

MINUTES OF MEETING
BETWEEN
THE JAPANESE PREPARATORY STUDY TEAM AND
THE AUTHORITIES CONCERNED OF
THE GOVERNMENT OF ROMANIA
ON
JAPANESE TECHNICAL COOPERATION
FOR
THE PROJECT ON THE REDUCTION OF SEISMIC RISK FOR BUILDINGS AND STRUCTURES

The Japanese Preparatory Study Team (hereinafter referred to as "the Team"), organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA"), headed by Mr. Hiroshi Ito, visited Romania from July 11 to July 21, 2001 for the purpose of clarifying the outline and background of the request for the Project on the Reduction of Seismic Risk for Buildings and Structures (hereinafter referred to as "the Project").

During its stay in Romania, the Team exchanged views and had a series of discussions with Romanian authorities concerned.

As a result of the discussions, the Team and Romanian authorities concerned agreed to report to their respective governments the matters referred to in the document attached hereto.

Bucharest, July 20, 2001



Mr. Hiroshi Ito
Leader
Japanese Preparatory Study Team
Japan International Cooperation Agency (JICA)
Japan



H.E. Mrs. Ileana Tureanu
Secretary of State
Ministry of Public Works, Transports and
Housing (MLPTL)
Romania

Attached Document

JICA, as one of Japan's Official Development Assistance implementing bodies, was established on August 1, 1974.

The Team, dispatched by JICA, was kindly hosted by the Ministry of Public Works, Transports and Housing, Government of Romania (hereinafter referred to as "MLPTL").

The Team has been received by H.E.Mr. Ion Selaru, Secretary of State at MLPTL, by H.E.Mrs. Ileana Tureanu, Secretary of State at MLPTL, by Mr. Cristian Teodorescu, Director of Asia-Pacific Division, Ministry of Foreign Affairs, by Prof. Dan Lungu, Ph.D., Director General of the National Building Research Institute INCERC in Bucharest (hereinafter referred to as "INCERC"), by Prof. E. Chesaru, Ph.D., Vice Rector of the Technical University of Civil Engineering, Bucharest (hereinafter referred to as "UTCB").

The discussions were held in Bucharest between Romanian authorities and experts concerned, and the Team.

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Result of the discussion

1. The necessity for the countermeasure for the seismic risk reduction (General Background)

The MLPIL stressed to the Team that the improvement of the technical regulations for the design, execution and use of the constructions, aiming at increasing the safety, and also the rehabilitation of the existing houses, locate the high priority among the main actions to be undertaken by the MLPIL, from the viewpoint of the risk reduction against the seismic disaster.

The MLPIL also explained the urgent necessity for the countermeasure for the seismic risk reduction as follows;

- The MLPIL co-ordinates the Romanian Government Program for seismic retrofitting of buildings in Romania, establishes priorities for retrofitting by its Commission for Seismic Risk Reduction, and – according to the Law approved on June 26, 2001 – funds the necessary construction works. For the fiscal year 2001, 10 tall reinforced concrete apartment buildings located in the center of Bucharest are planned to start retrofitting.
For the next years, the plan provides a significant increase of the annual rate of retrofitting.
- The retrofitting works are urgently required and in spite of classical technologies available, there is a clear lack of innovative technology for increase the speed of retrofitting and decrease their costs.
- It should be accumulated the database required for planning the earthquake resistant structural retrofitting and for writing a new generation of Codes for earthquake resistant structures.
- In addition, Romania must establish the new digital seismic observation and soil characterisation (equipment and know-how) network, that will contribute to quick assessment of damaged buildings to secure human life when earthquakes strike.

The MLPIL also expressed that earthquake countermeasure is one of the important items among the Romanian Government Program.

2. The basic concept of the Project

By means of PCM-PP (Project Cycle Management – Participatory Planning), tentative overall goal, objective, and title of the Project etc. were suggested in discussion as mentioned bellow;

The tentative Project Design Matrix is given in ANNEX 1.

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(1) The title of the Project

The title of the Project (tentative) is "The Reduction of Seismic Risk for Buildings and Structures".

(2) The overall goal

The overall goal of the Project (tentative) is "In case of great earthquake, fewer people are injured and/or killed. / In case of great earthquake, economic losses are significantly reduced".

(3) The objective of the Project

The objective of the Project (tentative) is "In case of great earthquake, damage by building collapse is reduced".

(4) Remarks

Both sides agreed to continue efforts for further development of the contents of the Project Design Matrix before the rationalization and the justification of the Project.

As for the contents of the Project Design Matrix, there should be highlighted items of special interest to be focused on. The contents should be correlated with the budget. The adjustment of the contents should be discussed by both sides later on.

The concept of "Buildings and Structures" on the title of the Project (tentative) is not including the infrastructure such as bridges, highways and so forth.

3. The Organization structure for the Implementation of the Project

The MLPIL explained that the organization for the implementation of the Project is the (Japan-Romania) Center for the Reduction of Seismic Risk for Buildings and Structures (hereinafter referred to as the "Center"), which should be included under the MLPIL structure and authority. That means the implementation of the Project and measures to be taken by Romanian side mentioned below (clause 5) are under the full responsibility of the MLPIL.

The Project sites are to be located at INCERC and UTCB. The MLPIL expressed to take the responsibility in order to utilize the results of the Project, machinery and equipment due to be installed in the sites. The MLPIL explained that the Center should be proposed to the government of Romania to be established by a specific government decision/ law to strengthen the activity of the seismic risk reduction. The maintenance, operation and replacement budget for the machinery/equipment, and also the salary for the persons in charge of the activity for the Center are provided according to this government decision/ law.

The draft of the organization chart, budget allocation plan, personnel assignment plan of the Center will be provided to Japanese side by August 15, 2001.

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(4) Replacement and Spare parts;

Romanian side will supply or replace machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the equipment provided through JICA.

(5) Allocation of budget;

Romanian side will bear the operational expenses necessary for the implementation of the Project, including expenses necessary for transportation of the equipment within Romania as well as installation, operation and maintenance.

(6) Exemption of customs duties, internal taxes etc.;

Romanian side will grant exemption from customs duties, internal taxes and any other charges imposed in Romania on the equipment provided by the Government of Japan.

(7) Claims against Japanese experts;

Romanian side shall bear claims, if any arises, against the Japanese experts engaged in technical cooperation for the Project resulting from, occurring in the course of, or otherwise connected with the discharge of their official functions in Romania except for those arising from the willful misconduct or gross negligence of the Japanese experts.

(8) Privileges, exemptions and benefits;

Romanian side will grant in Romania privileges, exemptions and benefits no less favourable than those granted to experts of third countries or international organizations performing similar missions to the Japanese experts and their families, and grant exemption from the payment of custom duties and charges of any kind imposed on or in connection with the importation of equipment, machinery and materials as well as personal and household effects belonging to the experts and their families.

(9) Self-reliant operation

Romanian side will take necessary measures to ensure that the self-reliant operation of the Project will be sustained during and after the period of Japanese technical cooperation, through the full and active involvement in the Project by all related authorities, beneficiary groups and institutions.

The Team explained that the measures to be taken by Japanese side are as follows;

(1) Dispatch of the Japanese experts

Japanese side will dispatch 2 to 4 long term (one year or more) and 3 to 4 short term experts according to the need.

(2) Training of Romanian personnel in Japan

Japanese side will receive normally 3 to 4 persons per year from the recipient country for the training in Japan to improve their technical skill.

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4. The actual application of the result of the Project

The MLPTL expressed that the MLPTL would practically and immediately apply the results of the Project. For example, collected seismic data, revised standard of earthquake-resistant design, revised reinforcement method and so forth will contribute practically and immediately for the seismic risk reduction by means of law enforcement and execution, training for technical personnel and seminars for ordinary citizens, and to supply the necessary information for quick assessment of damaged buildings to secure human life, etc. The action plan for utilization of the results of the activities within the Project is under the preparation by the MLPTL, that will be given to Japanese side by August 15, 2001.

5. Explanation of the scheme of Project-Type Technical Cooperation and measures to be taken by both sides

The Team explained the scheme of Project-Type Technical Cooperation. Both sides shared the common view that the framework of the Project should be discussed in compliance with the scheme, which is given in ANNEX 2.

The Team suggested the followings to be considered by Romanian side prior to the implementation of the Project.

(1) Assignment of personnel;

(1-1) Counterpart personnel

Romanian side will allocate a sufficient number of counterpart personnel necessary for the effective implementation of the Project. The counterpart personnel should have a good command of English to carry out their duties under the Project.

(1-2) Administrative personnel

Romanian side will allocate a sufficient number of administrative personnel necessary for the effective implementation of the Project.

(2) Buildings and utilities;

Romanian side will provide buildings and utilities (e.g. electricity, telecommunication fee, air conditioning, etc.) necessary for the implementation of the Project and will make necessary arrangements such as construction work (e.g. repair of the crane and flooring in the structural testing hall etc.), and electricity for installation of equipment. This will include office space necessary for the Japanese experts to carry out their duties.

(3) Furniture and consumables;

Romanian side will provide furniture and consumables necessary for the implementation of the

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(3) Provision of Machinery and Equipment

Japanese side will provide the machinery/equipment necessary for the transfer of technology.

6. Explanation of the Project Document

The Team explained that the Project Document would be used for the rationalization and the justification of the Project. The contents of the Project Document will be agreed by both sides and signed before the implementation of the Project. The basic structure of the Project Document is given in ANNEX 3.

Both sides will draft the Project Document as much as possible based on the information compiled in this study before this coming October.

7. Schedule

The Team explained that if the further study were needed, then Japanese side would dispatch another preparatory study team.

The Team emphasized that after getting assurance of the rationalization and the justification of the Project execution, Japanese side would approve the implementation of the Project and dispatch the Implementation study team.

The approval will be decided within Japanese fiscal year 2001 (by the end of March, 2002).

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ANNEX 1. Project Design Matrix (PDM)

Date: 17 July 2001(Ver.1)

Name of the Project: **Reduction of Seismic Risk of Buildings and Structures**

Target Group: **Civilians in Romania**

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumptions
<p>Overall Goal</p> <p>1. In case of great earthquake, fewer people are injured and/ or killed.</p> <p>2. In case of great earthquake, economic losses are significantly reduced.</p> <p>Project Purpose</p> <p>In case of great earthquake, damage by building collapse is reduced.</p>	<p>1. Expected/ actual no. of injured/ killed people</p> <p>2. Expected/ actual losses/ damages</p> <p>Expected/ actual no. of collapsed buildings</p>	<p>1. Project survey report (Risk scenario/ statistics)</p> <p>2. Project survey report (Risk scenario/ statistics)</p> <p>Project survey report (Risk scenario/ statistics)</p>	<p>-MLPTL upholds the project activities.</p> <p>-Great earthquake does not occur before the project is completed.</p> <p>-Unexpected severity of earthquake is not identified.</p>
<p>Outputs</p> <p>1. Effective and low-cost retrofit techniques are developed.</p> <p>2. Regulations/ codes concerning seismic issues are improved.</p> <p>3. Emergency action system is improved for the rescue-concerned persons (policemen, firefighters, etc).</p> <p>4. Disaster prevention skills of the citizens are improved.</p>	<p>1-1.Relative cost of new retrofitting techniques</p> <p>1-2.No. of experiment performed for validating new retrofitting techniques</p> <p>1-3.No. of retrofitting project for which new techniques are applied</p> <p>1-4.No. of seminars for engineers on new retrofitting techniques</p> <p>1-5.No. of manuals/ guidelines on new retrofitting techniques</p> <p>2-1.No. of new/ improved regulations and codes</p> <p>2-2.No. of boreholes</p> <p>2-3.No. of accelerometers</p> <p>3-1.Availability of real-time maps of potential damage</p> <p>3-2.Availability of manuals for quick inspection of damaged buildings</p> <p>4-1.No. of booklets</p> <p>4-2.No. of media release</p>	<p>1-1.Project survey report</p> <p>1-2.Project survey report</p> <p>1-3.Project survey report</p> <p>1-4.Project survey report</p> <p>1-5.Project survey report</p> <p>2-1.Project survey report</p> <p>2-2.Project survey report</p> <p>2-3.Project survey report</p> <p>3-1.Project survey and interview with focus group</p> <p>3-2. Project survey and interview with focus group</p> <p>4-1.Project survey</p> <p>4-2.Project survey (media survey)</p>	<p>-Building structure is properly maintained by residents (Residents do not damage or remove structural elements)</p> <p>-Citizens follow the emergency action program improved by the project.</p> <p>-Rescue-concerned persons (e.g. policemen, firefighters, etc.) follow the emergency program improved by the project</p> <p>-Media cooperate to disseminate seismic education program for the citizens.</p>

<p>Activities</p> <p>1-1. Update experiment equipment to study seismic design</p> <p>1-2. Implement experiment for developing the methods of effective and low-cost retrofit work</p> <p>1-3. Disseminate the information on the methods to civil engineers</p> <p>1-4. Train the civil engineers on newly developed retrofiting methods</p> <p>2-1. Update seismic network</p> <p>2-2. Prepare borehole data</p> <p>2-3. Investigate geotechnical data</p> <p>2-4. Prepare micro/ macrozonation maps</p> <p>2-5. Analyze vulnerability</p> <p>2-6. Prepare and analyze database of buildings</p> <p>2-7. Develop regulations/codes concerning seismic issues</p> <p>2-8. Prepare teaching manuals concerning improved regulations/ codes for building/ civil engineers</p> <p>2-9. Train the civil engineers on the new manuals and code developments</p> <p>3-1. Develop disaster-prevention manuals and real-time potential damage maps for rescue-concerned persons (e.g. policemen, firefighters, etc.)</p> <p>4-1. Develop emergency action programs for the citizens</p> <p>4-2. Disseminate information on earthquake by mass-media (TV, radio, newspaper, etc.)</p>	<p>Inputs</p> <p>-Japanese side</p> <p>-Romanian side</p>	<p>-Economic conditions of each side do not get worse.</p> <p>-Trained engineers remain active for on-going projects.</p> <p>Pre-conditions</p> <p>(No pre-conditions were identified.)</p>
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The General Explanation of the Project-Type Technical Cooperation

The main purpose of JICA's technical cooperation is to develop human resources by transferring technologies in those fields vital to the target countries and then disseminating these technologies through out the countries themselves.

1. Technical Cooperation Project

In this program, Japan's technology, experience and expertise are intensively transferred to counterpart organization of the recipient countries, over a set period of the project duration. JICA projects normally last from three to five years based on the Record of Discussions that JICA concludes with the relevant authorities responsible for the projects. Under this program, JICA provides integrated assistance to the counterpart organization by combining three forms of assistance:

1) Technical training in Japan

Receives normally 3 to 4 persons/year from the recipient country for the training to improve their technical skill.

2) Dispatch of experts

Dispatch 2 to 4 long term (one year or more) and 3 to 4 short term (approximately three months) experts according to the need.

3) Provision of machinery and equipment

Provides equipment and material necessary for the transfer of technology. Recipient country is responsible for the maintenance of the equipment and machinery.

2. Implementation Setup for the Project Activity

The heart of the project is a team of Japanese experts and the counterparts from the counterpart organization which is responsible for implementing the project in the recipient country, who are the direct targets of the technology transfer.

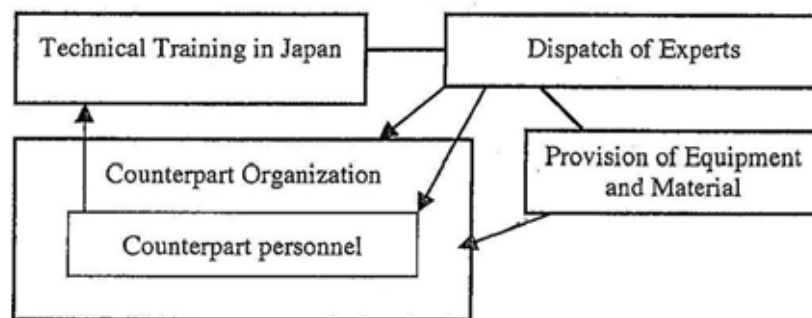
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The Japanese team consists of two (2) to four (4) experts who are dispatched to the recipient country on a long-term basis, as well as short-term experts who are dispatched as the need arises. The team of long term experts normally includes one (1) Chief Advisor and one (1) coordinator who acts as a liaison and is responsible for coordination.

One of the conditions to implement the project is that the counterpart organization appoints necessary number of the qualified counterparts for each Japanese experts. In addition, recipient country appoints a project director, who will bear overall responsibility for the administration and implementation of the project, and a project manager, who will be the person in charge of the actual operations of the part of the recipient country. This manager is normally one of the counterparts of the Japanese team leader.



3. Committee to Determine Operations and Management

A joint coordinating committee is established to make decisions concerning operations and management of the project. This committee follows the overall progress of the technical cooperation program, formulates annual work plans, monitors the need for revising the Tentative Schedule of Implementation, and reviews and exchanges opinions on major issues that arise in connection with the program.

The presiding officer of a relevant government organization in the recipient country is normally appointed to chair the committee. The Japanese team leader and other long-term experts as well as JICA's resident representative take part to the committee.

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Officials from Embassy of Japan participate the committee as observer. Members of the study team dispatched by JICA headquarters participate in the committee's work when it's necessary. For some projects, sub-committees are also set up to address specific matters.

A steering committee is established to discuss the plan and progress of actual operations, managerial and technical matters of the project. Project Manager is appointed to chair the committee. Counterpart personnel of executing organization and Japanese team leader and other long-term experts take part to the committee.

4. Transfer and Dissemination of Technology

The counterpart organization is the direct targets of technical transfer. Moreover, it is very important to disseminate the technology that is transferred to counterpart organization to other personnel, such as other researchers, and through them to people who can actually put this technology to use.

JICA believes that, while a project is being implemented, it is important to help counterpart organization establish a system that ensures the effective transfer and dissemination of technologies.

5. The system that ensures smooth implementation of the Project

Before a project begins, both the government of Japan and that of the recipient country must make the following preparations and arrangements.

Government of Recipient Country

- 1) Provide land, buildings and facilities that will serve as the base for the project.
- 2) Provide counterpart and administrative personnel.
- 3) Take the budgetary measures necessary for implementation of the project.

Government of Japan

- 1) Recruit experts to be dispatched.
- 2) Set up a domestic system that will support the project.

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- 3) Prepare to receive counterpart personnel for training in Japan.
- 4) Draw up a list of equipment to be provided for the project.

6. Types of Projects Not Accommodated by JICA's Technical Cooperation Project.

The main purpose of JICA's Technical Cooperation Project is integrated technology transfer to counterpart organization in recipient countries. Therefore, the following types of projects are not likely to be accommodated under this program.

- Projects that are not part of a national development plan
- Projects that require major capital input for facilities, or equipment
- Projects for which no counterpart personnel available
- Projects for which a specific project site is not available as an operational base
- Projects related to commercial production or joint ventures

7. Project Cycle

1) **Request:** After the project concept is drawn up, the government of the recipient country makes a formal request for assistance to the Japanese government.

2) **Examination and Appraisal:** JICA examines the various aspects of a project to determine whether it is absolutely necessary for the county that formally request it.

As related activity, JICA dispatches preparatory study teams to the recipient country to gain a fuller understanding of the background of the project concepts. In this examination process, JICA considers the county's technical standards, domestic systems, society and economy to determine the project's feasibility.

3) **Preparation:** After JICA concludes its examination, it then begins to recruit and train Japanese experts, decide on equipment, and develop texts. When necessary, JICA also convenes a domestic advisory committee for the project.

4) **Record of Discussions:** JICA then conducts discussions with the authorities responsible for the project in the recipient country regarding the conditions of the cooperation, its scope and duration, and the method with which it will be implemented.

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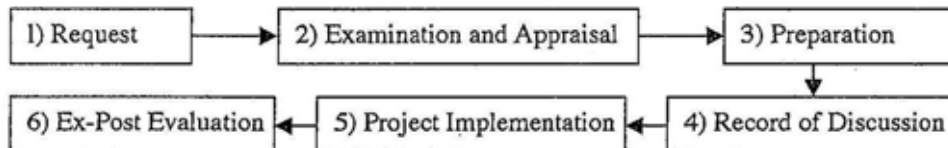
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These details are written up as the Record of Discussions.

5) Project Implementation: JICA then dispatches experts, receives counterpart personnel, and provides equipment and materials in accordance with the project implementation plan stated in the project document. While project being carried out, a joint committee, which is made up of individuals who are involved in the cooperation program, holds regular discussions on the project operation and management. In the final year of the project, JICA conducts a project evaluation at completion. Depending on the results, JICA may extend the cooperation term or provide follow up assistance.

6) Ex-Post Evaluation: About three years after the collaborative project has ended, JICA conducts additional surveys to assess the effectiveness of its involvement and whether or not to resume collaborative efforts. If as a result of these surveys, JICA acknowledges the self-reliant efforts of the recipient country, but determines that some kind of follow up cooperation is needed to bolster post project effectiveness, it may dispatch experts for a short period of time or provide equipment such as spare parts.



8. Project Document

To run the project smoothly and produce satisfactory results, it is a premise that all the necessary issues are fully identified and investigated, prior to the implementation of the project. Thus, JICA's project preparatory study team confirms and discusses the various issues, and compiles the comprehensive project documents (refer to the attached document) with the counterpart organization.

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The General Explanation about the Structure of the Project Document

This project document will jointly be prepared by Japan International Cooperation Agency (JICA) and the authorities concerned of the Government of the recipient country, prior to the implementation of the project.

Title of the project: This will be decided through the discussion during the preparatory study.

1. Introduction

This section will be drafted by JICA, before the signing of the R/D.

2. Background

2.1 Socio-economic context

This section will describe the general economic situation and other related issue such as governmental policy, recent economic trends, etc.

2.2 Description of the sector/sub-sector

This section will describe the problems within sector / sub-sector, and address some of the related issues.

2.3 Host country strategy

This section will describe the governmental strategy (or policy) for development and explain how the problems are situated within this strategy.

2.4 Prior and ongoing project/assistance

This section will describe the prior and ongoing governmental project / external assistance in the field related to the project.

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3. Problem to be addressed and the current situation

3.1 Institutional framework for the sub-sector

Describe the institutional framework of the recipient country.

3.2 Problem to be addressed: the current situation

Describe the current situation and programs that are done in the past. It is also necessary to analyze the causes of the past and current problems and how these are being / were solved.

4. Project strategy

4.1 Project strategy

4.1.1 Overall Project Strategy

This section will describe the objective analysis results obtained from the PCM workshop, and consider other issues clarified through the preparatory study.

4.1.2 Project Strategy

This section will describe the strategy and the field that the project will focus on.

In doing that, the following factors are considered:

1. The number of citizens that benefit / content of this benefit
2. The priorities of the problem
3. Japan's technological advantage
4. Socio-cultural causes of the problems
5. The project's influence on the environment
6. Availability of the Input
7. Economic causes
8. Achievement possibilities
9. Relationship with other aid donors
10. Is Japan recognized as the contributor ?

5. Project design

In the preparatory study mission, the detail of the project design will be formed based on the research outcomes (Especially PCM workshop outcomes).

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5.1 The Overall goal

Overall goal represents the achievement of a broader development goals at the sector related to the project. The goal should have explicit relationship to the recipient country's development plan.

5.2 Project objective

This is the objective to be achieved by the end of the JICA's assistance. It should be described as a specific benefit or impact given to the target group.

5.3 Outputs and Activities

Outputs are objectives to be realized by the project, in order to achieve the project objective. It is necessary to explain, "Why the achievement of the outputs produce the project objective". Normally, several outputs are identified.

Activities are specific actions intended to produce the outputs of the project by effective use of the inputs. It is necessary to explain the correlation between the each or set of the activities and the each output. As the project involves many diverse activities, it is necessary to list all the activities and explain their inter-relationship.

It is also important to describe the index need for monitoring and evaluation and those for the management of the project.

5.4 Strategy for the Activities

The outputs have a sequential inter-relationship. It is necessary to describe that relationship.

5.5 Inputs

Plans for inputs should be drawn up that take into account the personnel, equipment, facilities, and technology required for each of the project activities.

5.5.1 Inputs-from Japanese side

Experts, Provision of the equipment, Training in Japan, and others

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5.5.2 Inputs from the recipient country

Staff allocation, Buildings/facilities/land and equipment, Operational cost, and others

5.6 Important assumption and risk analysis

These risks and the assumptions will be discussed during the preparatory study based on the research findings and the information provided by the authorities concerned and the Government of the recipient country.

5.6.1 Important assumptions

Important assumptions are conditions required for the success of the project but that exist outside the control of the project. If the probability of an important assumption to be satisfied is considered very low, a change of project components must be considered. If the project cannot be changed, this assumption may disturb the success of the project, and the project will eventually fail. Therefore, this section will analyze all the necessary external condition and the probability of the fulfillment of those conditions.

5.6.2 Risk analysis

Risk is the external factors, which could seriously delay or prevent the achievement of the project. If it is predicted that the high possibilities in the occurrence of such risk, a change of project components must be considered. These high possibility risks will thus presumably be reduced or eliminated through the change of project components. As the result, the risks, which have to be described in this section, are the low possibility risks.

5.7 If there are several project objectives

Having several project objectives has to be avoided in order to clarify the focus of the project. If it is unavoidable to have several project objectives, it is necessary to explain its importance and relevance.

5.8 Project management and implementation structure

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The demarcation, relation and position of the relevant organization / person will be clarified in this section. The organization chart of the structure will be also attached.

5.9 Prior obligations and prerequisites

Prior obligations and prerequisites are requirements need to initiate the project. Those prior obligations and prerequisites have to be undertaken by the authorities concerned of the Government of the recipient country, prior to the implementation of the project activities.

6. Project justification

It is important that the justification for the implementation of the project be explained from the viewpoint of efficiency, effectiveness, impact, rationality, and sustainability.

6.1 Effects

The measurement of the project effects are described in terms by the following three aspects.

6.1.1 Expected effects of the project

Expected positive and negative effects of the implementation of the project, either direct or indirect, should be examined as follows.

6.1.1.1 Effects for the development policy framework

Effects on development policy both at national and local levels, etc.

6.1.1.2 Effects for the institutional framework

Effects on the related organizations and groups, changes to laws and regulations, etc.

6.1.1.3 Socio-economic impact

- a) Description of the beneficiaries
- b) Number of the beneficiaries
- c) Contents of the benefits

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6.1.1.4 Effects from the technical standpoint

The description of the technological innovation of the counterparts and the related organizations and sector.

- a) Number of counterparts
- b) Contents of the technology transfer

6.1.1.5 Economical benefits

To analyze economical, environmental, social benefits, improvement of income etc., after the end of the project.

6.1.2 Negative impact

Negative impact to the environment by the implementation of the project should be avoided to occur. This section will analyze this kind of aspect.

6.1.3 Important assumption for the achievement of the project purpose

It should be analyzed whether the given condition is sufficient enough to achieve the project purpose.

6.2 Possibilities and prediction of the achievement of the project purpose

The achievement is described in terms of the following three aspects.

6.2.1 Logical aspect of the plan

If important assumptions are satisfied, the achievement of one objective will lead to the next objective.

6.2.2 Appropriateness of the project objective

Comment whether the objectively verifiable indicators clarify the project objective and make it relevant.

6.2.3. Advantage of Japanese technology

Explain whether the Japanese technological level is high enough to be applied to the project.

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6.3. Efficiency

The achievement is described in terms of the following two aspects.

6.3.1. Operational Cost / Effect

Comment whether equipment with appropriate amount and quality is being (or is expected to be) provided. Additionally, explain whether it is able to buy spare parts for the equipment in the recipient country.

6.3.2. Operational Cost

Comment whether it is feasible, cost-effective in terms of cost value, or compared with the another project of the related field.

6.4. Rationality

This section is analyzed from the following six viewpoints;

6.4.1. Rationality of Japan's ODA

Japan's Official Development Assistance is expected to be fair and beneficial.
Comment whether the project is relevant and fair as Japan's aid project.

6.4.2. Country Plan of Operation

Analyze whether the technical cooperation fulfills the needs that are listed in the Country Plan of Operation .

6.4.3. The need of the recipient country

Describe whether the project objective and overall goal coincide with the needs (e.g. National development plan) of the recipient country.

6.4.4. Participatory Plan

Check whether the plan reflects the opinions of beneficiaries and related people.

6.4.5. Relevant managing system

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Comment if the managing institution is relevant and that the implementing structure is well-organized.

6.4.6. Monitoring and evaluation

Comment whether there is a person in charge of the monitoring and evaluation system and if there is a plan of operation.

6.5. Sustainability

The analysis of the sustainability is being conducted as follows;

6.5.1. Institutional ability

Comment whether the recipient institution has appropriate ability to manage the project effectively.

6.5.2. Financial condition

Address whether the recipient institution is able to manage and continue the activities after the completion of the project.

6.5.3. Social, environmental, and technological acceptability

Comment whether the approach being used in the project can be accepted by the beneficiaries, recipient institution, and citizens of the recipient country.

6.6. Preliminary Evaluation

As stated in the above sections, information obtained through preliminary evaluation is used to verify overall relevance of the project. The five viewpoints mentioned above are the measures with which the verification based on.

7. Annexes

7.1 PDM

The result of the PCM workshop is summarized in the Project Design Matrix and attached to the project document. PDM is also the summary of the project design.

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7.2 Overall Plan of Operations

Plan of the Operations will be prepared based on the basic project design and other information. The Plan of the Operations is an effective tool for project implementation and management, and provides important data for monitoring and evaluation of the project.

7.3 TOR for the Long Term Japanese Experts

The job description, qualification and term are summarized for each long term experts and some short term experts.

7.4 TOR for the Counterpart Personnel

The job description, minimum qualifications and number of the counterpart personnel are summarized in this section.

7.5 List of the equipment which will be provided by JICA

7.6. Detailed information concerning counterpart institution

7.7. The obligation of the counterpart institution

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