Dominican Republic

Midterm Evaluation Report on the International Diagnostic Imaging Course for Radiologists and Radiology Technicians in Central America and the Caribbean

November 2008

Japan International Cooperation Agency

Preface

The Japan International Cooperation Agency realized the midterm evaluation study of the International Diagnostic Imaging Course for Doctors and Radiologists in Central America and the Caribbean during July and August 2008.

I hope that the report will be helpful for radiologists and radiology technicians in Central America and the Caribbean, and that the project promotes strengthening of the good relations among the participating countries.

Finally, I would like to extend my gratitude to all the related individuals who provided their collaboration and support in the countries concerned..

Tadashi Ikeshiro

Director
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ACRONYMS AND ABBREVIATIONS

ADS	Antidiuretic substance
CEMADOJA	Dominican-Japanese Friendship Center for Medical Education
C/P	Counterpart
CT	Computerized tomography
JCC	Joint Coordination Committees
JICA	Japan International Cooperation Agency
IVR	Interventional radiology
MRI	Magnetic resonance imaging
SESPAS	Ministry of Public Health and Social Welfare
SEEPYD	Ministry of Economics, Planning, and Development
RX	Conventional X-rays

SUMMARY

I. Outline of the Project			
Country	Dominican Republic	**Project title**	International Course in Diagnostic Imaging for Radiologists and Radiology Technicians from Central America and the Caribbean
Issue/Sector	Health	**Cooperation scheme**	Technical cooperation
Division in charge	JICA Dominican Republic Office	**Total cost**	101,583,000 yen
Period of cooperation	**(R/D):** September 2005	**Partner Country's Implementing Organization**	• Ministry Public Health and Social Welfare (SESPAS) • Dominican-Japanese Friendship Center for Medical Education (CEMADOJA)
	(Extension): **(F/U):**	**Support Organization in Japan**	Oita University
Related cooperation	• Project for the Construction of the Dominican-Japanese Friendship Center for Medical Education (1998) • Medical Education and Training Project (1999–2004)		

1. Background of the Project

The lack of development in the field of medicine and public health poses a series of obstacles to meeting the health needs of most people in the Dominican Republic. Consequently, the Dominican Ministry of Public Health and Social Welfare officially requested grant aid from the government of Japan to construct a new medical education center within the Dr. Luís E. Aybar hospital complex (currently called Dr. Luís E. Aybar Health and Hygiene City). As a result, the Dominican-Japanese Friendship Center for Medical Education (CEMADOJA) was constructed in 1999, and medical education projects started that same year, lasting for a period of five years. The project placed emphasis on providing equipment for completing the facility as well as on training courses for local medical doctors and technicians to achieve technology transfer. As a result, the center has become one of the most highly regarded medical educational institutions in the country.

In March 2004 the project came to an end, and its success was acknowledged in the final evaluation. In response to this achievement, the Dominican government requested further technical cooperation for executing training programs for medical experts in the country as well as in neighboring countries.

The results of the preliminary evaluation showed that further technical cooperation was needed. In the countries targeted, the knowledge and skills of radiologists and radiological technicians are undeveloped. Therefore, there was a great demand for refreshing and updating their knowledge and information. In addition, CEMADOJA has the capacity to provide training courses to meet these needs with JICA's collaboration in planning and executing the training program.

Based on the results of the previous evaluation, an agreement on the program for the first training course was reached between JICA and CEMADOJA. Finally, the Dominican Minister of Public Health and the Director of JICA both signed the R/D in September 2005.

2. Project Overview

a. Project Purpose

(1) The radiologists and technicians who participated in the course diffuse their knowledge and techniques in diagnosis using images to contribute to the improvement of health services in their home countries.

(2) CEMADOJA is developing management capacity to conduct international courses by efficient and effective means, and strives to be the regional center for Central America and the Caribbean in the field of diagnostic imaging.

b. Outputs

The radiologists and radiology technicians in Central America and the Caribbean who participated in the course are developing capacity to conduct diagnostic imaging.

Japanese side:

Long-term experts:	0	Equipment cost:	20,525,700 Yen
Short-term experts:	13	Local cost:	Yen
Trainees received:	40		

Dominican side:

Counterparts:	16
Participants in the course:	40

II. Evaluation Team

Members of the evaluation team	Leader:	Mitsuo Isono	
	Diagnostic imaging technician:	Norio Hongo	
	Evaluation planning:	Toshiya Wakabayashi	
	Evaluation and analysis:	Alejandro Moliné	
Period of evaluation	28 July 2008–8 August 2008	**Type of evaluation**	Midterm

III. Results of the Evaluation

1. Project Performance

a. The project has fulfilled the commitment of conducting an annual version of the international course exactly as planned.

To date, three courses have been held, and the fourth is in the process of being prepared. Each course has been supported by Japanese experts, has included all of the defined teaching conditions, and has fulfilled the facilities planned for the participants.

b. A total of 40 people have taken part, and each course has fulfilled the commitment of not exceeding a total of 14 participants, with no more than four from the Dominican Republic.

In addition, all the countries invited have sent participants to each version of the course. The invitation process was conducted as planned, and the course participants have fulfilled the required personal and professional conditions.

c. The programs in the three versions of the course have been prepared according to directives.

Presentation of the themes has included the participation and supervision of the Japanese experts.

d. SESPAS, through CEMADOJA, has supported the course by contributing financial resources.

However, it hasn't presented documents that clearly show the resources provided, and they have taken an excessive amount of time to pay the teachers their incentives.

2. Summary of Evaluation Results

a. Relevance: High

Diagnostic imaging is of fundamental and growing importance in health interventions in the midst of an epidemiological transition from preventable diseases to chronic degenerative diseases.

As documented in the Tokyo Declaration 2005 Action Plan, the Dominican Republic will play a crucial part in medical education in Central American and Caribbean countries. In this respect, this project is in complete accordance with Japan's overseas development aid plan.

The technical capacity and diagnostic ability of Japanese technicians and radiologists is very highly regarded as a result of their great practical experience in operating modalities and interventional radiology as well as advanced educational and academic activities. The project comes under cooperation in the health area and therefore is in keeping with Japanese ODA policy.

b. Effectiveness: High

The evaluation did not have objective evidence to verify results of the course through the participants at its disposal, as a genuine assessment of the practical and theoretical knowledge they acquired would require an individually based and complex process, meaning that evaluating the project results for the participants was based on perceptions compiled in the questionnaire that they filled out and the interviews and visits that were conducted, as well as the tests that they took at the start and finish of each course.

The course has helped all the direct and indirect beneficiaries as set out in the project. The technical radiology staff and radiologists from the countries invited have benefited the most through broadening their theoretical knowledge and improving their technical skills. Some even became familiar with and had contact with equipment and procedures that are not available at their places of work. However, it is necessary for teachers to acquire up-to-date knowledge for use at the international level.

As an institution, CEMADOJA and its teaching and administrative staff had the opportunity to organize and teach three international courses, which provided them with skills and experience that will help CEMADOJA organize future events of this type. The project's effect on CEMADOJA's management capacity is evident. For this result, it is understood that the institution's management and teaching capacity has improved, but on this point there is also a lack of objective evaluation tools.

c. Efficiency: Medium

The project's basic activities, the annual international courses and the associated series of activities, have been carried out on the planned dates and within the planned timescale. The Japanese experts were present for the expected dates and timescales. Some factors that have contributed to reducing the direct costs of the course are: (i) use of CEMADOJA's existing physical infrastructure (teaching classrooms, work spaces, etc.) and teaching equipment (PowerPoint projectors, blackboards, desks, tables, PCs, etc.), which has required minimal provision of additional equipment; (ii) holding the course at the workplace means that the teaching and administrative staff did not have to be paid transportation expenses; and (iii) contributions from other public institutions that were involved, including SESPAS, SEEPYD, and the Ministry of Foreign Relations, were provided free of charge. However, one negative factor is that the payment of incentives to the teachers was considerably delayed on the three occasions that the course was held, affecting the motivation and the general pace of course organization.

d. Impact: Medium

Indicators to establish the course's impact on the participants' patients and users were not established in this evaluation. According to the participants and some of their managers, the course taught them techniques and procedures that have helped them improve the health services they provide. Some radiologists highlighted the fact that patients have benefited from a higher level of accuracy in tests, and from an improvement in interpretations of diagnostic images. The main problems they mentioned in applying the knowledge acquired during the course were: lack of adequate equipment (42.9%); lack of inputs (28.6%); lack of support from their managers (17.9%); and lack of interest from fellow staff (10.7%).

The course's impact on their professional colleagues in their places of work has varied, as not all participants have fulfilled their commitment to pass on what they had learned to their coworkers. 64.7% of the participants said they had conducted or taken part in activities to diffuse the practice and knowledge they had acquired during the course. It has to be stressed that some of the course participants who work in education in hospitals or training centers have been able to include important teaching elements from the CEMADOJA resident program and the classes taught during the course into their programs and study exercises. Likewise, all the interviews with participants who are also teachers in their home countries highlighted the incorporation of knowledge acquired in the course into their classes.

e. Sustainability: Low

In terms of management sustainability, CEMADOJA has acquired important experience through the organization and implementation of the international course with full support from Japanese experts and the permanent presence of JICA. It is necessary for CEMADOJA to manage the course on its own.

In terms of technical sustainability, CEMADOJA holds annual seminars to exchange knowledge in the area of diagnostic imaging, and CEMADOJA staff members are sent to other institutions to improve their colleagues' capacities to acquire new information and techniques. However, there is no adequate system for developing trainers, and the content of the materials is not sufficient for use at the international level.

In terms of financial sustainability, CEMADOJA has demonstrated self-management capacity by buying, with its own funds, a tomography and magnetic resonance scanner, and is currently in the process of acquiring other modern and costly equipment. But the current modality for implementing the course requires major economic contributions from JICA and CEMADOJA. At the present moment, CEMADOJA generates income by selling services, but it does not have a surplus, so it would be practically impossible for it to cover the entire cost of the courses.

3. Conclusion

Based on the results achieved, the evaluation team acknowledges that the project has been executed according to plan and that it will achieve its purposes in the established time frame. For the remaining execution period, the project needs to strengthen its management capacity and follow-up on the course participants' commitments in their home countries so that they continue to pass on the project's results.

4. Lessons Learned

The need for CEMADOJA to project a technological cutting-edge image in the field of medical imaging. The field of medical imaging has a strong technological component that depends greatly on the strength of the imaging equipment. In order for CEMADOJA to be a national and regional point of reference in the field of imaging, there has to be permanent technological upgrading and updating.

The importance of the prestige of CEMADOJA's professionals and teachers. For the national and international image that CEMADOJA has to project, in addition to the presence of modern equipment it is also essential to have a highly trained professional team that is up-to-date and possesses adequate teaching skills to meet international standards. The development of research is also an activity that will add prestige to these professionals and to CEMADOJA.

The importance of using management systems. Japanese advice contributed to the development and use of working systems within the institution. These systems, which involve the existence of work tools and procedures, are largely responsible for the good organization and development of the courses.

The importance of JICA's local offices being involved in the selection and follow-up of participants. Part of the value of the course process is based on effective selection of participants and following up on their outstanding commitments once they return to their home countries. In order to fulfill both roles, it is essential that JICA's local offices are involved in the selection of attendees so that they truly respond to the required profiles, and that JICA's local offices provide effective follow-up on the commitments obtained from those attending the courses.

The future sustainability of the project will depend on a range of factors. The continuation and diversification of training courses in the field of imaging by CEMADOJA will depend on development of the following factors: financial self-sufficiency, continuous training for CEMADOJA staff, technological updating, etc.

5. Recommendations

The principal recommendations to the Project are as follows:

In the short term:

- Increase SESPAS links with CEMADOJA's work
- Establish indicators for the skills acquired
- Review the course program
- Add preparation of a participant Work Plan

In the medium term:

- Increase CEMADOJA's capacity, science, and technological imaging
- Develop a marketing plan for imaging training and skills development services

1. Introduction

1.1 Name of the Project

International Diagnostic Imaging Course for Radiologists and Radiology Technicians in Central America and the Caribbean.

1.2 Period of Cooperation

Five years; started on 8 September 2005 and scheduled to end on 31 March 2010.

1.3 Location of the Project

The Dominican-Japanese Friendship Center for Medical Education (CEMADOJA), located in Santo Domingo, Dominican Republic.

1.4 Entities in Charge of Implementation

(1) Dominican side
- Ministry of Public Health and Social Welfare (SESPAS)
- Dominican-Japanese Friendship Center for Medical Education (CEMADOJA)
- Ministry of Economics, Planning, and Development (SEEPYD)

(2) Japanese side
- Oita University
- Japan International Cooperation Agency (JICA)

1.5 Background to the Evaluation

The International Diagnostic Imaging Course for Radiologists and Radiology Technicians in Central America and the Caribbean (hereinafter referred to "the course") will have been underway for three years as of 8 September 2008.

Having passed the halfway mark of its five-year duration, JICA decided to conduct a midterm evaluation in order to establish what activities have been held to date, the initial results achieved, and the difficulties encountered, as well as to identify suggestions and recommendations that will allow for improvement in execution during the rest of the project's duration. For this purpose a mission was organized, and it visited the Dominican Republic and some of the participating countries—El Salvador, Guatemala, and Nicaragua—between 29 July and 8 August 2008.

1.6 Evaluation Team

(1) Japanese side
- Mitsuo Isono, mission leader
- Norio Hongo, diagnostic imaging technician
- Toshiya Wakabayashi, evaluation planning
- Alejandro Moliné, evaluation and analysis

(2) Dominican side

- Julio Manuel Rodriguez Grullón, president of the Dr. Luís E. Aybar Health City hospital complex; coordinator for the Dominican side
- Ernesto Félix, aide to the Undersecretary on Personnel Affairs, Ministry of Public Health and Social Welfare (SESPAS)
- Rosanna Cuello, officer in the Insurance Department, Dominican-Japanese Friendship Center for Medical Education (CEMADOJA)
- Pablo Herasme, international cooperation analyst, Ministry of Economics, Planning, and Development (SEEPYD)

1.7 Objectives of the Evaluation

(1) Describe, understand, and verify the processes and achievements of the implementation of the course.
(2) Establish the influence of the inputs used in the achieved results.
(3) Extract lessons learned and draw up a set of recommendations aimed at improving implementation of the course.

1.8 Evaluation Methodology

The evaluation was based on the JICA Project Evaluation Guidelines manual and was conducted on the basis of the following criteria as defined in the manual:

(1) Relevance

Relevance of the project plan is reviewed through the validity of the project purpose and the overall goal in connection with the development policy of the government of the Dominican Republic and the needs of the beneficiaries, and also through logical consistency of the project plan.

(2) Effectiveness

Effectiveness is assessed by evaluating to what extent the project has achieved its purpose and clarifying the relationship between the purpose and outputs.

(3) Efficiency

Efficiency of the project's implementation is analyzed with emphasis on the relationships between outputs.

(4) Impact

Impacts of the project are assessed in terms of both positive and negative influences caused by the project.

(5) Sustainability

Sustainability of the project is assessed in organizational, financial, and technical aspects by examining the extent to which achievement of the project will be sustained and expanded after the project's completion.

The following activities were carried out for the evaluation:

(1) Review of documents

A set of basic documents about CEMADOJA and about the courses that were held were reviewed and analyzed.

(2) Visits to CEMADOJA

Visits were made in order to get to know the structure and the conditions of the center and to meet with its staff.

(3) Visits to participants' hospitals in El Salvador, Guatemala, and Nicaragua

Visits were made to several of the participants' hospitals in order to ascertain the conditions and the type of work that they do, to hear the opinions of their managers and coworkers, and to get to know the follow-up work they have done since they received the training.

(4) Interviews

Structures and open interviews were held with CEMADOJA and JICA officials as well as course teachers and beneficiaries. During the evaluation, interviews were conducted with participants from El Salvador, Guatemala, Nicaragua, and the Dominican Republic.

(5) Use of questionnaires

Questionnaires were prepared, distributed, compiled, processed, and analyzed, targeted at Japanese experts, teachers, and participating radiologists and technicians. 55% of the participants responded to the questionnaire, as did 60% of the teachers and five of the Japanese experts. The completed questionnaires represent a significant proportion of the total, but as no sample criteria were used, it can be said that they are relevant but not necessarily representative.

1.9 Evaluation Agenda

Date		Activity
July 28	Monday	• Meeting at CEMADOJA
July 29	Tuesday	• Santo Domingo to Nicaragua
July 30	Wednesday	• Interview with former participants in Nicaragua • Nicaragua to El Salvador
July 31	Thursday	• Interview with former participants in El Salvador
August 1	Friday	• El Salvador to Guatemala
August 2	Saturday	• Internal meeting
August 3	Sunday	• Internal meeting
August 4	Monday	• Interview with former participants in Guatemala • Internal meeting
August 5	Tuesday	• Guatemala to Santo Domingo
August 6	Wednesday•	• Joint Coordination Committee (JCC)
August 7	Thursday	• Joint Coordination Committee (JCC)
August 8	Friday	• Signing of Minutes (M/M) • Report to JICA in the Dominican Republic

2. Project Background and Summary

2.1 Background of the Project

Considering that the lack of development in the field of medicine and public health induces various impediments for meeting the needs of the majority of people in the Dominican Republic, the Dominican Ministry of Public Health officially requested that the government of Japan construct a new center for medical education through grant aid within the Dr. Luís E. Aybar hospital complex (currently called Dr. Luís E. Aybar Health and Hygiene City). In addition, it was also mentioned that there was the need to provide training courses for experts in medical imaging and epidemiology.

Consequently, in 1999, the Dominican-Japanese Friendship Center for Medical Education (CEMADOJA) was constructed, and medical education projects started the same year for a period of five years. In the project, emphasis was placed on providing equipment for completing the facility as well as training courses for local medical doctors and technicians in order to achieve technology transfer. As a result, the center has become one of the most highly evaluated medical educational institutions in the country.

In March 2004, the project was completed with the recognition of success in the final evaluation. In response to this success, the Dominican government requested further technical cooperation in executing training programs for medical experts within the country as well as for those in neighboring countries.

After revising the proposals, the need to evaluate the capacity of CEMADOJA as a training institute was noted by the local consultant in the process of the previous evaluation. In addition, a CEMADOJA-JICA joint mission was dispatched to the five countries in Central America: Honduras, Panama, El Salvador, Guatemala, and Nicaragua.

The results of its findings showed that further technical cooperation was necessary. In these targeted countries, the knowledge and skills of radiologists and radiological technicians are undeveloped; therefore, there is a great demand for upgrading and updating their knowledge and information. In addition, CEMADOJA has the capacity to provide training courses for meeting those needs with the collaboration of JICA in planning and executing the training program.

Based on the results of the previous evaluation, an agreement on a program for the first training course was made between JICA and CEMADOJA. Finally, in September 2005, the R/D was signed by both parties, the Dominican Minister of Public Health and Social Welfare and the director of JICA.

2.2 Project Summary

(1) Project purpose

1) Radiologists and technicians who participated in the course diffuse their knowledge, techniques, and progress in their capacity to diagnose using imaging to contribute to the improvement of health services in their home countries.
2) The capacity of CEMADOJA management progresses to realize international courses by efficient and effective means, and shall be a regional center for Central America and the Caribbean in the field of diagnostic imaging.

(2) Output

The radiologists and radiology technicians of Central America and the Caribbean who participated in the course progress in their capacity to conduct diagnostic imaging.

(3) Participants

The course is aimed at radiologists and radiology technicians in Central America and the Caribbean. On the first three occasions that the course was taught, professionals from El Salvador, Guatemala, Honduras, Nicaragua, Panama, and the Dominican Republic (as host country) took part. Each session should contain seven radiologists and seven radiology technicians. The participants must be university-educated, have more than two years of professional experience, be from the public sector, be under the age of 45, and not be doing any kind of military service.

(4) Project beneficiaries

The project has direct and indirect beneficiaries.

1) Direct beneficiaries:

- Participating radiologists and radiology technicians

  These are the most direct targets and beneficiaries of the course. They are the radiologists and radiology technicians from the countries invited who have taken part in the course.

- Teachers

  CEMADOJA's technical and medical staff members who have taught classes during the courses

- CEMADOJA staff

  The center's management and administrative staff who have taken part in the organization and development of the courses

2) Indirect beneficiaries:

- Patients or users of services

  Service users in the establishments where the course participants work who have been able to benefit from the increase in practical and theoretical knowledge acquired as a result of the professionals' participation in the course

- Radiologists and radiology technicians

  Staff in the workplaces of the trained technicians and radiologists who have benefited from contact with the trained professionals and from sessions where the acquired knowledge has been reproduced

(5) Teachers or instructors

The teachers responsible for teaching the course are radiologists and technicians at CEMADOJA, most of whom were trained in Japan. The center's development also has the support of Japanese experts who provide technical and organizational advice.

(6) Course methodology

The course combines theoretical knowledge with practical teachings derived from the services that CEMADOJA provides on a daily basis. It also includes visits to other imaging centers. During the course, two groups are set up: one composed of radiologists and one composed of technicians, which join together on several occasions. The idea is to generate a participative and interactive environment through a horizontal atmosphere of professional colleagues.

(7) Sessions held

To date the course has been held on three occasions:

1) The first version of the course took place between 30 January and 3 March 2006.
2) The second course lasted for five weeks, between 29 January and 2 March 2007.
3) The third version of the course was held from 29 January to 28 February 2008.

(8) Certification

Participants who pass the course receive a course certificate from JICA and CEMADOJA.

(9) Participants

In the following table, the participants in the three versions of the course that have been taught are classified according to profession and nationality.

Scholarship Holders Participating in the Course

Total Participants in the First Course: 13							
By Profession		**By Nationality**					
Doctors	**Technicians**	**El Salvador**	**Guatemala**	**Honduras**	**Nicaragua**	**Panama**	**Dominican Republic**
6	7	2	2	2	2	2	3
Total Participants in the Second Course: 14							
7	7	2	2	2	2	2	4
Total Participants in the Third Course: 13							
5	8	2	2	2	2	1	4
Total by Profession and Nationality							
18	22	6	6	6	6	5	11
Total Participants to Date: 40							

3. Evaluation

3.1 Project Achievements

The course does not have a classic project document. Expected results and performance indicators as well as the Minutes of the Meeting dated 8 September 2005 were used to define the course's scope and content. The Minutes of the Meeting establish a set of conditions, requisites, and measures to be taken, whose fulfillment and execution to date are established in the following tables.

As observed in Annex 1 of the Minutes of the Meeting dated 2005, the institutions involved took on and fulfilled the activities and commitments as stipulated in the Minutes of the Meeting, although in a few cases it was necessary to push through their fulfillment. Regarding the fulfillment of conditions, requisites, and measures to be taken as set out in the Project Minutes, the following items are highlighted:

(1) The project has fulfilled the commitment to conduct an annual version of the international course exactly as planned. To date, three courses have been held and the fourth is in the process of being prepared. Each course has been supported by Japanese experts, has included all the defined teaching conditions, and has fulfilled the facilities planned for the participants.

(2) A total of 40 people have taken part, and each course has fulfilled the commitment of not exceeding a total of 14 people, with no more than four from the Dominican Republic. In addition, all the countries invited have sent participants to each version of the course. The invitation process was conducted as planned, and the course participants have fulfilled the required personal and professional conditions.

(3) The programs in the three versions of the course have been prepared with the directives in Annex 1 of the Minutes of the Meeting dated 2005, and the presentations of the themes have included the participation and supervision of the Japanese experts.

(4) SESPAS, through CEMADOJA, has supported the course by contributing financial resources. However, it hasn't presented documents that clearly show the resources provided, and they have taken an excessive amount of time (nearly a year on the first two occasions and over six months on the third) to pay the teachers their incentives.

3.2 Achievements of the Project Purpose and Objectives

3.2.1 Relevance

Result: High

- Diagnostic imaging is of fundamental and growing importance in health interventions in the midst of an epidemiological transition from preventable diseases to chronic degenerative diseases. Central American and Caribbean countries are continuously acquiring imaging equipment, although not in the quantity and quality needed, in order to improve their diagnostic procedures. This increase in equipment requires technically trained staff to interpret test results. Additionally, due to lack of equipment and in some cases a lack of adequate radiological knowledge, some diseases are not detected in a timely manner and later turn out to be catastrophic. It is in this context that the International Diagnostic Imaging Course for Radiologists and Radiology Technicians in Central

America and the Caribbean responds to these regional training demands in the area of diagnostic imaging.

- The course as organized by CEMADOJA corresponds to the center's Vision, having emerged as the leader in the Dominican Republic when it comes to continuing education in imaging and serving other, technologically less advanced, countries. Likewise, it is in keeping with its Mission as a teaching, training, skill sharing, and research and development center for continuing medical education in advanced and high-technology diagnostic imaging. Moreover, increasing the skills of Dominican staff in the area of imaging supports the process of improving health services pursued by the Dominican government through its Health Sector Reform project and the implementation of the New Dominican Social Security System. In addition, the provision of an international course in diagnostic imaging by a public institution supports the Dominican government's efforts to project the country as a regional technological center.
- As documented in the Tokyo Declaration 2005 Action Plan, the Dominican Republic will play a crucial role in medical education in Central American and Caribbean countries. From this point of view, this project will fully coincide with Japan's international assistance plan.
- The technical capacity and diagnostic ability of Japanese technicians and radiologists is thought of very highly. This is the result of great practical experience with operating modalities and interventional radiology as well as advanced educational and academic activities. Deliberations on economic cooperation policies between Japan and the Dominican Republic were held in August 2003, and it was decided that the assistance areas of the Japanese side are as follows: (a) agriculture, forestation, and fisheries; (b) health; (c) education; (d) the environment; (e) promotion of foreign investment and exports; and (f) tourism. The project is cooperation in the health area, and therefore coincides with Japanese ODA policy.

3.2.2 Effectiveness

Result: High

- The evaluation did not have objective evidence at its disposal to verify results of the course for the participants, seeing as a genuine assessment of the practical and theoretical knowledge they acquired would require an individualized and complex process, meaning that evaluating results of the project for the participants was based on perceptions compiled in the questionnaire that they filled out and the interviews and visits that were conducted as well as the tests that they took at the start and finish of each course. These are multiple-choice tests, which only record theoretical aspects and are a useful but imperfect tool for measuring knowledge acquired.
- The course has helped all the direct and indirect beneficiaries as set out in the project. The technical radiology staff and radiologists from the countries invited have benefited most by broadening their theoretical knowledge and improving their technical skills. Some even became familiar with and had contact with equipment and procedures that are not available at their places of work. An estimated 40 out of 42 grant recipients have attended the three courses held. 55.5% of the participants who

responded to the questionnaire (55% of all attendees) classified the value of the course as "very high," and 45% as "high." 70% classified the program as "very good," and 30% as "good." The quality of the teachers was described as "very high" by 55% of respondents, and as "high" by the remaining 45%. The support materials were described as "adequate" by 65%, and "very adequate" by 35%. However, it is necessary for teachers to acquire up-to-date knowledge for use at the international level.

- The feedback evaluations, interviews, and visits reflected a good level of appreciation for the course by the participants. 26.3% of the participants who responded to the questionnaire said that the course had provided a "large" contribution to their professional knowledge; 68.4% said "very large," and 5.3% said "medium." The impact of the course on their professional work was awarded high marks by the participants, with 47.4% describing it as "large," 42.1% as "very large," and 10.5% as "medium." However, the impact on professional practice has been affected by the following factors: (a) The course duration, which for most participants was too short for the amount of themes being covered; (b) The program covers five study areas, but the participants only work on one technique or procedure in their own countries, which means that a large part of the course material is useful as general background knowledge but does not provide enough depth to have much of a linkage with their day-to-day work; and (c) In some cases the participants don't work with the same equipment that was used in the course.
- As an institution, CEMADOJA and its teaching and administrative staff had the opportunity to organize and teach three international courses, which provided them with skills and experience that will help CEMADOJA organize future events of this type. The project's effect on CEMADOJA's management capacity is evidenced by them effectively running three courses on the agreed timescales and under conditions that were established in the Minutes of the Meeting. For this result, it is understood that the institution's management and teaching capacity have improved, but on this point there is also a lack of objective evaluation tools. It must be stressed that 65% of the participants classified the general organization of the course as "very good" and 35% as "good."
- The trainers also benefited from the advice provided by the Japanese experts and from the experience of teaching, which has helped increase their knowledge of the subject as well as their pedagogical skills.

3.2.3 Efficiency

Result: High

- The project's basic activities, the annual international courses and the associated series of activities, have been carried out on the planned dates and within the planned timescale. The Japanese experts were present for the expected dates and timescales. Some factors that have contributed to reducing the direct costs of the course are: (a) Use of CEMADOJA's existing physical infrastructure (teaching classrooms, work spaces, etc.) and teaching equipment (PowerPoint projectors, blackboards, desks, tables, PCs, etc.), which has required minimal provision of additional equipment; (b) Holding the

course at the workplace means that the teaching and administrative staff did not have to be paid transportation expenses; and (c) Contributions from other public institutions that were involved, including SESPAS, SEEPYD, and the Ministry of Foreign Relations, were provided free of charge. However, one negative factor is that the payment of incentives to the teachers was considerably delayed on the three occasions that the course was held, affecting the motivation and the general pace of course organization.

3.2.4 Impact

Result: Medium

- Indicators were not established in the evaluation to verify the impact of the course on the participants' patients and users. According to the participants and some of their managers, the course taught them techniques and procedures that have helped them improve the health services they provide. Some radiologists highlighted the fact that their patients have benefited from a higher level of accuracy in the tests and from an improvement in the interpretations of diagnostic images. 90% of participants who responded to the questionnaire said that their patients had benefited "greatly" from the theoretical and practical knowledge acquired during the course, and 10% said the benefit was "a little." However, when asked whether they had been able to apply the theoretical and practical knowledge acquired during the course, 57.9% responded by saying "a lot," and 42.1% said "a little." The main problems they mentioned in applying the knowledge acquired during the course were: a lack of adequate equipment (42.9%); a lack of inputs (28.6%); a lack of support from their managers (17.9%); and a lack of interest from fellow staff (10.7%).
- The course's impact on their professional colleagues in their places of work has varied, as not all participants have fulfilled their commitment to pass on what they learned to their coworkers. 64.7% of the participants said they had conducted or taken part in activities to diffuse the practice and knowledge they had acquired during the course, while 35.3% said that they had not. Others have held regular sessions, and a minority has embarked on an ongoing process. However, it has to be stressed that some of the course participants who work in education in hospitals or training centers have been able to include important teachings from the CEMADOJA residential programs and the classes taught during the course into their programs and study exercises. Likewise, all the interviews with participants who are also teachers in their home countries highlighted the incorporation of knowledge acquired in the course into their classes.

3.2.5 Sustainability

Result: Medium

(1) Management sustainability

- As discussed above, CEMADOJA has acquired important experience through the organization and implementation of the international course, although they have always enjoyed the full support of Japanese experts and the permanent presence of the JICA office in the country. CEMADOJA has adequately fulfilled its commitment of organizing three sessions of the international imaging course.

Moreover, CEMADOJA hasn't yet developed the capacity to raise funds from international aid agencies and to market and sell training and skills-sharing services.

(2) Technical sustainability

- CEMADOJA holds an annual seminar to exchange knowledge on diagnostic imaging, and CEMADOJA staff members are dispatched to others institutions to improve their capacities to acquire new information and techniques. However, there has been no adequate system to develop trainers, and the content of the material is not sufficient for use at the international level.

(3) Financial sustainability

- CEMADOJA has demonstrated self-management capacity by buying, with its own funds, a tomography and magnetic resonance scanner, and is currently in the process of acquiring other modern and costly equipment. Another favorable factor is that JICA has reduced its contributions to the courses, and the center responded by supplying these resources. But the current modality for implementing the course requires major economic contributions from JICA and CEMADOJA. CEMADOJA has fulfilled its commitments, although on some occasions with delays. At present, CEMADOJA generates income by selling services but does not have a surplus, so it would be practically impossible for it to cover the entire cost of the courses.
- The Dominican Republic is experiencing economic difficulties in the midst of the international fuel-price crisis, which is affecting the availability of public funds for activities that, like training courses and training days, are not considered to be a priority; the Dominican government's budget support for this type of activity is also not guaranteed in the future.

4. Conclusions

- Based on the results achieved, the evaluation team acknowledges that the project has been executed according to plan and that it will achieve its purpose in the established time frame. For the remaining execution period, the project needs to strengthen its management capacity and follow-up on the course participants' commitments in their home countries so that they continue to pass on the project results.

5. Lessons Learned

- **The need for CEMADOJA to project a technological cutting-edge image in the field of medical imaging.** The field of medical imaging has a strong technological component that depends greatly on the strength of the imaging equipment. In order for CEMADOJA to be a national and regional point of reference in the field of medical imaging, there has to be permanent technological upgrading and updating.

- **The importance of the prestige of CEMADOJA's professionals and teachers.** For the national and international image that CEMADOJA has to project, in addition to the presence of modern equipment it is also essential to have a highly trained professional team that is up-to-date and possesses adequate teaching skills to meet international standards. The development of research is also an activity that will add prestige to these professionals and to CEMADOJA.
- **The importance of using management systems.** Japanese advice contributed to the development and use of working systems within the institution. These systems, which involve the existence of work tools and procedures, are largely responsible for the good organization and development of the courses.
- **The importance of JICA's local offices being involved in the selection and follow-up of participants.** Part of the value of the course process is based on effective selection of participants and following up on their outstanding commitments once they return to their home countries. In order to fulfill both roles, it is essential that JICA's local offices are involved in the selection of attendees so that they truly respond to the required profiles, and that JICA's local offices provide effective follow-up on the commitments obtained from those attending the courses.
- **The future sustainability of the project will depend on a range of factors.** The continuation and diversification of training courses in the field of medical imaging by CEMADOJA will depend on development of the following factors:
  - **The financial self-sufficiency of CEMADOJA.** Income generation and operational profits are vital for the organization, as well as running new training courses, which implies anticipated investments.
  - **Continuous training for CEMADOJA teachers and medical and technical staff.** As discussed above, updating knowledge is vital for the institution's prestige.
  - **Technological updating.** Also discussed above, this is another indispensable factor to maintain the reputation that CEMADOJA requires in order to continue holding international courses.
  - **Diversification of the educational services offered.** As well as the current course, CEMADOJA must design alternatives according to training needs identified in the region.
  - **Marketing capacity.** Without losing its social orientation, CEMADOJA must start developing sales capacity for the training services it can offer. These sales efforts should be directed at the public, not-for-profit, and private sectors.
  - **Development of institutional links.** For professional exchanges, developing cooperation, and fund-raising programs, CEMADOJA will have to set up links with international aid organizations, teaching hospitals, universities, and similar centers in the region.
  - **Exploring new markets.** As well as the countries taking part in the course, CEMADOJA should explore new options in the Caribbean region.

6. Recommendations

(1) In the short term

1) Creates stronger links between the health ministry (SESPAS) and CEMADOJA's work

As an institution with a certain level of autonomy, SESPAS does not get sufficiently involved in CEMADOJA's activities or feel represented by them. Therefore it is important to inform, raise awareness, and motivate SESPAS to bring it closer to the institution.

2) Establish indicators for the skills acquired

In order to measure the impact of the training taught in the courses, CEMADOJA needs to define a set of indicators and evaluation tools for this purpose. The tests that are currently being given before and after the course are useful but insufficient to establish the impact of the training on the participants.

3) Review the course program

With the experience accumulated in the project's execution, the project needs to review the program to achieve the project's purpose.

4) Add preparation of a participant work plan

The last day is a good time to present instructions to the participants to reproduce the course contents for their colleagues in their workplaces, for the participants to prepare a Work Plan for this purpose, and for CEMADOJA to define and explain how they will provide follow-up on this commitment.

5) Disbursement of incentives to teachers

CEMADOJA requests funds of SESPAS so that the teachers are relieved by incentive funds before the closing date of the next course. It is necessary to disburse funds by a specific date within three months of the end of the course.

6) Define a profile of radiologist and technician attendees

In order to ensure that the participants make the most of the course, it is very important to have good participants. In order to guarantee their quality, it is important that CEMADOJA's teachers, with their accumulated experience, define the selection criteria or draw up a profile with a set of essential attendee characteristics. The criteria or profile needs to reach the JICA office so that in coordination with national authorities, an effective selection of participants can be made. Some criteria that are being suggested are: participants should be linked to educational processes; they should be nominated by a hospital or institution; and they should provide evidence that confirms their long-term future in their posts.

7) Improve the quality of support materials

For this goal, at least two actions are recommended:

- **Review of the materials, and conducting a rehearsal of the teachers' presentations.** Each medical and technical teacher must make a presentation to their colleagues who took part in the course along with some CEMADOJA guests, with the aim of improving and enriching the presentations and materials that will be used in the course. The coordinators of the radiologists and

technicians need to set up these meetings, ensuring that as many people as possible attend, and verifying that the recommendations are incorporated into the presentations.

- **Prepare a document outlining the course organization process.** CEMADOJA staff members know how to organize an international imaging course, but the institution does not have a document that describes the steps and their sequence. In order to systematize and institutionalize the experience and so that other people have a description of the process of organizing an international course, it would be useful to draw up a document outlining every step of the process. In addition, in order to provide follow-up for the course preparation process, it is advisable to prepare a checklist to track progress at each stage, indicating what still needs to be done.

8) Continue with a policy of selling services to medical insurance companies, NGOs, and international aid organizations

   An increase in income is vital for the sustainability and continuity of CEMADOJA's training and skill-sharing activities. It is essential to seek ways to increase fund-raising for imaging studies for the general functioning of CEMADOJA and for the replacement and maintenance of equipment. CEMADOJA already has a contract with the National Health Service (SENASA) and is holding discussions with other insurance providers about selling services. These initiatives should continue, and at the same time the institution should approach aid institutions and nonprofit organizations that could fund service quotas to specific vulnerable sectors of the Dominican population, specifically women and children.

9) Draw up a proposal aimed at an international cooperation organization so that the course can continue

   Work needs to start immediately with the aim of identifying donors and preparing proposals to ensure that the courses continue. As the project ends in 2010, this work needs to begin now, because two years is not much time for preparation, submission, and approval of a proposal to an international development organization.

(2) In the medium term

1) Improve CEMADOJA's capacity, science, and technological imaging. This can be achieved through the following activities:

- **Permanent technological updating of the center.** CEMADOJA needs to establish upgrading and permanent updating of its diagnostic equipment as a priority objective. It needs to have an exclusive fund for this purpose, to which a percentage of income is transferred according to certain volume parameters.

- **Prepare and execute a continuous education program.** Draw up a diagnostic study of CEMADOJA's technical and management capacities with a defined budget. Program execution will allow for continuous updating and improving of the academic and scientific knowledge of CEMADOJA staff. They need to make the most of the support of international cooperation agencies in this area. In addition, the education program should include pedagogical skills development for

the course tutors. For this purpose, an exclusive fund with a variable percentage of income should also be set up. In addition, this point requires the support of the Japanese experts from Oita University.

- **Continuous development of research.** Research reinforces and generates new knowledge and provides professional prestige to whoever undertakes it. It is advisable to apply for support to organize the institution's research sector and to define a research program.

2) Imaging training services marketing plan

Once the analysis of national and international needs has been updated, CEMADOJA should prepare, with the support of consultations, a marketing plan for educational services and training in the field of imaging that includes Central America, Haiti, and other Caribbean countries. This plan should contribute to the definition of general course programs, like the current one, as well as specialized courses in specific imaging-related themes. Moreover, the question of whether technical imaging equipment maintenance staff should be included in the courses as well as radiologists and radiology technicians also needs to be considered. Consideration of the possibility of CEMADOJA teachers traveling to other countries to teach courses is also recommended.

ANNEXES

Annex 1. Conditions, Requisites, and Measures to Be Taken

Conditions		Fulfilled	
		Yes	No
1.	The course duration will be approximately five weeks.	×	
	Comment: The three versions of the course each lasted approximately five weeks.		
2.	The first course will be held from 30 January to 3 March 2006.	×	
3.	The program or curriculum attached in Annex 1 of the M/M dated 2005 will be used in the first course.	×	
4.	Countries invited: El Salvador, Guatemala, Honduras, Nicaragua, Panama, and the Dominican Republic.	×	
	Comment: Participants from all six countries have attended all the courses.		
5.	The number of participants per course should not exceed 14 people and no more than four should be from the Dominican Republic.	×	

Requisites for Participants		Fulfilled	
		Yes	No
1.	Proposed by their respective governments	×	
2.	At least two years work as radiology technicians or doctors	×	
3.	Hold an academic degree in the field	×	
4.	Age under 45	×	
5.	Good physical and mental health	×	
6.	Fluent in Spanish	×	
7.	Not in military service	×	

Measures to Be Taken		Fulfilled	
		Yes	No
SESPAS (Dominican Ministry of Public Health and Social Welfare)			
1.	Send general information (GI) to the governments of countries invited	×	
2.	Receive application forms and send them to CEMADOJA	×	
3.	Notify governments of the selections through diplomatic channels	×	
4.	Budget to CEMADOJA adjusted by SESPAS	×	
CEMADOJA			
1.	Draw up course program with Annex 1 of M/M dated 2005	×	
2.	Prepare and print GI leaflets	×	
3.	Appoint a sufficient number of teachers	×	
4.	Provide facilities and equipment for the course	×	
5.	Select participants and notify SESPAS and JICA DR	×	
6.	Arrange accommodations for participants	×	
7.	Arrange air tickets, transport to and from the airport	×	
8.	Set up domestic excursions	×	
9.	Share tickets, accommodations, food, health insurance, study trips, texts, teaching supplies, and ceremonies	×	
11.	Issue certificate for graduates	×	
12.	Send course report to JICA DR	×	
13.	Send expense accounts to JICA DR	×	
14.	Coordinate course affairs	×	
JICA			
1.	Send short-term Japanese specialists	×	
2.	Share tickets, accommodations, food, health insurance, study trips, texts, teaching supplies, and ceremonies	×	

Annex 2. Mission Members

1. Mitsuo Isono.....mission leader
2. Norio Hongo.....diagnostic imaging technician
3. Toshiya Wakabayashi.....evaluation planning
4. Alejandro Moliné.....evaluation and analysis

Annex 3. Evaluation Committee Members

For JICA

1. Mitsuo Isono.....mission leader
2. Norio Hongo.....diagnostic imaging technician
3. Toshiya Wakabayashi.....evaluation planning
4. Alejandro Moliné.....evaluation and analysis

For the Dominican government

1. Julio Manuel Rodriguez Grullón....president of Dr. Luís E. Aybar Health City hospital complex; coordinator for the Dominican side
2. Ernesto Félix.....aide to the Undersecretary on Personnel Affairs, Ministry of Public Health and Social Welfare (SESPAS)
3. Rosanna Cuello.....officer in the Insurance Department, Dominican-Japanese Friendship Center for Medical Education (CEMADOJA)
4. Pablo Herasme.....international cooperation analyst, Ministry of Economics, Planning, and Development (SEEPYD)

Annex 4. Observations by the Leader of the Japanese Mission

This project is executed on the basis of results achieved in previous projects such as the construction of CEMADOJA (grant aid cooperation in 1998) at the Dr. Luís E. Aybar hospital complex (officially called Dr. Luís E. Aybar Health and Hygiene City) and the Medical Education Project (technical cooperation). Japanese cooperation for this medical services complex began a long time ago in the field of gastroenterology, which also benefited later from the construction of the Gastroenterology Center and technical cooperation. Japan has been providing economic and technical assistance to this complex for nearly 20 years overall. In other words, this training project is the culmination of the total Japanese technical assistance provided to this important medical center in the Dominican Republic.

It is a very worthy achievement that the Dominican staff groomed and trained through technical assistance from Japanese specialists from Oita University's medical school have acquired great capacity and have shown willingness to carry out an international course in advanced medical technologies as a third-country training course. This is also demonstrated by the great appreciation shown by the participants in this course, both in the professional quality of the instructors and in CEMADOJA management of the course. Participants also gave high marks on the training content and on efficient management by CEMADOJA.

To organize a training course in medical technology, especially in a Third World country, organizers usually face some difficulties. It is especially quite difficult to design a training program that meets the needs of all participating countries, which are at different levels of technological development. Very often it has been observed that the trainees can not apply the knowledge acquired when back in their home countries due to a lack of equipment. This was also found in this evaluation, although the contents of the training course were highly evaluated. The Coordinating Committee also discussed this issue from several viewpoints. A method of objective evaluation, which has not yet been developed, is also necessary and remains a task for future training courses. It was also considered necessary to determine a mechanism for assessing and monitoring the activities of the participants after they return to their home countries.

As one of the outcomes of this project it was noted that CEMADOJA has acquired great capacity as a training institution; however it is difficult to assess this capacity objectively. In fact, there is no internationally standardized methodology, as training activity is evaluated not only in terms of quantity and quality of knowledge acquired by the participants but also in terms of teaching capacity and methods. From now on, it has become necessary to establish methods and tools for monitoring and evaluation in these two aspects.

In addition, the sustainability of the project after the completion of Japanese cooperation was discussed extensively. The Dominican side, including CEMADOJA staff, has shown a great expectation to continue this international course on their own. Participating countries also expected continuation of this course. To achieve financial sustainability, several methods were proposed, such as promoting this course to different markets and customers, establishing a

participation quota for the course, committing part of the proceeds of CEMADOJA laboratory services to this training, and seeking financial aid from other donors. Improving the quality of this training course is strongly required in order to meet international requirements, and it is expected that in the remaining time, CEMADOJA will continue its efforts.

One of the activities carried out by this mission was a visit to Guatemala to contact former course participants and local JICA officials. We realized that there were great efforts made by the officers of the JICA Guatemala office for the selection and monitoring of the participants, which deserves special mention. One of the factors that contribute to maximizing the effectiveness of the course and generating positive impact is the collaboration of the local JICA staff in each of the participating countries. We also renewed our awareness that a great diversity of people has been intervening and helping this international course to be conducted as programmed and to generate positive results.

Mitsuo Isono

Advisor, Department of Human Resources Development, JICA

Annex 5. Questionnaires

CUESTIONARIO DE BECARIOS MÉDICOS DEL CURSO INTERNACIONAL DE DIAGNÓSTICO POR IMÁGENES PARA MÉDICOS Y TÉCNICOS RADIÓLOGOS DE CENTROAMÉRICA Y EL CARIBE

I. Introducción

Saludos,

Actualmente la Agencia Internacional de Cooperación del Japón (JICA) se encuentra realizando una evaluación de medio término del Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe, y para esos fines estamos recaudando información sobre su experiencia y participación en ese evento.

La información solicitada es propiedad exclusiva de JICA y será utilizada de forma totalmente discrecional y no personal en la evaluación señalada, por lo que le solicitamos el mayor nivel de objetividad en sus respuestas.

De antemano agradecemos su importante colaboración.

II. Cómo Marcar las Respuestas

Marcar las respuestas con una X, un Sí o cualquier otra indicación que muestre claramente la respuesta seleccionada.

III. Preguntas

a) *Datos Profesionales*

1. Número de Colegio o Asociación Médica:
2. Especialización médica:
3. Años de vida profesional en el área de imágenes:
   a. Menos de 1 año:
   b. De 1 a 3 años:
   c. De 3 a 5 años:
   d. De 5 a 10 años:
   e. De 10 a 20 años:
   f. Más de 20 años:
4. Lugar Dónde Laboraba al Momento de Tomar el Curso:
5. Lugar Actual de trabajo:
6. Ocupación actual:
7. Año Laborando en Lugar Actual:

8. En cuál de las siguientes áreas tiene mayor dominio:
    a. Sonografía:
    b. Radiologógía:
    c. Mamografía:
    d. Tomografía Axial Computarizada:
    e. Resonancia Magnética:
    f. Angiografía e Intervencionismo:
    g. Otras. Especifique:

9. En cuáles de los siguientes sistemas usted tiene un mayor dominio clínico o diagnóstico? Puede seleccionar varia colocando un 1 a la de mayor dominio, un 2 a la segunda y así sucesivamente:
    a. Sistema Respiratorio:
    b. Sistema Cardiovascular:
    c. Sistema Gastrointestinal:
    d. Sistema Genitourinario:
    e. Sistema Músculoesquelético:
    f. Sistema Nervioso Central y Periférico:
    g. Otros. Especifique:

10. Imparte algún tipo de docencia:
    a. Si:
    b. No: (pase a pregunta No.13)

11. Materias, asignaturas, cursos o disciplinas que imparte:

12. Años de docencia en el área de imágenes:
    a. Menos de 1 año:
    b. De 1 a 3 años:
    c. De 3 a 5 años:
    d. De 5 a 10 años:
    e. De 10 a 20 años:
    f. Más de 20 años:

b) ***Percepción de la Capacitación Recibida***

13. Cuál es su valoración general de la calidad del Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe en que participó:
    a. Muy Alta:
    b. Alta:
    c. Media:
    d. Baja:
    e. Muy Baja:

14. Transcurrido unos meses luego de su participación, como considera el haberse ausentado del trabajo por esos día para asistir al Curso?
    a. Valió Mucho la Pena:
    b. Valió la Pena:
    c. No Valió la Pena:

15. Describa cuáles fueron las principales contribuciones del Curso a sus conocimientos técnicos y capacidad de diagnóstico:

16. Cómo considera el programa del Curso en que participó:
    a. Muy bueno:
    b. Bueno:
    c. Medio:
    d. Malo:
    e. Muy Malo:

17. Si tiene alguna opinión sobre la calidad del programa del Curso por favor escríbala en el espacio a continuación:

18. Cómo valora la calidad de los docentes del Curso:
    a. Muy Alta:
    b. Alta:
    c. Media:
    d. Baja:
    e. Muy Baja:

19. Si tiene alguna opinión sobre la calidad de los docentes por favor escríbala en el espacio a continuación:

20. Los materiales de apoyo utilizados en el Curso fueron:
    a. Muy adecuados:
    b. Adecuados:
    c. Poco Adecuados:
    d. Muy Poco Adecuados:

21. La cantidad materiales de apoyo entregados en el Curso fueron:
    a. Más de la Necesaria:
    b. La Necesaria:
    c. Menos de la Necesaria:

22. Si tiene alguna opinión sobre la calidad de los asesores y docentes japoneses que participaron en el Curso por favor escríbala en el espacio a continuación:

23. Cómo considera que fue la duración del Curso:
    a. Muy Extensa:
    b. Extensa:
    c. Adecuada:
    d. Poco Extensa:
    e. Muy Poco Extensa:

24. Si tiene alguna opinión sobre la duración del Curso por favor escríbala en el espacio a continuación:

25. Cómo considera el tipo y la condición del equipamiento utilizado en el Curso:
    a. Muy Adecuado:
    b. Adecuado:
    c. Poco Adecuado:
    d. Muy Poco Adecuado:

26. Si tiene alguna opinión sobre el tipo y la condición del equipamiento utilizado en el Curso por favor escríbala en el espacio a continuación:

27. En término de aprovechamiento y aprendizaje, cómo valora la cantidad de becarios que participaron en el Curso:

    a. Adecuada:

    b. Puede aumentarse sin afectar el aprovechamiento y aprendizaje de los participantes:

    c. Debe reducirse para mejorar el aprovechamiento y aprendizaje de los participantes:

28. Si tiene alguna opinión sobre la cantidad de becarios que participaron en el Curso por favor escríbala en el espacio a continuación:

29. Cómo considera la organización general y logística del Curso:

    a. Muy buena:

    b. buena:

    c. Media:

    d. Mala:

    e. Muy Mala:

30. Si tiene alguna opinión sobre la organización general y logística del Curso por favor escríbala en el espacio a continuación:

31. Cómo considera la metodología (estructura, contenido y articulación de las actividades) del Curso en que participó:

    a. Muy buena:

    b. Buena:

    c. Media:

    d. Mala:

    e. Muy Mala:

32. Si tiene alguna opinión sobre la metodología del Curso por favor escríbala en el espacio a continuación:

33. Califique los siguientes aspectos del curso. 1: Muy Bueno, 2: Bueno, 3: Regular, 4: Malo y 5: Muy Malo.
    a. Alojamiento (1) (2) (3) (4) (5)
    b. Transporte (1) (2) (3) (4) (5)
    c. Refrigerios (1) (2) (3) (4) (5)
    d. Materiales Audiovisuales (1) (2) (3) (4) (5)
    e. Condiciones de Aulas (1) (2) (3) (4) (5)
    a. Puntualidad (1) (2) (3) (4) (5)

34. Cuáles temas no abordados en el Curso usted considera que debieron de ser tratados:
    a:

    b:

    c:

c) ***Percepción de Ampliación de Conocimientos Técnicos y Capacidad de Diagnóstico por Imágenes***

35. Cómo considera el aporte del Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe a su formación profesional?
    a. Muy Alto:
    b. Alto:
    c. Medio:
    d. Bajo:
    e. Muy Bajo:
    f. Ninguno:

36. Cómo considera el aporte del Curso a su ejercicio y práctica profesional actual?
    a. Muy Alto:
    b. Alto:
    c. Medio:
    d. Bajo:
    e. Muy Bajo:
    f. Ninguno:

37. Cuáles aspectos de su ejercicio y práctica profesional mejoraron a partir del Curso:

d) ***Percepción de Impacto en el Servicio que Presta en País de Origen***

38. Cómo considera que se han beneficiados sus pacientes de los conocimientos teóricos y prácticos adquiridos en el Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe?
    a. Mucho:
    b. Poco:
    c. Nada:

39. Describa cómo considera que se han beneficiados sus pacientes de los conocimientos teóricos y prácticos adquiridos en el Curso:

40. Cuáles aportes ha realizado a su departamento o área de trabajo a partir de los conocimientos teóricos y prácticos adquiridos en el Curso:

41. Ha podido aplicar a su trabajo diario los conocimientos teóricos y prácticos adquiridos en el Curso?
    a. Mucho:
    b. Poco:
    c. Nada: (pasar a pregunta 43)

42. Cómo ha aplicado a su trabajo diario los conocimientos teóricos y prácticos adquiridos en el Curso?

43. Cuáles han sido los principales problemas que ha confrontado en su lugar de trabajo para aplicar los conocimientos adquiridos en el curso?
    a. Falta de Interés del personal:
    b. Falta de Apoyo de Superiores:
    c. Falta de Equipos Adecuados:
    d. Falta de Insumos:
    e. Otros. Especifique:

e) ***Difusión de Prácticas y Conocimientos Adquiridos en Curso***

44. Ha realizado o participado en actividades de difusión de las prácticas y conocimientos adquiridos en el Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe en que participó?

    a. Si:

    b. No: (Pasar a pregunta 46)

45. Mencione las actividades qué ha organizado o en qué ha participado para difundir las prácticas y conocimientos adquiridos en el Curso (nombre, tema tratado, organización que apoyó cada actividad, fecha y número de participantes:

46. Cuáles planes tiene para difundir las prácticas y conocimientos adquiridos en el Curso? Cuáles organizaciones participarán en la organización del evento?

f) ***Identificación de Necesidades Nacionales de Capacitación***

47. Cuáles de las siguientes las siguientes áreas requieren de mayor capacitación en su país en el momento actual. Puede seleccionar varia colocando un 1 a la que considera más importante, un 2 a la segunda y así sucesivamente:

    a. Sonografía:

    b. Radiologógía:

    c. Mamografía:

    d. Tomografía Axial Computarizada:

    e. Resonancia magnética:

    f. Angiografía e Intervencionismo:

    g. Otras. Especifique:

48. En cuáles de los siguientes sistemas los médicos y técnicos radiólogos requieren mayor capacitación en su país? Puede seleccionar varia colocando un 1 al que considera más importante, un 2 a la segunda y así sucesivamente:

    a. Sistema respiratorio:

    b. Sistema cardiovascular:

    c. Sistema gastrointestinal:

    d. Sistema genitourinario:

    e. Sistema Músculoesquelético:

    f. Sistema nervioso central y periférico:

    g. Otros. Especifique:

49. Cuáles de los siguientes temas requieren mayor capacitación en su país? Puede seleccionar varia colocando un 1 al que considera más importante, un 2 a la segunda y así sucesivamente:

    a. Calidad radiográfica:

    b. Radioprotección en Rayos X:

    c. Sonografía de urgencia:

    d. Radiografía convencional:

    e. Actualización general en diagnóstico basado en imágenes:

    f. Otros. Especifique:

g) ***Recomendaciones para Mejorar Cursos***

50. Cuáles de los siguientes aspectos considera que debe mejorarse del Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe en que participó. Puede seleccionar varia colocando un 1 al que considera más importante, un 2 a la segunda y así sucesivamente:

    a. El programa:

    b. La calidad de los docentes:

    c. El local:

    d. El alojamiento:

    e. La duración del curso:

    f. Los equipos utilizados en el curso:

    g. La organización general:

    h. Otro. Especifique:

    i. Otro. Especifique:

    j. Otro. Especifique:

51. Cuáles sugerencias y recomendaciones específicas tiene para mejorar los aspectos señalados en la pregunta previa:
    a:

    b:

    c:

    d:

    e:

    f:

CUESTIONARIO DE BECARIOS TÉCNICOS DEL CURSO INTERNACIONAL DE DIAGNÓSTICO POR IMÁGENES PARA MÉDICOS Y TÉCNICOS RADIÓLOGOS DE CENTROAMÉRICA Y EL CARIBE

I. Introducción

Saludos,

Actualmente la Agencia Internacional de Cooperación del Japón (JICA) se encuentra realizando una evaluación de medio término del Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe, y para esos fines estamos recaudando información sobre su experiencia y participación en ese evento.

La información solicitada es propiedad exclusiva de JICA y será utilizada de forma totalmente discrecional y no personal en la evaluación señalada, por lo que le solicitamos el mayor nivel de objetividad en sus respuestas.

De antemano agradecemos su importante colaboración.

II. Cómo Marcar las Respuestas

Marcar las respuestas con una X, un Sí o cualquier otra indicación que muestre claramente la respuesta seleccionada.

III. Preguntas

a) *Datos Profesionales*

1. Años de vida profesional en el área de imágenes:
   a. Menos de 1 año:
   b. De 1 a 3 años:
   c. De 3 a 5 años:
   d. De 5 a 10 años:
   e. De 10 a 20 años:
   f. Más de 20 años:
2. Lugar Dónde Laboraba al Momento de Tomar el Curso:
3. Lugar Actual de trabajo:
4. Ocupación actual:
5. Año Laborando en Lugar Actual:
6. Nombre del equipo de imágenes que tiene mayor dominio:
7. Nombre del equipo de imágenes con que más trabaja actualmente:
8. Imparte algún tipo de docencia:
   a. Si:
   b. No: (pase a pregunta No.10)
9. Materias, asignaturas, cursos o disciplinas que imparte:

10. Años de docencia en el área de imágenes:
    a. Menos de 1 año:
    b. De 1 a 3 años:
    c. De 3 a 5 años:
    d. De 5 a 10 años:
    e. De 10 a 20 años:
    f. Más de 20 años:

b) ***Percepción de la Capacitación Recibida***

11. Cuál es su valoración general de la calidad del Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe en que participó:
    a. Muy Alta:
    b. Alta:
    c. Media:
    d. Baja:
    e. Muy Baja:

12. Transcurrido unos meses luego de su participación, como considera el haberse ausentado del trabajo por esos día para asistir al Curso?
    a. Valió Mucho la Pena:
    b. Valió la Pena:
    c. No Valió la Pena:

13. Describa cuáles fueron las principales contribuciones del Curso a sus conocimientos técnicos y capacidad de diagnóstico:

14. Cómo considera el programa del Curso en que participó:
    a. Muy bueno:
    b. Bueno:
    c. Medio:
    d. Malo:
    e. Muy Malo:

15. Si tiene alguna opinión sobre la calidad del programa del Curso por favor escríbala en el espacio a continuación:

16. Cómo valora la calidad de los docentes del Curso:
    a. Muy Alta:
    b. Alta:
    c. Media:
    d. Baja:
    e. Muy Baja:

17. Si tiene alguna opinión sobre la calidad de los docentes por favor escríbala en el espacio a continuación:

18. Los materiales de apoyo utilizados en el Curso fueron:
    a. Muy adecuados:
    b. Adecuados:
    c. Poco Adecuados:
    d. Muy Poco Adecuados:

19. La cantidad materiales de apoyo entregados en el Curso fueron:
    a. Más de la Necesaria:
    b. La Necesaria:
    c. Menos de la Necesaria:

20. Si tiene alguna opinión sobre la calidad de los asesores y docentes japoneses que participaron en el Curso por favor escríbala en el espacio a continuación:

21. Cómo considera que fue la duración del Curso:
    a. Muy Extensa:
    b. Extensa:
    c. Adecuada:
    d. Poco Extensa:
    e. Muy Poco Extensa:

22. Si tiene alguna opinión sobre la duración del Curso por favor escríbala en el espacio a continuación:

23. Cómo considera el tipo y la condición del equipamiento utilizado en el Curso:
    a. Muy Adecuado:
    b. Adecuado:
    c. Poco Adecuado:
    d. Muy Poco Adecuado:

24. Si tiene alguna opinión sobre el tipo y la condición del equipamiento utilizado en el Curso por favor escríbala en el espacio a continuación:

25. En término de aprovechamiento y aprendizaje, cómo valora la cantidad de becarios que participaron en el Curso:
    a. Adecuada:
    b. Puede aumentarse sin afectar el aprovechamiento y aprendizaje de los participantes:
    c. Debe reducirse para mejorar el aprovechamiento y aprendizaje de los participantes:

26. Si tiene alguna opinión sobre la cantidad de becarios que participaron en el Curso por favor escríbala en el espacio a continuación:

27. Cómo considera la organización general y logística del Curso:
    a. Muy buena:
    b. buena:
    c. Media:
    d. Mala:
    e. Muy Mala:

28. Si tiene alguna opinión sobre la organización general y logística del Curso por favor escríbala en el espacio a continuación:

29. Cómo considera la metodología (estructura, contenido y articulación de las actividades) del Curso en que participó:
    a. Muy buena:
    b. Buena:
    c. Media:
    d. Mala:
    e. Muy Mala:

30. Si tiene alguna opinión sobre la metodología del Curso por favor escríbala en el espacio a continuación:

31. Califique los siguientes aspectos del curso. 1: Muy Bueno, 2: Bueno, 3: Regular, 4: Malo y 5: Muy Malo.
    a. Alojamiento (1) (2) (3) (4) (5)
    b. Transporte (1) (2) (3) (4) (5)
    c. Refrigerios (1) (2) (3) (4) (5)
    d. Materiales Audiovisuales (1) (2) (3) (4) (5)
    e. Condiciones de Aulas (1) (2) (3) (4) (5)
    b. Puntualidad (1) (2) (3) (4) (5)

32. Cuáles temas no abordados en el Curso usted considera que debieron de ser tratados:
    a:

    b:

    c:

c) *Percepción de Ampliación de Conocimientos Técnicos y Capacidad de Diagnóstico por Imágenes*

33. Cómo considera el aporte del Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe a su formación profesional?
    a. Muy Alto:
    b. Alto:
    c. Medio:
    d. Bajo:
    e. Muy Bajo:
    f. Ninguno:

34. Cómo considera el aporte del Curso a su ejercicio y práctica profesional actual?
    a. Muy Alto:
    b. Alto:
    c. Medio:
    d. Bajo:
    e. Muy Bajo:
    f. Ninguno:

35. Cuáles aspectos de su ejercicio y práctica profesional mejoraron a partir del Curso:

d) ***Percepción de Impacto en el Servicio que Presta en País de Origen***

36. Cómo considera que se han beneficiados sus pacientes de los conocimientos teóricos y prácticos adquiridos en el Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe?
    a. Mucho:
    b. Poco:
    c. Nada:

37. Describa cómo considera que se han beneficiados sus pacientes de los conocimientos teóricos y prácticos adquiridos en el Curso:

38. Cuáles aportes ha realizado a su departamento o área de trabajo a partir de los conocimientos teóricos y prácticos adquiridos en el Curso:

39. Ha podido aplicar a su trabajo diario los conocimientos teóricos y prácticos adquiridos en el Curso?
    a. Mucho:
    b. Poco:
    c. Nada: (pasar a pregunta 43)

40. Cómo ha aplicado a su trabajo diario los conocimientos teóricos y prácticos adquiridos en el Curso?

41. Cuáles han sido los principales problemas que ha confrontado en su lugar de trabajo para aplicar los conocimientos adquiridos en el curso?
    a. Falta de Interés del personal:
    b. Falta de Apoyo de Superiores:
    c. Falta de Equipos Adecuados:
    d. Falta de Insumos:
    e. Otros. Especifique:

e) ***Difusión de Prácticas y Conocimientos Adquiridos en Curso***

42. Ha realizado o participado en actividades de difusión de las prácticas y conocimientos adquiridos en el Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe en que participó?
    a. Si:
    b. No: (Pasar a pregunta 46)

43. Mencione las actividades qué ha organizado o en qué ha participado para difundir las prácticas y conocimientos adquiridos en el Curso (nombre, tema tratado, organización que apoyó cada actividad, fecha y número de participantes:

44. Cuáles planes tiene para difundir las prácticas y conocimientos adquiridos en el Curso? Cuáles organizaciones participarán en la organización del evento?

f) ***Identificación de Necesidades Nacionales de Capacitación***

45. Cuáles de las siguientes las siguientes áreas requieren de mayor capacitación en su país en el momento actual. Puede seleccionar varia colocando un 1 a la que considera más importante, un 2 a la segunda y así sucesivamente:

    a. Sonografía:
    b. Radiologógía:
    c. Mamografía:
    d. Tomografía Axial Computarizada:
    e. Resonancia magnética:
    f. Angiografía e Intervencionismo:
    g. Otras. Especifique:

46. En cuáles de los siguientes sistemas los médicos y técnicos radiólogos requieren mayor capacitación en su país? Puede seleccionar varia colocando un 1 al que considera más importante, un 2 a la segunda y así sucesivamente:

    a. Sistema respiratorio:
    b. Sistema cardiovascular:
    c. Sistema gastrointestinal:
    d. Sistema genitourinario:
    e. Sistema Músculoesquelético:
    f. Sistema nervioso central y periférico:
    g. Otros. Especifique:

47. Cuáles de los siguientes temas requieren mayor capacitación en su país? Puede seleccionar varia colocando un 1 al que considera más importante, un 2 a la segunda y así sucesivamente:

    a. Calidad radiográfica:
    b. Radioprotección en Rayos X:
    c. Sonografía de urgencia:
    d. Radiografía convencional:
    e. Actualización general en diagnóstico basado en imágenes:
    f. Otros. Especifique:

g) ***Recomendaciones para Mejorar Cursos***

48. Cuáles de los siguientes aspectos considera que debe mejorarse del Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe en que participó. Puede seleccionar varia colocando un 1 al que considera más importante, un 2 a la segunda y así sucesivamente:

    a. El programa:
    b. La calidad de los docentes:
    c. El local:
    d. El alojamiento:
    e. La duración del curso:
    f. Los equipos utilizados en el curso:
    g. La organización general:
    h. Otro. Especifique:
    i. Otro. Especifique:
    j. Otro. Especifique:

49. Cuáles sugerencias y recomendaciones específicas tiene para mejorar los aspectos señalados en la pregunta previa:
    a:

    b:

    c:

    d:

    e:

    f:

CUESTIONARIO DE EXPERTOS JAPONESES DEL CURSO INTERNACIONAL DE DIAGNÓSTICO POR IMÁGENES PARA MÉDICOS Y TÉCNICOS RADIÓLOGOS DE CENTROAMÉRICA Y EL CARIBE

I. Introducción

Saludos,

Actualmente la Agencia Internacional de Cooperación del Japón (JICA) se encuentra realizando una evaluación de medio término del Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe, y para esos fines estamos recaudando información sobre su experiencia y participación en ese evento.

La información solicitada es propiedad exclusiva de JICA y será utilizada de forma totalmente discrecional y no personal en la evaluación señalada, por lo que le solicitamos el mayor nivel de objetividad en sus respuestas.

De antemano agradecemos su importante colaboración.

II. Cómo Marcar las Respuestas

Marcar las respuestas con una X, un Sí o cualquier otra indicación que muestre claramente la respuesta seleccionada.

III. Preguntas

a) *Datos Personales*

1. Nombre y Apellido:
2. Edad:
3. País donde reside actualmente:
4. Ciudad donde labora:

b) *Datos Profesionales*

1. Número de Colegio o Asociación:
2. Años de vida profesional en el área de imágenes:
   a. Menos de 1 año:
   b. De 1 a 3 años:
   c. De 3 a 5 años:
   d. De 5 a 10 años:
   e. De 10 a 20 años:
   f. Más de 20 años:
3. Lugar Actual de trabajo:
4. Ocupación actual:
5. Cuál es su especialidad profesional:

6. Materias, asignaturas, cursos o disciplinas que impartió en el Curso:

7. Años de docencia en el área de imágenes:
   a. Menos de 1 año:
   b. De 1 a 3 años:
   c. De 3 a 5 años:
   d. De 5 a 10 años:
   e. De 10 a 20 años:
   f. Más de 20 años:

c) *Percepción de los Becarios*

8. Cómo considera la calidad técnica y profesional de los becarios del Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe:
   a. Muy Alta:
   b. Alta:
   c. Media:
   d. Baja:
   e. Muy Baja:

9. Cómo considera la respuesta de los becarios a la docencia que usted impartió en el Curso:
   a. Muy Buena:
   b. Buena:
   c. Media:
   d. Mala:
   e. Muy Mala:

10. Cuáles fueron las principales fortalezas que percibió en los becarios:

11. Cuáles fueron las principales debilidades que percibió en los becarios:

12. Recomendaciones para la selección de becarios a participar en el curso:

d) *Percepción de los Docentes*

13. Cómo considera la calidad técnica y profesional de los docentes del Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe:
    a. Muy Alta:
    b. Alta:
    c. Media:
    d. Baja:
    e. Muy Baja:

14. Cuál es su percepción general sobre la preparación de los contenidos de los temas del curso por parte de los docentes:
    a. Muy Adecuada:
    b. Adecuada:
    c. Poco Adecuada:
    d. Poco Adecuada:

15. Cuál es su percepción general sobre la calidad de la docencia impartida por los docentes del Curso:
    a. Muy Alta:
    b. Alta:
    c. Media:
    d. Baja:
    e. Muy Baja:

16. Cuáles fueron las principales fortalezas que percibió en los docentes:

17. Cuáles fueron las principales debilidades que percibió en los docentes:

18. Recomendaciones generales para los docentes del Curso:

e) *Características y Condiciones de Equipos Utilizados en Docencia*

19. Los equipos utilizados en el Curso fueron:
    a. Muy adecuados:
    b. Adecuados:
    c. Poco Adecuados:
    d. Muy Poco Adecuados:

20. Considera que el mantenimiento de los equipos utilizados en el Curso es:
    a. Muy Bueno:
    b. Bueno:
    c. Regular:
    d. Malo:
    e. Muy Malo:

21. Comentarios sobre los equipos utilizados en el Curso:

22. Recomendaciones sobre los equipos utilizados en el Curso:

f) *Capacidad de Organización del CEMADOJA*

23. Cómo considera la organización general y logística del Curso:
    a. Muy buena:
    b. buena:
    c. Media:
    d. Mala:
    e. Muy Mala:

24. Califique los siguientes aspectos del curso. 1: Muy Bueno, 2: Bueno, 3: Regular, 4: Malo y 5: Muy Malo.
    a. Alojamiento (1) (2) (3) (4) (5)
    b. Transporte (1) (2) (3) (4) (5)
    c. Refrigerios (1) (2) (3) (4) (5)
    d. Materiales Audiovisuales (1) (2) (3) (4) (5)
    e. Condiciones de Aulas (1) (2) (3) (4) (5)
    f. Puntualidad (1) (2) (3) (4) (5)

25. Si tiene alguna opinión sobre la organización general y logística del Curso por favor escríbala en el espacio a continuación:

26. Recomendaciones para mejorar la organización general del Curso:

CUESTIONARIO DE DOCENTES DEL CURSO INTERNACIONAL DE DIAGNÓSTICO POR IMÁGENES PARA MÉDICOS Y TÉCNICOS RADIÓLOGOS DE CENTROAMÉRICA Y EL CARIBE

I. Introducción

Saludos,

Actualmente la Agencia Internacional de Cooperación del Japón (JICA) se encuentra realizando una evaluación de medio término del Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe, y para esos fines estamos recaudando información sobre su experiencia y participación en ese evento.

La información solicitada es propiedad exclusiva de JICA y será utilizada de forma totalmente discrecional y no personal en la evaluación señalada, por lo que le solicitamos el mayor nivel de objetividad en sus respuestas.

De antemano agradecemos su importante colaboración.

II. Cómo Marcar las Respuestas

Marcar las respuestas con una X, un Sí o cualquier otra indicación que muestre claramente la respuesta seleccionada.

III. Preguntas

a) *Datos Personales*

1. Nombre y Apellido:
2. Edad:
3. País donde reside actualmente:
4. Ciudad donde labora:

b) *Datos Profesionales*

1. Número de Colegio o Asociación Médica:
2. Especialización médica:
3. Años de vida profesional en el área de imágenes:
    a. Menos de 1 año:
    b. De 1 a 3 años:
    c. De 3 a 5 años:
    d. De 5 a 10 años:
    e. De 10 a 20 años:
    f. Más de 20 años:
4. Lugar Actual de trabajo:
5. Ocupación actual:
6. Año Laborando en Lugar Actual:

7. En cuál de las siguientes áreas tiene mayor dominio:
   a. Sonografía:
   b. Radiologógía:
   c. Mamografía:
   d. Tomografía Axial Computarizada:
   e. Resonancia Magnética:
   f. Angiografía e Intervencionismo:
   g. Otras. Especifique:

8. En cuáles de los siguientes sistemas usted tiene un mayor dominio clínico o diagnóstico? Puede seleccionar varia colocando un 1 a la de mayor dominio, un 2 a la segunda y así sucesivamente:
   a. Sistema Respiratorio:
   b. Sistema Cardiovascular:
   c. Sistema Gastrointestinal:
   d. Sistema Genitourinario:
   e. Sistema Músculoesquelético:
   f. Sistema Nervioso Central y Periférico:
   g. Otros. Especifique:

9. Imparte algún tipo de docencia:
   a. Si:
   b. No: (pase a pregunta No.11)

10. Materias, asignaturas, cursos o disciplinas que imparte:

11. Años de docencia en el área de imágenes:
   a. Menos de 1 año:
   b. De 1 a 3 años:
   c. De 3 a 5 años:
   d. De 5 a 10 años:
   e. De 10 a 20 años:
   f. Más de 20 años:

12. Cómo considera el contenido de las clases que preparó para el Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe:
   a. Muy Adecuado:
   b. Adecuado:
   c. Poco Adecuado:
   d. Muy Poco Adecuado:

13. Sobre el tiempo que dedicó a la preparación de los contenidos de las clases que impartió en el Curso, considera que fue:
    a. Muy suficiente:
    b. Suficiente:
    c. Insuficiente:
    d. Muy Insuficiente:

c) *Percepción de los Becarios*

14. Cómo considera la calidad técnica y profesional de los becarios del Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe:
    a. Muy Alta:
    b. Alta:
    c. Media:
    d. Baja:
    e. Muy Baja:
15. Cuáles fueron las principales fortalezas que percibió en los becarios:
16. Cuáles fueron las principales debilidades que percibió en los becarios:
17. Recomendaciones para la selección de becarios a participar en el curso:

d) *Percepción de los Expertos Japoneses*

18. Cómo considera la calidad técnica y profesional de los expertos japoneses del Curso Internacional de Diagnóstico por Imágenes para Médicos y Técnicos Radiólogos de Centroamérica y el Caribe:
    a. Muy Alta:
    b. Alta:
    c. Media:
    d. Baja:
    e. Muy Baja:
19. Cuáles fueron las principales fortalezas que percibió en los expertos japoneses:
20. Cuáles fueron las principales fortalezas que percibió en los expertos japoneses:

21. Otros comentarios sobre los expertos japoneses:

22. Recomendaciones generales sobre los expertos japoneses:

e) ***Características y Condiciones de Equipos Utilizados en Docencia***

23. Los equipos utilizados en el Curso fueron:
    a. Muy adecuados:
    b. Adecuados:
    c. Poco Adecuados:
    d. Muy Poco Adecuados:

24. Considera que el mantenimiento de los equipos utilizados en el Curso es:
    a. Muy Bueno:
    b. Bueno:
    c. Regular:
    d. Malo:
    e. Muy Malo:

25. Comentarios sobre los equipos utilizados en el Curso:

26. Recomendaciones sobre los equipos utilizados en el Curso:

f) ***Capacidad de Organización del CEMADOJA***

27. Cómo considera la organización general y logística del Curso:
    a. Muy buena:
    b. buena:
    c. Media:
    d. Mala:
    e. Muy Mala:

28. Califique los siguientes aspectos del curso. 1: Muy Bueno, 2: Bueno, 3: Regular, 4: Malo y 5: Muy Malo.
    a. Alojamiento (1) (2) (3) (4) (5)
    b. Transporte (1) (2) (3) (4) (5)
    c. Refrigerios (1) (2) (3) (4) (5)
    d. Materiales Audiovisuales (1) (2) (3) (4) (5)
    e. Condiciones de Aulas (1) (2) (3) (4) (5)
    f. Puntualidad (1) (2) (3) (4) (5)

29. Si tiene algún comentario sobre la organización general y logística del Curso por favor escríbala en el espacio a continuación:

30. Recomendaciones para mejorar la organización general del Curso:

Annex 6. Investments

Device	Location	Status	Control Status	Unit Price (Yen)	Quantity	Price (Yen)
Laser Jet 2600n	Main office/technicians' quarters	In use	*	68,680.00	1	68,680.00
HP Deskjet 6540	Japanese experts' office	In use	*	34,769.25	1	34,769.25
HP Deskjet 6540	Japanese experts' office	In use	*	34,769.25	1	34,769.25
Dell Dimension 3000	Reading Room A	In use	*	115,622.78	1	115,622.78
Dell Dimension 3000	Reading Room A	In use	*	115,622.78	1	115,622.78
Dell Dimension 3000	Radiology technicians quarters	In use	*	115,622.78	1	115,622.78
Toshiba Tecra A3-SP611	Japanese experts' office	In use	*	208,907.39	1	208,907.39
Toshiba Tecra A3-SP611	Japanese experts' office	In use	*	208,907.39	1	208,907.39
Toshiba Tecra A3-SP611	Radiology technicians' quarters	In use	*	208,907.39	1	208,907.39
Infocus X2 1,600 lumens	Radiology technicians' quarters	In use	*	213,423.10	1	213,423.10
Canon Scan 3000x	Japanese experts' office	In use	*	15,624.70	1	15,624.70
DA-LITE 84 × 84	Reading Room A	In use	*	45,328.80	1	45,328.80
Shimadzu RS-50A	CEMADOJA	In use	Good	17,824,118.53	1	17,824,118.53
Blanca Mágica 24 × 36	CEMADOJA	In use	Good	2,388.92	1	2,388.92
Dell Inspiron 1420	CEMADOJA	In use	Good	124,860.00	1	124,860.00
Dell Inspiron 1420	CEMADOJA	In use	Good	124,860.00	1	124,860.00
Power Edge 29000 III	CEMADOJA	In use	Good	623,779.75	1	623,779.75
Seagate 750	CEMADOJA	In use	Good	31,423.10	1	31,423.10
Seagate 750	CEMADOJA	In use	Good	31,423.10	1	31,423.10
Dell Vostro 200S	CEMADOJA	In use	Good	88,442.50	1	88,442.50
Dell Vostro 200S	CEMADOJA	In use	Good	88,442.50	1	88,442.50
24-port SR224	CEMADOJA	In use	Good	14,046.75	4	56,187.00
HP R827	CEMADOJA	In use	Good	23,931.50	1	23,931.50
DCR-DVD408 DVD	CEMADOJA	In use	Good	78,037.50	1	78,037.50
HP Laserjet color 2600	CEMADOJA	In use	Good	41,620.00	1	41,620.00
Total						**20,525,700.01**

Annex 7. Minutes of the Meeting (English Version)

MINUTES OF MEETING BETWEEN
THE JAPANESE MID-TERM EVALUATION MISSION
AND THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF THE DOMINICAN REPUBLIC
ON
JAPANESE TECHNICAL COOPERATION FOR
THE PROJECT OF THE INTERNATIONAL COURSE OF THE DIAGNOSIS BY IMAGES COURSE
FOR RADIOLOGISTS AND TECHNICIANS OF LATIN AMERICA AND THE CARIBBEAN

The Japanese Mid-term Evaluation Mission (hereinafter referred to as "the Mission"), organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA"), headed by Mr. Mitsuo Isono visited the Dominican Republic and the countries concerned from July 28 to August 8, 2008, for the purpose of Mid-Term Evaluation of The Project of the International Course of the Diagnosis by Images for Radiologists and Technicians of Latin America and The Caribbean (hereinafter referred to as "the Project").

During its stay, the Mission had a series of discussions with the Dominican authorities concerned, jointly evaluated the achievements of the Project, and exchanged views for further improvement of the Project.

As a result of the discussions, both sides agreed upon the matters referred to in the document attached hereto.

This text is written in English and Spanish. Both of which are equally official. The English text shall prevail in case of any divergence of interpretation.

Santo Domingo, August 8, 2008

Dr. Mitsuo Isono
Leader
Japanese Mid-term Evaluación Mission
Japanese International Cooperation Agency
Japón

Dr. Bautista Rojas Gómez
Secretary of State
Ministry of Public Health and Social Asistance
of State
Dominican Republic

Dr. América Bastidas
Undersecretary of International Cooperation of State
Ministry of Economic, Planning, and Development
of State
Dominican Republic

ATTACHED DOCUMENT

1. Summary

The Evaluation Mission and Evaluation Committee for the Project in the Secretary of Public Health and Social Assistance of State (hereinafter referred to as "the Evaluators") prepared the Mid-term Evaluation Report and confirmed the following achievement of the Project. Besides, based on the five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact and Sustainability), the Project is evaluated as successfully been implemented. However, more strengthening is needed for efficiency and there still remain points to be improved in the Project's sustainability.

2. Recommendation

(1) In the Short Term

1) **Creates stronger links between the health ministry (SESPAS) and CEMADOJA's work.** As an institution with certain levels of autonomy, SESPAS does not get sufficiently involved in the Center's activities or feels represented by them. Therefore it is important to inform, raise awareness and motivate SESPAS to bring it closer to the institution.

2) **Establish indicators for acquired skills.** In order to measure the impact of the training taught in the courses, CEMADOJA needs to define a set of indicators and evaluation tools for this purpose. The Pre- and Post- tests that are currently being used are useful but insufficient to establish the impact of the teaching on the participants.

3) **Review the course programme.** With the experience accumulated in the Project execution, the Project needs to review the Programme to achieve the Project purpose.

4) **Add preparation of the Participants' Work Plan.** The last day is a good time to present instructions for the participants to reproduce the Course contents to their colleagues in their workplaces, for the participants to prepare a Work Plan for this purpose and for CEMADOJA to define and explain the way they will provide follow up to this commitment.

5) **Disbursement of incentive to teachers.** CEMADOJA requests fund to SESPAS so that the teachers relieve incentive within closing date of the next course. It is necessary to disburse within the specific day, in three month after closing the Course.

6) **Define a profile of the radiologist and technician attendee.** In order to ensure that the participants make the most of the Course, it is very important to have good participants. In

order to guarantee their quality, it is important that the CEMADOJA teachers, with their accumulated experience, define the selection criteria or a draw up a profile with a set of essential characteristics of the attendees. The criteria or the profile need to reach the JICA office so that in coordination with the national authorities, an effective selection of participants is conducted. Some criteria that are being suggested are: that the participants should be linked to educational processes, that they should be proposed by the hospital or institution, and provision of evidence that confirms their long-term future in their posts.

7) **Improve the quality of the support materials.** For this, at least two actions are recommended:

- **Review of the material and Carry out a rehearsal of the teachers' presentations.** Each medical and technical teacher must make a presentation to the colleagues who took part in the Course and some Centre guests, with the aim of improving and enriching the presentations and material that will be used in the course. The coordinators of the radiologists and the technicians need to set up these meetings, ensuring that as many people as possible attend, and verifying that the recommendations are incorporated into the presentations.

- **Prepare a document outlining the Course organization process.** CEMADOJA staff members know how to organize an International Imaging Course, but the institution does not have a document that describes the steps and their sequence. In order to systematize and institutionalize the experience and so that other people have a description of the process of organizing an international course, it would be useful to draw up a document outlining every step of the process. In addition, in order to provide follow up for the Course preparation process it is advisable to prepare a checklist to track progress at each stage and indicating what still needs to be done.

8) **Continue with a policy of selling services to medical insurance, NGOs and international aid organizations.** The increase in income is vital for the sustainability and continuity of the Center's training and skill sharing activities. It is essential to seek ways of increasing fundraising for imaging studies for the general functioning of the Centre and for the replacement and maintenance of equipment. CEMADOJA already has a contract with the National Health Insurance (SENASA) and is holding discussions with other insurance providers for selling services. These initiatives should continue, and at the same time the institution should approach aid institutions and non-profit organizations that could fund service quotas to specific vulnerable sectors of the Dominican population (women and

children).

9) **Draw up a proposal aimed at an international cooperation organization so that the Course can continue.** Work needs to be start immediately with the aim of identifying donors and preparing proposals to ensure that the courses continue. As the project ends in 2010 this work needs to start straight away, because two years is not much time for preparation, submission and approval of a proposal to an international development organization.

(2) In the Medium Term

1) **Improve CEMADOJA's capacity and the scientific and technological imaging.** This will be achieved through the following activities:

- ***Permanent technological updating of the Centre.*** CEMADOJA needs to establish the renovation and permanent updating of its diagnostic equipment as a priority objective. It needs to have an exclusive account for this purpose, where a percentage of income is deposited according to certain volume parameters.
- ***Prepare and execute a Continuous Education Programme.*** Draw up a diagnostic study of the Center's technical and management capacities with a defined budget. The Programme execution will allow for continuous updating and improving of the Centre staff's academic and scientific knowledge. They need to make the most of the support of international cooperation agencies in this area. In addition, the education programme should include pedagogical skills development for the course tutors. For this purpose an exclusive account and a variable percentage of income should also be set up.In addition, this point requires the support of the Japanese experts from Oita University.
- ***Continuous research development.*** The research reinforces and generates new knowledge and provides professional prestige to whoever conducts it. It is advisable to apply for support to organize the institution's research area and to define a research programme.

2) **Image training services marketing plan.** Once the diagnostic of national and international needs has been updated, CEMADOJA should prepare, with the support of a consultancy, a Marketing Plan for Educational Services and Training in the Area of Images that includes Central America, Haiti and other Caribbean countries. This plan should contribute to the definition of general course programmes, like the current one, as well as specialized courses in specific image-related themes. Moreover, the question of whether technical imaging equipment maintenance staff should be included in the courses as well as radiologists and

radiology technicians also needs to be considered. The possibility of CEMADOJA teachers traveling to other countries to teach courses is also recommended.

Annex

- Mid-term Evaluation Report

B.M.R.D.

Mid-term Evaluation Report on the "International Diagnostic Imaging Course for Radiologists and Radiology Technicians in Central America and the Caribbean"

Joint Evaluation Committee

August 2008

Dr. Mitsuo Isono
Leader
Japanese Mid-term Evaluación Mission
Japanese International Cooperation Agency
Japón

Dr. Bautista Rojas Gómez
Secretary of State
Ministry of Public Health and Social Asistance of State
Dominican Republic

Dr. América Bastidas
Undersecretary of International Cooperation of State
Ministry of Economic, Planning, and Development of State
Dominican Republic

CONTENTS

ACRONYMS AND ABBREVIATIONS

ADS	Antidiuretic Substance
CEMADOJA	Centro de Educación Médica y Amistad Dominico-Japonesa
C/P	Counterpart
CT	Computed Tomography
JCC	Joint Coordination Committees
JICA	Japan International Cooperation Agency
IVR	Interventional Radiology
MRI	Magnetic Resonance Imaging
SESPAS	Ministry of Public Health and Social Asistance of State
SEEPYD	Ministry of State of Economy, Planning, and Development
RX	Convencional X-ray

1. GENERAL INFORMATION

1.1. Name of Project

International Diagnostic Imaging Course for Radiologists and Radiology Technicians in Central America and the Caribbean.

1.2. Period of Cooperation

Five (5) years. Started on 8th September 2005 and is due to end on 31st March 2010.

1.3. Location of Project

The Dominican-Japanese Friendship Medical Education Centre (CEMADOJA). Located in Santo Domingo, Dominican Republic.

1.4. Entities in charge of implementation

(1) Dominican part

- Ministry of Public Health and Social Welfare (SESPAS).
- Dominican-Japanese Friendship Medical Education Centre (CEMADOJA).
- Secretary of State of Economy, Planning, and Development (SEEPYD)

(2) Japanese part

- Oita University
- Japanese International Cooperation Agency (JICA)

1.5. Background to Evaluation

The International Diagnostic Imaging Course for Radiologists and Radiology Technicians in Central America and the Caribbean (hereinafter referred to "The Course") will have been under way for three years on 8th September 2008.

Having passed the half-way mark of its five (5) year duration, JICA decided to conduct an Mid-term evaluation in order to establish the activities held to date, the initial results achieved and the difficulties encountered, as well as to identify suggestions and recommendations that will allow for improving execution during the rest of the Project's duration. For this purpose, the Mission was organized, which visited the Dominican Republic and some of the participating countries - El Salvador, Guatemala and Nicaragua - between 29th July and 8th August 2008

1.6. Evaluation Team

(1) Japanese part

- Mitsuo Isono: Mission leader.
- Norio Hongo: Diagnostic Imaging Technician
- Toshiya Wakabayashi: Planning the Evaluation.
- Alejandro Moliné: Evaluation and Analysis

(2) Dominican part

- Julio Manuel Rodriguez Grullón: President of "la Ciudad Sanitaria, Dr. Luís E. Aybar" / Coordinator of Dominican part
- Ernesto Félix: Aide of Sub-Secretary on Personnel Attention, Ministry of Public Health and Social Welfare (SESPAS)
- Rosanna Cuello: Officer in the Insurance Department, Dominican-Japanese Friendship Medical Education Centre (CEMADOJA)
- Pablo Herasme: Annalist of International Cooperation, Ministry of State of Economy, Planning and Development (SEEPYD)

1.6. Objectives of the Evaluation

(1) Describe, understand and verify the processes and achievements of the implementation of the International Diagnostic Imaging Course for Radiologists and Radiology Technicians in Central America and the Caribbean.

(2) Establish the influence of the inputs used in the achieved results.

(3) Extract lessons learned and draw up a set of recommendations aimed at improving the course implementation.

1.7. Evaluation Methodology

The evaluation was based on the "JICA Project Evaluation Guidelines" manual and was conducted on the basis of the following criteria that the Manual defines:

(1) Relevance
Relevance of the Project plan is reviewed by the validity of the Project Purpose and the Overall Goal in connection with the development policy of the Government of Dominican Republic and needs of the beneficiaries and also by logical consistency of the Project plan.

(2) Effectiveness
Effectiveness is assessed by evaluating to what extent the Project has achieved its purpose and clarifying the relationship between the purpose and outputs.

(3) Efficiency
Efficiency of the Project implementation is analyzed with the emphasis of the relationships between outputs.

(4) Impact
Impacts of the Project are assessed in both positive and negative influences caused by the Project.

(5) Sustanability
Sustainability of the Project is assessed in organizational, financial, and technical aspects by examining the extent to which the achievement of the Project will be sustained and expanded after the Project's completion.

The following activities were carried out for the evaluation:

(1) Review of Documents

A set of basic documents about CEMADOJA and about the courses that were held were reviewed and analysed.

(2) Visits to CEMADOJA

Visits were made in order to get to know the structure and the conditions of the Centre and to meet with its staff.

(3) Visits to participants' Hospitals in El Salvador, Guatemala and Nicaragua

Visits were made to several of the participants' hospitals in order to get to know the conditions and the type of work that they do, to hear the opinions of their managers and co-workers, and to get to know the follow-up work they have done since they received the training.

(4) Interviews

Structures and open interviews were held with: CEMADOJA and JICA officials, Course teachers and beneficiaries. During the evaluation were interviewed participants from: El Salvador, Guatemala, Nicaragua and Dominican Republic.

(5) Use of questionnaires

Questionnaires were prepared, distributed, compiled, processed and analysed, targeted at: Japanese experts, teachers, and participating radiologists and technicians. 55% of the participants responded to the questionnaire, 60% of the teachers and 5 Japanese experts. The completed questionnaires comprise a significant quantity of the total but as no sample criteria were worked with, it can be said that they are relevant but not necessarily representative.

1.8. Evaluation agenda

DATE		ACTIVITY
7/28	Monday	Meeting at CEMADOJA
7/29	Tuesday	Santo Domingo - Nicaragua
7/30	Wednesday	Interview with former participants in Nicaragua Nicaragua - El Salvador
7/31	Thursday	Interview with former participants in El Salvador
8/1	Friday	El Salvador - Guatemala
8/2	Saturday	Internal meeting
8/3	Sunday	Internal meeting
8/4	Monday	Interview with former participants in Guatemala Internal meeting
8/5	Tuesday	Guatemala - Santo Domingo
8/6	Wednesday	Joint Coordination Commission (JCC)
8/7	Thursday	Joint Coordination Commission (JCC)
8/8	Friday	Signing of Minutes (M/M) Report to JICA Dominican Republic

2. BACKGROUND AND SUMMARY OF THE PROJECT

2.1 Background of the Project

Considering the lack of development in the field of medicine and public health induces various impediments for meeting the needs of the majority in the Dominican Republic, Dominican Ministry of Public Health officially requested to the government of Japan for constructing the new center for medical education by Grand Aid within the Luis Aybar General Hospital (currently called the Luis Aybar Health and Hygiene City). In addition, it was also mentioned that there was the needs of providing the training courses for the experts in Imaginology and Epidemiology.

Consequently, in 1999, Dominican Japanese friendship Center of Medical Education (CEMADOJA) was constructed and the medical education projects had started in same year for the period of 5 years. In the project, the emphasis was on the provision of equipment for completing its facility as well as the training courses for the local medical doctors and technologists for achieving the technology transfer. As the result, the center had become one of the highly evaluated medical educational institutions in the country.

In March 2004, the project was finished with the recognition of success by the final evaluation. In the response to its success, the Dominican government requested further technical cooperation in executing the training programs for medical experts within the country as well as for her neighboring countries.

After revising the proposals, it was noticed the needs of capacity evaluation of CEMADOJA as a training institute by the local consultant on the process of the previous evaluation. In addition, CEMAJOJA-JICA joint mission was dispatched to the five countries in the Central America (such as Honduras, Panama, El Salvador, Guatemala and Nicaragua).

The result shows that the further technical cooperation was necessary through its findings. In these targeted countries, the knowledge and skills of Radiologists and Radiological technologists are backward and undeveloped; therefore, there is the high demand of renewal and updating their knowledge and information. In addition, the CAMADOJA has its capacity to provide the training courses for meeting those needs with the collaboration of JICA in planning and execution of the training program.

Based on the result of the previous evaluation, the agreement on its program of the first training course was made between JICA and CEMADOJA. Finally, on September in 2005, the both signed the R/D, the Dominican Minister of Public Health and Director of JICA.

2.2 Summary of the Project

(1) Project Purpose

1) The Radiologists and Technicians, who participated in the Course, diffuse their knowledge, technique, and progress in the capacity to diagnose by image to contribute the improvement of health service in their countries.
2) CEMADOJA progresses the capacity of management to realize international courses by efficient and effective means, and shall be the Regional Center of Central America and Caribbean on the area of Diagnostic Image.

(2) Output

The Radiologists and Technicians of radiology in Central America and Caribbean, who participated in the Course, progress the capacity to do Diagnostic Image.

(3) Participants

The course is aimed at radiologists and radiology technicians in Central America and the Caribbean. On the first three occasions that the course was taught, professionals from El Salvador, Guatemala, Honduras, Nicaragua, Panama and the Dominican Republic (as host country) took part. Each session should contain seven (7) radiologists and seven (7) radiology technicians. The participants must be university educated, have more than 2 years' professional experience, from the public sector, under the age of 45 and not providing any kind of military service.

(4) Project Beneficiaries

The project has direct and indirect beneficiaries.

1) Direct Beneficiaries:

- Participating Radiologists and Radiology Technicians

  These are the most direct targets and beneficiaries of the Course. They are the Radiologists and Radiology Technicians from the invited countries who have taken part in the course.

- Teachers

  CEMADOJA's technical and medical staff members who have taught classes in the courses.

- CEMADOJA staff

  The Centre's management and administrative staff who have taken part in the organisation and development of the courses.

2) Indirect Beneficiaries:

- Patients or users of services

  Service users in the establishments where the course participants work, who have been able to benefit from the increase in practical and theoretical knowledge acquired as a result of the professionals' participation in the Course.

- Radiologists and Radiology technicians

  Staff in the workplaces of the trained technicians and radiologists who have benefited from contact with the trained professionals and with the sessions where the acquired knowledge has been reproduced.

(5) Teachers or Instructors

The teachers responsible for teaching the Course are radiologists and technicians at CEMADOJA, most of who were trained in Japan. The centre's development also has the support of Japanese experts who provide technical and organisational advice.

(6) Course Methodology

The course combines theoretical knowledge with practical teachings derived from the services that CEMADOJA provides on a daily basis. It also includes visits to other imaging centres. During the course, two groups are set up: one made up of radiologists and one made up of technicians, which join together on several occasions. The idea is to generate a participative and interactive environment, through a horizontal atmosphere of professional colleagues.

(7) Sessions held

To date the Course has been held on three occasions:

1) The first version of the Course took place between 30th January and 3rd March 2006.

2) The second course lasted for *5 weeks*, between 29th January and 2nd March 2007.

3) The third version of the course was held from 29th January to 28th February.

(8) Certification

The participants who pass the course receive a course certificate from JICA and CEMADOJA.

(9) Participants

The participants in the three versions of the Course that have been taught are classified according to profession and nationality, in the following table.

SCHOLARSHIP HOLDERS PARTICIPATING IN THE COURSE VERSIONS							
Total Participants First Course: 13							
By Profession		**By Nationality**					
Radiologists	**Technicians**	**Salvador**	**Guatemala**	**Honduras**	**Nicaragua**	**Panama**	**Dominican Republic**
6	**7**	2	2	2	2	2	3
Total Participants Second Course: 14							
7	**7**	2	2	2	2	2	4
Total Participants Third Course							
5	**8**	2	2	2	2	1	4
TOTAL BY PROFESSION AND NATIONALITY							
18	**22**	6	6	6	6	5	11
TOTAL PARTICIPANTS: 40							

3. Evaluation

3.1 Project Achievements

The Course does not have a classic Project document, expected results and performance indicators, and the Minutes of Meeting dated 8 September 2005 were used to define the Course's scope and content. The Minutes of Meeting establish a set of conditions, requisites and measures to be taken, whose fulfillment and executing to date are established in the following tables.

As observed in the ANNEX I of the Minutes of Meeting, the institutions involved took on and fulfilled the activities and commitments as stipulated in the Discussion Minutes, although in a few cases it was necessary to push through their fulfillment. Of the fulfillment of conditions, requisites and measures to be taken as set out in the Project Minutes, the following are highlighted:

(1) **The project has fulfilled the commitment of conducting an annual version of the International Course exactly as planned.** To date three courses have been held and the fourth is in the process of preparation. Each course has been supported by Japanese experts, has included all the defined teaching conditions and has fulfilled the facilities planned for the participants.

(2) **A total of 40 people have taken part and each course has fulfilled the commitment of not exceeding a total of 14 people, and no more than 4 from the Dominican Republic.** In addition, all the invited countries have sent participants to each version of the Course. The invitation processes were conducted as planned and the course participants have fulfilled the required personal and professional conditions.

(3) **The programmes in the three versions of the Course have been prepared with the directives in ANNEX 1 of the Minutes of Meeting** and the presentations of the themes have included the participation and supervision of the Japanese experts.

(4) **SESPAS, through CEMADOJA, has supported the Course by contributing financial resources.** However, it hasn't presented accounts that clearly show the resources provided and they have taken an excessive amount of time (nearly a year on the first two occasions and over 6 months on the third) to pay the teachers their incentives.

3.2 Achievements of the Project Purpose and Objectives

3.2.1 Relevance

Result: **High**

- Diagnostic imaging is of fundamental and growing importance in health interventions, in the midst of an epidemiological transition from preventable diseases to chronic degenerative diseases. The Central American and Caribbean countries are continuously acquiring image equipment, although not in the quantity and quality needed, in order to improve their diagnostic procedures. This increase in equipment requires technically trained staff for interpreting test results. But also, due to lack of equipment, in some cases, a lack of adequate radiological knowledge, some diseases are not detected in time and later turn out to be catastrophic. It is in this context that the International Diagnostic Imaging Course for Radiologists and Radiology

technicians in Central America and the Caribbean responds to these regional training demands in the area of diagnostic imaging.

- The Course organization by CEMADOJA corresponds to the centre's *Vision*, having emerged as the leader in the Dominican Republic when it comes to continuing education in imaging and serving other, technologically less advanced, countries. Likewise, it is in keeping with its *Mission* as a teaching, training, skill sharing and research and development centre for continuing medical education in advanced and high technology diagnostic imaging. Moreover, increasing the skills of national staff in the area of imaging supports the process of improving health services pursued by the Dominican Government through its Health Sector Reform and the implementation of the New Dominican Social Security System. In addition, the provision of an international course in diagnostic imaging by a public institution supports the Dominican Government's efforts to project the country as a regional technological centre.

- As documented in "Tokyo declaration 2005 action plan". Dominican Republic will play a crucial part on the medical education in Central America and Caribbean countries. From this point of view, this project will fully coincide with the international assistance plan of Japan.

- The technical capacity and diagnostic ability of Japanese technicians and radiologists is very high considered. These are results of a great practical experience for operating modalities, interventional radiology as well as advanced educational and academic activities. It was held the deliberation about Economic Cooperation Policies between Japan and the Dominican Republic in August of 2003, and it was defined that the assistant areas of Japanese part are as follow: 1) Agriculture, forestation and fishery, 2) Health, 3) Education, 4) Environment, 5) Promotion of Foreign Investment and Exportation, and 6) Tourism. The Project is the cooperation in Health area, therefore, coincides with the Japanese ODA policy.

3.2.2 Effectiveness

Result: **High**

- The evaluation did not have objective evidence to verify results of the Course on the participants at its disposal, seeing as a genuine assessment of the practical and theoretical knowledge they acquired would require an individual and complex process, meaning that the evaluation on results of the Project for the participants was based on perceptions compiled in the questionnaire that they filled out, and the interviews and visits that were conducted, as well as the Pre- and Post- tests that they underwent at the start and finish of each course. These are multiple-choice tests, which only record theoretical aspects and are a useful but imperfect tool for measuring knowledge acquired.

- The Course has helped all the direct and indirect beneficiaries as set out in the Project. The technical radiology staff and radiologists from the invited countries have benefited the most, by broadening their theoretical knowledge and improving their technical skills. Some even became familiar and experienced contact with equipment and procedures that are not available at their places of work. An estimated 40 out of 42 grant recipients have attended the three courses held. 55.5% of the participants who responded to the questionnaire (55% of the total) classified

the Course as very high, and 45% as high. 70% classified the Programme as very good, and 30% as good. The quality of the teachers was described as very high in 55% of cases, and as high by the remaining 45%. The support materials were described as adequate by 65%, and very adequate by 35%. However, it is necessary for teachers to acquire up-date knowledge in international level.

- The feedback evaluations, the interviews and the visits reflected a goof level of appreciation for the Course by the participants. 26.3% of the participants who responded to the questionnaire said that the course had provided a high contribution to their professional knowledge, 68.4 % very high, and 5.3% medium. The results on the practice of their professional work was awarded high marks by the participants, 47.4% describing it as high, 42.1% as very high, and 10.5% as medium. However, the impact on professional practice has been affected by the following factors: a) The course duration, which for most participants was too short for the amount of themes being covered, b) The Programme covers five study areas but the participants only work on one technique or procedure in their own countries, which means that a large part of the course material is useful as general background knowledge but does not provide enough depth to have much of a linkage with their day-to-day work and c) In some cases the participants don't work with the same equipment that was used in course.

- As an institution, CEMADOJA and its teaching and administrative staff had the opportunity to organize and teach three international courses, which provided them with skills and experience that will help CEMADOJA organize future events of this type. The project's effect on CEMADOJA's management capacity is evident in their effective running of three courses in the agreed timescales and under the conditions that were established in the Discussions Minutes. For the previous result it is understood that the institution's management and teaching capacity have improved, but on this point there is also a lack of objective evaluation tools. It must be stressed that 65% of the participants classified the general organisation of the course as very good, and 35% as good.

- The trainers also benefited from the advice provided by the Japanese experts and from the experience of teaching, which has helped increase their knowledge of the subject, as well as their pedagogical skills.

3.2.3 Efficiency

Result: **Medio**

- The Project's basic activities, the annual international courses and the associated series of activities have been carried out on the planned dates and within the planned timescale. The Japanese experts were present at the expected dates and timescales. Some factors that have contributed to reducing the direct costs of the Course, are: a) use of CEMADOJA's existing physical infrastructure (teaching classrooms, work spaces, etc.) and teaching equipment (PowerPoint projectors, blackboards, desks, tables, PCs, etc.),which has allowed minimum provision of additional equipment; b) Holding the Course at the workplace means that the teaching and administrative staff did not have to be paid transportation expenses; and c) Contributions from other public institutions that were involved like SESPAS,

SEEPYD and the Ministry of Foreign Relations were provided free of charge. However, one negative factor is that the payment of incentives to the teachers was considerably delayed on the three occasions that the course has taken place, affecting the motivation and the general pace of the course organisation.

3.2.4 Impact

Result: Medium

- It was not established the indicator to verify impact of the Course for the participants' patients and users on the evaluation. According to the participants and some of their managers, the Course taught them techniques and procedures that have helped them improve the health services they provide. Some radiologists highlighted the fact that the patients have benefited from a higher level of accuracy in the tests, on their part, and from an improvement in interpretations of diagnostic images. 90% of participants who responded to the questionnaire said that their patients had benefited greatly from the theoretical and practical knowledge acquired during the course, and 10% said a little. However, when asked whether they had been able to apply the theoretical and practical knowledge acquired during the course, 57.9% responded by saying a lot, and 42.1% said a little. The main problems they mentioned in applying the knowledge acquired during the course were: lack of adequate equipment (42.9%), lack of inputs (28.6%), lack of support from their managers (17.9%) and lack of interest from staff (10.7%).

- The Course's impact on their professional colleagues in their places of work has varied, as not all participants have fulfilled their commitment to pass on what they had learned to their co-workers. 64.7% of the participants said they had conducted or taken part in activities to diffuse the practice and knowledge they had acquired during the Course, while 35.3% said that they hadn't. Others have held regular sessions, and a minority has embarked on an ongoing process. However, it has to be stressed that some of the course participants who work in education in hospitals or training centers have been able to include important teachings from the CEMADOJA residential programmes and the classes taught during the course into their programmes and study pensuns. Likewise, all the interviews with participants who are also teachers in their countries highlighted the incorporation of knowledge acquired in the Course into their classes.

3.2.5 Sustainability

Result: Low

(1) Management Sustainability

- As mentioned above, CEMADOJA has acquired important experience through the organization and implementation of the International Course, although they have always enjoyed the full support of Japanese experts and the permanent presence of the JICA office in the country. CEMADOJA has fulfilled its commitment of organizing three sessions of the international imaging course adequately. Moreover, the CEMADOJA hasn't yet developed the capacity to raise funds from international aid agencies and to market and sell training and skills-sharing services.

(2) Technical Sustainability

- It is held annual seminar by CEMADOJA to exchange knowledge of Diagnostic imaging, and CEMADOJA Staff is dispatched to others institutions to improve their capacities to acquire new information and technique. However, there has been no adecuate system to develop trainers, it is not sufficient the contents of material to international level.
-

(3) Financial Sustainability

- CEMADOJA has demonstrated self-management capacity by buying, with its own funds, a tomography and resonance scanner, and is currently in the process of acquiring other modern and costly equipment. Another favorable factor is that JICA has reduced its contributions to the courses and the Centre responded by supplying these resources. But the current modality for implementing the course requires major economic contributions from JICA and CEMADOJA. The Centre has fulfilled its commitments, although with delays on some occasions. At the present moment, CEMADOJA generates income by selling services, but does not have a surplus, so it would be practically impossible for it to cover the entire cost of the courses.

- The Dominican Republic is experiencing economic difficulties in the midst of the international fuel price crisis which is affecting the availability of public funds for activities that, like training courses and training days, are not considered to be a priority, and the Dominican Government's budget support for this type of activity is not guaranteed in the future.

4. CONCLUSIONS

Based on the results achieved, the evaluation team acknowledges that the Project has been executed according to plan and that it will achieve its purpose in the established timeframe. For the remaining execution period, the Project needs to strengthen its management capacity and follow-up on the course participants' commitments in their countries of origin, so that they continue to pass on the Project results.

5. LESSONS LEARNT

- **The need for CEMADOJA to project a technological cutting edge image in the area of imaging.** The area of imaging has a strong technological component that depends greatly on the strength of imaging equipment. In order for the Centre to be a national and regional point of reference in the area of images, there has to be permanent technological renewal and updating.

- **The importance of the prestige of CEMADOJA's professionals and teachers.** For the national and international image that CEMADOJA has to project, as well as the presence of modern equipment, it is also essential to have a highly trained professional staff that is up to date and with adequate teaching skills to meet international standard. Research development is also an activity that will add prestige to the professionals and the Centre.

- **The importance of using management systems.** The Japanese advice contributed to

the development and use of working system within the institution. These systems, which involve the existence of work tools and procedures, are largely responsible for the good organization and development of the courses.

- **The importance of involving JICA's local offices in the selection and follow up of participants.** Part of the value of the Course process is based on effective selection of participants and following up on their outstanding commitments once they return to their country of origin. In order to fulfill both things it is essential that JICA's local offices are involved in the selection of attendees, so that these truly respond to the required profiles, and that they provide effective follow up to the commitments obtained from attending the courses.

- **The future sustainability of the project will depend on a range of factors.** The continuation and diversification of the training courses in the area of imaging by CEMADOJA will depend on the development of the following factors:

  - ***The financial self-sufficiency on CEMADOJA.*** Income generation and operational profits are vital for the organization and running of new training courses, which imply anticipated investments.
  - ***Continuous training for the teachers and medical and technical staff at CEMADOJA.*** As mentioned above, updating knowledge is vital for the institution's prestige.
  - ***Technological updating.*** Also mentioned above, this is another indispensable condition for the reputation that the Centre requires in order to continue holding international courses.
  - ***Diversification of the educational services on offer.*** As well as the current Course, the Centre must design alternatives according to the training needs identified in the region.
  - ***Marketing capacity.*** Without losing its social orientation, CEMADOJA has to start developing sales capacity for the training services it can offer. These sales efforts should be directed at the public, not-for-profit and private sectors.
  - ***Development of institutional links.*** For professional exchanges, developing cooperation and fundraising programmes, the Centre will have to set up links with international aid organizations, teaching hospitals, universities and similar centers in the region.
  - ***Exploring new markets.*** As well as the countries taking part in the Course, CEMADOJA should explore new options in the Caribbean region.

6. Recommendations

(1) In the Short Term

1) **Creates stronger links between the health ministry (SESPAS) and CEMADOJA's work.** As an institution with certain levels of autonomy, SESPAS does not get sufficiently involved in the Center's activities or feels represented by them. Therefore it is important to inform, raise awareness and motivate SESPAS to bring

it closer to the institution.

2) **Establish indicators for acquired skills.** In order to measure the impact of the training taught in the courses, CEMADOJA needs to define a set of indicators and evaluation tools for this purpose. The Pre- and Post- tests that are currently being used are useful but insufficient to establish the impact of the teaching on the participants.

3) **Review the course programme.** With the experience accumulated in the Project execution, the Project needs to review the Programme to achieve the Project purpose.

4) **Add preparation of the Participants' Work Plan.** The last day is a good time to present instructions for the participants to reproduce the Course contents to their colleagues in their workplaces, for the participants to prepare a Work Plan for this purpose and for CEMADOJA to define and explain the way they will provide follow up to this commitment.

5) **Disbursement of incentive to teachers.** CEMADOJA requests fund to SESPAS so that the teachers relieve incentive within closing date of the next course. It is necessary to disburse within the specific day, in three month after closing the Course.

6) **Define a profile of the radiologist and technician attendee.** In order to ensure that the participants make the most of the Course, it is very important to have good participants. In order to guarantee their quality, it is important that the CEMADOJA teachers, with their accumulated experience, define the selection criteria or a draw up a profile with a set of essential characteristics of the attendees. The criteria or the profile need to reach the JICA office so that in coordination with the national authorities, an effective selection of participants is conducted. Some criteria that are being suggested are: that the participants should be linked to educational processes, that they should be proposed by the hospital or institution, and provision of evidence that confirms their long-term future in their posts.

7) **Improve the quality of the support materials.** For this, at least two actions are recommended:

- **Review of the material and Carry out a rehearsal of the teachers' presentations.** Each medical and technical teacher must make a presentation to the colleagues who took part in the Course and some Centre guests, with the aim of improving and enriching the presentations and material that will be used in the course. The coordinators of the radiologists and the technicians need to set up these meetings, ensuring that as many people as possible attend, and verifying that the recommendations are incorporated into the presentations.
- **Prepare a document outlining the Course organization process.** CEMADOJA staff members know how to organize an International Imaging Course, but the institution does not have a document that describes the steps and their

sequence. In order to systematize and institutionalize the experience and so that other people have a description of the process of organizing an international course, it would be useful to draw up a document outlining every step of the process. In addition, in order to provide follow up for the Course preparation process it is advisable to prepare a checklist to track progress at each stage and indicating what still needs to be done.

8) **Continue with a policy of selling services to medical insurance, NGOs and international aid organizations.** The increase in income is vital for the sustainability and continuity of the Center's training and skill sharing activities. It is essential to seek ways of increasing fundraising for imaging studies for the general functioning of the Centre and for the replacement and maintenance of equipment. CEMADOJA already has a contract with the National Health Insurance (SENASA) and is holding discussions with other insurance providers for selling services. These initiatives should continue, and at the same time the institution should approach aid institutions and non-profit organizations that could fund service quotas to specific vulnerable sectors of the Dominican population (women and children).

9) **Draw up a proposal aimed at an international cooperation organization so that the Course can continue.** Work needs to be start immediately with the aim of identifying donors and preparing proposals to ensure that the courses continue. As the project ends in 2010 this work needs to start straight away, because two years is not much time for preparation, submission and approval of a proposal to an international development organization.

(2) In the Medium Term

1) **Improve CEMADOJA's capacity and the scientific and technological imaging.** This will be achieved through the following activities:

- ***Permanent technological updating of the Centre.*** CEMADOJA needs to establish the renovation and permanent updating of its diagnostic equipment as a priority objective. It needs to have an exclusive account for this purpose, where a percentage of income is deposited according to certain volume parameters.
- ***Prepare and execute a Continuous Education Programme.*** Draw up a diagnostic study of the Center's technical and management capacities with a defined budget. The Programme execution will allow for continuous updating and improving of the Centre staff's academic and scientific knowledge. They need to make the most of the support of international cooperation agencies in this area. In addition, the education programme should include pedagogical skills development for the course tutors. For this purpose an exclusive account and a variable percentage of income should also be set up.In addition, this point requires the support of the Japanese experts from Oita University.
- ***Continuous research development.*** The research reinforces and generates new knowledge and provides professional prestige to whoever conducts it. It is advisable to apply for support to organize the institution's research area and to define a research programme.

2) **Image training services marketing plan.** Once the diagnostic of national and

international needs has been updated, CEMADOJA should prepare, with the support of a consultancy, a Marketing Plan for Educational Services and Training in the Area of Images that includes Central America, Haiti and other Caribbean countries. This plan should contribute to the definition of general course programmes, like the current one, as well as specialized courses in specific image-related themes. Moreover, the question of whether technical imaging equipment maintenance staff should be included in the courses as well as radiologists and radiology technicians also needs to be considered. The possibility of CEMADOJA teachers traveling to other countries to teach courses is also recommended.

8.14.A.9.

ANNEX1-1 List of Japanese Experts

Name	Area	Period		MM
NORIO HONGO	Lecturer, Course for Radiologist	2006/1/15	2006/3/13	1.9
HIROMU MORI	Support for Course Preparation (Chief Advisor)	2005/11/6	2005/11/16	0.4
MASAKI WAKISAKA	Support for Course Preparation (Radiologist)	2005/10/24	2005/11/21	1.0
TOMOHIRO HAMADA	Lecturer, Course for Radiologcal Technician	2006/1/15.	2006/3/13	1.9
KOICHI NAKAYAMA	Support for Course Preparation (Radiological Technician)	2005/10/24	2005/11/21	1.0
TORU MAEDA	Actualization of Techniqeus on Radiology (Radiolodist)	2007/9/1	2007/10/1	1.0
MASAHISA TAKUMA	Support for Course Preparation (Radiologist)	2006/8/9	2006/9/10	1.1
YUKIO KOISHI	Support for Course Preparation (Radiological Technician)	2006/8/9	2006/9/10	1.1
MICHIAKI SAI	Lecturer, Course for Radiologist	2007/1/14	2007/3/12	1.9
TOMOAKI SHIROO	Lecturer, Course for Radiological Technician	2007/1/14	2007/3/12	1.9
YASUFUMI KONDOH	Actualization of Techniques on Radiology (Radiological Technologist)	2007/9/1	2007/10/1	1.0
SHUICHI TANOUE	Course Lecturer (Radiologist)	2008/1/23	2008/3/8	1.5
YUKITO YOSHIDA	Course Lecturer, Radiological Technologist	2008/1/23	2008/3/8	1.5

ANNEX1-2 List of Machinary and Equipment

August, 2008

Date	Artículo	Specification	Place	State	State Control	Unit Price (Yenes)	Quantity	Price (Yenes)	Note
Jan - 2006	Impresora laser	Laser Jet 2600n	Dirección/cuarto técnicos	In use	*	68,680.00	1	68,680.00	
enero-2006	Impresora a color	Deskjet 6540 HP	Ofic. Expertos japoneses	In use	*	34,769.25	1	34,769.25	
enero-2006	Impresora a color	Deskjet 6540 HP	Ofic. Expertos japoneses	In use	*	34,769.25	1	34,769.25	
enero-2006	PC computer	Dimension 3000 Dell	Sala Lectura A	In use	*	115,622.78	1	115,622.78	
enero-2006	PC computer	Dimension 3000 Dell	Sala Lectura A	In use	*	115,622.78	1	115,622.78	
enero-2006	PC computer	Dimension 3000 Dell	Cuarto de los técnico radiologos	In use	*	115,622.78	1	115,622.78	1 USD = DOP 34.578
enero-2006	Laptop	Toshiba Tecra A3-SP611	Ofic. Expertos japoneses	In use	*	208,907.39	1	208,907.39	1 DOP = 3.434
enero-2006	Laptop	Toshiba Tecra A3-SP611	Ofic. Expertos japoneses	In use	*	208,907.39	1	208,907.39	
enero-2006	Laptop	Toshiba Tecra A3-SP611	Cuarto de los técnico radiologos	In use	*	208,907.39	1	208,907.39	
enero-2006	Proyector digital	Infocus X2/1600 Lumenes	Cuarto de los técnico radiologos	In use	*	213,423.10	1	213,423.10	
enero-2006	Escaner	Canon scan 3000x	Ofic. Expertos japoneses	In use	*	15,624.70	1	15,624.70	
enero-2006	Pantalla de tripode	DA-LITE 84 X 84	Sala Lectura A			45,328.80	1	45,328.80	
mayo-2007	Fluoroscopio	Shimadzu Modelo RS-50A System	CEMADOJA	In use	good	17,824,118.53	1	17,824,118.53	1 USD = ¥117.38 1 DOP = ¥3.675
abril-2008	Pizarra	Blanca mágica 24X36	CEMADOJA	In use	good	2,388.92	1	2,388.92	1 USD = ¥99.29 1 DOP = ¥2.967
mayo-2008	Laptop	Dell Inspiron 1420	CEMADOJA	In use	good	124,860.00	1	124,860.00	
mayo-2008	Laptop	Dell Inspiron 1420	CEMADOJA	In use	good	124,860.00	1	124,860.00	
mayo-2008	Servidor	Power Edge 29000 III	CEMADOJA	In use	good	623,779.75	1	623,779.75	
mayo-2008	Hard Disk	750 Seagate	CEMADOJA	In use	good	31,423.10	1	31,423.10	
mayo-2008	Hard Disk	750 Seagate	CEMADOJA	In use	good	31,423.10	1	31,423.10	
mayo-2008	Desktop	Dell Vostro 200S	CEMADOJA	In use	good	88,442.50	1	88,442.50	1 USD = ¥104.05 1 DOP = ¥3.092
mayo-2008	Desktop	Dell Vostro 200S	CEMADOJA	In use	good	88,442.50	1	88,442.50	
mayo-2008	Switch Linksys	24 ports/SR224	CEMADOJA	In use	good	14,046.75	4	56,187.00	
mayo-2008	Camara digital	HP R827	CEMADOJA	In use	good	23,931.50	1	23,931.50	
mayo-2008	Handycam	DCR-DVD408 DVD	CEMADOJA	In use	good	78,037.50	1	78,037.50	
mayo-2008	Impresora	Laserjet colo HP 2600 Networking	CEMADOJA	In use	good	41,620.00	1	41,620.00	
		Total						20,525,700.01	

ANNEX1-3 Participants of International Course

Year		Name	Country	Ocupation
2005	1	Manuel Ortiz Mercado	El Salvador	Doctor (Radiology)
	2	Ana M. Ramírez Vásquez	El Salvador	Technician (Radiology)
	3	María Fonseca de Chacón	Guatemala	Doctor (Radiology)
	4	Sandra M. Caniz Milián	Guatemala	Technician (Radiology)
	5	Carlos Enrique Rivera Argeñal	Honduras	Doctor (Radiology)
	6	Wilmer Alexander Vásquez Méndez	Honduras	Technician (Radiology)
	7	Linda M. Barba Rodríguez	Nicaragua	Doctor (Radiology)
	8	Brenda Ant. Conrado Mendieta	Nicaragua	Technician (Radiology)
	9	Mario Lee Escala	Panamá	Doctor (Radiology)
	10	Nuria Mireya Batista Oda	Panamá	Technician (Radiology)
	11	Lissette Bermúdez	Dominican Republic	Doctor (Radiology)
	12	Nurys Altagracia de Jesús Martínez	Dominican Republic	Technician (Radiology)
	13	Freddy Lionel Ortiz Tavarez	Dominican Republic	Technician (Radiology)
2006	1	Héctor Ant. Guidos Rodríguez	El Salvador	Doctor (Radiology)
	2	Marta Navarro Batlle	El Salvador	Technician (Radiology)
	3	Douglas Rafael Henry Ruiz	Guatemala	Doctor (Radiology)
	4	Delia Maritza Rodríguez de León	Guatemala	Technician (Radiology)
	5	Iris Hortensia Durón Gradiz	Honduras	Doctor (Radiology)
	6	Francisco José Mairena Rodríguez	Honduras	Technician (Radiology)
	7	Adela C. Castillo Miranda	Nicaragua	Doctor (Radiology)
	8	Edgar José Pérez Bermúdez	Nicaragua	Technician (Radiology)
	9	Sergio Andrés Landires Rojas	Panamá	Doctor (Radiology)
	10	César Ant. Barria del Cid	Panamá	Technician (Radiology)
	11	Iván Amaury Piña Saldaña	Dominican Republic	Doctor (Radiology)
	12	Carmen Yanet Pradel	Dominican Republic	Doctor (Radiology)
	13	Isramil A. Galán de la Cruz	Dominican Republic	Technician (Radiology)
	14	Alnerys Guzmán Mejía	Dominican Republic	Technician (Radiology)
2007	1	Susi Grisel Portillo Aguilar	El Salvador	Doctor (Radiology)
	2	Julio César Rodríguez Muñoz	El Salvador	Technician (Radiology)
	3	José Manuel Pineda Chacón	Guatemala	Doctor (Radiology)
	4	Nery Ernesto Acicón Torres	Guatemala	Technician (Radiology)
	5	Diana Carolina Martínez Montoya	Honduras	Technician (Radiology)
	6	Luís Rolando Delgado Velásquez	Honduras	Technician (Radiology)
	7	Noel Cajina	Nicaragua	Doctor (Radiology)
	8	Carla Antonia Largaespada	Nicaragua	Technician (Radiology)
	9	Marabellys Jurado	Panamá	Technician (Radiology)
	10	Luís Manuel Castillo Hernández	Dominican Republic	Doctor (Radiology)
	11	Eduardo Miguel Jacobo Cid	Dominican Republic	Doctor (Radiology)
	12	Cristian Bienvenido Ramírez de los	Dominican Republic	Technician (Radiology)
	13	Luz María Aramboles Santos	Dominican Republic	Technician (Radiology)

8.14.A.9.

ANNEX 1-4 Counterpart Training in Japan

Course	Name	Period	
Imagenology (Radiologist)	PEGUERO HOLGUIN Niraima Donaty	2007/10/3	2007/11/17
Imagenology (Technologist)	SURIEL ROSARIO Fausto Antonio	2007/10/3	2007/11/17

ANNEX 1-5 Budget Expenditure of the Course

(In RD$)

	2005		2006		2007	
Item	**Budget**	**Expenses**	**Budget**	**Expenses**	**Budget**	**Expenses**
Accommodation			931,392.00	875,882.30	931,392.00	640,695.00
Medical Insurance			45,150.00	42,763.50	22,750.00	20,475.00
Per-diem			303,680.00	30,680.00	312,440.00	290,540.00
Transportation	20,000.00	20,000.00	23,100.00	23,100.00	33,000.00	33,000.00
Transportation(Airport)			5,600.00	5,600.00	6,000.00	6,000.00
Food	32,760.00	32,760.00	33,600.00	33,600.00	38,976.00	38,227.40
Textbook	19,842.00	16,692.01	13,103.33	18,251.26		
Material Procurement	66,000.00	66,000.00				
Others	20,830.00	20,830.00		29,812.00		
	159,432.00	156,282.01	1,355,625.33	1,059,689.06	1,344,558.00	1,028,937.40

8.14.A.3