



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

## GENERAL INFORMATION ON

### **Sustainable Rural Development by Biomass 課題別研修「バイオマスの活用による持続可能な地域開発」 JFY 2016**

**NO. J1604436/ ID. 1684601**

**Course period in Japan: From Sep. 21 to Dec. 3 2016**

This information pertains to one of the JICA Knowledge Co-Creation Program (Group & Region Focus) of the Japan International Cooperation Agency (JICA), which shall be implemented as part of the Official Development Assistance of the Government of Japan based on bilateral agreement between both Governments.

#### 'JICA Knowledge Co-Creation Program (KCCP)' as a New Start

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

# ***I. Concept***

## **Background**

Global warming caused by the emission of carbon dioxide is a serious global issue in recent years. Due to that, concrete measure tackled on this issue is inevitable. Since the utilization of recyclable biomass resources is one of the effective measures, developments and disseminations of various kinds of technology in this field are progressed in many aspects globally.

The Government of Japan is also promoting the various measures on this issue based on “Biomass Nippon (=Japan) Strategy”. This idea is important not only in Japan but also in developing countries where there are plenty of potential biomass resources. Moreover, since the issues for an environmental degradation and limited energy resources are serious in tropical and subtropical region, the effective utilization of tropical biomass resources is highly expected.

In conjunction with these situations, the program which aims to train the administrative or research officials who engages in planning, promotion and utilization of biomass was established in 2005.

## **For what?**

This program aims to promote the effective utilization of tropical biomass resources through learning various examples for the promotion of sustainable society and biomass related industry in respective countries.

## **For whom?**

This program is offered to administrative or research officials presently engaged in tropical biomass and bio-energy utilization

## **How?**

Participants shall have opportunities in Japan to identify approaches, methods and technologies to create the re-cycling oriented society using biomass as well as to formulate their own action plan for improving biomass utilization. Participants will also organize the training report describing what participants learned in this program and its utilization plan in order to share it with their colleagues and carry out the plan.

## ***II. Description***

- 1. Title (J-No.):** Sustainable Rural Development by Biomass  
(J1604436)
- 2. Course Period in Japan**  
September 21 to December 3, 2016
- 3. Target Regions or Countries**  
India, Cuba, Moldova, Ukraine, Papua New Guinea, Argentina, Lebanon, Ghana
- 4. Eligible / Target Organization**  
Administrative bodies engaged in planning and/or operation of the utilization of tropical biomass and bio-energy
- 5. Total Number of Participants**  
10 participants
- 6. Language to be used in this program:** English
- 7. Program Objective (To be achieved by the end of the training)**  
Participants understand the features, cultivation plan, and effective utilization of biomass and bio-fuel as well as formulate and share the utilization plans fitted to their country in their organizations.
- 8. Overall Goal (To be achieved in the future)**  
Biomass utilization in participating countries is enhanced.

### 9. Expected Module Output and Contents:

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

Modules	Subjects/Agendas	Methodology
1) To be able to understand feature of biomass	(1) Environmental problems such as global warming and energy problem, mutual relations among the global warming and food problem, Countermeasures of global warming (2) Basic frameworks of Biomass Nippon and Biomass Asia	Lecture Observation
(2) To be sorted out the current situations and issues on the utilization of biomass in the home country	(1) Country Report preparation and presentation (2) Production of biomass such as the energy crops in the home country or home town	Lecture Practice
(3) To be able to estimate the amount of the biomass resources.	(1) Estimation of the total amount and usable biomass/bio-energy resources in the home country or home town	Lecture Practice
(4) To be able to understand individual technologies for the planning of biomass utilization.	(1) Production, collection and transportation of unused biomass and energy crops (2) Energy conversion technologies (3) Conversion of biomass as materials and its utilization (4) Measurement, monitoring and evaluation	Lecture Observation Practice
(5) To be able to make a plan for effective utilization of biomass based on above mentioned (1) to (3)	(1) Arrangement of problems relating biomass/bio-energy use in each country (2) PDCA of biomass/bio-energy utilization system (3) To make an action plan and its presentation	

(Subject to minor changes)

### **<Structure of the program>**

Topic outline (subject to minor changes)

Orientations (9/22-23)

- (1) Life in Okinawa and Japan
- (2) General Orientations on Japan

1st and 2nd week (9/26-10/7) Lecture and discussion

- (1) Country Report Presentation
- (2) Basic concept of biomass utilization Biomass Nippon and Biomass Asia
- (3) Estimation of biomass volume and Planning of biomass utilization

3rd week (10/10-14) Site visit

- (1) BDF (Bio Diesel Energy) related facilities
- (2) Biomass related research center

4th to 6th week (10/17-11/4) Lecture and laboratory work

- (1) Biomass energy conversion methodology (gasification and its utilization, waste treatment, BDF, and methane fermentation and its utilization)
- (2) Biomass Utilization as Materials (biomass plastic, comprehensive utilization of sugarcane, bagasse charcoal, composting and feeder production)
- (3) Photosynthesis and Energy crops Production Technique
- (4) Resource Crop and Bio-Ethanol Production Technique
- (5) Biomass Utilization General Practicum

7th week (11/7-11) Site visit and some experiences for plants operation

- (1) Biomass related research center and biomass conversion plants

8th to 10th week (11/14-12/2) Lecture, laboratory work and practice

- (1) Biomass measurement methodology (remote sensing)
- (2) Evaluation of biomass utilization system
- (3) Biomass material conversion and utilization
- (4) Biomass utilization system planning
- (5) Final report making

## ***III. Conditions and Procedures for Application***

### **1. Expectations for 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) 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 administrative or research officials presently engaged in planning of biomass or bio-energy utilization for tropical climate areas and will continue the position in this field for more than 3 years
- 2) Educational Background: be bachelor or technical higher education degrees holder degree holders in agriculture, forestry, chemical, mechanical engineering or equivalent science
- 3) Language: have a good command of English enough to give an oral presentation, discussion and write a report
- 4) 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

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

- 1) Those who have been devoting and who will continue to devote themselves to the activities of the JICA project concerned are highly welcome to this training program.
- 2) Those who are tasked with formulating the relevant measures for planning and promoting in this field, in the organizations/associations mentioned above.
- 3) Age: be between the ages of thirty (30) and forty-fifty (45) years.

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

- (1) Application Form:** The Application Form is available at the respective country's 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) 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), please attach it (or a copy) to the application form.
- (4) Country Report and Questionnaire:** to be submitted with the Application Form. Fill in VI. Annex of this General Information, and submit it along with the application form.

**(\*Applicants are strongly required to typewrite the Application Form. There are many applicants disqualified from the selection because of the illegible handwriting in the Application Form.)**

#### **4. Procedure for Application and Selection :**

##### **(1) Submitting the Application Documents:**

Closing date for application to respective country's JICA office or Embassy of Japan in your country: **Please inquire to respective country's JICA office (or Embassy of Japan) for your country.**

(Respective country's JICA office or Embassy of Japan will send application to **the JICA Center in JAPAN** by **August 12, 2016.**

##### **(2) Selection:**

After receiving the document(s) through due administrative procedures in the respective government, the respective country's JICA office (or Japanese Embassy) shall conduct screenings, and send the documents to the JICA Center in charge in Japan, which organizes this project. Selection shall be made by the JICA Center in consultation with the organizations concerned in Japan based on submitted documents according to qualifications. The organization with 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 shall be made by the respective country's JICA office (or Embassy of Japan) to the respective Government by **not later than August 19, 2016.**

#### **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 Okinawa

(2) **Contact:** Mr. Yuji INOUE, Training Program Division, JICA Okinawa:  
oicctp@jica.go.jp

### 2. Implementing Partner:

(1) **Name:** Under Selection

### 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:

JICA Okinawa International Center (JICA OKINAWA)

Address: 1143-1, Aza-Maeda, Urasoe-shi, Okinawa-ken 901-2552, JAPAN

TEL: +81-98-876-6000, Fax: +81-98-876-6014

(where “81” is the country code for Japan, and “98” is the local area code)

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

### 5. Expenses:

The following expenses will be provided for the participants by JICA:

(1) Allowances for accommodation, 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:

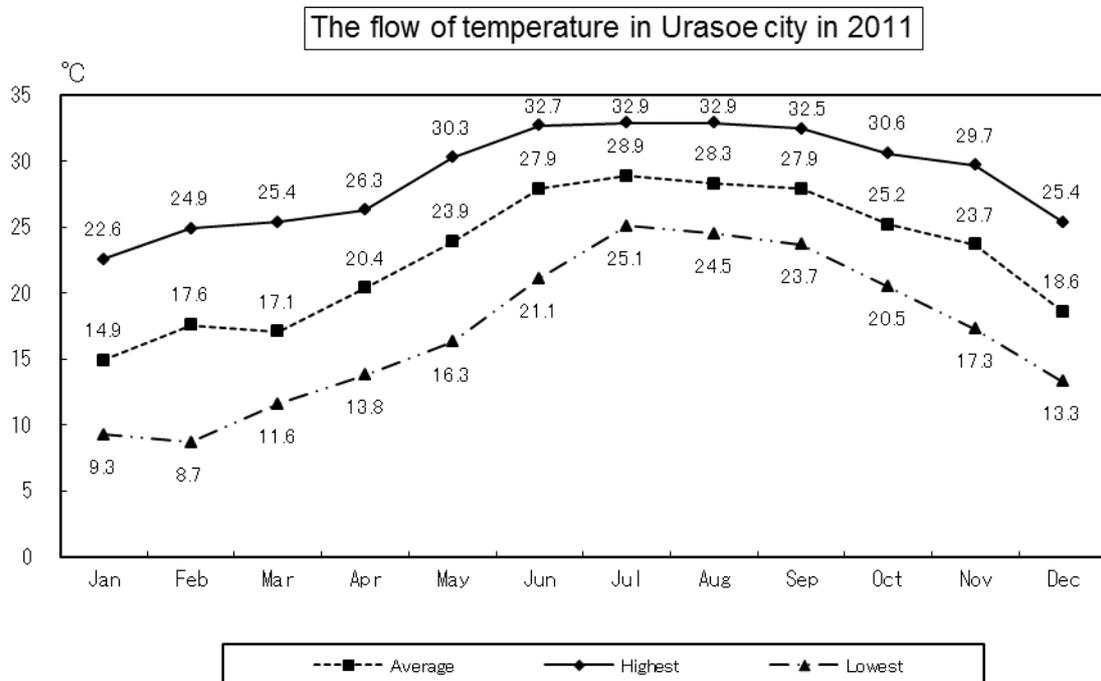
A pre-departure orientation will be held at the respective country’s JICA office (or Japanese Embassy), to provide participants with details on travel to Japan, conditions of the workshop, and other matters.

## V. Other Information

### 1. Climate of Okinawa

Okinawa is located at sub-tropical zone (southern edge of Japan) but climate varies depending upon seasons. While it is hot and heavily humid in the summer season (June to October), it becomes a bit chilly in the winter season (December to March) due to strong northerly wind. Participants are recommended to bring suitable clothing (details are mentioned in below4.)

The following diagram is the flow of temperature in Urasoe city where JICA Okinawa International Center (OIC) is located (Data source: homepage of Urasoe City).



### 2. Main facilities in JICA Okinawa

OIC is equipped with a variety of facilities for training and welfare activities such as seminar rooms, library, study room with computers, accommodation rooms (details are mentioned in below 3.), dining hall, clinic for medical consultation, gym, tennis court, a swimming pool (available from May to October), Japanese-style room for tea ceremony and recreation rooms.

At OIC dining hall, “HALAL” meals for the Muslim and vegetarian meals are available.

Internet connection available (either by cable or WiFi) at accommodation rooms and other buildings.

### 3. Accommodation in JICA Okinawa

OIC accommodation building has 96 single rooms. Every room is furnished with bed, desk, chair, bookshelf and closet. Also, there are TV (with satellite channel), DVD player, safety box, telephone, LAN cable jack, etc. in each room.

OIC accommodation building has tea lounge, smoking room and laundry room on each floor. And also washing machines and irons are available for free. Towels and toiletries are provided upon check-in. Please note that cooking at OIC accommodation is strictly prohibited

### 4. What to bring

#### (1) Clothing

It is recommended to bring appropriate clothing according to the season during Participants stay in Okinawa(\*refer 1. Climate of Okinawa ). If your training program includes plant visit or outdoor activities, suitable uniform/clothing will be provided by JICA or at visiting site upon arrival. Also, JICA Okinawa accommodation front desk has jackets and coats for rental in case of study tour to mainland Japan during winter time.

#### (2) National Costume

There are a few occasions like opening and closing ceremonies when training participants are kindly requested to wear formal clothing. Nevertheless, casual clothing is acceptable even during training hours of most of the training program.

It is strongly recommended to bring your national or traditional costumes for opening & closing ceremony and for other activities that participants may have opportunities to join. Besides, we will have “International Cooperation and Exchange Festival” during your stay. In the event, you will have chance to introduce your cultures to the local people.

#### (3) Handicrafts and Folk crafts

Any handicrafts and folk crafts items which could be used to exhibit your culture are welcomed. JICA Okinawa has display corner to introduce world culture to the local visitors.

#### (4) Photos and Movies

During your stay in Okinawa, JICA Okinawa and/or the local media (TV, newspapers, etc.) may interview you. Please bring photos and videos of your country, your daily life, your office, etc. Please note that photos and videos must be copyright cleared or taken by yourself.

#### (5) Authentic Recipes

We are very glad if you provide OIC restaurant authentic recipes of your hometown foods to let them provide various taste to relief as many participants as possible.

## 5. Environmental conservation activities in JICA OIC

JICA OIC emphasizes on the environmental conservation activities such as energy saving, rubbish separation and recycling etc. Participants are kindly requested to cooperate to these activities during their stay at JICA OIC. Details will be given on arrival to JICA OIC.

## 6. Activities out of training program

JICA Okinawa offers a various kinds of welfare activities for the participants such as sports program, exposition of Japanese/Okinawa traditional cultures and Japanese language/conversation classes etc. Training participants can try any of them whenever sheets are available.

## 7. For your Information

Information of Okinawa is available at following URLs.

- 1) Homepage of Urasoe city (where JICA OIC is located)

Urasoecity:<http://honyaku.i-server.com/LUCURASOEC/ns/tl.cgi/http%3a/www.city.urasoe.lq.jp/?SLANG=ja&TLANG=en&XMODE=0&XCHARSET=utf-8&XJSID=0>

Basic information of Urasoe city is covered in English.

- 2) HP of Okinawa Prefecture: <http://www.pref.okinawa.jp/english/index.html>

Basic information of Okinawa prefecture is covered (Urasoe city is one of the municipalities of Okinawa prefecture) in English.

- 3) HP of Okinawa Convention & Visitors Bureau: <http://en.okinawastory.jp/>

- 4) The YouTube channel of JICA Okinawa :

<https://www.youtube.com/user/jicaokinawa>

More information is available at the reception of JICA OIC.

# VI. ANNEX:

## Country Report and Questionnaire

Nominees are requested to prepare a country report on the following issues and submit it with the application form. These documents are requested to be typewritten in English on A4 size paper (21 cm x 29.5 cm) in single spacing at maximum of 20 pages.

### Country Report

<b>1. Full Name</b>	[Family]	[First]	[Middle]
<b>2. Organization</b>			
<b>3. Country Report (Please describe as clearly and minutely as possible)</b>			
<b>4-1. Description of your organization</b>			
<b>(1) Roles and responsibilities of your organization</b>			
<b>(2) Organization Chart</b>			
<p>Referring to the example, draw the chart of your organization and indicate your department / division /section with double line.</p> <p>(If it is difficult to incorporate into this form, you can attach Organization Chart separately.)</p>		<p>〈Organization Chart Example〉</p> <pre> graph TD     Ministry["Ministry of xxxxxxx"] --- Committee["xxxxxxx Committee"]     Ministry --- D1["xxxxxxx Department"]     Ministry --- D2["xxxxxxx Department"]     Ministry --- D3["xxxxxxx Department"]     D2 --- Div1["xxxxxxx Division"]     D2 --- Div2["xxxxxxx Division"]     D2 --- Div3["xxxxxxx Division"]     Div2 --- Sec1["xxxxxxx Section"]     Div2 --- Sec2["xxxxxxx Section xx Persons"]     style Sec2 stroke-width:4px     </pre>	
<b>(3) Your specialized field of study and practical experience.</b>			

<b>(4) Outline of agriculture including forestry in your country.</b>
<b>(5) Biomass resources and its utilization, present condition and future outlook.</b>
<b>(6) Special topics of the biomass utilization, especially your practice or research.</b>

## Questionnaire

1. What is the field of biomass you are or were actually researching? Select any item that applies.

(1) *Waste-Based Biomass*

- Livestock-based resources (livestock manure and other such material)
- Food-based resources (residue from food processing, raw garbage, etc.)
- Industrial-based resources (e.g., pulp waste)
- Forestry-based resources (scrap lumber and sawdust from sawmills, waste from construction, etc.)
- Sewage sludge
- Other

(2) *Non-Utilized Biomass*

- Forestry resources (slash and other logging debris, fast-growth trees, etc.)
- Agricultural resources (rice straw, chaff, wheat straw, etc.)
- Other

(3) *Product Resources*

- Sugar-based resources (sugar cane, sweet sorghum, etc.)
- Starch-based resources (rice, potatoes, cassava, corn, etc.)
- Oil- and fat-based resources (rapeseed, palm, jatropha, peanut, etc.)
- Other

(4) *Which of the following describes the form of use for the biomass at that time?*

- Energy
- Compost
- Animal feed
- Foodstuffs
- Plastics or other material resources
- Other

2. In your country, what other types of non-utilized resources can be used as biomass? What type of material do you hope to utilize?
  
3. Please describe specifically the uses of biomass you have researched thus far.
  
4. Please list dates, titles, conferences, journals, etc. for any papers you have published or presentations you have made at conferences. Also please note specific examples of biomass utilization in your country.
  
5. What are the benefits of promoting utilization of and research into biomass in your country?
  
6. Does your country have any laws or systems for actively promoting utilization of and research into biomass?
  
7. After you have completed this training course, what materials are you thinking of using in your own country, and in what ways do you hope to apply such biomass?
  
8. Please describe what kind of training content you expect in this training course.

Thank you very much.

## ***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.

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 Okinawa International Center (JICA OKINAWA)**

**Address : 1143-1, Aza-Maeda, Urasoe-shi, Okinawa-ken 901-2552, JAPAN**

Tel: +81-98-876-6000, Fax: +81-98-876-6014 E-mail: [oictp@jica.go.jp](mailto:oictp@jica.go.jp)