SENAI ELECTRICAL AND ELECTRONIC VOCATIONAL TRAINING CENTER PROJECT

EVALUATION REPORT

DECEMBER/1993

SENAI ELECTRICAL AND ELECTRONIC VOCATIONAL TRAINING CENTER PROJECT

PRESENTATION

This report is fruit of a joint study executed by the Brazilian and Japanese Governments, through the Brazilian Cooperation Agency - ABC and the Japanese International Cooperation Agency - JICA aiming at the identification of the results obtained and the problems occurred in the planning and implementation of Japanese cooperation projects in Brazil, besides the use of these results to subsidize future projects development between these two countries.

The technological Center of Electro-Electronics "César Rodrigues"- CETEL, implemented through the technical cooperation Brazil/Japan , was one of the projects chosen as the planned evaluation target.

In spite of the time passed between the development of the cooperation project and the current moment which the evaluation was executed, SENAI as JICA partner and responsible for the planning, implementation and working of CETEL, has promptly identified with the purpose of the work, by means of the opportunity of getting subsidy that could assign the planning of future actions from the Centre.

It's expected that the results that are registered here can contribute, in a decisive way, for the development of new Japanese technical cooperation projects in Brazil and that the richness of information available can contribute effectively in raising the quality of the service rendered by CETEL in favour of the graduation and development of human resources and the technological development in the Brazilian industrial sector.

1 - CETEL - RESULT OF PARTNERSHIP BRAZIL/JAPAN

Conceived as PJ ("Projeto Japão") - CETEL had its planning started by the end of the years 70, when then the industrial development process had already missing specialized manpower to attend upon the needs of electro-electronics sector.

After a negotiation period between SENAI and JICA an agreement of technical cooperation was signed on March 29th, 1979 forecasting the donation of equipments, technical assistance and know-how tranference by the Japanese side and with SENAI taking responsibility by the building construction, complementary equipments acquisition, arrangement of the human resources and the unit maintainance.

On April 6th, 1981 were officially implemented two programmed technical courses: Electric and Electronic Training Courses, pioneers till then. -

During these thirteen years of running the center, 476 trainees have concluded the technical course, that has established nowadays in one of the Centre's action strategy to attend upon the needs of the electro-electronics industry, that according to data from the RAIS/MTB (Annual Report of Social Information - Ministry of Labour) numbered 790 enterprises in 1991 absorbing 11.360 employees in Minas Gerais.

The Centre's profile has been objective of a continual evolution, influenced by the quick changes proceeding from the external ambient causing the deactivation of the Electric Training Course - extinct in 1989 - and the emerging of others, as the Industrial Computer Science, besides the enlargement of the possibilities available by the CETEL nowadays.

Thanks to this capacity of adequacy, incorpored progressively to its routine, CETEL has been recognized as a Vocational Training Center model in Brazil, soon being elevated to the category of National Technology Center, what makes it worth saying, that it's directed to absorption and diffusion of new technologies, additionally to the functions that it currently performs.

It's undeniable the contribution from Centres as CETEL in the elevation of the productivity level of the industries that need, more than ever, improve the quality of their products and services, facing the level of competitivity in the internal and external markets, impelled by the globalization of the economy and a higher level of the consumer demanding.

Although the serious crisis lived by the country, the high inflationary rate that endanger the expansion plan of the industries in general, the moment of great politics disorder which is passing the Brazilian nation, the country needs to grow searching its self-sufficiency.

The investment of graduating and developing human resources as part of a wider educational process, that includes in its goals the upbringing to work, as a way of citzenship redemption and structure of a fairer society, still constitutes as being the greater key for the country.

That's once more, the reason of the importance of CETEL as a reference centre to the technical training not only in Brazil as for other countries in Latin America and the necessities of permanent updating of its material and human resources.

2 - DEVELOPMENT OF EVALUATION

The operational systematic of the evaluation, led simultaneously by the Brazilian and Japanese teams, implied the following itens:

2.1 - Methodology used

The methodology allows a re-analyze of the cooperation project using the concept of logical framework that defines the overview of the project, indicating the basic components of the project, i.e. inputs, activities, outputs, project purpose sector goal and super goal. It defines these components.

The evaluation focuses the project under the following aspects:

- Efficiency: to judge the appropriateness of the means, methods, time, period and cost required to achieve the results. It's concerned with the tranformation of input into output, in terms of time, cost and the use of other resources;

- Effectiveness: to examine the degree to which the project purpose is being achieved, by comparing the original planned targets with the results actually achieved, and to analyze the factors and conditions which have led to the differences, if any;

- Impact: to analyze development effects including possible negative effects brought about by the project. These effects shall be evaluated mainly from the viewpoint of operational and managemental, technical, economic, and social aspects. Impact refers to the positive and negative effects, anticipated or not, on the concerned sector or on overall development within the recipient country.

- Sustainability: to assess the likelihood of the objectives of the project continuing after the project assistance is over. It shall be evaluated mainly from the viewpoint of operational and managemental, technical, and financial aspects;.

- Relevance: to examine the relevance of the project designs set up at the time of project preparation and those revised during project implementation, in accordance with changes in project circumstances. This is called project rationable. Based on an examination of the aspects previously state the relevance of the project can be discussed. Relevance is also related with whether or not the socio-economic needs are still existent to justify the continuation of the project.

2.2 - Target - Informant

Initially delimited by the Japanese study team, the target-people include:

. Beneficiaries from the project: trainees, graduates, graduates' supervisors and businessmen.

. Counterparts: instructors and technicians who have worked or who are presently working at CETEL.

.Managers: staff from SENAI who have, at the time of the project, supervised its implementation.

.Officials: specifically belonging to ABC and SENAI - National Department who have been responsible by the project at level of macro-system.

. Professionals: from universities and schools similar to CETEL who keep an interchange with the Centre.

2.3 - Data Collection

The necessary data collection to the evaluation was given through:

a - Fulfilment of the Indicator Table: it was performed a survey on a secundary data source in accordance with the indicators specified in the methodology evaluation model adopted (logical framework) including information about the project during the period from 1980 to 1993.

b - Interviews: 20 interviews were done in the period from November 16th to November 19th/93 including 35 people, from which originated a report with a synthesis of the information obtained.

c - Questionnaire: 5 different questionnaires previously prepared by the Japanese Study Team were adapted and translated into Portuguese by the Brazilian Work Team.

As a result of their distribution the following aspects were verified:

- Graduates: 222 questionnaires were mailed from which 23 were returned due to graduates' changing address and 68 were filled out and returned as asked.

- Graduates' supervisors: from the 54 questionnaires mailed, 10 were properly returned.

- Trainees: 07 from the 09 trainees who are attending the last period of the Electronic Training Course filled out the questionnaires.

- Instructors: 05 instructors integrating the target-public filled out the questionnaires.

- Counterparts: identified as the technical team, in this item were included 5 technicians who have already belonged to the working team of CETEL with those who are presently working in the Centre. From 10 questionnaires 7 were mailed back.

3 - RESULTS

According to the five aspects previously established it was analyzed the following:

3.1 - Efficiency

It can be asserted in a general way that the project was implemented in accordance with its initial planning.

The Japanese experts attended completely the purposes of the project, with a satisfactory training period, houwever the unlink of the team should have occurred gradually instead of all at once.

The technology transferred to the counterparts was positive.

Another aspect refers to the teaching materials translated at the time of the cooperation.

This material, in English, was worth for its technical contents, but the ones in Japanese were scarcely used since the translation takes time besides being expensive.

Regarding to the counterparts training in Japan it was adequate, contributing to increase their technological and training skillful level.

The difficulties found regarding to the training program, sometimes, incompatibles with the features and needs of the Brazilian counterparts, were surpassed through negotiation with the institutions responsible for the training in Japan.

The training period was considered adequate by the interviewed public on the whole, stressing that long training period (a year for example) can affect the familiar life of the counterparts.

The equipments donated to CETEL by the Japanese government were considered satisfactory, of good quality, requiring few spareparts up to now and being adequately provided .

However these equipments attended the needs of the industries during the cooperation period being up-to-date at that time what doesn't happen nowadays with most of them being considered obsolet.

Although the efforts carried out by SENAI to keep the Centre - CETEL - up-to-date and to complement the existente labs, there's shortage of equipments such as: Spectrum Analyzers, Digital Oscilioscopes, Digital True and RMS Multiniters.

Regarding to the Brazilian counterpart, the building and facilities were properly provided with enough space and in accordance with the project extent at that time.

The budget for installation and maintainance of the Centre was satisfactorily provided, allowing its entire operation not only during the cooperation period but up to the present moment.An investiment of US$ 1,176,694.00 was carried out by SENAI from the period of 1980 to 1993 aiming at the enlargement and continual adequacy of the CETEL facilities. Equipments and other materials acquired from 1987 to 1993 absorbed resources valuing US$ 1,029,278.00

The human resources required to the operation of the Centre were duly provided in 1980 the staff straight connected to the project was composed of 14 people, besides the administrative support from the team of the Vocational Training Center which was linked to the "Projeto Japão" (PJ).

At present CETEL counts with 46 employees.

Considering the aspects previously mentioned it can be asserted that the implementation of the cooperation project occurred in a effective way, with a positive balance as for the results accomplished and with regard to the solutions adopted to the problems which appeared at the time of the cooperation period.

3.2 - Effectiveness

The permanence of the Japanese experts in the centre during the cooperation period, made possible the transference of technology understanding and didactical skills for both counterparts and instructors and the realization of the training system in Electric and Electronics as initially planned.

From the implementation of CETEL to 1993, 476 trainees graduated in the Electronics and Electric courses, and according to information from the companies they're attending to their current needs.

According to data from the graduates' questionnaires, 92% are employed, perfoming jobs compatibles with the technical courses attendend at CETEL. (Two graduates are businessmen in the electro-electronics sector).

In addition to that, the technical level of the graduates was considered " high"by the technical/teaching team of CETEL and by the industries' supervisors.

Although the positive work out of the Electric course, it was deactivated in 1989 due to the low rate of applicants and increasing of dropout rate among the enrolled trainees.

Several points in the graduates' questionnaires, certify the good quality of the Electric course and advise a study about the possibility of its reintegration to the centre's activities.

Regarding to the centre's facilities, equipments and instruments available, they were considered satisfactory by either trainees, graduates and technical/teaching team.

It's worth saying that 57% of the graduates considered the equipments and tools available in the Centre similar to the ones they use in their companies.

The technical-pedagogical performance of the counterparts and instructors was esteemed satisfactory by 95% of the trainees and graduates.

The didactical material was esteemed properly by 95% of the trainees and graduates while 57% of the technicians and instructors esteemed it inadequate.

The companies searched showed themselves receptive to the graduates from the centre since they're quickly engaged to the productive power and for presenting a higher technological level than graduates from similar centres. (80% of the industries' supervisors have preferred graduates from CETEL).

3.3 - Impact

According to the opinion of 90% of the supervisors from the companies searched, it's easier, nowadays, to hire Electric and Electronics technicians than ten years ago.

The knowledge acquired at CETEL is mostly applicable in the companies and transferred to the graduates' colleagues, being the first, recognized as technicians of good level and able to contribute to the improvement of other employees.

The transference of knowledge has been involved technical information, equipment maintainance, use of instruments and development of projects, according to the observations registered in the graduates' and supervisors' questionnaires.

The technical team and instructors of CETEL have transferred their knowledge to centres of SENAI located in other States, through the technical assistance, and so to the industries through development of joint projects (example: software development to simulation of measurement with CEMIG).

It can be asserted that CETEL has caused a positive impact on the companies contributing to increase their level of productivity.

According to the interviewed professionals, CETEL has been established as a model in its working field, succeding in being a reference center for technological update of universities' teachers and similar schools.

3.4 - Sustainability

CETEL has been competent to continue implementing its activities and run as a National Technology Center in a self-sufficient way, despite the difficulties of SENAI regarding to the continual updating of material and human resources.

The operational costs of CETEL have been kept by the budget of SENAI-MG. Nowadays SENAI has been facing problems related to its operational budget, at the same time CETEL needs to expand and to spreed out their activities.

Concerning this matter there is a national policy wich recommend the adoption of alternative ways to produce returns which can minimize the operational costs of the centre and assure major investments in its technological development.

Although the wages policy of SENAI aren't exempt of the reflection of the wages policy from the educational area on the whole, which levels aren't compensating, the centre personnel have been kept without major changes, as for the opportunities of technological update offered by SENAI and for its substructure that's reliable and steady.

CETEL has tried to develop seminars and update courses regards to the upgrade of technical-pedagogical level of its human resources, in the opinion of 50% of the instructors and 71% of the counterparts.

The number of turn over of instructors and technicians has been low and the replacement of the ones who left by graduates, who are hired at CETEL after a period of permanence as technicians in a company, is promptly provided.

As for the activities developed by CETEL, besides the technical training courses, other important ones have been implemented: technical and technological assistance to the industries regarding to resolution of specific problems, researches and projects development.

The analysis of the technical training courses implemented with their respective demanding, and the detection of the greater technological increased areas, has motivated the opening of the industrial computer science running for two years.

Nevertheless this duty of curriculum revision, which is not continuously performed isn't enough to promote its continual and needed adequacy.

According to the data obtained through the interviews and from the questionnaires filled, the curricula of the technical training courses should comprise other contents essential to the back ground of a technician, as for example:

development of software, data communication computer science, English language(considered as important tool by means of consultation of technical literature).

The establishment, at CETEL of a support service to the graduates, was an alternative suggested through the questionnaires, as a way of helping the ones who enter the work market for the first time. Such support service would be able to guarantee a close and systematic relationship between CETEL and the companies, starting during the probation phase and making possible the collect of subsidy to the reformulation of the curricula of the courses being developed.

Another aspect reported through the interviews and questionnaires refers to the little divulgations of CETEL next to the industries, schools and society in general.

All the aspects previously pointed will be very important to malke strength its efficacy even more, although the sustainability of CETEL is assured with base in the seriousness at the work SENAI performs for 51 years.

3.5 - Relevance

CETEL was planned to provide manpower assigned to attend identified needs to the industrial sector by the time of its implementation.

Implemented with update technology and advanced equipments for that time, CETEL has placed itself ahead of time, achieving the purposes for which it was implemented.

At present the companies have adopted even more advanced technology in their productive process, impelled by the necessity of elevating their competitive level and attending the policy of industrial promotion concerning to the quality improvement.

The initial purpose of the project continues to be relevant nowadays, becoming urgent the updating of human resources and equipments, and the access to the advanced technology.

The variety of the Centre activities regarding to execution of courses and seminars to the companies, technical and technological assistance and development of projects has made possible a gradual linkage of the relationship CETEL/companies, which should be increased.

According to data obtained through the questionnaires, the courses developed at CETEL are applicable to other regions of the country, fact this, considered positive. Most of the supervisors from the companies (90%) assure that they shall need technical staff with a higher level each day.

4 - RECOMENDATION

Although the aspects enrolled in this item, are concerned to the evaluation of the cooperation project of CETEL, they were collected aiming at subsidy to the execution of future similar technical cooperation projects.

a) Initial Planning of the Project: the initial planning of the project should forecast besides the permanence of the Japanese experts during the cooperation development period their gradual unlink, aiming at preserving the continuity of the activities.

A major understanding of either the native or English languages as mediator is of fundamental importance to the transference of technology, training of counterparts and elaboration of didactical material and operational handbooks assigned to the working of the equipments.

b) Establishment of Chronogram: the comprehension of bureaucratic aspects relating to keeping track of projects thorough Governmental Departments shall contribute to the establishment of chronograms and terms more adequated to the reality.

c) Counterparts Training: the training of counterparts in Japan shoud be preceded by analysing the level of difficulties presented by the counterparts, their level of technological development, and their real shortage.

This study should guide the training planning as for the contents, strategy to be adopted and duration of the activities in Japan. Such procedure could assure the optimization of the expected results.

d) Project's Follow up: following up the project during and after its conclusion should be organized aiming at favouring possible problems' detection during its implementation and to guarantee the consolidation of good results.

This system would give beginning, for example, to a program of assistance to CETEL, having in view to contribute for the updating of its human resources and materials and for the technological increasing of CETEL, besides serving as a permanent channel of interchange between the cooperation agencies.

e) Guaranty of Continuity of the Project: during the cooperation period, strategies to guarantee the continuity of the project could be analysed according to the real possibilities and local peculiarities, aiming at adopting domestic solutions to future problems.

In case of obsolescence of equipments for instance, the work up of partnership among CETEL and companies holder of technologies could bring great benefits to both parts.

f) Support Service to Graduates: the development, by CETEL, of a support service to graduates at the execution of probation and at their entering in the work market, should make concrete as a way of promoting the linkage in the relationship CETEL/company, keeping syntony with the needs of the companies, and favouring the attendance to the graduates and their professional performance, and consequently, of assuring the feedback process of the curriculum.

g) Divulgation of the Centre Activities: a project of a more intense divulgation of the Centre and the activities developed should be object of major attention by SENAI, since the high concept it holds and the relevant services it grants are of noticing of a small number of industries and society in general. This procedure would contribute not only for the increasing of the applicants' number to the technical training courses as for making more accessible to the graduates the opportunities of working.

h) Knowledge of the Language: the understanding of the English language is considered of basic importance to the technical performance, since a great part of the specialized literature, catalogues, time table, etc, are in English in the electric and electronics areas.

CETEL should study alternatives to the development of English courses, even though being optional, parallelly with the technical training courses, aiming at its attendance by the trainees from the Centre.

i) Deactivation of the Electric Course: deactivation of the Electric course should be object of a deeper study, since the graduates from this course succeded in the work market in accordance with the information held in the questionnaires.

The investigation about the real reasons of the applicants' decrease number and the elevation of the dropout rate could lead, for example, to a restructure of the course instead of its deactivation.

j) Graduates' Updating: as for the human resources of CETEL need periodic updating, the graduates should also be thought over this aspect.

Because of the large territorial extension of the country, and the location of graduates in different parts of the Brazilian territory, plans of periodic updating for them could be worked out in the pattern of TCTP.

Additionally to that, the utilization of the capacity settled in the centre, should be considered to night-shift courses and updating seminars opened to the public as alternative inclusively as source of additiional income to CETEL.

LOGICAL FRAMEWORK
SENAI ELECTRIC AND ELECTRONIC
VOCATIONAL TRAINING CENTRE (SE/EVTC)PROJECT

PROJECT SUMMARY	INDICATORS	ATTAINMENT	IMPORTANT ASSUMPTION	PRESENT SITUATION
I.OVERALL GOAL 1.Upgrade the technical standard of the electric and electronic technicos in Brazil. 2.To increase the number of the electric and electronic technicos in Brazil.	1.1 Technical standard of technicos. 2.1 No. Of electric and electronic technicos.	1.1 Technical level of graduates is considered high by the industries. 2.1 In Brazil - 1985/89: 254.599 In CETEL - 1982/93: 454	1. It is easier to recruit higher trained tecnhnicians.	1.Companies prefer CETEL's graduates to others from similar schools. 2.Mostly of graduates execute jobs compatibles with the courses attended at CETEL
II.PROJECT PURPOSE 1.To establish an appropriate training system for higher electric and electronic technique and supply technicos. 2.SE/EVTC works as a model vocational training center in the field of electric and electronic technique in Brazil.	(After the Japanese Cooperation) 1.1.1 No. of training subjects 1.1.2 Rate of implemented subjects to plan 1.1.3 No. of companies implementing OJT program 1.1.4 No of trainees/graduates/dropout rate 1.1.5 Companies' evaluation on SE/EVTC 1.1.6 Trainees' evaluation on SE/EVTC 1.1.7 Operation budget 1.1.8 No. of equipment bought by SE/EVTC 1.1.9 No. of SE/EVTC internal seminars for trainees 1.1.10 No. of SE/EVTC internal seminar of trainers 1.1.11 Promotion costs to companies and students? 1.2.1 No. of staff members 1.2.2 No. of newly developed training materials and textbooks 1.2.3 No. of textbooks translated into Portuguese 1.3.1 Evaluation on management/maintenance/utilization of facilities/machines and equipment 2.1 No. of training subjects developed by SE/EVTC and comprehensively applicable in other region in Brazil. 2.2 No. of technical seminars for the instructors in other training centers.	1.1.1 Electric - 14 Electronic - 15 1.1.2 Electric - 100% Eletronic - 100% 1.1.3 260 companies 1.1.4 Trainees - 1985/93:86(annual average) Graduates - 1985/93: 386 Dropout - 1985/92: 9,2% (annual average) 1.1.5 CETEL performance is satisfactory according to the companies. 1.1.5 Annual average of scholarship for industries - 1985/93: 22,7 1.1.6 Enterviewed trainees are satisfied with CETEL 1.1.7 US$ 2.805.613,00 (1985/93) 1.1.8 467 itens of equipment 1.1.9 5 seminars (1989/93) 1.1.10 5 seminars (1989/93) 11.2.1 7 people 1.2.2 71 (1985/93) 1.3.1 Evaluated as satisfactory by trainees, graduates and counterparts 2.1 Electric: 10 Eletronic: 10 2.2 In other regions:11 In CETEL: 5	1.Graduates work as appreciated tchnicos. 2.Trainings meet industrial needs. 3.Government continue to support industrialization policy and take suitable promotion measures. 4.The training system of technico was established and No. of technicos was increased in the country. 5.Technical-pedagogical performance of instructors and counterparts is satisfactory. 6.Graduates tranfer tecnology to their company colleagues. 7.Maintainance of labs and equipments have, been done properly by instructors and techrical team. 8.No. of applicants to Electronic and Industrial Computer course is high. 9.Electric course was deactivated in 1989. 10.Equipments donated by Japanese Government requires little maintainance.	1.Implementation of Industrial Computer course in order to attend industry needs. 2.Increasing of technical/technological assistance to the industries. 3.Maintainance of equipments in other SENAI's centres by CETEL's technical team. 4.Donated equipments presents obsolescence level. 5.A more intense divulgation about CETEL's activities is required. 6.CETEL is recognized as a vocational training centre model and will be classified as a National Technology Centre.

PROJECT SUMMARY	INDICATORS	ATTAINMENT	IMPORTANT ASSUMPTION	PRESENT SITUATION
III.OUTPUTS 1.Training implementation system has been established for the following two fields: 1) Electric technique 2) Electronic technique 2. Counterpart instruct subjects, develop training materies and make a training plan. 3) C/Ps can operate and maintain facilities, machines and equipment. 4) Improved training module system for the program.	(During the Japanese Cooperation) 1.1 No. of training subjects 1.2 Rate of implemented subjects to plan 1.3 No. of companies implementing OJT program 1.4 No. of trainees/graduate/dropout rate 1.5 SE//EVTC's evaluation on trainees 1.6 Operation Budget 2.1 No. of C/Ps 2.2 No. of newly developed training materials and text book. 2.3 No. of textbooks translated into Portuguese 2.4 Evaluation on C/Ps'training skill. 2.5 Evaluation on developed C\Ps' training plans. 3.1 Evaluation on utilization of facilities/equipments 3.2 Evaluation on machine maintenance. 4.1 No. of improved module system	1.1. 2 Courses implemented as planned Electric - 1981/82: 18 Electronic -1981/82: 20 1983/84: 15 1.2 Rate of plan implementation: 100% 1.3 OJT is implemented since the 1984: 17 1.4 Trainees - 1981/84 - Electric course: 33 (annual average) Electronic)42 (annual average) Graduates: 1981/84: 99 Dropout: 1981/84: 7,75% 1.5 Trainees performance is satisfactory according to instructors and technical team 2.1 15 C/Ps trained in 83/84 2.2 Material and texbooks:29 2.3 Textbooks translated into Portuguese: 26 2.4 Counterparts level is high. 2.5 Mostly satisfactory. 3.1 Highly evaluated by counterparts and instructors. 3.2 Operation and maintainance of equipments is properly performed by technical team and instructors. 4.1 Electronics modules: 3	1.Trainees'eduaction level is to be maintained appropriately. 2.Trained counterparts continue to work fo SE/EVTC. 3.Some of the graduates remain in the center to be a future instructor. 4. Companies pay more appreciation to upgrade the technical standard. 5.Needs for technico are high: applicants to SE/ EVTC training course will be continuously. 6.Sparepars is continuously supplied. 7.Replacement of equipments is propoply undertaken.	1.Updating technological courses (OJT) are implemented by CETEL.
IV.ACTIVITIES 1.Training and suggestion for C/P 2.Development of textbook and training and suggestion for teaching method. 3.Seminar for company employees. 4.Training and suggestions for installation of equipments. 5.Training and suggestions for improvement of module education systems.	(IMPUT) <Japan> 1.No. of despatched of experts 2.No. of counterpart training in Japan 3.Facilities provided 4.1 Installation and equipments provided 4.2 Education material and Textbook provide <Brazil> 1.Provision of land 2.Manpower (No. of C/Ps') 3.Establishment costs 4.Building and facilities constructed	<Japan> 1.7 Long-term experts and 2 short-term experts were dispatched. 2.17 C/Ps were trained in Japan during the Project. 3. Equipments were supplied. 4.Total expenses: 639 million yen. 4.1 1972 items of equipments were provided 4.2 66 titles of didatic materials and textbooks were provide. <Brazil> 1. 3.707,6 m^2 were provided. 2. No of counterparts - 14 (1980/83) Total center personnel - 46 (1993) 3. US$1,029,278.00 4.US$1,176,694.00	PRE-ASSUMPTION 1. According to rapid industrialization by froreign investment, it was required to upgrade the tecnhical standard of technicians in Brazil. 2.The Government of Brazil (SENAI) planned the establishment of vocational training center for electric and electronic technology in Belo Horizonte.	1.Building and facilities were provided as planned. 2.Facilities were enlarged to attend the project purposes.

EVALUATION RESULTS ALONG THE FIVE POINTS OF EVALUATION (CETEL)

EVALUATION POINTS	EVALUATION RESULTS
EFFICIENCY	- On the whole the project was implemented according to the initial program. - Japanese experts attended satisfactorily to the purposes of the project. - Unlink of the whole Japanese experts team at the same time wasn't satisfactory. - Technology transference to the counterparts was satisfactory. - Didactical material written in Japanese were scarcely used. The translation was long and expensive. - Counterparts training in Japan was satisfactory, but it demended adequacy of the programs. - Equipments dovated by the Japanese Government were satisfatory and advanced for that time. - There have been no problems regarding to spare parts replacement or maintainance. - Equipments are obsolet at present. - Building and facilities were provided by SENAI according to the initial plan. - Costs of settling down and running of CETEL were properly absorbed by the budget of SENAI. - Human resources were provided according to the initial plan. - Planning and implementation of the project was efficient with positive results.
EFFECTVENESS	- Technological knowldge and didactical skills were transferred to the counterparts and instructors by the Japanese experts. - Electric and Electronic Training courses were implemented according to the program. - Graduates are attending the needs of the companies. - 92% of graduates are employed in positions compatible with the courses attended at CETEL. - Technical level of the graduates is high according to technicians, instructors, and companies' supervisors. - Electric course was deactivated in 1989 due to low rate of applicants and high dropout rate. - Most of trainees and graduates is satisfied with the facilities, instruments, and equipments available in the Centre and with the technical-pedagogical level of instructors. - 57% of graduates have considered the equipments and tools available in the Centre similar to the ones they use in the companies. - Most of trainees and graduates consider the didactical material satisfactory, and so do 57% of instructors and technicians. - Companies prefer the CETEL graduates due to their faster engagement to the productive power.

IMPACT DIRECT	- Most of learning acquired at CETEL are applicable in the companies and transferred by the graduates to their colleagues. - Technicians and instructors of CETEL have transferred their technological skill to other schools of SENAI from different States. - CETEL has contributed to solve specific problems in the companies through technical assistance.
INDIRECT	- 90% of the companies' supervisors think that it's easier to enroll Electric and Electronic technicians nowadays than 10 years ago. - There has been positive impact from the centre on the industry as for the increasing of the productivity level. - CETEL is thought over as a reference center for technological updating of universities teachers and similar schools.
SUSTAINABILITY	- CETEL has been able to implement it sactivities in a self-sufficient way. - Operational costs of the centre are absorbed by the budget of SENAI-MG. - Adoption of alternatives ways as a source of additional income will be thought over by CETEL. - Instructors and technicians have preferred remaining in the Centre that, besides the wages offer a steady substructure and opportunities to technological updating. - Besides the technical courses CETEL provides technical and technological assistance to the industry, researches and projects development. - To attend the industries' demand it was implemented the Industrial Computer Science Course. - Curricula shall be periodically updating and include the contents necessaries to upgrade technicians according to the industries' needs. - CETEL shall count on a support service to the graduates during the probation phase and entry in the work market. - Activities of the Centre are little divulged before the industries, schools and society in general. - CETEL sustainability is assured with base in the seriusness of the job perfomed by SENAI for 51 years.
RELEVANCE	- CETEL was planned to attend the companies' needs, identified during its implementation period. - Companies have adopted major advanced technologies in their productivity process. - Policy of industrial promotion concement to the improvement of quality, interfers in the manpower needs of the companies. - Purpose of the project is still relevant to the current needs of the companies. - Updating of human resources and equipments of CETEL should be continual. - Courses developed at CETEL are applicable to other Brazilian regions. - 90% of the companies' supervisors assure that those shall need a higher technical manpower level each day.

FACTORS CONTRIBUTING TO IMPLEMENTATION AND PRODUCTION OF IMPACT (CETEL)

	PROJECT IDENTIFICATION	APPRAISAL	IMPLEMENTATION DESIGN	IMPLEMENTATION	OTHERS
DUE TO SIDE JICA	- Project met the necessities of graduating industrial manpower	-CETEL was the first Centre in the Electric and Electronic area to be implemented in partnership SENAI/JICA, -The Japanese high technical level in Electro-electronic area was most relevant.	-Presence of Japanese experts during the project implementation was decisive.	-Equipments were donated according to the initial planning. - Transference of technology and didactical skills by the Japanese was satisfactory for both counterparts and instructors.	
DUE TO BRASIL SIDE SENAI	- Graduation of technicians of medium level (highschool) came to stop the gap in the structur of industries' manpower. -Investment in the graduation and development of human resources constitutes as the base to the industrial development.	-SENAI is recognized as an institution directed to the graduation and development of human resources for the industrial sector. -SENAI has always had great technical credibility on the industrial sector.	-Experience of SENAI in planning, implementing and administrating training centers was effective. -As a private institution SENAI has always had flexibility in administrating its budget resources.	-Emphasys on the Practical part of the curriculum has contributed to the ingression of the graduates within the porductive process of the industries. -Instructors and technical team were constituted mostly by former employees of SENAI - MG. - Budget was properly provided.	- Electronic development has been accured in a rythm more advanced than other learning areas. -Electronics constitutes the foundation for the technological development in several sectors of the economy. - CETEL has contributed effectively for the system development of SENAI

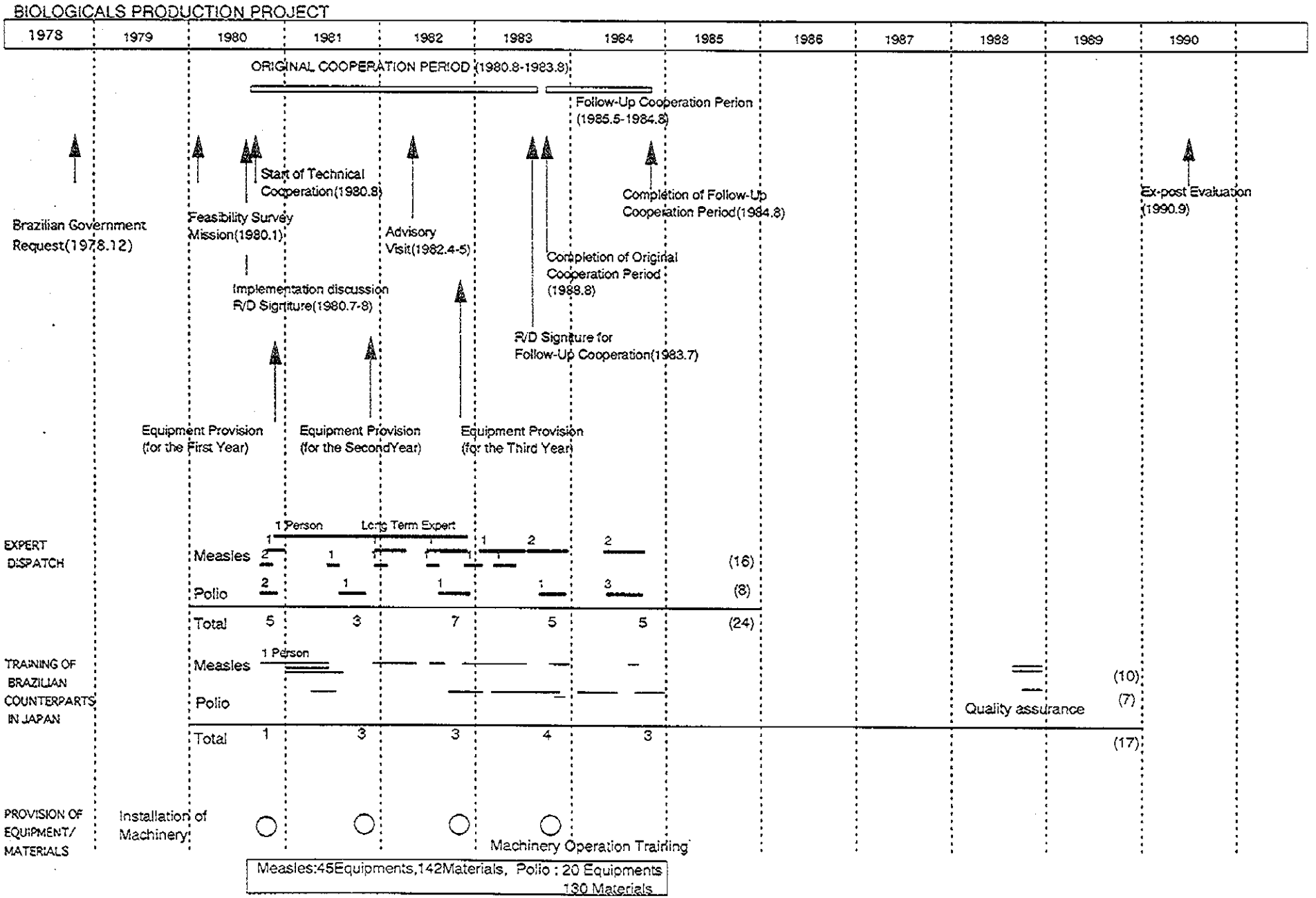
FACTORS INHIBITING IMPLEMENTATION AND PRODUCTION OF IMPACT (CETEL)

	PROJECT IDENTIFICATION	APPRAISAL	IMPLEMENTATION DESIGN	IMPLEMENTATION	OTHERS
DUE TO JICA SIDE				-Didactial material written in Japanese was scarcely used by either counterparts or trainees.	
DUE TO BRAZIL SIDE SENAI			-Communication through English language between Japanese experts and Brazilian Counterparts, made difficult in the beginning for the implementation of the project. -First curricula were conceived at variance to the Brazilian Teaching Legislation	-Electrical course was deactivated due to reduced number of applicants and high rate of dropout. -CETEL doesn't count on a follow up system to the graduates.	-Procedures of projects close to Governmental Departments is slow due to bureaucratic encumbrance.

LESSONS DRAWN FROM EVALUATION STUDY AND SUGGESTIONS FOR FUTURE COOPERATION

	LESSONS DRAWN FROM EVALUATION STUDY	SUGGESTIONS (SHORT TERM)	SUGGESTION (MID-TERM)	SUGGESTIONS (LONGTERM)
TO JICA SIDE	1-There'll be a greater guaranty of the continuity of the project if the unlink of Japanese experts be gradual. 2-Technology transference will be effective if the language obstacle be surpassed by the cooperator team. 3-Didactical material and equipments' operational handbooks shall be translated and suitable to the trainees level. 4-Japanese training plan shall consider the shortage and technical skill of the counterparts. 5-Attainment of the project's objectives requires its systematic attendance with process feed-back.	1-Inclusion in the chronogram of different periods for Japanese experts' permanence in the project. 1-Choice of homologous with enough knowledge of either the local or the second language of the cooperaton. 4-Joint analyses, by the cooperators, of the training plan previously elaborated.	3-Adequacy of didactical material (involving translation and methodology) shall precede the initial curricular activities.	5-Development of a follow up system during and after the cooperation period aiming at: -possible corrections of the project course. -sedimentation of the achieved results. -methodical interchange between the cooperaton.
TO BRAZIL SIDE SENAI	A-Project chronogram will be more effective if its procedure period be pondered close to Governmental Departments. B-Project continuity will be assured if local alternatives be adopted with such objective. C-Industry needs shall guide changes in the courses' curricula if there be a narrower linkage between CETEL/companies. D-Entry of Graduates in the work market and demad of the Centre's activities will be increased if a more intense divulgation of its activities be done.	B-Optimization of the capacity installed in the Centre through increasing of technological updating programs and technological transference(emphasys:nightshift course and alternative of additional income). C-Organization of a support service to the graduates regarding to probation phase and entering in the work markert. C-Evaluation study about the real reasons which conducted to the deativation of the Electric course D-Elaboration of a specific program about the Centre divulgation.	A-Elaborations of the project consonant to the rules and policies of Governmental Departments.	B-Work out of partnership among the Centre and companies holder of advanced technology.

ANNEX-B BIOLOGICALS PRODUCTION PROJECT


BIOLOGICALS PRODUCTION PROJECT
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
ORIGINAL COOPERATION PERIOD (1980.8-1983.8)
Follow-Up Cooperation Perion (1985.5-1984.8)
Brazilian Government Request(1978.12)
Feasibility Survey Mission(1980.1)
Start of Technical Cooperation(1980.8)
Advisory Visit(1982.4-5)
Completion of Follow-Up Cooperation Period(1984.8)
Ex-post Evaluation (1990.9)
Implementation discussion R/D Signiture(1980.7-8)
Completion of Original Cooperation Period (1988.8)
R/D Signiture for Follow-Up Cooperation(1983.7)
Equipment Provision (for the First Year)
Equipment Provision (for the SecondYear)
Equipment Provision (for the Third Year)
EXPERT DISPATCH
1 Person
Long Term Expert
Measles
Polio
Total
(16)
(8)
(24)
TRAINING OF BRAZILIAN COUNTERPARTS IN JAPAN
1 Person
Measles
Polio
Quality assurance
(10)
(7)
Total
(17)
PROVISION OF EQUIPMENT/ MATERIALS
Installation of Machinery
Machinery Operation Training
Measles:45Equipments,142Materials, Polio : 20 Equipments
130 Materials

LOGICAL FRAMEWORK - Bioligicals Production Project

PROJECT SUMMARY	INDICATORS	ATTAINMENT	IMPORTANT ASSUMPTIONS	PRESENT SITUATION
		measles / Poliomyelitis		
I OVERALL GOAL 1 To strengthen the production of biologicals in support of preventive measures against measles/poliomyelitis, and to reduce the rates of incidence.	1.1 Incidence of measles/poliomyelitis	1.1 99,263cases / 1,290cases ('80) 2,931cases / zero ('92)	1 Technology of other biologicals production is improved.	1 With the technology transferred through Japanese cooperation the technology of other biologicals has improved, mainly quality control, that was already produced in Brazil.
	1.2 Rate of death from measles/poliomyelitis	1.2 2.7% / 0.1% ('80) 0.3% / zero ('90)		
	1.3 Rate of preventive inoculation for measles/polio-myelitis	1.3 29.1% / 10.0% ('80) 100.0% / 97.7% ('92)		
II PROJECT PURPOSE	[After the Japanese cooperation] 1986-1992		1 Level of operators is kept appropriately.	1 Level of operators is kept appropriately.
1 To strengthen the biologicals production on a large scale.	1.1 Production of vaccines for measles/poliomyelitis in Brazil	1.1 measles-17,779,079doses('86), 11,312,020doses('89) polio - 6,286,828doses('86), 6,072,620doses('89)	2 Distribution system, that is, storage and dispatch of vaccines, and the immunization system are appropriately established in Brazil.	2 Production system is appropriately established however the local coldchain and storage system should be strengthened.
	1.2 Production of bulks for measles/ poliomyelitis in Brazil	1.2 N/A		
	1.3 Amount of imported vaccine/bulks for measles/poliomyelitis in Brazil	1.3 bulks-polio-65.6 liters('86),315 liters ('89)	3 Government continue to attach importance to domestic production of vaccines.	3 Government continues to attach importance to domestic production of vaccines, so much so that it has proposed a cooperation on the transfer of Japanese technology for production of the hepatitis B vaccine(recombinant DNA), rubella and mumps and the pertusis component of DTP.
	1.4 Share of the domestic vaccine in Brazil	1.4 measles 100% / polio 100%		
2 To strengthen the ability of quality control in vaccine production.	2.1 Inferior products rate in measles/poliomyelitis bulks production in Brazil	2.1 measles N/A / polio-0%('86), 0%('93)		
	2.2 Number of quality tests by type in vaccine production in Brazil	2.2 measles-936 ('86), 325 ('93) polio - 99 ('86), 91 ('89)		
III OUTPUTS	[During the Japanese cooperation] 1980-1985		1 Trained counterparts continue to work for vaccine production line.	1 Most of the trained counterparts continue to work for the vaccine production line.
1 Establishment of consistent production plant for measles vaccine	1.1 Production of measles vaccine in FIOCRUZ	1.1 5,046,115 doses ('82) / 12,145,062 doses ('85)	2 Trained counterparts continue to work for quality test of vaccines.	2 Most of the trained counterparts continue to work for quality test of vaccines.
i) Seed virus cultivation	1.2 Production of bulks for measles in FIOCRUZ	1.2 1,812 liters ('83) / 3,054 liters ('85)	3 Materials are sufficiently provided.	3 Materials are sufficiently provided, except for some spareparts, which are lacking.
ii) Quality test of SPF eggs	1.3 Inferior products rate in measles bulks production in FIOCRUZ	1.3 5.4% ('83) / 0% ('85)	4 Facilities and machines for production are appropriately maintained and improved.	4 Facilities and machines for production are adequately maintained, but there is a need for updating as to new equipment, or data on improvement of existing equipment. Materials were also improved; glassware purchased from industries were improved to meet the new requirements.
iii) Cell cultivation	1.4 No. of quality tests by type in measles vaccine production in FIOCRUZ	1.4 732 tests ('83) / 825 tests ('85)		
iv) Virus content test	2.1 Production of poliomyelitis vaccine in FIOCRUZ	2.1 600,000 ('84) / 5,929,000 ('85)		
v) Other quality tests	2.2 Amount of imported bulks for poliomyelitis in FIOCRUZ	2.2 72.5 liters ('84) / 60.6 liters ('85)		
vi) Production of virus suspension and bulks	2.3 Inferior products rate in poliomyelitis bulks production in FIOCRUZ	2.3 0% ('80) / 0% ('85)		
vii) Production of measles vaccine	2.4 Number of quality tests by type in Poliomyelitis production in Brazil	2.4 35 tests ('84) / 138 tests ('85)		
2 Establishment of final production plant for poliomyelitis vaccine	vaccine production in FIOCRUZ			
i) Quality test for virus content				
ii) Other quality test of bulks imported				
iii) Strengthening of quality control of the poliomyelitis vaccine				
IV ACTIVITIES	V INPUTS			
(A) Measles vaccine	<Japan>	<Japan>		
1 Field trials of the SIKENCAM 70 vaccine	1 Dispatch of Japanese experts	1 one long-term expert and 23 short-term experts		
2 Strengthening the capacity of production and quality control of the vaccine	2 Provision of machinery and equipment	2 measles: Co2 incubator and other 44 equipments Polio: filling machine set and other 19 equipments		
(B) Poliomyelitis vaccine	3 Provision of strain, vaccine and monovalent virus suspension	3 measles: 142 items / polio: 130 items		
1 Strengthening the capacity of quality control of imported vaccines	4 Training Brazilian personnel in Japan	4 14 counterparts were trained in Japan		
2 Establishment of the quality control system for the production of trivalent monovalent bulks	<Brazil>	<Brazil>	PRE-ASSUMPTION	
3 Establishment of an unit for diluting, blending and filling of imported viral suspension	1 Assignment of Brazilian counterpart personnel and Administrative personnel	1 17 counterparts are assigned: 10 (measles) 7 polio	1 Brazil's foreign-exchange holding are not sufficient for vaccine import.	1 Brazil's foreign currency asserts are sufficient for vaccine import.
4 Technical advice and training to the technical personnel to the Project	2 Supply of land, buildings and facilities	2 building and facilities were provided.	2 Procurement of necessary amount of vaccines is apt to be unstable because of the dependence on foreign countries' production	2 Up to this date, there has been no problem in the amount of vaccines for routine and campaign vaccination. However, problems have arisen for producing the necessary amount of vaccines for special vaccination efforts requiring very large extra amounts of vaccines.
5 Other activities necessary for the Project mutually agreed upon	3 Supply or replacement of machinery, equipment and any other materials necessary for the implementation of the Project other than those provided by Japan.	3 measles: edwards freazer-dryor, other 111 equipments and permanent materials polio: laminar flow module, other 55 equipments and permanent materials		
	4 Measures to meet the expenses and running expenses for the Project	4 Establishment cost : US $ 6million		

EVALUATION RESULTS ALONG THE FIVE POINTS OF EVALUATION - Biologicals Production Project

Evaluation points	Evaluation results
Efficiency of Implementation	- One long term expert and 23 short term experts were dispatched as planned. - Technical transfer in the field of measles vaccine production and the quality control of the measles vaccine and poliomyelitis vaccine was completed during cooperation. - More time may have been necessary, for at least a few months in the beginning, in order for Brazilian counterparts to learn the methodology of production and quality control technology at the earliest time of the cooperation. - Imported materials and equipment for measles production and for poliomyelitis quality control were provided by Japanese side as planned - The original manual machinery was reinforced by the FIOCRUZ for increasing the capacity of production.
Effectiveness	- The production was carried out according to the demands of the immunization program established by the Ministry of Health - Counterparts have strengthened their ability of quality control and vaccine production and gained higher specialized technical professional level. - Machine maintenance technician, however, do not fell that they are well trained to obtain higher techniques.
Impact Direct Impact	- At present there have been no cases of poliomyelitis and the mortality rate from measles has decreased. - The incidence of measles dropped from 99,263 cases in 1980 to 2,931 cases in 1992, and the incidence of poliomyelitis decreased from 1,290 cases in 1990 to zero (no cases) in 1992. - The strengthening of quality control through the cooperation contributed to the making of specifications of FIOCRUZ. As a result, supplies by industries for the production process, such as glassware which were poor in quality, were improved to meet FIOCRUZ.
Indirect Impact	- Multiplying research activities transferred techniques are now adapted and extended to other biologicals and it was carried out by FIOCRUZ and transferred to another country, such as is the case of yellow fever vaccine production to Nigeria. - The regional branch of WHO for the Americas also established FIOCRUZ since 1991 as one of the two regional centers for the development of vaccines. - The technology for quality control has contributed to the improvement of the National Control of all vaccines, mainly in the field of the specific laboratory methodology, and the basic methodology of analysis of control procedure utilized. - The establishment of the Third Country Training Program (TCTP) in 1988 was given as a trial of professional activity of the counterparts, resulted through the strengthened their ability of quality control by Japanese experts.
Sustainability	- The production system is appropriately established and the storage system have been adequately strengthened - The intensive use of equipment for more than ten years has resulted in a shortage of spare parts and in a reduction of output. - Budget for purchasing spare parts should be fully allocated and a system for replacing spare parts should be installed - FIOCRUZ has been expanding the building which is under construction. This will meet the further necessity space for amount and kind of vaccines production and its quality control area. - Most of the trained counterparts continue to work for the vaccine production lines. - Economic measure for containment of inflation proscribes the employment of new personnel, which does not allow FIOCRUZ to have an adequate number of highly-skilled personnel and an adequate number of highly skilled personnel consistent with the rate of production and need of personnel.
Relevance of Planning	- The Japanese cooperation was timely as far as the Health administration policy of the Brazilian Government and organization of needs of FIOCRUZ were concerned. - For production of measles vaccine, it was planned initially to produce 10 million doses per year. In 1990, 15 million doses are already produced and also the machinery of FIOCRUZ is reinforced to increase the production so as to cope with the requirement

FACTORS CONTRIBUTING TO IMPLEMENTATION AND PRODUCTION OF IMPACT - Biologicals Production Project

	Project Identification	Appraisal	Implementation Design	Implementation	Others
due to JICA side	1 Project was formulated in Biologicals where the needs from Brazilian side were very high 2 The Japanese cooperation was timely as far as the Health administration policy of the Brazilian Government and organization of needs of FIOCRUZ were concerned.	1 Equipment/materials not available in the Brazilian market were provided by Japan 2 Qualified Japanese experts were selected for the Project.	1 Equipment/materials not available in the Brazilian market were provided by Japan 2 Qualified Japanese experts were selected for the Project.	1 The Japanese experts were dispatched as planned and technical transfer from the experts was completed. 2 The production system was introduced for measles and quality control system was emphasized.	1 The Japanese cooperation was important for strengthening the relationship between Japan and Brazil. 2 Japan played an important role in providing the BIKEN CAM70 strain for measles vaccine production and financial and technical support required to implement the project.
due to Brazil side	a FIOCRUZ is the largest integrated research in Latin America and was identified as a project Implementation Agency b Japanese cooperation in Biologicals was timely as far as the policy of Health administration of the Government was concerned c The establishment of the new vaccination strategy of the National Immunization Program happened at the time of commencement of the Project. This field of technology development was a national priority.	a Other agencies, besides FIOCRUZ and MOH gave financial support to the Project, as FINEP-Financiadora de Projects.	a Locally available equipment/ materials were purchased in the market b Building of a plant with facilities for production and quality control activities of measles and polio vaccines was carried out by the Brazilian side.	a Sufficient number of manpower were assigned and trained. b 9 Brazilian counterparts were mobilized for technical training in Japan	a The establishment of the Third Country Training Program(TCTP) was given as a trial of professional activities of the counterparts resulting from the cooperation in Bioligicals b The regional branch of WHO for the Americas established FIOCRUZ in 1991 as one of the two regional centers for vaccine development c The establishment of the National Self- sufficiency Program reconfirmed the importance of this project

FACTORS INHIBITING IMPLEMENTATION AND PRODUCTION OF IMPACT - Biologicals Production Project

	Project Identification	Appraisal	Implementation Design	Implementation	Others
due to JICA side			1 Some equipment was not provided with specification and manuals in English. 2 Some spare parts for the equipment provided were not available in the Brazilian market		
due to Brazil side			a Sufficient time for adjustment of counterparts was needed, for at least a few months in the beginning. b Training in maintenance were not conducted.		

LESSONS DRAWN FROM EVALUATION STUDY AND SUGGESTIONS FOR FUTURE COOPERATION - Biologicals Production Project

	Lessons drawn from evaluation study	Suggestion (short term)	Suggestion (mid term)	Suggestion (long term)
to JICA side	1 Maintenance training for C/Ps in Japan should have sufficiently been provided.	f Preliminary survey should be enhanced with a view to understanding the precise local technology level.	1,a Greater emphasis should be given to maintenance training and to advising trainees on the replacement of spare parts, as well as on the procedures for purchasing these spare parts in the international market.	
to Brazil side	a Less emphasis has been given to training, specially for technicians in maintenance. b More time may have been necessary for at least a few months in the beginning, in order for Brazilian counterparts (C/Ps) to acquire knowledge at the earliest time of the cooperation. c A steady flow of information on the updating of knowledge and technology should be obtained by FIOCRUZ. d The coldchain and storage system should have been strengthened in order to maintain the quality of vaccin. e Budget for purchasing space parts should be fully allocated and a system for replacing spare parts should be installed. f The poor quality of instruments purchased in the local market, such as glassware, hindered the project from being efficient in the operation.	a Greater emphasis should be given for training of technicians in the field of maintenance and replacement of spare parts. b Prior to project implementation, it is necessary to make even the level of the C/Ps' skill and knowledge. If needed, preliminary training for C/Ps should be provided. d The effort for improving the local transportaition and storage system is indispensable.	e Budget for purchasing spare parts should be fully allocated after cooperation and a system for replacing spare parts should be envisaged according to the life span of the equipment.	c An internal training system should be established.

REMARKS: The general lessons and recommendations for future cooperation projects are summarized here.

INDICATOR TABLE -1 (1/5)

BIOLOGICALS PRODUCTION PROJECT

ITEM OF STUDY	UNIT	FISCAL YEAR													
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
I. OVERALL GOAL															
1.1 Incidence of measles/poliomyelitis															
A. Population															
a-1. Population(all age)million	person													147.3	
a-2. Population(age 0-14)million	person													5.08	
B. Incidence of measles															
b-1. No. of new sufferers from measles(all age)	person	99263	61279	3970	52257	80879	75998	129942	66059	25179	22853	61435	42532	7887	2931
b-2. Incidence of measles(all age)	%	83.4	50.5	31.9	46.3	63.1	58.2	97.6	48.7	18.9	16.7	42.8	29.1	5.3	1.9
b-3. No. of new sufferers from measles(age 0-14)	person	*	*	24736	46509	62445	57929	94172	48180	22269	17754	45244	31797	5789	*
b-4. Incidence of measles(age 0-14)	%	*	*	20.0	37.0	48.7	44.4	70.8	35.5	16.1	12.6	31.5	21.8	4.0	*
C. Incidence of poliomyelitis															
c-1. No. of new sufferers from poliomyelitis(all age)	person	1290	1221	69	45	130	329	612	196	106	35	–	–	–	–
c-2. Incidence of poliomyelitis(all age)	%	1.1	0.1	0.0	0.0	0.1	0.2	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0
c-3. No. of new sufferers from poliomyelitis(age 0-14)	person	*	*	*	*	*	*	*	*	*	*	*	*	*	*
c-4. Incidence of poliomyelitis(age 0-14)	%	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1.2 Rate of death from measles/poliomyelitis															
A. Rate of death from measles															
a-1. No. of deaths from measles(all age)	person	3263	2335	1670	1769	2344	1165	1633	794	400	205	475	*	*	*
a-2. Rate of death from measles(all age)	%	2.7	1.9	1.3	1.4	1.8	0.9	1.2	0.6	0.3	0.1	0.3	*	*	*
a-3. No. of deaths from measles(age 0-14)	person	3206	2300	1645	1717	2287	1103	1525	758	382	194	442	*	*	*
a-4. Rate of death from measles(age 0-14)	%	2.7	1.9	1.3	1.3	1.8	0.8	1.1	0.5	0.3	0.1	0.3	*	*	*
B. Rate of death from poliomyelitis															
b-1. No. of deaths from poliomyelitis(all age)	person	164	12	19	10	15	15	33	23	19	8		*	*	*
b-2. Rate of death from poliomyelitis(all age)	%	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		*	*	*
b-3. No. of deaths from measles(age 0-14)	person	148	12	13	4	9	9	26	15	10	6		*	*	*
b-4. Rate of death from poliomyelitis(age 0-14)	%	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		*	*	*
1.3 Rate of preventive inoculation for measles/poliomyelitis															
A. Population															
a-1. Population(age 0-4)(million)	person	17.1	17.5	17.9	18.3	18.7	19.2	19.2	19.9	19.5	19.4	19.7	18.7	17.5	*
B. Rate of preventive inoculation for measles															
b-1. No. of inoculated persons for measles(all age)(million)	person	5.0	10.1	6.5	6.3	8.6	5.1	5.0	17.1	6.3	6.6	7.6	6.7	32.2	*
b-2. No. of inoculated persons for measles(age 0-4)(million)	person	*	*	*	*	*	*	*	*	*	*	16.5	20.8	22.0	*
b-3. Rate of inoculation for measles(age 0-4)	%	29.1	*	*	*	*	*	*	*	*	*	92.8	100	100	*
C. Rate of preventive inoculation for poliomyelitis															
c-1. No. of inoculated persons for poliomyelitis(all age)(million)	person	21.7	21.9	19.5	20.6	18.8	17.5	19.3	20.0	20.4	21.7	21.0	20.7	19.7	*
c-2. No. of inoculated persons for poliomyelitis(age 0-4)(million)	person	17.1	17.5	17.1	18.0	17.0	16.3	17.1	17.9	18.1	18.4	18.2	17.8	17.1	*
c-3. Rate of inoculation for poliomyelitis(age 0-4)	%	100	100	95.4	98.1	90.9	85.0	89.4	89.7	92.8	94.8	92.4	95.8	97.7	*

Legend : * No data available . – No cases . Note: Measles 1983 - up to 42nd week

INDICATOR TABLE -2

BIOLOGICALS PRODUCTION PROJECT

	ITEM OF STUDY	UNIT	FISCAL YEAR													
			1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
II.	PROJECT PURPOSE															
1.1	Production of vaccine for measles/poliomyelitis in Brazil															
	A. Total production of vaccine for measles in Brazil	doses				9590293	19265000	12142062	17779079	19985557	9112200	11312020				
	B. Production of vaccine for measles from domestic vulks in Brazil	doses														
	C. Production of vaccine for measles from imported vulks in Brazil	doses														
	D. Total production of vaccine for poliomyelitis in Brazil	doses					600000	5929000	6286828	3912960	4173840	6072920	-	-	-	478825
	E. Production of vaccine for poliomyelitis from domestic vulks in Brazil	doses														
	F. Production of vaccine for poliomyelitis from imported vulks in Brazil	doses					600000	5929000	6286828	3912960	4173840	6072920				478825
1.2	Production of vulks for measles/poliomyelitis in Brazil															
	A. Production of vulks for measles in Brazil	liter														
	B. Production of vulks for poliomyelitis in Brazil	liter														
1.3	Amount of imported vaccine/vulks for measles/poliomyelitis in Brazil															
	A. Amount of imported vulks for measles in Brazil	liter														
	B. Amount of imported vaccine for measles in Brazil(million)	doses													-*	10.0
	C. Amount of imported vulks for poliomyelitis in Brazil	liter					72.5	60.6	65.6	89.85	55.6	315				
	D. Amount of imported vaccine for poliomyelitis in Brazil(million)	doses													55.0	65.0
1.4	Share of the domestic vaccine in Brazil															
	A. Share of domestic vaccine in total administered measles vaccine in Brazil															
	a-1. Amount of administered foreign measles vaccine (imported)	doses														
	a-2. Amount of administered measles vaccine in Brazil	doses														
	a-3. Share of domestic vaccine in total administered measles vaccine in Br	%														
	B. Share of domestic vaccine in total administered poliomyelitis vaccine in Br															
	b-1. Amount of administered foreign poliomyelitis vaccine (imported)	doses														
	b-2. Amount of administered poliomyelitis vaccine in Brazil	doses														
	b-3. Share of domestic vaccine in total administered poliomyelitis vaccine	%														
	C. Share of domestic vaccine in total vaccine production of Brazil															
	c-1. Share of domestic vaccine in measles vaccine production of Brazil	%														
	c-2. Share of domestic vaccine in poliomyelitis vaccine production of Brazil	%														
2.1	Inferior products rate in measles/poliomyelitis vaccine production in Brazil															
2.1.1	Inferior rate in measles vaccine production in Brazil															
	A. Inferior rate of SPF eggs in Brazil															
	a-1. No. of inferior SPF eggs in Brazil															
	a-2. No. of purchased SPF eggs in Brazil															
	a-3. Inferior rate of SPF eggs in Brazil	%														

Legend : - No cases

*no import/92

INDICATOR TABLE - 3
BIOLOGICALS PRODUCTION PROJECT

	ITEM OF STUDY	UNIT	FISCAL YEAR													
			1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
	B. Inferior rate of domestic vulks for measles in Brazil															
	b-1. Amount of inferior vulks for measles made in Brazil	liter														
	b-2. Amount of vulks for measles made in Brazil	liter														
	b-3. Inferior rate of domestic vulks for measles in Brazil	%														
	C. Inferior rate of imported vulks for measles in Brazil															
	c-1. Amount of inferior imported vulks for measles in Brazil	liter														
	c-2. Amount of imported vulks for measles in Brazil	liter														
	c-3. Inferior rate of imported vulks for measles in Brazil	%														
	D. Amount of imported vulks for measles in Brazil															
	d-1. Amount of inferior imported vaccine for measles in Brazil	doses														
	d-2. Amount of imported vaccine for measles in Brazil	doses														
	d-3. Inferior rate of imported vaccine for measles in Brazil	%														
2.1.2	Inferior rate in poliomyelitis vaccine production in Brazil															
	A. Inferior rate of imported vulks for poliomyelitis in Brazil															
	a-1. Amount of inferior imported vulks for poliomyelitis in Brazil	liter	-	-	-	-	0	0	0	0	0	0	-	-	-	-
	a-2. Amount of imported vulks for poliomyelitis in Brazil	liter	-	-	-	-	72.5	60.6	65.6	89.85	55.6	315	-	-	-	-
	a-3. Inferior rate of imported vulks for poliomyelitis in Brazil	%	-	-	-	-	0	0	0	0	0	0	-	-	-	-
	B. Amount of inferior imported vulks for poliomyelitis in Brazil															
	b-1. Amount of inferior vulks for poliomyelitis made in Brazil	liter														
	b-2. Amount of vulks for poliomyelitis made in Brazil	liter														
	b-3. Inferior rate of domestic vulks for poliomyelitis in Brazil	%														
	C. Inferior rate of imported vaccine for poliomyelitis in Brazil															
	c-1. Amount of inferior imported vaccine for poliomyelitis in Brazil	doses														
	c-2. Amount of imported vaccine for poliomyelitis in Brazil	doses														
	c-3. Inferior rate of imported vaccine for poliomyelitis in Brazil	%														
2.2	No. of quality tests by type in vaccine production in Brazil															
2.2.1	No. of quality tests by type in measles vaccine production															
	A. SPF eggs test															
	B. Potency test															
	C. Sterility test															
	D. Moisture content test															
	E. Protein content test															
	F. Animal test															
	G. Other tests															
2.2.2	No. of quality tests by type in poliomyelitis vaccine production															
	A. Virus content test	-	-	-	-	-	18	81	60	36	36	54	-	-	-	15
	B. Sterility test	-	-	-	-	-	7	27	18	12	12	17	-	-	-	2
	C. Adventitious virus detective test	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D. Marker test	-	-	-	-	-	3	3	3	3	3	3	-	-	-	
	E. Animal test	-	-	-	-	-	7	27	18	12	12	17	-	-	-	2
	F. Other tests (neuro-virus test, etc)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Legend : – No cases

INDICATOR TABLE - 4 (4/5)
BIOLOGICALS PRODUCTION PROJECT

	ITEM OF STUDY	UNIT	FISCAL YEAR													
			1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
III.	OUTPUTS															
1.1	Production of measles vaccine in FIOCRUZ															
	A. Total production of vaccine for measles in FIOCRUZ	doses			5046115	9890253	19269008	12145062	17779099	19985557	9112200	11312020	13768285	15177000	–	
	B. Production of vaccine for measles from domestic vulks in FIOCRUZ	doses				9126137	9126137	12145062	17779099	25825000	12040000	17845000	19135000	15200000	20790000	
	C. Production of vaccine for measles from imported vulks in FIOCRUZ	doses													–	
	D. Amount of imported vaccine for measles in FIOCRUZ	doses		15568600											4208450	
1.2	Production of vulks for measles in FIOCRUZ															
	A. A. Production of vulks for measles in FIOCRUZ	liter				1812	1812	3054	3122	3920	3472	2324	2492	2330	389	
	B. B. Amount of imported vulks for measles in FIOCRUZ	liter														
1.3	Production of vulks for measles in FIOCRUZ															
	A. Inferior rate of SPF eggs in FIOCRUZ															
	a-1. No. of inferior SPF eggs in FIOCRUZ					2347	2347	2400	4105	2353	1100	1706	1124	1700	2232	
	a-2. No. of purchased SPF eggs in FIOCRUZ					15247	15247	16000	24000	22100	18045	20510	17643	17000	15082	
	a-3. Inferior rate of SPF eggs in FIOCRUZ	%				7.5	7.5	15	17	11	6	8	7.5	10	12	
	B. Inferior rate of domestic vulks for measles made in FIOCRUZ															
	b-1. Amount of inferior vulks for measles made in FIOCRUZ	liter				86	147	0	63	189	105	105	100	85	10	
	b-2. Amount of vulks for measles made in FIOCRUZ	liter				1812	1812	3054	3122	3920	3472	2324	3400	2330	389	
	b-3. Inferior rate of domestic vulks for measles made in FIOCRUZ	%				5.4	5.2	0	2.4	8.1	3.4	7.5	3.0	4.0	3.0	
	C. Inferior rate of imported vulks for measles in FIOCRUZ															
	c-1. Amount of inferior imported vulks for measles in FIOCRUZ	liter														
	c-2. Amount of imported vulks for measles in FIOCRUZ	liter														
	c-3. Inferior rate of imported vulks for measles in FIOCRUZ	%														
	D. Inferior rate of imported vaccine for measles in FIOCRUZ															
	d-1. Amount of inferior imported vaccine for measles in FIOCRUZ	doses														
	d-2. Amount of imported vaccine for measles in FIOCRUZ	doses														
	d-3. Inferior rate of imported vaccine for measles in FIOCRUZ	%														
1.4	No. of quality tests by type in measles vaccine production in FIOCRUZ															
	A. SPF eggs test					144	69	111	84	132	54	126	75	138	117	84
	B. Potency test					148	268	202	256	222	294	134	178	196	–	56
	C. Sterility test					148	268	202	256	222	294	134	178	196	–	56
	D. Moisture content test					74	134	101	128	111	147	67	89	99	–	22
	E. Protein content test					–	–	–	–	–	–	–	–	–	–	–
	F. Animal test					144	69	111	84	132	54	126	75	138	–	84
	G. Other tests					74	134	101	128	111	147	67	89	99	–	22

Legend : – No cases

INDICATOR TABLE - 5 (5/5)

BIOLOGICALS PRODUCTION PROJECT

	ITEM OF STUDY	UNIT	FISCAL YEAR													
			1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
2.1	Production of poliomyelitis vaccine in FIOCRUZ															
	A. Total production of vaccine for poliomyelitis in FIOCRUZ	doses	–	–	–	–	600000	5929000	6286828	3912960	4173840	6072620	–	–	–	478825
	B. Production of vaccine for poliomyelitis from domestic vulks in FIOCRUZ	doses	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	C. Production of vaccine for poliomyelitis from imported vulks in FIOCRUZ	doses					600000	5929000	6286828	3912960	4173840	6072620	–	–	–	478825
	D. Amount of imported vaccine for poliomyelitis in FIOCRUZ	doses														
2.2	Amount of imported vulks for poliomyelitis in FIOCRUZ															
	A. Amount of imported vulks for poliomyelitis in FIOCRUZ	liter	–	–	–	–	72,5	60,6	65,6	89,85	55,6	315	–	–	–	–
	B. Production of vulks for poliomyelitis in FIOCRUZ	liter	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2.3	Inferior products rate in poliomyelitis vaccine production in FIOCRUZ															
	A. Inferior rate of imported vulks for poliomyelitis in FIOCRUZ															
	a-1. Amount of inferior imported vulks for poliomyelitis in FIOCRUZ	liter	–	–	–	–	0	0	0	0	0	0	–	–	–	–
	a-2. Amount of imported vulks for poliomyelitis in FIOCRUZ	liter	–	–	–	–	72,5	60,6	65,6	89,85	55,6	315	–	–	–	–
	a-3. Inferior rate of imported vulks for poliomyelitis in FIOCRUZ	%	–	–	–	–	0	0	0	0	0	0	–	–	–	–
	B. Inferior rate of domestic vulks for poliomyelitis made in FIOCRUZ															
	b-1. Amount of inferior vulks for poliomyelitis made in FIOCRUZ	liter	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	b-2. Amount of vulks for poliomyelitis made in FIOCRUZ	liter	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	b-3. Inferior rate of domestic vulks for poliomyelitis made in FIOCRUZ	%	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	C. Inferior rate of imported vaccine for poliomyelitis in FIOCRUZ															
	c-1. Amount of inferior imported vaccine for poliomyelitis in FIOCRUZ	doses														
	c-2. Amount of imported vaccine for poliomyelitis in FIOCRUZ	doses														
	c-3. Inferior rate of imported vaccine for poliomyelitis in FIOCRUZ	%														
2.4	No. of quality tests by type in poliomyelitis vaccine production in FIOCRUZ															
	A. Virus content test	–	–	–	–	–	–	18	81	60	36	36	54	–	–	–	15
	B. Sterility test	–	–	–	–	–	–	7	27	18	12	12	13	–	–	–	2
	C. Adventitious virus detective test	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	D. Marker test	–	–	–	–	–	–	3	3	3	3	3	3	–	–	–	–
	E. Animal test	–	–	–	–	–	–	7	27	18	12	12	17	–	–	–	–
	F. Other tests (neuro-virus test, etc)	–	–	–	–	–	–	–	–	–			–	–	–	–	–

Legend : – No cases

RESULTS OF QUESTIONNAIRE SURVEY : JAPANESE EXPERTS

[EFFICIENCY]

1 Did the Japanese Government provide enough input for the measles/	Total	Yes		No		N/C	
poliomyelitis vaccine production Project?							
(i) measles							
a) As a whole	13	13	100%	0	0%	0	
b)Was the machines/equipment/materials adequate?	13	13	100%	0	0%	0	
c)Was the counterpart training in Japan adequate(in general)?	13	13	100%	0	0%	0	
d) Was the technology transfer from Japan to Brazil adequate?	13	13	100%	0	0%	0	
(ii) poliomyelitis	Total	Yes		No		N/C	
a)As a whole	5	5	100%	0	0%	0	
b) Was the machines/equipment/materials adequate?	5	5	100%	0	0%	0	
c) Was the counterpart training in Japan adequate(in general)?	5	5	100%	0	0%	0	
d) Was the technology transfer from Japan to Brazil adequate?	5	5	100%	0	0%	0	
_ As vaccine production should be made in principle by consistent							
production plant from material to final products, overall technology							
transfer of production and quality control is desirable.							
2 Did the Brazilian Government provide enough input for the measles/	Total	Yes		No		N/C	
poliomyelitis vaccine production Project?							
(i) measles							
a) Are the facilities(space, utilities etc) adequate?	13	11	85%	0	0%	2	
b) Did they provide enough budget for the Project?	13	7	54%	0	0%	6	
c) Did they provide enough manpower for the Project?	13	11	85%	0	0%	2	
(ii) poliomyelitis	Total	Yes		No		N/C	
a) Are the facilities(space, utilities etc) adequate?	5	1	20%	3	60%	1	
b) Did they provide enough budget for the Project?	5	0	0%	1	20%	4	
c) Did they provide enough manpower for the Project?	5	3	60%	1	20%	1	
3 Do you think that the vaccination against measles/poliomyelitis							
was practiced by the Brazilian Government effectively after							
the Japanese cooperation for the Project?	Total	Yes		No		N/C	
(i) measles	13	9	69%	0	0%	4	
(ii) poliomyelitis	5	2	40%	1	20%	2	
4 Do you think that the implementing schedule of Biologicals Production							
Project against measles/poliomyelitis was adequate?							
(i) measles	13	12	92%	0	0%	1	
(ii) poliomyelitis	5	4	80%	1	20%	0	
5 Do you think that the Japanese cooperation was given enough support							
from the other sections of M.O.H.?							
(i) measles	13	8	62%	0	0%	5	
(ii) poliomyelitis	5	2	40%	0	0%	3	
6 Do you think that the Japanese cooperation was implemented with							
enough linkage with the other related project of related organization?							
(i) measles	13	0	0%	2	15%	11	
(ii) poliomyelitis	5	0	0%	1	20%	4	

Legend: N/C=No comment

[EFFECTIVENESS]

7 Do you think that Japanese cooperation for the Biologicals Production Project has succeeded to supply measles/poliomyelitis vaccines on a large scale?	Total	Yes		No		N/C	
(i) measles	13	11	85%	0	0%	2	
(ii) poliomyelitis	5	1	20%	3	60%	2	
8 Do you think that Japanese cooperation for the Biologicals Production Project has contributed to strengthen the ability of quality control of the measles/poliomyelitis vaccine production?	Total	Yes		No		N/C	
(i) measles	13	11	85%	0	0%	2	
(ii) poliomyelitis	5	4	80%	0	0%	1	
9 How do you evaluate skill / knowledge of counterparts just after the cooperation with Japanese experts and your current one?							
(i) measles	Total	Yes		No		N/C	
a) Overall	13	13	100%	0	0%	0	
b) Understanding of vaccine production	13	13	100%	0	0%	0	
c) Simple device handling	13	12	92%	0	0%	1	
d) Machine operation	13	8	62%	0	0%	5	
e) Machine maintenance	13	6	46%	0	0%	7	
f) Understanding of the methods of quality test	13	12	92%	0	0%	1	
g) Keeping and distribution of vaccine	13	9	69%	0	0%	4	
(ii) poliomyelitis	Total	Yes		No		N/C	
a) Overall	5	4	80%	1	20%	0	
b) Understanding of vaccine production	5	3	60%	2	40%	0	
c) Simple device handling	5	4	80%	0	0%	1	
d) Machine operation	5	4	80%	0	0%	1	
e) Machine maintenance	5	2	40%	0	0%	3	
f) Understanding of the methods of quality test	5	5	100%	0	0%	0	
g) Keeping and distribution of vaccine	5	3	60%	0	0%	2	
10 Were the skill/knowledge of counterparts enough for technology transfer?	Total	Yes		No		N/C	
(i) measles	13	8	62%	0	0%	5	
(ii) poliomyelitis	5	4	80%	1	20%	0	
11 How do you evaluate skill / knowledge just after the cooperation with Japanese experts?	Total	High		Low		Mod.	N/C
(i) measles							
a) Overall	13	5	38%	0	0%	8	0
b) Understanding of vaccine production	13	5	38%	0	0%	8	0
c) Simple device handling	13	3	23%	1	8%	8	1
d) Machine operation	13	3	23%	2	15%	5	3
e) Machine maintenance	13	2	15%	3	23%	4	4
f) Understanding of the methods of quality test	13	5	38%	1	8%	7	0
g) Keeping and distribution of vaccine	13	5	38%	0	0%	5	3

Legend: N/C=No comment Mod.=Moderate

(ii) b) poliomyelitis	Total	High		Low		Mod.	N/C
a) Overall	5	1	20%	0	0%	3	1
b) Understanding of vaccine production	5	1	20%	0	0%	3	1
c) Simple device handling	5	1	20%	0	0%	3	1
d) Machine operation	5	2	40%	1	20%	1	1
e) Machine maintenance	5	1	20%	0	0%	1	3
f) Understanding of the methods of quality test	5	3	60%	1	20%	0	1
g) Keeping and distribution of vaccine	5	1	20%	0	0%	1	3

Legend: N/C=No comment Mod.=Moderate

[IMPACT]

12 Do you think that Japanese cooperation for the Biologicals Production	Total	Yes		No		N/C	
Project contributed to the improvement of the technology of other kind							
vaccine production in Brazil?							
(i) measles	13	10	77%	0	0%	3	
(ii) poliomyelitis	5	4	80%	0	0%	1	
13 Have the vaccines supplied by the project contributed to the improvement							
of preventive measures against measles/poliomyelitis in Brazil	Total	Yes		No		N/C	
(i) measles	13	12	92%	0	0%	1	
(ii) poliomyelitis	5	4	80%	0	0%	1	
14 Do you think that Japanese cooperation for the Biologicals Production							
Project has contributed to reduce the foreign financial burden of Brazil?							
(i) measles	13	7	54%	0	0%	6	
(ii) poliomyelitis	5	1	20%	1	20%	3	
15 Do you think that technology transfer of Biologicals Production by							
Brazilian counterparts without any foreign aids is possible in Brazil?							
(i) measles	15	7	47%	2	13%	4	
(ii) poliomyelitis	5	0	0%	3	60%	2	
16 Have the measles/poliomyelitis vaccines supplied by this Biologicals							
Production Project been distributed all over the country to meet the							
demand in Brazil?							
(i) measles	13	11	85%	0	0%	2	
(ii) poliomyelitis	5	2	40%	1	20%	2	
17 Were there any other unexpected social/economical contribution by the							
Japanese cooperation for the Biologicals Production Project?							
(i) measles	13	3	23%	1	8%	9	
(ii) poliomyelitis	5	2	40%	0	0%	3	
18 Have you had any negative impacts from the Japanese cooperation							
for the Biologicals Production Project?							
(i) measles	13	0	0%	8	62%	5	
(ii) poliomyelitis	5	0	0%	3	60%	2	

Legend: N/C=No comment Mod.=Moderate

RESULTS OF QUESTIONNAIRE : COUNTERPARTS

[EFFICIENCY]

1 Did the Japanese Government provide enough input for the measles/poliomyelitis vaccine production Project?	Total	Yes		No		N/C
(i) measles						
a) As a whole	33	28	85%	0	0%	5
b) Was the machines/equipment/materials adequate?	33	31	94%	0	0%	2
c) Was the counterpart training in Japan adequate(in general)?	33	24	73%	0	0%	9
d) Was the technology transfer from Japan to Brazil adequate?	33	28	85%	1	3%	4
e) Was the level of technology transferred from Japan to Brazil	33	27	82%	1	3%	5
(II) poliomyelitis						
a) As a whole	19	9	47%	1	5%	9
b) Was the machines/equipment/materials adequate?	19	9	47%	1	5%	9
c) Was the counterpart training in Japan adequate(in general)?	19	10	53%	0	0%	9
d) Was the technology transfer from Japan to Brazil adequate?	19	10	53%	1	5%	8
e) Was the level of technology transferred from Japan to Brazil	19	9	47%	1	5%	9
2 Did the Brazilian Government provide enough input for the measles/poliomyelitis vaccine production Project?	Total	Yes		No		N/C
(i) measles						
a) As a whole	33	28	85%	3	9%	2
b) Are the facilities(space, utilities etc) adequate?	31	23	74%	8	26%	0
c) Did they provide enough budget for the Project?	32	23	72%	1	3%	8
d) Did they provide enough manpower for the Project?	33	27	82%	1	3%	5
(ii) poliomyelitis						
a) As a whole	20	11	55%	1	5%	8
b) Are the facilities(space, utilities etc) adequate?	20	14	70%	3	15%	3
c) Did they provide enough budget for the Project?	20	9	45%	1	5%	10
d) Did they provide enough manpower for the Project?	20	13	65%	1	5%	6
3 Do you think that the vaccination against measles/poliomyelitis was practiced by the Brazilian Government effectively after the Japanese cooperation for the Project?	Total	Yes		No		N/C
(i) measles	32	23	72%	0	0%	9
(II) poliomyelitis	21	13	62%	2	10%	6
4 Do you think that the Japanese cooperation was given enough support from the other sections of M.O.H.?	33	17	52%	0	0%	16
5 Do you think that the Japanese cooperation was implemented with enough linkage with the other related project of related organization?	30	4	13%	2	7%	24

[EFFECTIVENESS]

6 Do you think that Japanese cooperation for the Biologicals Production Project has succeeded to supply measles/poliomyelitis vaccines on a large scale?	Total	Yes		No		N/C
(i) measles	33	25	76%	6	18%	2
(ii) b) poliomyelitis	19	8	42%	5	26%	6
7 Do you think that Japanese cooperation for the Biologicals Production Project has contributed to strengthen the ability of quality control of the measles/poliomyelitis vaccine production?	Total	Yes		No		N/C
(i) measles	33	33	100%	0	0%	0
(II) poliomyelitis	21	17	81%	0	0%	4
8 Do you think that Japanese cooperation for the Biologicals Production Project has contributed to implement the National Vaccination Programme?	33	31	94%	0	0%	2

9 How do you evaluate your skill and knowledge just after the cooperation with Japanese experts and your current one?

	After cooperation						
	Total	High		Low		Mod.	N/C
a) Overall	30	7	23%	2	7%	16	5
b) Understanding of vaccine	30	8	27%	1	3%	18	3
c) Simple device handling	31	18	58%	0	0%	9	4
d) Machine operation	28	4	14%	1	4%	13	10
e) Machine maintenance	27	0	0%	3	11%	6	18
f) Understanding of the methods of quality test	30	14	47%	2	7%	7	7

Legend: N/C=No comment, Mod.=Moderate

	Current						
	Total	High		Low		Mod.	N/C
a) Overall	23	14	61%	1	4%	8	
b) Understanding of vaccine	22	13	59%	1	5%	8	
c) Simple device handling	22	17	77%	1	5%	4	
d) Machine operation	16	10	63%	1	6%	5	
e) Machine maintenance	11	2	18%	3	27%	6	
f) Understanding of the methods of quality test	19	14		1	5%	4	
10 Were you satisfied with the training skill/knowledge of Japanese experts?	Total	Yes		No		N/C	
a) Scientific Subject	33	26	79%	1	3%	6	
b) Technical/Practical Subject	33	28	85%	0	0%	5	
11. Have you taken a counterpart training in Japan?	33	9	27%	24	73%	0	
12 Did you have any problems, when you start your job after training?	18	5	28%	4	22%	9	
13 Were the facilities (space, utilities etc.) adequate during the Japanese cooperation?	23	13	57%	4	17%	6	
14 Have the production equipment/machines been sufficiently provided during the Japanese cooperation?	29	25	86%	0	0%	4	
15 Have the production equipment/machines been adequately maintained during the Japanese cooperation?	28	22	79%	1	4%	5	

[IMPACT]

	Total	Yes		No		N/C
16. Do you think that Japanese cooperation for the Biologicals Production Project contributed to the improvement of the technology of other kind vaccine production in Brazil?	29	15	52%	2	7%	12
17 Have the vaccines supplied by this Project contributed to the Improvement of preventive measures against measles/poliomyelitis?						
(i) measles	32	29	91%	0	0%	3
(ii) poliomyelitis	20	14	70%	0	0%	6
18 Do you think that Japanese cooperation for the Biologicals Production Project has contributed to reduce the foreign financial burden of Brazil?	32	10	31%	2	6%	20
19 Have you ever had a chance to transfer your technology to the staffs of other biologicals production system?	33	22	67%	1	3%	10
20 Do you think that Japanese cooperation for the Biologicals Production Project has contributed to the improvement of vaccination system in Brazil?	33	30	91%	0	0%	3
21 Have the measles/poliomyelitis vaccines supplied by this Biologicals Production Project been distributed all over the country to meet the demand in Brazil?						
(i) measles	32	20	63%	2	6%	10
(ii) poliomyelitis	21	7	33%	6	29%	8
22 Do you think that Japanese international contribution to the Biologicals Production is broadly recognized in Brazil?	32	19	59%	4	13%	9
23 Have you had any negative impacts from the Japanese cooperation for the Biologicals Production Project?	33	0	0%	32	97%	1
24 Were there any other social/economical contribution by the Japanese cooperation for the Biologicals Production Project?	33	15	45%	3	9%	15

[SUSTAINABILITY]

	Total	Yes		No		N/C
25 Does the Brazilian Government have the consistent policy for the Biologicals Production Project to continue its activities of measles/ poliomyelitis vaccine production after the Japanese cooperation?						
(i) measles	33	21	64%	3	9%	9
(ii) poliomyelitis	20	10	50%	3	15%	7
26. Does the measles/poliomyelitis vaccine production Project have enough resources to continue its activities?	Total	Yes		No		N/C
(i) measles	32	9	28%	19	59%	4
Equipments/machines	19	11				
Spare parts	19	19				
Materials	19	15				
Facilities	19	8				
Operation system	19	4				
Staff	19	14				
Budget	19	8				

	Total	Yes		No		N/C
(II) poliomyelitis	19	1	5%	7	37%	11
Equipments/machines	7	2				
Spare parts	7	4				
Materials	7	2				
Facilities	7	3				
Operation system	7	1				
Staff	7	5				
Budget	7	2				
27 Have the equipments/machines/spare parts for the Project been sufficiently provided after the Japanese cooperation?	32	18	56%	9	28%	5
28 Have the equipments/machines/spare parts for the Project been adequately maintained after the Japanese cooperation?	33	8	24%	20	61%	5
29 Do you think that this measles/poliomyelitis vaccine production Project will make enough benefit to adopt self-supporting system?						
(I) measles	31	18	58%	2	6%	11
(II) poliomyelitis	19	8	42%	2	11%	9
30 Do you think that this poliomyelitis vaccine production Project will develop into consistent national production plant without import of foreign vulks?	23	5	22%	8	35%	10
31 Do you have an internal training system in FIOCRUZ to transfer the technology for biologicals production among staffs?	32	10	31%	16	50%	6
32 Do you think that you have mastered enough technology to maintain the activities for this Project?	32	23	72%	4	13%	5
33 Are you satisfied with your current situation in Biologicals Production Project?	33	13	39%	17	52%	3
Salary is not enough(Negative reason)	17	9	53%			
Lack of opportunities to improve your technology(Negative reason)	17	15	88%			
Others (Negative reason)	17	3	18%			
34. Do you plan to continue to work for this Biologicals Production Project?	32	29	91%	0	0%	3

[RELEVANCE]

	Total	Yes		No		N/C
35 Have there been any major policy changes relating to the national vaccine production in Brazil?	32	19	59%	2	6%	11
36 Is the purpose of the project, to establish self-producing system of measles/ poliomyelitis vaccines on a large scale, still relevant to the current needs of your country?						
(I) measles	33	30	91%	0	0%	3
(II) poliomyelitis	20	15	75%	0	0%	5
37 Do you think that detailed plan of technology transfer and cooperation between Japan and Brazil were adequately made after enough consultation with Brazilian counterparts?	32	17	53%	2	6%	13
38 Do you think that Japanese technology transfer and cooperation were made opportunely during the Project?	31	25	81%	0	0%	6

Legend: N/C=No comment, Mod.=Moderate

RESULT OF QUESTIONNAIRE: BENEFICIARIES

[EFFICIENCY]

	Total	Yes		No		N/C
1 Did the Brazilian Government established appropriate vaccination system against measles/poliomyelitis during the Japanese cooperation?	11	10	91%	0	0%	1
(i) measles						
a) Are the facilities for measles vaccination enough?	11	7	64%	1	9%	3
b) Did they provide enough budget for measles vaccination?	11	6	55%	0	0%	5
c) Did they provide enough manpower for measles vaccination?	11	6	55%	0	0%	5
(ii) poliomyelitis	Total	Yes		No		N/C
a) Are the facilities for poliomyelitis vaccination enough?	10	9	90%	0	0%	1
b) Did they provide enough budget for poliomyelitis vaccination?	11	9	82%	0	0%	2
c) Did they provide enough manpower for poliomyelitis vaccination?	11	9	82%	0	0%	2

[EFFECTIVENESS]

	Total	Yes		No		N/C
2 Do you think that Japanese cooperation for the Biologicals Production Project has succeeded to supply measles/poliomyelitis vaccines on a large scale?						
(i) measles	10	5	50%	3	30%	2
(ii) poliomyelitis	10	3	30%	3	30%	4
3 Do you think that Japanese cooperation for the Biologicals Production Project has contributed to strengthen the ability of quality control technology of measles/poliomyelitis vaccine?	Total	Yes		No		N/C
(i) measles	11	10	91%	0	0%	1
(ii) poliomyelitis	11	10	91%	0	0%	1

[IMPACT]

	Total	Yes		No		N/C
4 Have the vaccines supplied by this Biologicals Production Project contributed to the improvement of preventive measures against measles/ poliomyelitis?						
(i) a) measles	11	9	82%	0	0%	2
(ii) poliomyelitis	10	6	60%	1	10%	3
5 Have the measles/poliomyelitis vaccines supplied by this Biologicals Production Project been distributed all over the country to meet the demand in Brazil?						
(i) measles	11	8	73%	1	9%	2
(ii) poliomyelitis	10	8	80%	0	0%	2
6 Do you think that Japanese cooperation for the Biologicals Production Project has succeeded to supply measles/poliomyelitis vaccines at a moderate price?						
(i) measles ,	10	3	30%	0	0%	7
(ii) poliomyelitis	9	3	33%	0	0%	6
7 Do you think that Japanese cooperation for the Biologicals Production Project has contributed to the improvement of preventive measures against measles/poliomyelitis in Brazil?						
(i) measles	11	9	82%	0	0%	2
(ii) poliomyelitis	10	7	70%	0	0%	3
8 Do you think that Japanese cooperation for the Biologicals Production Project has contributed to the improvement of vaccination system in Brazil	11	8	73%	1	9%	2
9 Were there any other social/economical contribution by the Japanese cooperation for the Biologicals Production Project?	10	6	60%	0	0%	4
10 Do you think that Japanese international contribution to the Biologicals Production is broadly recognized in Brazil?	11	5	45%	3	27%	3
11 Have you had any negative impacts from Japanese cooperation for the Biologicals Production Project?	11	0	0%	6	55%	5

Legend : N/C = No comment

[SUSTAINABILITY]

	Total	Yes		No		N/C
12 Does the Brazilian Government have the consistent policy for the Biologicals Production Project to continue its activities of measles/ poliomyelitis vaccine production?						
(i) measles	11	8	73%	2	18%	1
(ii) poliomyelitis	8	4	50%	1	13%	3
13 Have the Brazilian Government established pertinent vaccination system for measles/poliomyelitis such as the distribution and keeping of vaccines and inoculating persons in need of ?						
(i) measles	11	10	91%	0	0%	1
(ii) poliomyelitis	11	11	100%	0	0%	0

[RELEVANCE]

	Total	Yes		No		N/C
14 Is the purpose of the project, to establish self-producing system of vaccines on a large scale, still relevant to the current needs of your country?						
(i) measles	11	9	82%	0	0%	2
(ii) poliomyelitis	11	7	64%	2	18%	2
15 Do you think that Japanese technology transfer and cooperation were made opportunely during the Project?						
(i) measles	11	6	55%	0	0%	5
(ii) poliomyelitis	11	6	55%	0	0%	5

Legend : N/C = No comment

[SUSTAINABILITY]

	Total	Yes		No		N/C	
19 Have there been any policy change in measles/poliomyelitis vaccine production by Brazilian Government after the Japanese cooperation?							
(i) measles	13	0	0%	4	31%	9	
(ii) poliomyelitis	5	1	20%	1	20%	3	
20 Does the measles/poliomyelitis vaccine production Project have enough resources to continue its activities?							
(i) measles*	13	9	69%	0	0%	4	
(ii) poliomyelitis*	5	1	20%	2	40%	2	
21 Do you think that this measles/poliomyelitis vaccine production Project will make enough benefit to adopt self-supporting system?							
(i) measles	13	8	62%	0	0%	5	
(ii) poliomyelitis	5	2	40%	0	0%	3	
22 Do you think that this poliomyelitis vaccine production Project will develop into consistent national production plant without Import of foreign vulks?							
(ii) poliomyelitis	5	2	40%	1	20%	2	
23 Do you think that the establishment of an internal training system in Brazil without any foreign aids to transfer the technology for Biologicals Production?	Total	Exist		Not Exist		No	N/C
(i) measles	13	4	31%	6	46%	1	2
(ii) poliomyelitis	5	1	20%	1	20%	3	0

[RELEVANCE]

	Total	Yes		No		N/C	
24 Have there been any major policy changes relating to the national vaccine production in Brazil?							
(i) measles	13	0	0%	4	31%	9	
(ii) poliomyelitis	5	1	20%	1	20%	3	
25 Is the purpose of the project, to establish self-producing system of measles/poliomyelitis vaccines on a large scale, still relevant to the current needs of your country?							
(i) measles	13	12	92%	0	0%	1	
(ii) poliomyelitis	5	2	40%	2	40%	1	
26 Do you think that detailed plan of technology transfer and cooperation between Japan and Brazil were adequately made after enough consultation with Brazilian officials/counterparts?							
(i) measles	13	13	100%	0	0%	0	
(ii) b) poliomyelitis	5	3	60%	0	0%	2	
27 Do you think that Japanese technology transfer and cooperation were made opportunely during the Project in the light of project purpose?							
(i) measles	13	13	100%	0	0%	0	
(ii) poliomyelitis	5	3	60%	0	0%	2	

Legend: N/C=No comment

THE JOINT EVALUATION STUDY ON THE JAPANESE TECHNICAL COOPERATION PROJECTS IN BRAZIL

BIOLOGICALS PRODUCTION PROJECT

QUESTIONNAIRE TO COUNTERPARTS

JAPAN INTERNATIONAL COOPERATION AGENCY
SEPTEMBER, 1993

BACKGROUND OF RESPONDENT

Name: _____

Designation: _____

Division: _____

Organization: _____

Year when you took training during Japanese cooperation: _____

Subject of training: _____

Speciality in Biologicals Production Project: _____

Date: _____

Following are the question on the Biologicals Production Project. This survey is being conducted by the Brazilian Government and the Japanese Government in order to make a post evaluation on the Brazil-Japan Technical Cooperation Project(1980-1985).

Kindly please tick (v) the most appropriate answer or write down your comments. Your cooperation would be highly appreciated and your cooperation would be fully confidential and used exclusively for this survey.

[EFFICIENCY]
This section is concerned with the efficiency of the Project: i.e. how economically the inputs are translated into outputs.

1. Did the Japanese Government provide enough input for the measles/poliomyelitis vaccine production Project?

(i) measles

a) As a whole

☐Yes ☐No ☐No comment

b) Was the machines/equipment/materials adequate?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

c) Was the counterpart training in Japan adequate(in general)?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

d) Was the technology transfer from Japan to Brazil adequate?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

e) Was the level of technology transferred from Japan to Brazil adequate?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

f) If you have any comments on the Japanese inputs, please explain:

(ii) poliomyelitis

a) As a whole

☐Yes ☐No ☐No comment

b) Was the machines/equipment/materials adequate?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

c) Was the counterpart training in Japan adequate(in general)?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

d) Was the technology transfer from Japan to Brazil adequate?
☐Yes ☐No ☐No comment
If 'No', please explain:

---

e) Was the level of technology transferred from Japan to Brazil adequate?
☐Yes ☐No ☐No comment
If 'No', please explain:

---

f) If you have any comments on the Japanese inputs, please explain:

---

2. Did the Brazilian Government provide enough input for the measles/poliomyelitis vaccine production Project?

(i) measles

a) As a whole
☐Yes ☐No ☐No comment

b) Are the facilities(space, utilities etc) adequate?
☐Yes ☐No ☐No comment
If 'No', please explain:

---

c) Did they provide enough budget for the Project?
☐Yes ☐No ☐No comment
If 'No', please explain:

---

d) Did they provide enough manpower for the Project?
Yes No
☐Yes ☐No ☐No comment
If 'No', please explain:

---

e) If you have any comments on the Brazilian inputs, please explain:

(ii) poliomyelitis

a) As a whole
☐Yes ☐No ☐No comment

b) Are the facilities(space, utilities etc) adequate?
☐Yes ☐No ☐No comment
If 'No', please explain:

---

c) Did they provide enough budget for the Project?
☐Yes ☐No ☐No comment
If 'No', please explain:

---

d) Did they provide enough manpower for the Project?
Yes No
☐Yes ☐No ☐No comment
If 'No', please explain:

---

e) If you have any comments on the Brazilian inputs, please explain:

---

3. Do you think that the vaccination against measles/poliomyelitis was practiced by the Brazilian Government effectively after the Japanese cooperation for the Project?

a) measles
☐Yes ☐No ☐No comment
If 'No', please explain:

---

b) poliomyelitis
☐Yes ☐No ☐No comment
If 'No', please explain:

---

4. Do you think that the Japanese cooperation was given enough support from the other sections of M.O.H.?
☐Yes ☐No ☐No comment
If 'No', please explain:

---

5. Do you think that the Japanese cooperation was implemented with enough linkage with the other related project of related organization?
☐Yes ☐No ☐No comment
If 'Yes', please list those projects:

Name of Project	Implementing Organization

[EFFECTIVENESS]
This section is concerned with the effectiveness of the Project: i.e. the extent whereby the objectives of the Project are successful.

6. Do you think that Japanese cooperation for the Biologicals Production Project has succeeded to supply measles/poliomyelitis vaccines on a large scale?

a) measles
☐Yes ☐No ☐No comment
If 'No', please explain:

---

b) poliomyelitis
☐Yes ☐No ☐No comment
If 'No', please explain:

---

7. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to strengthen the ability of quality control of the measles/poliomyelitis vaccine production?

a) measles
☐Yes ☐No ☐No comment
If 'No', please explain:

---

b) poliomyelitis
☐Yes ☐No ☐No comment
If 'No', please explain:

---

8. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to implement the National Vaccination Programme?

☐Yes ☐No ☐No comment
If 'No', please explain:

---

9. How do you evaluate your skill and knowledge just after the cooperation with Japanese experts and your current one?

		After cooperation			Current		
	No comment	Low	Moderate	High	Low	Moderate	High
a) Overall	☐	☐	☐	☐	☐	☐	☐
b) Understanding of vaccine production	☐	☐	☐	☐	☐	☐	☐
c) Simple device handling	☐	☐	☐	☐	☐	☐	☐
d) Machine operation	☐	☐	☐	☐	☐	☐	☐
e) Machine	☐	☐	☐	☐	☐	☐	☐

maintenance
f) Understanding of the methods of quality test ☐ ☐ ☐ ☐ ☐ ☐ ☐

10. Were you satisfied with the training skill/knowledge of Japanese experts?

a) Scientific Subject

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) Technical/Practical Subject

☐Yes ☐No ☐No comment

If 'No', please explain:

---

11. Have you taken a counterpart training in Japan?

☐Yes ☐No

a) If 'Yes", were you satisfied with it?

☐Yes ☐No

What was the best point to be trained in Japan? Please explain.

If 'No', what was the major problem for you?

☐Training period was too short.
☐Technical level was too high.
☐Technical level was too low.
☐Training curriculum did not meet your needs.
☐Others please specify:

---

12. Did you have any problems, when you start your job after training?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

13. Were the facilities (space, utilities etc.) adequate during the Japanese cooperation?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

14. Have the production equipment/machines been sufficiently provided during the Japanese cooperation?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

15. Have the production equipment/machines been adequately maintained during the Japanese cooperation?

☐Yes ☐No ☐No comment

If 'No', please explain:

[IMPACT]

This section is concerned with the impact of the Project: i.e. direct or indirect, positive or negative.

16. Do you think that Japanese cooperation for the Biologicals Production Project contributed to the improvement of the technology of other kind vaccine production in Brazil?

☐Yes ☐No ☐No comment

If 'Yes' or 'No", please explain:

---

17. Have the vaccines supplied by this Project contributed to the improvement of preventive measures against measles/poliomyelitis?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

18. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to reduce the foreign financial burden of Brazil?

☐Yes ☐No ☐No comment

If 'Yes' or 'No", please explain:

---

19. Have you ever had a chance to transfer your technology to the staffs of other biologicals production system?

☐Yes ☐No ☐No comment

a) If 'Yes', what type of technology did you transfer to them?

☐Quality test

☐Machine maintenance/management/operation

☐Others (please specify:)

b) If 'No', what was the major hindrance for transfer?, please explain:

---

20. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to the improvement of vaccination system in Brazil?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

21. Have the measles/poliomyelitis vaccines supplied by this Biologicals Production Project been distributed all over the country to meet the demand in Brazil?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

22. Do you think that Japanese international contribution to the Biologicals Production is broadly recognized in Brazil?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

23. Have you had any negative impacts from the Japanese cooperation for the Biologicals Production Project?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

---

24. Were there any other social/economical contribution by the Japanese cooperation for the Biologicals Production Project?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

[SUSTAINABILITY]

This section is concerned with the sustainability of the Project: i.e. the extent of the Biologicals Production Project development for self sustainability after the Japanese assistance was completed.

25. Does the Brazilian Government have the consistent policy for the Biologicals Production Project to continue its activities of measles/poliomyelitis vaccine production after the Japanese cooperation?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

26. Does the measles/poliomyelitis vaccine production Project have enough resources to continue its activities?

a) measles

☐Yes ☐No ☐No comment

If 'No', please specify which one of the following items is not sufficient:

☐Equipments/machines(please specify:)
☐Spare parts(please specify:)
☐Materials(please specify:)
☐Facilities(please specify:)
☐Operation system(please specify:)
☐Staff(please specify:)
☐Budget(please specify:)
☐Others (please specify:)

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please specify which one of the following items is not sufficient:

☐Equipments/machines(please specify:)
☐Spare parts(please specify:)
☐Materials(please specify:)
☐Facilities(please specify:)
☐Operation system(please specify:)
☐Staff(please specify:)
☐Budget(please specify:)
☐Others (please specify:)

27. Have the equipments/machines/spare parts for the Project been sufficiently provided after the Japanese cooperation?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

28. Have the equipments/machines/spare parts for the Project been adequately maintained after the Japanese cooperation?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

29. Do you think that this measles/poliomyelitis vaccine production Project will make enough benefit to adopt self-supporting system?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

30. Do you think that this poliomyelitis vaccine production Project will develop into consistent national production plant without import of foreign vulks?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

31. Do you have an internal training system in FIOCRUZ to transfer the technology for biologicals production among staffs?

☐Yes ☐No ☐No comment

Please explain:

☐Yes ☐No ☐No comment

Please explain:

---

32 Do you think that you have mastered enough technology to maintain the activities for this Project?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

33. Are you satisfied with your current situation in Biologicals Production Project?

☐Yes ☐No ☐No comment

If 'No', what is the major problem for you?

☐Salary is not enough

☐Lack of opportunities to improve your technology

☐Others (please specify:)

34. Do you plan to continue to work for this Biologicals Production Project?

☐Yes ☐No ☐No comment

If 'No', please explain:

[RELEVANCE]
This section is concerned with the relevance of the Project: i.e. whether the objectives of the Project are pertinent and worthwhile.

35. Have there been any major policy changes relating to the national vaccine production in Brazil?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

---

36. Is the purpose of the project, to establish self-producing system of measles/poliomyelitis vaccines on a large scale, still relevant to the current needs of your country?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

37. Do you think that detailed plan of technology transfer and cooperation between Japan and Brazil were adequately made after enough consultation with Brazilian counterparts?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

38. Do you think that Japanese technology transfer and cooperation were made opportunely during the Project?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

39. Any other comment:

(Thank you for your cooperation)

THE JOINT EVALUATION STUDY ON THE JAPANESE TECHNICAL COOPERATION PROJECTS IN BRAZIL

BIOLOGICALS PRODUCTION PROJECT

QUESTIONNAIRE TO BENEFICIARIES(Health center, Hospital)

JAPAN INTERNATIONAL COOPERATION AGENCY
SEPTEMBER, 1993

BACKGROUND OF RESPONDENT

Name: _____

Designation: _____

Division: _____

Organization: _____

Date: _____

Following are the question on the Biologicals Production Project. This survey is being conducted by the Brazilian Government and the Japanese Government in order to make a post evaluation on the Brazil-Japan Technical Cooperation Project(1980-1985).

Kindly please tick (v) the most appropriate answer or write down your comments. Your cooperation would be highly appreciated and your cooperation would be fully confidential and used exclusively for this survey.

[EFFICIENCY]
This section is concerned with the efficiency of the Project: i.e. how economically the inputs are translated into outputs.

1. Did the Brazilian Government established appropriate vaccination system against measles/poliomyelitis during the Japanese cooperation?

☐Yes ☐No ☐No comment

If 'No', please explain:

(i) measles

a) Are the facilities for measles vaccination enough?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) Did they provide enough budget for measles vaccination?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

c) Did they provide enough manpower for measles vaccination?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

d) If you have any comments on the Brazilian vaccination system against measles, please explain:

(ii) poliomyelitis

a) Are the facilities for poliomyelitis vaccination enough?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) Did they provide enough budget for poliomyelitis vaccination?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

c) Did they provide enough manpower for poliomyelitis vaccination?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

d) If you have any comments on the Brazilian vaccination system against poliomyelitis, please explain:

[EFFECTIVENESS]
This section is concerned with the effectiveness of the Project: i.e. the extent whereby the objectives of the Project are successful.

2. Do you think that Japanese cooperation for the Biologicals Production Project has succeeded to supply measles/poliomyelitis vaccines on a large scale?

a) measles
☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis
☐Yes ☐No ☐No comment
If 'No', please explain:

---

3. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to strengthen the ability of quality control technology of measles/poliomyelitis vaccine?

a) measles
☐Yes ☐No ☐No comment
If 'No', please explain:

---

b) poliomyelitis
☐Yes ☐No ☐No comment
If 'No', please explain:

[IMPACT]
This section is concerned with the impact of the Japanese cooperation for the Biologicals Production Project: i.e. direct or indirect, positive or negative.

4. Have the vaccines supplied by this Biologicals Production Project contributed to the improvement of preventive measures against measles/poliomyelitis?

a) measles
☐Yes ☐No ☐No comment
If 'No', please explain:

---

b) poliomyelitis
☐Yes ☐No ☐No comment
If 'No', please explain:

---

5. Have the measles/poliomyelitis vaccines supplied by this Biologicals Production Project been distributed all over the country to meet the demand in Brazil?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

6. Do you think that Japanese cooperation for the Biologicals Production Project has succeeded to supply measles/poliomyelitis vaccines at a moderate price?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

7. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to the improvement of preventive measures against measles/poliomyelitis in Brazil?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

8. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to the improvement of vaccination system in Brazil?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

9. Were there any other social/economical contribution by the Japanese cooperation for the Biologicals Production Project?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

---

10. Do you think that Japanese international contribution to the Biologicals Production is broadly recognized in Brazil?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

11. Have you had any negative impacts from Japanese cooperation for the Biologicals Production Project?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

[SUSTAINABILITY]

This section is concerned with the sustainability of the Project: i.e. the extent of the Biologicals Production Project development for self sustainability after the Japanese assistance was completed.

12. Does the Brazilian Government have the consistent policy for the Biologicals Production Project to continue its activities of measles/poliomyelitis vaccine production?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

13. Have the Brazilian Government established pertinent vaccination system for measles/poliomyelitis such as the distribution and keeping of vaccines and inoculating persons in need of ?

a) measles

☐Yes ☐No ☐No. comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

[RELEVANCE]
This section is concerned with the relevance of the Project: i.e. whether the objectives of the Project are pertinent and worthwhile.

14. Is the purpose of the project, to establish self-producing system of vaccines on a large scale, still relevant to the current needs of your country?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

15. Do you think that Japanese technology transfer and cooperation were made opportunely during the Project?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

16. Any other comment:

(Thank you for your cooperation)

THE JOINT EVALUATION STUDY ON THE JAPANESE TECHNICAL COOPERATION PROJECTS IN BRAZIL

BIOLOGICALS PRODUCTION PROJECT

INTERVIEW SHEET TO OFFICIALS

JAPAN INTERNATIONAL COOPERATION AGENCY
SEPTEMBER, 1993

BACKGROUND OF RESPONDENT

Name: _____

Designation: _____

Division: _____

Organization: _____

Date: _____

Following are the question on the Biologicals Production Project. This survey is being conducted by the Brazilian Government and the Japanese Government in order to make a post evaluation on the Brazil-Japan Technical Cooperation Project(1980-1985).

We would like to have an interview on this sheet.

Kindly please tick (v) the most appropriate answer or write down your comments. Your cooperation would be highly appreciated and your cooperation would be fully confidential and used exclusively for this survey.

[EFFICIENCY]
This section is concerned with the efficiency of the Project: i.e. how economically the inputs are translated into outputs.

1. Do you think that the Japanese cooperation was implemented with enough linkage with the other related project of related organization?

☐Yes ☐No ☐No comment

If 'Yes', please list those projects:

Name of Project	Implementing Organization
_____	_____
_____	_____
_____	_____

[EFFECTIVENESS]
This section is concerned with the effectiveness of the Project: i.e. the extent whereby the objectives of the Project are successful.

2. Do you think that Japanese cooperation for the Biologicals Production Project has succeeded to supply measles/poliomyelitis vaccines on a large scale?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

_____

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

_____

3. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to strengthen the ability of quality control of the measles/poliomyelitis vaccine production?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

_____

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

_____

4. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to implement the National Vaccination Programme?

☐Yes ☐No ☐No comment

If 'No', please explain:

_____

5. Were you satisfied with the training skill/knowledge of Japanese experts?
   a) Scientific Subject
   ☐Yes ☐No ☐No comment
   If 'No', please explain:

   ---

   b) Technical/Practical Subject
   ☐Yes ☐No ☐No comment
   If 'No', please explain:

   ---

6. Were the facilities (space, utilities etc.) adequate during the Japanese cooperation?
   ☐Yes ☐No ☐No comment
   If 'No', please explain:

   ---

7. Have the production equipment/machines been sufficiently provided during the Japanese cooperation?
   ☐Yes ☐No ☐No comment
   If 'No', please explain:

   ---

8. Have the production equipment/machines been adequately maintained during the Japanese cooperation?
   ☐Yes ☐No ☐No comment
   If 'No', please explain:

[IMPACT]
This section is concerned with the impact of the Project: i.e. direct or indirect, positive or negative.

9. Do you think that the Japanese cooperation for Biologicals Production Project contributed to the improvement of the technology of other kind vaccine production in Brazil?
   ☐Yes ☐No ☐No comment
   If 'Yes' or 'No", please explain:

   ---

10. Have the vaccines supplied by this Project contributed to the improvement of preventive measures against measles/poliomyelitis?
   a) measles
   ☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

11. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to reduce the foreign financial burden of Brazil?

☐Yes ☐No ☐No comment

If 'Yes' or 'No", please explain:

---

12. Have you ever had a chance to transfer the FIOCRUZ's measles/poliomyelitis vaccine production technology to the other biologicals production system?

☐Yes ☐No ☐No comment

a) If 'Yes', what type of technology did you transfer to them?

☐Quality test

☐Machine maintenance/management/operation

☐Others (please specify:)

b) If 'No', what was the major hindrance for transfer?, please explain:

---

13. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to the improvement of vaccination system in Brazil?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

14. Have the measles/poliomyelitis vaccines supplied by this Biologicals Production Project been distributed all over the country to meet the demand in Brazil?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

15. Do you think that Japanese international contribution to the Biologicals Production is broadly recognized in Brazil?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

16. Have you had any negative impacts from the Japanese cooperation for the Biologicals Production Project?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

---

17. Were there any other social/economical contribution by the Japanese cooperation for the Biologicals Production Project?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

[SUSTAINABILITY]

This section is concerned with the sustainability of the Project: i.e. the extent of the Biologicals Production Project development for self sustainability after the Japanese assistance was completed.

18. Does the Brazilian Government have the consistent policy for the Biologicals Production Project to continue its activities of measles/poliomyelitis vaccine production after the Japanese cooperation?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

19. Does the Brazilian Government have the consistent policy for the administration of FIOCRUZ to continue its activities of measles/poliomyelitis vaccine production after the Japanese cooperation?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

20. Does the measles/poliomyelitis vaccine production Project have enough resources to continue its activities?

a) measles

☐Yes ☐No ☐No comment

If 'No', please specify which one of the following items is not sufficient:

☐Equipments/machines(please specify:)
☐Spare parts(please specify:)
☐Materials(please specify:)
☐Facilities(please specify:)
☐Operation system(please specify:)
☐Staff(please specify:)
☐Budget(please specify:)
☐Others (please specify:)

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please specify which one of the following items is not sufficient:

☐Equipments/machines(please specify:)
☐Spare parts(please specify:)
☐Materials(please specify:)
☐Facilities(please specify:)
☐Operation system(please specify:)
☐Staff(please specify:)
☐Budget(please specify:)
☐Others (please specify:)

21. Do you think that this measles/poliomyelitis vaccine production Project will make enough benefit to adopt self-supporting system?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

22. Do you think that this poliomyelitis vaccine production Project will develop into consistent national production plant without import of foreign vulks?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

23. Do you think that FIOCRUZ Foundation have an enough ability to adopt internal training system to transfer the technology for biologicals production among staffs?

☐Yes ☐No ☐No comment

Please explain:

---

24 Do you think that counterparts for the Japanese cooperation have mastered enough technology to maintain the activities of this Project?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

25. Do you have any opinion to establish self-sustaining system of this Project?

☐Yes ☐No ☐No comment

If 'No', please explain:

[RELEVANCE]

This section is concerned with the relevance of the Project: i.e. whether the objectives of the Project are pertinent and worthwhile.

26. Have there been any major policy changes relating to the national vaccine production in Brazil?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

---

27. Is the purpose of the project, to establish self-producing system of measles/poliomyelitis vaccines on a large scale, still relevant to the current needs of your country?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

28. Do you think that the detailed plan of technology transfer and cooperation were adequately made after the enough discussion between Japanese parts and Brazilian parts?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

29. Do you think that Japanese technology transfer and cooperation were made opportunely during the Project?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

30. Any other comment:

(Thank you for your cooperation)

THE JOINT EVALUATION STUDY ON THE JAPANESE TECHNICAL COOPERATION PROJECTS IN BRAZIL

BIOLOGICALS PRODUCTION PROJECT

INTERVIEW SHEET TO MANAGERS

JAPAN INTERNATIONAL COOPERATION AGENCY
SEPTEMBER, 1993

BACKGROUND OF RESPONDENT

Name: _____

Designation: _____

Division: _____

Organization: _____

Date: _____

Following are the question on the Biologicals Production Project. This survey is being conducted by the Brazilian Government and the Japanese Government in order to make a post evaluation on the Brazil-Japan Technical Cooperation Project(1980-1985).

We would like to have an interview on this sheet.

Kindly please tick (v) the most appropriate answer or write down your comments. Your cooperation would be highly appreciated and your cooperation would be fully confidential and used exclusively for this survey.

[EFFICIENCY]
This section is concerned with the efficiency of the Project: i.e. how economically the inputs are translated into outputs.

1. Do you think that Japanese cooperation for the Biologicals Production Project succeeded to realize measles/poliomyelitis vaccines on a large scale?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

2. Do you think that Japanese cooperation for this Project contributed to strengthen the ability of quality control on the biologicals production for measles/poliomyelitis?

☐Yes ☐No ☐No comment.

If 'No', please explain:

---

3. Did the Japanese Government provide enough input for the measles/poliomyelitis vaccine production Project?

(i) measles

a) Was the machines/equipment/materials adequate?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) Was the counterpart training in Japan adequate(in general)?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

c) Was the technology transfer from Japan to Brazil adequate?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

d) Was the level of technology transferred from Japan to Brazil adequate?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

e) If you have any comments on the Japanese inputs, please explain:

(ii) poliomyelitis

a) Was the machines/equipment/materials adequate?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) Was the counterpart training in Japan adequate(in general)?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

c) Was the technology transfer from Japan to Brazil adequate?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

d) Was the level of technology transferred from Japan to Brazil adequate?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

e) If you have any comments on the Japanese inputs, please explain:

---

4. Did the Brazilian Government provide enough input for the measles/poliomyelitis vaccine production Project?

(i) measles

Yes No

a) Are the facilities(space, utilities etc) adequate?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) Did they provide enough budget for the Project?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

c) Did they provide enough manpower for the Project?

Yes No

☐Yes ☐No ☐No comment

If 'No', please explain:

---

d) If you have any comments on the Brazilian inputs, please explain:

(ii) poliomyelitis

Yes No

a) Are the facilities(space, utilities etc) adequate?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) Did they provide enough budget for the Project?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

c) Did they provide enough manpower for the Project?

Yes No

☐Yes ☐No ☐No comment

If 'No', please explain:

---

d) If you have any comments on the Brazilian inputs, please explain:

---

5. Do you think that the vaccination against measles/poliomyelitis was practiced by the Brazilian Government effectively after the Japanese cooperation?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

6. Do you think that the Project was given enough support from the other sections of M.O.H.?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

7. Do you think that Japanese cooperation schedule adequately made for implementation?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

8. Do you think that the Japanese cooperation was implemented with enough linkage with the other related project of related organization?

☐Yes ☐No ☐No comment

If 'Yes', please list those projects:

Name of Project	Implementing Organization
_____	_____
_____	_____
_____	_____

[EFFECTIVENESS]

This section is concerned with the effectiveness of the Project: i.e. the extent whereby the objectives of the Project are successful.

9. Do you think that Japanese cooperation for the Biologicals Production Project has succeeded to supply measles/poliomyelitis vaccines on a large scale?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

_____

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

_____

10. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to strengthen the ability of quality control in the measles/poliomyelitis vaccine production?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

_____

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

_____

11. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to implement the National Vaccination Programme?

☐Yes ☐No ☐No comment

If 'No', please explain:

_____

12. How do you evaluate counterparts' skill and knowledge just after the training with Japanese experts and current one?

		After cooperation			Current		
	No comment	Low	Moderate	High	Low	Moderate	High
a) Overall	☐	☐	☐	☐	☐	☐	☐
b) Understanding of vaccine production	☐	☐	☐	☐	☐	☐	☐
c) Simple device handling	☐	☐	☐	☐	☐	☐	☐
d) Machine operation	☐	☐	☐	☐	☐	☐	☐
e) Machine maintenance	☐	☐	☐	☐	☐	☐	☐
f) Understanding of the methods of quality test	☐	☐	☐	☐	☐	☐	☐

13. Were you satisfied with the training skill/knowledge of Japanese experts?

a) Scientific Subject

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) Technical/Practical Subject

☐Yes ☐No ☐No comment

If 'No', please explain:

---

14. Were the facilities (space, utilities etc.) adequate during the Japanese cooperation?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

15. Have the production equipment/machines been sufficiently provided during the Japanese cooperation?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

16. Have the production equipment/machines been adequately maintained during the Japanese cooperation?

☐Yes ☐No ☐No comment

If 'No', please explain:

[IMPACT]
This section is concerned with the impact of the Project: i.e. direct or indirect, positive or negative.

17. Do you think that the Japanese cooperation for Biologicals Production Project contributed to the improvement of the technology of other kind vaccine production in Brazil?

☐Yes ☐No ☐No comment

If 'Yes' or 'No", please explain:

---

18. Have the vaccines supplied by this Project contributed to the improvement of preventive measures against measles/poliomyelitis?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

19. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to reduce the foreign financial burden of Brazil?

☐Yes ☐No ☐No comment

If 'Yes' or 'No", please explain:

---

20. Have you ever had a chance to transfer your technology to the staffs of other biologicals production system?

☐Yes ☐No ☐No comment

a) If 'Yes', what type of technology did you transfer to them?

☐Quality test

☐Machine maintenance/management/operation

☐Others (please specify:)

b) If 'No', what was the major hindrance for transfer?, please explain:

---

21. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to the improvement of vaccination system in Brazil?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

22. Have the measles/poliomyelitis vaccines supplied by this Biologicals Production Project been distributed all over the country to meet the demand in Brazil?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

23. Have you had any other unexpected impacts on the Biologicals Production caused by the Japanese cooperation for the Biologicals Production Project?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

---

24. Have you had any negative impacts from the Japanese cooperation for the Biologicals Production Project?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

---

25. Were there any other social/economical contribution by the Japanese cooperation for the Biologicals Production Project?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

[SUSTAINABILITY]

This section is concerned with the sustainability of the Project: i.e. the extent of the Biologicals Production Project development for self sustainability after the Japanese assistance was completed.

26. Does the Brazilian Government have the consistent policy for the Biologicals Production Project to continue its activities of measles/poliomyelitis vaccine production after the Japanese cooperation?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

27. Does the Brazilian Government have the consistent policy for the administration of FIOCRUZ to continue its activities of measles/poliomyelitis vaccine production after the Japanese cooperation?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

28. Does the measles/poliomyelitis vaccine production Project have enough resources to continue its activities?

a) measles

☐Yes ☐No ☐No comment

If 'No', please specify which one of the following items is not sufficient:

☐Equipments/machines(please specify:)
☐Spare parts(please specify:)
☐Materials(please specify:)
☐Facilities(please specify:)
☐Operation system(please specify:)
☐Staff(please specify:)
☐Budget(please specify:)
☐Others (please specify:)

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please specify which one of the following items is not sufficient:

☐Equipments/machines(please specify:)
☐Spare parts(please specify:)
☐Materials(please specify:)
☐Facilities(please specify;)
☐Operation system(please specify:)
☐Staff(please specify:)
☐Budget(please specify:)
☐Others (please specify:)

29. Have the equipments/machines/spare parts for the Project been sufficiently provided after the Japanese cooperation?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

30. Have the equipments/machines/spare parts for the Project been adequately maintained after the Japanese cooperation?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

31. Do you think that this measles/poliomyelitis vaccine production Project will make enough benefit to adopt self-supporting system?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

32. Do you think that this poliomyelitis vaccine production Project will develop into consistent national production plant without import of foreign vulks?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

33. Do you have an internal training system in FIOCRUZ to transfer the technology for biologicals production among staffs?

☐Yes ☐No ☐No comment

Please explain:

---

34. How do you think the capacity of FIOCRUZ to maintain and improve the equipments/machines?

Please explain

---

35 Do you think that counterparts for the Japanese cooperation have mastered enough technology to maintain the activities of this Project?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

36. Do you think that counterparts continue to work for this Biologicals Production Project?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

37. Please let us know the mechanism of making an annual budget plan?

---

38. Do you have any opinion to establish self-sustaining system of this Project?

☐Yes ☐No ☐No comment

If 'No', please explain:

[RELEVANCE]

This section is concerned with the relevance of the Project: i.e. whether the objectives of the Project are pertinent and worthwhile.

39. Have there been any major policy changes relating to the national vaccine production in Brazil?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

---

40. Is the purpose of the project, to establish self-producing system of measles/poliomyelitis vaccines on a large scale, still relevant to the current needs of your country?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

41. Do you think that the detailed plan of technology transfer and cooperation were adequately made after the enough discussion between Japanese parts and Brazilian parts?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

42. Do you think that Japanese technology transfer and cooperation were made opportunely during the Project?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

43. Any other comment:

(Thank you for your cooperation)

THE JOINT EVALUATION STUDY ON THE JAPANESE TECHNICAL COOPERATION PROJECTS IN BRAZIL

BIOLOGICALS PRODUCTION PROJECT

INTERVIEW SHEET TO PROFESSIONALS

JAPAN INTERNATIONAL COOPERATION AGENCY
SEPTEMBER, 1993

BACKGROUND OF RESPONDENT

Name: _____

Designation: _____

Division: _____

Organization: _____

Date: _____

Following are the question on the Biologicals Production Project. This survey is being conducted by the Brazilian Government and the Japanese Government in order to make a post evaluation on the Brazil-Japan Technical Cooperation Project(1980-1985).

We would like to have an interview on this sheet.

Kindly please tick (v) the most appropriate answer or write down your comments. Your cooperation would be highly appreciated and your cooperation would be fully confidential and used exclusively for this survey.

[EFFECTIVENESS]
This section is concerned with the effectiveness of the Project: i.e. the extent whereby the objectives of the Project are successful.

1. Do you think that Japanese cooperation for the Biologicals Production Project has succeeded to supply measles/poliomyelitis vaccines on a large scale?

a) measles
☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

2. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to strengthen the ability of quality control of the measles/poliomyelitis vaccine production?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

3. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to implement the National Vaccination Programme?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

4. Do you think that technology transfer from Japanese experts to Brazilian counterparts were carried out successfully?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

[IMPACT]

This section is concerned with the impact of the Project: i.e. direct or indirect, positive or negative.

5. Do you think that the Japanese cooperation for Biologicals Production Project contributed to the improvement of the technology of other kind vaccine production in Brazil?

☐Yes ☐No ☐No comment

If 'Yes' or 'No", please explain:

---

6. Have the vaccines supplied by this Project contributed to the improvement of preventive measures against measles/poliomyelitis?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

7. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to reduce the foreign financial burden of Brazil?

☐Yes ☐No ☐No comment

If 'Yes' or 'No", please explain:

---

8. Have the measles/poliomyelitis vaccines supplied by this Biologicals Production Project been distributed all over the country to meet the demand in Brazil?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

9. Do you think that Japanese cooperation for the Biologicals Production Project has contributed to the improvement of vaccination system in Brazil?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

10. Do you think that Japanese international contribution to the Biologicals Production is broadly recognized in Brazil?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

11. Have you had any environmental impacts from the Japanese cooperation for the Biologicals Production Project?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

---

12. Have you had any other negative impacts from the Japanese cooperation for the Biologicals Production Project?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

---

13. Regarding the improvement of preventive measures for measles/poliomyelitis, did you notice unexpected impacts from the Japanese cooperation for the Biologicals Production Project?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

---

14. Were there any other social/economical contribution by the Japanese cooperation for the Biologicals Production Project?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

[SUSTAINABILITY]

This section is concerned with the sustainability of the Project: i.e. the extent of the Biologicals Production Project impact after the assistance was completed.

15. Does the Brazilian Government have the consistent policy for the Biologicals Production Project to continue its activities of measles/poliomyelitis vaccine production after the Japanese cooperation?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

16. Does the measles/poliomyelitis vaccine production Project have enough resources to continue its activities?

a) measles

☐Yes ☐No ☐No comment

If 'No', please specify which one of the following items is not sufficient:

☐Equipments/machines(please specify:)
☐Spare parts(please specify:)
☐Materials(please specify:)
☐Facilities(please specify:)
☐Operation system(please specify:)
☐Staff(please specify:)
☐Budget(please specify:)
☐Others (please specify:)

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please specify which one of the following items is not sufficient:

☐Equipments/machines(please specify:)
☐Spare parts(please specify:)
☐Materials(please specify:)
☐Facilities(please specify:)
☐Operation system(please specify:)
☐Staff(please specify:)
☐Budget(please specify:)
☐Others (please specify:)

17. Do you think that this measles/poliomyelitis vaccine production Project will make enough benefit to adopt self-supporting system?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

18. Do you think that this poliomyelitis vaccine production Project will develop into consistent national production plant without import of foreign vulks?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

19. Do you think that FIOCRUZ Foundation have an enough ability to adopt internal training system to transfer the technology for biologicals production among staffs?

☐Yes ☐No ☐No comment

Please explain:

---

20 Do you think that counterparts for the Japanese cooperation have mastered enough technology to maintain the activities of this Project?

☐Yes ☐No

If 'No', please explain:

---

21. Do you have any opinion to establish self-sustaining system of this Project?

☐Yes ☐No

If 'Yes', please explain:

[RELEVANCE]

This section is concerned with the relevance of the Project: i.e. whether the objectives of the Project are pertinent and worthwhile.

22. Have there been any major policy changes relating to the national vaccine production in Brazil?

☐Yes ☐No ☐No comment

If 'Yes', please explain:

---

23. Is the purpose of the project, to establish self-producing system of measles/poliomyelitis vaccines on a large scale, still relevant to the current needs of your country?

a) measles

☐Yes ☐No ☐No comment

If 'No', please explain:

---

b) poliomyelitis

☐Yes ☐No ☐No comment

If 'No', please explain:

---

24. Do you think that Japanese technology transfer and cooperation were made opportunely during the Project?

☐Yes ☐No ☐No comment

If 'No', please explain:

---

25. Any other comment:

(Thank you for your cooperation)

ANNEX-C

SCOPE OF WORK
FOR
A JOINT EVALUATION STUDY
ON
JAPANESE TECHNICAL COOPERATION PROJECTS
IN
THE FEDERATIVE REPUBLIC OF BRAZIL

AGREED UPON
BETWEEN
BRAZILIAN COOPERATION AGENCY
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY

Brasilia, June 30 , 1993.

Mr.JOSÉ MANOEL DE AGUIAR MARTINS
Director of International Cooperation
National Service of Industrial
Apprenticeship - SENAI
Federative Republic of Brazil

Mr.ALBERTINO ALEXANDRE MACIEL FILHO
General Coordinator for Special
Affairs on Health
Ministry of Health
Federative Republic of Brazil

Mr.CARLOS ROBERTO CRISTALLI
Executive Director
Brazilian Cooperation Agency-ABC
Federative Republic of Brazil

Mr.YASUO MUKAI
Mining and Industrial
Development Specialist
Institute for International Cooperation
Japan International Cooperation Agency

The Japan International Cooperation Agency (hereinafter referred to as "JICA") had a series of discussions with the Brazilian Cooperation Agency (hereinafter referred to as "ABC") and Brazilian governmental organizations concerned on the scope of work of a joint evaluation study on the Japanese technical cooperation projects carried out in Brazil (hereinafter referred to as "the Study"). As a result of the discussions, both ABC and JICA agreed to conduct the Study and finalized the scope of work.

1. Objectives of the Study

The objectives of the Study are:

(1) To identifty the achievements and problems of two projects, referred to as "the Projects", mentioned in Section 4,
(2) To share common findings and understandings on the evaluation results of the Projects, and
(3) To utilize the findings to improve the planning of future projects in Brazil.

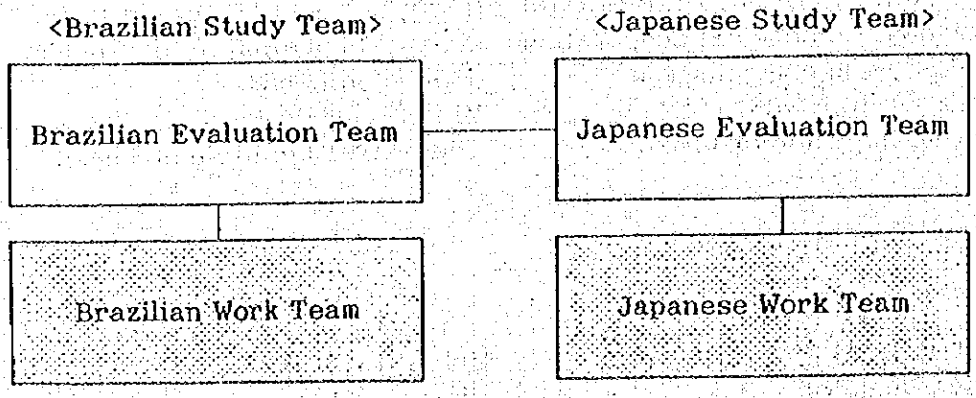
The Study covers all stages of the Projects, such as the planning, implementation and post project situation.

2. Organization

The Study Team consists of an Evaluation Team and a Work Team.

(1) ABC and JICA each organize their own Evaluation Team.
Both Evaluation Teams will consult with each other on the arrangement and implementation of the Study and take joint responsibility for the Study.
(2) Each Evaluation Team will nominate and supervise a group of consultants as a Work Team in order to execute the Study.

Organizational Chart of the Study Teams



The list of members of the Evaluation Teams is attached in ANNEX 1.

3. Methods of the Study

(1) The Japanese Study Team will define and prepare the following:
   a. Logical Framework
   b. Indicator Table
      (data table regarding the verifiable indicators specified in the Logical Framework)
   c. Question sheets for interview survey
   d. Questionnaires (for questionnaire survey)

   The Brazilian Study Team will be responsible for the following:
   a. Preparation of Name List (names and addresses of the persons who are to be interviewed or given the questionnaire survey)
   b. Completion of the Indicator Table prepared by the Japanese Study Team
   c. Questionnaire survey

(2) The interview survey will be carried out jointly by both Study Teams, using the question sheets.

(3) The results of the questionnaire and interview survey together with the reports and materials collected through the Study will be jointly analyzed and shared in order to identify the achievements and problems of the Projects.

(4) Drafts of two evaluation reports (hereinafter referred to as "the First Drafts"), based upon the data and information analyzed and compiled, will be prepared separately by the Brazilian Study Team and the Japanese Study Team.

(5) Using the First Drafts and the presentation materials prepared, both Study Teams will present in the joint seminar each side's findings and understandings on the evaluation results of the Projects, including the recommendations for future projects.

(6) Based on the First Drafts and the results of discussions from the joint seminar, the Final Report will be drafted by the Japanese Study Team, and confirmed by the Brazilian Study Team.

4. Projects to be Evaluated

The two projects to be evaluated are as follows:
(1)SENAI Electrical and Electronic Vocational Training Center Project/SENAI/MG
(2)Biologicals Production Project/FIOCRUZ

They are chosen from projects undertaken with the technical assistance of JICA.

5. Evaluation Items

The Study will focus on the following aspects of the Projects.
(1) Efficiency
(2) Effectiveness
(3) Impact
(4) Sustainability
(5) Relevance

6. Expenses of the Study

JICA will bear the expenses necessary to hire consultants for the Work Teams. Items of major expense are included in ANNEX 2.

ABC and JICA will consult with each other regarding other expenses necessary for the Study.

7. Terms of Reference of the Consultants

ABC will finalize the draft of the Terms of Reference (TOR) prepared by JICA for the Brazilian Consultants in the Joint Evaluation Study.

8. Implementation Schedule

The Study will be conducted according to the work schedule attached in ANNEX 3.

9. Report Preparation and Submission

The following reports will be prepared in English:

(1) First Drafts (by the mid December, 1993):
separately prepared by each Study Team, one draft by the Brazilian Study Team and the other by the Japanese Study Team.

(2) Final Report (by the end of February, 1994):
drafted by the Japanese Study Team and confirmed by the Brazilian Study Team.

The Final Report will be submitted to the Brazilian Study Team.

ANNEX 4 and ANNEX 5 provide Terms of Reference on the Joint Evaluation Study and Contents of the Final Report (tentative), respectively.

ANNEX 1

List of Members of the Evaluation Teams

BRAZIL:

1 NELSON DE OLIVEIRA	Brazilian Cooperation Agency – ABC Ministry of Foreign Relations
2 JOÃO BAPTISTA RISI JÚNIOR	Ministry of Health
3 JOSÉ LAZARO DE BRITO LADISLAU	National Health Foundation
4 OTÁVIO PINHEIRO OLIVA	Oswaldo Cruz Foundation (FIOCRUZ)
5 GERALDO EUSTÁQUIO DE OLIVEIRA	SENAI/NATIONAL
6 ERICH ROBERT GANS	SENAI/MG

JAPAN:

1 Mr. Yasuo Mukai	Mining and Industrial Development Specialist Institute for International Cooperation Japan International Cooperation Agency
2 Mr. Yoshitaka Fujita	Evaluation and Post Project Monitoring Div., Planning Department Japan International Cooperation Agency

ANNEX 2

Items of Major Expenses for Hiring Consultants

1. PERSONNEL EXPENSES

   1.1. Consulting Fee

   1.2. Administration of Questionnaire Survey

   1.3. Secretarial Staff Services

2. TRAVELING ALLOWANCE

   2.1. Vehicle Rental

   2.2. Travel Allowance for Questionnaire Survey

3. MISCELLANEOUS EXPENSES

   3.1. Communication (e.g. mail, telephone, courier)

   3.2. Printing, Sending Reports, etc.

ANNEX 3

Work Schedule

LEGEND
——— : Joint Work in Brazil
═══ : Separate Work

Brazilian Study Team	Aug. 93	Sep.	Oct.	Nov.	Dec.	Jan. 94	Feb.
1 Survey preparation							
1.1 LF & IT[1]							
1.2 Questionnaires[2]							
1.3 Name list			(Oct. 6--)				
1.4 Quest. survey[3]							
1.5 Data collection							
1.6 Quest. collection[4]			--Oct. 26)				
2 Survey							
2.1 Interview survey					(Nov. 10--)		
2.2 Data analysis							
2.3 First Drafts					--Dec. 9)		
3 Seminar							
3.1 Preparation				(Dec. 15--Dec. 24)			
3.2 Present.at Seminar[5]						(Jan. 26--Feb. 1)	
4 Final Report							
Evaluation Team			** *****		** ****		**
Work Team			*****		*********		***

Japanese Study Team	Aug. 93	Sep.	Oct.	Nov.	Dec.	Jan. 94	Feb.
1 Survey preparation							
1.1 LF & IT[1]	(Aug. 25--)						
1.2 Questionnaires[2]		(--Sep. 14)					
1.3 Name list							
1.4 Quest. survey[3]							
1.5 Data collection							
1.6 Quest. collection[4]							
2 Survey							
2.1 Interview survey					(Nov. 10--)		
2.2 Data analysis							
2.3 First Drafts					--Dec. 9)		
3 Seminar							
3.1 Preparation							
3.2 Present.at Seminar[5]						(Jan. 26--Feb. 1)	
4 Final Report							(Feb. 15--Feb. 20)
Evaluation Team		****** **			** **	**	****
Work Team		******			**********	**	****

REMARKS:
1) Logical Framework and Indicator Table
2) Question sheets for the interview survey and questionnaires
3) Questionnaire Survey; Questionnaires shall be distributed.
4) Questionnaire collection; Those questionnaires distributed shall be collected.
5) Presentation at Seminar; Both Study Teams shall present their own findings and understandings from the joint evaluation study.

ANNEX 4

Terms of Reference on the Joint Evaluation Study

1 Projects to be Evaluated

Both the Brazilian and Japanese Study Teams agree to conduct a joint evaluation study of the following Projects:

(1) SENAI Electrical and Electronic Vocational Training Center Project/ SENAI/MG

(2) Biologicals Production Project / FIOCRUZ

2 Evaluation Items

The Study focuses on the following aspects of the Projects:

(1) Efficiency: to judge the appropriateness of the means, methods, time period and cost required to achieve the results. Efficiency is concerned with the transformation of input into output, in terms of time, cost and the use of other resources.

(2) Effectiveness: to examine the degree to which the project purpose is being achieved, by comparing the original planned targets with the results actually achieved, and to analyze the factors and conditions which have led to the differences, if any.

(3) Impact: to analyze development effects including possible negative effects brought about by the project. These effects shall be evaluated mainly from the viewpoint of 1)operational and managemental, 2)technical, 3)economic, and 4)social aspects. Impact refers to the positive and negative effects, anticipated or not, on the concerned sector or on overall development within the recipient country.

(4) Sustainability: to assess the likelihood of the objectives of the project continuing after the project assistance is over. Sustainability shall be evaluated mainly from the viewpoint of 1)operational and managemental, 2)technical, and 3)financial aspects.

(5) Relevance: to examine the relevance of the project designs set up at the time of project preparation and those revised during project implementation, in accordance with changes in project circumstances. This is called project rationale. Based on an examination of the above points (1) to (4), the relevance of the project can be discussed. Relevance is also related with whether or not the socio-economic needs are still existent to justify the continuation of the project.

3 Work Program

The Brazilian Evaluation Team and the Japanese Evaluation Team should have their respective Study Teams organized by August 18, 1993; one week prior to the joint evaluation work.

A detailed description of the joint evaluation is as follows:

(1) Survey Preparation (August 25, 1993 - October 26, 1993)

A. *The First Term of Survey Preparation*
(August 25, 1993 - September 14, 1993)

a. Logical Framework and Indicator Table

A set of Logical Frameworks, data tables of the verifiable indicators specified in the Logical Framework (Indicator Table) will be prepared by the Japanese Study Team and then sent to the Brazilian Study Team.

b. Question Sheets for Interview Survey and Questionnaires

A set of the question sheets for the interview survey and questionnaires written in English will be prepared by the Japanese Study Team. Regarding the questionnaires for the Beneficiaries, they are to be translated from English into Portuguese by the Brazilian Work Team.

Those targeted for the interview survey and for the questionnaire survey are as follows:

1) Beneficiaries from the Projects, such as local farmers, local companies and multi-national corporations operating in Brazil.

2) Counterparts (including staff) who worked or who are presently working on the Projects in Brazil.

3) Managers belonging to project implementing agencies who have been in supervising positions within the Projects.

4) Officials belonging to ABC, Ministry of Health (MOH) and SENAI/National who have been in supervising positions within the Projects.

5) Professionals from universities, think-tanks and economic organizations, who are specialized in the fields of the Projects in Brazil.

In principle, the target groups for the questionnaire survey are the following: Beneficiaries, Counterparts and Japanese Experts. Interview surveys will be conducted with the following people: Managers, Officials and Professionals.

Before the second term of survey preparation, the Logical Framework, Indicator Table and question sheets for the interview survey and questionnaires prepared by the Japanese Study Team in the previous term are to be examined by the Brazilian Study Team. The Japanese Study Team will, if necessary, correct them as a result of comments from the Brazilian Study Team.

B. *The Second Term of Survey Preparation*
(October 6, 1993 - October 26, 1993)

a. Name List

The Brazilian Study Team will specify the names and addresses of the persons who should be interviewed. The Brazilian Study Team will also specify the names and addresses of the persons to whom questionnaires should be distributed. The Name List will be promptly sent to the Japanese Study Team by fax for agreement.

As for the former Japanese experts who had been engaged in the Projets, the Japanese Study Team will examine their names and addresses.

b. Questionnaire Survey

The Brazilian Work Team will distribute the questionnaires prepared by the Japanese Study Team to the persons listed on the Name List, following a phone call requesting their cooperation with the questionnaire survey. As for the Japanese Experts, the Japanese Study Team will conduct the questionnaire survey in Japan.

c. Data Collection

The Brazilian Work Team will fill in the Indicator Table prepared by the Japanese Study Team, collecting data from statistics of the project implementing agencies and secondary data published by the Brazilian government, academic institucions, etc. Soon after completion, the filled-in tables should be sent to the Japanese Study Team by fax.

In the case that some indicators are considered inappropriate, these can be changed by the Brazilian Study Team with explicit reasons given.

d. Questionnaire Collection

One to two weeks after the delivery of the questionnaires, the Brazilian Work Team will collect the questionnaires, after making a confirmation call. The Brazilian Work Team will translate the questionnaires written in Portuguese into English and send them to the Japanese Study Team.

(2) Survey (November 10, 1993 - December 9, 1993)

The Brazilian Evaluation Team will provide the workroom which both Study Teams can jointly use for the survey in Brazil.

a. Interview Survey (for about 2 weeks)

The question sheets for the interview survey will be filled in through the interview of the persons listed on the Name List, jointly or separately, if necessary, by the Brazilian Work Team and the Japanese Work Team. The Brazilian Work Team will make a record of each interview meeting and send it to the Japanese Evaluation Team. One of the Brazilian Work Team members will join the interview survey as a English-Portuguese translator, make a record of each interview meeting and send it to the Japanese Evaluation Team.

If needed, during this stage, the Brazilian Work Team will re-collect data on the indicators added to the Indicator Table as a result of discussion between both Study Teams at the initial stage of the field survey.

b. Data Analysis (for about 1 week)

The question sheets from the interview survey and questionnaires, together with reports and materials collected through the Study, will be analyzed and compiled jointly by both Work Teams and shared with each other, in order to identify the achievements and problems of the Projects.

c. First Drafts (for about 1 week)

The Brazilian Study Team and the Japanese Study Team will separately prepare draft evaluation reports in English (the First Drafts), based upon the data and information analyzed and compiled by both Work Teams at the previous stage.

The prepared reports are to be exchanged and comments given by the other team. The reports are to be revised as a result of the comments received.

(3) Seminar (December 15, 1993 - February 1, 1994)

a. Preparation (December 15, 1993 - December 24, 1993)

The Brazilian Study Team will identify guests and extend an invitation to them to attend the joint seminar. The confirmed guests list should be sent to the Japanese Study Team.

The First Drafts should be circulated beforehand to all the possible guests by the Brazilian Work Team, preferably more than one week prior to the seminar.

b. Presentation at Seminar (January 26, 1994 - January 28, 1994;
January 31, 1994 - February 1, 1994)

The Brazilian and Japanese Study Teams will hold the joint seminar in Brazil, whereby, using the First Drafts and, if necessary, handouts prepared for the seminar, both Study Teams will present their own findings and understandings from this evaluation study, including recommendations for future projects.

The Brazilian Work Team will draw up a record of the questions and answers, comments and discussions made in the seminar.

(4) Final Report (February 14, 1994 - February 28, 1994)

After the joint seminar, the Brazilian Work Team will promptly send the seminar record to the Japanese Study Team.

Based on the First Drafts and the record of the seminar, the Japanese Study Team will prepare a draft Final Report in English. It will be corrected and confirmed by the Brazilian Study Team.

Contents of the Final Report are tentatively shown in ANNEX 5.

ANNEX 5

Contents of the Final Report (tentative)

1 BACKGROUND
- 1.1 Objectives of the Joint Evaluation Study
- 1.2 Evaluation Methods
- 1.3 Team Composition
- 1.4 Work Procedure
- 1.5 Project Summary
  - 1.5.1 SENAI Electrical and Electronic Vocational Training Center Project/ SENAI/MG
  - 1.5.2 Biologicals Production Project/FIOCRUZ

2 EVALUATION FINDINGS
- 2.1 SENAI Electrical and Electronic Vocational Training Center Project/ SENAI/MG
  - 2.1.1 Implementation Efficiency
  - 2.1.2 Attainment of the Project's Objectives
  - 2.1.3 Impact of the Project
  - 2.1.4 Sustainability of the Project
  - 2.1.5 Relevance of Initial Planning
  - 2.1.6 Results and Recommendations gained
- 2.2 Biologicals Production Project/FIOCRUZ
  - 2.2.1 Implementation Efficiency
  - 2.2.2 Attainment of the Project's Objectives
  - 2.2.3 Impact of the Project
  - 2.2.4 Sustainability of the Project
  - 2.2.5 Relevance of Initial Planning
  - 2.2.6 Results and Recommendations gained

3 GENERAL RESULTS AND DISCUSSIONS

4 GENERAL RECOMMENDATIONS

ANNEX
1 Interview and Questionnaire Survey Results
2 List of Interviewees

Record of the Seminar for the Joint Evaluation Study

On February 9th, 1994, JICA - Japan Agency for International Cooperation and FIOCRUZ - Oswaldo Cruz Foundation, held the "Seminar on the Joint Evaluation Study on the Biologicals Production Project", at Bio-Manguinhos/FIOCRUZ, in Rio de Janeiro, Brazil.

Participants presently and/or formerly involved in the Project (officials, managers, professionals, beneficiaries and counterparts), as shown in the "List of Participants" (page 3) attended.

The Seminar was carried out according to the "Agenda" (page 2). Presentations were followed by discussion with participants and the "rapporteur".

The information, comments and suggestions presented at the Seminar were very useful for the common understanding of the evaluation methodology and results, and should be taken into consideration for planning future Brazil/Japan cooperation projects.

(Main Speakers)

Chairman	Carlos Médicis Morel President of FIOCRUZ
Co-Chairman	Yasuo Mukai Leader of the JICA Study Team
Brazilian side	Nelson de Oliveira Brazilian Cooperation Agency - Ministry of External Relations
	João Quental Director, Bio-Manguinhos/FIOCRUZ
	Valerie R. Chaves Consultant
Japanese side	Yoshitaka Fujita JICA
	Kanji Oshino Consultant

Agenda of the Seminar on the Joint Evaluation Study Biological Production Project

Rio de Janeiro, February 9th, 1994.

09:45	Arrival of participants and guests
10:00 - 10:30	Opening Addresses by Carlos Médicis Morel, President of the Oswaldo Cruz Foundation/FIOCRUZ and Nelson de Oliveira, Representative of ABC - Brazilian Cooperation Agency - Ministry of External Relations
10:30 - 10:40	Address by Masaharu Torii, Director of JICA / Rio de Janeiro
11:00 - 11:20	"Objectives of the Study" presented by Yasuo Mukai
11:20 - 11:50	"Methodology, Study Team and Work Procedure", presented by Yoshitaka Fujita/JICA
12:00 - 13:45	(Lunch)
14:00 - 15:45	Biologicals Production Project: "Project Summary "presented by João Quental - Bio-Manguinhos/FIOCRUZ "Evaluation Results" presented by Valerie Rumjanek Chaves - Consultant (Brazilian side) Kanji Hoshino - Consultant (Japanese side) "Recommendations "presented by João Quental
15:45 - 16:00	Questions and Answers
16: - 16:15	Coffee Break
16:15 - 16:45	Discussion
16:45 - 17:00	Closing addresses by - Nelson de Oliveira - Yasuo Mukai

LIST OF PARTICIPANTS

Carlos Médicis Morel	President, FIOCRUZ -	Official
Willy Beçak	President, Butantan Foundation	Professional
Yasuo Mukai	JICA	
Eduardo Martins	Vice-President, FIOCRUZ	
João Quental	Director, Bio-Manguinhos	Counterpart
Nelson de Oliveira	ABC/MRE - Brazilian Cooperation Agency	Official
Kenji Hishino	JICA - Consultant	
Kataryoshi Sudo	JICA (Brasilia)	
Valerio Rumjanek Chaves	ABC/JICA	
Yoshinaka Fujita	JICA	
Masaharu Torii	JICA (Rio de Janeiro)	
Hermann Schatzmayr	IOC/FIOCRUZ - Director, Virology Department	Beneficiary
Marco Antonio Moreira	PASNI - Immunization Program - MOH	
Lenea Bertollo Arruda	PASNI - Immunization Program - MOH	
Wilson Alves de Paula	Measles Laboratory, Bio-Manguinhos	Counterpart
Terezinha Elisa S. de Brito	Measles Laboratory, Bio-Manguinhos	Counterpart
Ainami Pereira	Measles Laboratory, Bio-Manguinhos	Counterpart
Clara Soares Viga	Measles Laboratory, Bio-Manguinhos	Counterpart
Belem Vieira de Andrade	Measles Laboratory, Bio-Manguinhos	Counterpart
Evanilce Ferreira	Measles Laboratory, Bio-Manguinhos	Counterpart
Paulo Carvalho	Measles Laboratory, Bio-Manguinhos	Counterpart
Darcy Hokama	Measles Laboratory, Bio-Manguinhos	Counterpart
George Mann	Measles Laboratory, Bio-Manguinhos	Counterpart
Carlos Alberto Nogueira	Measles Laboratory, Bio-Manguinhos	Counterpart
Benedito Couto da Silva	Measles Laboratory, Bio-Manguinhos	Counterpart
Manoel Carqueira	Measles Laboratory, Bio-Manguinhos	Counterpart
Renato Marchevsky	Measles Laboratory, Bio-Manguinhos	Counterpart
Fátima Velloso da Silva	Measles Laboratory, Bio-Manguinhos	Counterpart
Maria da Luz F. Leal	Measles Laboratory, Bio-Manguinhos	Counterpart
Vera Lucia A. Baug	Measles Laboratory, Bio-Manguinhos	Counterpart
Rafael Guimarães	Measles Laboratory, Bio-Manguinhos	Counterpart
Artur R. Couto	Measles Laboratory, Bio-Manguinhos	Counterpart
Luiz Antonio da Cunha	Measles Laboratory, Bio-Manguinhos	Counterpart
Eliese Cabral Raposo	Measles Laboratory, Bio-Manguinhos	Counterpart
Maria das Graças Danelli	Measles Laboratory, Bio-Manguinhos	Counterpart
Mitiko Fujita	IOC/FIOCRUZ	Beneficiary
Isabella Maluf	Bio-Manguinhos	Counterpart
Maria Eunice Antunes	Bio-Manguinhos	Counterpart
Denise Milagres	Bio-Manguinhos	Counterpart
Maria Beatriz de Oliveira	Bio-Manguinhos	Counterpart
Carlos Mauricio	Bio-Manguinhos	Counterpart
Andrea Good Lima	Bio-Manguinhos	Counterpart
Helena Rocha Moura	Bio-Manguinhos	Counterpart
Eduardo Maranhão	Epidemiologist - National School of Public Health	Beneficiary
Leda Bomfim	Bio-Manguinhos	
Wilma Martinho	Bio-Manguinhos	
Fernando Gomes	Professional	
Pedro Jorge Corrêa	Bio-Manguinhos	Counterpart
Claudia Dias	Bio-Manguinhos	Counterpart

1. Opening address - Carlos Médicis Morel, President of FIOCRUZ

Dr. Morel opened the joint Seminar and delivered welcoming remarks. In his address, he mentioned the success of the Biologicals Production Project and he expressed his wish that this Seminar, rather than a closure, would be the beginning of new technical cooperation projects. He added that this cooperation might be extended to other areas and he gave the example of the soon to be inaugurated regional FIOCRUZ unit in Manaus, which presents interesting challenges and possibilities for international cooperation in the Amazon region.

2. Nelson de Oliveira, representative of ABC - Brazilian Cooperation Agency - Ministry of External Relations

After his opening remarks, Mr. Oliveira explained ABC's role in the technical cooperation system. He emphasized the reasons for the successful results of this project - mainly, the seriousness and the commitment of JICA/ABC/FIOCRUZ.

3- Mr. Masaharu Torii - Director of JICA/Rio de Janeiro

Mr.. Torii explained the role of JICA and remarked on the fact that Brazil is the first country in the world in terms of technical cooperation received from Japan. This cooperation, he went on to say, includes training. consultants, donation of equipment and other modes of support.

He also stressed the importance of evaluating this kind of cooperation, and that this survey should always be carried out bilaterally.

4. Mr. Yasuo Mukai, Leader of the Japanese study team

Mr.. Mukai introduced himself, and remarked on the fact that he had formerly worked in the field of technical cooperation in Brazil, and was thus greatly interested in the results of the Biologicals Production Project evaluation.

Mr.. Mukai stressed the importance of the efficiency and effectiveness of technical cooperation and that the pursuit for quality should be permanent. He added that social commitment is fundamental, since ultimately the financial resources allocated are a result of taxes collected in both countries.

He also mentioned that evaluation should be carried out continuously, as feedback for future projects. He added that the objective of this evaluation is, therefore, the identification of points which should be improved for future cooperation.

Finally, he commented on the succesful work carried out with SENAI.

5. Bio-Manguinhos - Counterpart. Mr. Yoshitaka Fujita/JICA

Mr.. Fujita briefed participants on the methodology carried out for the evaluation study, and analyzed its five focal points: efficiency. effectiveness. impact, sustainability and relevance.

He also dwelt on the composition of the work teams, both on the Brazilian and Japanese side.

Mr.. Fujita explained in detail the "logical framework" procedure utilized for the evaluation study and its working schedule. He concluded his presentation with comments on the stages of the evaluation study: preparatory stage; field research; seminar and final report.

6. Dr. João Quental, Director of Bio-Manguinhos/FIOCRUZ

Dr. Quental resumed the afternoon session of the Seminar with a summary of the Biologicals Production Project, which began in 1980, when a new strategy against vaccine-preventable diseases was launched by the Brazilian Government.

He stressed the importance of the project regarding improvement of vaccine production and distribution. He added that the project was timely and thus received incentives from several Government sources: MOH, FIOCRUZ and FINEP, a project-financing agency.

7. Mrs. Valerie R. Chaves, Consultant

Mrs. Chaves said that, as the issues addressed in and the numbers obtained from the evaluation study were on record in the reports distributed by participants and would be dealt with by Mr. Oshimo, she would comment on some overall aspects that had arisen from the interviews and questionnaires.

Mrs. Chaves explained that this was the first time that a comprehensive evaluation was carried out in Brazil within the technical cooperation framework, be it multilateral or bilateral. She stressed the importance and the innovative aspect of interviews carried out with professionals involved with the project at all levels.

Mrs. Chaves went on to remark on an interesting fact which arose from the evaluation study: that views exposed by former officials, professionals, managers and counterparts were compatible with those by people presently working within the project in these categories irrespective of their different academic, technical, scientific, political backgrounds, and despite the 10 years elapsed since completion of the project.

She also mentioned that the results of the evaluation reflected not only the success of the project, but that some flaws, however minor, were also detected and presented in the report, without detracting from the success of the endeavor.

8. Dr. João Quental

Dr. Quental raised a point regarding equipment maintenance. Brazilian technicians emphasized the need for more intensive training in maintenance, specially because there are no technical representatives from the Japanese manufactures of this specific equipment in the Brazilian market. He added that there was a problem concerning the lack of spare parts and he addressed the issue of the need for translating manual on the equipment into English.

He suggested that the TCTP should be further strengthened, as a means of transferring knowledge and technology, through the dispatch of experts and donation of instruments and materials.

He proposed that a monitoring system should be implemented, since new technological improvements developed in Japan should be transferred to Brazilian counterparts.

Dr. Quental remarked that ABC had urged that the flow of information be improved mainly concerning projects submitted to JICA and not approved, as well as the reasons for denial.

Finally, Dr. Quental addressed the issue of future cooperation, which is desirable for production of biologicals such as the acellular pertussis vaccine, the triple viral vaccine and the recombinant DNA Hepatitis B vaccine.

9. Mr. Yasuo Mukai

Mr.. Mukai presented the recommendations contained in the report from the Japanese side and recalled what he had mentioned earlier in the morning session about the objectives of the evaluation study, in that the recommendations are of capital importance for establishing the guidelines for future cooperation.

Mr.. Mukai emphasized the importance of the TCTP and recommended that it be included in the final report.

10. Closing addresses were delivered by Nelson Oliveira and Yasuo Mukai.