



Knowledge Co-Creation Program (Group & Region Focus)

General information on

Promotion of Hydrogen Energy Use -Energy Policy
Toward Hydrogen -Based CO2 Free Society-

課題別研修「水素エネルギー利用の推進
～ CO2 フリー社会に向けたエネルギー政策 ～」

JFY 2022

NO. 20210792J001

Course period: **From February 1, 2023 to March 9, 2023**

***In the context of the COVID-19 pandemic, please note that there is still a possibility the course period will be changed, shortened, or the course itself will be cancelled.**

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)

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

In 2014, the Ministry of Economy, Trade and Industry formulated the hydrogen and fuel cell strategy roadmap, and clarified the process up to 2050 toward the realization of a hydrogen society in Japan. In 2017, the ministerial committee of Japanese government formulated the world's first basic hydrogen strategy, and relevant parties such as private companies, academic institutions, and governmental organizations are steadily promoting various efforts toward the realization of hydrogen society.

After the Paris Agreement, under which all countries have common but differentiated responsibilities for contributing to reduction of green house gas emissions, many countries are ratcheting up their commitments on emission targets. Not only developed countries but numbers of developing countries also announced their intentions for accelerating efforts to promote carbon neutrality after 2050. The attention to production and usage of hydrogen was drastically increased as it was regarded as one of the promising energy sources towards carbon neutral society.

Hydrogen is considered to be the ultimate clean energy. However, we need to overcome various challenges such as costs for manufacturing and storage / transportation, safety and convenience of users. Effective policy and financial supports and collaborations with various institutes such as universities, manufacturing industries, and infrastructure companies are indispensable for expanding its use. Comprehensive efforts such as cooperation and enlightenment activities to promote utilization are important. It is also essential to establish a global supply chain to supply hydrogen inexpensively and stably. Sharing experiences and knowledge to enhance collaboration with various countries are the first step to promote hydrogen supply and utilization.

This training is targeted for government officials engaged in supply of renewable energy including hydrogen for the realization of a carbon-neutral society, policy making for expanding utilization, and administrative practice.



For what?

The training program is specialized in energy policy for promotion of hydrogen energy for carbon neutral society including transition. Participants will acquire knowledge about global trends in promoting hydrogen-based society, Japan's hydrogen supply, utilization expansion policies, technologies, infrastructure, business initiatives, the roles of central and local governments. Though the course, they are expected to improve policy-making ability to promote hydrogen supply and utilization.

For whom?

This program is intended for departments specialized in policy making on clean energy in relevant ministries such as energy and environment, which are (will be) engaged in renewable energy, hydrogen, carbon storage and so forth.

How?

In the second year of this course, training will be conducted in Japan. Lectures, discussions, and presentations will be conducted face-to-face. During the field visits, participants will visit training sites in Tokyo and Fukushima, as well as Fukuoka.

In this program, participants are expected to learn not only from their experiences in Japan, but also from the experiences of other participants. Through these activities, participants will learn about various approaches to energy policy and its transformation toward a hydrogen-centered, carbon-neutral society.



Source: Kitakyushu City Environment Bureau Green Growth Promotion Department Green Growth Promotion Division

II. Description

1. Title (Course No.)

Promotion of Hydrogen Energy Use -Energy Policy Toward Hydrogen -Based CO2 Free Society- (202107927J001)

2. Course Duration

February 1 , 2023 to March 9, 2023

3. Target Regions or Countries

Argentina, Bolivia, Brazil, Chile, Colombia, Egypt, Mexico, Morocco, Serbia, Ukraine, Vietnam

4. Eligible /Target Organization

Target organizations:

This program is intended for departments specialized in policy making on clean energy in relevant ministries such as energy and environment, which are (will be) engaged in renewable energy, hydrogen, carbon storage and so forth.

Target person:

Administrative and/or engineering officers engaged in policy making for clean energy described above.

5. Course Capacity (Upper limit of Participants)

20 participants

6. Language to be Used in This Program

English

7. Course Outputs:

By the end of course, participants will be able to ;

- (1) Explain the advantages, issues, and countermeasures of hydrogen energy in the short-, medium-, and long-term framework.
- (2) Understand hydrogen production, storage / transportation, supply and utilization technologies, safety and security outlines and laws and regulations.
- (3) Explain the main points of various measures such as policies, technologies / infrastructure, and business necessary for promoting a hydrogen society in Japan.
- (4) Explain the main points of the roles and significance of governments, local governments, industrial and academic sectors, to promote a hydrogen-based society.
- (5) Understand the challenges for realizing a hydrogen-based society in your own country and be able to propose short-, medium- to long-term countermeasures including transition.

8. Course Objective:

Participants will improve the policy-making and implementation capabilities necessary to promote the use of hydrogen energy in each country.

9. Overall Goal:

In order to realize a clean hydrogen society, industry, academia and government in each country, including developing countries, will collaborate on a global scale to promote hydrogen supply and utilization.



Image :Fukushima Hydrogen Energy Research Field (FH2R)
Source: Agency for Natural Resources and Energy

10. Output and Contents

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

<Structure of the program>

Preliminary Phase (Activities when applying)

- All applicants are required to prepare "Country Report (ANNEX1)"



Core Phase		
Course Outputs:	Subjects/Agendas	Methodology
1. Explain the advantages, issues, and countermeasures of hydrogen energy in the short-, medium-, and long-term framework in your country.	(1) IAS solutions to issues and TASK extraction (2) Job report presentation (including current status and issues of hydrogen utilization in each country) (3) Keynote Lecture/Use of Hydrogen Energy and its Future (4) Recent Trends in Hydrogen and Ammonia technologies toward Realization of a Decarbonized Society (5) Promotion of Hydrogen and Ammonia utilization and supply chain toward Realization of a Decarbonized Society	Lecture Presentation Discussion Site Visit
2. Understand hydrogen production, storage / transportation, supply and utilization technologies, safety and security outlines and laws and regulations.	(1) Overall map of hydrogen production, storage, transportation, and utilization technologies (2) Characteristics of variable renewable energy and hydrogen utilization (3) Construction of hydrogen energy supply chain through overseas collaboration (4) Construction of Hydrogen Supply Chain and its Development (MCH Method) (5) Toward the realization of a hydrogen	Lecture Presentation Discussion Site Visit

	<p>society (construction of a global supply chain)</p> <p>(6) Development of hydrogen power generation and ammonia power generation technologies</p> <p>(7) Initiatives toward the realization of a hydrogen society (fuel cell vehicles)</p> <p>(8) Initiatives toward the realization of a hydrogen society (residential and commercial-use fuel cells)</p> <p>(9) Security toward the realization of a hydrogen society</p>	
<p>3. Explain the main points of various measures such as policies, technologies / infrastructure, and business necessary for promoting a hydrogen society in Japan.</p>	<p>(1) Fukushima Hydrogen Energy Research Field (FH2R)</p> <p>(2) Challenge to achieve zero CO2 emissions in 2050</p> <p>(3) Geothermal Hydrogen Production Demonstration Project</p> <p>(4) Visit to Wind and Solar Power Generation Facilities</p> <p>(5) Efforts to introduce ammonia fuel</p> <p>(6) Development of ammonia production and mixed combustion technology</p>	<p>Lecture</p> <p>Presentation</p> <p>Discussion</p> <p>Site Visit</p>
<p>4. Explain the main points of the roles and significance of governments, local governments, industrial and academic sectors, and local citizens to promote a hydrogen-based society.</p>	<p>(1) Japan's Vision and Actions toward the Realization of a Hydrogen-based Society (including Hydrogen Strategy)</p> <p>(2) Activities and Achievements of Fukuoka Prefecture Hydrogen Strategy Council</p> <p>(3) Visit to the Hydrogen Energy Products Research and Testing Center/ Advanced Scientific Research Center for Hydrogen Materials</p> <p>(4) Kitakyushu City's efforts toward the realization of a hydrogen society</p> <p>(5) Kitakyushu CO2-free Hydrogen Production and Supply Demonstration Project</p> <p>(6) Visit to Higashida Hydrogen Town in Kitakyushu City</p>	<p>Lecture</p> <p>Presentation</p> <p>Discussion</p> <p>Site Visit</p>

<p>5. Understand the challenges for realizing a hydrogen-based society in your own country and be able to propose short-, medium- to long-term countermeasures</p>	<p>(1) Action Plan Lecture (2) Guidance on Action Plan Preparation and Presentation (3) Action Plan Presentation</p>	<p>Lecture Presentation Discussion</p>
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Final Phase (activities in your home country)

- Dissemination activity
- Progress of Action Plan(s)
- Challenges for implementing Action Plan(s)



Source: Ministry of the Environment in Japan

III. Eligibility and Procedures

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) 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) Participating organizations are also expected to be prepared to make use of knowledge acquired by the nominees for the said purpose.
- (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) Target Organization:

Departments specialized in policy making on clean energy in relevant ministries such as energy and environment, which are (will be) engaged in renewable energy, hydrogen, carbon storage and so forth.

2) Target personnel:

<Position>

Applicants in charge of policy making and promotion of clean energy such as hydrogen at target organizations mentioned above.

<Experience>

Applicants are engaged in policy making or promotion of clean energy including hydrogen energy for more than 2 years.

<Education Background>

Applicants must have bachelor degrees or equivalent in relevant fields such as energy policy/engineering/science, economy, law, business.

< Language>

Have a competent command of spoken and written English which is equal to TOEFL iBT 100 or more (This workshop includes active participation in discussions, which requires high competence of English ability. Please attach an official certificate for English ability such as TOEFL, TOEIC, etc., if possible).

< Health>

Be in good health and suitable to participate in the program in Japan.

To reduce the risk of worsening symptoms associated with respiratory tract

infection, **please be honest to declare in the Medical History (QUESTIONNAIRE ON MEDICAL STATUS RESTRICTION of the application form)** if you have been a patient of following illnesses; Hypertension / Diabetes / Cardiovascular illness / Heart failure / Chronic respiratory illness.

Pregnant applicants are not recommended to apply due to the potential risk of health and life issues of mother and fetus. Because live vaccines administered to a pregnant woman pose a theoretical risk to the fetus; therefore, live, attenuated virus and live bacterial vaccines generally are contraindicated during pregnancy.

Please refer to the following. <https://www.cdc.gov/vaccines/pregnancy/hcp-toolkit/guidelines.html>

(2) Recommendable Qualifications

- 1) Age: be between the ages of thirty and fifty years old.
- 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 office (or the Embassy of Japan).

Attention: Regarding the e-mail address in 6) on page 6, please make sure to provide an e-mail address that can be received during your stay in Japan.

6) Contact Information

Private	Address:	
	TEL*:	Mobile*:
	FAX*:	E-mail:
Office	Address:	
	TEL*:	Mobile*:
	FAX*:	E-mail:
Emergency Contact	Name:	
	Relationship to you:	
	Address:	
	TEL*:	Mobile*:
	FAX*:	E-mail:

*If you have any difficulties/disabilities, which require assistance, please specify necessary assistances in the Medical History of the application form. It may allow us (people concerned in this course) to prepare better logistics or alternatives.

(2) Job Report and Issue Analysis Sheet (IAS) (ANNEX I & II)

- To be submitted with application form. Job Report and IAS are necessary

documents for screening of applicants.

- Each participant will be required to present IAS in approx. 10 minutes in an early stage of the course. Visual materials such as PowerPoint 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.
- An applicant should submit an IAS with approval of his/her superior and an IAS without approval of an applicant's superior is not accepted.
- The purpose of an IAS is to logically organize relationships between challenges of an applicant's organization and contents of fields to be covered in a training course.

(3) 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) Nominee's English Score Sheet

To be submitted with the application form, if you have any official documentation of English ability. (e.g., TOEFL, TOEIC, IELTS)

4. Procedure for Application and Selection

(1) Submitting the Application Documents

Closing date for applications: Please inquire at the JICA office (or the Embassy of Japan).

All required material must arrive at **JICA Center in Japan** by **October 28, 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

Notification of results shall be made by the respective country's JICA office (or the

Embassy of Japan) to the respective Government not later than **November 28, 2022.**

(4) Remote Training Environment Check (ZOOM TEST)

After notification, we will contact the participants to confirm the ZOOM environment, required equipment status, and training location 2 weeks before the start of training.

5. Conditions for Participation

The participants of KCCP are required

- (1)** to strictly observe the course schedule,
- (2)** not to change the air ticket (and flight class and flight schedule arranged by JICA) and lodging by the participants themselves,
- (3)** to understand that leaving Japan during the course period (to return to home country, etc.) is not allowed (except for programs longer than one year),
- (4)** not to bring or invite any family members (except for programs longer than one year),
- (5)** 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,
- (6)** to observe the rules and regulations of the program implementing partners to provide the program or establishments,
- (7)** not to engage in political activities, or any form of employment for profit,
- (8)** to discontinue the program, should the participants violate the Japanese laws or JICA's regulations, or the participants commit illegal or immoral conduct, or get critical illness or serious injury and be considered unable to continue the course. The participants shall be responsible for paying any cost for treatment of the said health conditions except for the medical care stipulated in (3) of "5. Expenses", "IV. Administrative Arrangements",
- (9)** to return the total amount or a part of the expenditure for the KCCP depending on the severity of such violation, should the participants violate the laws and ordinances,
- (10)** not to drive a car or motorbike, regardless of an international driving license possessed,
- (11)** to observe the rules and regulations at the place of the participants' accommodation.
- (12)** to refund allowances or other benefits paid by JICA in the case of a change in schedule.

IV. Administrative Arrangements

1. Organizer(JICA Center in Japan)

(1) **Name:** JICA Kyushu Center (JICA KYUSHU)

(2) **Program Officer:** Ms. OGAWA Yoko ((jicatic@jica.go.jp)

2. Cooperation partner:

(1) **Name:** Kitakyushu International Techno-cooperative Association

(2) URL: <http://www.kita.or.jp/english/>

3. Travel to Japan

(1) **Air Ticket:** In principle, JICA will arrange an economy-class round-trip ticket between an international airport designated by JICA and Japan.

(2) **Travel Insurance:** Coverage is from time of arrival up to departure in Japan. Thus traveling time outside Japan (include damaged baggage during the arrival flight to Japan) will not be covered.

4. Accommodation in Japan

Basically, JICA will arrange the following accommodation(s) for the participants in Japan:

5. Expenses

The following expenses in Japan will be provided by JICA

(1) Allowances for meals, living expenses, outfits, and shipping and stopover.

(2) Expenses for study tours (basically in the form of train tickets).

(3) Medical care for participants who become ill after arriving in Japan (the costs related to pre-existing illness, pregnancy, or dental treatment are not included).

(4) Expenses for program implementation, including materials.

(5) 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.

*Link to JICA HP (English/French/Spanish/Russian):

https://www.jica.go.jp/english/our_work/types_of_assistance/tech/acceptance/training/index.html

1. Information

*YouTube of "Knowledge Co-Creation Program and Life in Japan" and "Introduction of JICA Center" are viewable from the link below.

Part I: Knowledge Co-Creation Program and Life in Japan	
English ver.	https://www.youtube.com/watch?v=SLurfKuqrEw
French ver.	https://www.youtube.com/watch?v=v2yU9ISYcTY
Spanish ver.	https://www.youtube.com/watch?v=m7l-WIQSDjI
Russian ver.	https://www.youtube.com/watch?v=P7_ujz37AQc
Arabic ver.	https://www.youtube.com/watch?v=1iBQqdpXQb4
Part II: Introduction of JICA Centers in Japan	
JICA Kyushu	https://www.jica.go.jp/kyushu/english/office/index.html



JICA Kyushu Main Entrance

V. Other Information

1. Report and Presentation

(1) Job Report & Issue Analysis Sheet (IAS)

Each applicant is required to submit his/her own Job Report & Issue Analysis Sheet following the instruction. Participants will have a presentation of his/her Job Report & Issue Analysis Sheet up to 10 minutes at the earlier stage of the training in Japan in order to share knowledge and background with other participants as well as instructors. Visual materials such as Power Point and pictures may be helpful for your presentation if you bring them with you.

(2) Action Plan

Participants are required to make an Action Plan at the end of the training to express your idea and plan that you carry out after your return, reflecting the knowledge and method you acquire in the training. Each person will have 10 minutes for presentation.

In addition, participants are required to complete IAS by the end of the training in Japan and present it at the Action Plan Presentation.

2. Participants who have successfully completed the program will be awarded a certificate by JICA. It requires 70% or more of training participation. If you do not create an action plan and submit a questionnaire, you will not be awarded a certificate.
3. Participants are recommended to bring a **laptop computer** for your convenience. During the program, participants are required to work on the computers, including preparation of Action plans, finalizing Job report etc.
4. Allowances will be deposited to your temporary bank account in Japan after 2 to 5 days after your arrival to Japan or Lifting the waiting period for Covid-19 control. It is highly advised to bring some cash (100 usd etc.) in order to spend necessary money for the first 2 to 5 days stays after your arrival.
5. It is very important that your currency must be exchanged to Japanese Yen at any transit airport, Narita International Airport in Tokyo. It is quite difficult to exchange money after that, due to no facility or time during the training program.
6. The field trip is arranged during the training program. It would be convenient if you bring small travel bag.
7. As for the waiting period measures after arrival, you may be asked to stay at a hotel arranged by JICA for about 7 days as a general rule. In some cases, such as when the applicant has a valid vaccination certificate, there may be no waiting period.

8. Participants in countries designated as endemic countries/regions for Covid-19 will be placed in quarantine-secured accommodations for three days. If the test result is negative, the participants will be moved to a hotel arranged by JICA, and will continue to stay for 3 nights and 4 days.

VI. ANNEX

- I. Job Report
- II. Issue Analysis Sheet
- III. Issue Analysis Sheet (IAS) Guidelines
- IV. Sample Training Schedule (for reference)

Annex I

Name of Training Course	PROMOTION OF HYDROGEN ENERGY USE -ENERGY POLICY TOWARDS HYDROGEN-BASED CO2 FREE SOCIETY-
Name of Applicant	
Name of Country	
E-Mail	

Job Report

1. Energy Situation in your country (up to 1 page)

- Policy frameworks for clean energy and carbon neutrality,
- Outline of nationally determined commitment,
- Primary energy supply (present and forecasts)
- Electricity supply (outline of share of generation and future plan (see item 4. below)
- Enactment & enforcement situation of renewable energy law and/or regulation
- Incentive scheme to promote renewable energy (e.g. feed-in-tariff, subsidy)
- Issues for promotion of renewable energy and hydrogen

2. Your organization and main tasks (up to 1 page)

- (1) Main tasks of the organization
- (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.) Please describe a duty of each department (section) briefly.
- (3) Brief description of your assignments
- (4) Problems in your job

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

- (1) Your purpose of participating in this course
- (2) Subjects of the course which you are interested in the most
- (3) How do you expect to apply skills and knowledge that you will gain through the module (refer to Annex III) to tackle problems in your home country?
- (4) Other matters which you are expecting to obtain from the course

4. What type of renewable energy have you applied in your country? Please fill in the installed capacity and annual generated energy for each generation facility.

	Installed capacity (MW)	Annual generated energy (GWh)
Hydrogen energy		
Hydropower		
Wind-power generation		
Geothermal power generation		
Solar power		
Biomass power generation		

ANNEX II Issue Analysis Sheet (IAS)

Name: _____

No	【A】* Issues that you confront.	【B】 Actions that you are taking.	
1			
	【 I 】 Task or The information that I need.	【 II 】 Useful information that I obtained /found.	【 III 】 Lecturer

No	【A】* Issues that you confront.	【B】 Actions that you are taking.	
2			
	【 I 】 Task or The information that I need.	【 II 】 Useful information that I obtained /found.	【 III 】 Lecturer

No	【A】* Issues that you confront.	【B】 Actions that you are taking.	
3			
	【 I 】 Task or The information that I need.	【 II 】 Useful information that I obtained /found.	【 III 】 Lecturer

***You shall describe challenges you are facing in your section also in the Job Report. Among them, in column A, please describe only those issues you expect to solve utilizing information and knowledge being delivered in this training course.**

ANNEX III

Issue Analysis Sheet (IAS) Guidelines

1. What is IAS?

- (1) IAS is a tool to logically organize relationships between issues and contents of the training program in Japan.
- (2) IAS will help the nominee to clarify his/her challenges to be covered in each expected module output and to formulate solutions to them.
- (3) The sheet is to be utilized as a logical process control sheet to draw up improvement plans for the issues by filling out the sheet in phases from prior to the nominee's arrival through to the end of the training.
- (4) In addition, it is used for the course leader and lecturers to understand the issues that each participant is confronting, and provide him/her with technical advice, useful references and solutions through the training program in Japan.

2. How to fill out IAS?

- (1) Please describe the issues you confront in column " **A: Issue that you confront**".
- (2) You shall describe challenges you are facing in your section also in the Job Report. Among them, in column A, please describe only those issues you expect to solve utilizing information and knowledge being delivered in this training course. Prepare the separate rows for each problem; if necessary, please add new rows.
- (3) In column " **B: Actions that you are taking to deal with the issue now.**", please describe actions that you are taking to solve the issue shown in " **Column A**".
- (4) This information is very important to carry out the training course and also to make Action Plan as a fruit of the training.
- (5) It's not necessary to fill in column " **I : Task to solve the Issue**", column " **II : The information that I need to carry out the Task.**" and column " **Result**". These columns shall be filled out during the training.
- (6) " **Column I** " shall be clarified and filled out in the subject " **Confirmation of Task based on IAS**" implemented at the earlier time in the training.
- (7) " **Column II** " and " **Column Result**" shall be filled out during the training and you are required to present completed IAS in the subject " **Action Plan Presentation**". **II**

Sample Schedule

Month	Day	Day	Training Contents	
Feb	1	Wed	Arrival at JICA Kyushu	
	2	Thur	Briefing for Arrival in Japan (formalities)	General Orientation
	3	Fri	Course Orientation	Overall map of hydrogen-related technologies
	4	Sat	day off	
	5	Sun	day off	
	6	Mon	Keynote Lecture Utilization of Hydrogen Energy and its Future/Kyushu University	Characteristics of Variable Renewable Energy and Hydrogen Use /IEEJ
	7	Tue	Problem Solving with IAS	TASK extraction based on IAS
	8	Wed	Job report presentation	Wind and Solar Power Generation Facility Inspection Tour /Electric Power Development
	9	Thur	Promotion of Hydrogen and Ammonia Utilization /Potential Lecturers → Kyushu University,	Departure for study tour
	10	Fri	Trends in Decarbonization Technologies /Deloitte Tohmatsu	Realization of a Hydrogen-Based Society/Ministry of Economy, Trade and Industry
	11	Sat	day off	
	12	Sun	day off	
	13	Mon	Challenge to achieve zero CO2 emissions by 2050 /JERA	Fuel Cell Vehicles /Toyota
	14	Tue	Establishment of Global Supply Chain/Iwaya Corporation	Action Plan Lecture and Review
	15	Wed	Hydrogen Supply Chain Development /CHIYODA Corporation	Kawasaki dehydrogenation plant tour/CHIYODA Corporation
	16	Thur	Hydrogen Energy Supply Chain through Overseas Cooperation/Kawasaki Heavy Industries, Ltd.	Ride on a fuel cell bus
	17	Fri	Nuclear Disaster Museum	Fukushima Hydrogen Energy Research F / Toshiba ES
	18	Sat	day off	
	19	Sun	day off	
	20	Mon	Development of Hydrogen and Ammonia Power Generation Technology / Mitsubishi Heavy Industries, Ltd.	Development of ammonia production and co-firing technology/IHI
	21	Tue	JICA Tokyo ⇒ Panasonic	Fuel cells for residential and commercial use /Panasonic

	22	Wed	Kyoto Mini tour	Kyoto ⇒ JICA Kyushu
	23	Thur	day off	
	24	Fri	Miyata Plant Tour/Toyota	review
	25	Sat	day off	
	26	Sun	Kitakyushu City Sightseeing Bus Tour	
	27	Mon	Activities and Achievements of Fukuoka Prefecture Hydrogen Strategy Council /Prefecture	Tour of hydrogen-related research facilities /Prefecture
	28	Tue	Kitakyushu City's efforts to realize a hydrogen society /City	Visit to Kitakyushu Blue Hydrogen Production and Supply Project /City
Mar	1	Wed	Guidance for Action Plan (AP) creation	Guidance on AP preparation /Reflection
	2	Thu	Visit to Higashida Hydrogen Town /City	Security for the realization of a hydrogen society/High Pressure Gas Association
	3	Fri	Visit to Yaskawa Electric Robot Museum /Yaskawa Electric Corporation	Guidance for AP presentation presentation
	4	Sat	day off	
	5	Sun	day off	
	6	Mon	JICA Kyushu ⇒ Green Hydrogen Production Demonstration Plant	Tour of geothermal hydrogen production facility / Obayashi Corporation
	7	Tue	Visit to Hachobaru Geothermal Power Plant/Kyushu Electric Power Co.	Hachobaru⇒JICA Kyushu
	8	Wed	AP presentation	Evaluation meeting
	9	Thu	Departure from Japan	

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 from a process of adoption and adaptation, 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.



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