No.12040/25/2014-TRG(FTC/IR)
Government of India
Ministry of Personnel, Public Grievances and Pensions
Department of Personnel and Training
[Training Division]

Block-4, Old JNU Campus
New Mehrauli Road, New Delhi-67
Dated – May 26, 2014

TRAINING CIRCULAR

Subject: Group Training Course in "Integrated Basin Management for Lake Environment" to be held in Japan from September 29 to November 29, 2014 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 from September 29 to November 29, 2014 under the Technical Cooperation Programme of the Government of Japan.

2. This 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. This programme is offered to the Mid-career government officials and senior researchers responsible for the management of lakes (natural and artificial) and their basins for sustainable use.

4. The applying organizations are expected to select those nominees who are either technical officers 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 programms in their countries, with more than three years of occupational experience in the field. The nominee should also be an university graduate or equivalent; should have competent command over spoken and written English; must be in good health (both physically and mentally) and must not be a part of military service. The participants between the age group of 25 to 40 years will be preferred for this course.

5. In addition to above, 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.

6. 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).

...2/-

7. 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.

8. The applications should reach this Department through the Administrative Ministry/State Government not later than **July 04, 2014.** 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
E-mail-ID naresh.wadhwa@nic.in

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) The Chief Secretaries to all the 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.

GROUP AND REGION-FOCUSED TRAINING

GENERAL INFORMATION ON

INTEGRATED BASIN MANAGEMENT FOR LAKE ENVIRONMENT

課題別研修「湖沼環境保全のための統合的湖沼流域管理」

JFY 2014

NO. J14-04096 / ID. 1480988

Course Period in Japan: From September 29, 2014 to November 29, 2014

This information pertains to one of the Group and Region-Focused Training 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 meeting 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, the 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 can be downloaded 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
（J14-04096）

2. Course Period in JAPAN
September 29, 2014 to November 29, 2014

3. Target Regions or Countries
Brazil, Chad, Côte d'Ivoire, India, Kenya and Zimbabwe

4. Eligible/Target Organization and Participants:
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.

5. Course Capacity (Upper limit of Participants):
9 participants

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

7. Course 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

8. 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.

9. Expected Module Output and Contents:

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

(1) Preliminary Phase in Participant's Home Country

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

【**Output 1**】Preliminary Lake Basin Report and Lake Basin Questionnaire are completed.	
Modules	Activities
Report Preparation	♣ Formulation of Preliminary Lake Basin Report and Lake Basin Questionnaire ♦ Participants are required to prepare 1) Preliminary Lake Basin Report (LBR) and 2) Lake Basin Questionnaire, according to the instructions in ***VI. ANNEX 1*** and ***VII. ANNEX 2***. ♦ Participants will be required to give a short presentation on their LBRs, using Power Point slides at the beginning of the program after arriving in Japan. ♦ The LBR should be -typewritten single-spaced in English (about 20 pages, A-4 size) -submitted to JICA as a copy saved on CD-Rom or USB memory stick by the time of arrival in Japan. ♦ Participants are recommended to bring supplementary materials, such as photos and maps which show the lake environment in the participants' countries.

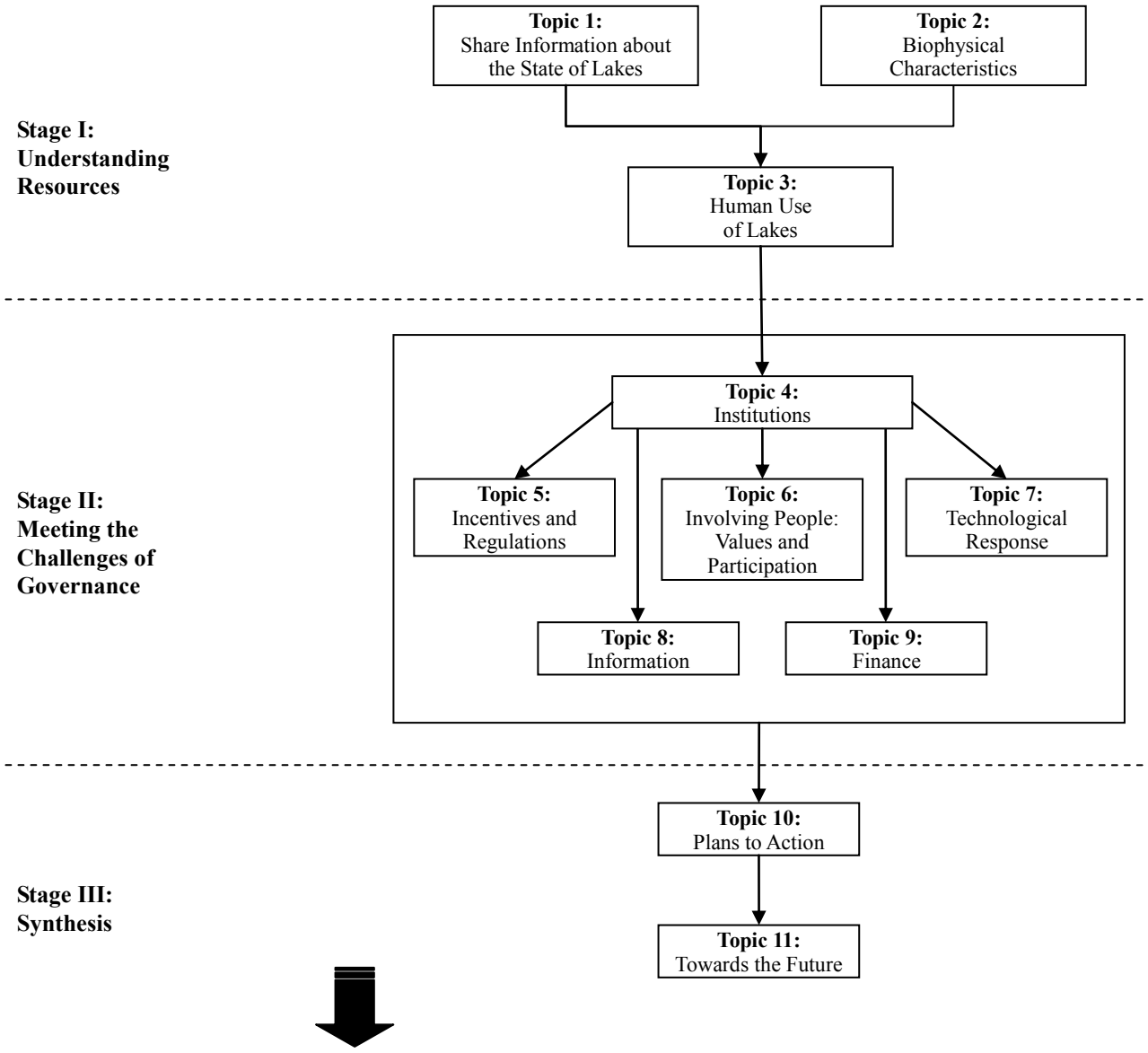
(2) Core Phase in Japan *(September 29, 2014 to November 29, 2014)*

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

【**Introduction**】	
Modules	Subjects/Agendas/Methodology
Introduction	Course Orientation
	♣ Presentation of LBRs ♦ Each participant will make a presentation on LBR. ♦ Sharing the difficulties or challenges which participants' organizations are facing and confirming what should be learned during the course.
【Output 2】 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
【Output 3】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

【Output 4】Participants are able to propose their draft Action Plans, to solve the problems/challenges which participants' organizations 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	Topic 10: Plans to Action
	Topic 11: 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

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

【Output 5】 Draft Action Plans are shared and discussed by the participating organization	
Discussion and Finalization of Action Plan	♣ Sharing and discussing of draft Action Plan in the participating organization ♣ Finalization of draft Action Plan
Submission of Final Report to JICA Regional Office	♣ Submitting Final Report including description of progress of Action Plan to respective JICA Regional Offices (Deadline: April 30, 2015)

【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 from 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 project 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 project to meet specific requirements of applying organizations and effectively facilitate them toward solutions for the issues and problems.

(3) In this connection, applying organizations are expected to nominate the most qualified candidates to address the said issues or problems, carefully referring to the qualifications described in section Ⅲ-2 below.

2. Nominee Qualifications:

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

(1) Essential Qualifications:

1) <u>Educational Background</u>:

Applicants should be university graduates or have equivalent educational qualifications in the area of Environmental Management.

<u>2) Current Duties &Experience in the relevant field</u>:

Applicants should be either technical officers 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 countries, with more than three (3) years' occupational experience in the field.

3) <u>English Language Qualification</u>:

Applicants should have a competent command of English which is equal to TOEFL 70 (iBT) or more (This training course includes 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) <u>Health</u>:

Applicants must be in good health, both physically and mentally, to participate in the Program in Japan.

5) <u>Military Service:</u>

Applicants 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 interests, 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 origins 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 permission of her training participation.

Please ask JICA Staffs for the details.

(2) Photocopy of passport:

Photocopy of passport should be submitted with the Application Form, if you possess your passport which you will carry when entering Japan for this program. If not, you are requested to submit its photocopy as soon as you obtain it.

*Photocopy should include the followings:

Name, Date of birth, Nationality, Sex, Passport number and Expire date.

(3) Nominee's English Score Sheet:

Nominee's English Score Sheet should be submitted with the Application Form. If you have any official documentation of English ability. (e.g., TOEFL, TOEIC, IELTS)

(4) 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 applications: **Please inquire to the JICA office (or the Embassy of Japan).**

（After receiving applications, the JICA office (or the Embassy of Japan) will send them to **the JICA Center in JAPAN** by **July 15, 2014**）

(2) Selection:

After receiving the documents through proper channels from your government, the JICA office (or the embassy of Japan) will conduct screenings, and then forward the documents to the JICA Center in Japan. Selection will be made by the JICA Center in consultation with concerned organizations in Japan. *The applying organization with the best intention to utilize the opportunity of this program will be highly valued in the selection.*

(3) Notice of Acceptance:

Notification of results will be made by the JICA office (or the Embassy of Japan) **not later than August 29, 2014.**

5. Conditions for Attendance:

(1) to strictly adhere to the program schedule.
(2) not to change the program topics.
(3) not to extend the period of stay in Japan.
(4) not to be accompanied by family members during the program.
(5) to return to home countries at the end of the program in accordance with the travel schedule designated by JICA.
(6) to refrain from engaging in any political activities, or any form of employment for profit or gain.
(7) 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.

(8) to observe the rules and regulations of the accommodation and not to change the accommodation designated by JICA.

IV. Administrative Arrangements

1. Organizer:

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

(2) Contact: Mr. Yutaka ARAKI
(Araki.Yutaka@jica.go.jp, jicaksic-unit@jica.go.jp)

2. Implementing Partners:

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

(2) Contact: Mr. Naoya YAMAMOTO (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 Tickets: The cost of a round-trip ticket between an international airport designated by JICA and Japan will be borne by JICA.

(2) Travel Insurance: Coverage is from time of arrival up to departure in Japan. Thus traveling time outside Japan will 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, meals, 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 “III. ALLOWANCES” of the brochure for participants titled “KENSHU-IN GUIDE BOOK,” which will be given before departure for Japan.

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 Information

1. Participants who have successfully completed the program will be awarded certificates 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 countries.

3. Participants are strongly advised to bring their own personal computers for their 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 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 a 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 most of the days in Japan.

VI. ANNEX 1 Preliminary Lake Basin Report

Please complete the report and questionnaire according to the instructions below. These should be submitted on 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' Action Plans 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. ANNEX 2 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 an 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 km^3)
2.3 Surface Area (in km^2)
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 m^3 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 m^3 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 km^2), 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. ANNEX 3 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 (VI. Annex 1) 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.?

VIII. ANNEX 4 Brief Overview of the Program

What You Can Get from the Training Course:

INTEGRATED BASIN MANAGEMENT FOR LAKE ENVIRONMENT

1. Purpose

   This program is designed 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. Integrated Lake Basin Management Platform Process (ILBM-PP)

   In order to sustainably manage a lake basin, it would be necessary to build up a balanced framework (Fig. 1) which is consisted of 6 pillars: 1) institutional responsibilities, 2) policy directions, 3) all stakeholder participation, 4) technological possibility, 5) scientific and traditional information, and 6) funding prospects.

Fig. 1 ILBM conceptual illustration with 6 pillars

The ILBM Platform is a kind of discussion desk to improve the lake basin governance with all related stakeholders. The state of the lake basin governance will be gradually and continuously improved through this ILBM Platform Process (Fig. 2). Further information is available at http://www.ilec.or.jp/en/.

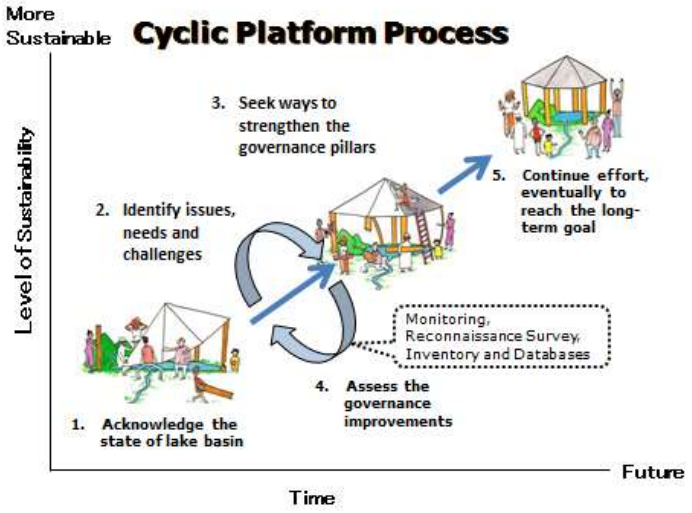


Fig. 2 Conceptual image of cyclic ILBM Platform Process

3. Lectures and Study Tours

During the 2 months training term there are many lectures and study tours in order to attain the above purpose. 32 lectures and 23 study tours are properly arranged for objectives of this training course.

Fig. 3 Lecture of Prof. M. Nakamura, the course leader.

Fig. 4 Plankton survey practice in Lake Biwa

4. Group Discussion

A group discussion time will be arranged during the training course. The discussion will be organized and managed by trainees. The purpose of the discussion is as follows: 1) to get information on some topics from other trainees, 2) to discuss on urgent topics freely among the trainees, and 3) to understand deeply the problems and challenges of other trainees.

Fig. 5 Free discussion by trainees

5. Accommodations

ILEC will provide the trainees with accommodations. Please refer to GI (V. Other Information) for the stay in ILEC.

Fig. 6 Accommodations

6. Holidays

Saturdays, Sundays and Japanese National Holidays are free time for the trainees. Kyoto, a traditional cultural city, and Osaka, a big commercial city, are close to ILEC.

Date	Name	Date	Name
January 1	New Year's Day	July 21	Marine Day
January 13	Coming of Age Day	September 15	Respect-for-the-Aged Day
February 11	Foundation Day	September 23	Autumnal Equinox Day
March 21	Vernal Equinox Day	October 13	Health and Sports Day
April 29	Shōwa Day	November 3	Culture Day
May 3	Constitution Memorial Day	November 23	Labour Thanksgiving Day
May 4	Greenery Day	November 24	Labour Thanksgiving Day observed
May 5	Children's Day		
May 6	Greenery Day observed	December 23	The Emperor's Birthday

Fig. 7 National Holidays in 2014

7. Contact

Please contact the following person of ILEC for any questions you have.

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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 and 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

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