

No.12040/37/2013-FTC (Trg.)
Government of India
Ministry of Personnel, Personnel Grievances and Pensions
Department of Personnel and Training
[Training Division]

Block-4, Old JNU Campus
New Mehrauli Road, New Delhi-67
Dated 24th June, 2013

TRAINING CIRCULAR

Subject: Group Training Course on 'Integrated Basin Management for Lake Environment to be held in Japan under the Technical Cooperation Programme of the Government of Japan

The undersigned is directed to state that the Japan International Cooperation Agency (JICA) has invited applications for the above mentioned training programme to be held in Japan September 02, 2013 to November 02, 2013 under the Technical Cooperation of the Government of Japan.

2. The programme aims to strengthen the participants' capacity to apply the concept of Integrated Lake Basin Management (ILBM) for meeting their lake basin management challenges.

3. The program is offered to mid-career government officials and senior researchers responsible for the management of lakes (natural and artificial) and their basins for sustainable use. The nominees for this course should be technical officer in charge of lake/wetland water management (including management of rivers flowing into such water bodies) who are expected to assume executive administrative posts in that field or researchers in water quality and ecosystem management who are expected to take leading roles in guiding the lake/wetland management programs with more than three (3) years of occupational experience in the relevant field; be fluent in spoken and written English; be in good health (both physically and mentally), not be a part of military service. The official between the age group of twenty-five (25) and forty (40) years will be preferred.

4. In addition, the following information in respect of the nominated officers may please be mentioned while furnishing the nomination:-

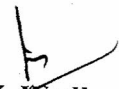
- a) Whether attended any foreign training programme in the past? If so, the duration/detail thereof;
- b) Whether cleared from vigilance angle;
- c) Age;
- d) Whether working in North East State/J&K;
- e) A brief in 50-100 words justifying the nomination.

5. The course covers the cost of a round-trip air ticket between international airport designated by JICA and Japan; travel insurance from the time of arrival in Japan to departure from Japan; allowances for (accommodation, living expenses, outfit and shipping); expenses for JICA study tours and free medical care for participants who may fall ill after reaching Japan (costs relating to pre-existing illness, pregnancy, or dental treatment are not included).

6. It is therefore requested that the nomination of suitable candidates may please be forwarded (in duplicate) in JICA's prescribed form (available in persmin.nic.in→DOPT→Training Wing→Circular→JICA) to this Department duly authenticated by the HOD of the concerned department in accordance with the eligibility criteria.

...2/-

7. The applications should reach this Department through the Administrative Ministry/State Government not later than **July 01, 2013**. Nominations received after the prescribed date will not be considered. The details of the programme may be drawn from Ministry of Personnel, Public Grievances and Pensions' website (persmin.nic.in).



(N.K. Wadhwa)

Under Secretary to the Government of India
Tele.No.011-26165682

Copy to:

- a) The Secretary, M/o water Resources, Shram Shakti Bhavan, Rafi Marg, New Delhi-110001,
- b) The Secretary, M/o Environment & Forest, Paryavaran Bhawan, CGO Complex, Lodhi Road, New Delhi-110003,
- c) All State Governments/Union Territories(with request to circulate the same amongst their related Departments/Organizations).
- d) NIC with request to post the circular along with the JICA's circular on this Department's website.

O/C


जारी किया
ISSUED



TRAINING AND DIALOGUE PROGRAMS

**GENERAL INFORMATION ON
INTEGRATED BASIN MANAGEMENT
FOR LAKE ENVIRONMENT**

**集団研修「湖沼環境保全のための統合的湖沼流域管理」
JFY 2013**

**<Type: Solution Creation / 類型：課題解決促進型>
NO. J13-00794/ ID. 1380988**

From August 2013 to April 2014

Phase in Japan: From September 2, 2013 to November 2, 2013

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 Governments.

I. Concept

Background

Lakes/wetlands play a vital role as fresh water resources for drinking water, agricultural water and industrial water. Lakes/wetlands, including saline waters, also serve for fishery resources and for recreational activities.

In recent years, however, there is growing concern especially in developing countries about the degradation of lake and their basin environments caused by inappropriate management. Technical officers and policy makers in charge of managing lakes/wetlands are required to have comprehensive knowledge and skill about the possible approaches for sustainable lake basin management. This program is meant to contribute to meet such needs.

For what?

This program is designed to strengthen the participants' capacity to apply the concept of Integrated Lake Basin Management (ILBM) for meeting their lake basin management challenges.

For whom?

Mid-career government officials and senior researchers responsible for the management of lakes (natural and artificial) and their basins for sustainable use

How?

This program is composed of 3 stages with 11 topics according to the various ILBM resource materials. ILBM is an approach for achieving sustainable management of lakes and reservoirs through gradual, continuous and holistic improvement of basin governance, including sustained efforts for integration of institutional responsibilities, policy directions, stakeholder participation, scientific and traditional knowledge, technological possibilities, and funding prospects and constraints.

In the first stage, the participants will review the biophysical characteristics of lakes and their resource use features. In the second stage, the participants will learn how to address the governance challenges in lake basin management, focusing on ILBM. And finally, participants will learn how to integrate all the major components of lake basin management in the form of ILBM Platform Process.

The program will be implemented through lectures, field visits and interactive sessions. The participants will work closely together with those from other countries having different technical and disciplinary backgrounds, in recognition that lake basin management generally involves various sector organizations and stakeholders having different sector interests and priorities.

*** The GEF-LBMI Report, “Managing Lakes and their Basins for Sustainable Use” can be downloaded from the following page.**

<http://www.ilec.or.jp/en/pubs/p2/lbmi>

Other relevant publications including “Guidelines for Lake Brief Preparation” can be downloadable from the following page as well.

<http://www.ilec.or.jp/en/pubs>

II. Description

1. Title (J-No.) : Integrated Basin Management for Lake Environment (J13-00794)

2. Period of program

Duration of whole program:	August 2013 to April 2014
Preliminary Phase: (in participant's home country)	August 2013 to September, 2013
Core Phase in Japan:	September 2, 2013 to November 2, 2013
Finalization Phase: (in participant's home country)	November 2013 to April 2014

3. Target Regions or Countries: Brazil, India, Kenya and Zimbabwe

4. Overall Goal:

Activities for solving the problems related to Lake Basin Management are continuously implemented with cooperation among relevant organizations based on the Action Plans.

5. Objective:

(1) Program objectives

For the participants to become adequately knowledgeable about the fundamental of lake basin management, and to become able to play a major catalytic role in developing the needed governance framework

(2) Expected Module Output:

(Preliminary Phase in Participants' home countries)

1. Preliminary Lake Basin Report and Lake Basin Questionnaire are completed.

(Core Phase in Japan)

2. Participants are able to explain the resources of lakes and its utilization.

3. Participants are able to explain the challenges of governance in the field of Lake Basin management in general and in their respective country.

4. Participants are able to propose a draft Action Plan, to solve the problems/challenges which participants' organization are facing, by properly integrating the components of the governance framework involving institutions, policies, stakeholder participation, technological investments, information, financing and other considerations.

(Finalization Phase in Participants' Home Countries)

5. Draft Action Plans are shared and discussed by the participating organization

6. Eligible / Target Organization :

Division in National/Local government which is in charge of Management of Lakes and their basins

* Management of lakes and their basins requires close cooperation among different sectoral organizations. This training program offers some clues as to how such cooperation may be pursued. Representatives from sectoral organizations willing to

explore ways to achieve sustainable management of lake basins by contributing to strengthen the overall basin governance framework are welcome to send a participant to this program.

7. Total Number of Participants :

4 participants in total from 4 countries which are Brazil, India, Kenya and Zimbabwe

8. Language to be used in this project : English (including English translated from Japanese through interpreters)

9. Contents:

This program consists of the following components. Details on each component are given below:

(1) Preliminary Phase in participant’s home country (~September 1, 2013)

Participating organization make required preparation for the Program in the respective country.

【Output1】 Preliminary Lake Basin Report and Lake Basin Questionnaire are completed.	
Modules	Activities
Report Preparation	<ul style="list-style-type: none"> ♣ Formulation of Preliminary Lake Basin Report and Lake Basin Questionnaire <ul style="list-style-type: none"> ◆ Participants are required to prepare 1) Preliminary Lake Basin Report (LBR) and 2) Lake Basin Questionnaire, according to the instructions in V. ANNEX1. and VI. ANNEX 2. ◆ Participants will be required to give a short presentation on their LBRs, using Power Pont Slides at the beginning of the program after arriving in Japan. ◆ The LBR should be <ul style="list-style-type: none"> -typewritten single-spaced in English(about 20 pages, A-4 size) -submitted to JICA as an original hard copy and as a copy saved on CD-Rom or USB memory stick by the time of arrival in Osaka. ◆ Participants are recommended to bring supplementary materials, such as photos and map which show the lake environment in the participants’ countries.



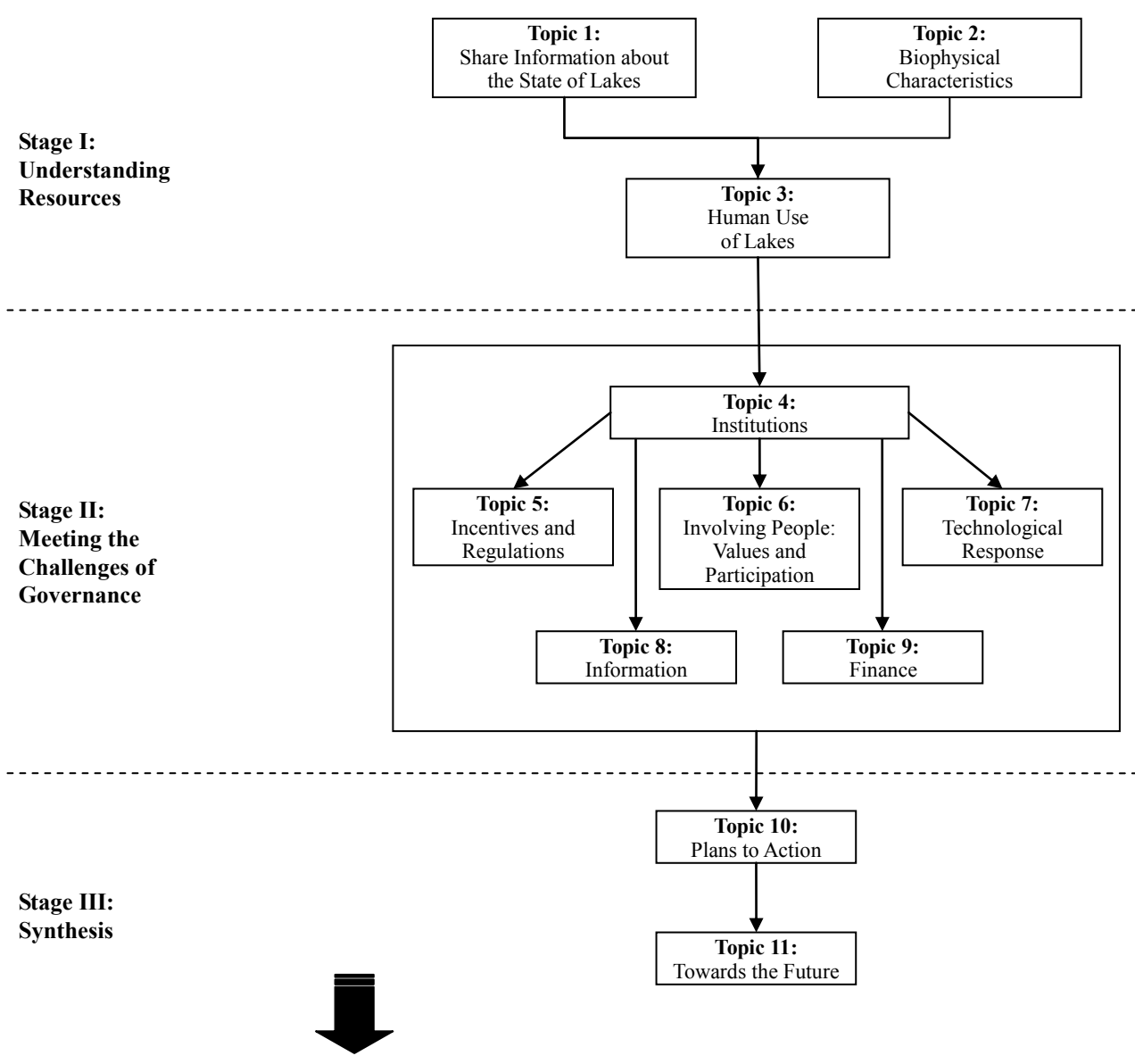
(2) Core Phase in Japan (September 2, 2013 to November 2, 2013)

Participants dispatched by the organizations attend the Program implemented in Japan.

【Introduction】	
Modules	Subjects/Agendas/Methodology
Introduction	Course Orientation
	<ul style="list-style-type: none"> ♣ Presentation of LBRs <ul style="list-style-type: none"> ◆ Each participant will make presentation on LBR. ◆ Sharing the <u>difficulties or challenges which participants’ organizations are facing</u> and confirming what should be learned during the course.

【Output2】 Participants are able to explain the resources of lakes and their utilization.	
Modules	Subjects/Agendas/ Methodology
Stage I: Understanding Resources	Topic 1: Share information about the State of Lakes
	Topic 2: Biophysical Characteristics
	Topic 3: Human use of Lakes
【Output3】 Participants are able to explain the challenges of governance in the field of Lake Basin management in general and in their respective country.	
Modules	Subjects/Agendas/ Methodology
Stage II: Meeting the Challenges of Governance	Topic 4: Institutions
	Topic 5: Incentives and Regulations
	Topic 6: Involving People: Values and Participation
	Topic 7: Technological Response
	Topic 8: Information
	Topic 9: Finance
【Output4】 Participants are able to propose an draft Action Plan, to solve the problems/challenges which participants' organization are facing, by properly integrating the components of the governance framework involving institutions, policies, stakeholder participation, technological investments, information, financing and other considerations.	
Modules	Subjects/Agendas/ Methodology
Stage III: Synthesis	Plans to Action
	Towards the future
Action Plan Preparation	Interview with course leader to get the guidance on making Action Plan (Participants will have several opportunities to get the guidance during the program)
	Preparation of Action Plan
	Presentation and discussion of Action Plan

***Flowchart of the program in Japan**



(3) Finalization Phase in participant's home country (November 2013 to April 2014)

Participating organizations produce final outputs by making use of results brought back by participants. This phase marks the end of the Program.

【 Output5 】 Draft Action Plans are shared and discussed by the participating organization	
Discussion and Finalization of Action Plan	<ul style="list-style-type: none"> ♣ Sharing and discussing of draft Action Plan in the participating organization ♣ Finalization of draft Action Plan
Submission of final report to JICA regional Office	<ul style="list-style-type: none"> ♣ Submitting Final report including description of progress of Action Plan to respective JICA Regional Offices (Deadline: April 30 e, 2014)



【 Program Objective 】 For the participants to become adequately knowledgeable about the fundamental of lake basin management, and to become able to play a major catalytic role in developing the needed governance framework.

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 use 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.

2. Nominee Qualifications:

Applying Organizations are expected to select nominees who meet the following qualifications.

(1) Essential Qualifications:

- 1) **Current Duties:** be either technical officer in charge of lake/wetland water management (including management of rivers flowing into such water bodies) who are expected to assume executive administrative posts in that field or researchers in water quality and ecosystem management who are expected to take leading roles in guiding the lake/wetland management programs in their country.
- 2) **Experience in the relevant field:** more than three (3) years' occupational experience in the field.
- 3) **Language :** have a competent command of spoken and written English which is equal to TOEFL 70 (iBT) or more (This training course include active participation in discussions, Action Plan development, thus requires high competence of English ability. Please attach official certificate for English ability such as TOEFL, TOEIC etc, if possible).
- 4) **Health:** must be in good health, both physically and mentally, to participate in the Program in Japan.
- 5) Must not be serving any form of military service.

(2) Recommendable Qualifications:

- 1) **Age:** be between twenty-five (25) and forty (40) years of age

3. Required Documents for Application:

(1) **Application Form:** The Application Form is available at the respective country's JICA office or Embassy of Japan. **Applicants are strongly encouraged to choose one or two of the following "Six Pillars of Governance" which best match their interest, and to describe them in "Area of Interest" in the Application Form – Part B, 6. 3).**

Six Pillars of Governance

- (1) Institutions to manage a lake and its basin for the benefit of all lake basin resource users
- (2) Policies to govern people's use of lake resources, and its impacts on lakes
- (3) Involvement of people to facilitate all aspects of lake basin management
- (4) Technological possibilities and limitations that often dictate long-term decisions
- (5) Knowledge of both traditional and modern scientific origin as the basis for informed decisions
- (6) Sustainable finances to support implementation of all of the above-noted activities

*Pregnancy

Pregnant participants are strictly requested to attach the following documents in order to minimize the risk for their health:

1. letter of the participant's consent to bear economic and physical risks,
2. letter of consent from the participant's supervisor, and
3. doctor's letter with agreement of her training participation.

Please ask National Staffs in JICA office for details.

(2) **Organization Chart:** Please describe correlation charts of organizations which involved in basin management for lake environment, and indicate which is your organization.

Note: Applications not accompanied by Organization Chart cannot be duly considered.

Attention! : All documents should be in English and typewritten by PC or handwritten in BLOCK LETTERS, NOT in *Running Hand*.

4. Procedure for Application and Selection :

(1) **Submitting the Application Documents:**

Closing date for application to the JICA Center in JAPAN: **July 5, 2013**

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 Embassy of Japan) shall conduct screenings, and send the documents to the JICA Kansai in charge in Japan, which organizes this program. Selection shall be made by the JICA Kansai, according to qualifications in consultation with the organizations concerned in Japan, based on submitted documents. *The organization with intention to utilize the opportunity of this program will be highly valued in the selection.*

(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 August 2, 2013.**

5. Conditions for Attendance:

- (1) to follow 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 Japanese laws and ordinances. If there is any violation of said laws and ordinances, participants may be required to return part or all of the training expenditure depending on the severity of said violation.
- (7) to observe the rules and regulations of their place of accommodation and not to change the accommodation designated by JICA, and
- (8) to participate the whole program including a preparatory phase prior to the program in Japan.

IV. Administrative Arrangements

1. Organizer:

(1) **Name:** JICA Kansai International Center (JICA Kansai)

(2) **Contact:** Ms. Makiko NAEMURA

(Naemura.Makiko@jica.go.jp, jicaksic-unit@jica.go.jp)

2. Implementing Partners:

(1) **Name:** International Lake Environment Committee: ILEC

(2) **Contact:** Mr. YAMAMOTO Naoya (nyamamoto@ilec.or.jp)

(3) **URL:** <http://www.ilec.or.jp/en/>

(4) **Remark:** The International Lake Environment Committee Foundation (ILEC), formed in 1986, is an international non-governmental organization (NGO), and obtained legal status in 1987.

ILEC was organized with the aim of promoting environmentally sound management of natural and man-made lakes and their environments consistent with sustainable development policies by promoting international research and investigation, and by facilitating the exchange of findings and knowledge among the experts throughout the world.

Its building is located on the shore of Lake Biwa in Shiga Prefecture, Japan.

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:

(1) JICA Kansai International Center (JICA Kansai)

Address: 1-5-2, Wakinohama-kaigandori, Chuo-ku, Kobe, Hyogo 651-0073, Japan

TEL: 81-78-261-0383 FAX: 81-78-261-0465

(where "81" is the country code for Japan, and "78" is the local area code)

(2) International Lake Environment Committee Foundation (ILEC)

Address : 1091 Oroshimo-cho, Kusatsu-shi, Shiga 525-0001, Japan

TEL : 81(*)-77(**)-568-4567 FAX : 81(*)-77(**)-568-4568

(where "81" is the country code for Japan, and "77" is the local area code)

Note: Please refer to "V. Other Information" for the stay in ILEC.

If there is no vacancy at JICA Kansai or ILEC, JICA will arrange alternative accommodations for the participants. Please refer to facility guide of JICA Kansai at its URL, <http://www.jica.go.jp/english/contact/domestic/index.html>.

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),
and
 - (4) Expenses for program implementation, including materials.
- For more details, please see p. 8-16 of the brochure for participants titled "KENSHU-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 Embassy of Japan), to provide participants with details on travel to Japan, conditions of the participation in the Program, and other matters.

V. Other Important Information

1. Participants who have successfully completed the program will be awarded a certificate by JICA.
2. For the promotion of mutual friendship, JICA Kansai encourages international exchange between JICA participants and local communities, including school and university students as a part of development education program. JICA participants are expected to contribute by attending such activities and will possibly be asked to make presentations on the society, economy and culture of their home country.
3. Participants are strongly advised to bring your own personal computers for your convenience. Through the program, participants are required to work on computers intensively for various assignments including GIS lecture, preparation of Action Plans, etc. Desk top computers are available in JICA Kansai, however, not in the ILEC and other facilities.
4. Allowances, such as for accommodation, living, clothing, and shipping, will be deposited to your temporary bank account in Japan after 2 to 5 days after your arrival to Japan. It is highly advised to bring some cash / traveler's check in order to spend necessary money for the first 2 to 5 days after your arrival.
5. It is very important that your currency must be exchanged to Japanese Yen at any transit airport or Kansai International Airport (KIX) in Osaka, Japan soon after your arrival. It is quite difficult to exchange money after that, due to no facility or time during the training program.
6. Stay in ILEC (Cooking)
Participants are kindly requested to cook for themselves at ILEC, because ILEC has no restaurant. ILEC's accommodation has kitchen in each room and is equipped with all the kitchen utensils and tableware. Please be ready to cook for yourself at ILEC, where you will spend roughly more than half of the days in Japan.

VI. ANNEX1 Preliminary Lake Basin Report

Please complete the report and questionnaire according to the instructions below. These should be submitted on the arrival in Japan. Also it is recommended to bring the photos and maps which show the lake environment in the participants' countries.

If you need former participants' Final Report for your reference, please contact Mr. Naoya Yamamoto of ILEC at nyamamoto@ilec.or.jp

Preliminary Lake Basin Report

(For Introductory Presentation during the Training Program)

The participants will be requested to make a short presentation on their Lake Basin Reports (LBRs), using PowerPoint slides. An LBR can be described by the following general outline:

1. Introduction
2. The Lake
3. Management of the Lake and Its Basin
4. Key Challenges
5. References

1. Introduction. (based in part on Lake Basin Questionnaire items, 10 and 11, 14 and 15)

This section should describe the socio-economic context (people, livelihood, economy, institutions, political structure, etc.) of the region, country, or the basin in which the lake is located. It should summarize the overall importance of the lake and its drainage basin, from the perspective of its significance as a natural habitat and its social, economic, political, cultural and recreational importance to the human population in the region, and for globally-important lakes of the world.

2. The Lake (based in part on Lake Basin Questionnaire items, 1 through 9)

2.1 Overview

This section should provide information on the biophysical feature of the lake and its drainage basin. It should also present basic physical characteristics including the water surface and drainage areas, depth and volume of the lake, etc. The landscape of the drainage basin as well as the past and current land use patterns should also be mentioned. It should also summarize the environmental state of the lake in relation to its drainage basin.

List the human and environmental benefits derived from the lake/reservoir and its drainage area.

2.2 State of the Lake

To be included here is the past and present states of the lake's water environment, including water quantity and quality, and aquatic biota (flora and fauna). Any regionally or globally important aspects of the lake's environment should be identified.

3. Management of the Lake and Its Basin

(based in part on Lake Basin Questionnaire items, 10 through 14)

3.1 Overview of Management Needs

- What is the importance of the lake/reservoir to the population of its drainage basin? What are the major socio-economic-political characteristics of the lake/reservoir and its drainage basin?
- What is the importance of the lake/reservoir for the economy of the region? Describe a brief history of the resource degradation and environmental problems that the lake and its drainage basin have experienced over past decades (e.g., the impacts of industrial, urban, and agricultural development).
- Provide an overview of resource development, use and conservation conflicts within the lake and its drainage basin resulting in significant environmental threats to the sustainable use of the lake resources (resource exploitation, watershed degradation, declining fishery, biodiversity losses, etc).

3.2 Management Programs and Processes

- To what extent have land-based and water-based activities occurring in and around the lake and within its drainage basin been reduced (by, for example, control of domestic, industrial and other pollution loads, control of urban and agricultural run-offs, including that resulting from watershed degradation, excessive flow control and water withdrawal, over-fishing, loss of wetlands and riparian zones)?
- Are there any formal plans or policies for management of the lake and its drainage basin or, in the absence of formal plans and policies, the existing legal and policy basis for lake management? Describe the major water pollution control programs, management of water abstraction from the lake and its inflowing rivers, legal framework for the prevention of lake water and lake environment quality degradation, including land-use control, environmental and ecosystem management and restoration, as well as specific instruments for financing lake management including user fees, taxes, fish levies, zoning charges, tradable permit systems, etc.). This section also should identify important gaps, issues and challenges.

4. Key Challenges (based largely on your insights and impressions)

This section should identify key challenges with regard to such issues as policy development, institutional and management frameworks, capacity building efforts, financing mechanisms, stakeholder involvement, scientific research and community-based knowledge-base development, sharing, transfer and dissemination of information, etc., as well as the corresponding investment approach, considerations and priorities. The questions to ask may include;

- (a) Has there been an emergence of political interest and commitment to managing and using the lake and its resources in a more sustainable manner, and the reasons for this emergency?
- (b) Have there been attempts to establish sustainable institutions that can adequately address multi-national, multi-sectoral issues and multi-stakeholder interests involved in managing the lake for sustainable use;

- (c) Will there be efforts to develop financing subsidizing mechanisms for management activities focusing on sustainable lake use?
- (d) Will there be attempts to establish a new legislative framework and policies for lake management?
- (e) Will there be efforts to enhance the extent of stakeholder participation in the design and implementation of the lake management program?
- (f) Will there be a plan or plans to strengthen the linkages between the lake management program and the broader national and regional water resources management efforts?
- (g) Will there be efforts to better incorporate scientific information and research in the lake management program?

5 References

List useful supplementary reading materials on the lake, the lake basin, and the region including your country, which complement this Report.

VII. ANNEX2 Lake Basin Questionnaire

Please provide as much information as possible. Information relating to items displayed in boxes below may be omitted from the questionnaire if not readily available. It may, however, be found later in the scientific literature or in the global database, or even during the course of training program. Identify as many reference materials on the subjects as possible and be prepared to have ready access to them if and when needed for improving the Preliminary Lake Basin Report as a Final Report.

1. Basic Information

1.1 Name(s)

1.1.1 In English (All official names, if called in more than one way.)

1.1.2 In local language(s)

1.2 Location

1.2.1 Latitude (range from West to East)

1.2.2 Longitude (range from South to North)

1.2.3 Elevation at water surface from sea level

1.2.4 Riparian countries and sub-national (state, province, etc.) jurisdictions

1.2.5 Non-riparian basin (upstream) countries and sub-national jurisdictions

1.3 Origin

1.3.1 In the case of natural lakes

- Origin of the lake (e.g., glacial, tectonic, volcanic, etc.)
- Estimate of the age of the lake

1.3.2 In case of artificial lakes (reservoirs)

- Describe the physical features
- Years of construction in phases

1.4 Basin and/or Watershed, Map(s)

1.4.1 Major inflowing and out-flowing rivers

1.4.2 Main cities and other points of interest

1.4.3 National/sub-national jurisdictional boundaries

1.4.4 Etc.

1.5 Basin Demography, Map(s)

1.5.1 Population and density distribution

1.5.2 Etc.

(The participants are requested to bring along maps and other resource materials containing geographical, demographical, land-use, geo-hydrological information for the lake and its basin and/or watershed.)

1.6 Landscape and waterscape

1.6.1 Visual features of the lake and its basin

(The participants are requested to bring along photos of various kind including landscape, physical facilities, water quality problems, land and water uses in the riparian as well as upstream regions, biological and ecosystem conditions including unique fauna and flora, etc., for possible use in the final report.)

2. Morphology

2.1 Bathymetric map, if available

- 2.2 Volume (in km³)
- 2.3 Surface Area (in km²)
- 2.4 Length and width (in km)
- 2.5 Length of shoreline (in km)
- 2.6 Maximum depth (in m)
- 2.7 Mean depth (in m)
- 2.8 Note on intra- and inter-annual changes in water level and volume, if information is available (provide a note on water level changes due to flow regulations)

3. Water Balance

- 3.1 Inflow (Annual average in m³ per year)
 - 3.1.1 Precipitation
 - 3.1.2 Rivers (Note if they are controlled.)
 - 3.1.3 Groundwater
 - 3.1.4 Diversions
- 3.2 Outflow (Annual average in m³ per year, if information is available.)
 - 3.2.1 Evaporation
 - 3.2.2 Rivers (Controlled?)
 - 3.2.3 Groundwater
 - 3.2.4 Diversions
- 3.3 Retention time (In years, if information is available.)
 - 3.3.1 Theoretical filling time (Lake volume/annual inflow)
 - 3.3.2 Theoretical flushing time (Lake volume/annual outflow)
- 3.4 Notes on any long-term changes

4. Climate

- 4.1 Average T, min monthly T, max monthly T (in centigrade)
- 4.2 Average Precipitation, min monthly precipitation, max monthly precipitation (in mm)
- 4.3 Prevailing wind directions by season, strength
- 4.4 Seasonal and inter-annual variability (Describe.)

5. State of Ecosystem

- 5.1 Description on the state of ecological health including conservation of fauna and flora
- 5.2 Description on the state of biodiversity conservation

6. Physical Data

- 6.1 Temperature of water
 - 6.1.1 Versus time
 - 6.1.2 Versus depth
- 6.2 Freezing period and extent of freezing
- 6.3 Mixing
 - 6.3.1 Vertical
 - 6.3.2 Horizontal (Note main bays, sub-basins of lake.)

- 6.4 Stratification
 - 6.4.1 Period and extent of stratification

- 7. Chemical Data
 - 7.1 Concentrations: The state of chemical water quality in general including the states of eutrophication, i.e., oxygen demand, N and P concentration values (organic, inorganic, particulate, total, if available), salinity, organic and inorganic chemical pollution.
 - 7.2 Loadings (tons/yr.) of inputs from rivers, groundwater, and the atmosphere

- 8. Biotic Data (Main species, exotics, productivity change through time)
 - 8.1 The overall state of the lake ecosystem including its biodiversity
 - 8.2 Phytoplankton, Zooplankton, Fish
 - 8.3 Benthos, Avifauna
 - 8.4 Linkages (e.g., Describe briefly the ecosystem/biodiversity issues in general with regard to littoral wetlands, rivers, air (birds, etc.).

- 9. State of the Basin
 - 9.1 Description of the catchment area including its size (in km²), general geography of the region in relation to the lake and other neighboring water bodies (other lakes connected in chain, for example), catchment (draining-in) system, catchment area of the out-flowing river (draining-out) system
 - 9.2 Basin hydrology (Briefly describe basin hydrology, including active as well as non-active parts.)
 - 9.3 Soil types (refer to a soil map, if available)
 - 9.4 Land cover with changes through time (Briefly describe seasonal land-use changes, by referring to a land-use map.)
 - 9.5 Notes on sub-surface drainage (Briefly describe underground water flows, referring to hydrographical and hydrological maps, if available.)

- 10. Uses of the Lake and Its Resource Development Facilities
 - 10.1 Water
 - 10.1.1 Flood/drought control facilities
 - 10.1.2 Drinking water withdrawal and facilities
 - 10.1.3 Agricultural water withdrawal and facilities
 - 10.1.4 Industrial water withdrawal and facilities
 - 10.2 Fisheries and their facilities
 - 10.3 Tourism facilities
 - 10.4 Others

- 11. Impairments to Uses
 - 11.1 Increased algal growth
 - 11.2 Increased salinity
 - 11.3 Destruction of wetlands
 - 11.4 Declining fish stocks

- 11.5 Other

- 12. Causes of Impairments
 - 12.1 Upper-watershed degradation including erosion and siltation
 - 12.2 Point and non-point source runoff from urban areas
 - 12.3 Shoreline degradation and alterations
 - 12.4 Other

- 13. Structural Management Response
 - 13.1 Sewerage system
 - 13.2 Industrial wastewater treatment system
 - 13.3 Solid and hazardous waste management system
 - 13.4 Other

- 14. Non-structural Management Response
 - 14.1 Rules
 - 14.1.1. Informal (informal community rules and voluntary restrictions)
 - 14.1.2. Formal (industrial effluent regulations, protected areas (land use restrictions, ecological reserves), etc.)
 - 14.2 Economic Incentives (subsidies, taxes, etc.)
 - 14.3 Awareness Raising (public awareness-raising including environmental education, environmental campaigns, activities of environmental NGOs and CBOs, etc.)

- 15. Socioeconomic Information (partial duplication of 1.5)
 - 15.1 Population dynamics (numbers, distribution, main cities, percent urban/rural, etc.)
 - 15.2 Education (extent and types of education, literacy rates, etc.)
 - 15.3 Culture (languages, ethnicity, including indigenous peoples, religion, legends/beliefs about the lake)
 - 15.4 Economic sectors (major industries and their production statistics, regional economic development issues including energy, transportation, commerce sectors, livelihood issues in different parts of the lake basin, i.e., coastal regions, upland regions, upper-watershed regions, Gross National Income per capita within the basin (noting how it might differ from the national average(s)))

- 16. Political Situation (partial duplication of 1.2)
 - 16.1 Nations within basin
 - 16.2 Sub-national boundaries
 - 16.3 Describe briefly the political history of the region
 - 16.4 Describe briefly the governance challenges for the people to have;
 - 16.4.1. Access to information
 - 16.4.2. Rights to participation
 - 16.4.3. Access to justice

VII. ANNEX3 Lake Basin Governance Challenges

<Note> The following preview gives a general description of what this training program aims to address during its course, with regard to some of the important challenges that you have listed under 4. Key Challenges in the Lake Basin Report to be presented at the outset of the training program.

Institution

- Is there a good institutional mechanism to ensure vertical (transboundary, regional, national and local) linkages among government agencies in lake basin management?
- Is there a good institutional mechanism to ensure horizontal linkages between government agencies, industries, scientific institutions and citizen groups, etc., in dealing with lake resource development and conservation? In particular, is there good institutional collaboration to deal with water pollution and other natural resource degradation activities such as land degradation and over-fishing?

Policy

- Is there a national policy for lake basin management? What, if any, are the major national/regional development plans related to the lake basin? What, if any, are the major national/regional conservation plans related to the lake basin?
- What sort of policy reforms have taken place, or are being considered, to overcome the constraints to achieving environmentally-sound management and use of the resources of the lake and its drainage basin, particularly with respect to development of sound policy, strengthening of institutional capacity, promotion of environmental investments, and development of human resources?

Legislation

- What are the major legislative provisions (laws, regulations, ordinances) pertaining to development and conservation measures for lake basin management? Does your lake have lake-specific legislation (lake laws and ordinances)?
- What are the major regulatory measures introduced for lake basin management, e.g., effluent standards, ambient standards such as nutrient and chemical concentrations, source-water protection classification?
- What is the state of command-and-control measures? Have industries been well regulated?
- What is the state of voluntary compliance regarding industrial pollution? Have they been able to regulate themselves in preventing lake water pollution?

Stakeholder and community/citizen participation

- What are the major stakeholder groups in the management of your lake (e.g., government sectors, institutions, organizations, interest groups, private sectors, etc.)?
- How well have stakeholders been involved in the design and implementation of the lake management program(s) (e.g., identification of relevant stakeholders living on the lake shore, as well as those living upstream and downstream of the lake, the existing mode, if any, of stakeholder involvement, the relationship between the

government and various non-governmental stakeholders)?

- How has involvement of voluntary associations, village organizations, CBOs, NGOs, etc. been promoted/assured?
- How has involvement of women as well as disadvantaged and affected members of community been promoted/assured?
- How has involvement of international/external NGOs been? What have been the benefits and disbenefits of their involvement?

Role of Science

- What is the state of lake water quality monitoring?
- How well have monitoring results been reflected in lake basin management?
- How well has scientific information been reflected in management plans for your lake/reservoir and its basin?
- List the names of major scientific institutions working on your lake including universities, governmental/non-governmental research institutes, private sector laboratories, etc. This has no value unless each institution's role is critiqued.
- What has been the extent of information dissemination and sharing, and the degree of transparency and access to data and information on the lake?

Technology

- List some of the major technological interventions for lake resources development, e.g., water resource development (sewerage comes here too I think), agriculture/irrigation, fisheries/navigation, tourism, etc.
- List some of the major technological interventions for lake resources conservation, e.g., sewerage, industrial pollution control, solid waste management, wetland conservation, etc.

Finance

- Describe briefly the taxation system of your country? How much tax money is retained for local use, such as for management of your lake basin?
- If you know, what is the general distribution of major sources of funds, for lake environment management, such as construction and operation/maintenance of sewerage, and/or other sanitation systems? For example, what portion of construction costs is being borne by the national budget, state budget, local budget, and external financial assistance? Who pays the operations and maintenance costs?
- What are some of the means for raising local funds, taxes, charges, fees, etc., used for conservation projects?
- Do you know of any innovated financial mechanisms used in your region for pollution control, such as pollution charges, tradable permits, etc.?

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 Embassy of Japan.

Further, address correspondence to:

JICA Kansai International Center (JICA Kansai)

Address: 1-5-2, Wakinohama-kaigandori, Chuo-ku, Kobe, Hyogo 651-0073, Japan

TEL: 81-78-261-0383 FAX: 81-78-261-0465