

付 属 資 料

1. T/R
2. S/W
3. M/M
4. 主要面談者リスト
5. 打合せ議事録
6. Q/N及び回答
7. 収集資料リスト
8. ローカルコンサルタントリスト
9. 事前評価表案

APPLICATION FORM FOR JAPAN'S DEVELOPMENT STUDIES

Date of entry: month —August- *year* - 2001-

Applicant: the Government of —Iran—

1. Project digest

(1) Project Title : Study on Flood & Debris Flow in the Caspian Coastal Area Focusing on the flood-hit Region in Golestan Province

Enter the project title in English

(2) Location (province/county name): Caspian Coast Provinces (Golestan and Mazandaran, Gilan), Iran

(city/town/village name:—Gorgan—

from the metropolis : about 5 hours/40 min.—ride/flight

(3) Implementing Agency

Name of the Agency: Deputy of watershed Management (WMD)

Enter the name of the implementing agency including such details as the name of the bureau or department.

Number of staff of the Agency: 2000 persons

(on a category basis)

*Budget allocated to the Agency—*20 billion Tomans

Attach an organizational chart and mark the department responsible for the study.

(4) Justification of the project

Provide detailed information of the project regarding the items below

Caspian region includes provinces of Gillan, Mazandran and Golestan (most recent disaster area) which are the representative disaster affected places in Caspian region. The map of area is attached in Appendix A.

During summer time in 2001 because of a disaster over 400 people were died and a lot of infrastructures with a value of approximately 500 billion Rials were lost by debris flow and flooding.

Although in this situation, effective countermeasure has not carried out in this area. The Iranian Government never formulates a master plan for sediment or flood disaster prevention. This area is the representative disaster affected places in Iran. So if we could formulate the master plan, we could spread the technique to other place which have danger of sediment or flood disaster.

- *Sectoral development policy of the national/local government:*

Importance of rural development is well recognized by the government of Iran. Watershed management activities are strongly supported by government at National and provincial level aiming rural development and preserve Natural Resources preservation (water, soil, forests, and rivers).

Evaluation and study department has the responsibility on strategically planning for watershed management due to the large area of land; evaluation and priority decision of watershed management project has not been before.

- *Problems to be solved in the sector.*

The area has vast bare slope and many collapses and countermeasures are not carried out. Because of that, if there was heavy rain once, disaster would occur easily. And also data collection and problems identification did not carry out.

- *Purpose (short-term objective) of the project:*

The purpose of this project is to formulate Master Plan of disaster prevention

- *Goal (long-term objective) of the project:*

The goal of this project is to carry out technology transfer to the counterpart personnel thorough the formulating process.

If it goes successfully, we can formulate Master Plan of disaster prevention at every place.

Further, after implementation of Master Plan, following things will be accomplished.

- Disaster prevention,
- Reducing erosion and sedimentation
- Increasing tourist attraction
- Improving plant cover and vegetation of the land
- Increasing the range land productivity
- Increasing soil fertility of upland areas
- Job creation by tourist attraction.
- Improving the ecological balance of the environment
- Reclamation of the pasture and vegetation cover

- *Prospective beneficiaries:*

The most direct recipients of the project will be the people residing in the rural area whose living conditions are deteriorating due to continuously imposed pressure on the catchments resources, forest and range lands. Particular attention will be offered to the needs of women and for promotion of environment the strategies, methods and tools experienced and refined within the project will be disseminated to benefit nearly 50% of the rural population in Iran or else where.

- *The project's priority in the National Development plan / public Investment program.*

This project has a high priority in the National Development Plan.

(5) *Desirable or Scheduled time of the commencement of the Project:*

Month: April year: 2002

(6) *Expected funding source and/or assistance (including extenal origin) for the project*

From:

National Budget of Iran
Ministry of Jihad-Agriculture
Environmental Agency

Describe the concrete policies for the realization of the project and enter the prospects for realization and funding sources.

(7) *Other relevant projects, if any.*

2. *Terms of Reference of the proposed study*

Please fill in (1) and (2) below. Paying particular attention to the following items.

- *In the case that a study was conducted in the same field in the past. Describe the grounds for requesting this study. The present status of the previous project. And the situation regarding the technology transfer.*
- *Whether there are existing studies regarding this requested study or not.*
- *Coordination with other economic and technical cooperation from Japan*

(1) *Necessity/Justification of the Study.*

One of the area that is justify based on different sectors in Iranian system as having priority is conducting prevention work in the catchments area.

Caspian region includes provinces of Gillan, Mazandran and Golestan (most recent disaster area) which are the representative disaster affected places in Caspian region. The map of area is attached in Appendix A.

The Caspian coastal area is one of the most important areas from the viewpoints of abundant natural resources, agricultural production, tourism resources and so on. The United Nations recognized some parts of this area as precious and protected area. This Area has been developed rapidly since this area is the north part of the North-South corridor. (The establishment of the North-South corridor is one of the most important and urgent national issues in Iran). On the other hand, the Caspian coastal area is prone to natural disasters such as flood and debris flows, so far, this area has been suffering from a lot of flood and debris flows frequently and vulnerable to such disasters. It is feared that the damage in this area by natural disasters will get bigger due to the rapid development and insufficient effort to watershed management. Therefore, immediate making master plan and its appropriate implementation are needed to prevent the devastating disasters. And this project has the height priority from the viewpoint of watershed management, land conservation, soil erosion, landslide, debris flow and environment conservation in the important area in Iran.

During Summer time in 2001 because of a disaster over 400 people were killed (it could have thousands of lives lost if there would not a warning by local governor) and a lot of infrastructures with a value of approximately 500 billion Rials were destroyed by debris flow and flooding in Golestan Province. This was not the first time that this area was facing with these kinds of disaster. Availability of the bare soils in the catchments and endless moveable material in the catchments indicates the potential of debris flow events in future.

During summer in 1999 because of a disaster 47 people were killed and a lot of infrastructures with a value of approximately 300 billion Rials were destroyed by debris flow and flooding. Thanks to the previous flood the night before and traditional warning system. The whole city was under debris and it could have thousands of lives lost. Also during Summer time in 1998 because of a disaster 50 people were killed (in Masuleh close to the previous area) and a lot of infrastructures with a value of approximately 85 billion Rials were destroyed by debris flow and flooding.

Although in this situation, effective countermeasure has not carried out in this area. The Iranian Government never formulates a master plan for sediment or flood disaster prevention.

This area is the representative disaster affected places in Iran. So if we could formulate the master plan, we could spread the technique to other place which have danger of sediment or flood disaster. Considering the disaster of this summer, we should formulate Master Plan for Golestan Province.

- Present conditions of the sector:

Preparation of Master plan and project planning and also Evaluation of watershed conditions are of responsibilities of the Study and Evaluation Department.

(2) Necessity/Justification of the Japanese Technical Cooperation

Since Japan is one of the most advanced countries in developing the technology in preventing disasters caused by debris flow and flood, the cooperation of Japanese expert is considered to be very effective for prevention activities.

(3) Objectives of the Study:

- Describe the objectives of the study in details. Also, indicate who will benefit from the study in as much detail as possible, and describe the beneficial effect in terms of quantity. Enter in a concise manner the goal expected to be achieved in the future by conducting the study.*
- When the requested study is the only input scheme there is in the cooperation program. Enter the same sentences given in the objective of the cooperation program in the summary sheet. When more than one scheme is requested including this one. Describe clearly the role of the requested study.*

The main objective of the Study is to formulate a master plan for sediment and flood disaster prevention of Golestan Province. The master plan should be aimed as follows;

1. It is necessary to review the characteristics of disaster, which occurred in this summer in Golestan Province.
For example, type of disaster (ex. debris flow, mud flow, flood, landslide etc.), condition of sediment, condition of flowing wood, amount of collapsed sediment and so on.
Also investigation on other province of Caspian coast should be carried out to know situation of disaster in this area.
2. The objects, which should be protected, are houses and infrastructures such as roads, bridges, water pipelines.
The purpose of countermeasure against sediment and flood disaster is to protect these things.
The investigation on these objects should be carried out to know the priority of countermeasure.
3. Investigation of whole basin should be carried out, especially upstream area (yield). We should know the causes of disaster before formulate the master plan.
For example, where collapses have occurred, and what are reasons why the collapses have occurred.

4. The possibility study of countermeasures in yield should be carried out from above-mentioned investigation.
If it is possible to carry out them, it is quite effective to disaster prevention.
At same time concrete method of countermeasure in yield should be carried out.
5. Investigations on countermeasures in lower stream area should be carried out.
Countermeasures should be carried out not only in yield but also in lower stream area.
6. At same time non-structural method such as warning systems should be carried out. It is difficult to complete the structural counter measure in vast basin.
Therefore we should carry out non-structural countermeasures.
7. The comprehensive countermeasure plan should be formulated combining these results. That will be Master Plan for this basin. The priority of each method should be examined in the master plan also.

(4) Area to be covered by the Study:

- Enter the name of the target area for the study and attach a rough map to the documents submitted. The attached map should be at a scale that clearly shows the project site. Mark the site in red.
- 4 Million ha

(5) Scope of the Study:

- Enter in a concise manner using an itemized statement.
Study Component

Phase1 is to review and investigate the situation of disaster in this area.

In this stage, it is necessary to investigate the situation of disaster not only Golestan province but also whole Caspian Coast especially in the towns which have experience of disaster. Because we should know the situation of whole area in Caspian coast to get the characteristics of this disaster area.

Phase2 is to investigate countermeasure against disaster. The draft of countermeasure should be written also.

Phase3 is to formulate a comprehensive countermeasure plan for sediment and flood disaster.

(6) Study Schedule:

- Enter the time/period of the study:

Phase I: 1st to 9th month

Review and investigate the situation of disaster in this area.

Phase II: 10th to 15th month

Investigate countermeasure against disaster.

Phase III: 16th to 22nd month

Formulate a comprehensive countermeasure plan.

(7) Expected Major Outputs of the Study:

A comprehensive Master Plan for sediment and flood disaster prevention in Golestan Province.

(8) Possibility to be implemented/ Expected-funding resources:

The project has to be implemented as a short and long term implementation. Because there are abundant moveable material, which can cause debris flow and flood there is an urgent need of implementing quick measures against debris flow. In addition some more essential activities has to be conducted in long period. Ministry of Jihad - Agriculture.

(9) Request of the study to other donor agencies, if any:

Please pay particular attentions the following items:

- *Whether you have requested the same study to other donors or not.*
- *Whether any other donor has already started a similar study in the target area or not.*
- *Presence/absence of cooperation results or plans by third-countries or international agencies for similar projects.*
- *In the case that a study was conducted in the same field in the past, describe the grounds for requesting this study. The present status of the previous project. And the situation regarding the technology transfer.*
- *Whether there are existing studies regarding this requested study or not. (Enter the time/period. Content and concerned agencies of the existing studies.)*

None

(10) Other relevant information

Enter relevant information other than that described above if any.

3. Facilities and information for the study

- (1) Assignment of counterpart personnel of the implementing agency for the study (number, academic background, etc)*

Number and field of Iranian experts to be dispatched to Iran

Fields	Number	Academic
Erosion Control (Planning and coordinator of project)	2	Ms.c
Ecological development and planner	1	Bs.c
Environmental protection expert	-	-
Ecologist and Biologist	-	-
Fish farming		
Forest management	1	Ms.c
Total	4	

(2) Available data, information, documents, maps, etc. related to the study (Please attach the list).

See Appendix II

(3) Information on the security conditions in the Study Area.

Generally the area is quiet safe and there would not be any worry for security matters.

4. Global issues (Environment, Women in Development, Poverty, etc.)

(1) Environmental components (Such as pollution control, water supply, sewage. Environmental management, forestry, biodiversity) of the project, if any.

This Master Plan will include afforestation project.

(2) Anticipated environmental impacts (both natural and social) by the project, if any.

Building structures may give impact to nature condition. So we should be careful not to give so much impact to the nature.

(3) Women as main beneficiaries or not.

This is comprehensive countermeasure. So both men and women will equally take advantage of the proposed study.

(4) Project components, which require special consideration for women (such as gender difference, women specific role, women's participation). If any.

None

(5) Anticipated impacts on women caused by the project, if any.

None

(6) Poverty alleviation components of the project, if any.

Disaster prevention will also affect to improve living situation of poor people.

(7) Any constraints against the low-income people caused by the project.

There could be some constraints against low income people when the fore to use the environment based on its capacity, reduce the number of sheep or goats etc or when they are prevented from deforestation.

5. Undertakings of the Government of Iran (as the recipient country)

In order to facilitate the smooth and efficient conduct of the study, the Government of Iran (as the recipient country) shall take necessary measures.

(1) to secure the safety of the study team.

(2) To permit the members of the study team to enter, leave and sojourn in Iran (the recipient country) in connection with their assignment therein, and exempt them from foreign registration requirements and consular fees.

(3) To exempt the study Team from taxes, duties and any other charges on equipment. Machinery and other materials brought in to and out of Iran (the recipient country) for the conduct of the study.

(4) To exempt the study team from income tax and charges of any kind imposed on or in connection with the implementation of the study.

(5) To provide necessary facilities to the study team for remittance as well as utilization of the funds introduced in Iran (the recipient country) from Japan in connection with the implementation of the study.

(6) To secure permission for entry into private properties or restricted areas for the conduct of the study.

(7) To secure permission for the study team to take all data, documents and necessary materials related to the study out of Iran (the recipient country) to Japan, and

(8) To provide medical services as needed. Its expenses will be chargeable to members of the study team.

6. The Government of Iran (the recipient country) shall bear claims, if any arise against member (S) of the Japanese Study Team resulting from , occurring in the course of or otherwise connected with the discharge of their duties in the implementation of the study, except when such claims arise from gross negligence or willful misconduct on the part of the member of the study team.

7. The WMD (The implementing Agency) shall act as counterpart agency to the Japanese Study Team and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.

8. The WMD (The implementing Agency) will, as the executing agency of the project, take responsibilities that may arise from the products of the Study.

** In the case that Detail Design Study is requested.*

The Government of Iran (the recipient country) assures that the matters referred to in this form will be ensured for the smooth conduct of the Development study by the Japanese Study Team.

Signed :Mehdi Varshabi—

*Title: Deputy of Watershed Management
On behalf of the Government of IRAN*

Date. August 22-2001

Scope of Work

SCOPE OF WORK
FOR
THE STUDY
ON
Flood and Debris Flow in the Caspian Coastal Area
Focusing on the flood-hit Region in Golestan Province

AGREED UPON BETWEEN

Ministry of Jihad-e Agriculture
AND
Japan International Cooperation Agency

Tehran, September 3, 2003

Forood Sharifi

Dr. Forood Sharifi
Deputy for Watershed Management,
Forest, Range and Watershed Management
Organization,
Ministry of Jihad-e-Agriculture

原 義 文

Mr. Hara Yoshifumi
Leader of the Preparatory Study Team
Japan International Cooperation
Agency (JICA)

Scope of Work

I . INTRODUCTION

In response to the official request of the Government of the Islamic Republic of Iran (hereinafter referred to as "Government of Iran"), the Government of Japan decided to conduct the Study on Flood and Debris Flow in the Caspian Coastal Area Focusing on the flood-hit Region in Golestan Province (hereinafter referred to as "the Study") in accordance with the relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programs of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of the Government of Iran.

The present document sets forth the Scope of Work with regard to the Study and will be valid after exchanging Verbal Notes between Government of Iran and Government of Japan concerning implementation of the Study.

II . OBJECTIVES OF THE STUDY

The objectives of the Study are:

1. To formulate a master plan up to the target year 2025 for prevention of flood and debris flow disaster in the Madarsoo River Basin,
2. To create a manual for planning and designing of flood and debris flow countermeasures, and
3. To pursue technology transfer to counterpart personnel in the course of the Study.

III . STUDY AREA

The Study will cover Caspian Coastal Area, mainly focused on the Madarsoo river basin.

IV . SCOPE OF THE STUDY

In order to achieve the objectives mentioned above, the Study will cover the following items:

Phase I: Basic Study and Analysis for formulation of master plan

1. Collection and analysis of existing information (documents, materials, and data)
 - a. natural conditions (topography, geology, meteorology, etc.)
 - b. national and regional socio-economic conditions, financial conditions
 - c. river and slope condition
 - d. existing facilities and measures related to flood and debris flow control including emergency works plan for the fast track implementation (dam, sabo dam, shore protection, etc.)
 - e. infrastructure (road, bridge, etc.)
 - f. relevant legislation/ organizations/ institution
 - g. present watershed management, etc.
2. Review of foregoing, ongoing and prospective plans, studies and projects

Scope of Work

3. Field survey
 - 1) Madarsoo River Basin
 - 2) Flood and Debris flow hit area
 - 3) Other Caspian Coastal Area (two or three rivers)

4. Socio-cultural survey (Madarsoo River Basin)
 - a. population
 - b. settlement and community
 - c. property
 - d. life-style
 - e. industry
 - f. public education
 - g. awareness of flood and debris flow prevention
 - h. awareness of law or regulation

5. Analysis
 - a. hydrological analysis
 - b. sediment loads analysis
 - c. debris flow analysis
 - d. flood run-off analysis
 - e. inundation analysis
 - f. damage analysis
 - g. flood root causes analysis

6. Evaluation of facilities for disaster prevention of flood and debris flow
 - a. allocation
 - b. location
 - c. type
 - d. scale
 - e. materials

7. Socio economical prediction

Phase II: Formulation of Master Plan

<Countermeasure for Debris flow>

1. Criteria for site selection of structural measure for debris flow
 - a. area
 - b. population
 - c. property
 - d. effectiveness of structural measure
 - e. geographical and soil condition
 - f. hydrological condition, etc.

2. Site Selection of structural measure

3. Alternative analysis

4. Environmental Impact Analysis, Social Impact Analysis

5. Design and Cost estimation

Handwritten signature and initials, possibly "Fsh."

Scope of Work

6. Non structural measure (warning and evacuation)

<Countermeasure for Flood>

1. Plan of River Scale
2. Structural measure for planned flow
3. Alternative analysis
4. Environmental Impact Analysis, Social Impact Analysis
5. Design and Cost estimation
6. Non structural measure (warning and evacuation)

<Combination>

1. Organizational and Institutional Plan
 - a. implementation organization
 - b. demarcation of responsibilities among the relevant authorities
 - d. regulatory and institutional arrangements
 - e. enforcement of law and regulations
2. Capacity Development Plan
 - a. capacity building of the organizations concerned
 - b. human resource arrangement and development
 - c. training plan of the staff of the organizations concerned
3. Education and Extension Plan of Local People
 - a. education plan of the local community and people
 - b. enlightenment plan of the local people and visitors
 - c. plan of disaster prevention drill for the local communities and people
4. Implementation Plan
 - a. implementation schedule
 - b. budget allocation
 - c. monitoring and evaluation plan of the implementation
5. Evaluation
 - a. Financial and economic analysis
 - b. Technical evaluation
 - c. Social impact evaluation and
 - d. Environmental impact assessment

Other activities

1. Pilot project
 - a. debris flow disaster warning and evacuation, etc.
2. Manual Creation

Scope of Work

- a. study plan
 - b. criteria for site and facility type selection
 - c. design and calculation
3. Technology Transfer Seminar
 4. Public Hearing
 5. Publication of Newsletter of the Study
 6. Setting up of web-site

V. SCHEDULE OF THE STUDY

The Study will be carried out in accordance with the tentative schedule as attached in the annex. The schedule is tentative and subject to be modified when both parties agree upon any necessity that will arise during the course of the Study.

VI. REPORTS

JICA will prepare and submit the following reports in English to Iran.

1. Inception Report:

Twenty (20) English copies at the commencement of the first field work in Iran

2. Progress Report:

Twenty (20) English copies at the end of the first field work in Iran

3. Interim Report:

Twenty (20) English copies at the commencement of Phase II study

4. Draft Final Report:

Twenty (20) English copies at the end of Phase II study

Iran side shall submit its comments within one (1) month after the receipt of the Draft Final Report.

5. Manual

Twenty (20) English copies at the end of Phase II study

6. Final Report:

Final Report will consist of Executive Summary, Main Report, Supporting Report, and/or Data Book. Twenty (20) English copies will be submitted within one (1) month after the receipt of the comments on the Draft Final Report.

Scope of Work

VII. UNDERTAKINGS OF THE GOVERNMENT OF IRAN

1. To facilitate the smooth conduct of the Study, the Government of Iran shall take the following necessary measures:

(1) To permit the members of the Team to enter, leave and sojourn in Iran for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees;

(2) To exempt the members of the Japanese study team (hereinafter referred to as "the Team") from taxes, duties, and any other charges on equipment, machinery and other materials brought into Iran for the implementation of the Study;

(3) To exempt the members of the Team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Team for their services in connection with the implementation of the Study; and

(4) To provide necessary facilities to the Team for remittance as well as utilization of the funds introduced into Iran from Japan in connection with the implementation of the Study.

2. The Government of Iran shall bear claims, if any, against a member(s) of the Team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the member of the Team.

3. Ministry of Jihad-e Agriculture shall act as a counterpart agency to the Team and also as a coordinating body in relation with other governmental and non-governmental organizations for the smooth implementation of the Study.

4. Ministry of Jihad-e Agriculture shall, at its own expense, provide the Team with the following, in cooperation with other organizations concerned:

- (1) Security-related information as well as measures to ensure the safety of the Team;
- (2) Information on as well as support in obtaining medical service;
- (3) Available data and information related to the Study;
- (4) Counterpart personnel;
- (5) Suitable office space with necessary office equipment (telephone etc.) and furniture;
- (6) Credentials or identification cards; and
- (7) Appropriate numbers of vehicles with drivers.

VIII. CONSULTATION

JICA and Ministry of Jihad-e Agriculture shall consult with each other in respect of any matter that may arise from or in connection with the Study.

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Scope of Work

Annex I

Tentative Schedule

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
Work																										
Phase																										
Report	IC/R		P/R(1)						P/R(2)						IT/R						DF/R				F/R	
Seminar / Workshop								▲					▲								▲					

IC/R: Inception Report, P/R: Progress Report, IT/R: Interim Report,
 DF/R: Draft Final Report, F/R: Final Report

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