



# Knowledge Co-Creation Program (Group & Region Focus)

## GENERAL INFORMATION ON

### OPERATION AND MAINTENANCE OF SEWERAGE SYSTEM (A) 課題別研修「下水道システム維持管理(A)」

JFY 2017

NO. J17-04435 / ID. 1784790

Course Period in Japan: From August 13, 2017 to September 29, 2017

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 (KCC) Program' as a New Start

In the Development Cooperation Charter which is 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 sewerage facility is one of the most fundamental factors of the urban infrastructure, and the setting up of sewerage and waste water treatment plants in developing countries has achieved certain degree of progress.

Along with the development of the facilities, demand for engineers specialized in maintenance of those facilities has become acute.

Since the appropriate maintenance of sewerage facilities is a vital part of providing a good sanitary environment, technicians who deal with sewerage works are required to have wide-ranging knowledge and techniques.

This course focuses on the appropriate maintenance management of sewerage facilities to prevent water pollution, which contributes to Agenda 21, the action plan proposed at the Earth Summit held in Rio de Janeiro in 1992.

Additionally, the course contributes to easy access to basic sanitary facilities and safe drinking water because of the nature of "water cycle". The access to the safe and clean water is one of the targets in SDGs, through promoting knowledge and technologies in the field.

Through lectures, practices, seminars and observations, participants will acquire explicit / tacit knowledge in operation and maintenance of sewerage systems to be made good use of in their own countries.

## **For what?**

This program aims to promote the sewerage system and its management and maintenance techniques in participants' organizations.

## **For whom?**

This program is offered to senior technical staff directly engaged in sewerage system in governmental organizations.

## **How?**

Participants will learn techniques and know-how in the field through lectures, observations, practices and discussions. In addition, participants are expected to formulate and present an Action Plan at the end of the training program, utilizing the contents in the program, and share the ideas after going back to each country.

## ***II. Description***

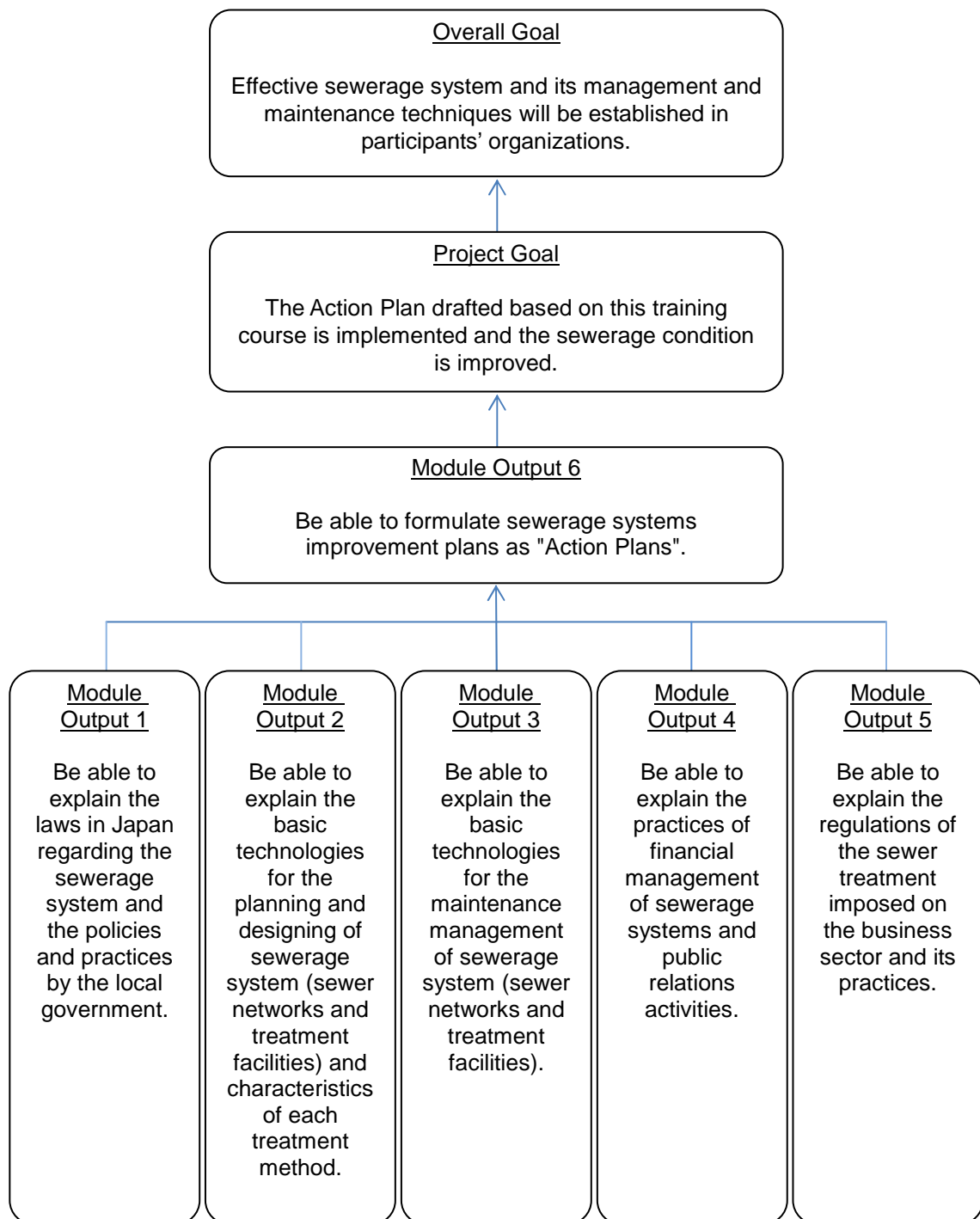
- 1. Title (J-No.): Operation and Maintenance of Sewerage System (A) (J1704435)**
- 2. Course Period in JAPAN**  
August 13, 2017 to September 29, 2017
- 3. Target Regions or Countries:**  
Bangladesh, Egypt, Indonesia, Kenya, Peru, Philippines, and Sudan
- 4. Eligible / Target Organization:**  
This program is designed for the governmental or public organization which is directly engaged in the maintenance and operation of the sewerage system.
- 5. Course Capacity (Upper limit of Participants):**  
8 participants
- 6. Language to be used in this project:** English
- 7. Course Objective:**  
The Action Plan drafted based on this training course is implemented and the sewerage condition is improved.
- 8. Overall Goal:**  
Effective sewerage system and its management and maintenance techniques will be established in participants' organizations.

## 9. Expected Module Output and Contents

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

Expected Module Output	Subjects/Agendas	Methodology
1. be able to explain the laws in Japan regarding the sewerage system and the policies and practices by the local government.	(1) Laws in Japan for the sewerage systems (2) History of sewerage system development in Japan (3) History of environmental protection (4) Practices for river project and drinking water project by the local government including disaster management	Lecture Site visit and Exercise
2. be able to explain the basic technologies for the planning and designing of sewerage system (sewer networks and treatment facilities) and characteristics of each treatment method.	(1) Planning of sewerage systems (2) Planning and designing of sewage networks and plant (3) Sewage treatments methods (4) Small-medium scale sewerage systems	Lecture Site visit and Exercise
3. be able to explain the basic technologies for the maintenance management of sewerage system (sewer networks and treatment facilities).	(1) Maintenance management for sewer networks (2) Treatment plants and pumping stations	Lecture Site visit and Exercise
4. be able to explain the practices of financial management of sewerage systems and public relations activities.	(1) Financial management and public relation activities by the local government	Lecture Site visit
5. be able to explain the regulations of the sewer treatment imposed on the business sector and its practices.	(1) Water quality regulations imposed on business sectors(plants and factories) (2) Practice of wastewater treatment by business sectors	Lecture Site visit and Exercise
6. be able to formulate sewerage systems improvement plans as "Action Plans".	(1) Action plan preparation & presentation (2) Formulation & submission of final report	Lecture and Exercise

## <Structure of the program>



### ***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 operations. Applying 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. 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.
- (4) 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.

#### **2. Nominee Qualifications**

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

##### **(1) Essential Qualifications**

- 1) Current Duties: be senior technical staffs who deal with sewerage system and wastewater treatment.
- 2) Experience in the relevant field: have more than 5 years' experience in the field mentioned above, and be willing to work for your organization in the future (at least 5 years).
- 3) Age: between the ages of twenty-five (25) and fifty (50) years
- 4) Educational Background: be a graduate of university or equivalent level.
- 5) Language: have a competent command of spoken and written English which is equal to TOEFL CBT 250 or more.
- 6) Must not be serving any form of military service.
- 7) Health: must be in good health, both physically and mentally, to participate in the Program in Japan. Pregnant applicants are not recommended to apply due to the potential risk of health and life issues of mother and fetus.

\*Please note that this training course includes site visits such as sewerage facility, and factories, therefore, a lot of physical exercises will be required.

##### **(2) Recommendable Qualifications**

- 1) Expectations for the Participants: preferably be in relation with past or

on-going JICA projects focusing on sewerage treatment.

- 2) Educational background: since majority of the curriculums are based on engineering, participants are preferable to own backgrounds in civil engineering or mechanical engineering.
- 3) Others: Participants are expected to be familiar with PC operation, as there will be many chances for report writing and presentations.

### **3. Required Documents for Application**

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

**(2) 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.

**(3) Job Report:** to be submitted with the application form. Fill in Annex of this General Information, and submit it along with the Application Form. Job Report is the necessary document for screening of an applicant. Each participant will be required to present his/her Job report in approx. 10 minutes in an early stage of the training course. Visual materials such as Power Point and pictures may be helpful for your presentation if you bring them. When you use PowerPoint, it is preferable to use letters more than 24-point and not to use pictures on the background.

**(4) English Ability Certificate:** If available, please attach the official certificate for English ability such as TOEFL, TOEIC, IELTS etc.

### **4. Procedures for Application and Selection**

#### **(1) Submission of 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 **June 16, 2017.**)

#### **(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. 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 will be made by the JICA office (or the Embassy of Japan) not later than **July 7, 2017**.

## **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 KYUSHU

(2) Contact: [kictp@jica.go.jp](mailto:kictp@jica.go.jp)

### 2. Implementing Partner

(1) Name: Fukuoka City Government

(2) URL: <http://www.city.fukuoka.lg.jp/english/index.html>

### 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:

#### (1) During the Briefing and Orientation Program

JICA Kyushu International Center (JICA Kyushu)

Address: 2-2-1 Hirano, Yahata Higashi-ku, Kitakyushu-shi,  
Fukuoka, 805-8505 Japan

TEL: 81-93-671-6311                      FAX: 81-93-671-0979

(81: country code for Japan, 93: area code)

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

Please refer to facility guide of KIC at its URL,

<https://www.jica.go.jp/kyushu/english/office/c8h0vm0000a0cdx5-att/kyushu01.pdf>

#### (2) During the Technical Training Period by Fukuoka City Government

Participants will stay in a room of the apartment-type hotel in Fukuoka City. There isn't a restaurant at the hotel but the room is equipped with a mini-kitchen. You need to buy foods at the supermarket near-by or cook by yourself. There are also some restaurants around the hotel.

### 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 “KENSU-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 Japanese Embassy), to provide participants with details on travel to Japan, conditions of the workshop, and other matters.

## ***V. Other Information***

### **1. Reports and Presentation**

#### **(1) Job Report**

As written in the previous page, each nominee is required to submit his/her own Job Report following the instruction in the previous sections. Participants will have a presentation of his/ her Job Report up to 10 minutes at the earlier stage of the training program in order to share knowledge and background with other participants as well as the instructors. Visual materials such as Power Point and pictures may be helpful for your presentation if you bring them with you. When you use Power Point, it is preferable to use letters more than 24 points and not to use pictures on the background.

#### **(2) Action Plan Report**

Accepted participants are required to formulate an action plan at the end of the training program in Japan to show your ideas and plans, which you carry out after return home, reflecting the knowledge and method acquired from the training. Each participant will have approximately 10 minutes for presentation.

#### **(3) Laptop PC**

Participants are requested to bring their own laptops upon arrival in Japan. They will be useful to take notes, modify reports, and prepare for presentations.

### **2. International Exchange Program with local communities**

JICA encourages international exchange between JICA participants and local communities. Participants will have a chance to visit elementary schools, junior high schools or the civic groups. Therefore, participants are recommended to bring their national costumes or crafts and materials such as CDs and photographs that will make the exchange program more fruitful.

### **3. Remarks**

JICA training is implemented for the purpose of development of human resources who will promote the advancement of the countries, but not for the enrichment of individuals or private companies. Matters of a trade secret and patent techniques will remain confidential and inaccessible during the training.

## **VI. ANNEX:**

### **Operation and Maintenance of Sewerage System (A) (JFY 2017) Job Report**

Name: \_\_\_\_\_  
Country: \_\_\_\_\_  
Organization and present post: \_\_\_\_\_  
E-mail: \_\_\_\_\_  
FAX: \_\_\_\_\_

Remarks 1: The Report should be typewritten in English (12-point font, A4 size paper), and total pages of the report should be limited to 3 pages (not including organization chart).

Remarks 2: Each participant is required to have presentation in 10 minutes based on this Job Report at the early stage of the training for the purpose of making the training more effective and fruitful by comprehending the situations and challenges of the participants each other.

Remarks3: Please itemize your answer and make them specific.

#### **1. Situation of Sewerage Treatment Systems**

- (1) Sewer coverage in assigned area / country
- (2) Brief description on sewer treatment facilities (existence, number, type, etc.)
- (3) Method applied for sewer treatment
- (4) Brief description on legal frameworks (numerical standards, fee, restrictions etc.)

#### **2. Organization and main tasks (up to 1 page)**

- (1) Main tasks of the organization  
(Please include annual turnover or product amount, name of products and number of employees.)
- (2) Organization chart:  
Please draw a chart of your organization including the department (section) names with the number of staffs in it and mark where you are positioned. (The chart should be attached and not be counted in this page limit.)
- (3) Brief description of your assignments.

#### **3. Existing problems in your section (up to 1 page)**

- (1) Challenges you are facing
- (2) Countermeasures for these challenges
- (3) Obstacles in the process of solving those challenges

**4. Expectations for the training course (up to 1 page)**

- (1) Most interesting subjects or topics in the training course
- (2) How do you expect to apply skills and knowledge for overcoming challenges according to listed items in curriculum (in the previous section) after you return to your home country?
- (3) Other matters you are expecting for this course

**5. Which of the following specialized technologies have you learned? Please check to signify “YES” or “NO”.**

	YES	NO
(1) Civil engineering .....	( )	( )
(2) Mechanical engineering .....	( )	( )
(3) Electrical engineering .....	( )	( )
(4) Chemical engineering .....	( )	( )
(5) Environmental engineering .....	( )	( )
(6) Hygiene engineering .....	( )	( )
(7) Computer science .....	( )	( )
(8) Others ( ) .....	( )	( )

Note: Under“(8) Others” please specify subjects not covered by any items (1) to (7) if any.

**6. Which of the following represent your practical work experiences? Please fill in the years of your occupational experience.**

	Years of Experience
(1) Planning and designing of wastewater treatment facilities .....	( )
(2) Operation and maintenance of wastewater treatment facilities .....	( )
(3) Operation and maintenance of industrial wastewater treatment facilities .....	( )
(4) Water pollution control administration .....	( )
(5) Chemical analysis .....	( )
(6) Human excreta treatment .....	( )
(7) Jokaso (septic tank) management .....	( )
(8) River/water way management in urban area .....	( )
(9) Water supply .....	( )
(10) Information processing (computer programming) .....	( )
(11) Others ( ) .....	( )

Note: Under “(11) Others” please describe any practical experience that might be related to wastewater treatment techniques but are not covered by items (1) to (10).

## ***For Your Reference***

### **JICA and Capacity Development**

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

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

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

### **Japanese Development Experience**

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

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

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

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



***CORRESPONDENCE***

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

**JICA Kyushu International Center (JICA KYUSHU)**

**Address: 2-2-1 Hirano, Yahatahigashi-ku, Kitakyushu-shi, Fukuoka, 805-8505, Japan**

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