



【Online】

Knowledge Co-Creation Program (Group & Region Focus)

**General information on
INTENSIVE TRAINING FOR GEOTHERMAL RESOURCE ENGINEERS
課題別研修「地熱資源エンジニア」
JFY 2022**

Course No.: 202107922J001

**Course Period: *Please See the detail in II.2 (Course duration)
*this Program will be delivered completely online basis***

This information pertains to one of the JICA Knowledge Co-Creation Programs (Group & Region Focus) of the Japan International Cooperation Agency (JICA) 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)

The Japanese Cabinet released the Development Cooperation Charter in February 2015, which stated, “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.” JICA believes that this ‘Knowledge Co-Creation Program’ will serve as a foundation of mutual learning process.

I. Concept

Background

It is well known that exploration stage is the main obstacle in geothermal development, and in the past 10 years, international organizations focused to support to this stage. However, even at exploration stage, especially exploration drilling, and continuous appraisal drilling stages remain as the critical steps, which require more precise, robust and systematic technical approach in addition to large amount of budget. Hence, human resources development is expected to have significant impact for these stages.

Under these circumstances, this training aims to provide practical training, which is divided into the following specialized fields:

Drilling-logging, geochemistry (from discharging test and the following stage), geology (during/after drilling stages), reservoir evaluation, and wellbore simulation.

The trainees carry out a practical work as the Project Study, responding to the specific themes that they have in their own country. The trainees will present their results of the Project Study and prepare an Action Plan proposing how their activities are expected to be applied after returning to their country.

This year, however, due to the COVID-19, the program could not be implemented in Japan and is alternatively replaced by online basis, so the curriculum is changed as well as duration is shortened accordingly.

For what?

The program is designed to develop the capacity of engineers in geothermal resource development.

For whom?

This program is offered to experienced engineers who are currently engaged in geothermal resource development.

How?

In consideration of the spread of Covid-19 infection, JICA will offer remote training only.

II. Description

1. Title (Course No.)

**Intensive Training for Geothermal Resource Engineers
(202107922J001)**

2. Course period / time table

(1) Course period

This program will be held in two periods in consideration of the time difference.

- **November 7th to December 16th 2022 for “Region1” (Mexico, Nicaragua, Peru).**
- **January 10th to February 18th 2023 for “Region 2” (Indonesia, Djibouti, Ethiopia, Kenya, Tanzania).**

(2) Time table

Online lectures are held every weekday during the course period above mentioned.

- from 8:00 to 9:30 JST (Japanese standard time =UTC+9) for “Region 1”
- from 15:30 to 17:00 JST (Japanese standard time =UTC+9) for “Region 2”.

The detail of the program will be announced in the middle of October.

3. Target Regions or Countries

Mexico, Nicaragua, Peru, Indonesia, Djibouti, Ethiopia, Kenya, and Tanzania

4. Eligible / Target Organization

This program offers to governmental and/or public organizations in charge of geothermal development.

5. Capacity (Upper Limit of Participants)

Maximum of 18 participants.

6. Language

English

7. Objectives and Overall Goal

This program will train engineers to understand problem-solving methods in Japan to accelerate the geothermal resources development in their country. Participants are expected to acquire theoretical and practical methods for geothermal resource development through lectures and to understand current situations of geothermal development in the world. As a result, reliability and efficiency of national geothermal resources development are expected to be improved.

8. Expected Outputs and Contents

Contents

Specialty	Lecture title (Subject)
Geothermal sector	<ul style="list-style-type: none">• JICA's Cooperation in Geothermal Development• Overview of Geothermal Systems• Evaluation of Geothermal Potential

	<ul style="list-style-type: none"> • Geothermal Development Planning • Geothermal Development in the World
Geoscience	<ul style="list-style-type: none"> • Social acceptance of geothermal energy • Geology in geothermal system, alteration mineral • Geochemistry Field Sampling, Laboratory Analyses and Interpretation • Mineral extraction from geothermal fluid • Geophysics for geothermal exploration
Reservoir engineering	<ul style="list-style-type: none"> • Well logging • Well Testing (Completion Testing and Production Testing) • Vapor-dominated Systems: Their Characteristics and Development • Geothermal Wellbore Flow • Reservoir Simulation
Surface facilities	<ul style="list-style-type: none"> • Geothermal Power Plant • Direct Use of Geothermal Energy • Exergy Analysis • Operation and Maintenance of Geothermal Power Station

Cooperative International-Network for Earth Science and Technology (CINEST)

International Symposium on earth science and technology named CINEST symposium will be held on December 1-2, 2022 at Kyushu University, Fukuoka, Japan. You are free to participate to the symposium as an additional lesson and gain more experiences, knowledge and information. The detailed information will be announced accordingly. We will communicate with you about it at the online orientation for the Central and South America region and by the e-mail for the East Africa region.

III. Eligibility and Procedures

1. Expectations to the Applying Organizations:

- (1) This course is designed primarily for organizations that intend to address specific issues or problems identified in their operation. Applying organizations are expected to use the program for those specific purposes.
- (2) This course is enriched with contents and facilitation schemes specially developed in collaboration with relevant prominent organizations in Japan. These special features enable the course 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 and experience in the relevant field: be currently engaged in geothermal development or related project, and have 1 year's experience in the relevant engineering field/project.
- 2) Educational background: be a graduate of university or equivalent level, preferably with a background of engineering or science.
- 3) Language: have a competent command of spoken and written English proficiency equivalent to TOEFL iBT 100 or more (Please attach an official certificate for English ability such as TOEFL, TOEIC, IELTS etc, if possible).
- 4) Health: Since this program is 100% online basis, basically there is no restriction about health status.

(2) Recommended Qualifications

- 1) Age: Preferably below the age of forty (40) years
- 2) Gender Equality and Women's Empowerment: Women are encouraged to apply for the program. JICA makes a commitment to promote gender equality and women's empowerment, providing equal opportunity for all applicants regardless of sexual orientation and gender identity.

3. Required Documents for Application

- (1) **Application Form:** The Application Form is available at **the JICA overseas office (or the Embassy of Japan)**.
- (2) **English Score Sheet:** to be submitted with the application form. If nominees have any official English examination scores. (e.g., TOEFL, TOEIC, IELTS)
- (3) **Photocopy of Passport or ID document:** You should submit it with the application form if you possess your passport. If not, you are requested to submit a photocopy of your ID document for ID purposes.

*The following information should be included in the photocopy:

4. Procedures for Application and Selection :

(1) Submission of the Application Documents:

Closing date for applications: **Please confirm the local deadline with the JICA overseas office (or the Embassy of Japan).**

(All required material must arrive at JICA Center in Japan by **September 30th, 2022**).

(2) Selection:

Primary screening is conducted at the JICA overseas office (or the embassy of Japan) after receiving official documents from your government. JICA Center will consult with concerned organizations in Japan in the process of final selection. Applying organizations with the best intentions to utilize the opportunity will be highly valued.

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

(3) Notice of Acceptance:

The JICA overseas office (or the Embassy of Japan) will notify the results **not later than October 15th, 2022**.

5. Conditions for Participation

The participants of KCCP are required

- (1)** to strictly observe the course schedule,
- (2)** to carry out such instructions and abide by such conditions as may be stipulated by both the nominating Government and the Japanese Government in respect of the course,
- (3)** to observe the rules and regulations of the program, including the copyright of the lecture materials.

IV. Administrative Arrangements

1. Organizer (JICA Center in Japan)

(1) Responsible JICA domestic office: JICA Kyushu Center

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

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

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

(2) Program Officer: HIRAI Kento(Mr.) (kictp@jica.go.jp)

2. Implementing Partner

(1) Name: Kyushu University

(2) URL: <http://mine.kyushu-u.ac.jp/english/>

<http://mine.kyushu-u.ac.jp/jicac/index.html>

3. Travel to Japan: Not applicable since this program is 100% online.

4. Accommodation in Japan: Same as above

5. Expenses: Same as above

6. Pre-departure Orientation: Same as above

For Your Reference

JICA and Capacity Development

Technical cooperation is people-to-people cooperation that supports partner countries in enhancing their comprehensive capacities to address development challenges by their own efforts. Instead of applying Japanese technology per se to partner countries, JICA's technical cooperation provides solutions that best fit their needs by working with people living there. In the process, consideration is given to factors such as their regional characteristics, historical background, and languages. JICA does not limit its technical cooperation to human resources development; it offers multi-tiered assistance that also involves organizational strengthening, policy formulation, and institution building.

Implementation methods of JICA's technical cooperation can be divided into two approaches. One is overseas cooperation by dispatching experts and volunteers in various development sectors to partner countries; the other is domestic cooperation by inviting participants from developing countries to Japan. The latter method is the Knowledge Co-Creation Program, formerly called Training Program, and it is one of the core programs carried out in Japan. By inviting officials from partner countries and with cooperation from domestic partners, the Knowledge Co-Creation Program provides technical knowledge and practical solutions for development issues in participating countries.

The Knowledge Co-Creation Program (Group & Region Focus) has long occupied an important place in JICA operations. About 400 pre-organized courses 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 is being customized by the different target organizations to address the specific needs, 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, as the first non-Western nation to become a developed country, built itself into a country that is free, peaceful, prosperous and democratic while preserving its tradition. Japan will serve as one of the best examples for our partner countries to follow in their own development.

From engineering technology to production management methods, most of the know-how that has enabled Japan to become what it is today has emanated, of course, has been accompanied by countless failures and errors behind the success stories.

Through Japan's progressive adaptation and application of systems, methods and technologies from the West in a way that is suited to its own circumstances, Japan has developed a storehouse of knowledge not found elsewhere from unique systems of organization, administration and personnel management to such social systems as the livelihood improvement approach and governmental organization. It is not easy to apply such experiences to other countries where the circumstances differ, but the experiences can provide ideas and clues useful when devising measures to solve problems.

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.



Contact Information for Inquiries

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

JICA Kyushu Center (JICA KYUSHU)

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