



Knowledge Co-Creation Program (Group & Region Focus)

GENERAL INFORMATION ON

FLOOD DISASTER RISK REDUCTION

課題別研修「洪水防災」

JFY 2018

NO. J1804071 / ID. 1884478

Course Period in Japan: From September 30, 2018 to September 13, 2019

This information pertains to one of the JICA Knowledge Co-Creation Program (Group & Region Focus) 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.

‘JICA Knowledge Co-Creation Program (KCCP)’ as a New Start

In the Development Cooperation Charter which was released from the Japanese Cabinet on February 2015, it is clearly pointed out that *“In its development cooperation, Japan has maintained the spirit of jointly creating things that suit partner countries while respecting ownership, intentions and intrinsic characteristics of the country concerned based on a field-oriented approach through dialogue and collaboration. It has also maintained the approach of building reciprocal relationships with developing countries in which both sides learn from each other and grow and develop together.”* We believe that this ‘Knowledge Co-Creation Program’ will serve as a center of mutual learning process.

I. Concept

Background

A natural hazard becomes a disaster when the affected country or region lacks the coping capacity. In recent years, flood disasters have been increasing in numbers as well as in scale. This is particularly so in developing countries due to lack of leadership with vision, political will, coping capacity and resources. The resulting social and economic damages in such cases are likely to worsen with climate change.

In order to address this problem, and to plan sustainable development in developing countries, there is an urgent need to nurture leaders and experts on flood disaster mitigation, who can plan and implement management measures such as preparedness, response, recovery and rehabilitation.

Japan has a wealth of experience in coping with and managing many kinds of natural disasters including floods, and therefore is in a position to assist and transfer knowledge and expertise which can contribute to the development process of needy countries.

This program aims to train experts with the hope that they in turn will transfer the knowledge gained to the next level of professionals thereby upgrading the human resources capacities of developing countries.

For what?

This program aims to develop the participant's capacity to practically manage and mitigate damages of flood disasters and to contribute for socio-economic and environmental improvements at regional and national level in developing countries which suffer from them consistently.

For whom?

This program is provided to technical officials, engineers or researchers who are expected to be core human resources in the organization. Participants are expected to become independent investigators in the areas of integrated flood disaster management, who are equipped with the most advanced technical and legal know-how to enhance the basic understanding of the challenges of flood risks and to translate this knowledge back to practical flood disaster reduction strategies including poverty reduction and the promotion of sustainable development at local, national and regional level.

How?

Participants shall have opportunities in Japan to acquire knowledge and techniques of Flood Disaster Risk Reduction through lectures, discussions, exercises, on-site-visit, etc.

Participants will also formulate a Master Thesis and a course report describing what the participant learned and what the participant will do after they go back to their home countries by putting the knowledge and ideas acquired and discussed in Japan into their on-going activities.

Remark:

The curriculum of this program is approved as a master's degree program by the National Graduate Institute for Policy Studies (GRIPS) and the Public Works Research Institute (PWRI). Completing all graduation requirements during the training, the participants will be awarded a Master's degree, "Master of Disaster Management" by GRIPS and PWRI. Accordingly this program is very demanding. Applicants, with an excellent demonstrable educational and professional background, should be highly motivated and confident enough to pursue and attain the requirement of the program so that they can obtain the degree.

II. Description

- 1. Title (J-No.):**
Flood Disaster Risk Reduction (J1804071)
- 2. Course Period in JAPAN:**
September 30, 2018 to September 13, 2019
- 3. Target Regions or Countries:**
Bangladesh, Bhutan, Brazil, Colombia, India, Indonesia, Liberia, Myanmar, Nepal, Pakistan, Peru, Philippines, Saint Christopher and Nevis, Serbia, Sri Lanka, Trinidad and Tobago, Tunisia, Viet Nam, Zimbabwe
- 4. Eligible / Target Organization:**
This program is designed for governmental organizations concerning river management or flood disasters.
- 5. Course Capacity (Upper limit of Participants):**
20 participants
- 6. Language to be used in this program:**
English
- 7. Course Objective:**
The participant's capacity to practically manage and mitigate damages of flood disasters in developing countries which suffer from them consistently is enhanced.
- 8. Overall Goal:**
The damage of flood disasters is reduced by planning and implementing the countermeasures of flood disasters in their countries.

9. Expected Module Output and Contents:

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

(1) Preliminary Phase in a participant's home country; <i>Participants make required preparation for the Program in the respective countries.</i>	
	Activities
	Submission of Assignments
	Formulation and submission of Inception Report Presentation Material

(2) Phase in Japan; <i>Participants dispatched by the organizations attend the Program implemented in Japan.</i>		
Outputs	Subjects/Agendas (Tentative)	Methodology
To be able to explain basic concept and theory on generation process of flood disasters, hazard risk evaluation, disaster risk management policy and technologies	Basic Concepts of Integrated Flood Risk Management (IFRM): - Outline of integrated flood risk management - Disaster management cycle - Basic concepts of IFRM	Lecture
	Urban Flood Management and Flood Hazard Mapping: - Outline of disaster prevention countermeasures - Local disaster emergency plan - Non- structural countermeasures in Japan (Early warning system, Flood Hazard Map)	Lecture, Exercise
	Disaster Management Policies A: from Regional and Infrastructure Aspect: - Social system against disasters - Education on basic knowledge for disasters - Policy for infrastructure - Policy making process for disasters	Lecture, Presentation, Discussion
	Disaster Management Policies B: from Urban and Community Aspect: - Basic issues of disaster management policies - Urban disaster management policies in Japan - Lessons from past large disasters in the world - Policies and regulations to secure building safety	Lecture, Presentation, Discussion
	Site Visit of Water-related Disaster Management Practice in Japan	Field trip
To be able to explain	Hydrology:	Lecture

basic concept and theory on flood countermeasures including landslide and debris flow	<ul style="list-style-type: none"> - Climate System and Water Cycle - Hydrological Processes, In-situ Observation and Modeling - Remote Sensing of Hydrology - Water Resources Planning and Management 	
	Hydraulics: <ul style="list-style-type: none"> - Fundamentals - Advection and Diffusion - General transport equations 	Lecture, Exercise
	Flood Hydraulics and River Channel Design: <ul style="list-style-type: none"> - Outline of rivers in Japan - Fundamental mechanics of flood flows - Steady quasi-two dimensional analysis of Flood flow 	Lecture
	Mechanics of Sediment Transportation and Channel Changes: <ul style="list-style-type: none"> - Mechanics of sediment transportation - River morphology 	Lecture
	Control Measures for Landslide & Debris Flow: <ul style="list-style-type: none"> - Introduction to Sabo projects - Countermeasures for sediment-related disasters - Hazard mapping for sediment-related disasters 	Lecture, Exercise
	Computer Programming: <ul style="list-style-type: none"> - Programming Language - Numerical Computation 	Lecture, Exercise
	Practice on GIS and Remote Sensing Technique: <ul style="list-style-type: none"> - Geographic Information System (GIS) - Advanced Remote Sensing 	Lecture, Exercise
	Practice on Flood Forecasting and Inundation Analysis: <ul style="list-style-type: none"> - Rainfall-Runoff-Inundation modeling - Runoff Analysis with IFAS - Large-scale Runoff Analysis with BTOP - Advanced Hydrological Model 	Lecture, Exercise
	Socio-economic and Environmental Aspects of Sustainability-oriented Flood Management: <ul style="list-style-type: none"> - Outline of Socio-economic and environmental aspects - Methodology of risk assessment - Socio-economic impacts of disasters 	Lecture

	Practice on Open Channel Hydraulics: <ul style="list-style-type: none"> - Hydraulic phenomena - Usage of the experimental instrumentation - The methodology of flow discharge measurement 	Lecture, Exercise
To formulate the countermeasures to solve the problems and issues concerning flood disasters in their countries for applying techniques and knowledge acquired through the program	Individual Study: <ul style="list-style-type: none"> - Formulation of the Master thesis <ul style="list-style-type: none"> ➤ Participants will make a Master thesis based on the knowledge and techniques acquired through Lectures, Discussions, Exercises and Field Trips in the program. 	Discussion, Presentation

<Structure of the program>

(1) Preliminary Phase:

After receiving the “Notice of Acceptance”, each participant has to make and submit an “Inception Report Presentation Material” and assignment materials to review fundamental subjects (e.g., math, hydrology) necessary for the master’s level course work.

(2) Core Phase in Japan:

This program consists of “Lecture”, “Exercise”, “Discussion”, “Presentation”, “Field trip” and “Individual study”. This course schedule is shown in Fig. 1.

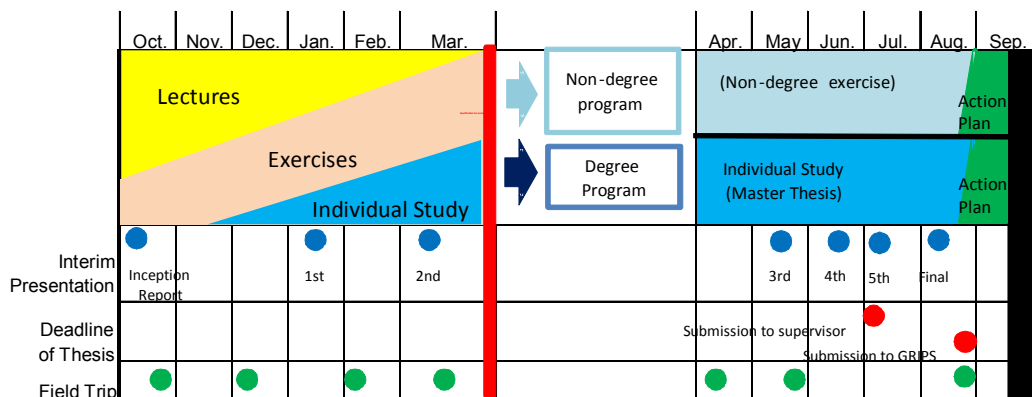


Fig. 1: Course schedule in Japan

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 program for those specific purposes.
- (2) 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.
- (3) Applying organizations are also expected to be prepared to make use of knowledge acquired by the nominees for the said purpose.

2. Nominee Qualifications:

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

- (1) be nominated by their governments in accordance with the procedures described in **III-4**.
- (2) be technical officials, engineers or researchers who have three (3) or more years of experience in the field of river management or flood disasters in governmental organizations.
- (3) be university graduates, preferably in civil engineering, water resource management, or disaster mitigation, or related department.
- (4) be proficient in basic computer skills.
- (5) have a competent command of spoken and written English ---with a minimum test score of TOEFL iBT 79, IELTS Academic 6.0 or its equivalent. (This program includes active participation in discussions and development of the action plan and Master thesis, thus requires high competence of English ability both in conversation and composition. Please attach an official certificate of English ability such as TOEFL or IETLS.)
- (6) be judged medically adequate to pursue study in Japan by an examining physician on a prescribed certificate of health. Pregnant applicants are not recommended to apply due to the potential risk of health and life issues of mother and fetus.
- (7) Generally, be over twenty-five (25) and under forty (40) years of age as of October 1, 2018.

3. Required Documents for Application:

(1) Application Form:

The Application form is available at **the JICA office (or the Embassy of Japan)**.

(2) Application Materials for GRIPS/PWRI Master's Program:

The entire curriculum of this program is approved as a master's degree program by

GRIPS and PWRI. Therefore, each applicant is required to prepare and submit all of the following materials for admission to GRIPS/PWRI Master's Program as written in **ANNEX I**.

- Application for admission to GRIPS/PWRI Master's Program
- 1 clear photograph of your face (30 x 40 mm)
- 2 letters of recommendation
- Certificate of employment
- Official transcripts of academic record and graduation/degree certificates
- Official evidence of English ability
- Statement of purpose
- Certificate of health

Please note that an applicant will NOT be registered as an applicant until we have received all of the above materials. Please carefully review the information in ANNEX I.

(3) Inception Report:

Each applicant must prepare an "Inception Report" on the present situation of his/her organizations and problems related to his/her own job. It must be typewritten in English, no more than 6 pages (12-point font, double-spaced, A4 size paper) and in the required format (see **ANNEX II**). The Inception Report will be used only for screening purpose and as training materials, only if applicant is selected.

(4) Photocopy of Passport:

To 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

4. Procedures for Application and Selection:

(1) Submission of the Application Documents:

Closing date for applications: **Please inquire at 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 April 13th, 2018.**

(2) Selection:

- 1) After receiving the document(s) through due administrative procedures in the respective government, the respective country's JICA office (or Embassy of Japan) will conduct screenings, and send the documents to JICA Tsukuba, which organizes this program.

- 2) JICA Tsukuba will carry out the screening jointly with PWRI and decide the passed applicants out of those who fulfill the set qualifications described above in **III-2**.
- 3) Some of the applicants may be requested to take an oral interview by telephone or TV conference system in the respective country's JICA office.
 1. The cost of transportation to the respective country's JICA office for receiving an interview will be paid by applicants.
- 4) A committee, which consists of GRIPS and PWRI, will screen the above qualified applicants academically with the application materials such as official transcripts.
- 5) The applicants who are accepted to participate in this program will be decided by a faculty council of GRIPS finally by **the end of July, 2018.**

In case the number of applicants is more than the capacity of this course, some applicants may not be accepted due to the limited number of seats even though they fulfill the requirements.

Qualifications of applicants who belong to the military or other military-related organizations and/or who are enlisted in the military will be examined by the Government of Japan on a case-by-case basis, consistent with the Development Cooperation Charter of Japan, taking into consideration their duties, positions in the organization, and other relevant information in a comprehensive manner.

(3) Notice of Acceptance:

Notification of results shall be delivered to the respective Government through the respective countries' JICA office (or Embassy of Japan) by **no later than July 31st, 2018.**

(*Acceptance Agreement will be sent from GRIPS together with the official admission letter soon after this notice of acceptance.)

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.

6. Certificate and Master's Degree:

- Participants who have successfully completed the program will be awarded a certificate by JICA.
- Participants who have successfully completed all graduation requirements will be awarded a Master's Degree, "Master of Disaster Management" by GRIPS and PWRI.

IV. Administrative Arrangements

1. Organizer:

(1) **Name:** JICA Tsukuba

(2) **Contact:** Mr. Shingo TADA (tbictp@jica.go.jp)

2. Implementing Partner:

(1) International Centre for Water Hazard and Risk Management (ICHARM), Publics Works Research Institute (PWRI)

1) URL: <http://www.icharm.pwri.go.jp>

2) Address: 1-6 Minamihara, Tsukuba, Ibaraki, 305-8516 Japan

3) TEL: +81-29-879-6809

4) FAX: +81-29-879-6709

5) E-mail: training.icharm@pwri.go.jp

6) Remark: ICHARM was established in March 2006 based on the agreement between the Japanese Government and UNESCO hosted by the PWRI. ICHARM mission is to be the Centre of Excellence to provide and assist implementation of the best practicable strategies to localities and nations for water-related disasters. PWRI is the renowned practice oriented research institute serving for more than 80 years since its establishment.

(where “81” is the country code for Japan, and “29” is the local area code)

(2) National Graduate Institute for Policy Studies (GRIPS)

1) URL: <http://www.grips.ac.jp/en>

2) Address: 7-22-1 Roppongi, Minato-ku, Tokyo, 106-8677 Japan

3) TEL: +81-3-6439-6046

4) FAX: +81-3-6439-6050

5) E-mail: admissions@grips.ac.jp

6) Remark: GRIPS is a graduate school and research institute established in October 1997. GRIPS aims to be an international center of excellence for the education of future leaders in policy arena, advancement of policy research, and collection and dissemination of policy-related information.

(where “81” is the country code for Japan, and “3” is the local area code)

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:** 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 basically:

JICA Tsukuba International Center (JICA Tsukuba)

Address: 3-6 Koyadai, Tsukuba, Ibaraki, 305-0074 Japan

TEL: +81-29-838-1111, FAX: +81-29-838-1776

(where “81” is the country code for Japan, and “29” is the local area code)

Please refer to facility information of JICA Tsukuba at its URL:

<https://www.jica.go.jp/tsukuba/english/office/index.html>

5. Expenses:

The following expenses will be provided to 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 “KENSU-IN GUIDE BOOK,” which will be given before departure for Japan.

*The curriculum of this program is approved as a master’s degree program by GRIPS and PWRI. **The application fee, admission fee and tuition for the Master’s Degree Program will be provided by PWRI.***

6. Pre-departure Orientation:

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

V. Other Information

1. Computer:

The participants are recommended to bring own laptop/notebook computers to prepare the presentation slides and to communicate by e-mail.

2. Relevant Data for Flood Disasters in Participants' Country:

The participants are strongly recommended to bring the relevant data for flood disasters in their countries on their laptop/notebook computers for preparing the presentation slides etc.

3. For the Promotion of Mutual Friendship:

JICA Tsukuba 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.

4. Bring Some Cash:

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. Exchange to Japanese Currency (YEN):

It is very important that your currency must be exchanged to Japanese Yen at any transit airport or Narita International Airport or Haneda Airport, Japan soon after your arrival. It is quite difficult to exchange money after that, due to no facility or time during the training program.

END

- ANNEX I: Check List / Application Materials for GRIPS/PWRI Master's Program***
ANNEX II: Instruction for Inception Report
ANNEX III: Course Schedule (tentative)

For Your Reference

JICA and Capacity Development

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

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

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

Japanese Development Experience

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

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

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

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



CORRESPONDENCE

For enquiries and further information, please contact the JICA office or the Embassy of Japan.

Further, address correspondence to:

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