Terminal Evaluation Report On International Course on the Workers Health in Brazil

March 2005

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Summary

I. Outline of the Project					
Country : Brazil		Project title : WORKER'S HEALTH			
Issue/Sector	: Health/Medical Care	Cooperation scheme : Third-Country Training Program			
Division in charge: Dept.: CESTEH/EN Division: Fiocruz		Total cost: US\$ 281.372,38 (¥29.724.178,20) Cost per participant: US\$ 6.252,72 (¥660.537,29) Share of Japan's Contribution: 68,29%			
Davis d of	(R/D): 2001 ~ 2005 (five years)	Partner Country's Implementing Organization : CESTEH/ENSP/FIOCRUZ			
Period of Cooperation	(Extension) : (F/U) :	Supporting Organization in Japan : JICA			
Related Cooperation :	training course in the field of "Worker's Health".				

1 Background of the Project

In most of Latin American Countries there is a precarious policy and legislation which neither prioritizes nor guarantees the workers' health and they do not have adequate technologies and methodologies and qualified human resources in the field of workers' health. Most of these countries were just worried about getting and installing industries and as a result of there is a high statistics of work accident and environmental and occupational diseases related to work. Through the knowledge of the actual situation and the identification of hard work conditions, measures can be taken to eliminate, minimize or control these problems. The Japanese experience transferred to CESTEH/ENSP/FIOCRUZ during the mini-project developed from 1996 to 1998, was very important for the study and identification of Brazilian work condition that are very similar to the target countries of this TCTP.

In 1999, the CESTEH/ENSP/FIOCRUZ institution requested a technical cooperation to the Government of Japan in order to provide to the participants from Latin American and Portuguese speaking African countries an opportunity to improve their knowledge and techniques in the field of workers' health, specially on the surveillance on workers' health, National policies and legislation on workers' health; diseases related to work; evaluation and improvement of working environment.

This project was a result of a basic agreement on a technical cooperation between the Government of Japan and the Government of The Federal Republic of Brazil, signed in Brasilia on March 30th, 2001, and inter-mediated by the Brazilian Cooperation Agency (ABC), in which both Governments agreed to cooperate with each other to organize a training course in the field of worker's health, under JICA's Third Country Training Program.

The Fiocruz Institute was responsible for conducting the Training Course with the support of the technical cooperation of the Government of Japan. The CESTEH/ENSP/Fiocruz, and other Brazilian institutions, have been responsible for qualifying human resources – technicians and new researchers - in the field of worker's health by providing technical courses, Mastering-School and Doctorate degree courses. The studies, research projects, reference and cooperation services, which have been developed by CESTEH in the field of workers' health and environment, have contributed a lot for identifying workers' health conditions and work environment in Brazil and for developing technologies to control and improve these conditions. Thus, in this context, the Third Country Training Program (TCTP) fits into CESTEH activities.

2 Project Overview

The Training Course has been a result of basic agreement on technical cooperation between Government of Japan and Government of The Federal Republic of Brazil, in which both Governments agreed to cooperate with each other to organize a training course in the field of worker's health, under JICA's Third Country Training Program. The Fiocruz Institute was responsible for conducting the Training Course with the support of the technical cooperation of the Government of Japan.

The purpose of the Third-Country Training Course is to provide the participants from Latin American and Portuguese speaking African countries an opportunity to improve their knowledge and techniques in the field of workers' health, specially on surveillance on workers' health, National policies and legislation on workers' health; diseases related to work; evaluation and improvement of working environment.

(1) Outputs of the Training Program

- 1) Output 1: it is expected the participants have acquired theoretical and practical knowledge of the techniques, methodologies and technologies related to workers' health improvement;
- 2) Output 2: it is expected the participants have acquired a continuous technical relationship and a networking and cooperation between the countries involved;
- 3) Output 3: it is expected the participants have acquired a local development on workers' health.

(2) Inputs (U\$1,00 = \$105,64)

Japanese side: US\$192.154,38 (¥20.299.188,70)

Long-term Expert non Equipment US\$ 3.124,38 (¥ 220.059,50)

Short-term Expert: 02 M/M

Trainees received US\$ 100.680,00 (¥10.635.835,20)

Others (air fares/ transportation/ medical insurance) US\$ 88.350,00 (¥9.333.294,00)

Partner's Country Side : US\$ 89.218,00 (¥ 9.424.989,52)

Land and Facilities (training expenses) US\$ 53.468,00 (¥5.648.359,52)

Local Cost (lecturers, staff) US\$14.000,00 (¥1.478.960,00)

Others (GI, Print, Postage, Certifications) US\$ 21.750,00 (¥ 2.297.670,00)

II. Evaluation Team

Members of Evaluation Team	JICA Brasilia Office (contract to Local Consultant Franz Naoki Yoshitoshi, University of São Paulo's Master – School of Veterinary Medicine)			
Period of	From January, 2005 to March, 2005	Type of Evaluation, Terminal		
Evaluation		Type of Evaluation: Terminal		

III. Results of Evaluation

III-1. Achievement of the Training Program

The overall goal is to transfer knowledge, techniques and technologies to the participants from Latin American and Portuguese speaking African countries in the field of Workers' Health. In this context, 100% from the participants acquired and improved their knowledge, technologies and methodologies in the field of Workers' Health Improvement and 100% of them are applying more than 80% of what they have learned in their daily work. 90% from participants keep an interchange of information with other participants and 3% with the training institute.

III-2. Evaluation Results

(1) Analysis on the Achievement in terms of Outputs

Output 1) According to the participants' answers, the training course was considered able to transfer new and adequate knowledge and technologies to the participants in the field of workers' health. 100% from participants acquired and improved their knowledge, technologies and methodologies in the field of Workers' Health Improvement.

Output 2) Based on participants' answers and to Final Reports, elaborated by coordinators after the end of the course, the training program was able to promote partly a continuous technical relationship and a networking and a cooperation between countries involved.

During and after the end of the course of the I TCTP, there was not promoted a continuous technical relationship and a networking and cooperation between participatins countries. According to the answer of participants from I TCTP, Francisco José Tafur Sacipa (Colombia) and Rosa Ines Martinez Aguilar (Nicaragua), letters/e-mails were sent to Fiocruz' researchers and lecturers in order to interchanging technical information, but there were no responses from them. All participants thought there were no integration among themselves and with lecturers. 57% of participants continue to communicate with other participants and 28% with lecturers and Japanese expert. According to interview with Fiocruz' representants and lecturers, they did not received contact from foreign participants of I TCTP after the end of the course.

From II TCTP, an integration and an interchange between participants and training institution was strengthened and an e-networking was created, in internet, for changing technical information between participants and lecturers.

In II TCTP, extra-official technical agreements and cooperation were signed between CESTEH/ENSP/Fiocruz and Bolivia and Mexico, related to activities of evaluation of biological agents exposure on workers' health, as well as development of projects in the field of biosecurity with Cuba. All participants of the II TCTP are continuing to communicate with other participants and 25% with lecturers and Japanese expert.

In the III TCTP, proposals of technical agreements and cooperation were made between CESTEH/ENSP/Fiocruz and Chile, Panama and Costa Rica, related to activities of evaluation of agents exposure on workers' health, as well as, interchange of experiences about management of "SUS" (Health Unique System) adopted in Brazil. All participants of the III TCTP are continuing to communicate with other participants and 25% with lecturers and Japanese expert.

In the IV TCTP, was created a e-network for changing technical information, referred to as "solastra@gruposyahoo.com".

According to interview with training institution representants, there is a great willing to sign technical agreements and to keep a continuous technical relationship and a networking and a cooperation between countries involved.

Output 3) According to the answer of questionnaires, 97% of participants are applying and transferring/sharing more than 80% of what they learnt, in their daily work with co-workers, bosses and colleagues. All participants have disseminated in their countries the knowledge and abilities gained in this course thorough seminars (31%), workshop (23%), sharing what they learnt by talking with their bosses, colleagues, co-workers, pupil (some participants are teachers) and other people engaged to activities related to workers' health (92%), showing notes, textbooks, material classes and bibliography to their bosses, colleagues, co-workers, pupil and other people engaged to activities related to workers' health (61%), daily work (65%), beside development of projects, researches and presentation of the subject of this course in Medicine National Seminar (11%). All the participants intend to develop future projects in the field of workers' health. 45% of participants changed their daily activities for others ones related to improvement of worker's health. However, 85% of participants have difficult to implement/execute the knowledge and technologies acquired in their work due to nonexistence of: funds, equipments, qualified human resources and support/stand from their institutions/countries. A grate attention is paid for the participant Francisco José Tafur Sacipa, from Colombia, participant from I TCTP, which elaborated and published, after the end of the training course, a reference manual/book on workers' illness, with 82 pages, followed by Health Ministry of Colombia and, actually, he is heading a project for setting a guarantee system of quality on Occupational Health in Colombia.

(2) Relevance

Regarding the development necessity and policies of the target countries, the training course was necessary and important because in most of participating countries there is a precarious legislation and policies which nether prioritizes nor guarantees the workers' health; they do not have adequate technologies and methodologies and qualified human resources in the field of workers' health. In these countries exist a high statistics of work accident and environmental and occupational diseases related to work. This training course was able to transfer to all participants knowledge and techniques in the field of workers' health, specially on prevention, control, detection, surveillance, national policy and legislation, diseases, evaluation and improvement of workers' health.

According to the remitted questionnaires, the training course was the best way to transfer appropriated technology because the participants had an access to modern and updated equipments during the practical classes, as well as updated and modern information and conceptions in the field of workers' health. Beside, the training institute Fiocruz is one of the most respected institution related to workers' health in Latin American and has a high level technical group of researches and owns modern and excellent framework.

One of the factors that has contributed for a good program progress, are the similar culture and language between the participating countries that resulted in a good understanding and assimilation of the training course. If the training course had to be held in Japan or in another countries which they do not speak Spanish or Portuguese, most participants would be impeded to understand the course because unfamiliar language.

According to interview with authorities of Fiocruz Institute, the entrustment of the training course was partly reasonable in terms of improving his capacity and his ownership. In order to transfer new and updated knowledge and technologies to participants, the training institution needs to recycle

(modernize) his equipments as the same way as happened in the period of the mini-projects financed by Government of Japan, inter-mediated by JICA. So, they suggestioned to intercalate the mini-projects and the training course with duration of two years each one.

There is a great willing from Fiocruz continue the course with the aim of creating a network and cooperation with participating countries and other ones. However, the costs to finance the expenditures, that are currently payed by the JICA, are impracticable.

The training course was partially meaningful in terms of promoting network and cooperation among target countries. Not all invited countries assigned official or extra-official technical cooperation with training institute and not all participants are in touching with the training institute. In the IV TCTP was created a "e-network", designed as SOLASTRA@gruposyahoo.com, for interchanging information between Latin American and Portuguese speaking African countries.

2. Factors promoting sustainability and impact

(1) Factors concerning Planning

Based on all the information collected during this consultation, the training program is necessary for promoting the development and improvement in the field of workers' health in Latin American and Portuguese speaking African countries. In this context, Fiocruz owns an adequate framework and high qualified human resources for transfer appropriate knowledge and technology for the target countries.

(2) Factors concerning the Implementation Process

The fact that Fiocruz conducted the training course contributed a lot to the achievement of the overall goal, because they have high level of human resources - teachers, researchers and lecturers - and adequate framework, equipments, technologies and techniques for the project.

Another factor is that the training course was held in Brazil, because the target countries and Brazil have a similar culture and language. Therefore, this resulted in a good understanding and assimilation of the training course by all participants.

The support of the technical cooperation by the Government of Japan is another factor that contributed to the high efficiency to promote the sustainability and impact of the training course.

3. Factors inhibiting sustainability and impact

(1) Factors concerning the Planning

The necessity of financial agency to pay the cost of the course.

(2) Factors concerning the Implementation Process

- Management and administration of the training course was disorganized;
- Nonexistence of a group/person responsible to manage the interchange of technical information, during and after the training course and for keeping a networking and organize a follow-up cooperation among develops countries and the training institute.
- Is has been observed a varied area of actuation among the participants and knowledge level, since it involved professional from medical, political and engineer area. The participants suggestioned to separate the practical classes in area of actuation of the participants, for example, medical, engineer and political.
- According to interview with authorities of Fiocruz Institute, the entrustment of the training course was partly reasonable in terms of improving his capacity and his ownership. In order to transfer new and updated knowledge and technologies to participants, the training institution needs to recycle (modernize) his equipments as the same way as happened in the period of the mini-projects financed by Government of Japan, inter-mediated by JICA. So, they suggestioned to intercalate the mini-projects and the training course with duration of two years each one.

4. Conclusion

At short term, the training course promoted a impact on the participating countries in the field of workers' health, because they were able to transfer an adequate knowledge and technologies to all participants which improved their understanding in the field of workers' health. The promotion of local development and the creation of an increasing network and cooperation among the target countries in the field of workers' health have been promoted gradually by the participants and by the training institute during the TCTP. The participants, after the training course, incorporated a workers' health philosophy into their daily work.

At long term, it will promote a high impact on the participating countries in the field of workers' health if a technical cooperation is signed between the target countries and the integration between participants and training institution is increased.

5. Recommendations

Recommendations for Partner Country Side (Direction of Future Activities of Project):

According to answers evaluated in the questionnaires, participants have made following suggestions:

- The material given is adequate, but could be more organized;
- Improve the administration and management of the training course by hiring specific team/people for this purpose, as well as control the contacts of the participants with the training institution, during and after the end of the course;
- Redesign the curriculum in order to increase more practical classes and separate these one according to the participants areas medicine, engineering, political and other.
- Include in the curriculum a time/class to discuss solutions for local problems in the field of workers' health and possible technical cooperation between participants countries and Fiocruz or other reference institutes and to discuss promoting network and cooperation among them;
- Elaborate possible projects which could be implemented in participating countries;
- Provide access to the participants for downloading the material/bibliography from training institute webpage of internet, before beginning the classes;
- Faster the process between the Application Form reception by the embassies and the respective delivery for the Fiocruz;
- More emphasis to practical training;

Recommendations for JICA (Necessity for Follow-up Cooperation)

According to training institution:

- Provide to the participants basic kits for environmental application in their countries;
- Keep the support of the technical cooperation of the training course. It would be impracticable to continue the course without JICA's support;
- Discuss the possibility of alternate mini-project and the training course;
- Keep the training course being held in Latin Countries, preferably in Fiocruz Institute;

According to consultant:

- Increase of time allocated for practical training and ellaboratin of projects, which could possibly be implemented in participants' countries;
- Confer participants a presentantion letter which could be presented at their local work for eventual support;
- Contact Federal Public Institutions for partneships and subsidies to define National Program priorities:
- Organize former participants meetings every two years for workshop purpose.

6. Lessons Learned

- Lessons Learned regarding Situations in Evaluated Country and Sectors (policy, technological level, social and cultural aspect, institution, economic and financial aspect, etc.):

In most of target countries there are a precarious legislation and policies which nether prioritizes nor guarantees the improvement in the field of workers' health; they do not have adequate technologies and methodologies and qualified human resources. Thus, the TCTP was appropriated to: qualify human resources non existent in target countries; incorporate on participants a workers' health vision/philosophy and to promote possible technical cooperation projects.

The similarity of the culture, language and problems between involved countries, makes the learning better.

The technological level of Fiocruz Institution and the knowledge grade of the lecturers are good enough for a satisfactory formation.

- Lessons Learned regarding Project Management (Finding, Formulation, Implementation, Evaluation, etc.): The management of a project of this magnitude requires efforts and willingness from all sides to be achieved. Judging from the achievement of the outputs, the project management got achieve partly the objectives of the TCTP, due the following problems: few practical classes; management and administration of the training course was disorganized; nonexistence of a group/person responsible to manage the interchange of technical information, during and after the training course and for keeping a networking and organize a follow-up cooperation among develop countries and the training institute.

These kind of problems should be solved by: improve the administration and management of the training course by hiring specific team/people for this purpose, as well as control the contacts of the participants with the training institution, during and after the end of the course; redesign the curriculum in order to increase more practical classes and separate these one according to the participants areas – medicine,

engineering, political and other; include in the curriculum a time/class to discuss solutions for local problems in the field of workers' health and possible technical cooperation between participants countries and Fiocruz or other reference institutes and to discuss promoting network and cooperation among them; elaborate possible projects which could be implemented in participating countries; provide access to the participants for downloading the material/bibliography from training institute webpage of internet, before beginning the classes;

7. Follow-up Situation

Many participants, after the end of the training course, continue to communicate with lecturers, Japanese expert and with themselves, exchanging information, and including some official and extra-official technical cooperation occur between institutions.

Chapter 1 Outline of Evaluation Study

1-1 Objectives of Evaluation Study

The objective of the study is to evaluate the international training course in the field of Workers' Health, accomplished from 2001 to 2004, under JICA's Third Country Training Program, conducted by CESTEH / ENSP / FIOCRUZ, in order to provide a view to improving its planning and management and to enhance similar projects in the future.

1-2 Members of Evaluation Study Team

The evaluation was executed by Franz Naoki Yoshitoshi (University of São Paulo's Master – School of Veterinary Medicine).

1-3 Period of Evaluation Study

From January, 2005 to March, 2005

1-4 Methodology of Evaluation Study

- 1. The following points were taken in considering for the evaluation:
- Capacitate for Implementation, organization and management of the training course;
- Lecturers capacitate;
- Adequacy of equipment;
- Adequacy of Plant and Framework for training (laboratory, classes, library, auditorium);
- Administration;
- Materials/text (text books);
- Satisfaction of the participants.
- 2. Impact of the training course for the target countries:
- Adequacy of curriculum design for their local needs;
- Depth of the knowledge and technology acquired, by the participants, through the training course;
- Dissemination of the knowledge and skills acquired through the training course.

In order to raise information for analyses of above points, the consultant took the following measures:

1. A questionnaire, adapted regarding to each participants profile, was elaborated and it was sent to them (questionnaires in Portuguese and Spanish in annex).

Based on the participants registration, the consultant contacted them by phone, fax and e-mail. The consultant tried to contact the 50 participants, but it was not possible to contact all of them because of the following problems:

- Non existent phone number;
- The phone number registered was wrong;
- The questionnaire was sent by e-mail, but the consultant has got no answer back.
- Participants changed its job and the consultant has got no access to the new one.
- Wrong e-mail address.
- The consultant visited the CESTH/ENSP/FIOCRUZ plant and interviewed the director of the institution, teachers, lecturers and co-ordinators of the training course. Questionnaires were sent to participants.

Chapter 2 Outline of the Training Program

2-1 Background of the Training Course

In most of Latin American Countries there is a precarious policy and legislation which neither prioritizes nor guarantees the workers' health and they do not have adequate technologies, methodologies and qualified human resources in the field of workers' health. Most of these countries were just worried about getting and installing industries and as a result of this, there is a high statistics of work accident and environmental and occupational diseases related to work. Through the knowledge of the actual situation and the identification of hard work conditions, measures can be taken to eliminate, minimize or control these problems. The Japanese experience transferred to CESTEH/ENSP/FIOCRUZ during the mini-project developed from 1996 to 1998, was very important for the study and identification of Brazilian work conditions that are very similar to the target countries of this Third Country Training Program.

In 1999, the CESTEH/ENSP/FIOCRUZ Institution requested a technical cooperation to the Government of Japan in order to provide to the participants from Latin American and Portuguese speaking African countries an opportunity to improve their knowledge and techniques in the field of workers' health, specially on surveillance on workers' health, National policy and legislation on workers' health; diseases related to work; evaluation and improvement of working environment.

This Training Course was a result of basic agreement on technical cooperation between the Government of Japan and the Government of The Federal Republic of Brazil, signed in Brasilia on March 30th, 2001, and inter-mediated by Brazilian Cooperation Agency (ABC), in which the both Governments engaged to cooperate with each other for organizing a training course in the field of worker's health, under JICA's Third Country Training Program.

The purpose of this course is to provide the participants from Latin American and Portuguese speaking African countries with an opportunity to improve their knowledge and techniques in the field of workers' health, specially on surveillance on workers' health; National policies and legislation on workers' health; diseases related to work; evaluation and improvement of working environmental.

As outputs of the Training Course, it is expected the participants have: 1) acquired theoretical and practical knowledge of the techniques, methodologies and technologies related to workers' health improvement; 2) a continuous technical relationship and a networking and cooperation between the countries involved; 3) a local development on workers' health.

The Fiocruz Institute was responsible for conducting the Training Course with the support of the technical cooperation by the Government of Japan. In this context, Fiocruz has a large experience in the field of Workers's Health. The Workers' Health and Human Ecology Studies Center of the National School of Public Health of Oswaldo Cruz Foundation (referred to as "CESTEH/ENSP/FiOCRUZ") was established in 1985, with the following main objectives: 1) to capacitate human resources in the field of workers' health; 2) to develop studies and researches concerned to "work-health-environment" relationship; 3) to develop national and international technical-scientific cooperation activities.

The CESTEH/ENSP/Fiocruz and other Brazilian Institutions, have been responsible for qualifying human resources - technicians and new researchers - in the field of worker's health by providing technical courses, Mastering-School and Doctorate degree courses. CESTEH/ENSP/Fiocruz usually renders technical assistance to Ministry of Health, Ministry of Environment, Syndicates (Labour Unior), Public Prosecution Ministry and other institutions. The studies, researches projects, reference and cooperation services, which have been developed by CESTEH in the field of workers' health and work environment, have contributed a lot for identifying workers' health conditions and work environment in Brazil and for developing technologies to control and improve these conditions.

The interchange and cooperation with national and international institutions/organizations has been necessary for capacitating CESTEH/Fiocruz's lecturers and teachers and for updating its laboratories, besides keep an increasing inter-institutional partnership related to researches and training courses for human resources. An example of this, is the Brazil-Japan Technical Cooperation, inter-mediated by International Cooperation Agency of Japan (JICA) that was established in 1992 and was related to the Occupational Health Area, entitled "Isolated Coming of Expert". In this opportunity, CESTEH had collaboration of the Japanese expert, Dr. Kazunori Mizunuma, who spent three months in Brazil. This collaboration was extended until 1998 and, in this period, it was implanted a mini-project-type technical cooperation for Occupational Health. During this period, new methodologies were implemented for evaluation of work environment and environmental and occupational exposure on workers' health. Still, two laboratories were implanted in CESTEH: a ventilation and exhaustion laboratory – for studying engineer processes applicable to improvement of work environment – and a filaments and particles laboratory. The existence of these both laboratories became possible to capacitate and to consolidate the teaching, researches, the bases and frameworks for the activities foresaw on Third Country Training Program (TCTP).

Thus, in this context, the Third Country Training Program (TCTP) fits into CESTEH activities.

2-2 Summary of Initial Plan of the Training

(1) Course title	Workers' Health
(2) Number of participants a year	Limited to twelve (12) participants from target countries and three (3) participants from Brazil
(3) Duration	four (4) Weeks/ 168 hours
(4) Year of cooperation	2001 ~ 2005 (five years)

Requirement for Application

(1) Level of knowledge and/or skills which participants are expected to have	To be graduated from university specialized in health, science and technology;
(2) Desirable current position/duties	- To be engaged at public institutions of researches, teaching or services that develop activities in the field of Workers' health.
(3) Years of experience in the sector/issue in question	Non requirement
(4) Age limit	To be under fifty (50) years of age;
(5) Target countries	Angola, Argentine, Bolivia, Cape Verde, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatelama, Guinea-Bissau, Honduras, Mexico, Mozambique, Nicaragua, Panama, Paraguay, Peru, São Tome and Principe, Uruguay and Venezuela.

Chapter 3 Outline of the Training Program

3-1 Implementation frameworks

In order to organizing and implementing the Training Course, the Japan-Brazil Governments took the following measures in accordance with the relevant laws and regulations in force in their respective countries:

- 1. The government of the Federative Republic of Brazil inter-mediated by Brazilian Cooperation Agency (referred to as "ABC") was responsible for: a) forwarding general information (G.I.) brochures to the government of invited countries through Brazilian diplomatic channels; b) receiving applications forms sent by the applying countries through Brazilian diplomatic channels and forwarding them to Fiocruz; c) Notifying the results of the selection of participants to the respective Governments through Brazilian diplomatic channels.
- 2. The Fiocruz was responsible for: a) formulating the curriculum of the Course; b) drafting and printing the General Information (G.I.); c) Assigning an adequate number of staff as lectures and instructors for the Course; d) providing necessary training facilities and equipment for the Course; e) Selecting participants for the Course and notifying JICA and ABC of the results; f) Arranging accommodation for participants; g) arranging international air tickets for the participants from invited countries and meeting and seeing them off at the airport; h) Arranging domestic study tour(s) as a part of the Course; i) taking budgetary measures to contribute a part of the expenses of the Course equivalent no less than thirty percent (30%) of the total amount; j) Issuing certificates to the participants who have successfully completed the Course; l) submitting a course evaluation report to JICA within thirty (30) days after the terminations of the Course; m) submitting a statement of expenditure on the fund from the government of Japan, with the receipts and other verifying documents attached within 30 days after the termination of the course; n) attending to any matters related to the Course.
- 3. The Government of Japan, inter-mediated by JICA, was responsible for: a) dispatching Japanese short-term expert(s), in accordance with the normal procedures of its technical cooperation scheme, who give relevant advice to FIOCRUZ and deliver some of the lectures. This, however, is subject to the budgetary availability of JICA. FIOCRUZ is expected to inform JICA of the requests for JICA short-term expert(s) not later than the annual consultation; b) bearing a part of the expenses for the Course equivalent up to seventy percent (70%) of the total amount.

3-2 Achievement in terms of Outputs

	2001	2002	2003	2004	2005	Total
Number of					-	
Applicants						
Number of	14	12	13	11	-	50
Participants						
Countries	10 (included	11 (included	12 (included	9 (included	-	42
Participated	Brazil)	Brazil)	Brazil)	Brazil)		
Duration	Four weeks – 168 hours	Four weeks – 168 hours	Four weeks – 168 hours	Four weeks – 168 hours	-	16 weeks – 672 hours

3-3 Achievement in terms of Activities

	2001	2002	2003	2004	2005	Average	Note if any revision in criteria during the course duration
Output 1	3	3	3	3	-	3	-
Output 2	1	2	2	2	-	1,8	-
Output 3	2	2	2	2	-	2	-

^{*}Achieved: 3, Partly Achieved: 2, Not Achieved: 1

3-4 Achievement in terms of Input (1 US\$ = \pmu105,64)

Total cost US\$ 281.372,38 (¥29.724.178,20)

Cost per participants (45) US\$ 6.252,72 (¥660.537,29)

(In this calculus, don't considerate Brazilian participants)

Share of Japanese Contribution: 68,29%

Japanese Side:

Air fares/ transportation/ medical insurance	US\$ 88.350,00	¥ 9.333.294,00
Per diem/ accomodation	US\$ 100.680,00	¥ 10.635.835,20
Equipments (pecilimeter ono sokki La 1240, climomaster anemometer n.6531 kanomax)	US\$ 317,61+ 2806,77= US\$3.124,38	¥ 33.552,32 + 296.507,18= ¥330.059,50
Total Cost	US\$ 192.154,38	¥20.299.188,70

Host Country's Side:

Lecturers, Staff	US\$ 14.000,00- five(5) Persons	¥ 1.478.960,00 - five
Training Expense	US\$ 53.468,00	¥ 5.648.359,52
Others(G.I.print/postage/certificate)	US\$ 21.750,00	¥ 2.297.670,00
Total Cost	US\$ 89.218,00	¥ 9.424.989,52

(R\$1,00 = U\$0,37 = ¥39,09)

Chapter 4 Result of Evaluation

50 people participated in the course. The consultant tried to make contact to all of them by phone, and sent questionnaires by fax and e-mail. As a result, the consultant received 26 responses, which corresponds to 52% of participants.

The answer distributions are:

A) By country:

TOTAL

COUNTRY	NUMBER OF QUESTIONNARIE S	NUMBER OF PARTICIPANT S	%
Angola	-	1	0
Bolivia	1	2	50
Brazil	4	5	80
Chile	2	2	10
			0
Colombia	2	3	66
Costa Rica	-	1	0
Cuba	1	1	10
			0
Dominican Republic	1	2	50
El Salvador	2	3	66
Ecuador	1	2	50
Guatemala	2	4	50
Guinea-Bissau	-	3	0
Honduras	1	3	33
Mexico	-	1	0
Mozambique	-	5	0
Nicaragua	4	5	80
Panama	2	2	10
			0
Peru	3	3	10
			0
San Tome	-	1	0
Venezuela	-	1	0

B) By Year

Year	Number responses	%
2001	7/14	50
2002	4/12	33
2003	8/13	61
2004	7/11	63

To implement evaluation study, the consultant developed the following activities:

1) Sending of questionnaires to every 50 participants;

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2) Visiting to Implementation Organization, ENSP/Fiocruz, when organization board and Fiocruz Institution's authority were interviewed;

52

50

- 3) Analysis of 4 final reports, elaborated by coordinators, of three courses held in 2001, 2002, 2003 and 2004;
- 4) Analysis of the country report from invited countries;
- 5) Analysis of remitted questionnaires;
- 6) Analysis of Institution plant and installations;
- 7) Analysis of the curriculum course;

4-1 Analysis of Outputs

(1) Output 1

1) Achieved

According to the participants' answers and to Final Reports, elaborated by coordinators after the end of the course, the training course was able to transfer new, updated and adequate knowledge and technologies to the participants in the field of workers' health. 100% from participants acquired and improved their knowledge, technologies and methodologies in the field of Workers' Health Improvement.

2) Promoting Factors

_	tputs requirement of			•	
■ curriculum	targeted countries	□ duration	■ text/materials	■ lecturers	
equipment	applicants selection	□ practica	l classes		

Promoting factors in detail

Promoting factors:

- Setting of outputs: this factor gave directions for conducting the training course and for setting the
 activities of the training course organization team and of the participants;
- <u>Curriculum design</u>: 90% from participants evaluated the curriculum design as adequate for the purpose of the training course; 10% from participants suggestioned to include more practical classes and to separate the subjects according to participants' area medicine, engineering, governmental and others;
- <u>Lecturers</u>: 100% from participants evaluated the lectures skills, capacitate and curriculum as excellent and adequate.
- <u>Equipment</u>: According to 5% from participants, the equipment of the training course was considered as new had never seen before and for all of them, as adequate and updated;
- Target Countries: based on the countries reports and on the questionnaire forward to the participants, in most of participating countries there is a precarious legislation and policies which nether prioritizes nor guarantees the workers' health; they do not have adequate technologies and methodologies and do not have qualified human resources in the field of workers' health. Thus, all participants asked for assimilate as much as they could of knowledge and theoretical and practical classes and all of them are applying and transferring more than 80% of what they learnt in their daily work with co-workers, bosses and colleagues
- <u>Willingness of participants</u>: According to interview with coordinators and lectures, all the participants made efforts to assimilate as much as they could the knowledge and technologies given.
- <u>Text/materials</u>: 100% of the participants evaluated the content of the materials and text as adequate. 15% of them suggestioned that the material/text could be more organized with the existence the apostil/folders and improved its quality (original not copies), and translated to Spanish language.
- Applicants selections: Based on participants curriculum, all the applicants selected were/are
 engaged to activities related to workers' health and most of them are researchers, teachers or are
 working in strategically directions occupation in public institutions in their countries.
- <u>Requirements applicant</u>: the requirements are adequate to limit just applicants engaged to activities related to workers' health;

(2) Output 2

1) Partly Achieved

Based on participants' answers and to Final Reports, elaborated by coordinators after the end of the course, the training program was able to promote partly a continuous technical relationship and a networking and a cooperation between countries involved.

During and after the end of the course of the I TCTP, there was not promoted a continuous technical relationship and a networking and cooperation between participations countries. According to the answer of participants from I TCTP, Francisco José Tafur Sacipa (Colombia) and Rosa Ines Martinez Aguilar (Nicaragua), letters/e-mails were sent to Fiocruz' researchers and lecturers in order to interchanging technical information, but there were no responses from them. All participants thought there were no integration among themselves and with lecturers. 57% of participants continue to communicate with other participants and 28% with lecturers and Japanese expert. According to interview with Fiocruz' representants and lecturers, they did not received contact from participants after the end of the course.

From II TCTP, an integration and an interchange between participants and training institution was strengthened and an e-networking was created, in internet, for changing technical information between participants and lecturers.

In II TCTP, extra-official technical agreements and cooperation were signed between CESTEH/ENSP/Fiocruz and Bolivia and Mexico, related to activities of evaluation of biological agents exposure on workers' health, as well as development of projects in the field of biosecurity with Cuba. All participants of the II TCTP are continuing to communicate with other participants and 25% with lecturers and Japanese expert.

In the III TCTP, proposals of technical agreements and cooperation were made between CESTEH/ENSP/Fiocruz and Chile, Panama and Costa Rica, related to activities of evaluation of agents exposure on workers' health, as well as, interchange of experiences about management of "SUS" (Health Unique System) adopted in Brazil. All participants of the III TCTP are continuing to communicate with other participants and 25% with lecturers and Japanese expert.

In the IV TCTP, was created a e-network for changing technical information, referred to as "solastra@gruposyahoo.com".

According to interview with training institution representants, there is a great willing to sign technical agreements and to keep a continuos technical relationship and a networking and a cooperation between countries involved.

2)	What were the	promoting (if you	i chose "a	" or "h" in 1)) or impeding (if you chose "	c" or "h" in	11) factore?
~ 1	vviial wele lile		i ciiose a		<i>ı</i> , or irrib c arrıa (II VUU UIUSE		III Iaciois:

■ setting of output ■ curriculum	s □ requirement of application ■ willingness of participants ■ targeted countries □ duration ■ text/materials ■ lecturers
■ equipment	□ applicants selection ■ technical relationship
nonexistent of institution.	a responsible team/people to inter-mediate the contact of participants with training

Describe the promoting/impeding factors in detail.

Promoting factors:

- <u>Setting of outputs</u>: this factor stimulated the training institute to promote proposals of agreements for transferring technology among invited countries, as well as the promotion of an interchange of information, by internet, between participants and lecturers;
- <u>Target Countries</u>: the participants of target countries have great interest to keep a continuous technical relationship and a networking and a cooperation between countries involved.
- <u>Technical Relationship</u> between participating countries: 80% of participants are in contact with participants of other countries;
- Willingness of participants: some participants tried to keep contact with Fiocruz institute, by e-mail,

after the end of the training course, for technical interchanging and cooperation, but there were no responses. However, the Fiocruz representatives said they did not receive any contact from participants countries for technical cooperation;

- <u>Equipments</u>: Due to equipments are modern and updated, they could be useful to participating countries. 10% of participants had never seen some equipments of the course before;
- <u>Text/materials</u>: All participants evaluated the text/material as excellent.

Impending factors:

- nonexistence of a group/person responsible to manage the interchange of technical information, during and after the training course and for keeping a continuous networking and for organize a follow-up cooperation between invited countries and the training institute;
- No integration between participants and training institute after the end of the course.
- Lack of classes on curriculum of the course for discuss possible projects which could be implemented in participating countries and possible technical relationship and agreements.

(3) Output 3

1) Partly Achieved

According to the answer of questionnaires, 97% of participants are applying and transferring/sharing more than 80% of what they learnt, in their daily work with co-workers, bosses and colleagues. All participants have disseminated in their countries the knowledge and abilities gained in this course thorough seminars (31%), workshop (23%), sharing what they learnt by talking with their bosses, colleagues, co-workers, pupil (some participants are teachers) and other people engaged to activities related to workers' health (92%), showing notes, textbooks, material classes and bibliography to their bosses, colleagues, co-workers, pupil and other people engaged to activities related to workers' health (61%), daily work (65%), beside development of projects, researches and presentation of the subject of this course in Medicine National Seminar (11%). All the participants intend to develop future projects in the field of workers' health. 45% of participants changed their daily activities for others ones related to improvement of worker's health. However, 85% of participants have difficult to implement/execute the knowledge and technologies acquired in their work due to nonexistence of: funds, equipments, qualified human resources and support/stand from their institutions/countries. A grate attention is paid for the participant Francisco José Tafur Sacipa, from Colombia, participant from ITCTP, which elaborated and published, after the end of the training course, a reference manual/book on workers' illness, with 82 pages, followed by Health Ministry of Colombia and, actually, he is heading a project for setting a guarantee system of quality on Occupational Health in Colombia.

2) What were the promoting (if you chose "a" or "b" in 1)) or impeding (if you chose "c" or "b" in 1)) factors?

•	tputs ■ requirement of application ■ targeted countries □ duration	0 1		
■ equipment	□ applicants selection ■ funds			

Promoting factors:

- <u>Setting of outputs</u>: this factor stimulated the participants to share and to develop in their respective countries the knowledge and technologies acquired during the training course;
- <u>Equipment</u>: for some participants, the equipment of the training course was considered as new had never seen before in their countries and for all of them, as adequate and updated.
- <u>Target Countries</u>: based on the *countries reports* and on the questionnaire for participants, in most of participating countries there is a precarious legislation and policies which nether prioritizes nor guarantees the workers' health; they do not have adequate technologies and methodologies and qualified human resources in the field of workers' health. Thus, these participants asked for

- assimilate as much knowledge and technique as possible for sharing them in their respective countries and for promoting a local development.
- <u>Willingness of participants</u>: all the participants made efforts to assimilate as much as possible the knowledge and technologies given.
- Text/materials: The most of the participants evaluated the materials and the text as adequate.
- Applicants selections: all the applicants selected were/are engaged to activities related to workers' health and most of them are researchers, teachers or are exercising directions occupation in public institutions in their countries.

Impending factors:

 most of participants have difficult to execute/apply what they learnt in their work due to nonexistence of: funds, equipment, qualified human resources and support/stand from their institutions/countries;

(4) Overall judgment on the achievement of outputs.

The training course was able to transfer adequate knowledge and technologies to all participants which improved their understanding in the field of workers' health. 95% of participants were satisfied with the content of the training curriculum, books, equipments, besides the ability of the lectures.

The creation of an increasing network and cooperation among the target countries and the promotion of local development on workers' health have been promoted gradually by the participants and by the training institute after the end of each training course. 97% of participants are applying and transferring/sharing more than 80% of what they learnt, in their daily work with co-workers, bosses and colleagues. All participants have disseminated in their countries the knowledge and abilities gained in this course thorough seminars (31%), workshop (23%), sharing what they learnt by talking with their bosses, colleagues, co-workers, pupil (some participants are teachers) and other people engaged to activities related to workers' health (92%), showing notes, textbooks, material classes and bibliography to their bosses, colleagues, co-workers, pupil and other people engaged to activities related to workers' health (61%), daily work (65%), beside development of projects, researches and presentation of the subject of this course in Medicine National Seminar (11%).

11% of participants are developing projects in the field of workers' health in their respective institutions and all of them intend to develop future projects in these same field in their country. The participant Francisco José Tafur Sacipa, from Colombia, from I TCTP, elaborated and published, after the end of the training course, a reference manual/book on workers' illness, with 82 pages, followed by Health Ministry of Colombia and, actually, he is heading a project for setting a guarantee system of quality on Occupational Health in Colombia. The participant Jose Francisco Vargas Barrutia, from Guatemala, from III TCTP, inhibited a great willing to organize an international seminar or conference in his country to disseminate this subject in order to do technical agreement between countries. The participant Julio Domingos Nunes Fontes, from Brazil, from I TCTP, is developing researches and projects in the field of worker's health in the Fiocruz Institution. 45% of participants changed their daily activities for other ones related to improvement of worker's health. However, 85% of participants have difficult to execute/apply what they learned, in their work because lack of funds, equipment, qualified human resources and support/stand from their institutions/countries. All participants, as result of the training course, incorporated a workers' health philosophy in their daily work.

4-2 Relevance

(1) Relevance of the reasons for setting the training program

Regarding the development necessity and policies of the target countries, the training course was necessary and important because in most of participating countries there is a precarious legislation and policies which nether prioritizes nor guarantees the workers' health; they do not have adequate technologies and methodologies and qualified human resources in the field of workers' health. In these countries exist a high statistics of work accident and environmental and occupational diseases related to work. This training course was able to transfer to all participants knowledge and techniques in the field of workers' health, specially on prevention, control, detection, surveillance, national policy and legislation, diseases, evaluation

and improvement of workers' health.

language.

According to the remitted questionnaires, the training course was the best way to transfer appropriated technology because the participants had an access to modern and updated equipments during the practical classes, as well as updated and modern information and conceptions in the field of workers' health. Beside, the training institute Fiocruz is one of the most respected institution related to workers' health in Latin American and has a high level technical group of researches and owns modern and excellent framework. One of the factors that has contributed for a good program progress, are the similar culture and language between the participating countries that resulted in a good understanding and assimilation of the training course. If the training course had to be held in Japan or in another countries which they do not speak Spanish or Portuguese, most participants would be impeded to understand the course because unfamiliar

According to interview with authorities of Fiocruz Institute, the entrustment of the training course was partly reasonable in terms of improving his capacity and his ownership. In order to transfer new and updated knowledge and technologies to participants, the training institution needs to recycle (modernize) his equipments as the same way as happened in the period of the mini-projects financed by Government of Japan, inter-mediated by JICA. So, they suggestioned to intercalate the mini-projects and the training course with duration of two years each one.

There is a great willing from Fiocruz continue the course with the aim of creating a network and cooperation with participating countries and other ones. However, the costs to finance the expenditures, that are currently payed by the JICA, are impracticable.

The training course was partially meaningful in terms of promoting network and cooperation among target countries. Not all invited countries assigned official or extra-official technical cooperation with training institute and not all participants are in touching with the training institute. In the IV TCTP was created a "e-network", designed as SOLASTRA@gruposyahoo.com, for interchanging information between Latin American and Portuguese speaking African countries.

(5) Appropriateness of Output Setting and Curriculum Design

The setting of output 1 and Curriculum Design were appropriated for improving the knowledge and techniques of all participants in the field of workers' health. About the curriculum design, the participants suggestioned to improve them: more practical classes, improve the quality of the material – organize the copies in an book/apostil –, delivery the material to the participants before the beginning of the course/classes; material translated into Spanish; delivery the material in CD.

The setting of output 2 and Curriculum Design were not appropriated for promoting a technical network and cooperation between the participants and the training institute, because the curriculum design did not included classes for discussion of possible technical cooperation among target countries. Still, there were not a group/person responsible for interchanging of technical information, during and after the training course and for keeping a continuous networking and for organize a follow-up cooperation between develop countries and the training institute;

The setting of output 3 and training components were appropriated to improvement of local development in the field of workers' health. However, considering that the most of target countries do not own adequate equipment, most of participants did not put into practice the knowledge learned from laboratory practical. The training institution suggestioned to provide to participants, basic kits for environmental application.

(6) Appropriateness of Requirement for the Applicants, and selection

As required in the *Requirement for the Applicants, all* participants selected for the training program had/have a link with institutions, public or not, of teaching, researches and services in which develop activities in the field of workers' health.

(7) Overall Judgment on Relevance

Based on all the information collected during this consultation, the training program is necessary for promoting the development and improvement in the field of workers' health in Latin American and Portuguese speaking African countries. In this context, Fiocruz owns an adequate framework and high qualified human resources for transfer appropriate knowledge and technology for the target countries.

4-3 Conclusion

4-3-1 Factors Promoting the Effectiveness of the Training Program

- <u>Setting of outputs</u>: this factor gave directions for conducting the training course and for setting the activities of the organization team training course and of the participants;
- <u>Adequate framework of Fiocruz</u> to conduct the training course, which owns new and update technology and equipment.
- <u>Curriculum design</u>: it was adequate for the purpose of the training course;
- <u>Lecturers</u>: Excellence and adequacy of lecturers skills and know-how to transfer technology and knowledge for the participants.
- Requirements applicant and selections: as it required, all the applicants selected were/are engaged to activities related to workers' health and most of them are researchers, teachers or are exercising directions occupation in institutions, public or not, which develop activities in the field of workers' health, in their countries.
- Target Countries: In most of the participants countries there are a precarious legislation and policies which nether prioritizes nor guarantees the workers' health; they do not have adequate technologies and methodologies and qualified human resources in the field of workers' health. Thus, these participants asked for assimilating as much as possible all the theoretical and practical classes. Besides, in majority of invited countries, the subject "workers' health" is considered as priority aim of the local Government.
- <u>Willingness of participants</u>: all the participants made efforts to assimilate as much as possible the knowledge and technologies given and to disseminate and apply them in their respective country.
- <u>Text/materials</u>: The materials and the text were adequate to transfer and to disseminate knowledge and information.
- Facility and quickness of information interchanging by using internet;
- Needs and interest of the target countries to sign technical cooperation with the training institute;
- The incorporation of the Workers' Health Philosophy into participants' work and activities.
- A favorable aspect is cultural proximity and Portuguese language comprehension, which helps participants adaptation in Rio de Janeiro;

4-3-2 Factors Inhibiting the Effectiveness of the Training Program

- few practical classes;
- management and administration of the training course was disorganized. Due to this factor, the consultant had difficult to collect many data and document about the training course, harming the deadline (time) to delivery this report;
- nonexistence of a group/person responsible to manage the interchange of technical information, during and after the training course and for keeping a networking and organize a follow-up cooperation among develop countries and the training institute.
- Is has been observed a varied area of actuation among the participants and knowledge level, since it involved professional from medical, political and engineer area. The participants suggestioned to separate the practical classes in area of actuation of the participants, for example, medical, engineer and political.

4-3-3 Conclusion

Regarding the development necessity and policies of the target countries, the training course was necessary and important because in most of participating countries there is a precarious legislation and policies which nether prioritizes nor guarantees the workers' health; they do not have adequate technologies and methodologies and qualified human resources in the field of workers' health. In these countries exist a high statistics of work accident and environmental and occupational diseases related to work. This training course was able to transfer to all participants knowledge and techniques in the field of workers' health, specially on prevention, control, detection, surveillance, national policy and legislation, diseases, evaluation and improvement of workers' health.

According to the remitted questionnaires, the training course was the best way to transfer appropriated technology because the participants had an access to modern and updated equipments during the practical classes, as well as updated and modern information and conceptions in the field of workers' health. Beside, the training institute Fiocruz is one of the most respected institution related to workers' health in Latin American and has a high level technical group of researches and owns modern and excellent framework.

One of the factors that has contributed for a good program progress, are the similar culture and language between the participating countries that resulted in a good understanding and assimilation of the training course. If the training course had to be held in Japan or in another countries which they do not speak Spanish or Portuguese, most participants would be impeded to understand the course because unfamiliar language.

Chapter 5 Recommendations and Lessons Learned

5-1 Recommendations

5-1-1 Recommendations for Partner Country Side (Direction of Future Activities of Project)

According to answers evaluated in the questionnaires, participants have made following suggestions:

- The material given is adequate, but could be more organized;
- Improve the administration and management of the training course by hiring specific team/people for this purpose, as well as control the contacts of the participants with the training institution, during and after the end of the course:
- Redesign the curriculum in order to increase more practical classes and separate these one according to the participants areas medicine, engineering, political and other.
- Include in the curriculum a time/class to discuss solutions for local problems in the field of workers' health and possible technical cooperation between participants countries and Fiocruz or other reference institutes and to discuss promoting network and cooperation among them:
- Elaborate possible projects which could be implemented in participating countries;
- Provide access to the participants for downloading the material/bibliography from training institute webpage of internet, before beginning the classes;
- Faster the process between the Application Form reception by the embassies and the respective delivery for the Fiocruz;
- More emphasis to practical training;

5-1-2 Recommendations for JICA (Necessity for Follow-up Cooperation)

According to training institution:

- Provide to the participants basic kits for environmental application in their countries;
- Keep the support of the technical cooperation of the training course. It would be impracticable to continue the course without JICA's support;
- Discuss the possibility of alternate mini-project and the training course:
- Keep the training course being held in Latin Countries, preferably in Fiocruz institute;

According to consultant:

- Increase of time allocated for practical training and elaboration of projects, which could possibly be implemented in participants' countries;
- Confer participants a presentation letter which could be presented at their local work for eventual support:
- Contact Federal Public Institutions for partnerships and subsidies to define National Program priorities;
- Organize former participants meetings every two years for workshop purpose.

5-2 Lessons Learned

5-2-1 Lessons Learned regarding Situations in Evaluated Country and Sectors (policy, technological level, social and cultural aspect, institution, economic and financial aspect, etc.)

In most of target countries there are a precarious legislation and policies which nether prioritizes nor guarantees the improvement in the field of workers' health; they do not have adequate technologies and methodologies and qualified human resources. Thus, the TCTP was appropriated to: qualify human resources non existent in target countries; incorporate on participants a workers' health vision/philosophy and to promote possible technical cooperation projects.

The similarity of the culture, language and problems between involved countries, makes the learning better.

The technological level of Fiocruz Institution and the knowledge grade of the lecturers are good enough for a satisfactory formation.

5-2-2 Lessons Learned regarding Project Management (Finding, Formulation, Implementation, Evaluation, etc.)

The management of a project of this magnitude requires efforts and willingness from all sides to be achieved. Judging from the achievement of the outputs, the project management got achieve partly the objectives of the TCTP, due the following problems: few practical classes; management and administration of the training course was disorganized; nonexistence of a group/person responsible to manage the interchange of technical information, during and after the training course and for keeping a networking and organize a follow-up cooperation among develop countries and the training institute.

These kind of problems should be solved by: improve the administration and management of the training course by hiring specific team/people for this purpose, as well as control the contacts of the participants with the training institution, during and after the end of the course; redesign the curriculum in order to increase more practical classes and separate these one according to the participants areas – medicine, engineering, political and other; include in the curriculum a time/class to discuss solutions for local problems in the field of workers' health and possible technical cooperation between participants countries and Fiocruz or other reference institutes and to discuss promoting network and cooperation among them; elaborate possible projects which could be implemented in participating countries; provide access to the participants for downloading the material/bibliography from training institute webpage of internet, before beginning the classes;