



TRAINING AND DIALOGUE PROGRAMS

GENERAL INFORMATION ON

TROPICAL BIOMASS AND BIO-FUEL UTILIZATION

集団研修「熱帯バイオマスおよびバイオ燃料利用」

JFY 2010

<Type: Trainers Training / 類型: 人材育成普及型>

NO. J10-00665/ ID. 1080032

From May 2010 to June 2011

Core phases in Japan: From Sep. 28, 2010 to Dec. 4 2010

This information pertains to one of the Training and Dialogue Programs 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.

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 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. During five years training period, the initial goal to enhance the capacity of personnel that is involved in formulating policy and plan had been achieved. Since we confirm the necessity of diffusion of knowledge and acquirement, we will change the standard category of training as “Trainers Training” from this year, and aim of the specified final beneficiaries gaining knowledge and skill through program participants, in addition to the development of the abilities of the participants themselves.

For what?

This program aims to realize the effective utilization of biomass resources through introducing the advanced technologies related to the effective utilizations of tropical biomass.

It is also expected that this program will ultimately contribute to 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-fuel 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 the plan for biomass utilization systems. Participants will also organize the training report describing what did participants learned in this program.

II. Description

1. Title (J-No.): Tropical Biomass and Bio-fuel Utilization (J10-00665)

2. Period of program

Duration of whole program:	May 2010 to June 2011
Preliminary Phase: (in a participant's home country)	May 2010 to September 2010
Core Phase in Japan:	September 28, 2010 to December 4, 2010
Finalization Phase: (in a participant's home country)	December 2010 to June 2011

3. Target Regions or Countries

Costa Rica, Colombia, Burkina Faso, Brazil, Mexico, Egypt

4. Eligible / Target Organization

Administrative body and NPO engaged in tropical biomass and bio-fuel utilization

5. Total Number of Participants

6 participants

6. Language to be used in this program: English

7. Program Objective:

The technologies for the effective utilization of biomass/bio-fuels that suit the condition of the home country in the tropics and the subtropical area are shared in the organization.

8. Overall Goal

The global warming issue, energy problems, and the food problem, etc. are deeply understood, and the biomass/bio-fuels are used for contributing to solve those problems.

9. Expected Module Output and Contents:

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

(1) Preliminary Phase in a participant's home country (May 2010 to September 2010) <i>Participating organizations make required preparation for the Program in the respective country.</i>	
Modules	Activities
Country report	Formulation and submission of Country Report

(2) Core Phase in Japan (September 28, 2010 to December 4, 2010) <i>Participants dispatched by the organizations attend the Program implemented in Japan.</i>		
Modules	Subjects/Agendas	Methodology
(1) To be able to explain the approaches to create the sustainable and re-cycling oriented society using biomass/bio-fuels.	(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 Practice
(2) To be able to estimate the amount of the biomass resources or bio-fuels.	(1) Estimation of the total amount and usable biomass/bio-fuels resources in the home country or home town (2) Production of biomass such as the energy crops in the home country or home town	Lecture Observation Practice
(3) To master the Individual technologies for the planning of biomass/bio-fuels 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

<p>(4) To be able to make a plan for effective utilization system of biomass/bio-fuels based on the above-mentioned (1) to (3).</p>	<p>(1) Arrangement of problems relating biomass/bio-fuels use in each country (2) PDCA of biomass/bio-fuels utilization system (3) To make an action plan and its presentation</p>	<p>Lecture Observation Practice</p>
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(Subject to minor changes)

***1: Some study tours are held in mainland Japan, where the temperature is lower than Okinawa. It is recommended that the participants bring some winter clothes when they come to Japan.**

***2: Participants are required to prepare and present Country Reports, Action Plans, and other form of presentations, during the Core Phase in Japan. It is recommended that participants bring some relevant information in electronic form, such as figures, data, pictures and maps, which are related to biomass and bio-fuel utilization in their countries.**

(3)Finalization Phase in a participant's home country

Participating organizations produce final outputs by making use of results brought back by participants. This phase marks the end of the Program.

Modules	Activities
<p>The action plan made during the training course will be shared in the participant's belonging organization, and will be modify if necessary.</p>	<p>(1) Report of training content in the belonging organization (2) Sharing the action plan in the belonging organization (3) Reexamination of the action plan (4) Formulate and submit the progress report and completion report by June, 2011.</p>

<Structure of the program>

1. Preliminary phase (activities in your home country):
Preparation of the country report.

2. Core Phase (activities in Japan):

Topic outline (subject to minor changes)

1st and 2nd week (10/4-10/15) 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 (10/18-10/22) Site visit

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

4th to 6th week (10/25-11/12) 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 (11/15-11/19) Site visit and some experiences for plants operation

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

8th to 9th week (11/22-12/3) 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

3. Finalization Phase (activities in your home country)

Participants are expected to implement his/her action plan and report on the progress within six months after the completion of the phases in Japan.

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.
- (3) As this program is designed to facilitate organizations to come up with concrete solutions for their issues, participating organizations are expected to make due preparation before dispatching their participants to Japan by carrying out the activities of the Preliminary Phase described in section -9 .
- (4) Participating organizations are also expected to make the best use of the results achieved by their participants in Japan by carrying out the activities of the Finalization Phase described in section -9.

2. Nominee Qualifications:

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

(1) Essential Qualifications

- 1) Educational Background: be bachelor's degree holders in agriculture / forestry or chemical / mechanical engineering or equivalent science
- 2) Current Duties: be administrative officials presently engaged in planning of biomass utilization / research officials involved in planning process of biomass utilization / presently work as an adviser to planning and promoting biomass utilization
- 3) Experience in the relative field: have more than three (3) years' experience in the field of above mentioned in 2)
- 4) Language: have a good command of English enough to give an oral presentation and write a report in English
- 5) Health: be in good health, both physically and mentally, to undergo the course of training

There is higher risk for pregnant women and people with chronic diseases to cause serious medical consequences when infected with the new Influenza A (H1N1) virus according to the past cases.

Under the pandemic situations of the new Influenza, pregnant applicants shall not be accepted for the time being.

And applicants who suffer from chronic diseases, such as respiratory illness, cardiac disease, metabolic disease (diabetes, etc), renal dysfunction and immune insufficiency (systemic steroid administration, etc), shall not be accepted in principle. However, for those applicants with the chronic diseases, if they and their organizations express strong interest in participating in training programs, JICA shall accept them as an exceptional case after receiving a letter of consent from themselves and their organizations.

Please ask national staffs in JICA office for the details.

6) Must not be serving any form of military service.

(2) Recommendable Qualifications

1) Age: be between the ages of twenty-five (25) and thirty-five (35) 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) 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 the JICA Center in JAPAN: **August 6, 2010.**

Note: Please confirm the closing date set by the respective country's JICA office or Embassy of Japan of your country to meet the final date in Japan.

(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.*

(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 27, 2010.**

5. Conditions for Attendance:

- (1)** to observe the schedule of the program,
- (2)** not to change the program subjects or extend the period of stay in Japan,
- (3)** not to bring any members of their family,
- (4)** to return to their home countries at the end of the program in Japan according to the travel schedule designated by JICA,
- (5)** to refrain from engaging in political activities, or any form of employment for profit or gain,
- (6)** to observe the rules and regulations of their place of accommodation and not to change the accommodation designated by JICA, and
- (7)** to participate the whole program including a preparatory phase prior to the program in Japan. Applying organizations are expected to carry out the actions described in section -9 and section -4.

IV. Administrative Arrangements

1. Organizer:

(1) **Name:** JICA Okinawa

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

2. Implementing Partner:

(1) **Name:** The faculty of agriculture, University of the Ryukyus

Remark: <http://www.u-ryukyu.ac.jp/>

<http://www.u-ryukyu.ac.jp/en/index.html>

http://www.u-ryukyu.ac.jp/en/mains/faculties/faculty_agr.php

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:** Term of Insurance: From arrival to departure in Japan. *the traveling time outside Japan shall not be covered.

4. Accommodation in Japan:

JICA will arrange the following accommodations for the participants in Japan:

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 p. 9-16 of the brochure for participants titled

"KENSU-IN GUIDE BOOK," which will be given to the selected participants before (or at the time of) the pre-departure orientation.

6. Pre-departure Orientation:

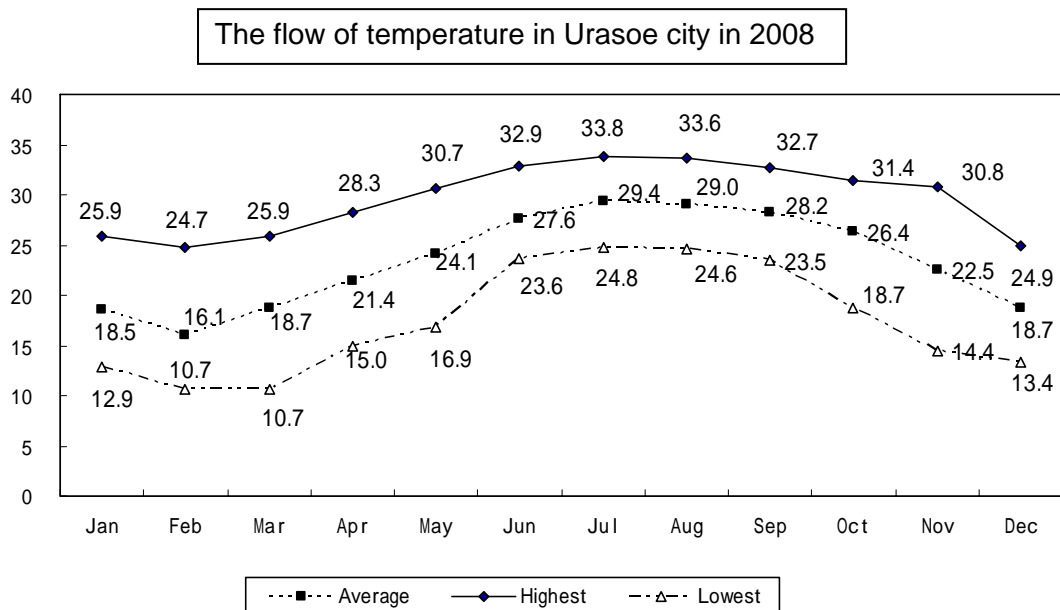
A pre-departure orientation will be held at the respective country's JICA office (or Japanese Embassy), to provide participants with details on travel to Japan, conditions of the workshop, and other matters.

V. Other Information

1. Climate in Okinawa

Okinawa is located in sub-tropical zone (southern edge of Japan) however climate varies depending upon seasons. While it is hot as well as heavily humid in summer season (June through October), it becomes a bit chilly due to the strong windy in winter season (December through March). So, participants are recommended to bring suitable clothing (details are mentioned in below 4.)

The following diagram is the flow of temperature in Urasoe city where JICA Okinawa (or “Okinawa Kokusai Center” in Japanese) is located (Data source: http://www.city.urasoe.lg.jp/images/library/File/kikakubu/kikaku/tokei/420/01_%E2%9C%9F%E5%9C%B0_1%EF%BD%9E.xls).



2. Main facilities in JICA Okinawa

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

Supplementary, “HALAL” meals for the Muslim and vegetarian meals are available in the dining hall.

3. Accommodation in JICA Okinawa

JICA Okinawa's accommodation building has three stories and 118 single rooms. Training participants basically use these single rooms. Every single room is furnished with a bed, a desk, a chair, a TV equipped with video, a DVD player, room lamps, a safety box, a bathroom and a telephone set which enables you to call inside JICA Okinawa and receive all incoming calls including international calls.

Accommodation building is equipped with laundry room on each floor. And also washing machines and irons are available for free. However, towels and toiletries are not available and cooking facility is not equipped. Cooking in the room is strictly prohibited.

4. Outfit

It is recommended to bring suitable clothing depending upon the season, especially ensure to have warmed enough clothes if your program runs through the winter season.

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 welcomed to bring your national or traditional dress for cultural exchange activities that you are likely to join. And also any other items which may be used to exhibit your culture are welcomed (JICA Okinawa has displays which introduce world culture to the visitors).

If your training program includes practices such as plant visit or outdoor activities, suitable uniform/clothing will be provided by JICA or a visiting site upon arrival. Participants are requested, however, to bring a pair of comfortable walking shoes.

5. Environmental conservation activities in JICA Okinawa

JICA Okinawa emphasizes on the environmental conservation activities such as energy saving, rubbish separation and recycling etc. JICA Okinawa has been certified ISO14001 (International Organization for Standardization) since Oct, 2004 and renewed it in Oct, 2007. ISO 14001 is the international specification for an environmental management system. Therefore, training participants are also kindly requested to cooperate to these activities during stay in JICA Okinawa. Details are instructed by a staff member of JICA Okinawa at beginning of the training program.

6. Activities out of training program

JICA Okinawa offers a various kinds of welfare activities for the participants such as a home-stay program to the local family, 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) HP of Urasoe city:

<http://www.city.urasoe.lg.jp/archive/8761234/kokusai/english/index.html>

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://www.ocvb.or.jp/en/>

More information is available at the reception of JICA Okinawa.

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 by August 6, 2010. 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

1. Full Name	[Family]	[First]	[Middle]
2. Organization			
3. Country Report (Please describe as clearly and minutely as possible)			
4-1. Description of your organization			
(1) Roles and responsibilities of your organization			
(2) Organization Chart			
<p><i>Referring to the example, draw the chart of your organization and indicate your department / division /section with double line.</i></p> <p><i>(If it is difficult to incorporate into this form, you can attach Organization Chart separately.)</i></p>		<p>Organization Chart Example</p> <pre> graph TD Ministry["Ministry of xxxxxxx"] --- Committee["xxxxxxx Committee"] Ministry --- Dept1["xxxxxxx Department"] Ministry --- Dept2["xxxxxxx Department"] Ministry --- Dept3["xxxxxxx Department"] Dept2 --- Div1["xxxxxxx Division"] Div1 --- Sec1["xxxxxxx Section"] Div1 --- Sec2["xxxxxxx Section xx Persons"] style Sec2 stroke-width:4px </pre>	
(3) Your specialized field of study and practical experience.			

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

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.

About 460 pre-organized programs cover a wide range of professional fields, ranging from education, health, infrastructure, energy, trade and finance, to agriculture, rural development, gender mainstreaming, and environmental protection. A variety of programs and 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