



TRAINING AND DIALOGUE PROGRAMS

GENERAL INFORMATION

**Adaptive Watershed Management for Flood Countermeasures
by Climate Change and Conservation of Ecosystem**

**集団研修「気候変動による洪水対策と生態系保全のための
順応的流域管理」
JFY 2009**

<Type: Trainers Training / 類型:人材育成普及型>

NO. J-0900784/ ID.0980765

From August 16 to October 17, 2009

This information pertains to one of the Training and Dialogue Programs of the Japan International Cooperation Agency (JICA), which shall be implemented as part of the Official Development Assistance of the Government of Japan based on bilateral agreement between both the Governments or recipient country and Japan.

I. Concept

Background

Global warming, which is generally considered to stem from increased emissions of greenhouse gases (e.g. carbon dioxide), has caused climate change on a global scale, including significant variations in rainfall amounts. Developing countries in particular experience frequent cyclones/hurricanes and resultant heavy rain that has developed to unexpected levels, causing a corresponding increase in damage to human life and property. Meanwhile, conventional flood countermeasures such as dams and levees are often found to have adverse effects on the ecosystem in watershed areas.

For these reasons, an adaptive watershed management approach that integrates flood countermeasures and ecosystem conservation rather than viewing them as incompatible is being stressed on an international level; the dissemination of such an approach and the advancement of human resources in developing countries represent effective support measures enabling these regions to deal with climate change.

Motivation

This group training program is designed for mid-level working and senior administrative officers of organizations operating watershed management projects, and aims to share adoptive watershed management methods among them.

Methodology

Participants will have opportunities to have mainly lectures including field studies and discussions. Participants will also formulate an interim report including an action plan describing what the organization will do after the participants go back to home country putting the knowledge and ideas acquired and discussed in Japan among others into their on-going activities.

What is “Adaptive Management of Drainage Basin”?

It aims an adaptation to global climatic changes from viewpoints of drainage basin Management. Under global climatic changes, we will have more risk in river management: the fluvial regime changes quickly and also discharge at rainy season easily exceeds the former level. We cannot decrease the disaster caused by future climatic changes by a further hard works such as a big dam and/or embankment construction. It will be better to reduce the disaster by alternative countermeasures such as construction of retention pools and an appropriate control of flooded water.

Another important issue is biodiversity conservation. Riparian zone is always rich in biodiversity, but in many places its ecosystem has been lost by hard river works and urbanization. Our new training course aims to reduce the vulnerability of our society by using an adaptation management in drainage basin. It proposes a new drainage-basin management system which adjusts to present and future natural conditions, by

reducing the vulnerability, and by increasing the resilience to global climatic changes.

II. Description

1. Title (J-No.): Adaptive Watershed Management for Flood Countermeasures by Climate Change and Conservation of Ecosystem (J-0980765)

2. Period of Program:

Duration of whole program: July, 2009 to March, 2010

Preliminary Phase: June to July, 2009

(in a participant's home country)

Core Phase in Japan: August 16 to October 17, 2009

Finalization Phase: October, 2009 to March, 2010

(in a participant's home country)

3. Target Countries:

Bangladesh, Fiji, Honduras, Bolivia, Brazil, Malawi, Senegal (2 persons),
Tajikistan (2 persons)

4. Eligible / Target Organizations:

Project implementation organizations engaging in flood control or ecosystem conservation in watershed areas

Example: Ministry of Environment, Ministry which is including section/department of river management and construction

It is required for Senegal and Tajikistan to send each specialist, one from flood control section, the other from ecosystem conservation.

5. Total Number of Participants: 8 participants

6. Working Language: English

7. Program Objective:

Adoptive watershed management methods will be systematically shared among organizations operating flood control and ecosystem conservation for watershed management by having mid-level working and senior administrative officers from such organizations participating in the training program (a three-year objective).

8. Overall Goal:

Watershed management methods will be systematically internationalized among organizations engaging in disaster prevention and those involved in ecosystem preservation as an adoptive measure for climate change. These organizations will work together to mitigate flood risk and preserve ecosystems effectively.

9. Expected Module Output and Contents:

This program consists of the following components.

(1) Preliminary Phase in a participant's home country (June to July, 2009) <i>Participating organizations make required preparation for the Program in the respective country.</i>	
Expected Module Output	Activities
Inception Report is Formulated.	Formulation and submission of Inception Report to the respective country's JICA Offices together with Application Forms.
(2) Core Phase in Japan (August 16 to October 17, 2009) <i>Participants dispatched by the organizations attend the Program implemented in Japan.</i>	
Expected Module Output 1: Participants will be able to explain the effects of climate change on the watersheds of their respective areas and discuss the possibility of introducing adoptive watershed management methods.	

L: Lecture, P: Practical training, S: Site Visit, D: Discussion/Unit per day

Topics	L	P	S	D	Details
Observation tour to Reisakubetsu and crescent-shaped lakes			1		Observation tour to Reisakubetsu and crescent-shaped lakes
Observation tour to Aioinakajima			1		Methods of floodplain management and resident involvement
Nuppuku River			1		Resident activities related to rivers
Lecture and practical training at the Kiso Sansen Park Center	1	1			Floodplain management methods: biodiversity and flood frequency
Flood control and biodiversity in the Kushiro River	1		1		River flood control and biodiversity conservation
GIS application and river management plan design		2			Floodplain management methods using GIS
GIS-based flood control plans and biodiversity conservation		5			Basic knowledge and operation of GIS

Terrestrial ecosystems and biodiversity	0.5	0.5			Protection of biodiversity and small mammals
Protection of biodiversity and small mammals			1		Environmental education/ecotourism using wetlands
Expected Module Output 2: Participants will be able to analyze current flood risks and the conditions/patterns of ecosystem destruction in the watersheds of their respective areas and explain tasks related to area management methods and ongoing adoptive measures					
Compatibility of flood control measures and agriculture in the Ichinoseki Flood Control Basin			1		Adoptive management methods in flood control basins
Floodway plans and flood control in the Chitose River: biodiversity conservation	1		1		Compatibility of flood control measures and environmental protection, environmental education by NPOs
Global environmental change/Kyoto Protocol	1				Reality of global environmental deterioration and the significance of the Kyoto Protocol
Post-Kyoto Protocol framework: relaxation and adoptive measures	0.5			0.5	Meanings of relaxation and adoptive measures in a post-Kyoto Protocol framework
(Fundamentals of landscape ecology)	1				Fundamentals of landscape ecology for floodplain management
Dams and watershed control	0.5	0.5			Dam-related effects and problems
Tokachi River control plans and monitoring	0.5	0.5			River management monitoring in Japan
Expected module 3: Participants will prepare action plans (temporary) for an adoptive watershed management project as a measure to deal with climate change.					
Research methods	1	1		1	PCM (Project Cycle Management)-based project development methods
Capacity development	0.5			0.5	

Consensus building/cooperation with NGOs	0.5		0.5	Consensus building/cooperation with NGOs
Interim report preparation			3	Provision of guidance to design action plans and individual coaching for interim report writing
Problem analysis workshops			1.5	Problem analysis workshops

The schedule is subject to change due to the coordination of curriculum.

3)Finalization Phase in a participant's home country (August, 2009 to March, 2010) <i>Participating organizations submit the Activities Report to JICA Overseas Office by March 17, 2010.</i>	
Expected Module Output	Activities
To formulate the Activities Report	Sharing and discussing the basic data and analysis results in their organizations and formulating a report about improvement

*Progress Report will be submitted by the participating organization, not by the individual participant.

<Whole Structure of the Three-year Program>

【Preparatory Phase:】

Submission of Inception Report (present state and issues)

1. First and second years program (for 60 days)

Expected Module Output 1: To be able to analyze current flood risks and the conditions/patterns of ecosystem destruction in the watersheds of their respective areas and explain tasks related to area management methods and ongoing adoptive measures.

Expected Module Output 2: To be able to explain the effects of climate change on the watershed

Expected Module Output 3: To formulate Action Plans (temporary) for an adoptive watershed management project at participants' home countries

*Submission of Progress Report on the Action Plans after within six months after returning home.

2. Third-year program(for 21 days)

Expected Module Output1~3

Expected Module Output 4: To formulate an Introductory Plan of necessary method for adoptive management planning applicable to the watersheds at participants' home countries.

【Finalization Phase】

Submission of Final Report which is to report the progress on the introductory of the adoptive management planning within six months of returning home

During six month until submission the course leader gives advices to the participants by means of internet.

III. Conditions and Procedures for Application

1. Expectations for the Participating Organizations:

- (1) This program is designed primarily for organizations that intend to address specific issues or problems identified in their operation. Participating organizations are expected to utilize the program for those specific purposes.
- (2) This program is enriched with contents and facilitation schemes specially developed in collaboration with relevant prominent organizations in Japan. These special features enable the program to meet specific requirements of applying organizations and effectively facilitate them toward solutions for the issues and problems.
- (3) As this program is designed to facilitate organizations to come up with concrete solutions for their issues, participating organizations are expected to make due preparation before dispatching their participants to Japan by carrying out the activities of the Preliminary Phase described in section II -9 .
- (4) Participating organizations are also expected to make the best use of the results achieved by their participants in Japan by carrying out the activities of the Finalization Phase described in section II -9.

2. Nominee Qualifications:

Applying organizations are expected to select nominees who meet the following qualifications:

Participants who should;

- (1) Be nominated by their government,
- (2) Current duties:
First and second years: Mid-level working officers in charge of flood control and ecosystem preservation projects within organizations
Third year: Senior administrative officers of organizations related to flood control and ecosystem preservation and academic experts directly involved in designing management plans for individual watershed,
- (3) Experience in the relevant fields: Individuals with at least five(5) years experience,
- (4) Educational background: be university graduates or equivalent,

- (5) Language: competent command of spoken and written English, which is equal to TOEFL iBT* 72 (CBT** 200/PBT*** 533) or more (the program is commanded by English; therefore participants are requested to have sufficient English ability),
*iBT: Internet-Based Testing/ **CBT: Computer-Based Testing/
***PBT: Paper-Based Testing
- (6) Health: must be in good health, both physically and mentally.
*Pregnancy : Pregnant participants are strictly requested to complete the required procedures before departure in order to minimize the risk for their health. The procedures include ①a letter of the participant's consent to bear economic and physical risks ②a letter of consent from the participant's supervisor ③a letter of consent from your Embassy in Japan, ④medical certificate. Please ask National Staff of JICA Office for the details.
- (7) Must not be serving any form of military service,
- (8) Preferable to have skills and knowledge on computer due to GIS program,
- (9) It is strongly recommended for each the same organization related to flood control and ecosystem conservation to nominate an applicant every year.

3. Required Documents for Application:

- (1) Application Form**: The Application Form is attached to this General Information.
- (2) Nominee's English Score Sheet**: to be submitted with the Application Form. If you have any official documentation of English ability (e.g., TOEFL, TOEIC, IELTS), please attach it (or a copy) to the application form.
- (3) Inception Report and Questionnaire**: to be submitted with the Application Form. Fill in Attachment-1 and 2 of this General Information, and submit it along with the Application Form.

4. Procedure for Application and Selection :

(1) Submitting the Application Documents:

Closing date for application to the JICA Center in Japan: **June 30, 2009**

Note: Please confirm the closing date set by the respective country's JICA Office or Embassy of Japan of your country to meet the final date in Japan.

(2) Selection:

After receiving the document(s) through due administrative procedures in the respective government, the respective country's JICA Office (or Japanese Embassy) shall conduct screenings, and send the documents to the JICA Center in charge in Japan, which organizes this program. Selection shall be made by the JICA Center in consultation with the organizations concerned in Japan based on submitted documents according to qualifications.

(3) Notice of Acceptance:

Notification of results shall be made by the respective country's JICA Office (or Embassy of Japan) to the respective Government by **not later than July 14, 2009.**

5. Conditions for Attendance:

- (1) to observe the schedule of the program,
- (2) not to change the program subjects or extend the period of stay in Japan,
- (3) not to bring any members of their family,
- (4) to return to their home countries at the end of the program in Japan according to the travel schedule designated by JICA,
- (5) to refrain from engaging in political activities, or any form of employment for profit or gain,
- (6) to observe the rules and regulations of their place of accommodation and not to change the accommodation designated by JICA, and
- (7) to participate the whole program including a preparatory phase prior to the program in Japan. Applying organizations, after receiving notice of acceptance for their nominees, are expected to carry out the actions described in section II -9 and section III-3.

IV. Administrative Arrangements

1. Organizer:

Name: JICA Obihiro

Contact:

(Address) 1-2, Minami 6-chome, Nishi 20-jo, Obihiro, Hokkaido, 080-2470, Japan

(Tel) 81(*)-155(**)-35-1210 (Fax) 81(*)-155(**)-35-1250

Note: *:country code for Japan, **:area code for Obihiro

(Email) jicaobic@jica.go.jp (Website) www.jica.go.jp/english

2. Implementing Partner:

Name: Northern Regions Center (NRC)

3. Travel to Japan:

(1) Air Ticket: The cost of a round-trip ticket between an international airport designated by JICA and Japan will be borne by JICA.

(2) Travel Insurance: Term of Insurance: From arrival to departure in Japan. The

traveling time outside Japan shall not be covered.

4. Accommodation in Japan:

JICA will arrange the following accommodations for the participants in Japan:

Obihiro International Center (OBIC)

Address: 1-2, Minami 6-chome, Nishi 20-jo, Obihiro, Hokkaido, 080-2470, Japan

TEL: 81-155-35-2001 FAX: 81-155-35-2213

(where "81" is the country code for Japan, and "155" is the local area code)

If there is no vacancy at OBIC, JICA will arrange alternative accommodations for the participants.

5. Expenses:

The following expenses will be provided for the participants by JICA:

- (1) Allowances for accommodation, living expenses, outfit, and shipping.
- (2) Expenses for study tours (basically in the form of train tickets).
- (3) Free medical care for participants who become ill after arriving in Japan (costs related to pre-existing illness, pregnancy, or dental treatment are not included).
- (4) Expenses for program implementation, including materials.

For more details, please see p. 8-16 of the brochure for participants titled "KENSU-IN GUIDE BOOK," which will be given to the selected participants before (or at the time of) the pre-departure orientation.

6. Pre-departure Orientation:

A pre-departure orientation will be held at the respective country's JICA Office (or Japanese Embassy), to provide participants with details on travel to Japan, conditions of the workshop, and other matters.

V. Other Information

1. Participants who have successfully completed the training program will be awarded a certificate by JICA.
2. **Medical history**
In case you have or have had malaria, you are kindly requested to bring the medicine for malaria with you because it is quite difficult to obtain it in Japan.
3. **Climate**
The climate condition in Obihiro is given below. Participants are advised to prepare appropriate clothes.

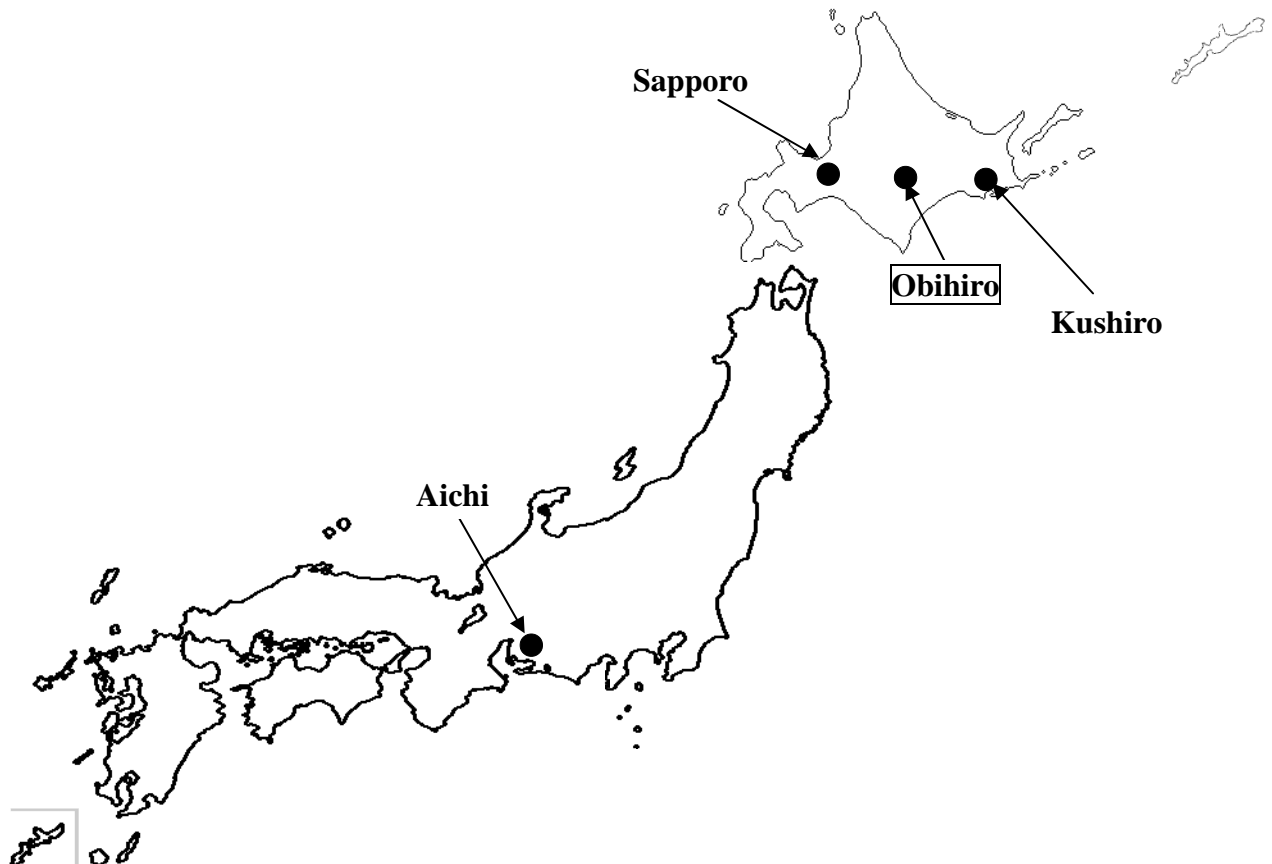
		Winter		Spring			Summer			Autumn			Winter
		Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Temperature (°C)	Maximum	-2.0	-1.0	3.4	11.3	17.6	20.4	23.7	25.1	21.2	15.4	7.7	1.1
	Average	-7.7	-6.8	-1.6	5.4	11.0	14.5	18.4	20	16	9.6	2.8	-3.7
	Minimum	-13.9	-13.2	-6.9	0.2	5.4	10.0	14.5	16.2	11.6	4.3	-1.9	-8.9
Humidity (%)		70	69	67	66	69	79	83	82	79	73	68	69
Precipitation (mm)		42.3	30.7	49.6	60.5	80.1	85.9	94.4	139.2	139.8	91.7	68.2	40.3

(Average from 1971 to 2000)

4. Study Trip

As a supplemental program, there are study trips during your stay.

1. Sapporo city(Capital city of Hokkaido)
2. Kushiro City(Eastern part of Hokkaido)
3. Aichi prefecture



VI. ANNEX:

Attachment-1

Inception Report

Participants are requested to prepare an Inception Report on the following issues and Questionnaire, and submit it to the respective country's JICA Office or JICA Obihiro by **June 30, 2009**, preferably by e-mail to jicaobic@jica.go.jp.

a. Purposes

- (1) To clarify issues and problems presently faced in their work in order to facilitate the acquisition of knowledge and ideas leading to solutions during the training program.
- (2) To provide advance information regarding issues and problems faced by participants to lecturers and organizations concerned with the program as a point of reference in finding solutions.

b. Contents

- (1) Name of organization
- (2) Organization chart
- (3) Risk of global climatic changes
 - (a) What will be the most serious risk in your drainage basin caused by global climatic changes in the viewpoint both **flood countermeasure** and conservation of biodiversity?
 - (b) What kind of adaptation work you wish to do in your drainage basin ?

c. Layout

Typewritten in English, 3-5 pages (12-point font, double spaced, A4 size paper)

d. Presentation

The Inception Report is to be presented by each participant using MS PowerPoint at the beginning of the program.

- (1) The time allocation for each presentation of the Inception Report will be about 10 minutes.
- (2) It is advisable to bring some materials such as pictures or other visual aids to show your country's wildlife management and wildlife issues situation.

Questionnaire

Name: _____

Country: _____

Please indicate the following materials on your drainage basin.

1. Map of land use
2. Map of vegetation
3. Population
4. Basic climatic condition
 - 1) Mean annual temperature
 - 2) Monthly air temperature
 - 3) Monthly precipitation data
5. River data
 - 1) River length and surface of drainage basin
 - 2) Maximum and minimum discharge
 - 3) Water qualities, if available, indicate BOD, COD level or any bio-index etc.
6. Please name specifically the endangered species of plants, animals and insects which should be conserved from the viewpoint of biodiversity in your designated drainage basin.

*Please submit the Questionnaire with A2A3 Nomination form and Inception Report.

*It is preferable to bring slides or photos of drainage basin in your region so that we can understand your conditions more clearly.

This program includes “Beginner’s Computer Class” for those who want to attend. If you want to attend it, please mark YES or NO and send it with the Application Form.

YES

NO

**Beginner’s Computer Class
(5 times complete, 10 hours total)**

The purpose of this class is to provide the basic knowledge and information about the computer. However, a level can be adjusted to the level of your group. The schedule is as follows.

First day	:	Windows XP, Basic operation of MS Word
Second day	:	Basic operation of MS Word
Third day	:	Basic operation of Internet
Forth day	:	Basic operation of MS PowerPoint
Fifth day	:	Basic operation of MS PowerPoint

- NOTE:
1. Those who answer “YES” should attend 5-day classes.
 2. Those who answer “NO” can not apply for the attendance after you come to Japan.

For Your Reference

JICA and Capacity Development

The key concept underpinning JICA operations since its establishment in 1974 has been the conviction that “capacity development” is central to the socioeconomic development of any country, regardless of the specific operational scheme one may be undertaking, i.e. expert assignments, development projects, development study projects, training programs, JOCV programs, etc.

Within this wide range of programs, Training Programs have long occupied an important place in JICA operations. Conducted in Japan, they provide partner countries with opportunities to acquire practical knowledge accumulated in Japanese society. Participants dispatched by partner countries might find useful knowledge and re-create their own knowledge for enhancement of their own capacity or that of the organization and society to which they belong.

About 460 pre-organized programs cover a wide range of professional fields, ranging from education, health, infrastructure, energy, trade and finance, to agriculture, rural development, gender mainstreaming, and environmental protection. A variety of programs are being customized to address the specific needs of different target organizations, such as policy-making organizations, service provision organizations, as well as research and academic institutions. Some programs are organized to target a certain group of countries with similar developmental challenges.

Japanese Development Experience

Japan was the first non-Western country to successfully modernize its society and industrialize its economy. At the core of this process, which started more than 140 years ago, was the “*adopt and adapt*” concept by which a wide range of appropriate skills and knowledge have been imported from developed countries; these skills and knowledge have been adapted and/or improved using local skills, knowledge and initiatives. They finally became internalized in Japanese society to suit its local needs and conditions.

From engineering technology to production management methods, most of the know-how that has enabled Japan to become what it is today has emanated from this “*adoption and adaptation*” process, which, of course, has been accompanied by countless failures and errors behind the success stories. We presume that such experiences, both successful and unsuccessful, will be useful to our partners who are trying to address the challenges currently faced by developing countries.

However, it is rather challenging to share with our partners this whole body of Japan’s developmental experience. This difficulty has to do, in part, with the challenge of explaining a body of “tacit knowledge,” a type of knowledge that cannot fully be expressed in words or numbers. Adding to this difficulty are the social and cultural systems of Japan that vastly differ from those of other Western industrialized countries, and hence still remain unfamiliar to many partner countries. Simply stated, coming to Japan might be one way of overcoming such a cultural gap.

JICA, therefore, would like to invite as many leaders of partner countries as possible to come and visit us, to mingle with the Japanese people, and witness the advantages as well as the disadvantages of Japanese systems, so that integration of their findings might help them reach their developmental objectives.



CORRESPONDENCE

For enquiries and further information, please contact the JICA Office or the Embassy of Japan. Further, address correspondence to:

JICA Obihiro International Center (JICA Obihiro)

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TEL: +81-155-35-1210 FAX: +81-155-35-1250

Website: www.jica.go.jp/english/

E-mail: jicaobic@jica.go.jp