
付録

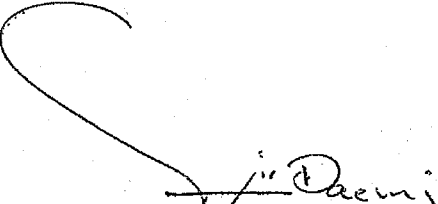
Scope of Work

Minutes of Meetings

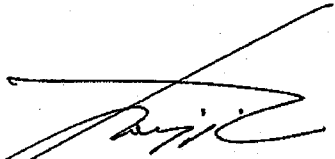
SCOPE OF WORK
FOR
THE STUDY
ON
INTEGRATED WATER RESOURCES MANAGEMENT FOR SEFIDRUD RIVER BASIN
IN THE ISLAMIC REPUBLIC OF IRAN

AGREED UPON BETWEEN
WATER RESOURCES MANAGEMENT COMPANY
THE MINISTRY OF ENERGY
THE ISLAMIC REPUBLIC OF IRAN
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Tehran, February 10, 2007



Mr. Ali R. Daemi
Deputy of Planning and Economics
Affairs
Water Resources Management Company
Ministry of Energy
(WRMC)



Mr. Kenji Nagata
Leader of the Preparatory Study Team
Japan International Cooperation Agency
(JICA)

I. INTRODUCTION

In response to the official request of development studies from the Government of Islamic Republic of Iran (hereinafter referred to as "the Government of Iran"), the Government of Japan decided to conduct technical cooperation for the Study on Integrated Water Resources Management for Sefidrud River Basin in the Islamic Republic of Iran (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 the notification of approval by the JICA headquarters through the JICA Iran office to the Government of Iran.

II. OBJECTIVES OF THE STUDY

The objectives of the Study are:

1. to formulate a master plan for integrated water resources management for Sefidrud River Basin, and;
2. to transfer relevant skills and technologies to personnel concerned with the Study

III. STUDY AREA

The Study will cover the Sefidrud River basin extending to the eight provinces of Tehran, Qazvin, Zanjan, Gilan, Kordestan, Azarbayjan-e Sharghi, Ardabil and Hamedan in Iran. The location of the Study Area is shown in Annex-1.

IV. SCOPE OF THE STUDY

The Study is divided into the following two (2) phases; Phase 1 is for the basic study to understand present and future conditions, and Phase 2 is for formulation of a master plan for integrated water resources management.

The scope of work for the Study shall cover the following items:

Phase 1: Basic Study

1. Collection and review of existing data (incl. site reconnaissance)

Water Resources Management Company (hereinafter referred to as "WRMC") collected the data and information about the items with the mark "*", and will provide those data and information to JICA. Thus, those data and information will be reviewed and additional data collection would be conducted if necessary. The other data and information with no marks will be newly collected in the Study.

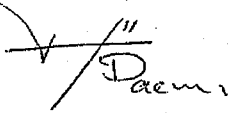
- (1) Socio-economic conditions (administrative division, population, industry, etc.)
- (2) Socio-economic development plans and other development policies/plans
- (3)* Natural conditions (topography, geology, meteorology, hydrology, hydrogeology, environment, etc.)
- (4) Topographical maps, geological maps, land use and vegetation maps, satellite photographs, etc.
- (5)* Meteorological and hydrological data and their monitoring system
- (6)* Water resources potential of surface water and groundwater (quantity and quality)
- (7)* Soil erosion, transportation and deposition
- (8)* Water use conditions and water demand, water rights allocation, facilities and problems/issues
 - ✓ by sector: agriculture (incl. irrigation and fishery), domestic water, industry water, hydropower generation, etc.
 - ✓ by water resources: surface water and groundwater
- (9)* Agriculture: soil reference data, farm product, water users' association, farmer's water use and consciousness on water issue
- (10)* Urban/Rural water services: facilities, water supply amount, organization, operation and maintenance, financial conditions, etc.
- (11)* Existing/on-going/planned projects and studies concerning with water sector
- (12) Existing legal framework for water resources development and management as well as water supply and sanitation
- (13) Existing institutional framework for operation, maintenance and management relevant to water resources
- (14)* Existing database related to water resources management


2. Field survey (if necessary)

- (1) Survey for socio-economic and environmental conditions
- (2) Survey of water facilities such as irrigation works, water supply works, flood protection facilities, groundwater development facilities, etc.

3. Analysis

- (1) Satellite image analysis on land use, surface water, groundwater, etc.
- (2) Rainfall analysis

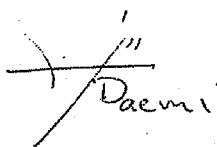
A handwritten signature in black ink, appearing to be "D. Aem", is located at the bottom left of the page.

A handwritten signature in black ink is located at the bottom right of the page.

- (3) Runoff analysis
- (4) Groundwater flow analysis
- (5) Conflict analysis on water resources
4. Water demand projection
 - (1) Socio-economic projection
 - (2) Study for possibility on saving of domestic, agricultural and industrial water
 - (3) Water demand projection for domestic, agricultural and industrial use
5. Water resources potential
 - (1) Available surface water and groundwater (quantity and quality)
 - (2) Hydrological water balance (rainfall, evapotranspiration, surface flow, groundwater flow)
 - (3) Sustainable water resources potential
6. Water balance study between water demand and potential
7. Establishment of GIS data base system for integrated water resources management
8. Evaluation of present laws, institutions and systems for water resources management
9. Stakeholder meetings
 - (1) Problems and issues on water resources management
 - (2) Present water balance and future water resources management policy
 - (3) Causes of conflict on water resources

Phase 2: Formulation of a Master Plan

1. Identification of problems and issues on water resources development and management
 - (1) Surface water development and management
 - (2) Groundwater development and management
 - (3) Operation and maintenance for water facilities
 - (4) Laws, institutions and systems for water resources management
2. Basic policy for water resources development and management
 - (1) Water resources development and management (surface water and groundwater)
 - (2) Water supply and sanitation for urban and rural areas
 - (3) Irrigation water management
 - (4) Water resources conservation
 - (5) Coordination system of water resources development and management
 - (6) Public participation into water resources management


Daemi



3. Formulation of the master plan

- (1) Surface water development and management plan
- (2) Groundwater development and management plan
- (3) Monitoring plan for surface water and groundwater
- (4) River basin management plan
- (5) Plan for laws, institutions and systems for water resources management
- (6) Evaluation of priority of the above plans based on the criteria to be proposed
- (7) Operation and maintenance plan
- (8) Water utilization / allocation plan in drought period and usual period
- (9) Initial environmental examination (IEE)
- (10) Design of water facilities
- (11) Implementation plan
- (12) Cost estimate

4. Evaluation of the master plan

- (1) Technical evaluation
- (2) Economic and financial evaluation
- (3) Environmental and social evaluation

5. Stakeholder meetings

- (1) Alternatives of projects to be proposed
- (2) Water resources allocation plan
- (3) Projects of the master plan

V. SCHEDULE OF THE STUDY

The Study will be carried out in accordance with the tentative schedule as attached in Annex-2. 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

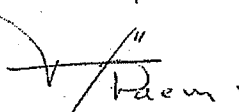
JICA shall prepare and submit following reports in English to the Government of Iran.

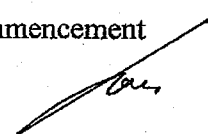
1. Inception Report:

Twenty (20) copies will be submitted at the commencement of the phase 1 work period. This report will contain the schedule and methodology of the Study.

2. Progress Report I:

Twenty (20) copies will be submitted at the time of fourth (4th) month after the commencement





of the phase 1 work period.

3. Interim Report:

Twenty (20) copies will be submitted at the end of the phase 1 work period. This report will summarize the findings of the phase 1 of the Study. The discussion on it will be held at the beginning of the phase 2 work period.

4. Progress Report II:

Twenty (20) copies will be submitted at the time of about fourth (4th) month after the commencement of the phase 2 work period.

5. Draft Final Report:

Twenty (20) copies will be submitted at the end of the phase 2 work period. The Government of Iran shall submit its comments within two (2) month after the receipt of the Draft Final Report.

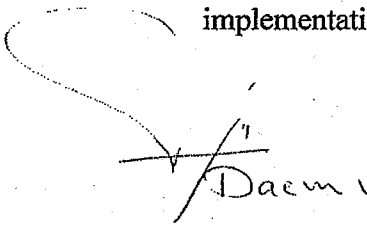
6. Final Report:

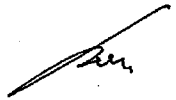
Thirty (30) copies will be submitted within one (1) month after the receipt of the comments on the Draft Final Report.

VII. UNDERTAKINGS OF THE GOVERNMENT OF IRAN

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

- (1) to secure safety of the Japanese study team (hereinafter referred to as "the Team");
- (2) 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;
- (3) to exempt the members of the Team from taxes, duties and any other charges on equipment, machinery and other material brought into and out of Iran for the implementation of the Study;
- (4) 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;
- (5) to provide necessary facilities to the Team for the remittance as well as utilization of the funds introduced into Iran from Japan in connection with the implementation of the Study;
- (6) to secure permission for the Team to enter into private properties or restricted areas for the implementation of the Study;

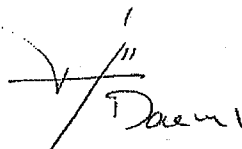

Daem i



- (7) to secure permission for the Team to take all data and documents including photographs and maps related to the Study out of Iran to Japan;
 - (8) to provide medical services as needed. Its expenses will be charged on the members of the Team.
2. The Government of Iran shall bear claims, if any arises, against the members 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 Team.
 3. On the parts of the Government of Iran, the Ministry of Energy shall act as the counterpart agency to the Team for the Study and also as the coordinating body in relation to other governmental and non-governmental organizations concerned for the smooth implementation of the Study.
 4. Ministry of Energy of Iran shall, at its own expense, provide the Team with the following, in cooperation with other organizations concerned:
 - (1) Security-related information on 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 (including maps and photographs) and information related to the Study;
 - (4) Counterpart personnel;
 - (5) Suitable office space with necessary equipment; and
 - (6) Credentials or identification cards.

VIII. CONSULTATION

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



A handwritten signature in black ink, appearing to read 'Daeui', with a large, sweeping flourish above it.



A handwritten signature in black ink, appearing to read 'Aur', with a long, sweeping flourish extending to the right.

Annex 1: Study Area



[Handwritten signature]

[Handwritten signature]

Annex-2: Tentative Schedule of the Study

Tentative Schedule of the Study

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
Phase	Phase 1						Phase 2													
Work in Iran						■	■													
Work in Japan																				■
Report Presentation																				
	▲			▲				▲				▲								▲
	IC/R			PG/R1				IT/R				PG/R2								DF/R
																				F/R

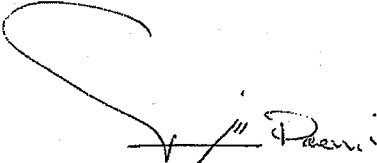
- IC/R: Inception Report
- PG/R1: Progress Report I
- IT/R: Interim Report
- PG/R2: Progress Report II
- DF/R: Draft Final Report
- F/R: Final Report

Daemi

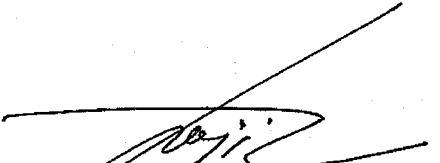
car

MINUTES OF MEETINGS
ON
SCOPE OF WORK
FOR
THE STUDY
ON
INTEGRATED WATER RESOURCES MANAGEMENT FOR SEFIDRUD RIVER BASIN
IN THE ISLAMIC REPUBLIC OF IRAN
AGREED UPON BETWEEN
WATER RESOURCES MANAGEMENT COMPANY
THE MINISTRY OF ENERGY
THE ISLAMIC REPUBLIC OF IRAN
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Tehran, February 10, 2007



Mr. Ali R. Daemi
Deputy of Planning and Economies
Affairs
Water Resources Management Company
Ministry of Energy
(WRMC)



Mr. Kenji Nagata
Leader of the Preparatory Study Team
Japan International Cooperation Agency
(JICA)

I. INTRODUCTION

In response to the official request of development studies from the Government of Islamic Republic of Iran (hereinafter referred to as "the Government of Iran"), the Government of Japan decided to conduct technical cooperation for the Study on Integrated Water Resources Management for Sefidrud River Basin in the Islamic Republic of Iran (hereinafter referred to as "the Study") in accordance with the relevant laws and regulations in force in Japan.

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, dispatched a preparatory study team headed by Mr. Kenji NAGATA (hereinafter referred to as "the Team"), from 2nd February to 1st March 2007 to Iran for discussions on the contents of the Study.

During the stay of the Team in Iran, the Team made a field reconnaissance to the study area, and held a series of meetings with Water Resources Management Company (hereinafter referred to as "WRMC"). The list of participants of the meetings is attached in the Appendix-1.

The Minutes of Meetings have been prepared for the better understanding of the Scope of Work agreed upon between WRMC and the Team (hereinafter referred to as "both sides"). The main items that were discussed and agreed upon between both sides are summarized as follows:

1 Demarcation of the Study

WRMC has been conducting the study for water resources management in Sefidrud River (hereinafter referred to as "the WRMC Study") through subcontracting it to Mahab Ghodss Consulting Engineering Co. (hereinafter referred to as "the Subcontractor"). Both sides agreed the demarcation of the Study as follows:

(1) Collecting data and information in Phase-1

WRMC will provide the JICA Study Team with all the data and information collected through the WRMC Study with no compensation. The JICA Study Team will review those data and information and would conduct additional collection of data and information according to need.

(2) Formulating a master plan in Phase-2

The master plan will be formulated mainly by the JICA Study Team in cooperation with WRMC and the Subcontractor.

(3) Mutual sharing of data and information

WRMC, the JICA Study Team and the Subcontractor will share all the data and information as well as the study/planning process and results concerning with the Study and the WRMC

Study, and will cooperate with each other and make their efforts to formulate the best master plan for Sefidrud River Basin.

The Team requested that the interim report of the WRMC Study be given to the Team before 21st February 2007 to prepare the TOR for the Study immediately, and explained that the preparation of the TOR might be delayed if the submission of the interim report to the Team would be postponed because both sides understood that the interim report was the starting point of the Study. WRMC agreed with it and promised to give the interim report to the Team.

2 Master plan

Both sides confirmed that the master plan included structural and non-structural measures on a master plan level, and would not include detailed plans and designs for particular projects such as rehabilitation of Gilan irrigation facilities and countermeasures for sediment in Manjil Dam Reservoir.

3 GIS database

In response to the WRMC's request, the Team agreed to complete the GIS database that WRMC and the Subcontractor has been preparing, compiling the data and information which would be collected and analyzed in the Study.

4 Simulation models for surface water and groundwater

WRMC strongly requested that simulation models should be developed in the Study for surface water and groundwater analysis in terms of quantity and quality. The Team explained that the first priority should be put on immediate formulation of the master plan, and the simulation models might be developed according to need to formulate the master plan. And the Team explained that the level of the simulation models to be applied in the Study depends on data availability and resources (time and budget), and would be decided based on the survey results by the Team. The Team agreed to convey the request to JICA Headquarters. It is emphasized by WRMC that a type and level of simulation model should be clarified in the inception report.

5 Flood and sediment control measures

WRMC requested that recommendation on flood and sediment control measures be included in the Study. The Team answered that the recommendation on those measures would be made in the Study based on existing data and information as well as previous study reports on flood and sediment.

6 Stakeholder meetings

Both sides confirmed that the master plan should be formulated with consensus building through

stakeholder meetings. The Team suggested that stakeholder meetings would be very important to formulate the master plan, and WRMC agreed to hold frequent stakeholder meetings under their responsibility. The Team promised to assist WRMC in holding those stakeholder meetings.

7 Time schedule of the Study

WRMC requested to shorten the time schedule of the Study to complete the master plan immediately. The Team understood the urgency of the formulation of the master plan, and promised to complete the study as soon as possible. The Team added, however, that immediate completion of the Study depended much on data availability and a halfway job would not be conducted to shorten the time schedule. The Team promised to make efforts to start the Study before September 2007.

8 Technology transfer and capacity building

WRMC requested that counterpart personnel should take advantage of training in Japan related to the Study to promote effective technology transfer. The Team agreed to convey the request to JICA Headquarters.

9 Counterpart team

WRMC agreed to assign a counterpart team, and promised to deliver the tentative list of the counterpart team to the Team by 20th February 2007.

10 Steering committee

WRMC will set up a steering committee under the chairmanship of WRMC for the smooth implementation of the Study. Both sides confirmed that the steering committee would consist of responsible persons in WRMC and relevant regional water authorities. Coordination with relevant organizations will be conducted by WRMC. WRMC promised to submit a tentative list of the steering committee to the Team by 20th February 2007.

11 Environmental and social considerations

The Team explained the JICA's environmental and social consideration guidelines. And WRMC understood the policy of the JICA's guidelines. The Study will follow both the laws / regulations of Iran and the JICA's guidelines.

12 Reports

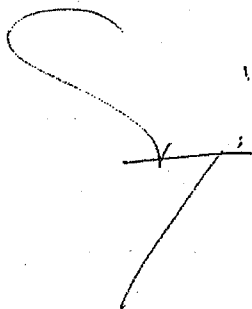
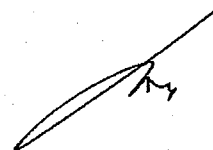
Both sides agreed that the study reports would be open to the public, in principle, in order to achieve maximum use of the Study results.

13 Inception Report

The methodology and policy of the draft inception report will be discussed and finalized by the JICA Study Team and WRMC at the beginning of the Study. Based on the discussion the final inception report will be prepared.

14 Office space

WRMC agreed to provide office space with office furniture, air-conditioning, telephone lines and electricity inside of WRMC in Tehran.

A handwritten signature in black ink, consisting of a large, sweeping initial 'S' followed by a horizontal line and a diagonal stroke.A handwritten signature in black ink, consisting of a large, sweeping initial 'M' followed by a horizontal line and a diagonal stroke.

Appendix-1 List of Participants

Iranian Side

Water Resources Management Company, Ministry of Energy

Mr. Ali R. Daemi, Deputy of Planning and Economics Affairs

Mr. Majid Sayyari, Director General of Budget and Planning

Ms. Bahareh Hafez, Expert, Water Planning and Allocation Department

Mahab Ghodss Consulting Engineering Co.

Mr. Pakdaman Amir Hassan, Head of Water Resources Section

Mr. Bahman Khayyam, Senior Water Resources Specialist

Mr. M. A. Taban, Head of Integrated Water Resources Department

Mr. A. Ghobadi, Senior Expert, Water Resources Department

Japanese Side

The Preparatory Study Team, JICA

Mr. Kenji NAGATA, Leader

Ms. Hiromi SAWADA, Cooperation planning

Mr. Seiichi YAMAKAWA, Water Resources Development and Management (surface water/
groundwater)

Mr. Takayoshi ITOIGAWA, Water Resources Management Policy and System / environmental
and social consideration

JICA Iran Office

Mr. Hiroshi KURAKATA, Resident Representative

Mr. Yoshinori NAKAYAMA, Project Formulation Advisor

Mr. Babak SAMIEI, Program Officer

MINUTES OF MEETINGS

of

The Scoping of Initial Environmental Examination

for

*The Study on Integrated Water Resources Management for Sefidrud River
Basin in the Islamic Republic of Iran*

AGREED UPON

BETWEEN

Water Resources Management Company

Ministry of Energy

The Islamic Republic of Iran

and

The Study Team of Japan International Cooperation Agency

Tehran,

September 25, 2007

Mr. Majid Sayyari
Director General
Office of Project and Planning
Water Resources Management Company

Mr. Tahara Teruo
Leader of the Study Team
Japan International Cooperation Agency

M. Sayyari

Rajeev

I. Introduction

The Government of Japan, in response to the official request of the Government of Islamic Republic of Iran (hereinafter referred to as "the Government of Iran"), decided to conduct the Study on Integrated Water Resources Management for Sefidrud River Basin in the Islamic Republic of Iran (hereinafter referred to as "the Study") and the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Study Team to Iran from February 2 to March 1, 2007.

Water Resources Management Company of the Ministry of Energy (hereinafter referred to as "WRMC") and the Preparatory Study Team signed on and exchanged the agreement on the Scope of Work (hereinafter referred to as "S/W") and Minutes of Meetings (hereinafter referred to as "M/M") for the Study.

JICA has prepared the Study according to the S/W and M/M, and dispatched the JICA Study Team, headed by Mr. Tahara Teruo of CTI Engineering International Co., Ltd., to Iran from August 9, 2007.

The Study Team explained the overall activities described in the Inception Report and the Scoping of Initial Environmental Examination (hereinafter referred to as "IEE") to Iranian stakeholder, steering committee, and Environment and Water Resources Quality Office in WRMC (hereinafter referred to as "Iranian Side") in the meeting that were held on 20th of August and 12th of September 2007. Iranian side and the JICA Study Team (hereinafter referred to as "Both Sides") had finally agreed on the scoping of IEE. List of participants are shown in ATTACHMENT 1 and ATTACHMENT 2.

II. Discussions

1. Definition

Both side agreed on that stake holder should be composed of Studies and Evaluation Bureau of WRMC in Ministry of Energy and the representative of Regional Water Company (hereinafter referred to as "RWC") of seven provinces of Zanjan, Kordestan, East Azarbayegan, Gilan, Qazvin, Ardebil, and Tehran.

2. Scoping of IEE

The both sides confirmed that "Environmental Primary Estimate" is required in Iranian regulation. It is synonymous with "IEE" of JICA regulation, so IEE will be conducted in the Study.

IEE would be conducted for getting the environmental condition in the Sefidrud River Basin. Terms of Reference (TOR) of IEE including Scoping are shown in ATTACHMENT 3.

Items of reserved area and dangerous plants will be added in "Natural Environment" in TOR 2.2.2 Scoping.

Positive impacts will be also investigated in TOR 2.2.2 Scoping.

It shall be added "objectives", "schedule", and "environmental standards" of Iran in Inception Report in TOR 2.4 Reporting.

3. Report submission

The Final Report of IEE shall be submitted to "Environment and Water Resources Quality Office in WRMC.

ATTACHMENT 1

List of participants in the Meeting on August 20, 2007 at the meeting room of WRMC.

[Iranian Side]

Mr. Majid Sayyari	Director General	Office of Project and Planning, WRMC
Mr. Davoud Khatib	Expert	Office of Project and Planning, WRMC
Mr. Ahmad Rajaei	Expert	Office of Project and Planning, WRMC
Mr. Yamashita Yoshihiro	JICA Expert	WRMC

List of participants of stakeholder in Stakeholders' meeting on 20th of August

	Full Name	Affiliation	Position	Contact
1	Mr. Mohammad-Ghasem Safice	Qazvin RWC	Deputy of water resource planning	081-2223-7219
2	Mr. Mohammad-Ali Banisefid	Qazvin RWC	Planning & development	0912-181-7151
3	Mr. Kazem Aziz Moghaddam	Ardebil RWC	Engineering 7 technical office	0914-1529-414
4	Mr. Kourosh Kolahchi	Tehran RWC	Manager / planning office	021-8896-8014
5	Mr. Ali Mozafarian	Tehran RWC	Planning expert	021-8896-8014
6	Mr. Mojtaba Jalilzad	East Azerbaijan RWC	Manager / water resource planning office	041-1338-2410
7	Ms. Soheila mafakheri	Kordestan RWC	Expert / water resources planning	087-1662-2950
8	Mr. Jafar Fahimi	Zanjan RWC	Director general	034-1424-1041
9	Mr. Mohammad-Taghi Talebpoor	Zanjan RWC	Exploitation manager	034-1424-1041
10	Mr. Ali Karimi	Zanjan RWC	Technical consultant	034-1424-1041
11	Mr. Ali Abbasi	Zanjan RWC	Manager / water resources preservation office	034-1424-1041
12	Mr. Majid Akbari	R&D	WRMC	021-8890-1081
13	Mr. Fazl-Ali Jafarian	R&D	WRMC	021-8890-9137
14	Ms. Sanaz Dashti	Mahab Ghodss	Expert of water resources	021-2396-5229
15	Mr. Amir Hassan Pakdaman	Mahab Ghodss	Manager / water resources & demands	021-2396-1221
16	Mr. Abdolali Ghobadi	Mahab Ghodss	Water resources & demands	021-2396-1221
17	Mr. Bahman Khayyam	Mahab Ghodss	Water resources & demands	021-2396-1228
18	Mr. Vahid karami	Mahab Ghodss	Irrigation & drainage	021-2396-1351

[Japanese Side]

Mr. Tahara Teruo	Team Leader	JICA Study Team
Mr. Matsumoto Shinichiro	Deputy Team Leader	JICA Study Team
Mr. Morishita Kanehiro	IWRM Planning Specialist	JICA Study Team
Mr. Yajima Makoto	Conflict Management Specialist	JICA Study Team
Mr. Daisaku Kiyota	Environmental Specialist	JICA Study Team
Mr. Onuma Takashi	Administrative Coordinator	JICA Study Team
Mr. Wakui Junji	Assistant Resident Representative	JICA Iran Office

ATTACHMENT 2

List of participants in the Meeting on 12th of September, 2007 at the meeting room of WRMC.

[Iranian Side]

Mr. Majid Sayyari	Director General	Office of Project and Planning, WRMC
Mr. Davoud Khatib	Expert	Office of Project and Planning, WRMC
Mr. Ahmad Rajaei	Expert	Office of Project and Planning, WRMC
Mr. Yamashita Yoshihiro	JICA Expert	WRMC

List of participants of stakeholder in Stakeholders' meeting on 12th of September

No.	Full Name	Affiliation	Position	Contact
1	Ms. Soheila Mafakhary	Kordestan RWC	Expert, Water Resources Planning,	087-1662-2949
2	Mr. Iraj Hamidzadeh	East Azarbayejan RWC	Manager, Water Resources Planning Office	0914-1165-975
3	Mr. Kazem Azizmoghaddam	Ardebil RWC	Manager, Water Resources Planning & Development Office	0914-2529-414
4	Mr. Mohammad Ali Banisefid	Qazvin RWC	Deputy, Development & Planning	0912-181-7151
5	Mr. Amir Kakahaji	Qazvin RWC	Engineering Office	028-1223-9662
6	Mr. Mohammad Ghasem Safiee	Qazvin RWC	Manager, Basic Water Resources Studies Office	028-1223-7219
7	Mr. Mohammad Talebpoor	Zanjan RWC	Deputy, Exploitation & Subscribers Affairs	0912-2429-608
8	Mr. Ali Abbasi	Zanjan RWC	Manager, Water Resources Protection Office	0912-3425-272
9	Ms. Mandana Abedini	Zanjan RWC	Manager, Coordination	0912-5422-866
10	Ms. Sedigheh Rasouli	Gilan RWC	Manager, Water Resources Planning Office	013-1666-7257
11	Mr. Mojtaba Jalilzadeh	East Azarbayejan RWC	Manager, Water Resources Planning Office	041-1338-2410
12	Mr. Majid Akbary	WRMC	Expert, Water resources Basic Studies Office	021-8890-1819
13	Mr. Fazl --Ali Jafarian	WRMC	Expert, Water resources Basic Studies Office	021-8890-9137
14	Mr. Amir Hassan Pakdaman	Mahab Ghodss	Manager, Water Resources & Demands	021-2396-1221
15	Mr. Abdolali Ghobadi	Mahab Ghodss	Senior Expert	021-2396-1221
16	Ms. Sanaz Dashti	Mahab Ghodss	Groundwater Senior Expert	021-2396-5229
17	Mr. Vahid Karami	Mahab Ghodss	Manager, Irrigation & Drainage	021-2396-1351

[Japanese Side]

Mr. Tahara Teruo	Team Leader	JICA Study Team
Mr. Matsumoto Shinichiro	Deputy Team Leader	JICA Study Team
Mr. Yajima Makoto	Conflict Management Specialist	JICA Study Team
Mr. Takafumi Szuki	Agriculture/Irrigation Specialist	JICA Study Team
Mr. Yasushi Osato	Organization/ Institution Specialist	JICA Study Team
Mr. Daisaku Kiyota	Environmental Specialist	JICA Study Team
Mr. Onuma Takashi	Administrative Coordinator	JICA Study Team

ATTACHMENT 3: Scoping of IEE

**TERMS OF REFERENCE (TOR)
FOR
INITIAL ENVIRONMENTAL EXAMINATION (IEE)**

1. Implementation Policy of IEE

1.1 General

The objective of the **INITIAL ENVIRONMENTAL EXAMINATION** (hereinafter referred to as **IEE**) is anticipating examining the consequences of Master Plan prior to the project stage and will be applied to the project of "INTEGRATED WATER RESOURCES MANAGEMENT FOR SEFIEDRUD RIVER BASIN IN THE ISLAMIC REPUBLIC OF IRAN (hereinafter referred to as **The Study**)"

IEE will be conducted for the generic master plan study proposed by JICA Study Team with the guidelines of Islamic Republic of Iran and/or JICA guidelines.

1.2 Entrusting of IEE

The JICA Study Team will entrust part of **IEE** studies to a local consultant (hereinafter referred to as **Contractor**) on contract basis as described in the "2. Scope of Work for IEE)".

1.3 Study Process of IEE

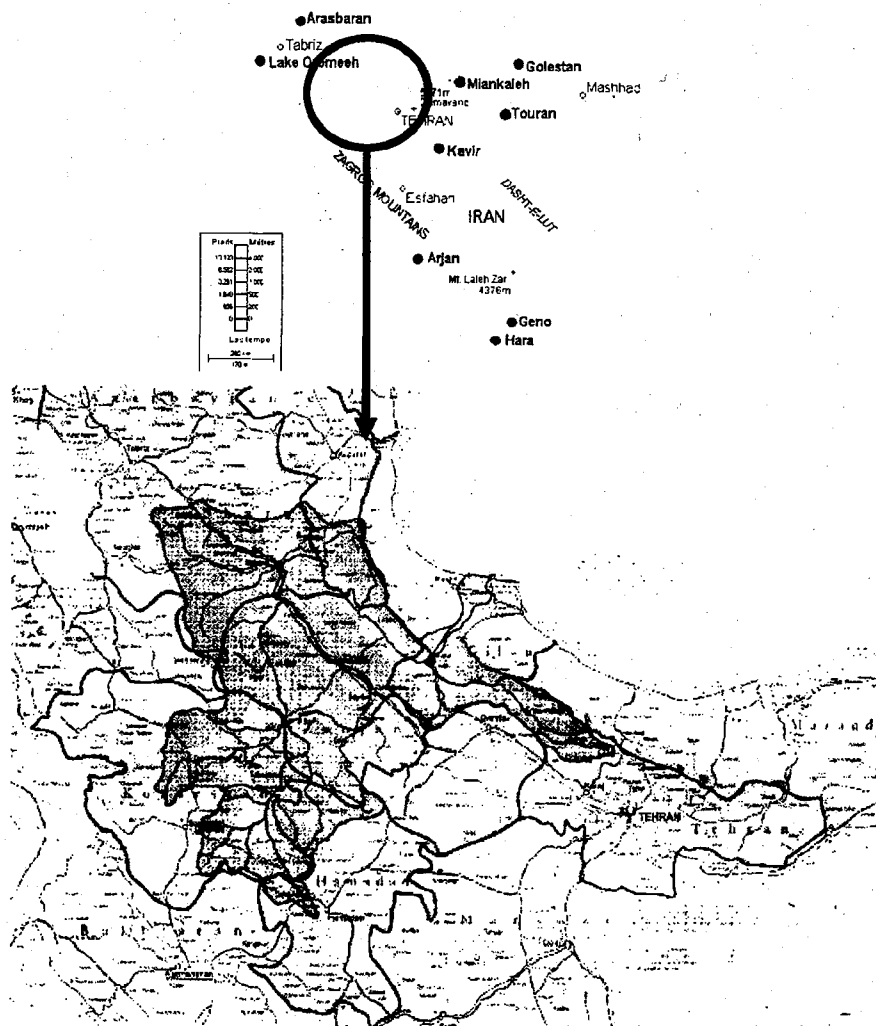
The **IEE** will be conducted for generic master plan. The study process is shown below.

- **Scoping:** JICA study team will prepare a scoping report in consultation with the project proponent. The scoping report was discussed with stakeholders in the stakeholder meeting held on 20th of August and 12th of September 2007.
- **Implementation of IEE:** the contractor and the JICA Study Team will conduct the **IEE**, taking into consideration the opinions/recommendations addressed in the first and second stakeholder meeting. In the course of the study, interim results will be discussed with stakeholders in the third stakeholder meeting that will be held in the beginning of December 2007.
- **Preparation of IEE Report:** the contractor and the JICA Study Team will prepare a draft final report, taking into consideration the opinions/recommendations addressed in the above stakeholder meeting. The draft final report will be discussed with stakeholders in the fourth stakeholder meeting that will be held in the beginning of February 2008. The final report will be prepared, taking into consideration the opinions/recommendations addressed in the above fourth meeting.

2. Scope of Work for IEE

2.1 Target Area

The IEE shall be conducted for the river basins of SEFIDRUD, and related 8 provinces of East Azerbaijan, Gilan, Hamadan, Kordestan, Qazvin, Tehran, Zanjan, and Ardebil in the Islamic Republic of Iran.



2.2 Study Works

2.2.1 Collection of Relevant Documents and Data

The Contractor shall collect existing baseline data/information related to natural and social environments, environmental regulations/guidelines, and water quality standards. The Contractor shall summarize the documents and regulations for review by the JICA Study Team.

2.2.2 Scoping

Scoping is to identify the extent of possible significant impacts caused by the Study and to establish prediction/evaluation methods of the impacts. In more detail, Scoping shall include the following works:

- (i) to identify impact sources of the project activities,
- (ii) to identify environmental items which may be subject to significant negative impacts and,
- (iii) to establish prediction/evaluation method of the impacts.

JICA Study Team established the scoping in the consultation of stakeholder meeting. The Contractor shall conduct the above scoping works based on scoping of JICA Study Team and shall investigate the following items with the analyses of the collected data/information and field reconnaissance.

(1) Identification of Negative Impact Sources

Negative impacts will be generated by the necessary project activities to implement the generic master plan. The impact sources of each component will be identified for pre-construction stages. The contractor shall identify impact sources to be analyzed.

(2) Item to be investigated

The contractor shall identify environmental items which may be affected by significant negative impacts from among the following ones, but not limited to them.

- Social Environment: (i) resettlement, (ii) economic activities, (iii) land use, (iv) separation of community, (v) transportation and living facilities and services, (vi) poverty and minority, (vii) regional imbalance of project benefits, (viii) historical and cultural assets, (ix) regional conflicts, (x) water right and common right, (xi) public hygiene, (xii) disaster and epidemic.
- Natural Environment: (i) topography and geology, (ii) groundwater, (iii) soil erosion, (iv) hydrological regime, (v) coastal and ocean environment, (vi) fauna/flora and biological diversity, (vii) climate, (viii) landscape, (ix) global warming, (x) preserved area, (xi) dangerous plants
- Public Nuisance: (i) air pollution, (ii) water pollution, (iii) soil pollution, (iv) solid waste, (v) noise and vibration, (vi) land subsidence, (vii) odor, (viii) pollution of riverbed materials, (ix) traffic accident.

The degree/extent of negative impacts shall be shown as much clearly as possible, for example, by matrix system with score, so that really important environmental items can be selected.

(3) Identification of Positive Impacts

Positive impacts will be also investigated by this Master Plan, especially in the social environment.

2.2.3 Implementation of IEE

The Contractor shall prepare IEE for the generic master plan, based on the existing data, field reconnaissance, field observation on natural environment (as required), results of social environmental survey for resettlement and engineering studies, and other information.

The IEE study shall include the following works:

- (i) to predict and evaluate negative impacts caused by master plan,
- (ii) to propose mitigation measures of the negative impacts and
- (iii) to propose monitoring plan of the negative impacts.
- (iv) to investigate positive impacts

2.3 Attendance in Stakeholder Meeting

The Contractor shall attend the stakeholder meetings which will be held in the course of the master plan study, and provide the JICA Study Team and project proponent with necessary technical support in the meeting.

2.4 Reporting

The Contractor shall submit the following reports in English to the JICA Study Team at the designated time. The JICA Study Team will examine them for approval to the next step, after consultation with the project proponent.

(1) Inception Report (3 copies)

The Contractor shall prepare five (5) copies of Inception Report and submit them to the JICA Study Team within 2 weeks after signing of the contract. The Inception Report shall contain the following descriptions.

- (a) Objectives
- (b) Schedule
- (c) Environmental standards in Iran
- (d) Environmental Impact Statement System (EIS) and laws/ regulations/ policies related to resettlement of Iran
- (e) Scoping
- (f) Others, if any

(2) Interim Report (3 copies)

The Contractor shall prepare the Interim Report and submit it to the JICA Study Team by the end of November 2007. The Interim Report shall contain the interim results of the IEE.

(3) Draft Final Report (3 copies)

The Contractor shall prepare the Draft Final Report and submit it to the JICA Study Team by the end of January 2008. The Draft Final Report shall contain all the results of IEE study. The JICA Study Team will review the report and make comments.

(4) **Final Report (10 copies and CD)**

The Contractor shall finalize the Draft Final Report based on the comments by the JICA Study Team and submit it to the JICA Study Team by end of February 2008.

4. Equipment, Materials and Labor

All equipment, transportation vehicles, materials and labor required for all the above-mentioned works shall be provided by the Contractor, as defined in the contract. Those costs shall be included in the cost estimate. The contract is based on Lump sum basis.

5. Any Other Issues

Any other issues related to the conduct of the IEE not mentioned above shall be settled with mutual agreement between the JICA Study Team and the Contractor.

MINUTES OF MEETINGS

on

The Inception Report

of

THE STUDY

on

**Integrated Water Resources Management for Sefidrud River Basin
in the Islamic Republic of Iran**

AGREED UPON BETWEEN

Water Resources Management Company

Ministry of Energy

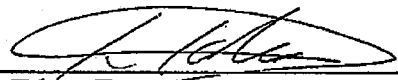
The Islamic Republic of Iran

and

Japan International Cooperation Agency

Tehran, October 2, 2007

Mr. Majid Sayyari
Director General
Office of Project and Planning
Water Resources Management Company

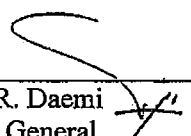


Mr. Tahara Teruo
Leader of the Study Team
Japan International Cooperation Agency

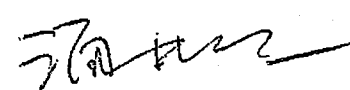


M. Sayyari


Witness



Mr. Ali R. Daemi
Director General
General Planning Department
Ministry of Energy



Mr. Wakui Junji
Assistant Resident Representative
Iran Office
Japan International Cooperation Agency



I. Introduction

The Government of Japan, in response to the official request of the Government of Islamic Republic of Iran (hereinafter referred to as "the Government of Iran"), decided to conduct the Study on Integrated Water Resources Management for Sefidrud River Basin in the Islamic Republic of Iran (hereinafter referred to as "the Study") and the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Study Team to Iran from February 2 to March 1, 2007.

Water Resources Management Company of the Ministry of Energy (hereinafter referred to as "WRMC") and the Preparatory Study Team signed on and exchanged agreement on the Scope of Work (hereinafter referred to as "S/W") and Minutes of Meetings (hereinafter referred to as "M/M") for the Study.

JICA has prepared the Study according to the S/W and M/M, and dispatched the JICA Study Team, headed by Mr. TAHARA Teruo of CTI Engineering International Co., Ltd., to Iran from August 9, 2007.

At the commencement of the Study, the Study Team explained the overall activities described in the Inception Report to Iranian stakeholders (composed of the representative of seven provinces of Zanjan, Kordestan, East Azerbaijan, Gilan, Qazvin, Ardebil, and Tehran), steering committee (hereinafter referred to as "Iranian Side") in the meeting that were held on 20th of August and 12th of September 2007. List of participants of the stakeholder meeting are shown in ATTACHMENT 1 and ATTACHMENT 2.

After the stakeholder meetings, Iranian side and the JICA Study Team (hereinafter referred to as "Both Sides") had also a series of discussions on the comments from stakeholders. Both Sides finally agreed upon the study components and study plan contained in the Inception Report. List of participants are shown in ATTACHMENT 3.

II. Discussions

1. The target of accuracy of satellite images will be 1/25,000 scale, if such data available.
2. Table 3.12 will be adjusted in accordance with the number of project in the Mahb Ghodss final report.

ATTACHMENT 1

List of participants in the Meeting on August 20, 2007 at the meeting room of WRMC.

[Iranian Side]

Mr. Majid Sayyari	Director General	Office of Project and Planning, WRMC
Mr. Davoud Khatib	Expert	Office of Project and Planning, WRMC
Mr. Yamashita Yoshihiro	JICA Expert	WRMC

List of participants of in Steering Committee and Stakeholders' meeting on 20th of August

	Full Name	Affiliation	Position	Contact
1	Mr. Mohammad-Ghasem Safiee	Qazvin RWC	Deputy of water resource planning	081-2223-7219
2	Mr. Mohammad-Ali Banisefid	Qazvin RWC	Planning & development	0912-181-7151
3	Mr. Kazem Aziz Moghaddam	Ardebil RWC	Engineering 7 technical office	0914-1529-414
4	Mr. Kourosh Kolahchi	Tehran RWC	Manager / planning office	021-8896-8014
5	Mr. Ali Mozafarian	Tehran RWC	Planning expert	021-8896-8014
6	Mr. Mojtaba Jalilzad	East Azerbaijan RWC	Manager / water resource planning office	041-1338-2410
7	Ms. Soheila mafakheri	Kordestan RWC	Expert / water resources planning	087-1662-2950
8	Mr. Jafar Fahimi	Zanjan RWC	Director general	034-1424-1041
9	Mr. Mohammad-Taghi Talebpoor	Zanjan RWC	Exploitation manager	034-1424-1041
10	Mr. Ali Karimi	Zanjan RWC	Technical consultant	034-1424-1041
11	Mr. Ali Abbasi	Zanjan RWC	Manager / water resources preservation office	034-1424-1041
12	Mr. Majid Akbari	R&D	WRMC	021-8890-1081
13	Mr. Fazl-Ali Jafarian	R&D	WRMC	021-8890-9137
14	Ms. Sanaz Dashti	Mahab Ghodss	Expert of water resources	021-2396-5229
15	Mr. Amir Hassan Pakdaman	Mahab Ghodss	Manager / water resources & demands	021-2396-1221
16	Mr. Abdolali Ghobadi	Mahab Ghodss	Water resources & demands	021-2396-1221
17	Mr. Bahman Khayyam	Mahab Ghodss	Water resources & demands	021-2396-1228
18	Mr. Vahid karami	Ghodss	Irrigation & drainage	021-2396-1351

[Japanese Side]

Mr. Tahara Teruo	Team Leader	JICA Study Team
Mr. Matsumoto Shinichiro	Deputy Team Leader	JICA Study Team
Mr. Morishita Kanehiro	IWRM Planning Specialist	JICA Study Team
Mr. Yajima Makoto	Conflict Management Specialist	JICA Study Team
Mr. Daisaku Kiyota	Environmental Specialist	JICA Study Team
Mr. Onuma Takashi	Administrative Coordinator	JICA Study Team

Mr. Wakui Junji	Assistant Resident Representative	JICA Iran Office
-----------------	-----------------------------------	------------------

ATTACHMENT 2

List of participants in the Meeting on 12th of September, 2007 at the meeting room of WRMC.

[Iranian Side]

Mr. Majid Sayyari	Director General	Office of Project and Planning, WRMC
Mr. Davoud Khatib	Expert	Office of Project and Planning, WRMC
Mr. Yamashita Yoshihiro	JICA Expert	WRMC

List of participants of in Steering Committee and Stakeholders' meeting on 12th of September

No.	Full Name	Affiliation	Position	Contact
1	Ms. Soheila Mafakhary	Kordestan RWC	Expert, Water Resources Planning,	087-1662-2949
2	Mr. Iraj Hamidzadeh	East Azarbayejan RWC	Manager, Water Resources Planning Office	0914-1165-975
3	Mr. Kazem Azizmoghaddam	Ardebil RWC	Manager, Water Resources Planning & Development Office	0914-2529-414
4	Mr. Mohammad Ali Banisefid	Qazvin RWC	Deputy, Development & Planning	0912-181-7151
5	Mr. Amir Kakahaji	Qazvin RWC	Engineering Office	028-1223-9662
6	Mr. Mohammad Ghasem Safiee	Qazvin RWC	Manager, Basic Water Resources Studies Office	028-1223-7219
7	Mr. Mohammad Talebpour	Zanjan RWC	Deputy, Exploitation & Subscribers Affairs	0912-2429-608
8	Mr. Ali Abbasi	Zanjan RWC	Manager, Water Resources Protection Office	0912-3425-272
9	Ms. Mandana Abedini	Zanjan RWC	Manager, Coordination	0912-5422-866
10	Ms. Sedigheh Rasouli	Gilan RWC	Manager, Water Resources Planning Office	013-1666-7257
11	Mr. Mojtaba Jalilzadeh	East Azarbayejan RWC	Manager, Water Resources Planning Office	041-1338-2410
12	Mr. Majid Akbary	WRMC	Expert, Water resources Basic Studies Office	021-8890-1819
13	Mr. Fazl -Ali Jafarian	WRMC	Expert, Water resources Basic Studies Office	021-8890-9137
14	Mr. Amir Hassan Pakdaman	Mahab Ghodss	Manager, Water Resources & Demands	021-2396-1221
15	Mr. Abdolali Ghobadi	Mahab Ghodss	Senior Expert	021-2396-1221
16	Ms. Sanaz Dashti	Mahab Ghodss	Groundwater Senior Expert	021-2396-5229
17	Mr. Vahid Karami	Mahab Ghodss	Manager, Irrigation & Drainage	021-2396-1351

[Japanese Side]

Mr. Tahara Teruo	Team Leader	JICA Study Team
Mr. Matsumoto Shinichiro	Deputy Team Leader	JICA Study Team
Mr. Yajima Makoto	Conflict Management Specialist	JICA Study Team
Mr. Takafumi Szuki	Agriculture/Irrigation Specialist	JICA Study Team
Mr. Yasushi Osato	Organization/ Institution Specialist	JICA Study Team
Mr. Daisaku Kiyota	Environmental Specialist	JICA Study Team
Mr. Onuma Takashi	Administrative Coordinator	JICA Study Team

ATTACHMENT 3

1. List of participants in the Meeting on 23rd of September, 2007 at the Director's office of WRMC.

[Iranian Side]

Mr. Majid Sayyari	Director General	Office of Project and Planning, WRMC
Mr. Ahmed Rajaei	Expert	Office of Project and Planning, WRMC

[Japanese Side]

Mr. Tahara Teruo	Team Leader	JICA Study Team
------------------	-------------	-----------------

2. List of participants in the Meeting on 24th of September, 2007 at the Deputy's office of WRMC.

[Iranian Side]

Mr. Ali R. Daemi	Deputy	Planning and Economics Affairs, Studies and Evaluation Bureau of WRMC
Mr. Majid Sayyari	Director General	Office of Project and Planning, WRMC
Mr. Ahmed Rajaei	Expert	Office of Project and Planning, WRMC

[Japanese Side]

Mr. Tahara Teruo	Team Leader	JICA Study Team
------------------	-------------	-----------------

3. List of participants in the Meeting on 25th of September, 2007 at the Director's office of WRMC.

[Iranian Side]

Mr. Majid Sayyari	Director General	Office of Project and Planning, WRMC
Mr. Ahmed Rajaei	Expert	Office of Project and Planning, WRMC

[Japanese Side]

Mr. Tahara Teruo	Team Leader	JICA Study Team
------------------	-------------	-----------------

MINUTES OF MEETING

on

The Interim Report

of

THE STUDY

on

***Integrated Water Resources Management for Sefidrud River Basin
in the Islamic Republic of Iran***

AGREED UPON BETWEEN

Water Resources Management Company

Ministry of Energy

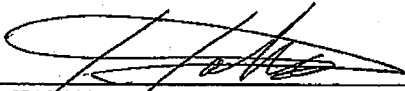
The Islamic Republic of Iran

and

Japan International Cooperation Agency

Tehran, July 13, 2008

Mr. Majid Sayyari
Director General
Office of Project and Planning
Water Resources Management Company



Mr. TAHARA Teruo
Leader of the Study Team
Japan International Cooperation Agency



Mr. Sayyari

Witness

Mr. Alireza Almasvandi
Deputy
Research and Technical Affairs
Water Resources Management Company



Mr. NAGATA Kenji
Leader of Monitoring Team
Japan International Cooperation Agency

I. Introduction

The Government of Japan, in response to the official request of the Government of Islamic Republic of Iran (hereinafter referred to as "the Government of Iran"), decided to conduct the Study on Integrated Water Resources Management for Sefidrud River Basin in the Islamic Republic of Iran (hereinafter referred to as "the Study") and the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Study Team to Iran from February 2 to March 1, 2007.

Water Resources Management Company of the Ministry of Energy (hereinafter referred to as "WRMC") and the Preparatory Study Team signed on and exchanged agreement on the Scope of Work (hereinafter referred to as "S/W") and Minutes of Meetings (hereinafter referred to as "M/M") for the Study. JICA has prepared the Study according to the S/W and M/M, and dispatched the JICA Study Team, headed by Mr. TAHARA Teruo of CTI Engineering International Co., Ltd., to Iran from August 9, 2007.

A meeting on the Interim Report (hereinafter referred to as "the Report") for the Study was held at the WRMC's Office on July 8, 2008. The Report was explained by the Study Team and discussions were made between the Study Team and WRMC. After the meeting, WRMC received the Interim Report from JICA Study Team and will provide the comments to the Study Team by the middle of September. List of Participants is attached herewith.

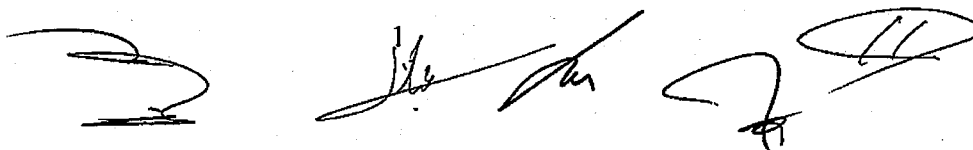
II. Discussions

General

Prior to the discussion, President requested that the Study Team should pay attention to the fair water allocation, improvement of irrigation efficiency and effective utilization of groundwater as well as surface water.

Socio-economic Consideration

1. WRMC expressed that socio-economic analysis was important for the sustainable development, and that fair economic development should be considered as well as fair water allocation. The Study Team replied that socio-economic expert had already conducted such analysis and would consider the fair economic development through fair water allocation in the phase II stage.
2. WRMC requested that a socio-economic model should be linked to the simulation model that the Study Team had been constructing. The Study Team answered that the water balance between water potential and demand by each Province would be studied through the present simulation model and that the socio-economic effects to the Provinces would be evaluated through the simulation results and the results of socio-economic analysis. Both sides agreed with this matter.



Simulation Modeling

1. WRMC requested that land use change, in particular vegetation cover should be considered for the run-off model construction. The Study Team answered that the effects of land use changes so far were already studied, and found that the effects could be negligibly small.
2. WRMC requested that the accuracy of MIKE-SHE and -BASIN should be examined by comparing with the other simulation software. The Study Team answered that even construction of MIKE-SHE and -BASIN was tough work due to constraint of useful data/information, and thus dual ways of simulation and its comparison were too hard. Both sides agreed with this matter.

Environmental Needs

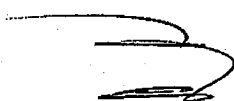
1. There are draft guidelines on an environmental flow in Iran. Presently, preliminary set up of an environmental flow was applied in the water balance simulation. Both guidelines of Iran and Japan should be examined considering the characteristics of rivers in Iran, and the considered environmental flow should be revised through the discussion of Both Sides in the phase II stage.

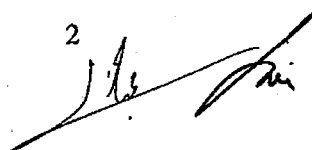
Request of Additional Study

1. WRMC requested that the following Study items be implemented in order to encourage all the stakeholders to be able to reach a close consensus on a water resources management in the Sefidrud River Basin:
 - 1) To include the related area to Sefidrud irrigation network in the Gilan Province in the water balance simulation,
 - 2) To implement a training on the operation of the simulation model using manuals to be specially edited for Sefidrud River Basin, and
 - 3) To hold additional stakeholder meetings on alternative plans of the water resources management in order to build the consensus among the stakeholders.

Satellite Imagery Analysis (Pending Issue)

1. Regarding to the scale of land use map, there are different interpretations. WRMC makes more importance on the scale of 1/25,000 with necessary accuracy, whereas the Study Team believes that 1/250,000 would be accurate enough. WRMC believes that this accuracy may affect greatly on cropping pattern, consequently, on water demand. This item is needed to be more discussed between the Study Team and WRMC.



2




List of Participants

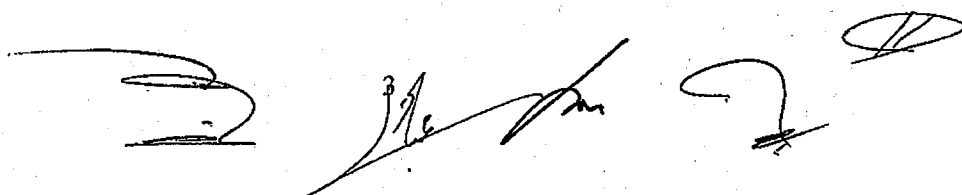
List of participants in the Meeting on July 8, 2008 at the meeting room of WRMC.

[Iranian Side]

Mr. Sattar Mahmudi	WRMC	President
Mr. Alireza Almasvandi	WRMC	Deputy of Research and Technical Affairs
Mr. Majid Sayyari	WRMC	Director General of Office of Project & Planning
Mr. Taghi Ebadi	WRMC	Office of Project & Planning
Mr. YAMASHITA Yoshihiro	WRMC	JICA Expert
Mr. Ali R Daemi	MOE	Director General of Macro Planning of Water & Wastewater

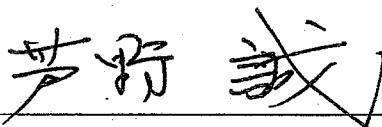
[Japanese Side]

Mr. NAGATA Kenji	JICA Headquarters	Leader of Monitoring Team
Ms. YOSHIDA Sanae	JICA Headquarters	Cooperation Planning, Monitoring Team
Mr. HIRANO Takahiro	JICA Iran Office	Project Formulation Advisor
Mr. TAHARA Teruo	JICA Study Team	Team Leader
Mr. MATSUMOTO Shinichiro	JICA Study Team	Deputy Team Leader
Mr. MORISHITA Kanehiro	JICA Study Team	IWRM Planning Specialist
Mr. GOTO Toshihiro	JICA Study Team	Water Balance Modeling Specialist
Mr. YAJIMA Makoto	JICA Study Team	Conflict Management Specialist
Ms. INOUE Tomomi	JICA Study Team	Environmental Specialist
Mr. TAKATA Satoshi	JICA Study Team	Design/Cost Estimation Specialist
Mr. OSATO Yasushi	JICA Study Team	Organization/ Institution Specialist

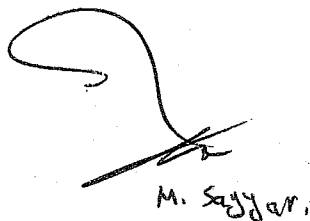


MINUTES OF DISCUSSIONS
ON
THE STUDY
ON
INTEGRATED WATER RESOURCES MANAGEMENT FOR SEFIDRUD
RIVER BASIN
IN THE ISLAMIC REPUBLIC OF IRAN
AGREED UPON BETWEEN
WATER RESOURCE MANAGEMENT COMPANY
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY

Tehran, April 15, 2009



Makoto ASHINO
Resident Representative
JICA Iran Office



M. Sayyari

Majid SAYYARI
Director General
Planning and Project Office

1. Background

Scope of Work for “the Study on Integrated Water Resources Management for Sefidrud River Basin in the Islamic Republic of Iran” (hereinafter referred to as the S/W) was agreed upon between Water Resources Management Company (hereinafter referred to as WRMC) and Japan International Cooperation Agency (hereinafter referred to as JICA) on February 10, 2007. During the discussion on the S/W, the original study period of 19 months was designed, as illustrated in the following figure.

Tentative Schedule of the Study

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Phase	Phase 1							Phase 2											
Work in Iran	■							■											
Work in Japan	□																		
Report Presentation	▲																		
	IC/R		PG/R1			IT/R		PG/R2					DF/R		F/R				

IC/R: Inception Report
 PG/R1: Progress Report I
 IT/R: Interim Report
 PG/R2: Progress Report II
 DF/R: Draft Final Report
 F/R: Final Report

In July 2007, the study team was dispatched to Iran and discussed on the study schedule with the WRMC. The study team proposed the study schedule for the period of July 2007 to December 2008.

2. Pending Issues

In the course of the study, the WRMC raised the following issues.

- (1) The dominant water use in the Sefidrud River basin is for agricultural purpose.
- (2) The parameters to estimate water demands for irrigation, such as agricultural land use, cropping patterns and irrigation water requirements by crops, have little persuasiveness and objectivity.
- (3) In order to increase of transparency on estimation process of irrigation demand and to foster the mutual trust among the related provinces, the WRMC strongly proposed the additional works on agricultural land use survey using satellite imagery with high resolution and water requirement survey by crops.

These matters were agreed as pending issues in the meeting on the Interim Report in July 2008.

3. Discussion Results

After rising the above- mentioned issues, the WRMC and the study team continuously discussed in order to find a suitable solution for them. In March 2009, both parties of the WRMC and the study team finally reached to the agreement on the solution of the pending issues. The agreement is composed of cooperative works by the WRMC including Mahab Ghods consulting company and the JICA study team, and the work schedule agreed is summarized below.

No	Work Items	Time Frame	Responsible Parties
1	Clarification of the area covered by satellite imagery and Spot imagery shooting plan will be made, and the imagery shooting should be ordered for two times.	April and July 2009	Mahab Ghods and JICA
2	After receiving the imagery, pre-analysis activities, topologic and radiometric corrections and maps with a 1:25,000 scale shall be made.	Beginning of May 2009	Mahab Ghods and JICA
3	Field trip, sampling with GPS ($\pm 3m$) and spectral study for each crop at least 30 points with even distribution in each frame.	Beginning of May 2009	Mahab Ghods
4	Through data analysis, providing classification algorithm and other necessary activities for the spectral analysis, the initial version of maps shall be prepared.	June 2009	Mahab Ghods
5	After calculation of error coefficient, final version of land use maps divided by crops for two seasons of Summer and Autumn shall be submitted.	July 2009 and October to December 2009	Mahab Ghods
6	Water requirements by crops shall be studied, and ETC and ETO shall be estimated by comparing them with national document	July 2009	Mahab Ghods
7	Agricultural field trips shall be made and questionnaires shall be distributed simultaneously.	May and September 2009	Mahab Ghods
8	Accuracy of all information for estimation of water requirements shall be checked and confirmed.	May and September 2009	Mahab Ghods
9	Water requirements estimated shall be submitted.	July and October 2009	Mahab Ghods

4. Rescheduling

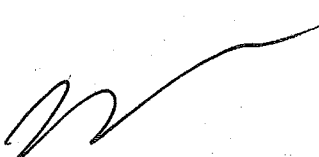
Following the agreed works for more precise estimation of irrigation water requirements, the study period shall be rescheduled as follows:

- (1) Formulation of master plan: April to June 2009
- (2) Submission of satellite imagery and discussion of progress on the imagery analysis: May and August 2009
- (3) Discussion of progress on the imagery analysis and further necessary study: November to December 2009
- (4) Restudy on the proposed master plan based on the results of the imagery analysis: January to March 2010
- (5) Submission of draft final report: July 2010
- (6) Submission of final report: September to October 2010

The original schedule and updated schedules are attached next page.

5. Effectiveness of S/W

The both sides confirmed that the matters discussed and agreed in S/W dated 10th February 2007 will remain effective unless otherwise agreed herein.

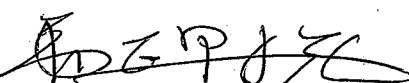


MINUTES OF MEETINGS
on
the Stakeholder Meetings
of
THE STUDY
on
Integrated Water Resources Management for Sefidrud River Basin
in the Islamic Republic of Iran

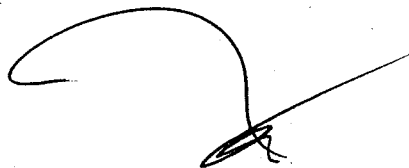
AGREED UPON BETWEEN
Water Resources Management Company
Ministry of Energy
the Islamic Republic of Iran
and
Japan International Cooperation Agency

Tehran, May 31, 2009

Mr. Majid Sayyari
Director General
Office of Project and Planning
Water Resources Management Company



Mr. Kanehiro Morishita
Leader of the Study Team
Japan International Cooperation Agency



Mr. Sayyari:

I. Introduction

The JICA Study Team explained the outline of the draft Maser Plan on Integrated Water Resources Management for Sefidrud River Basin in the Stakeholder Meetings consisting of the representatives of East-Azarbayejan RWC, Ardebil RWC, Kordestan RWC, Zanjan RWC, Gilan RWC, Qazvin RWC, Tehran RWC and WRMC, which were held on 6th and 18th of May 2009 in Tehran. Iranian side and the JICA Study Team had a series of discussions on the Study in such two Stakeholder Meetings.

II. Discussions

Discussions of such two Stakeholder Meetings are described in the following pages.

Minutes of Meeting I

Sefidrud River Basin Stakeholder Meeting, May 6th 2009

Participants: Ardebil RWC, Tehran RWC, Zanjan RWC, WRMC, Mahab Ghods Consultants Co., Kordestan RWC, Guilan RWC, the JICA Study Team

Absence: East-Azerbaijan RWC, Qazvin RWC, Water & Sewage Planning Office

Discussed issues:

First, Mr. Sayyari informed participants that Mahab Ghods Co. has submitted its draft final report before Iranian new year. Also, according to agreement with JICA, satellite imagery shooting has been started in April. Then it was determined that firstly Mahab Ghods and secondly JICA will report the progress of their studies.

Mr. Pakdaman (Mahab Ghods) mentioned that Mahab Ghods report has been sent to the Provinces and asked the Province RWCs to make their comments regarding the report. It was determined that all members of the Stakeholder Meeting make their comments on the report by 20th of May. Then, different scenarios were presented by Mahab Ghods and finally in this section, the Stakeholder Meeting agreed to ask Mahab Ghods to submit the complete information of water resource planning for each reach to all Provinces.

JICA Study Team made its presentation and gave some explanation about the simulation results for both average year and 5-year drought. The JICA Study Team emphasized necessity of improvement of irrigation efficiency from 33% at present condition to 40% and 50% in mid-term and long-term when 36 dams are considered in the simulation model. Possibility of conversion of water source from groundwater to surface water in some areas was also mentioned. More detailed study on a multi-dimensional management is also necessary regarding this issue. Change or improvement of cultivation pattern in some areas should be considered.

The main purpose of Taleghan dam is another issues remarked. The main purpose of this dam is to supply municipal or drinking water to Teheran.

Agreements:

- 1- All members of the Stakeholder Meeting should submit their comments and suggestions regarding Mahab Ghods report by 20th May 2009.
- 2- Mahab Ghods will submit the power point file including result of each scenario which shows irrigation area, water shortage, water demand of new plans, etc. within one week.

- 3- Mahab Ghods report on water resources planning needs to give a clear conclusion. Mahab Ghods should revise the report according to further comments which will be made later by the members of the Stakeholder Meeting and give the conclusion.
- 4- Time-consuming process of IWRM and never-ending need of its updating was emphasized again.
- 5- Revised report of water resources and consumptions (published in Dey 1387), is the base for report on water resources planning, and plans should be considered according to the report of water resources and consumptions.
- 6- Ardebil RWC made their comments on water resources planning report, and submitted them as a document at the end of meeting. This document will be delivered to Mahab Ghods afterward.

Minutes of Meeting II

Sefidrud River Basin Stakeholder Meeting, May 18th 2009

Participants: East-Azerbayejan RWC, Ardebil RWC, Kordistan RWC, Zanzan RWC, Guilan RWC, Qazvin RWC, Tehran RWC, WRMC, MOE, Mahab Ghods Consultants Co., JICA HQ (Tokyo), JICA Iran Office, the JICA Study Team

Agenda:

- 1) Opening by Mr. Majid Sayyari, Director General, Office of Project and Planning, WRMC
- 2) Presentation of Draft M/P and the results of Local Consultation by the JICA Study Team
- 3) Comments by related Provinces and agencies
- 4) Report by MG Consulting Company
- 5) Comments by Mr. Kenji Nagata, Senior Advisor, JICA HQ
- 6) Comments by Mr. Almas Vandi, Deputy, of Bureau of Development Planning, WRMC

Discussions:

[Comments by related Provinces and agencies and Responses by JICA Study Team]

Gilan Province

- Simulations should be conducted based on the data of past 10 years since when the climate has been changed.
 - *The simulations were conducted based on the data of past 30 years with using a hydrological model. No one can say that the same trend of drought would continue further. Another examination will be conducted based on the data of 5-year drought in the recent 10 years.*
- The water quality of the lower reaches has been deteriorated and the EC of the river water shows 3,300. Water quality issues should be considered.
 - *Concerning the water quality, only data analyses were conducted in the Study. As we said in the occasion of the Local Consultation, it is very difficult to solve the salinization problems in this region due to widespread geological origin. However, recommendation will be provided in the report.*
- In Gilan Plain, demands for irrigation water concentrate between April and August, when the flow decreases. Did you consider this effect?
 - *Our model shows the lowest flow between April and August, which causes the same results. Also, the simulation is based on 12 months, thus the low season will be considered.*
- Technical Office of MOE stipulates that only the projects for which the phase 1 study has been completed can be considered. Is JICA Study contrary to this?

- *We included those projects for which F/S had been completed as stipulated by Technical Office in the main scenario. Also other scenario had been simulated in a wide range.*
- Data of drinking water demands presented by Provinces seem overestimated. Did you check them?
 - *Drinking water demands are very small comparing with those for irrigation. Effects of overestimation on drinking water would be negligible.*
- Only water volumes were examined with the model. Did you examine them from the viewpoints of economy and environment?
 - *We estimated changes in flow conditions with a hydrological model. Based on such data, we made additional examinations from the viewpoints of economy and environment.*
- Water potential in a drought year illustrated in the graph seems too big.
 - *Water potential of the lower reaches of Manjil Dam is the difference of natural flow and water consumed in the upper reaches.*
- The yearly capacity of Manjil Dam is 1,085 MCM. Dam capacities should be examined on monthly or daily basis.
 - *We used the same figure and examined them on monthly basis.*

Tehran Province

- The study conducted by Sanyu consulting company proposed an alternative dam to Manjil Dam because it has a sedimentation problem.
 - *This study is for a master plan. The studies in a small scale such as a sedimentation study shall be done in different projects.*
- Taleghan, Karaj and Lar dams were originally constructed to supply both drinking and irrigation water but presently drinking water supply to Tehran is prioritized. Therefore, integrated operation between Manjil and Taleghan dams is difficult.
 - *Integrated operation between Manjil and Taleghan dams were presented just as an example to show possibility.*
- To set a check point at Manjil Dam is suitable at present. In mid-term and long-term examinations, it should be moved or increased because new dams will be constructed then.
 - *It is important to clarify what should be checked when you consider the check point. We will check flow conditions longitudinally along the river, not at just one point (Manjil Dam).*
- Sensitive analysis is necessary in preparation for the case that the improvement of irrigation efficiency would not be attained.
 - *As the improvement of irrigation efficiency is significant, we will examine some other cases as development scenarios.*

East-Azarbajejan Province

- We would like to know water resources potential, specifications of projects, design volumes and so on, on the basis of Province
 - *Such data will be organized on the basis of Province.*
- The graph in the presentation seems that the demands of the lower reaches area are satisfied by almost 100%, which is deemed unfair.
 - *According to a master plan, we are going to distribute water shortage equally to the whole basin. However, it is impossible to achieve the complete distribution of the shortage of water in each region due to their geographical and hydrological conditions.*

Ardebil Province

- Did you examine criteria for deciding water allocation among related Provinces?
 - *It should be decided by the Provinces what criteria should be applied. JICA Study Team provides a tool for consultation / agreement on the water allocation among the Provinces.*
- We would like to ask you to examine and make comments about water resources facilities whose volume is less than 5 MCM because their number is large.
 - *Comments will be made about those less than 5MCM in the reports.*

Kordestan Province

- According to our examination, the traditional irrigation area whose water sufficiency is less than 50% is much larger than that you presented.
 - *Our study is conducted from a macro viewpoint and we do not have such local information. As it is very useful, we would like to ask you to provide us with more detailed information.*
- We would like to ask you to propose detailed ways for improving irrigation efficiency.
 - *As the scale of a master plan, the target should be defined and the concrete ways for improving irrigation efficiency should be studied in a separate project. However, recommendation will be provided in the report.*

Qazvin Province

- Did you include Burmanak Dam of Shahrud river?
- Did you include Alamut Transfer?
 - *Both of them are included in the model.*
- Did you include water supply of 25 MCM for the slope area in Qazvin Province?
 - *Yes, we considered it in D-1 and D-2.*
- Macro approach which targets the whole river basin provides such results that are not necessarily accurate from a local viewpoint.

- *Accuracy is acceptable by WRMC as a master plan level and all the information is in the report. If there is any inaccuracy in the report, please let us know.*

Water and Sewage Planning Office, WRMC

- I would like to know the details about Master Plan of IWRM. What model is used for the simulation?
 - *The detail information is presented in the report.*

Zanjan Province

- JICA Study Team has produced good results. We are expecting that MG consulting company will also produce good results with being influenced by JICA Study Team.
- Is it recommended to change to water saving crops from water consuming ones in the study?
 - *Since this is a study for a master plan, detail studies should be done in different projects. However, recommendation will be provided.*
- We think that the target of irrigation efficiency should be achieved by making efforts though some Provinces are claiming that the target is too high.
- Water resources should be used firstly to fulfill the demands within its basin. Then, they should be transferred to outside of the basin if they have remaining potential.
 - *It's not the matter to be decided by JICA Study Team. It should be decided by the consultation among Provinces or within the basin.*
- The checkpoint should be placed at the river mouth of the Caspian Sea.
 - *Our checkpoints are distributed from the most upstream location to the most downstream location. The lowest downstream checkpoint is located at Astaneh, which is close to the river mouth at Caspian Sea.*

Iran Water & Power Development Co., MOE

- We did not receive the report of JICA Study.
- If the submission of the final results is delayed, additional projects will be proposed. We would like to ask you to submit as soon as possible.
 - *Though we would like to submit the final results as soon as possible, they will be submitted in August next year as it takes a long time to analyze the satellite imagery.*
- Concerning the environmental flow, is it really effective with applying a hydrological method?
 - *We considered some methods recommended by the Ministry of Energy and also we have made the environmental review in the report.*
- Does the hydropower dam between Ostor and Manjil dams affect it?
 - *It is difficult to grasp the situation as we do not have the data on hydropower dams. If it is a small-sized run-off dam, it does not affect. We will visit to your office to collect the*

information later on.

WRMC

- If the dam at the upper reaches is a large-sized one, it affects as its annual evapotranspiration is large.
 - *Evapotranspiration factor was considered in the model.*

[Comments by Mr. Kenji Nagata, Senior Advisor, JICA HQ]

The Master Plan of Sefidrud IWRM has the following issues:

1) Improvement of Irrigation Efficiency

The result is that all the proposed projects could be accepted if the irrigation efficiency was improved to the target level. Efforts and investment are required to achieve the target level. In addition, it is required to examine what would be if the irrigation efficiency remained at the same level in order to propose a realistic master plan. Improvement of the irrigation efficiency should be considered as one of the projects for demand control.

2) Environmental Flow

Though it is a worldwide trend to setup an environmental flow, it should be considered whether it is really necessary at the cost of other demands in the dry areas like Sefidrud river basin. Its objective or what will be conserved should be clarified.

3) RBO

Establishment of an RBO is not enough. It should also be clarified what is necessary to actually functionalize the RBO.

4) IWRM

It requires various data and information. It is important that every Province provides data and information and discusses and confirms them together.

[Comments by Mr. Almas Vandi, Deputy, Bureau of Development Planning, WRMC]

- Since the model used in the Study is a mathematical one, consistent inputs are required to get consistent outputs. Every Province should provide accurate data.
- We would like to ask you to examine the outcomes of the model further from the socio-economic viewpoints.
- It was decided that the satellite imagery be used to improve the accuracy of land use data. It is being shot now.
- Improvement of irrigation efficiency should be achieved. As more than 50% of efficiency was achieved in Latin America, where the water is scarce like Iran, water shortage can not be

attributed to the failure of the achievement.

- Water quality is an important issue. We would like to ask the JICA Study Team to examine it fully.

End

MINUTES OF MEETINGS
ON THE PROGRESS REPORT 4
FOR THE STUDY
ON INTEGRATED WATER RESOURCES MANAGEMENT FOR SEFIDRUD RIVER BASIN
IN THE ISLAMIC REPUBLIC OF IRAN
AGREED UPON BETWEEN
WATER RESOURCES MANAGEMENT COMPANY
MINISTRY OF ENERGY
THE ISLAMIC REPUBLIC OF IRAN
AND
JICA STUDY TEAM

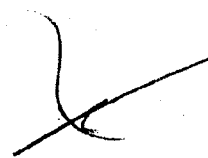
Based on (i) the Scope of Work for the Study on Integrated Water Resources Management for Sefidrud River Basin in the Islamic Republic of Iran (hereinafter referred to as "the Study") and the Minutes of Meeting agreed on 10 February 2007 between the Water Resources Management Company of the Ministry of Energy (hereinafter referred to as "WRMC") and Japan International Cooperation Agency (hereinafter referred to as "JICA"), (ii) the Minutes of Meeting on the Interim Report between the WRMC and JICA concluded on 13 July 2008, and (iii) the Record of Discussion on Work Progress between the WRMC and JICA Study Team (hereinafter referred to as "the Team") on 14 February 2009, the Team has been conducting the Study.

After the close investigation over the study area, the collecting information, the analysis of various matters related to water resources, the Team submitted the Progress Report 4 (hereinafter referred to as "P4/R") describing the activities and the study result in 20 (twenty) copies in English version and presented the summary of P4/R to WRMC. Both sides of WRMC and the Team have discussed and concluded on the contents of P4/R and the Iranian side received P4/R. The result of the discussion was recorded in writing as this Minutes of Meeting and both sides agreed on the attached matters.

TEHRAN, 15 March 2010

Mr. Majid Sayyari
Deputy
Research and Technical Affairs
Water Resources Management Company
Islamic Republic of Iran

Toshihiro Goto
for Mr. MORISHITA Kanehiro
Leader, The Study Team
Japan International Cooperation Agency
JAPAN


M. Sayyari

ATTACHMENT

1. Progress Report 4

- (1) The Team explained the study result in the third field survey, namely, the result of water allocation simulation by using the water demand based on the result of satellite image analysis.
- (2) The Team submitted P4/R in twenty (20) copies in English version.
- (3) WRMC has expressed that the contents shall be amended or added considering the results of the stakeholder meeting on 9 March 2010: namely, (i) the case of 0.39 irrigation efficiency of traditional agricultural area in Gilan province and (ii) the addition of evaluation for improvement projects concerning the water allocation system such as dams, interbasin transfer and irrigation efficiency.
- (4) The Iranian side will provide all of the comments to the Team on the contents of P4/R, if any, by the beginning of May 2007.
- (5) Participants of Stakeholder Meetings are listed in Annex-1.

2. Draft Final Report

Both sides confirmed that the Team would submit the Draft Final Report (hereinafter referred as to "DF/R") to WRMC at the middle of July 2010. In addition, the Stakeholder Meeting and the Seminar on DF/R would be held at the same time. In addition, the Team will refer to the comment on P3/R and P4/R: especially, the delivered comments late for P3/R; namely, that from Ardebil, Kordestern and Zanjan provinces.

3. Office Space

Both sides confirmed that the Team continues to use the office space provided by WRMC. The Team appreciates to use the office space until the third week of July 2010.

Participants Of Meeting

No.	Full Name	Affiliation	Position	Contact
1	Mr.A.Ghobadi	Mahab Ghodss	Expert	021-2396-5615
2	Mr.A.Dehmohseni	Mahab Ghodss	GIS Expert	0912-157-9703
3	Mr.Amin Hoseini	Mahab Ghodss	GIS Expert	0912-2689-3287
4	Mr.Zahra Gorjian	Mahab Ghodss	IT Expert	0912-207-9738
5	Mr.Alireza Sanjabi	Mahab Ghodss	Agricultural Expert	0912-304-6785
6	Mr.M.T. Akrami	Zanjan RWC	Expert	0912-390-3917
7	Mr.Shahrokh Amiraslani	Zanjan RWC	Expert	0912-341-2412
8	Mr.Jafar Fahimi	Zanjan RWC	M.D	0912-150-4775
9	Mr.Kazem Azizmoghadam	Ardabil RWC	Expert	0914-152-9414
10	Mr.Ebrahim Mokalaf	Ardabil RWC	Expert	0912- 419-6200
11	Mr.Yadollah Maleki	Qazvin RWC	Expert	0912-282-2623
12	Mr.Ali Ashraf Moradi	Qazvin RWC	Expert	8891-6596
13	Ms.Sedigheh Rasoli	Gilan RWC	Expert	0131-666-7257
14	Mr.Eghbal Shanazari	Kordestan RWC	Head of Project & Development	0871-666-4619
15	Mr.Mojtaba Jalilzadeh	East Azarbayjan	Manager of Planning & Development	0914-116-8592
16	Mr.Abdolreza Fallahrastgar	WRMC	Expert	021-8891-6596
17	Mr.Mojtaba Kord	WRMC	Expert	-
18	Mr.Majid Sayyari	WRMC	Deputy of development & Planning	0912-148-4345
19	Ms.Maryam Movahediniya	WRMC	Expert	021-8893-7223
20	Mr.Taghi Ebadi	WRMC	Expert	021-8889-8698
21	Mr.Fazlali Jafariyan	WRMC	Expert	021-8890-9137
22	Mr.Gholam Reza	IWPCO	Project Manager	021-2782-2132
23	Mr.ENDO Shinichiro	JICA	Expert	021-8893-7310
24	Mr.Amin Karimi	JICA	Translator	021-8893-7310
25	Mr.HIRANO Takahiro	JICA	Project Formulation Advisor	021-8864-8050
26	Mr.GOTO Toshihiro	JICA	JICA Study Team Leader	021-8890-8658
27	Mr. TAKATA Satoshi	JICA	JICA Study Team member	0919-485-3558
28	Mr.Mehran Mahboobi	JICA	Translator	0912-313-5697
29	Ms.Farideh Ghorabi	JICA	Translator	0912-157-5357

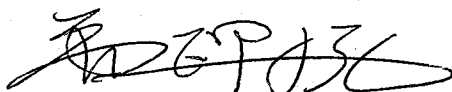


M. Sayyari

Minutes of Meeting
on
Draft Final Report
for
The Study on Integrated Water Resources Management for Sefidrud River Basin
in the Islamic Republic of Iran

Agreed upon between
Water Resource Management Company
Ministry of Energy
and
The Study Team of Japan International Cooperation Agency

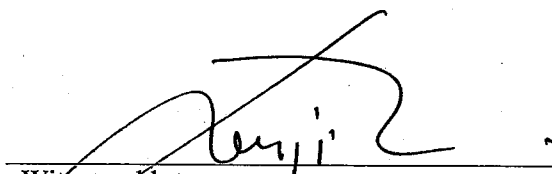
Tehran, 17th July 2010



Kanehiro Morishita
Leader of the Study Team
Japan International Cooperation Agency
Japan



Majid Sayyari
Deputy
Planning and Development
Water Resource Management Company
Islamic Republic of Iran



Witnessed by
Kenji Nagata
Leader of the Monitoring Mission
Japan International Cooperation Agency
Japan

In accordance with the Scope of Work for "The Study on Integrated Water Resources Management for Sefidrud River Basin" (hereinafter referred to as "the Study") agreed upon between Water Resources Management Company (hereinafter referred to as "WRMC"), and Japan International Cooperation Agency (hereinafter referred to as "JICA") on 10 February, 2007, JICA Study Team prepared the Draft Final Report (hereinafter referred to as "DF/R"), and submitted DF/R to WRMC; twenty (20) copies of Main Report and forty (40) copies of Summary.

The Stakeholder Meeting on DF/R chaired by Mr. Majid Sayyari, Deputy, Development and Planning was held on 13th July, 2010 in attendance with the members of the Stakeholder Meeting and participants from WRMC (hereinafter referred to as "the Iranian side"), where the Study Team explained the contents of DF/R. The list of the participants to the Meeting is shown in Appendix 1.

The followings are the main points discussed and/or agreed upon the Stakeholder Meeting, and this Minutes of Meeting was prepared and signed by both sides.

I. Draft Final Report

- (1) The Iranian Side basically received the basic outcomes of the Study mentioned in the DF/R.
- (2) Comments on DF/R will be forwarded from WRMC to JICA Iran Office by the middle of August.
- (3) JICA Study Team has submitted an outline of revision to be made to the DF/R. Revised chapters (mainly chapter 4 and 9) shall be sent to the Iranian side by the end of August 2010.
- (4) Comments on mainly the chapter 4 and 9, if any, will be forwarded from WRMC to JICA Iran Office by the end of September 2010.
- (5) Final Report will be delivered after necessary modification by incorporating the comments from the Iranian side.
- (6) Both sides agreed that the Final Report be open to public.

II. Further Requests made by the Iranian Side

JICA Study Team agreed upon the following requests from the Iranian side;

(1) Donation of equipment and software

The Iranian side requested JICA to donate all equipment and software which JICA Study Team has been using for the Study after JICA Study Team finishes all the necessary works

in Iran. The list of the equipment and software is shown in Appendix 2. The Iranian side is planning to utilize the equipment for future activities and will ensure that the equipment is properly maintained.

(2) Sensitivity Analysis for Ardebil Interbasin Transfer Project

The Iranian side requested JICA Study Team to conduct the sensitivity analysis by using the water allocation simulation model on the long-term condition. JICA Study Team agreed to assist to clarify the water balance variation caused by the above project.

(3) Evaluation of Environmental Flow and Preparation of Schematic Flow Diagram

The Iranian side requested JICA Study Team to evaluate the environmental flow by Montana Method and to figure the study results on the schematic flow diagram.

III. Further Technical Cooperation

The Iranian side requested further technical cooperation on the Integrated Water Resource Management sector, especially policy formulation, coordination and facilitation of the project implementation for WRMC and authorities concerned. JICA Study Team promised to convey this request to JICA Headquarters.

Appendix 1: List of Participants

1. Iranian Side

Mr. Majid Sayyari Deputy Planning and Development, WRMC
Mr. ENDO Shinichiro JICA Expert WRMC

No.	Name	Position	Organization
1	Mr. Ibrahim Mokalef Sarband	Expert of Technical Office	Ardabil RWC
2	Mr. Kazem Azizmoghadam	Manager of Technical Office	Ardabil RWC
3	Mr. Mohamad Reaza Rahimi	Expert	Deputy of Protection
4	Mr. Ghasem Soltanzadeh	Deputy of development & plan	East Azarbayjan
5	Mr. Mojtaba Jalilzadeh	Manager of Planning office	East Azarbayjan
6	Ms. Sedighe Rasoli	Manager of water resources development plans	Gilan RWC
7	Mr. Eghbal Shanazari	Deputy of development & plan	Kordestan RWC
8	Mr. Abdoloh Ghobadi	Senior Expert	Mahab Ghods
9	Mr. Abdolrahim Safaritarbar	Water resources Expert	Mahab Ghods
10	Mr. Amir Hossein Pakdaman	Senior Expert	Mahab Ghods
11	Ms. Behiye Jafari	Expert	MOE , Ab Abfa Planning office
12	Mr. Mohamad Ghasem Safieei	Manager of Studies	Qazvin RWC
13	Mr. Yadolah Malaki	Deputy of protection & Operation	Qazvin RWC
14	Mr. Ali Mozafariyan	Expert of Planning	Tehran RWC
15	Mr. A.Fallah Rastgar	Director of Drainage & Irrigation Networks development Office	WRMC
16	Mr. Abdolamir Kakahaji	Khazar basin	WRMC
17	Mr. Fazlali Jafariyan	Head of the group integration	WRMC
18	Mr. Isa Aghajani	Head of the group of planning	WRMC
19	Mr. Mansour Jamshidnezhad	Expert	WRMC
20	Mr. Masoud Najafi	Expert	WRMC
21	Mr. Mohamad Taghi Tavakoli	Director	WRMC
22	Mr. Mosa Aminnezhad	Director	WRMC
23	Mr. Seyyed Ahmad Alavi	Manager of Basin	WRMC
24	Mr. Seyyed Morteza Mousavi	Manager of Casin Area	WRMC
25	Mr. Taghi Ebadi	Manager of Technical Office	WRMC
26	Ms. Ghazal Jafari	Head of the Group	WRMC
27	Mr. Hossein Mehdinezhad	Deputy of planning & Improvement Managment	Zanjan RWC
28	Ms. Solmaz Mohamadi	Expert of Water allocation	Zanjan RWC

2. Japanese Side

JICA Monitoring Mission

- | | |
|-----------------|-----------------|
| 1) Kenji Nagata | Team Leader |
| 2) Miki Inaoka | Project Manager |

JICA Iran Office

- | | |
|--------------------|-----------------------------|
| 1) Takahiro Hirano | Project Formulation Advisor |
|--------------------|-----------------------------|

JICA Study Team

- | | |
|-----------------------|--|
| 1) Kanehiro Morishita | Team Leader/IWRM Planning Specialist |
| 2) Toshihiro Goto | Deputy Team Leader/Water Balance Modeling Specialist |
| 3) Makoto Yajima | Conflict Management Specialist |

Appendix 2: List of Equipment and Software

Equipment and Software:

No.	Items	Lot	Description
1	DEM data	-	ASTER DEM in the Study Area
2	Satellite Images	-	ALOS (ERSDAC) 5 images (one season in the Study Area)
3	Facsimile	1	SHARP FO-P610
4	Color Laser Printer (A3)	1	HP Color LaserJet 5550
5	Color Laser Printer (A4)	1	HP Color LaserJet 4005
6	Plotter machine	1	HP Designjet 800 ps
7	Laptop PC	1	Lenovo 0768-4BG (without Microsoft Software*)
8	Multi copy machine	1	HP Laserjet M5025
9	Desktop PC	3	Original (without Microsoft Software*)
10	UPS	3	FARATEL SM1250
11	Mobile GPS	3	Garmin eTrex Legend Cx
12	MIKE BASIN, MIKE SHE and MIKE 11 (2 DVDs, 2 keys)	1 set	<ul style="list-style-type: none"> - First key is for Mike-Basin Extended licenses, Mike-SHE Enterprise licenses and Mike 11 Enterprise licenses. (Key No. MZ-17615) - Second key is for Mike-Basin Extended licenses and Mike-SHE Enterprise licenses. (Key No. MZ-18318) - Without ESRI software license*

* Unfortunately, these official softwares are not allowed to be granted in Iran.