Knowledge Co-Creation Program (Group and Region Focus)

# Promotion of Hydrogen Energy Use

-Energy Policy Toward Hydrogen-Based CO2 Free Society-



Course Number: 202210187J001

Course Period: September 26- November 1, 2023



NOTE: Adobe Acrobat Leader DC and Google Chrome are recommended as PDF viewer. JAWS and NVDA are recommended as screen reader.

NOTE: If there are any difficulties in reading this document, please contact JICA Office in your country or JICA Center in Japan.

NOTE: Depending on the circumstances, some or all of the program periods may be changed or cancelled after the application has been accepted.



# How can we promote hydrogen supply and utilization?

Acquire theoretical and effective solutions for hydrogen energy development through practical training in Japan.

#### **Outline**



This training course is designed for government officials engaged in policy making and administrative work to promote the supply and utilization of renewable energy, including hydrogen, in the energy transition period toward a carbon neutral society.

The 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 Fukuoka, Tokyo, Kobe as well as Yamanashi.

All sessions are carried out in English.

The period of the program is from September 26, to November 1, 2023.

Course Capacity: 8 participants



# JICA Knowledge Co-Creation Program (KCCP)

The Japanese Cabinet released the Development Cooperation Charter in February 2015, stated 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 foundation of mutual learning process.



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# For What?

#### **Background**

In the world, since the beginning of 2020, countries around the world have been accelerating their efforts to promote the utilization of hydrogen, including European countries that aim to achieve carbon neutrality by 2050 and other countries that have announced their hydrogen strategies one after another. Hydrogen is considered the ultimate clean energy, but due to cost and technical issues in the supply chain (production, storage, transportation, and utilization), medium- to long-term efforts are needed to expand the use of hydrogen.

#### **Objectives**

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

# To Whom?

## Job Areas and Organizations

This program is designed for administrative officials who are involved in policy making and research and development affairs for expanding the supply and use of clean energy in ministries in charge of clean energy such as hydrogen and renewable energy.

The applying organization with the best intention to utilize the opportunity of this program will be highly valued in the selection.

#### **Targeted Countries**

Bhutan, Bolivia, Costa Rica, India, Indonesia, Mexico, Kenya, Paraguay

Participants who have successfully completed the program will be awarded a certificate by JICA.



# When?

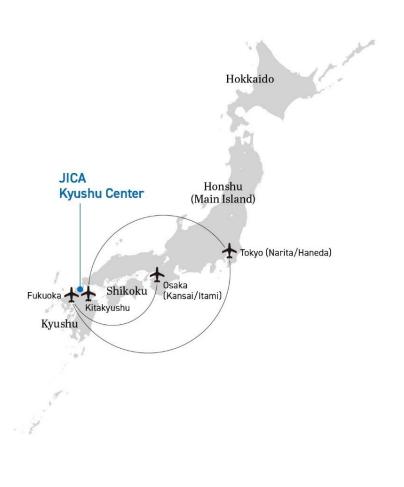
#### Face to Face Program Period



From September 26, 2023 to November 1, 2023

# Where?

This course is organized by JICA Kyushu Center. Participants will stay at JICA Kyushu Center at the first week of the training course and move to where the actual training will be held. Participants will be arranged accommodation such as a JICA domestic center or a private hotel for long stay.





## How?

#### How to Learn

- Research
- Workshops
- Discussions
- Field Visits
- Presentations







Study

**Discuss** 

Interact



**Present** 



Experience

#### Language

**English** 

#### Commitment to the SDGs









#### **Program Structure**

Preliminary Phase (Activities when applying)

All applicants are required to prepare "Job Report (ANNEX1) and "Issue Analysis Sheet(ANNEX2)

#### Week 1:

Briefing, Program orientation and General orientation.



#### Week 2 to final week:

#### Core Phase

Course Outputs:	Methodology	
1. Explain the advantages,	Subjects/Agendas  (1) IAS solutions to issues and TASK	ctriodotogy
issues, and	extraction	
countermeasures of	(2) Job report presentation (including	
hydrogen energy in the	current status and issues of	
short-, medium-, and long-	hydrogen utilization in each	
term framework in your	country)	Lecture
country.	(3) Current Status and Future Prospects	Presentation
	of Hydrogen Technology for	Discussion
	Realization of a Carbon Neutral	Site Visit
	Society	
	(4) Utilization of hydrogen as an energy	
	carrier for decarbonization	
	(5) Recent Trends in Hydrogen and	
	Ammonia Technologies for Realizing	
	a Decarbonized Society	
2. Understand hydrogen	Production	
production, storage /	(1) Characteristics of Variable	
transportation, supply and	Renewable Energy and Hydrogen Use	
utilization technologies,	(2) Basic characteristics and features of	
safety and security	photovoltaic power generation	
outlines and laws and	systems	Lastina
regulations.	(3) Contribution to achieving carbon	Lecture Presentation
	neutrality through artificial photosynthesis	Discussion
	(4) Current Status and Future	Site Visit
	Development of Wind Power	SICC VISIC
	Generation	
	Transport	
	(5) Establishment of hydrogen supply	
	chain (LH2 and hydrogen CGS)	
	(6) Establishment of hydrogen supply	
	chain (LOHC-MCH method)	

3. Explain the main points of various measures such as policies, technologies / infrastructure, and business necessary for promoting a hydrogen society in Japan.	<ul> <li>(7) Establishment of hydrogen supply chain - dehydrogenation plant</li> <li>Utilization</li> <li>(8) Development of hydrogen and ammonia power generation technology</li> <li>(9) Ammonia Supply Chain Future Vision</li> <li>(10) Challenge to become carbon neutral (development of commercial-use FCs)</li> <li>(11) Current Status and Future Development of Synthetic Fuel Technology</li> <li>(12) Toward the Future of Logistics with Hydrogen (FC Forklift Trucks)</li> <li>safety</li> <li>(13) Security for the Realization of a Hydrogen Society</li> <li>(1) Yamanashi Yonekurayama Electric Power Storage Technology Research Site</li> <li>(2) Geothermal Hydrogen Production Demonstration Project</li> <li>(3) CO2 Zero Showroom - Panasonic Center Tokyo</li> </ul>	Lecture Presentation Discussion Site Visit
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.	<ul> <li>(1) Japan's Vision and Actions toward the Realization of a Hydrogen-based Society</li> <li>(2) Activities and Achievements of Fukuoka Prefecture Hydrogen Strategy Council</li> <li>(3) Kitakyushu City's efforts toward the realization of a hydrogen society</li> </ul>	Lecture Presentation Discussion Site Visit



	(4) Kitakyushu CO2-free Hydrogen	
	Production and Supply	
	Demonstration Project	
	(5) Kawasaki City Hydrogen Strategy	
	(6) Center for Advanced Hydrogen	
	Materials Science (HYDROGENINUS)	
	(7) Hydrogenergy Products Research	
	and Testing Center (HyTReC)	
	(8) Wind power generation in	
	Kitakyushu City	
	(9) Kitakyushu Next Generation Energy	
	Park	
	(10) Environmental Museum	
	(11) Yaskawa Electric Miraikan (Future	
	Museum)	
	(12) TOTO Museum	
	(13) Toyota Kyushu	
5. Understand the	(1) Action Plan Lecture	
challenges for realizing a	(2) Guidance on Action Plan	Locturo
hydrogen-based society	Preparation and Presentation	Lecture Presentation
in your own country and	(3) Action Plan Presentation	Discussion
be able to propose		DISCUSSIOII
short-, medium- to long-		
term countermeasures		

#### **Management Members**

# Course Leader Mr. Tarawa Yoichi Kitakyushu International Techo-cooperative Association



#### Coordinator

#### Ms.Aratake Miho Training Coordinator of KCCP

She has extensive experience in coordinating the Knowledge Co-Creation Program (KCCP), and has been the Training Coordinator for many courses in the field of resources and energy



#### **Program Officer**

#### Ms. Ogawa Yoko

Japan International Cooperation Agency (JICA) Kyushu Center

Message: Hello, friends! Have you ever experienced struggling with promotion of Hydrogen energy use? In this program, we will focus on Yamanashi, Japan's largest research center for "Hydrogen and Fuel Cells" as a key to the contribution of government officials and engineers in solving the issues of hydrogen energy promotion. Gain new perspectives through discussions with the lecturers and other participants. We look forward to meeting you!





# Voice

#### Past Program Alumni Comments



Jorge Vinicio Vargas Costa Rica

Thank you so much. The opportunity to expand technical knowledge and learn about Japanese and other cultures in the course will be memorable and help strengthen collaborative relationships between the countries.





Aurora Tenorio Dena Mexico

It was an amazing learning experience, both for Hydrogen and Japanese culture. I am very greatful to JICA, this course will be crucial for my activities and for developing a Hydrogen Strategy.



# 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) 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) 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.

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#### 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 enegy 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. <a href="https://www.cdc.gov/vaccines/pregnancy/hcp-toolkit/guidelines.html">https://www.cdc.gov/vaccines/pregnancy/hcp-toolkit/guidelines.html</a>

#### (2) Recommendable Qualifications

1)Age: be between the ages of thirty and fifty years old.

2) Gender Equality and Women's Empowerment:

<1>Women are encouraged to apply for the program. JICA is committed to



promoting gender equality and women's empowerment, and provides equal opportunities for all applicants regardless of their sexual orientation or gender identity.

<2>JICA seeks more female applicants due to the past records of fewer applications from women. JICA is committed to promoting gender equality and women's empowerment, and provides equal opportunities for all applicants regardless of their sexual orientation or gender identity.

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#### 3. Required Documents for Application

- (1) **Application Form:** The Application Form is available at the JICA overseas office (or the Embassy of Japan)
  - \* If you have any difficulties/disabilities which require assistance, please specify necessary assistances in the QUESTIONNAIRE ON MEDICAL STATUS RESTRICTION (1-(c)) of the application form. Information will be reviewed and used for reasonable accommodation.
- (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:** You should submit it 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.
  - \*The following information should be included in the photocopy: Name, Date of Birth, Nationality, Sex, Passport Number and Expiry Date
- (4) 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.



#### 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 July 21, 2023)

#### (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 <u>not</u> later than August 11, 2023

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#### 6. 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 "3.Expenses", "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, and
- (12) to refund allowances or other benefits paid by JICA in the case of a change in schedule.



# Administrative Arrangements

#### 1. Organizer (JICA Center in Japan)

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

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

#### 2. Implementing Partner

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

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

#### 3. Travel to Japan

(1) **Air Ticket:** In principle, JICA will arrange an economy-class roud-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 tive to outside Japan (include damaged baggage during the arrival fligt to Japan) will not be covered.

#### 4. Accommodation in Japan

Basically, JICA will arrange the following accommodations for the participants in Japan outside of JICA Kyushu.

#### JICA Tokyo Center (JICA Tokyo)

Address: 49-5, Nishihara 2-chome, Shibuya-ku, Tokyo 151-0066

Tel: +81-3-3485-7051 Fax: +81-3-3485-7904

(where "81" is the country code for Japan, and "3" is the local area code. Please refer to facility guide of JICA Kansai at its URL.

#### JICA Kansai Center (JICA Kansai)

Address: 1-5-2, Wakinohama-kaigandori, Chuo-ku, Kobe, Hyogo 651-0073, Japan

TEL: +81-78-261-0388/0341 FAX: +81-78-261-0465



#### JICA Chubu Center (JICA Chubu)

Address: 60-7, Hiraike-cho, 4-chome, Nakamura-ku, Nagoya City, Aichi

Prefecture 453-0872

Tel: +81-52-533-0220 Fax: -81-52-564-3751

If there is no vacancy at JICA Kansai or Tokyo, JICA will arrange alternative accommodation(s) for the participants.

#### 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 preexisting 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 "KENSHU-IN GUIDE BOOK," which will be given before departure for Japan.
  - \*Link to JICA HP (English/French/Spanish/Russian):

The Knowledge Co-Creation Program (KCCP) | Our Work | JICA



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#### 6. Pre-departure Orientation

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

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

Image videos of 'Introduction of JICA Center (YouTube)' show the following information of JICA Centers: Location, Building, Entrance, Reception(Front desk), Lobby, Office,

Accommodation(Room), Amenities(Hand dryer), Bathroom(Shower and Toilet), Toiletries, Restaurant, Laundry Room(Washing machine, Iron), ICT Room(Computer for participants), Clinic, Cash dispenser, Gym, Neighborhood.

Part I: Knowledge Co-Creation Program and Life in Japan				
English ver.	https://www.youtube.com/watch?v=SLurfKugrEw			
French ver.	https://www.youtube.com/watch?v=v2yU9lSYcTY			
Spanish ver.	https://www.youtube.com/watch?v=m7l-WlQSDjl			
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 Tokyo	https://www.jica.go.jp/tokyo/english/office/index.html			
JICA Kansai	https://www.jica.go.jp/kansai/english/office/index.html			
JICA Kyushu	https://www.jica.go.jp/kyushu/english/office/index.html			

If the link of these youtube URLs has expired, please access the URL below and search the nessesary information from the key word.

https://www.youtube.com/user/JICAChannel02

#### 7. Reference

PDF: KENSHU-IN GUIDE BOOK

For more detailed terms and conditions

https://www.jica.go.jp/english/our\_work/types\_of\_assistance/tech/acceptance/training/c8h0vm0000011i07-att/guide\_en.pdf





Video: JICA Predeparture Briefing

For more information on life in Japan and KCCP

https://www.youtube.com/watch?v=SLurfKugrEw



Website: JICA

English/French/Spanish/Russian

https://www.jica.go.jp/english/our\_work/types\_of\_assistance/tech/acceptance/training/index.html

Video: Introduction of JICA Kyushu

Introduction of JICA Kyushu - YouTube



#### 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 5days after your arrival to Japan or Lifting the waiting period for Covid-19 control. Itis 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 or small carry.



### **Annex**

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

#### Annex I

#### Job Report

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	

#### 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
- 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 hydrogen energy

#### 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 (MW)	capacity	Annual g energy (GWh	enerated )
Hydrogen energy				
Hydropower				
Wind-power generation				
Geothermal power generation				
Solar power				
Biomass power generation				



ANNEX II	Issue	Analysis	Sheet	(IAS)
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lame:		

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.	[ ${ m II}$ ] 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.	[ ${ m II}$ ] Useful information that I obtained /found.	【Ⅲ】Lecturer

<sup>\*</sup>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



#### ANNEX2-

#### Sample Schedule

Month	Day	Day	Training Contents		
	26	Tue	Arrival at JICA Kyushu		
	27	Wed	Briefing for Arrival in Japan (formalities)	Program Orientation	
Sep	28	Thur	Course Orientation	General Orientation	
	29	Fri	Problem Solving with IAS	Problem Solving with IAS	
	30	Sat	day off		
	1	Sun	day off		
	2	Mon	Utilization of hydrogen as an energy carrier for decarbonization	Job report presentation	
	3	Tue	Current Status and Future Prospects of Hydrogen Technology for Realization of a Carbon Neutral Society	Visit: Center for Advanced Hydrogen Materials Science (HYDROGENIUS), Hydrogen Energy Products Research and Testing Center (HyTReC)	
	4	Wed	Activities and Results of Fukuoka Prefecture Hydrogen Strategy Counci	Establishment of hydrogen supply chain (domestic and international hydrogen transportation)	
	5	Thur	Kitakyushu City's Efforts to Realize a Hydrogen Society	Wind power generation in Kitakyushu City	
Oct	6	Fri	Environmental Museum	Development of hydrogen and ammonia power generation technology Action Plan Lecture / Review	
	7	Sat	day off		
	8	Sun	day off		
	9	Mon	Travel (Kitakyushu→Tokyo)		
	10	Tue	Recent Trends in Hydrogen and Ammonia Technologies for a Decarbonized Society	Japan's vision and actions toward the realization of a hydrogen-based society	
	11	Wed	Establishment of hydrogen supply chain (LOHC-MCH method)	Characteristics of Variable Renewable Energy and Hydrogen Use	
	12	Thur	Current Status and Future Development of Synthetic Fuel Technology	<ul><li>Characteristics of Variable Renewable Energy and Hydrogen Use</li><li>Review</li></ul>	



	13	Fri	Travel (Tokyo→Yamanashi; 2 hours)	Yamanashi Demonstration Facility , Travel (Yamanashi→Tokyo)
	14	Sat	day off	
	15	Sun	day off	
	16	Mon	Panasonic Center Tokyo	Kawasaki Hydrogen Strategy
	17	Tue	Ammonia Supply Chain Future Vision	Current status and future development of wind power generation
	18	Wed	Geothermal Hydrogen Production Demonstration Project	Efforts toward a hydrogen society (FCV) Review
	19	Thur	Travel (Tokyo→Kyoto)	R&D and Future Prospects of Fuel Cells for Residential and Commercial Use
	20	Fri	Understanding of Japanese culture Mobility (Kyoto→Kobe)	Establishment of Hydrogen Supply Chain (LH2, Hydrogen CGS)
	21	Sat	Travel (Shin-Kobe→Kokura)	
	22	Sun	day off	
	23	Mon	Action Plan Guidance (Theme/Tutorial)	Action Plan Guidance (Theme/Tutorial)
Oct	24	Tue	Basic Characteristics and Features of Solar Power Generation Systems	Toward the Future of Logistics with Hydrogen (FC Forklift Trucks)
	25	Wed	Contribution of Artificial Photosynthesis to the Realization of CN	Security for Realization of Hydrogen Society (Concept of Legal System)
	26	Thu	Action Plan Presentation Guidance	Action Plan Presentation Guidance
	27	Fri	TOTO Museum	Visit to Toyota Kyushu
	28	Sat	Kitakyushu City Cultural Understa	anding Tour
	29	Sun	day off	
	30	Mon	Yaskawa Electric Miraikan	Review Kitakyushu Next Generation Energy Park/Eco Town
	31	Tue	Action Plan Presentation	Action Plan Presentation Evaluation meeting
Nov	1	Wed	departure from Japan	

<sup>\*</sup>The schedule will be subjest to change.



#### 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 course 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.



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.



#### Correspondence

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("81" is the country code for Japan, and "93" is the local area code)