilities as cited above.

#### **VIII. INFORMATION DISCLOSURE**

Both sides agreed that information disclosure shall be implemented by CONAGUA and JICA. The Team explained that information disclosure is necessary as this shall confirm the alternatives with the participation of the stakeholders early on in the conduct of the Project. The Team also emphasized that JICA will make the reports concerning the Project open to the public.

# Annex I Draft PROJECT DESIGN MATRIX (PDM)

Project Title: COASTAL WATER QUALITY MONITORING NETWORK PROJECT  
 Project Location: United Mexican States  
 Prepared on Aug. 10, 2005

Organization: National Water Commission (Comisión Nacional del Agua - CONAGUA)

NARRATIVE SUMMARY	VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p><b>Overall Goal</b> Coastal Water Quality Monitoring Network in Mexico is improved</p>			
<p><b>Project Purpose</b> The technical and institutional capacity of the reference center for coastal water quality monitoring is improved</p>			
<p><b>Outputs</b> 1. The reference center's skills of the coastal water quality monitoring are improved 2. Nation-wide coastal water quality monitoring data are properly collected, stored and managed in the reference center 3. The skills of the coastal water quality monitoring are improved and standardized among regional laboratories for water quality monitoring operated by the National Water Commission (CONAGUA) 4. Draft standards for the coastal water quality are proposed</p>			
<p><b>Activities</b> 1-1. Undertake capacity development of coastal water quality monitoring 1-2. Complement equipment and machinery in the reference center 1-3. Plan and undertake a program for the maintenance of the equipment and machinery 1-4. Plan and undertake a program for quality control/assurance (QA/QC) of the coastal water quality monitoring data in the reference center  2-1. Introduce equipment and facilities necessary for effective and efficient data collection, storage and management 2-2. Develop software to store and manage the data 2-3. Undertake capacity development to equip the counterpart personnel with necessary skills for operation and maintenance of the coastal water quality information network system  3-1. Prepare manuals for establishment, operation, and QA/QC of the coastal water quality monitoring 3-2. Undertake capacity development of coastal water quality monitoring targeting at the staffs of other regional laboratories 3-3. Plan and undertake a program for the audit of the data quality of the regional laboratories  4-1. Undertake a basic study to propose draft standards for the coastal water quality 4-2. Undertake capacity development on drafting standards for the coastal water quality targeting counterpart personnel</p>	<p><b>Inputs</b></p>		<p><b>Preconditions</b></p>

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**Annex II MEXICAN COUNTERPART AND ADMINISTRATIVE PERSONNEL**

**1. Project Administrative Management Counterpart**

**1) Project Director**

Felipe I. Arreguín Cortés Deputy Director General (Technical area),  
CONAGUA

**2) Project Manager**

Enrique Mejía Maravilla General Manager of Water Quality and Sanitation,  
CONAGUA

**3) Deputy Project Manager**

Evangalina Mancinas Mena Head of the Water Quality and Environmental Impact  
Project, Northern Gulf Regional Bureau, CONAGUA

**2. Technical Counterpart**

**1) CONAGUA Northern Gulf Regional Bureau**

Luis Manuel Camacho Martínez

Francisca Robledo Muñiz

Mónica Miguel Gil

Liliana Longoria Bolan

Luis Vázquez Ochoa

Lilia Mercedes Gómez Gallardo

Carlos Alberto Rojas Flores

Luz María Hernández Escobedo

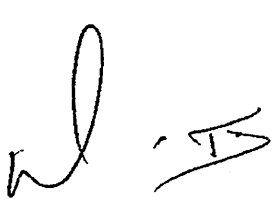
María Natividad Cervantes Morales

Francisco Sergio Nieto Treviño

Eusebio González Del Angel

Emelia Rivera Sánchez

Héctor Armando Hernández Zúniga



2) CONAGUA Central and National Reference Laboratory

Jesús García Cabrera

Sub Manager of National Laboratories and Monitoring Networks

Ignacio González Mora

Head of the Department of the National Monitoring Network

Guadalupe del Pozo Peñaloza

Head of the Department of the National Laboratory Network

Margarita Lobato Calleros

Head of the National Reference Laboratory, CONAGUA

Martha Leticia Otero López

Hydraulic Specialist, CONAGUA

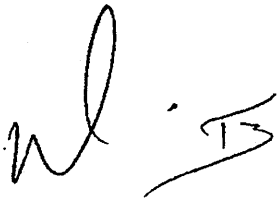
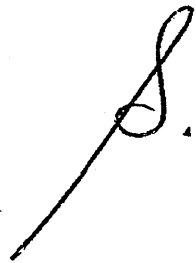
3. CONAGUA International Cooperation

José María de la Torre Wolf

Deputy Manager of International Cooperation, CONAGUA

Guillermo Gutiérrez Gómez

Head of Department of International Cooperation, CONAGUA





### Annex III JOINT COORDINATING COMMITTEE

The Joint Coordinating Committee, which consists of both the Mexican and the Japanese sides, will be established for the effective and successful implementation of technical cooperation of the Project.

#### 1. Functions

The Joint Coordinating Committee will be held at least once a year or whenever the necessity arises in order to fulfill the following functions.

- (1) To formulate the annual work plan of the Project based on the Tentative Plan of Operation within the framework of the Record of Discussions (hereinafter referred to as "the R/D") to be signed later;
- (2) To review the result of the annual work plan and the progress of the technical cooperation;
- (3) To review and exchange opinions on major issues that arise during the implementation of the Project.

#### 2. Composition

##### (1) Chairperson

- Deputy Director General (Technical area) of CONAGUA (Project Director)

##### (2) Members

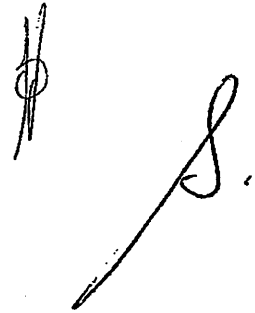
###### 1) Mexican side

- A representative from SEMARNAT
- Deputy Director General (Planning area) of CONAGUA
- General Manager of Water Quality and Sanitation, CONAGUA (Project Manager)
- Deputy Manager of National Laboratories and Monitoring Networks, CONAGUA
- Deputy Manager of International Cooperation, CONAGUA
- Head of the Department of the National Monitoring Network, CONAGUA
- Head of the Department of the National Laboratory Network, CONAGUA
- Head of the Department of International Cooperation, CONAGUA
- Head of the National Reference Laboratory, CONAGUA
- Head of the Water Quality and Environmental Impact Project, Northern Gulf Regional Bureau, CONAGUA (Deputy Project Manager)
- A representative from Ministry of Foreign Affairs

2) Japanese side

- Japanese Experts
- Representatives of JICA Mexico Office
- Members of JICA study team, to be dispatched when necessary

Note: Official(s) of the Embassy of Japan in Mexico may attend the Joint Coordinating Committee as observer(s).

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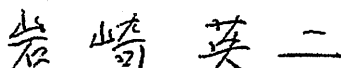
**MINUTES OF MEETING**  
**BETWEEN THE SECOND PERPARATORY STUDY TEAM**  
**AND THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF MEXICO**  
**ON JAPANESE TECHNICAL COOPERATION**  
**FOR COASTAL WATER QUALITY MONITORING NETWORK PROJECT**

The Second Preparatory Study Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") headed by Mr. Eiji Iwasaki, visited Mexico from August 14 to 24, 2006, for the purpose of clarifying the framework of the technical cooperation project named "Coastal Water Quality Monitoring Network Project" (hereinafter referred to as "the Project") in the United Mexican States.

The Team exchanged views and had a series of discussions with the Mexican authorities concerned with respect to desirable measures to be taken by JICA and the Government of Mexico for the successful implementation of the Project.

As a result of the discussions, and in accordance with the provisions of the Agreement on Technical Cooperation between the Government of Japan and the Government of Mexico, signed in Tokyo on December 2nd, 1986 (hereinafter referred to as "the Agreement"), the Team and Mexican authorities concerned agreed on the matters referred to in the document attached hereto. The technical members of the Team will continue to stay in Mexico to work out tentative activities of the Project until September 6, 2006.

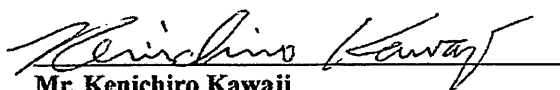
Mexico, D.F., August 24, 2006



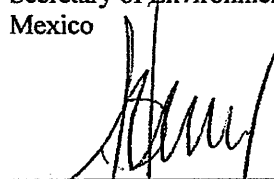
**Mr. Eiji Iwasaki**  
Leader,  
The Second Preparatory Study Team,  
Japan International Cooperation Agency (JICA)



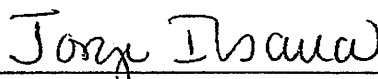
**Dr. Felipe Larreguín Cortés**  
Deputy Director General (Technical area),  
National Water Commission (CONAGUA),  
Secretary of Environment and Natural Resources,  
Mexico



**Mr. Kenichiro Kawaji**  
Resident Representative,  
Japan International Cooperation Agency (JICA)  
Mexico Office



**Ing. Cesar Herrera Toledo**  
Deputy Director General (Planning area),  
National Water Commission (CONAGUA),  
Secretary of Environment and Natural Resources,  
Mexico



**Dr. Jorge Ibarra Salazar**  
General Director of Technical and Scientific Cooperation  
Secretariat of Foreign Affairs  
Mexico

## THE ATTACHED DOCUMENT

### I. COOPERATION BETWEEN JICA AND THE GOVERNMENT OF MEXICAN UNITED STATES

1. The Government of Mexico will implement the Coastal Water Monitoring Network Project (hereinafter referred to as "the Project") in cooperation with JICA.
2. The Project will be implemented in accordance with the Master Plan which is given in Annex I.

### II. MEASURES TO BE TAKEN BY JICA

In accordance with the laws and regulations in force in Japan and the provisions of Article III of the Agreement, JICA, as the executing agency for technical cooperation by the Government of JAPAN, will take, at its own expense, the following measures according to the normal procedures of its technical cooperation scheme.

#### 1. DISPATCH OF JAPANESE EXPERTS

JICA will provide the services of the Japanese experts as listed in Annex II. The provision of Article IX of the Agreement will be applied to the above-mentioned experts.

#### 2. PROVISION OF MACHINERY AND EQUIPMENT

JICA will provide such machinery, equipment and other materials (hereinafter referred to as "the Equipment") necessary for the implementation of the Project. A tentative list of the Equipment will be drawn up by the technical members of the Team. The provision of Article VIII-1 of the Agreement will be applied to the Equipment.

#### 3. TRAINING OF MEXICAN PERSONNEL IN JAPAN

JICA will receive the Mexican personnel connected with the Project for technical training in Japan. The training in Japan will be planned based on the following consideration;

- (1) To be of the complimentary nature which could serve to consolidataly the intent of the Project purpose.

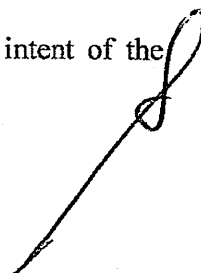
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- (2) To investigate site activities how the monitoring points determined and put into practice in particular at the risk of coastal area of marine pollution.
- (3) To investigate how the laboratory management in Japan is implemented.
- (4) To investigate the fact in Japan how the coastal water monitoring is reflected on the environmental administration.

### III. MEASURES TO BE TAKEN BY THE GOVERNMENT OF UNITED MEXICAN STATES

1. The Government of Mexico will take necessary measures to ensure that the self-reliant operation of the Project will be sustained during and after the period of Japanese technical cooperation, through full and active involvement in the Project by all related authorities, beneficiary groups and institutions.
2. The Government of Mexico will ensure that the technologies and knowledge acquired by the Mexican nationals as a result of the Japanese technical cooperation will contribute to the sustainable development of Mexico.
3. In accordance with the provisions of Article V and VI of the Agreement, the Government of Mexico will grant in the Mexico privileges, exemptions and benefits to the Japanese experts referred to in II-1 above and their families.
4. In accordance with the provisions of Article VIII of the Agreement, the Government of Mexico will take the measures necessary to receive and use the Equipment provided by JICA under II-2 above and equipment, machinery and materials carried in by the Japanese experts referred to in II-1 above.
5. In accordance with the laws and regulations in force in Mexico, the Government of Mexico will take necessary measures to cover the cost of value-added tax (IVA) and delivery in Mexico for the Equipment provided through JICA, and to supply or replace at its own expense machinery, equipment, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the Equipment provided through JICA under II-2 above.

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6. The Government of Mexico will take necessary measures to ensure that the knowledge and experience acquired by the Mexican personnel from technical training in Japan will be utilized effectively in the implementation of the Project.
7. In accordance with the provision of Article V-(b) of the Agreement, the Government of Mexico will provide the services of Mexican counterpart personnel and administrative personnel as listed in Annex III.
8. In accordance with the provision of Article V-(a) of the Agreement, the Government of Mexico will provide the buildings and facilities as listed in Annex IV.
9. In accordance with the laws and regulations in force in the Mexico, the Government of Mexico will take necessary measures to meet the running expenses necessary for the implementation of the Project.

#### IV. ADMINISTRATION OF THE PROJECT

1. Deputy Director General (Technical area), as the Project Director, will bear overall responsibility for the administration and implementation of the Project.
2. General Manager of Manager's Office of Water Quality and Sanitation, as the Project Manager, will be responsible for the managerial matters of the Project.
3. Deputy Manager of Technical Area of Northern Gulf Regional Office, as the Deputy Project Manager, will be responsible for the technical matters of the Project.
4. The Japanese Chief Adviser will provide necessary recommendations and advice to the Project Director and the Project Manager on any matters pertaining to the implementation of the Project.
5. The Japanese experts will give necessary technical guidance and advice to Mexican counterpart personnel on technical matters pertaining to the implementation of the Project.

*K. R.*

*GA*

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*Shimizu*

6. For the effective and successful implementation of technical cooperation for the Project, a Joint Coordinating Committee (hereinafter referred to as "JCC") will be established. The function and composition of JCC are described in Annex V.

## V. JOINT EVALUATION

Evaluation of the Project will be conducted jointly by the Mexican side and JICA, at the middle and during the last six months of the cooperation term in order to examine the level of achievement.

## VI. CLAIMS AGAINST JAPANESE EXPERTS

In accordance with the provision of Article VII of the Agreement, the Government of Mexico undertakes to bear claims, if any arises, against the Japanese experts engaged in technical cooperation for the Project resulting from, occurring in the course of, or otherwise connected with the discharge of their official functions in the Mexico except for those arising from the willful misconduct or gross negligence of the Japanese experts.

In accordance with the Agreement, the Japanese experts oversee and attend the Mexican regulations and laws.

## VII. MUTUAL CONSULTATION

There will be mutual consultation between the Government of Mexico and JICA on any major issues arising from, or in connection with the Project

## VIII. MESURES TO PROMOTE UNDERSTANDING OF AND SUPPORT FOR THE PROJECT

For the purpose of promoting support for the Project among the people of Mexico, the Government of Mexico will take appropriate measures to make the Project widely known to the people of Mexico.

*K. V.*  
*E.A.*

*[Signature]*

*[Signature]*  
*Ibama*

IX. TERM OF COOPERATION

The duration of the technical cooperation for the Project under this Attached Document will be 3 (three) years starting from the date when the expert team arrives.

X. PROVISIONS FOR THE PROJECT

Before JICA's internal approval of the Project, it is envisaged by the Team that the following commitments and /or actions by CONAGUA may be most necessary;

1. Northern Gulf Regional Laboratory as a Reference Training Center

CONAGUA shall internally recognize the Northern Gulf Regional Laboratory with written evidence that the Northern Gulf Regional Laboratory is appointed as the core technical training center on the coastal water monitoring network. The copy of such an evidence letter shall be submitted to the JICA Mexico office.

2. Reinforcement of Northern Gulf Regional Laboratory

In above connection, it is much desired that the capacity of the Northern Gulf Regional Laboratory shall further be reinforced to implement such commitment by CONAGUA, for instance in the following points;

- (1) To employ increasing numbers of the qualified permanent laboratory staff, so that the JICA's technology transfer shall be more effectively and efficiently implemented.
- (2) To make the atomic absorption spectrometry and gas chromatography operative in order to analyze heavy metals and organic compounds in sediment and saline water.

3. Reinforcement of National Reference Laboratory

In above connection, the capacity of the National Reference Laboratory should also be reinforced to implement such commitment by CONAGUA, in particular, numbers of the qualified laboratory personnel, equipment, reagent and materials. The details will be discussed during the stay of technical member of the Team.

For provisional budgeting purpose of National Reference Laboratory, National Reference Laboratory requested and the Team agreed that the Team, during its stay in Mexico City, should list up the reagent and other materials necessary for the Project.



#### 4. Necessary budget for the Project

In order to materialize the above, CONAGUA will make best efforts to secure the necessary budget, for instance;

- (1) To allocate sufficient financial resources including a support, if possible, from the World Bank's GICA,
- (2) To assign temporary personnel from the state laboratories during the project period.

#### 5. Local costs for the Project operation

The Mexican side will generally bear the local costs for the Project operation, such as those for sampling and training costs including transportation and daily allowances etc.

### XI. OTHER REMARKS

#### 1. Schedule before the commencement of the Project

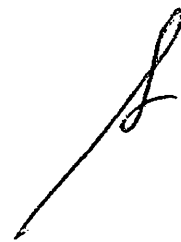
When the Project is found viable and officially accepted by JICA, based on the results of the study team, the implementation and detailed contents of the Japanese Technical Cooperation for the Project shall be determined in the "Record of Discussions" (R/D) which would be signed between the CONAGUA and the JICA Mexico Office. In the process of the approval, modifications of the project scope may be discussed in close consultation with CONAGUA.

The official request forms to assign Japanese Experts for the term of technical cooperation will be submitted by CONAGUA through the official channel.

#### 2. Connection with World Bank's GICA (Gestion Integrada de Cuencas y Acuiferos)

The Team considered that due to increasing necessity of reuse water, the "water quality monitoring and control", which is one of the JICA's Project focus, becomes increasingly important from a view point of securing "water quantity" with less water treatment cost, which is one of the primary focus of the GICA.

CONAGUA agreed that GICA and the Project could possibly play complementary roles each other in a synergic manner from the overall water management points of view. CONAGUA suggested that some involvement of the JICA Mexico office should be preferred in the discussion with the coming World Bank mission.



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### 3. Improved arrangements of Northern Gulf Regional Laboratory management

The Team suggested that in order to secure more smooth communications between the management of Northern Gulf Regional Office and Laboratory, it might be recommended to place the water quality management next to the laboratory. CONAGUA informed the Team of its plan of future relocation of Northern Gulf Regional Offices in Altamira and the fact that CONAGUA had already secured land around the laboratory.

### 4. Use of local consultancy

For supporting the Project activities in general, both sides agreed that the use of appropriate local resources might be considered important such as for studies on designating sampling points from the view points of oceanology.

ANNEX I	MASTER PLAN
ANNEX II	LIST OF JAPANESE EXPERTS
ANNEX III	LIST OF MEXICAN COUNTERPART AND ADMINISTRATIVE PERSONNEL
ANNEX IV	LIST OF BUILDINGS AND FACILITIES
ANNEX V	JOINT COORDINATING COMMITTEE
ANNEX VI	PROJECT DESIGN MATRIX (PDM) Version 0
ANNEX VII	TENTATIVE PLAN OF OPERATION (PO)

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## ANNEX I      MASTER PLAN

The Project will be implemented in accordance with the Master Plan as follows.

### 1. Title of the Project

Coastal Water Quality Monitoring Network Project

### 2. Overall goal

The capacity of CONAGUA for monitoring and control for the coastal water is augmented.

### 3. Project purpose

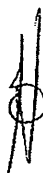
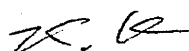
The reference functions of CONAGUA on the coastal water monitoring are strengthened.

### 4. Outputs

1. The capabilities of coastal water monitoring in the Northern Gulf Regional Office are strengthened.
2. The capabilities of coastal water monitoring in the Manager's Office of Sanitation and Water Quality are strengthened.
3. The Quality Assurance and Quality Control (QA/QC) system of coastal water monitoring is improved.
4. National Reference Laboratory and Northern Gulf Regional Laboratory's training functions on coastal water monitoring are strengthened.

### 5. Activities

- 1-1. To integrate the existing coastal monitoring guidelines (JICA and others) into uniform standard guidelines.
- 1-2. To review the existing coastal monitoring plan based on the new standard guideline and develop a new monitoring plan in the Northern Gulf Region.
- 1-3. To prepare the standard operation procedures (draft NMX) for saline water and sediment sampling and analysis methods after reviewing the present work.
- 1-4. To consolidate the sampling skills of saline water and sediment.
- 1-5. To consolidate analytical skills of the basic parameters in saline water and sediment, and those for data quality assurance.
- 1-6. To interpret monitoring data for site evaluation.



- 1-7. To conduct sampling and chemical analysis of water and sediment based on the standardized operation procedures.
  
- 2-1. To integrate the existing coastal monitoring guidelines (JICA and others) into uniform standard guidelines.
- 2-2. To review the existing regional monitoring plans based on the standard guidelines for coastal monitoring and to give necessary approval.
- 2-3. To apply the methods to measure the basic parameters and selected toxic pollutants in saline water and sediment, and those for data quality assurance.
- 2-4. To prepare the standard operation procedures (draft NMX) for saline water and sediment analysis methods.
- 2-5. To interpret monitoring data for site evaluation.
- 2-6. To conduct chemical analysis of saline water and sediment based on the standard operation manuals.
  
- 3-1. To prepare the QA/QC system appropriate to the coastal water monitoring after reviewing the present QA/QC operation in Northern Gulf Regional Laboratory.
- 3-2. To review the past monitoring data based on the newly developed QA/QC system.
- 3-3. To integrate the newly developed QA/QC system into the existing QA/QC system for the national water monitoring network.
- 3-4. To apply the integrated QA/QC system for the fresh water and saline water monitoring.
  
- 4-1. To develop a training master plan for coastal water monitoring after studying the existing training programs and training needs.
- 4-2. To develop an annual training program based on the training master plan.
- 4-3. To prepare training texts based on the annual training program.
- 4-4. To conduct trial trainings with the texts.
- 4-5. To revise the texts and the annual training program as required after reviewing the trial trainings.
- 4-6. To conduct the trainings for regional laboratory staff based on the revised training program.

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## ANNEX II LIST OF JAPANESE EXPERT

Fields to be covered by the Japanese experts are as follows:

1. Chief advisor
2. Monitoring planning
3. Interpretation of monitoring data
4. Saline water sampling
5. Basic parameters analysis
6. Inorganic substance analysis
7. Organic substance analysis
8. Sediment analysis
9. Quality assurance and quality control
10. Coordinator

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**ANNEX III LIST OF MEXICAN COUNTERPART AND ADMINISTRATIVE PERSONNEL**

**1. Project administrative management counterpart**

(1) Project Director

Felipe I. Arreguín Cortés Deputy Director General (Technical area), CONAGUA

(2) Project Manager

Enrique Mejía Maravilla General Manager of Manager's Office of Water Quality and Sanitation

(3) Deputy Project Manager

Enrique Lopez Perez Deputy Manager of Technical Area, Northern Gulf Regional Office, CONAGUA

**2. Technical Counterpart**

(1) CONAGUA Central and National Reference Laboratory

Jesús García Cabrera Deputy Manager of National Laboratories and Monitoring Networks

To be assigned Head of the Department of the National Monitoring Network

To be assigned Head of the Department of the National Laboratory Network

Margarita Lobato Calleros Head of the National Reference Laboratory, CONAGUA

Martha Leticia Otero López Hydraulic Specialist, Department of the National Monitoring Network

Martha Zamudio Díaz Hydraulic Specialist, Department of the National Monitoring Network

Alicia Vázquez Martínez Hydraulic Specialist, Department of the National Monitoring Network

Graciela Martínez Serratos Hydraulic Specialist, Department of the National Monitoring Network

Javier Viramontes Navarro Technician, Department of the National Monitoring Network

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Martha Bustamante Herrera	Hydraulic Specialist, National Reference Laboratory
Norma Lilia Heiras Rentería	Hydraulic Specialist, National Reference Laboratory
Guadalupe Machado Osuna	Hydraulic Specialist, National Reference Laboratory
Valia Maritza Goytia Leal	Hydraulic Specialist, National Reference Laboratory
Martin Castro Juárez	Technician, National Reference Laboratory
Sebastián Pérez Rodríguez	Technician, National Reference Laboratory

(2) CONAGUA Northern Gulf Regional Office

Luis Manuel Camacho Martínez	Head of the Water Quality and Environmental Impact Project, Northern Gulf Regional Office
Francisca Robledo Muñiz	Head of the Northern Gulf Regional Laboratory
Mónica Miguel Gil	Hydraulic Specialist, Northern Gulf Regional Office
Liliana Longoria Bolán	Hydraulic Specialist, Northern Gulf Regional Office
Luis Vázquez Ochoa	Technician, Northern Gulf Regional Office
Lilia Mercedes Gómez Gallardo	Technician, Northern Gulf Regional Office
Carlos Alberto Rojas Flores	Technician, Northern Gulf Regional Office
Luz María Hernández Escobedo	Technician, Northern Gulf Regional Office
María Natividad Cervantes Morales	Technician, Northern Gulf Regional Office
Francisco Sergio Nieto Treviño	Technician, Northern Gulf Regional Office
Eusebio González Del Angel	Technician, Northern Gulf Regional Office
Emelia Rivera Sánchez	Technician, Northern Gulf Regional Office
Héctor Armando Hernández Zúniga	Technician, Northern Gulf Regional Office

(3) CONAGUA International Cooperation

José María de la Torre Wolf	Deputy Manager of International Cooperation
Guillermo Gutiérrez Gómez	Head of Department of International Cooperation

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**ANNEX IV LIST OF BUILDINGS AND FACILITIES**

1. Buildings and facilities necessary for the implementation of the Project
2. Office space and necessary facilities in the buildings of the Project for Japanese experts and meetings
3. Facilities and services such as electricity, gas, water supply, telephone, internet access and furniture necessary for the Project activities
4. Other facilities mutually agreed upon as necessary

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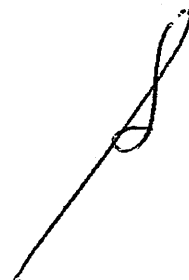
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## ANNEX V      JOINT COORDINATING COMMITTEE

The Joint Coordinating Committee, which consists of both the Mexican and the Japanese sides, will be established for the smooth and effective implementation of the Project.

### 1. Functions

The Joint Coordinating Committee will meet at least once a year or whenever the necessity arises, in order to fulfill the following functions:

- (1) To formulate the annual operational work plan of the Project based on the Tentative Schedule of Implementation within the framework of the "Record of Discussions" (R/D).
- (2) To review the results of the annual operational work plan and the overall progress of the Project.
- (3) To exchange views on major issue arising from or in connection with implementation of the Project.

### 2. Composition

#### (1) Chairperson

- Deputy Director General (Technical area) of CONAGUA (Project Director)

#### (2) Members

##### 1) Mexican side

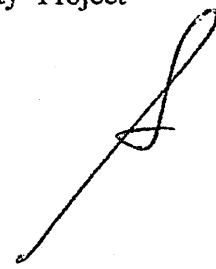
- General Director of Technical and Scientific Cooperation, Secretariat of Foreign Affairs
- A representative from SEMARNAT
- General Manager of Manager's Office of Water Quality and Sanitation (Project Manager)
- Deputy Manager of National Laboratories and Monitoring Networks, CONAGUA
- Deputy Manager of International Cooperation, CONAGUA
- Head of the Department of the National Monitoring Network, CONAGUA
- Head of the Department of the National Laboratory Network, CONAGUA
- Head of the Department of International Cooperation, CONAGUA
- Head of the National Reference Laboratory, CONAGUA
- Sub Manager of Technique, Northern Gulf Regional Office, CONAGUA (Deputy Project Manager)

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▪ Head of the Water Quality and Environmental Impact Project, Northern Gulf Regional Office,  
CONAGUA

2) Japanese side

- Japanese Experts
- Representatives of JICA Mexico Office
- Members of JICA study team, to be dispatched when necessary

Note: Official(s) of the Embassy of Japan in Mexico may attend the Joint Coordinating Committee as observer(s).

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ANNEX VI PROJECT DESIGN MATRIX (PDM) Version 0

Project Title: Coastal Water Quality Monitoring Network Project

Target Area:  
Whole Area of Mexican United States

Duration: 3 years

Target Group:  
CONAGUA Manager's Office of Sanitation and Water Quality and Northern Gulf Regional Office

Ver. 0  
Creation Date: Aug 24, 2006

Narrative Summary	Objective Verifiable Indicators	Means of Verification	Important Assumptions
<p><b>Overall Goal</b> The capacity of CONAGUA for monitoring and control for the coastal water is augmented.</p>	<ol style="list-style-type: none"> <li>1. QA/QC system is applied in 11 regional laboratories.</li> <li>2. Coastal water monitoring results are released in the National Water Statistics in Mexico.</li> <li>3. NMX (Mexican Norms) for coastal water analysis methods are established.</li> <li>4. Prioritized control areas are identified and designated based on the monitoring data.</li> </ol>	<ol style="list-style-type: none"> <li>1. ISO17025 accreditation of 11 regional laboratories</li> <li>2. The National Water Statistics in Mexico</li> <li>3. NMX (Mexican Norms)</li> <li>4. CONAGUA annual report</li> </ol>	
<p><b>Project Purpose</b> The reference functions of CONAGUA on the coastal water monitoring are strengthened.</p>	<ol style="list-style-type: none"> <li>1. Three kinds of manuals (such as for sampling, basic and toxic parameters) of saline water and sediment analysis are authorized by General Director of CONAGUA.</li> <li>2. The authorized manuals are introduced in 11 regional laboratories.</li> </ol>	<ol style="list-style-type: none"> <li>1. Official document (Oficio) signed by General Director of CONAGUA</li> <li>2. CONAGUA annual report</li> </ol>	<p>Subject to NMX committee approval</p>
<p><b>Output</b> 1. The capabilities of coastal water monitoring in the Northern Gulf Regional Office are strengthened.</p> <p>2. The capabilities of coastal water monitoring in the Manager's Office of Sanitation and Water Quality are strengthened.</p>	<p><b>Indicators</b></p> <ol style="list-style-type: none"> <li>1. Coastal water monitoring plan prepared based on the new guidelines.</li> <li>2. 16 Standard Operation Procedures (SOPs) for basic parameters in saline water and sediment.</li> <li>3. Results of reference materials analysis are within the control limits.</li> </ol> <p>1. Regional coastal water monitoring plan prepared based on the new guidelines.</p> <ol style="list-style-type: none"> <li>2. SOPs for 7 harmful parameters and for 4 toxic organic pollutants in saline water and sediment.</li> <li>3. Results of reference materials analysis are within the control limits.</li> </ol>	<p>Monitoring Plan</p> <p>SOPs</p> <p>Analysis Report</p> <p>Monitoring Plan</p> <p>SOPs</p> <p>Analysis Report</p> <p>Proficiency test report.</p> <p>Data analysis report</p> <p>Training records</p>	<p>No critical organizational change of CONAGUA.</p>
<p>3. The Quality Assurance and Quality Control (QA/QC) system of coastal water monitoring is improved.</p>	<ol style="list-style-type: none"> <li>1. A proficiency test is carried out between Northern Gulf Regional Laboratory and National Reference Laboratory at least once a year.</li> <li>2. Data analysis report from the QA/QC program is issued twice a year.</li> </ol>		
<p>4. National Reference Laboratory and Northern Gulf Regional Laboratory's training functions on coastal water monitoring are strengthened.</p>	<p>At least 3 training courses (such as for sampling, basic and toxic parameters) are conducted based on an annual training plan.</p>		

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Expected Outputs	Activities	Schedule (Month)													
		1st Year				2nd Year				3rd Year					
		1	2	3	4	1	2	3	4	1	2	3	4		
1.The capabilities of coastal water monitoring in the Northern Gulf Regional Office are strengthened.	1-1. To integrate the existing coastal monitoring guidelines (JICA and others) into uniform standard guidelines.	█													
	1-2. To review the existing coastal monitoring plan based on the new standard guideline and develop a new monitoring plan in the Northern Gulf Reigion.		█												
	1-3. To prepare the standard operation procedures (draft NMX) for saline water and sediment sampling and analysis methods after reviewing the present work.			█											
	1-4. To consolidate the sampling skills of saline water and sediment.				█										
	1-5. To consolidate analytical skills of the basic parameters in saline water and sediment, and those for data quality assurance.	█			█										
	1-6. To interpret monitoring data for site evaluation.							█							
	1-7. To conduct sampling and chemical analysis of water and sediment based on the standardized operation procedures.							←————→							
2.The capabilities of coastal water monitoring in the Manager's Office of Sanitation and Water Quality are strengthened.	2-1. To integrate the existing coastal monitoring guidelines (JICA and others) into uniform standard guidelines.*	█													
	2-2. To review the existing regional monitoring plans based on the standard guidelines for coastal monitoring and to give necessary approval.		█					█							
	2-3. To apply the methods to measure the basic parameters and selected toxic pollutants in saline water and sediment, and those for data quality assurance.**	█		█			█								
	2-4. To prepare the standard operation manuals (draft NMX) for saline water and sediment analysis procedures.				█			█							
	2-5. To interpret monitoring data for site evaluation.							█							
	2-6. To conduct chemical analysis of saline water and sediment based on the standard operation manuals.								←————→						
3.The Quality Assurance and Quality Control (QA/QC) system of coastal water monitoring is improved.	3-1. To prepare the QA/QC system appropriate to the coastal water monitoring after reviewing the present QA/QC operation in Northern Gulf Regional Laboratory.						█								
	3-2. To review the past monitoring data based on the newly developed QA/QC system.							█							
	3-3. To integrate the newly developed QA/QC system into the existing QA/QC system for the national water monitoring network.**							█							
	3-4. To apply the integrated QA/QC system for the fresh water and saline water monitoring.								←————→						
4.National Reference Laboratory and Northern Gulf Regional Laboratory's training functions on coastal water monitoring are strengthened.	4-1. To develop a training master plan for coastal water monitoring after studying the existing training programs and training needs.										█				
	4-2. To develop an annual training program based on the training master plan.											█			
	4-3. To prepare training texts based on the annual training program.											█			
	4-4. To conduct trial trainings with the texts.												█		
	4-5. To revise the texts and the annual training program as required after reviewing the trial trainings.												█		
	4-6. To conduct the trainings for regional laboratory staff based on the revised training program.													█	

\* Joint training with the Northern Gulf Regional Office

\*\* The first training is jointly conducted with North Gulf Regional Laboratory

←————→ indicates activities which are done by mexican sides as routine works.

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4. メキシコ水行政年表

メキシコ水環境行政の変遷

年	水管理関連法、政策	水管理行政組織	開発・環境計画	JICAの協力	1人当り GDP (\$)	GDP成長率 (%)
1917		水・国土・住宅部 (la Direccion de Aguas, Tierras y Colonizacion) 設立				
1926		国家灌溉委員会 (Comision Nacional de Irrigacion) 設立				
1946		水資源省 (Secretaria de Recurso Hidraulicos) 設立				
1972	連邦水法 (La ley Federal de Aguas) 制定	農業水資源省 (Secretaria de Agricultura y Recursos Hidraulicos: SARH) 設立			3,768	8.2
1976		IMTA (メキシコ水工学研究所) 設立			4,208	4.4
1986					4,763	-3.7
1988	生態系保全及び環境保護一般法 (Ley General Ddel Equilibrio Ecologico y la Proteccion Ambiental) 制定 水質環境クライテリアCE-CCA-001/89 (環境基準) 制定	SARHの技術担当機関として国家水委員会 (Comision Nacional de Agua: CNA) 設立	国家開発計画 (1989-1994) 環境分野の特微的政策: 都市環境を評価・予測する手法の導入、インセンティブを伴う環境規制の強化	メキシコ市大気汚染対策調査 (1998年まで)	4,712	1.2
1989					4,816	4.1
1990				大気汚染測定・分析専門家 (SEDEU, 1992年まで)	4,966	5.0
1992	国家水法 (La ley de Aguas Nacionales) 制定			環境行政専門家 (ODF, 1995年まで)	5,168	3.6
1993				メキシコ連邦区下水処理計画調査 (1994年まで)	5,174	1.9
1994	国家水法規則 (Reglamento de La ley de Aguas Nacionales) 制定	CNAの機能が環境天然資源漁業省 (Secretaria de Medio Ambiente, Recursos Naturales y Pesca: SEMARNAP) の設立と同時に同省へ引き継がれる。これと同時にCNAが国家水法に規定される水管理行政を担うこととなる			5,309	4.4
1995			国家開発計画 (1995-2000) 環境分野の特微的政策: 環境悪化の激しい水系の浄化 上水と下水施設の整備と改善	環境研究研修センタープロジェクト (GENICA, 2002年まで) 研究協力農業用水資源有効活用 (IMTA, 2001年まで)	4,891	-6.2
1996	メキシコ公式規格001-ECOL-1996 (公共水域への排水基準) 制定 メキシコ公式規格002-ECOL-1996 (下水道網への排水基準) 制定			オアハカ村落森林業環境計画調査 (1998年まで) 林業計画専門家 (SEMARNAP, 1998年まで)	5,063	5.1
1998				メキシコ・シティ廃棄物対策計画調査 (1999年まで) 沿岸部水質環境モニタリング計画調査 (CNA, 2000年まで)	5,512	4.9
1999				S/環境法整備 (サンルイスポトシ州, 2002年まで)	5,647	3.8
2000		環境天然資源漁業省が組織改変で環境天然資源省 (Secretaria de Medio Ambiente y Recursos Naturales: SEMARNAT) となり、同省の独立機関としてCNAは引き続き水管理行政を担当		廃棄物処理専門家 (DDF, 2001年まで)	5,934	6.6
2001			国家開発計画 (2001-2006) 環境分野の特微的政策: 環境管理への社会参加促進と環境や改善措置についての情報提示		5,864	-0.1
2002				第三国研修「環境保全型排水処理と再利用」 (IMTA, 2006年まで) 第三国研修「固体・有害廃棄物の適正管理」 (GENICA, 2006年まで)	5,852	0.8
2004	国家水法 (La ley de Aguas Nacionales) 改定				6,055	4.1
2005				全国大気汚染モニタリング強化支援プロジェクト (GENICA, 2008年まで)	6,172	2.9

出典：1人当たりGDP及び成長率 (%)  
WB World Development Indicator2006 (US dollars, constant 2000)