INFORMATION

ON

THE PROGRAM

IN

WATER ENVIRONMENTAL MONITORING II

JFY 2006

集団：水環境モニタリング II

PROGRAM NO. : J06-00962

Program in Japan:

September 19, 2006 – November 14, 2006

JAPAN
Official Development Assistance

THE GOVERNMENT OF J APAN
JAPAN INTERNATIONAL COOPERATION AGENCY

JICA

Preface

Since its establishment, the Japan International Cooperation Agency (JICA) has been facilitating development of various capacities in partner countries as one of implementing bodies of the official development assistance program of the Government of Japan.

While JICA organize a variety of technical cooperation programs, its training and dialogue programs offer opportunities to those organizations of partner countries which intend to enhance knowledge or skill of key personnel with strategic assignments or trainers who would train others. Besides those human capacities development, the program could meet needs of those organizations which intend to enhance their own organizational capacities through improvement of rules and regulation as well as social capacities through reform of policies and institutions under their jurisdiction.

In each program, participants dispatched by their respective organizations would be exposed to practical knowledge and experiences of leading organizations and individuals in Japan through a series of lectures, workshops and sight visits. They also have a chance to share knowledge and experiences with participants from other countries. As a result, each organization is expected to acquire or create knowledge which would be subsequently put into its own contexts to achieve a specific objective.

This program is offered to those organizations which intend to develop human resources as leading technical experts conducting comprehensive and systematic monitoring on water quality in the central or local governmental laboratories.

Participants shall have opportunities in Japan to understand methodology of water quality monitoring among others. It is also envisioned that the program would serve the cause of mutual collaboration among participating countries and Japan in the area of knowledge sharing.

I. ESSENTIAL FACTS

Program Title (No.)	Water Environmental Monitoring II (J06-00962)
Target Organizations	Central or local governmental laboratories in charge of water quality monitoring
Outcome/Purpose	The purpose of this program is to develop human resources as leading technical experts conducting comprehensive and systematic monitoring on water quality in the central or local governmental laboratories.
Outputs	By the end of the program, participants are expected to be able to deepen knowledge on: (1) Mechanism of water pollution and its effects, (2) Water quality conservation methods, (3) Water quality monitoring methods, (4) Practical skills on monitoring and data processing, and (5) Based on acquired knowledge of (1)–(4), participants are requested to formulate action plan
Contents	(1) Mechanism of water pollution and its effects on our life (2) Water pollution management system (3) Methodology of water quality monitoring
Number of Participants	10
Language	English
Duration of the Program	<Preliminary> August 2006 – September 2006 <Program in Japan> September 19, 2006 – November 14, 2006
Implementing Organizations	(1) JICA Tokyo International Center (2) Japan Environmental Sanitation Center (JESC) (3) National Environmental. Research & Training Institute, Ministry of the Environment (NETI)
Deadline for Application	July 19, 2006 for acceptance at JICA office (or Embassy of Japan) Submission: (1) A2A3form (2) Questionnaire (ANNEX I) (3) Country Report (ANNEX II)
Deadline for Acceptance Notice	August 4, 2006

Ⅱ. DETAILS

PROGRAM TITLE		Water Environmental Monitoring II
PROGRAM NO.		J06-00962
1.	**Background**	Water pollution is an issue directly connected to people's healthy life, natural environment conservation and maintenance of ecosystems. Conservation of water quality is indispensable to maintain life. However, with development of urbanization and industrialization in developing countries, environmental deterioration like water pollution is getting more serious. To take some measures against these issues, correct understanding of water quality (water quality monitoring) is essential. For adequately responding to the situation, securing and fostering of technical experts in charge of water quality monitoring is becoming a pressing issue. Above all, to urgently enhance water quality monitoring, it is a prime task to have a plan for leadership development targeting technical experts, who can implement works comprehensively and systematically.
2.	**Target Organizations**	Central or local governmental laboratories in charge of water quality monitoring
3.	**Outcome/ Purpose**	The purpose of this program is to foster leading technical experts capable of conducting comprehensive and systematic monitoring on water quality in the central or local governmental laboratories.
4.	**Outputs**	By the end of the program, participants are expected to be able to deepen knowledge on: (1) Mechanism of water pollution and its effects, (2) Water quality conservation methods, (3)Water quality monitoring methods, (4)Practical skills on monitoring and data processing, and (5)Based on acquired knowledge of (1) – (4), participants are requested to formulate an action plan
5.	**Activities** **(1) Preliminary for participation**	〈Duration〉 August 2006 – September 2006 From acceptance notice to arrival in Japan 〈Activities〉 <u>Preparation for Country Report Presentation</u>: Participants are required to prepare the materials for presentation (about 30 min/person including questions and answers) based on their country report before starting this program. Overhead projector, overhead camera, PC (Windows XP, Professional) and a slide projector are available.

	(2) Program in Japan	〈Duration〉 September 19, 2006 – November 14, 2006 〈Activities〉 1.Lectures (and Q & A) (1)History of Water Pollution Problem in Japan (2)The Current Situation and Mechanism of Water Pollution (3)Administration for Water Quality Preservation in Japan (4)Environmental administration of Local Government (5)Prevention and countermeasures (6)Processing Technology /Monitoring Method of Water Quality (7)Basics of Environmental Analysis (8)Utilization of Water Quality Data 2.Practice (1)Measurement of Velocity/Flow Rate of Water Current (2)Measurement of Hazardous Chemicals (HPLC) (3)Measurement of Heavy Metals (AAS) (4)Measurement of Hazardous Chemicals (GC) (5)Measurement of Organic Pollutant (COD,TOC, etc) (6)Classification Methods of Water Quality by Macro Benthos 3.Site visits (1)Ozaku Weir and Ozaku Water Filtration Plant (2)National Institute for Environmental Studies (3)Tamagawa Upstream Water Recycling Center (4)Teganuma Lake, and the facilities for cleaning up the water (5)Kisshoin Wastewater Treatment Plant(Textile wastewater, Kyoto City) (6)The Lake Biwa (Sampling from a boat) (7)Biwa Lake Museum (8)East Mountainous Landfill Disposal Site (Kyoto City) (9)National Minamata Disease Research Center, Minamata Disease Municipal Museum (10)Others 4.Presentation and Discussions (1)Country Report (2)Action Plan **See “ANNEX III. MODULE (Contents of the Program in Japan).”** Note: The above contents may be subject to minor changes.

6.	**Inputs** **(1) By Japan (JICA)**	1. Round-trip ticket between an international airport designated by JICA and Japan. 2. Allowance (accommodation, living expenses, shipping) 3. Expenses for study tours Basically paid in the form of train ticket(s) or chartered bus 4. Free medical care for participants who become ill after arrival in Japan (costs related to pre-existing illness, pregnancy or dental treatment are not included) 5. Expenses for program implementation including materials See the brochure, KENSHU-IN GUIDE BOOK p. 9-16, given to each selected candidate before (or at the time of) the pre-departure orientation. 6.Arrangement of (1) Module a. Lectures b. Practices c. Site Visits d. Presentations and Discussions e. Evaluation meeting (Middle) f. Evaluation meeting (Final) g. Closing Ceremony (2) Personnel a. Officials of central or local governmental laboratories in charge of water environmental monitoring, b. Japanese experts in various items of the subject c. A JICA program officer d. A JICE training officer and a coordinator e. Others (3) Materials (handouts/publications) (4) Rooms/equipment/transportation, etc (5) Other items
	(2) By the Government of the Participating Country/ Countries	The government of the participating country/countries nominate and recommend an applicant(s) fulfilling the requirements for the program in Japan designated at the “9. Conditions and procedure for application” on page 7 in accordance with the procedures mentioned in the “Procedure for application” given below.
7.	**Organizations** **(1) Implementing Organization**	JICA Tokyo International Center (JICA TOKYO) Address: 2-49-5 Nishihara, Shibuya-ku, Tokyo 151-0066, Japan TEL: 81-3-3485-7051 FAX: 81-3-3485-7904 (81: country code for Japan, 3: area code)

	(2) Partner Organization	(1) Japan Environmental Sanitation Center (JESC) Address: 10-6, Yotsuya Kamimachi, Kawasaki-ku, Kawasaki-shi, Kanagawa Pref. Tel:81-44-288-4896 Fax:81-44-299-2294 (81: country code for Japan, 44: area code) (2) National Environmental Research & Training Institute, Ministry of the Environment (NETI) Address: 3-3, Namiki, Tokorozawa-shi, Saitama 359-0042, Japan TEL: 81-42-994-9766 FAX: 81-42-994-9306 (81: country code for Japan, 42: area code) (3) Japan Society on Water Environment Address: Green Plaza Fukagawa Tokiwa 201, 2-9-7 Tokiwa, Koto-ku, Tokyo 135-0006, JAPAN TEL: 81-3-3632-5351 FAX: 81-3-3632-5352 (81: country code for Japan, 3: area code)
8.	**Accommodation**	JICA Tokyo International Center (JICA TOKYO) Address: 2-49-5 Nishihara, Shibuya-ku, Tokyo 151-0066, Japan TEL: 81-3-3485-7051 FAX: 81-3-3485-7904 (81: country code for Japan, 3: area code) If no room is available at JICA TOKYO, JICA will arrange alternative accommodations for the participants.
9.	**Conditions and Procedure for Application** **(1) Qualifications of Applicants**	(1) be engaged in water quality monitoring in central or local government laboratories (2) be a university graduate (science or engineering) or have the equivalent academic background, (3) not to be less than twenty-five(25) and not be more than thirty-five (35) years of age, in principle, (4) be proficient in spoken and written English (5) be in good health, both physically and mentally, to participate in the program in Japan, (6) Not be serving in any form of military services
	(2) Procedure of Application	(1) Governments desiring to nominate applicants for the program in Japan should fill in and forward one (1) original and three (3) copies of the Nomination Form (Form A2A3) for each applicant, to a JICA office (or an Embassy of Japan) by July 19, 2006. (2) The JICA office (or Embassy of Japan) will inform the applying government of acceptance or non-acceptance of a nominee's application no later than August 4, 2006. (3) All applicants are required to submit a “Questionnaire” (ANNEX I) and a “Country Report” (ANNEX II) with the Nomination Form. The country report should be typewritten in English in accordance with the attached form (ANNEX II) on the present situation and main problems of water bodies in their own country, and moreover their tasks at their environmental laboratories. They will be the factors considered in selection of participants.

10.	**Other Matters:** **(1) A Pre-departure Orientation**	A pre-departure orientation will be held at JICA overseas offices (or Embassies of Japan) to provide the selected candidates with details on travel to Japan, conditions of the program in Japan, and other matters. Participants will see a video "Training in Japan," and receive a textbook and cassette tape, "Simple Conversation in Japanese." A brochure, the KENSHU-IN GUIDE BOOK, will be handed to each selected candidate before (or at the time of) the orientation.
	(2) Attention	Participants are required: (1) not to change the subject of the program in Japan or extend the period of the program in Japan, (2) not to bring with them any members of their family, (3) to return to their home countries at the end of the program in Japan according to the international travel schedule designated by JICA, (4) to refrain from engaging in political activities or any form of employment for profit or gain, and (5) to observe the rules and regulations of their place of accommodation and not to change the accommodations designated by JICA. (Participants who have successfully completed the program will be awarded a certificate by JICA and NETI.)

ANNEX Ⅰ. Questionnaire
ANNEX Ⅱ. Country Report
ANNEX Ⅲ. MODULE (Contents of the Program in Japan)
ANNEX Ⅳ. Action Plan

ANNEX I

Water Environmental Monitoring Ⅱ

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QUESTIONNAIRE

Date:

Name:

Country:

1. Have you ever studied the following subjects?

(Please tick either YES or NO.)

	YES	NO
(1)Chemical engineering	( )	( )
(2)Analytical chemistry	( )	( )
(3)Hygiene engineering	( )	( )
(4)Environmental engineering	( )	( )
(5)Environmental science	( )	( )
(6)Civil engineering	( )	( )
(7)Water pollution control technology	( )	( )

2. Please put down in the parenthesis the number of years of experience you have with the following items.

(1) Administration of water quality management (year(s))

(2) Research on water quality management (year(s))

(3) Work on water quality monitoring (year(s))

(4) Work on water quality control in private enterprises (year(s))

3. Concerning water analysis methods listed below, please answer the questions.

< Method TOC analyzer>

Interested or not?

□very much □medium □no

Do you have experience of the method?

□have long and enough experience

□have some experience

□have no experience but know the outline of the method

□no experience and no knowledge on the method

Your interested subject:

〔 〕

< Method AAS>

Interested or not?

☐very much ☐medium ☐no

Do you have experience of the method?

☐have long and enough experience

☐have some experience

☐have no experience but know the outline of the method

☐no experience and no knowledge on the method

Your interesting subject

( )

< Method GC/ECD>

Interested or not?

☐very much ☐medium ☐no

Do you have experience of the method?

☐have long and enough experience ☐have some experience

☐have no experience but know the outline of the method

☐no experience and no knowledge on the method

Your interesting subject

( )

< Method HPLC>

Interested or not?

☐very much ☐medium ☐no

Do you have experience of the method?

☐have long and enough experience ☐have some experience

☐have no experience but know the outline of the method

☐experience and no knowledge on the method

Your interesting subject

( )

4. In order to prepare a lab.coat and a pair of shoes for the participants, please give us the following information.

(1)Height (cm)

(2)Weight (kg)

(3)Shoes Size (cm)

ANNEX II

Water Environmental Monitoring II

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COUNTRY REPORT

The role of country report is not just to describe the present state of water quality in your county. It is also to find the causes of water quality problems and their solutions. So please mention the problems in details, their causes, and what YOU can do to solve them.

Name of Applicant:

Name of Country:

Name of Organization and Present Post:

1. General Information on the Country
   Specify briefly the geographical status, population, and economic conditions, weather and so on.

2. Organizational Framework
   Specify the section of central government, local government and other organizations responsible for water pollution control, the exact role of your organization within the government, and the personnel and budgetary resources available for your organization in dealing with pollution, especially water pollution. Describe your position and tasks in your organization.
   (Please attach your organization chart)

3. Situation and problems of water pollution
   Specify the condition and the causes of water pollution in your country or your region.
   Please refer to the following items and explain by using tables and figures to facilitate the comparison among the participant's countries.

   a) Regulations relating to water pollution control
   b) List of Environmental Quality Standard (EQS) and their values
   c) Compliance rate to EQS (present and historical trend)
   d) Historical trend of water pollution
   e) Spatial distribution of pollutants
   f) Supplementary information such as coverage of sewage, source of drinking water

4. Water Quality monitoring system
   Specify your water quality monitoring system with respect to the following items

   a) The number of analytical staff and list of analytical equipment in your laboratory
   b) The number of parameters and samples in average analyzed by your laboratory per month
   c) Information about on-the-spot inspection of the facilities
   d) How to gather the monitoring data, how to interpret them and how to utilize them
   e) What the obstacles are to execute the water quality monitoring
   f) How you attempt to expand the water monitoring activities
   g) Supplementary information such as sampling point map, tables of analytical parameters and analytical methods you employed

5. Specific area of interest

a) What are your interests in water quality monitoring?
b) What kind of analytical techniques do you wish to learn in the laboratory exercises during the training course?
c) What kind of information do you want to get relevant to your field?

Note1: For effective training, please bring the data you mentioned in the country report.

Note2: All participants are requested to make presentation on your country report. Please prepare for your presentation, materials such as making power point files, before coming to Japan

ANNEX III

Module (Contents of the Program in Japan)

***The curriculum is subject to minor changes.**

OUTPUTS	CONTENTS	HOUR	TYPE
1)Mechanism of Water Pollution and its effects	History of Water Pollution Problem in Japan	3	lecture
	The current situation and Mechanism of Water Pollution	12	ditto
	Water Pollution and Minamata disease	5	visit
	Mechanism of Water Pollution	3	ditto
2)Water Management Method	Administration for Water Quality Preservation in Japan	3	lecture
	Environmental administration of Local Government	3	ditto
	Prevention of Water Pollution and Countermeasures (Case study)	3	ditto
3)Water Monitoring Method	Processing Technology / Monitoring Method of Water Quality (groundwater, discharging water, environmental water, tap water)	12	ditto
	Processing Technology / Monitoring Method of Tap Water	3	visit
	Water Pollution Control in closed water areas and Monitoring Method	7.5	ditto
	River Water Pollution Control and Monitoring Method	1.5	ditto
	Water Pollution Control in a sewage plant and Monitoring Method	2	ditto
	Water Pollution Control in a landfill disposal site and Monitoring Method	2.5	ditto
4)Technique for Water Quality Analysis and Method for Data Processing	Basics of environmental analysis (HPLC, GC, AAS, etc)	63	Lecture/ practice
	Classification Method of Water Quality by Macro Benthos	9	ditto
	Velocity / Flow Rate Measurements	3	practice
	Utilization of Water Quality Data	3	lecture
	Analytical Data Processing by PC (Excel)	3	ditto
5)Based on acquired knowledge(1)- (4), participants are required to formulate an action plan	Country Report Preparation / Presentation	12	preparation/ presentation
	Action Plan (draft) Formulation / Draft Checking / Presentation	15	ditto
	Middle Evaluation meeting (Requests from participants to make future trainings more effective)	3	discussion

ANNEX IV

Water Environmental Monitoring II

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Action Plan

By the end of the training course, all participants are requested to formulate an Action Plan.

For Action Plan formulation, pick up one that you can tackle among issues that you mentioned in your country report, utilizing the knowledge that you gained through the training course, make YOUR OWN acting component (=Action Plan), not a governmental one. Try making the plan by using the existing human and financial resources in your organization in the most efficient and effective way possible.

You are requested to submit the Action Plan in the way as mentioned below.

<Contents (Recommended)>

a. Title
b. Background
c. Objectives (Goals)
d. Direct and Indirect beneficiaries
e. Action Component
f. Implementation schedule
g. Necessary resources
h. Responsible agencies and their roles
i. Strategies and tactics for implementation
j. Monitoring and evaluation
k. Budget and resources

Typewrite on the A4 sized paper and also prepare a presentation material.

You will have more detailed guidance after arrival in Japan.

CORRESPONDENCE

For enquires and further information, please contact the JICA office, or the Embassy of Japan. Address any other correspondence to:

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