

ATTACHMENT

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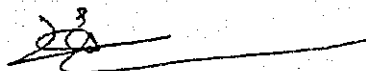
Attachment 1

**Scope of Work for the Study on Watershed Management
Plan for Karoon River in the Islamic Republic of Iran**

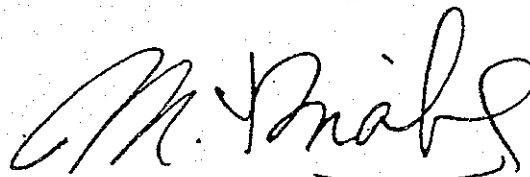
SCOPE OF WORK
FOR
THE STUDY
ON
WATERSHED MANAGEMENT PLAN
FOR
KAROON RIVER
IN
THE ISLAMIC REPUBLIC OF IRAN

AGREED UPON BETWEEN
WATERSHED MANAGEMENT DEPARTMENT,
MINISTRY OF JIHAD-E-SAZANDEGI
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Tehran, October 24, 1999



Mr. Mehdi Varshabi
Deputy Minister for Watershed Management,
Ministry of Jihad-e-Sazandegi



Mr. Masayuki WATANABE
Team Leader,
Preparatory Study Team
Japan International Cooperation
Agency (JICA)

I. INTRODUCTION

In response to the request of the Government of the Islamic Republic of Iran (hereinafter referred to as "IRI"), the Government of Japan has decided to conduct the study on watershed management plan for Karoon River (hereinafter referred to as "the Study") in accordance with relevant laws and regulations in force in Japan.

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

The present document sets forth the scope of work with regard to the Study.

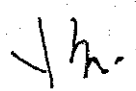
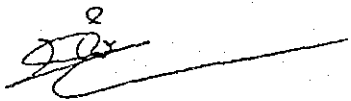
II. OBJECTIVES OF THE STUDY

The objectives of the Study are:

1. to formulate a master plan on integrated watershed management for the selected area in Karoon watershed to prevent further degradation of natural resources and to promote sustainable development.
2. to carry out technology transfer to the counterpart personnel in the course of the Study.

III. STUDY AREA

The study area shall cover the upper Karoon watershed that is shown in Appendix 1 attached.



IV. SCOPE OF THE STUDY

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

Phase-I Basic Study

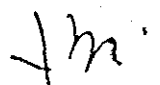
1. Collection and review of existing data and information,
2. Field survey (hydrological, geological, vegetation cover, land capability, flood damage, debris flow damage, land slide damage, erosion and sediment discharge, existing facilities) ,
3. Rural survey (land use, social, economy, life-style, industry, productivity, awareness of disaster prevention) ,
4. Organization and legal institution,
5. Preparation of the inventory on physical and non-physical features of the area,
6. Selection of the areas for Master Plan Study, and
7. Working out a basic policy of Master Plan.

Phase-II Formulation of Master Plan for Integrated Watershed Management

1. Planning framework,
2. Structural measures (sabo-planning, rain-water harvesting system, soil and water conservation, reforestation, river improvement structure, operation and maintenance) ,
3. Non-structural measures (organization and legal institutional structure, industry improvement, industry development, land use planning and management, public education and promotion of awareness of disaster prevention) ,
4. Formulation of master plan for integrated watershed management,
5. Initial environmental examination (IEE),
6. Preliminary cost estimates and financial plan,
7. Evaluation
 - (a) Economic evaluation,
 - (b) Financial evaluation, and
 - (c) Social impact evaluation

V.SCHEDULE OF THE STUDY

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



VI. REPORTS

JICA shall prepare and submit the following reports in English to IRI.

1. Inception Report:

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

2. Progress Report (1):

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

3. Interim Report:

Twenty (20) copies at the commencement of the second work in Iran.

4. Progress Report (2):

Twenty (20) copies at the end of the second work in Iran.

5. Draft Final Report:

Twenty (20) copies at the first of the third work in Iran.

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

6. Final Report:

Twenty (20) copies within one (1) month after receipt of the comments on the Draft Final Report.

VII. UNDERTAKINGS OF IRANIAN SIDE

1. To facilitate smooth implementation of the Study, IRI shall take necessary measures:

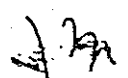
(1) to secure the safety of the Japanese Study Team,

(2) to permit the members of the Japanese Study Team to enter, leave and sojourn in Iran for the duration of their assignment therein, and exempt them from alien registration requirements and consular fees,

(3) to exempt the members of the Japanese Study Team from taxes, duties and any other charges on equipment, machinery and other materials brought into and out of Iran for the conduct of the Study,

(4) to exempt the members of the Japanese Study 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 Japanese Study Team for their services in connection with the implementation of the Study,

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



- (6) to secure permission for entry into private properties for the implementation of the Study,
 - (7) to secure permission for the Japanese Study Team to take all data and documents related to the Study out of Iran to Japan, and
 - (8) to provide medical services as needed. Its expenses will be chargeable on the members of the Japanese Study Team.
2. IRI shall bear claims, if any arises, against the members of the Study Team resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Study Team.
 3. Watershed Management Department, Ministry of Jihad-e-Sazandegi (hereinafter referred to as "WMD") shall act as a counterpart agency to the Study Team and also as a coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.
 4. WMD shall, at its own expense, provide the Study Team with the followings, in cooperation with other organizations concerned:
 - (1) available data (including photographs and maps) and information related to the Study,
 - (2) counterpart personnel,
 - (3) suitable office space with necessary equipment and furniture, and
 - (4) credentials or identification cards.

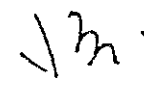
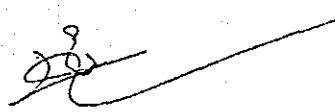
VIII. UNDERTAKINGS OF JAPANESE SIDE

For the implementation of the Study, JICA shall take the following measures:

1. to dispatch, at its own expense, the Study Team to Iran.
2. to pursue technology transfer to the Iranian counterpart personnel in the course of the Study.

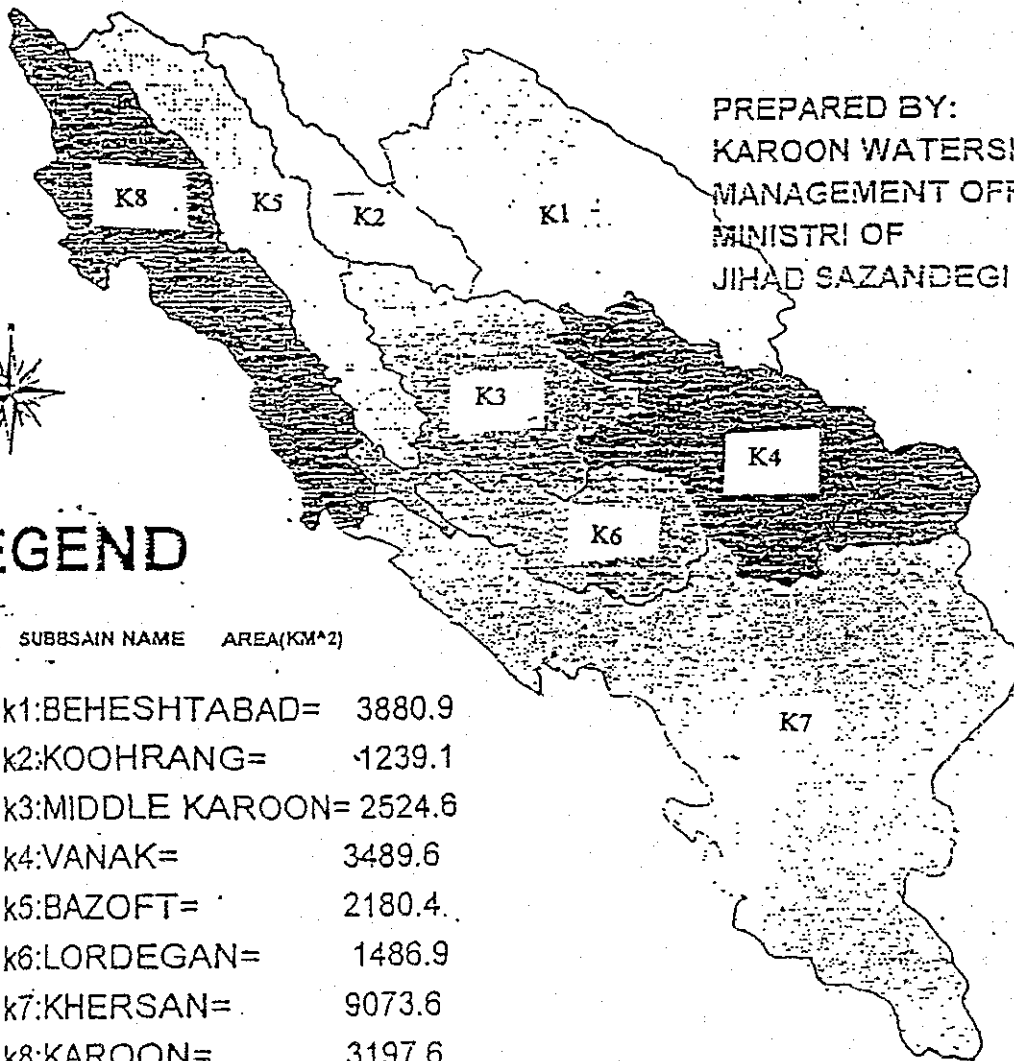
IX. CONSULTATION

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





KAROON SUBBASIN



PREPARED BY:
 KAROON WATERSHED
 MANAGEMENT OFFICE
 MINISTRI OF
 JIHAD SAZANDEGI

LEGEND

COLOR	SUBBSAIN NAME	AREA(KM ²)
[Dotted pattern]	K1:BEHESHTABAD=	3880.9
[White box]	K2:KOOHRANG=	1239.1
[Diagonal lines /]	K3:MIDDLE KAROON=	2524.6
[Diagonal lines \]	K4:VANAK=	3489.6
[Horizontal lines]	K5:BAZOFT=	2180.4
[Vertical lines]	K6:LORDEGAN=	1486.9
[Dotted pattern]	K7:KHERSAN=	9073.6
[Diagonal lines /]	K8:KAROON=	3197.6



TOTAL 27,072 KM²

APPENDIX 1

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TENTATIVE STUDY SCHEDULE

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
WORK IN IRAN		[Shaded bar from month 2 to 8]									[Shaded bar from month 11 to 16]													
WORK IN JAPAN	[Small bar]								[Small bar from month 9 to 10]							[Small bar from month 16 to 18]						[Small bar]		
REPORT PRESENTATION	△ IC/R							△ P/R(1)			△ IT/R					△ P/R(2)				△ DF/R		△ F/R		

- IC/R : Inception Report
- P/R(1) : Progress Report(1)
- IT/R : Interim Report
- P/R(2) : Progress Report(2)
- DF/R : Draft Final Report
- F/R : Final Report

AT-7

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APPENDIX 2

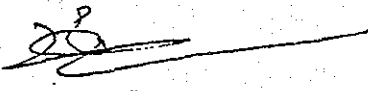
Attachment 2

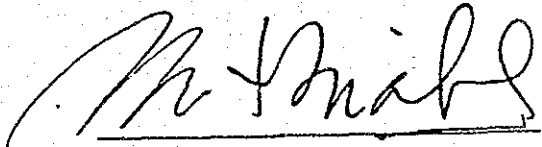
Minutes of Meeting for the Study on Watershed
Management Plan for Karoon River in the Islamic Republic
of Iran

MINUTE OF MEETING
FOR
THE STUDY
ON
WATERSHED MANAGEMENT PLAN
FOR
KAROON RIVER
IN
THE ISLAMIC REPUBLIC OF IRAN

AGREED UPON BETWEEN
WATERSHED MANAGEMENT DEPARTMENT,
MINISTRY OF JIHAD-E-SAZANDEGI
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Tehran, 24 October, 1999


Mr. Mehdi Varshabi
Deputy Minister for Watershed Management,
Ministry of Jihad-e-Sazandegi


Mr. Masayuki WATANABE
Team Leader,
Preparatory Study Team
Japan International Cooperation
Agency (JICA)

In response to the request of the Government of the Islamic Republic of Iran (hereinafter referred to as "IRI"), Japanese Preparatory Study Team (hereinafter referred to as "the Team ") was sent by Japan International Cooperation Agency (hereinafter referred to as "JICA") to discuss with Watershed Management Department, Ministry of Jihad-e- Sazandegi (hereinafter referred to as "WMD"), the Scope of Work (S/W) for the study on watershed management plan for Karoon river (hereinafter referred to as "the Study").

The Team carried out the field survey on the study area and had a series of discussions with the officials of WMD from 11 to 24 October. The participants and attendees to the meetings are listed in the attached Appendix 1. The following matters were mutually confirmed with regard to the Scope of Work (S/W) signed on 24 October 1999 in Tehran.

1. Aerial photography and mapping

The aerial-photo shall cover all the area of 27,072km² upper Karoon watershed. The mapping area shall be decided between JICA study team and WMD, but the area shall be 10,000km² at maximum.

2. Areas for Master Plan

The areas for Master Plan shall be decided between JICA study team and WMD.

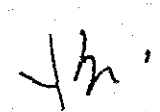
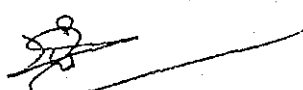
3. Target year for the M/P is 2020.

4. Equipment

IRI made the request of the equipment as shown in APPENDIX 2. WMD shall bear the cost for maintenance and drivers for vehicles. The team agrees to convey this request to JICA Headquarters for further consideration.

5. WMD requested that JICA would hold seminars and workshops during the course of the study to transfer technology to counterpart personnel. The team agreed to convey these requests to the JICA Headquarters.

6. WMD requested that JICA provide counterparts training in Japan, The team agrees to convey this request to JICA Headquarters for further consideration.



APPENDIX-1

LIST OF PARTICIPANT

1. Dr. Forood SHARIFI General Director of Study and Evaluation Department
2. Dr. Ebrahim HOSSEINI Vice General Director of Study and Evaluation Department
3. Dr. Jaffar GAYYUMLIAN Expert of Soil Conservation and Watershed Management Research Center
4. Mr. Bubak SOURI Expert of Study and Evaluation Department
5. Mr. Mostafa BEHBAHANI Expert of Watershed Management Deputy
6. Dr. Z. SHOAI Expert of Soil Conservation and Watershed Management Research Center
7. Mr. Okimichi SUZUKI JICA Expert in Study and Evaluation Department
8. Mr. Masayuki WATANABE Team leader/Sabo Planning of JICA Study Team
9. Mr. Munehiro MATSUI Watershed Management Expert
10. Mr. Takafumi YASUMOTO Study Planning Officer
11. Mr. Toshiro IWAHASHI River Planning Expert
12. Mr. Yoichi KISHI Geology and Hydrology Expert

APPENDIX-2

Equipment list

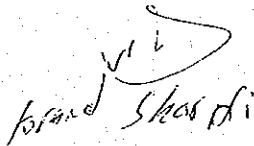
1. Soil moisture measurement	station type w/solar battery	3 units
	portable type	1 unit
2. Rainfall recorder		24 units
3. Snow depth meter	recorder type	3 units
4. Meteorological station	temp., wind velocity, etc.	3 units
5. Water level gauge		32 units
6. Current meter		2 units
7. GPS & digital camera		2 sets
8. Computer system for GIS	w/ software, including Data-base processing software	1 set
9. Walkie-talkie		2 sets
10. 4WD car		2 units
11. 4WD pick-up		1 unit
12. Geo-electric prospecting device		1 unit
13. Suspended load measurement device		1 unit

Attachment 3


**Minutes of Meeting on Inception Report for the Study on
Watershed Management Plan for Karoon River in the
Islamic Republic of Iran**

MINUTETS OF MEETING
ON
INCEPTION REPORT
FOR
THE STUDY
ON
WATERSHED MANAGEMENT PLAN
FOR
KAROON RIVER
IN
THE ISLAMIC REPUBLIC OF IRAN
AGREED UPON BETWEEN
WATERSHED MANAGEMENT DEPUTY
MINISTRY OF JIHAD-E-SAZANDEGI
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Tehran, March 6, 2000

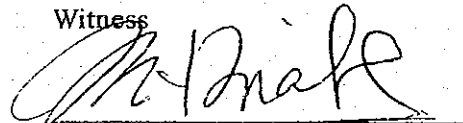


Dr. Forood SHARIFI
General Director of
Study and Evaluation Department
Watershed Management Deputy
Ministry of Jihad-e-Sazandegi



Mr. Hironori TAKAHASHI
Team Leader
JICA Study Team

Witness



Mr. Masayuki WATANABE
Chairman/ Sabo Planning
JICA Advisory Committee

In accordance with the Scope of Work signed on October 24, 1999 for the captioned study (S/W), Japan International Cooperation Agency (JICA) dispatched the Study Team headed by Mr. Hironori TAKAHASHI and the Advisory Committee Team headed by Mr. Masayuki WATANABE to Islamic Republic of Iran for commencing the Study. The Study Team and the Advisory Committee Team arrived in Tehran on February 28, 2000.

The Study Team submitted officially twenty (20) copies of the Inception Report to Watershed Management Deputy (WMD), Ministry of Jihad-e-Sazandegi, and explained its contents to the WMD official concerned on February 29 and March 5, 2000 in Tehran and March 1, 2000 in Share Kord. WMD made some comments on the Inception Report. After revision of the Inception Report, both sides agreed to the contents in principle. The Study Team and the Study and Evaluation Department shall consult with each other in respect of any matter that may arise from or in connection with the Inception Report. The list of attendants at the meetings is shown in the attached paper.

After the presentation of the Report, an exchange took place between Iranian side and Japanese side. The followings are the main points of the discussions;

1. Importance of the Study on Socio-economic Conditions

Both sides recognized the importance of the Study on socio-economic conditions for preventing regional disasters and ensuring the sustainable regional development. For efficient analysis on socio-economic conditions, the concepts of Human Development Index (HDI) and Human Poverty Index (HPI) could be incorporated in the Study. The socio-economic study should be conducted in accordance with existing laws, regulations, religious and cultural values.

2. Coordinating Committee

For the smooth implementation of the Study, Coordinating Committee of related government agencies is to be established if it is necessary and applicable.

3. Counterpart Personnel

The Study Team requested that Study and Evaluation Department assign at least one counterpart personnel to each expert of the Study Team. Study and Evaluation Department agreed to assign four (4) full time counterpart.

4. Office Space

The Study Team requested that the office space be provided both in Tehran and Share Kord. Office in Tehran should have the space to accommodate eight (8) desks with chairs and one (1) large table to spread maps and drawings. Office in Share Kord should have the space to accommodate five (5) desks with chairs and one (1) large table. WMD agreed the requests of the Study Team in principle.

5. Data Collection

WMD requested the Study Team to submit urgently the list of required data and information. The Study Team agreed to submit the list within a few days.

List of Attendants

Iranian Side

Watershed Management Deputy (WMD)

Mr. Mehdi VARSHABI	Deputy Minister for Watershed Management
Dr. Forood SHARIFI	Director General of Study and Evaluation Department
Mr. Nader SANOUBAR	Director General of Executive Affairs
Mr. Mohamad Reza SHAFEINIA	Director General of Coordination and Planning
Mr. S.H. OWSIA	Advisor for Deputy Minister
Dr. Ebrahim HOSSEINI	Vice Director General of Study and Evaluation Department
Dr. Jaffar GHAYYUMIAN	Expert of Soil Conservation and Watershed Management Research Center
Mr. Reza SOHRABI	Manager of Technical Committee of WMD
Mr. Bubak SOURI	Expert of Study and Evaluation Department
Mr. Mostafa BEHBAHANI	Expert of Watershed Management Deputy
Mr. Okimichi SUZUKI	JICA Expert

Karoon Watershed Management Office

Mr. Heydar Ali RAEISI	Head of Karoon Watershed Management Office
Mr. Babak EBRAHIMI	Expert of Karoon Watershed Management Office
Mr. Hassan NAKHKOUB	Expert of Karoon Watershed Management Office

Chaharmahal va Bakhtiyari Province

Mr. Sabz Ali KAWIANI	Head of Provincial Watershed Management Office
Mr. Ali Reza MARDANIAN	Expert of Provincial Watershed Management Office

Japanese Side

JICA Study Team

Mr. Hironori TAKAHASHI	Team Leader
Mr. Jiro YABE	Water Use/ Hydrology
Mr. Kotaro KIKUCHI	Coordinator

JICA Advisory Committee Team

Mr. Masayuki WATANABE	Chairman/ Sabo Planning
Mr. Toshiya TAKESHI	Watershed Management

Embassy of Japan

Mr. Yoshiharu SATO	Second Secretary
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Attachment 4


**Minutes of Meeting on Field Report (1) for the Study on
Watershed Management Plan for Karoon River in the
Islamic Republic of Iran**

MINUTES OF MEETING
ON
FIELD REPORT (I)
FOR
THE STUDY
ON
WATERSHED MANAGEMENT PLAN
FOR
KAROON RIVER
IN
THE ISLAMIC REPUBLIC OF IRAN
AGREED UPON BETWEEN
WATERSHED MANAGEMENT DEPUTY
MINISTRY OF JIHAD-E-SAZANDEGI
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Tehran, September 13, 2000



Dr. Forood SHARIFI
General Director of
Study and Evaluation Department
Watershed Management Deputy
Ministry of Jihad-e-Sazandegi



Mr. Hironori TAKAHASHI
Team Leader
JICA Study Team

The Study Team submitted officially (20) copies of the Field Report (I) to the Watershed Management Deputy (WMD) on September 4, 2000 and the meeting was held on September 13, 2000. The Team explained its contents to the WMD officials concerned. Iranian side made several comments on *unsatisfactory points* and the Team understood basically. Iranian side stated that Phase I is very important. The list of attendants at the meeting is shown in the attached paper.

After the presentation, an exchange took place between Iranian side and Japanese side. The following are the major points of discussion

1. Methodology of analysis

The methodology of analysis, such as analysis of SPOT satellite imageries (DEM), evaluation of candidate sites and interpretation of aero-photograph is to be clearly shown in the Report.

2. Data/ Information Collection

Phase I Study started based on existing data and information. However, Iranian side requested the Study Team that since the data/information especially in the field of land use, soil and erosion are not enough, generation of data should be incorporated even in the Phase I Study with appropriate scale. The Study Team agreed the necessity of the data generation from technical point of view. However, the Study Team explained that the generation of data is difficult from the TOR, budget and time given to the Study Team, but the Study Team promised to convey the comments of Iranian side to the Government of Japan.

3. Selection Criteria of Master Plan Areas

The Study Team selected preliminarily five (5) Master Plan areas among 22 candidate sub-basin areas suggested by the provincial officials. However, Iranian side pointed following problems on selection:

- 1) Selection method is not quantitative but qualitative.
- 2) In qualitative selection, however, there are no criteria of qualitative decision.
- 3) The first class among three categories gets a point for selection, and second one is not considered in selection.

The Study Team selected areas at preliminary level because the Team tried to scope what areas to be selected for next stage. However, the Team recognizes the selection criteria are not qualitative and not final conclusion. The Team will carry out selection work in quantitative way taking above points into consideration using inventory of 455 sub-basins in Home Work (1).

4. Number of Master Plan Areas

Iranian side requested that the number of master plan areas is not sufficient and to be increased to eight (8), possibly one for each river basin. The Study Team explained that five (5) areas are already presented in the Inception Report, but the Study Team promised to convey the comments of Iranian side to the Government of Japan.

5. Technical Transfer

Technology transfer as one of the main objectives of the Study should be considered and practiced for all stages of the Study. Iranian side pointed out that technology transfer is not sufficient up to now and four times of workshops and seminars are not enough for the chance of technology transfer. Japanese side explained that technology transfer is to be executed basically through on the job training (OJT), and more counterpart personnel should participate in actual survey and analysis in cooperation with Japanese experts. The Team will try to make more technical meeting in next phase.

List of Attendant

Iranian Side

Dr. Forood SHARIFI	General director of Study and Evaluation Department, WMD
Dr. Zieaoddin SHOAEI	Head of Soil Conservation, Watershed Management Research Center
Mr. Jafar GHAYOUMIAN	Scientific Member, Watershed Management Research Center
Mr. Mostafa BEHBAHANI	Biologist, Main office of WMD
Mr. M. E. Hosseni	Expert, WMD
Mr. M. H. Gharavi	Senior Expert, WMD,
Mr. M. Urumieh	Expert, WMD

JICA Study Team


Mr. Hironori TAKAHASHI	Team Leader
Mr. Seiichi YAMAKAWA	Deputy Team Leader/Comprehensive Disaster Prevention
Mr. Yasuo MATSUBARA	Water and Soil Conservation

Attachment 5

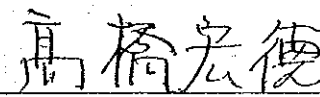
**Minutes of Meeting on Interim Report for the Study on
Watershed Management Plan for Karoon River in the
Islamic Republic of Iran**

MINUTETS OF MEETING
ON
INTERIM REPORT
FOR
THE STUDY
ON
WATERSHED MANAGEMENT PLAN
FOR
KAROON RIVER
IN
THE ISLAMIC REPUBLIC OF IRAN
AGREED UPON BETWEEN
WATERSHED MANAGEMENT DEPUTY
MINISTRY OF JIHAD AGRICULTURE
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Tehran, June 13, 2001

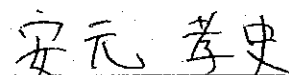


Dr. Forood SHARIFI
General Director of
Study and Evaluation Department
Watershed Management Deputy
Ministry of Jihad Agriculture



Mr. Hironori TAKAHASHI
Team Leader
JICA Study Team

Witness

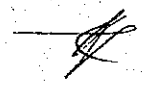


Mr. Takafumi YASUMOTO
JICA Headquarters

The Study Team for the Study on Watershed Management Plan for Karoon River in the Islamic Republic of Iran (hereinafter referred to as the Study Team) organized by Japan International Cooperation Agency (JICA) headed by Mr. Hironori TAKAHASHI as the Team Leader and Watershed Management Deputy (WMD), Ministry of Jihad Agriculture, headed by Dr. Forood SHARIFI, General Director of Study and Evaluation Department, had a series of discussions from April 16, 2001 on the Interim Report of the Study. The list of participants is shown in Annex-1 attached hereto. The Study Team explained to WMD the major points presented in the Interim Report. Meanwhile, the followings are matters discussed by both parties.

1. Both sides agreed to proceed work on the following five master plan study areas.
 - (1) K5-19-A Chaman Goli-Bazoft
 - (2) K4-1-9 Vastegan
 - (3) K7-0-19-1 Sarbaz (boundary is shown in the attachment)
 - (4) K7-48 Tangsorkh
 - (5) K8-28 Zeras

2. WMD stated that aerial photos with scale of 1:20,000 should have been taken and additional data generation should have been carried out during the course of Phase 1 Study, however, Japanese side explained that the aerial photos taken in 1997 with scale of 1:40,000, the information of which was given by WMD in the Scope of Work discussion, were acquired with the assistance of WMD and were used for the Phase 1 Study, and that the inventory study was carried out based on the existing data and information as was described in the plans of operations in the Inception Report. The Japanese side also explained that the Phase 1 Study utilizing the aerial photos of 1:40,000 is technically sufficient and it is extremely difficult to execute the additional works.



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List of Attendants

Iranian Side

Watershed Management Deputy (WMD)

Dr. Forood Sharifi	Director General of Study and Evaluation Department
Dr. Zieaoddin Shoa'ei	Head of Soil Conservation, Watershed Management Research Center
Mr. R.Sohrabi	Director General, Planning Bureau, WMD
Dr. Ebrahim Hosseini	Deputy Director General of Study and Evaluation Department
Mr. J.Ghayoumian	Soil Conservation, Watershed Management Research Center
Mr. M.Danesh	Planning Bureau, Main Watershed Office
Mr. M. Behbahani	Main Watershed Office
Mr. S.M.R.Hashemi	Study and Evaluation Department, WMD
Mr. S.Ali Kahlpou	Forest and Range Organization
Mr. M.Urumieh	Study and Evaluation Department, WMD
Mr. S.A.Hosseiny	Deputy of Executive Affairs, WMD
Mr. M.H.Rohhiie	Deputy of Executive of Planning and Arrangement
Mr. M.K.Hendabadi	WMD
Mr. H.A.Mohammadi	Study and Evaluation Department, WMD
Mr. H.Abassi	Study and Evaluation Department, WMD
Mr. Hossein Ali Mohammadi	Forestry Engineer, Study and Evaluation Department
Dr. Okimichi Suzuki	JICA Expert

Japanese Side

JICA Study Team

Mr. Hironori Takahashi	Team Leader
Mr. Seiichi Yamakawa	Deputy Team Leader
Mr. Yasuo Matubara	Water and Soil Conservation
Mr. Jiro Yabe	Water Use/ Hydrology
Mr. Kotaro Kikuchi	Coordinator

JICA Headquarters

Mr. Takafumi Yasumoto	Task Management
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Embassy of Japan

Mr. Kunihiro Moriyasu	Second Secretary
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Attachment

SARBAZ

NOORABAD

DEYERGAN

KAHANGAN

PANGAZ
1.00

K7-0-19-1 Sarbaz

1:50,000

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Attachment 6

Minutes of Meeting on Field Report (2) for the Study on
Watershed Management Plan for Karoon River in the
Islamic Republic of Iran

MINUTETS OF MEETING
ON
FIELD REPORT (2)
FOR
THE STUDY
ON
WATERSHED MANAGEMENT PLAN
FOR
KAROON RIVER
IN
THE ISLAMIC REPUBLIC OF IRAN
AGREED UPON BETWEEN
WATERSHED MANAGEMENT DEPUTY
MINISTRY OF JIHAD AGRICULTURE
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Tehran, August 26, 2001



Dr. Forood SHARIFI
General Director of
Study and Evaluation Department
Watershed Management Deputy
Ministry of Jihad Agriculture



Mr. Hironori TAKAHASHI
Team Leader
JICA Study Team

The Study Team for the Study on Watershed Management Plan for Karoon River in the Islamic Republic of Iran (here in after referred to as the Study Team) organized by Japan International Cooperation Agency (JICA) headed by Mr. Hironori TAKAHASHI as the Team Leader Submitted the Twenty (20) copies of Field Report (2) on August 22,2001. The Study Team and Watershed Management Deputy (WMD), Ministry of Jihad Agriculture, headed by Dr. Forood SHARIFI, General Director of Study and Evaluation Department, had meeting on August 26,2001. The list of participants is shown in Annex-1 attached hereto. The Study Team explained the major points presented in the Field Report (2). The following are matters discussed in the meeting.

1. The Master Plan should be formulated to be the basis for the future implementation.
2. Future Socio-Economic analysis should be carried out in the home office work.
3. The Economic benefit of the project for soil and water conservation should be evaluated quantitatively.
4. After evaluation of the Field Report (2), the WMD will send its comments, in a written letter, to the Study Team.
5. The Draft Final Report will be submitted to WMD in mid of December 2001 and the Study team will come to Iran to have meeting on the Draft Final Report in early January 2002.

Annex-1

List of Attendants

Iranian Side

Watershed Management Deputy (WMD)

Dr. Forood Sharifi	Director General of Study and Evaluation Department
Mr. R.Sohrabi	Director General, Planning Bureau, WMD
Dr. Ebrahim Hosseini	Deputy Director General of Study and Evaluation Department
Mr. Mehdi.Danesh	Planning Bureau, Main Watershed Office
Mr. Mostafa. Behbahani	Main Watershed Office
Mr. M.Urumieh	Study and Evaluation Department, WMD
Mr. M.H.Roffiie	Deputy of Executive of Planning and Arrangement
Mr.G.R. Noroozi	Soil Conservation & Watershed Management
Mr. Takayuki Nagai	JICA Expert

Forest and Range Land Organization

Mr. Hojjat Pouxn	Expert
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Planning and Management Organization

Mr. Rasoul Jalali	Senior Expert
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Japanese Side

JICA Study Team

Mr. Hironori Takahashi	Team Leader
Mr. Seiichi Yamakawa	Deputy Team Leader
Mr. Yasuo Matubara	Water and Soil Conservation
Mr. Jiro Yabe	Water Use/ Hydrology

Attachment 7

**Minutes of Meeting on Installation of Meteorological,
Hydrological and Soil observation Equipment for the Study
on Watershed Management Plan for Karoon River in the
Islamic Republic of Iran**

MINUTES OF MEETING
ON
INSTALLATION
OF
METEOROLOGICAL, HYDROLOGICAL AND
SOIL OBSERVATING EQUIPMENT
FOR
THE STUDY
ON
WATERSHED MANAGEMENT PLAN
FOR
KAROON RIVER
IN
THE ISLAMIC REPUBLIC OF IRAN
AGREED UPON BETWEEN
WATERSHED MANAGEMENT DEPUTY
MINISTRY OF JIHAD AGRICULTURE
AND
JICA STUDY TEAM

Tehran, July 8th, 2001



Dr. Forood SHARIFI
General Director of
Study and Evaluation Department
Watershed Management Deputy
Ministry of Jihad Agriculture



Mr. Hironori TAKAHASHI
Team Leader
JICA Study Team

Japan International Cooperation Agency (JICA) dispatched the Study Team for Phase II to Islamic Republic of Iran on March 29th, 2001. In the Phase II, meteorological and hydrological equipment will be provided and installed at the sites. However the sites for installation has not yet decided in detail. Then the Study Team and Iranian Working Group had several meetings from April 22, 2001 to decide the locations on the maps in Tehran and identified the sites for installation in the field. The followings are decided by the discussions between the Study Team and Iranian Working Group.

1. Meteorological Station and Soil-moisture Meters Station (3 sites)

It is confirmed to install meteorological stations to the property of Jihad Office at Dehdaz in Khuzestan, Ardal in Chaharmahal va Bakhtiyari and Si Sahkt in Kohgiluyeh va Boyerahmad. Soil-moisture meters should be installed within meteorological stations.

2. Rainfall Gauging Station (5 sites)

It is confirmed rain gauge station should be installed in each master plan area. It is recommended that rain gauge station will be installed in/near village in consideration of operation and maintenance.

- K4-1-9 (Vastegan, Chaharmahal va Bakhtiyari)
- K5-19a (Cahaman Goli-Bazoft, Chaharmahal va Bakhtiyari)
- K7-0-19-1 (Sarbaz, Esfahan)
- K7-48 (Tang sorkh, Kohgiluyeh va Boyerahmad)
- K8-28 (Zeras, Khuzestan)

3. Snow-depth Meters Station (3 sites)

Snow-depth meters stations will be installed in three (3) area which are selected among five (5) master plan areas in the consideration of snow condition and snow-depth meters stations will be installed near rain gauge station.

- K4-1-9 (Vastegan, Chaharmahal va Bakhtiyari)
- K7-0-19-1 (Sarbaz, Esfahan)
- K7-48 (Tang sorkh, Kohgiluyeh va Boyerahmad)

4. Water Level Gauging Station (10 sites)

It is confirmed to install ten (10) water level gauging stations at the sites of major streams in five (5) master plan area as follows. As to Vastegan, staff gauge will be installed additionally at the bridge site in Vastegan village for the purpose of improving precision of discharge observation.

- K4-1-9 (Vastegan, Chaharmahal va Bakhtiyari) : 1 sites at a major tributary
- K5-19a (Cahaman Goli-Bazoft, Chaharmahal va Bakhtiyari) : 3 sites at major tributaries
- K7-0-19-1 (Sarbaz, Esfahan) : 3 sites at 2 tributaries
- K7-48 (Tang sorkh, Kohgiluyeh va Boyerahmad) : 2 sites at a major tributary
- K8-28 (Zeras, Khuzestan) : 1 site at a major tributary

5. Miscellaneous

- Watershed management deputy has responsibility, if land acquisitions are necessary.
- Watershed management deputy has responsibility for operation and maintenance of equipment and other appurtenance facilities.

f.5

List of Attendants

Iranian Side

Watershed Management Deputy (WMD)

Mr. Ali Akbar MOOSIVAND	Expert of Study and Evaluation Department
Mr. Mohammad SHERAFATI	Expert of Execution Department
Mr. Mohammad Reza SHALFOROOSH	Expert of Study and Evaluation Department

Japanese Side

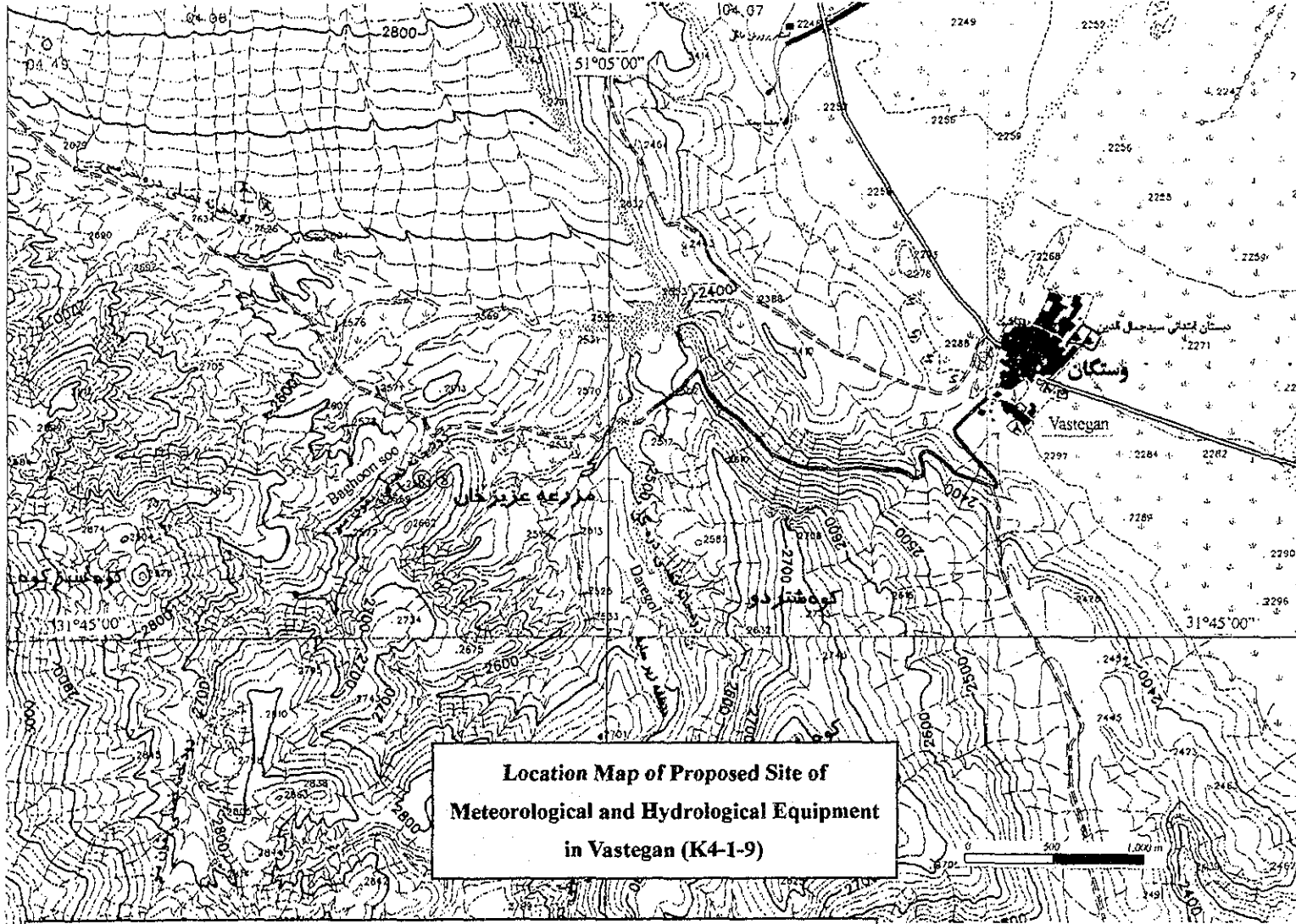
JICA Study Team

Mr. Yasuo MATSUBARA	Water and Soil Conservation
Mr. Jiro YABE	Water Use/ Hydrology

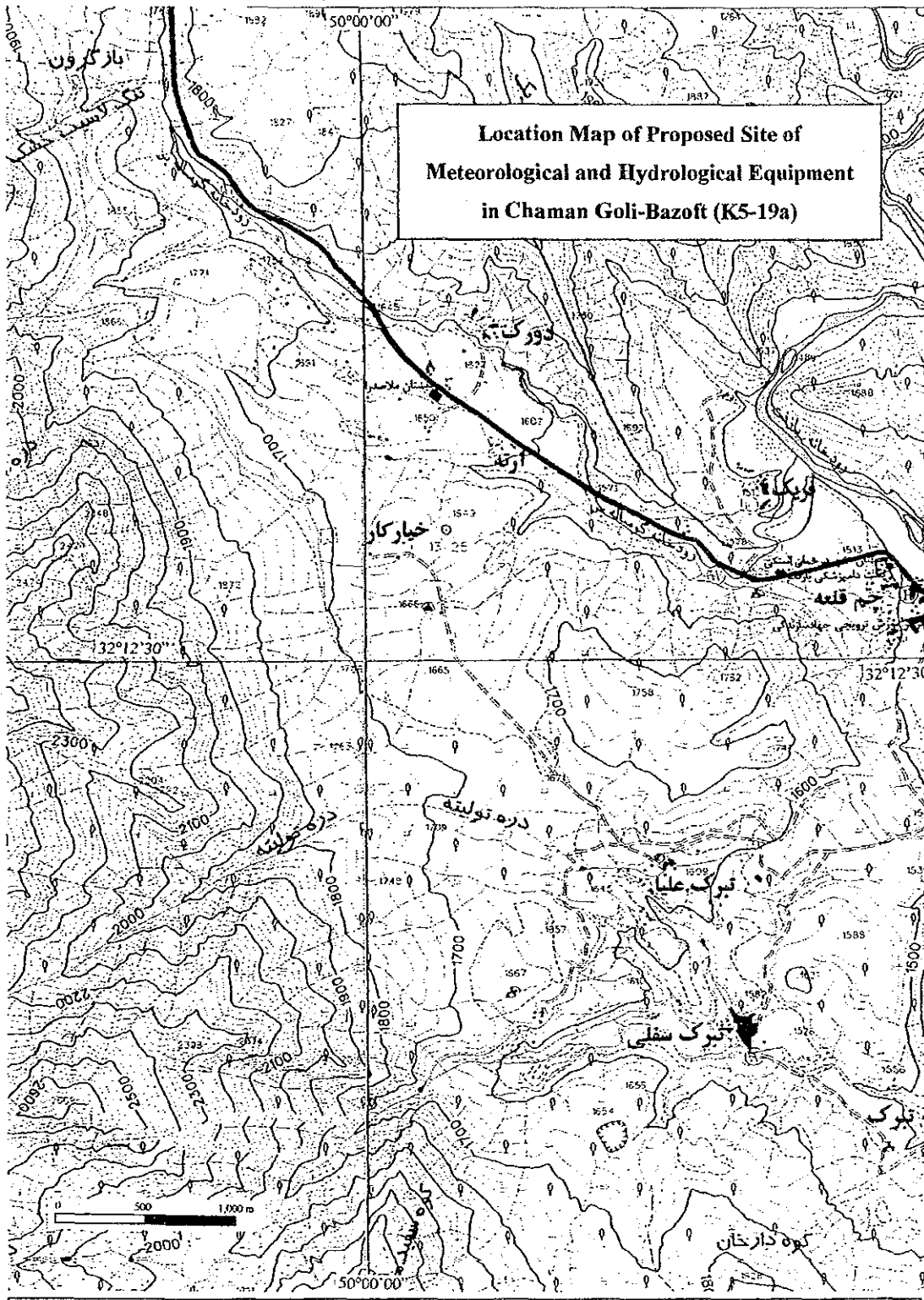


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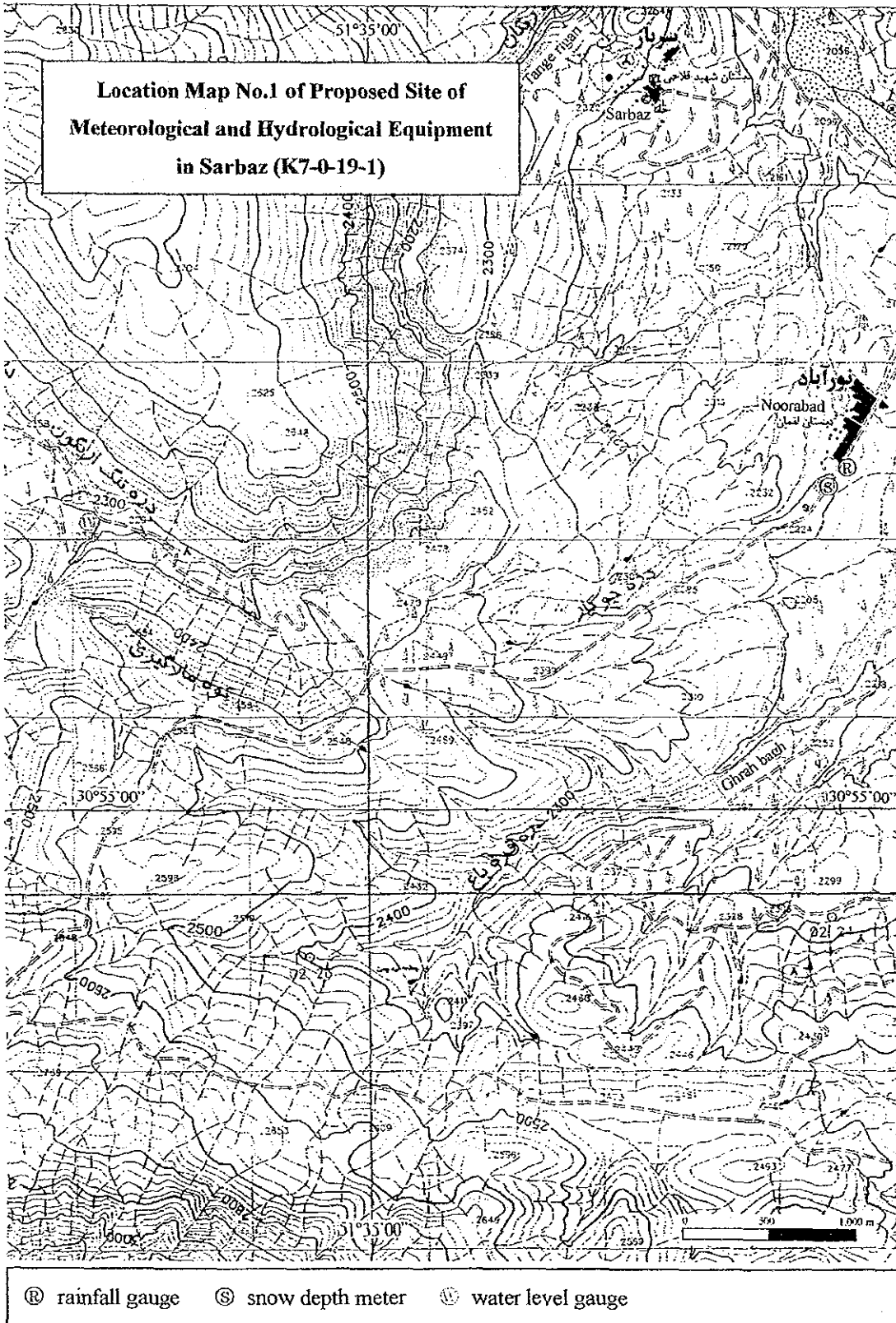


**Location Map of Proposed Site of
Meteorological and Hydrological Equipment
in Chaman Goli-Bazoft (K5-19a)**

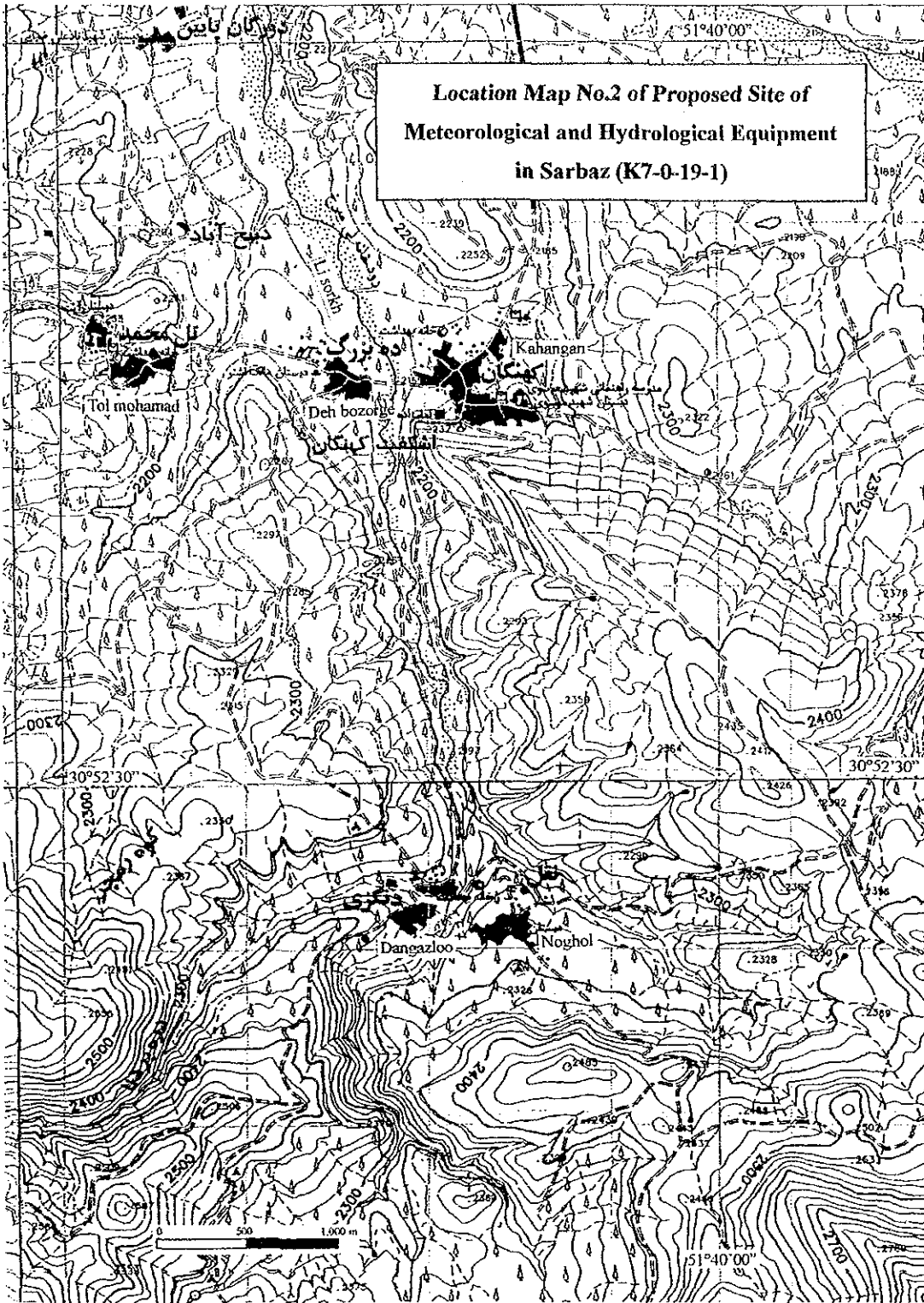
- Ⓜ rainfall gauge
- Ⓢ snow depth meter
- Ⓜ water level gauge

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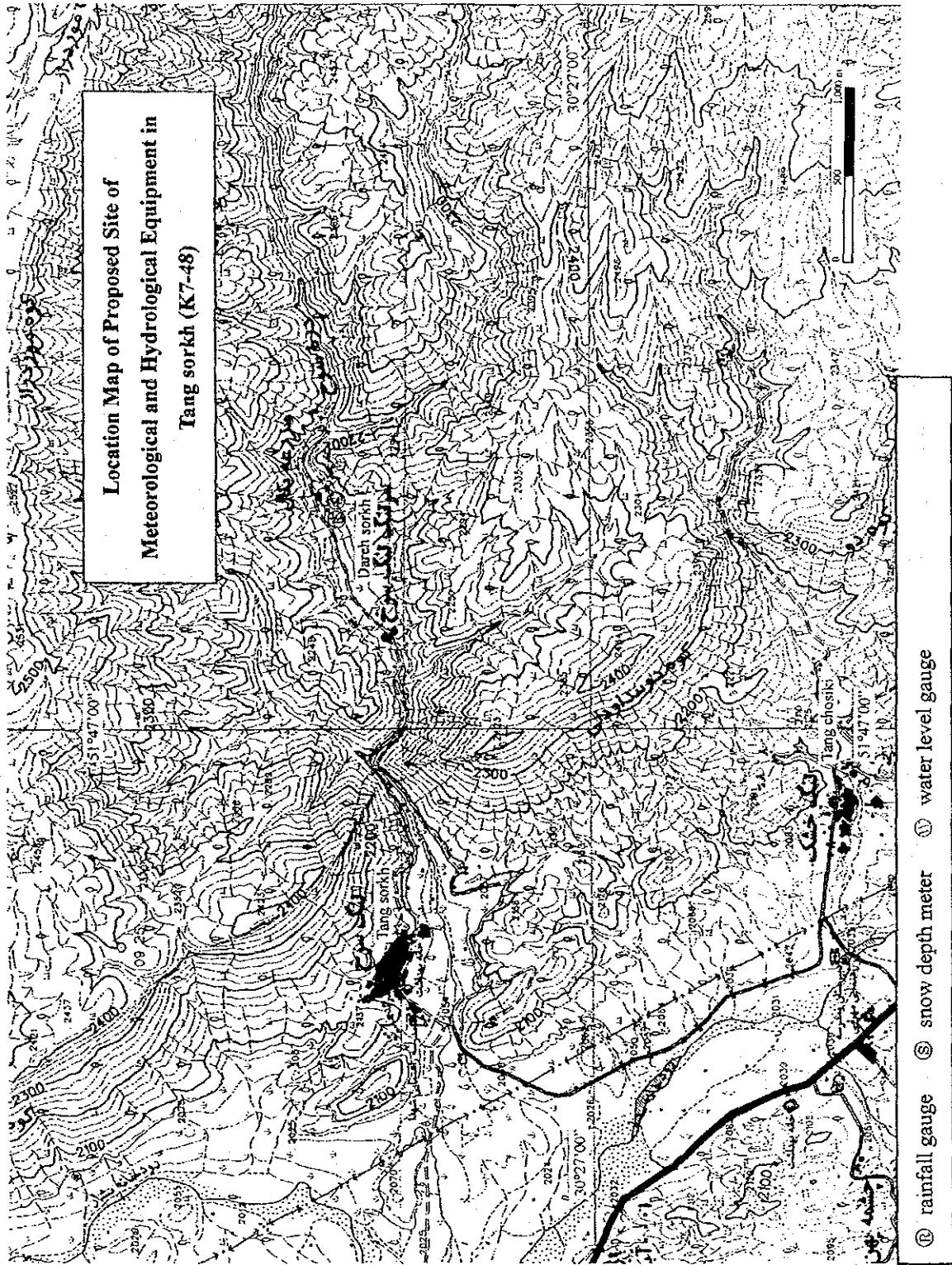


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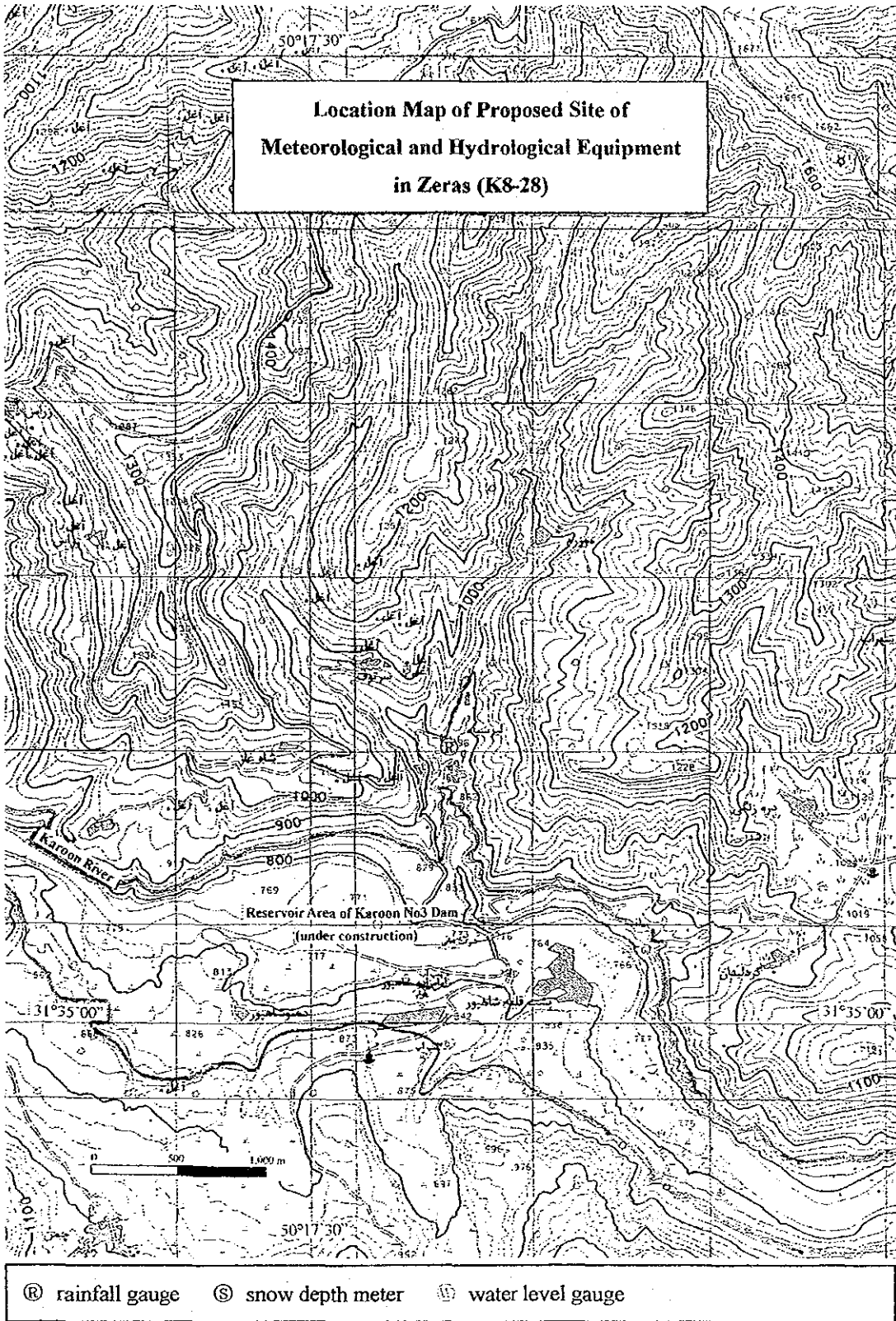


(R) rainfall gauge (S) snow depth meter (W) water level gauge

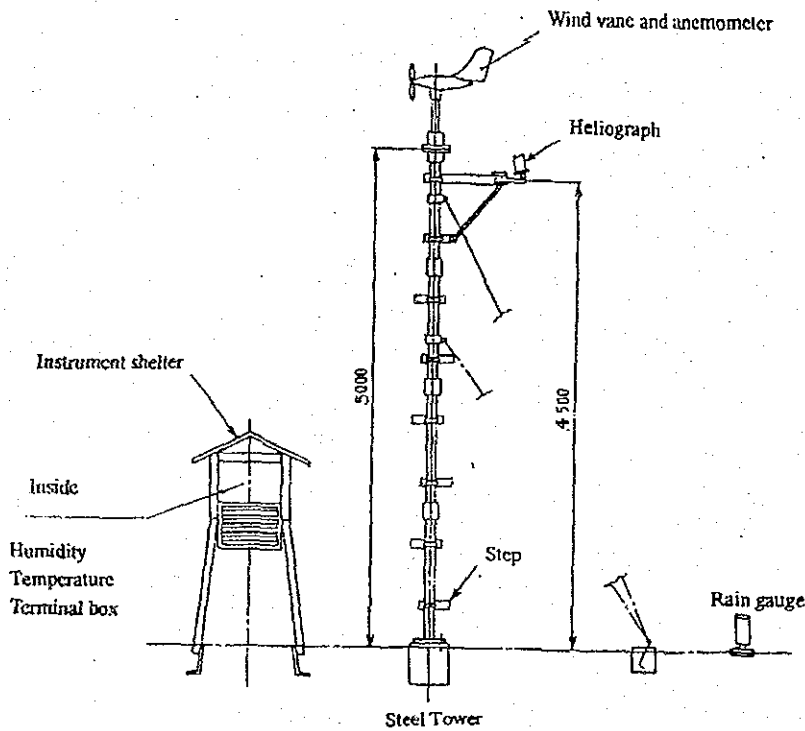
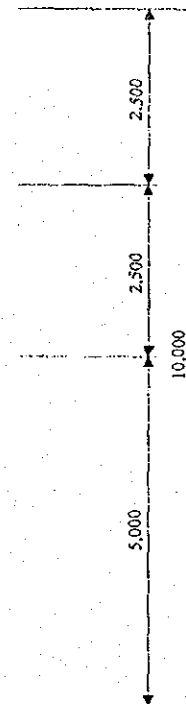
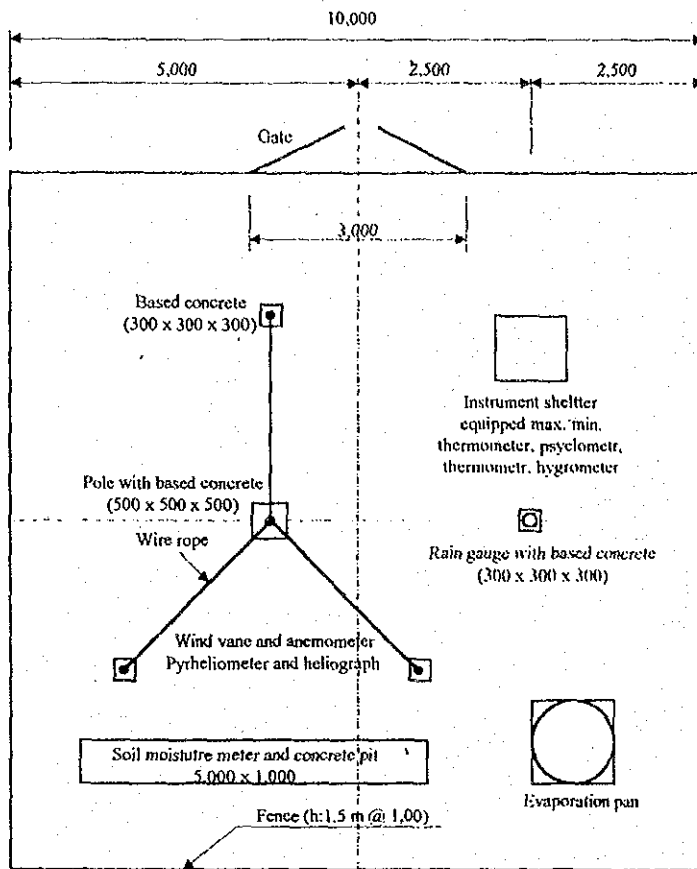
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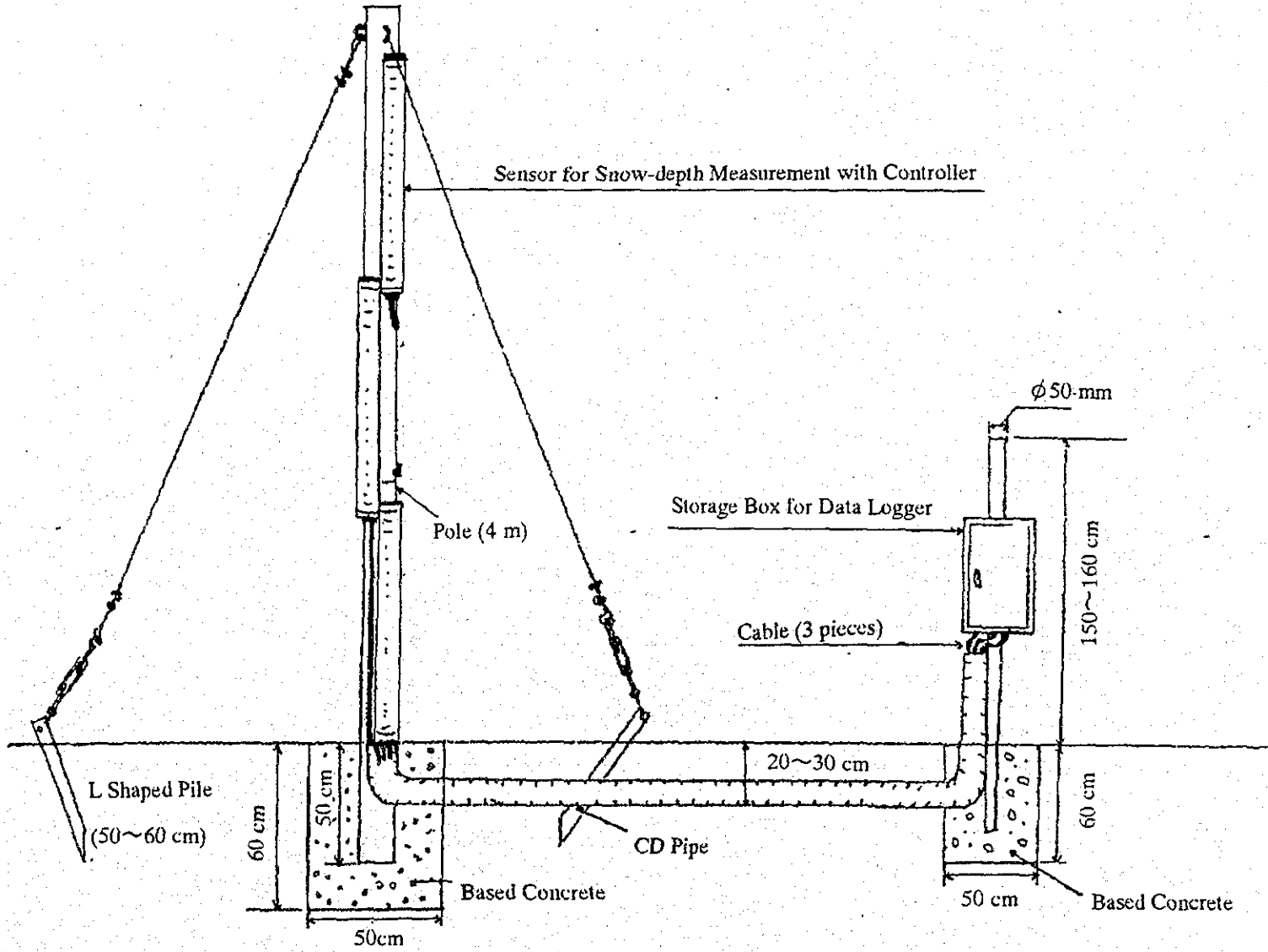


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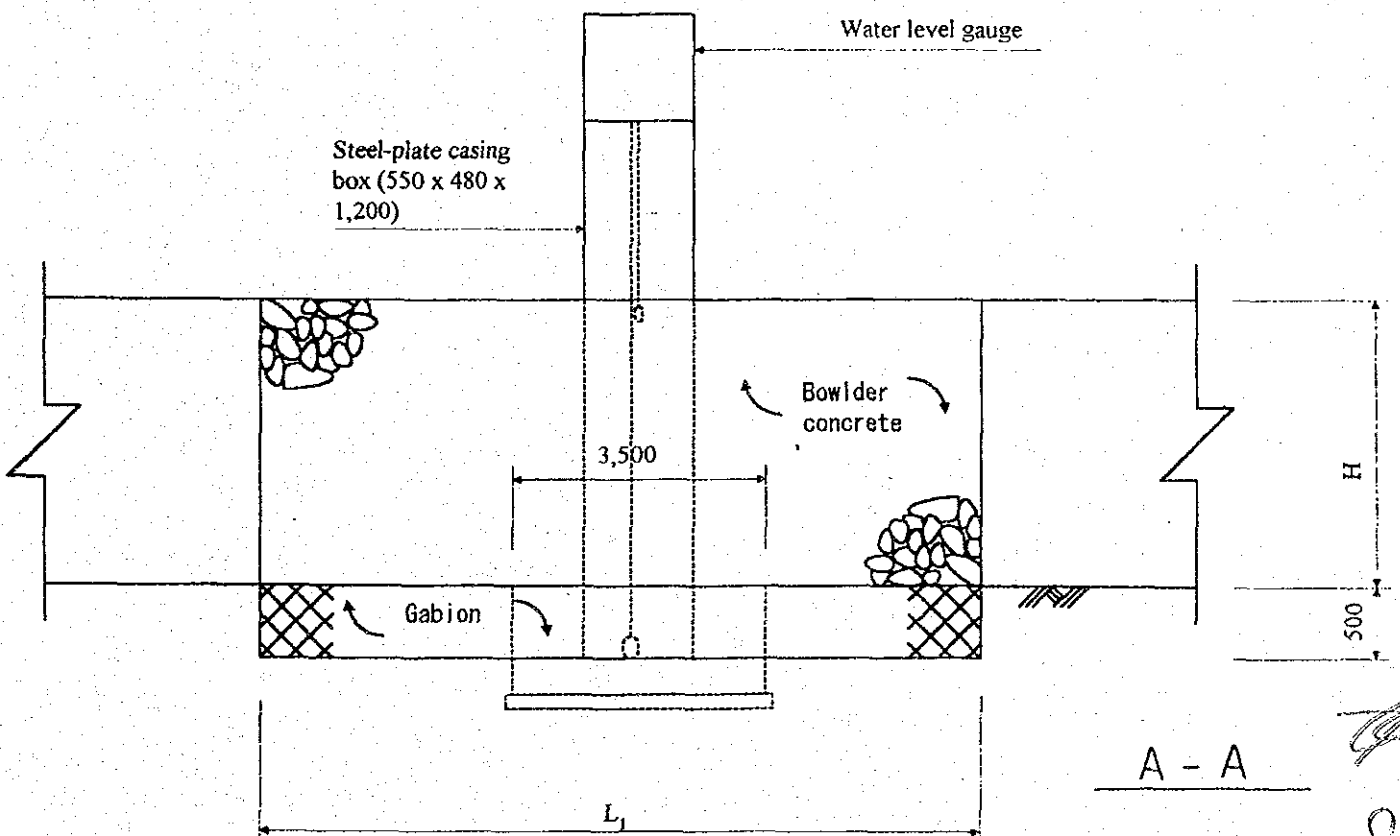
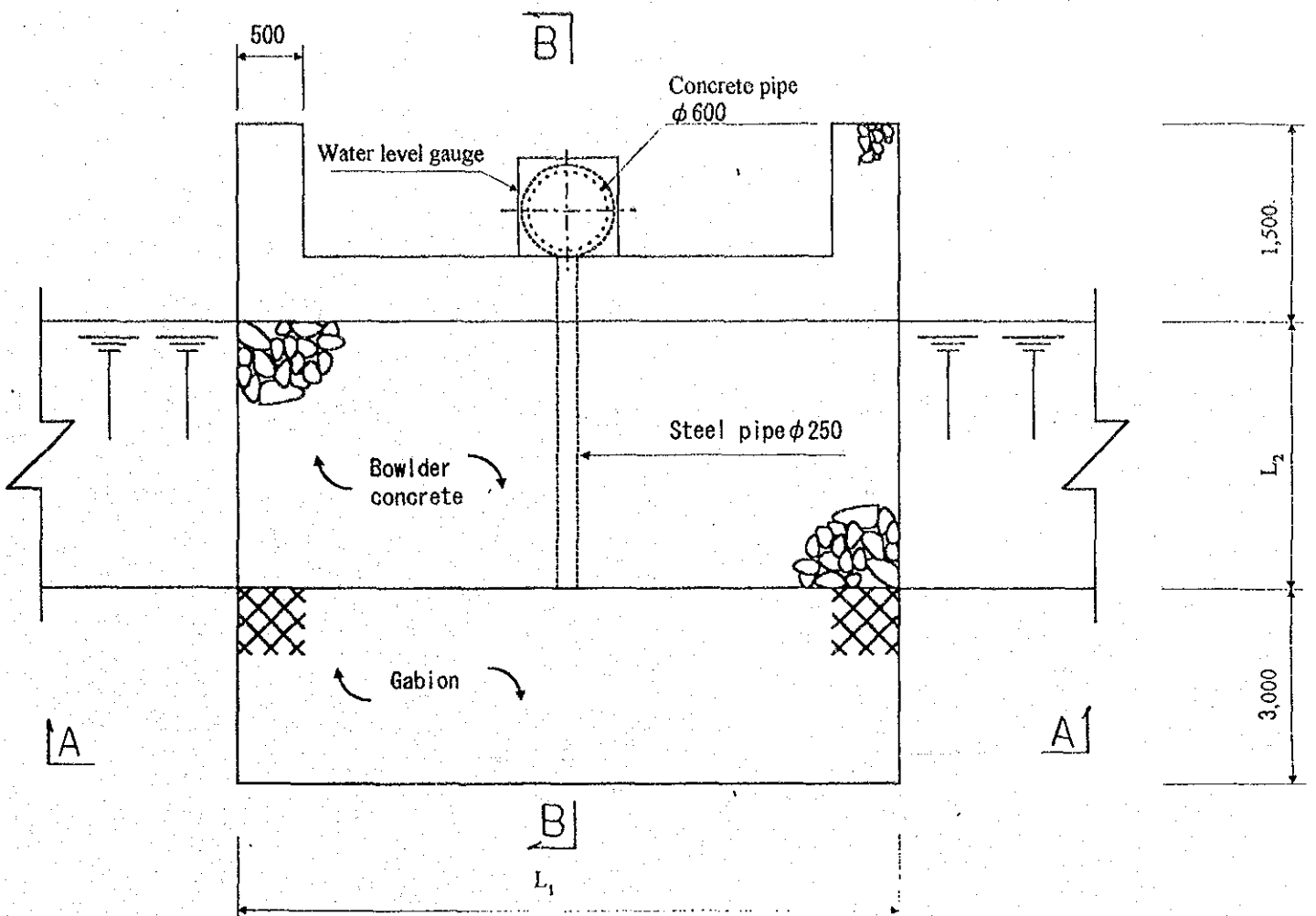
Installation of Meteorological Station

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Installation of Snow-depth Meter

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Installation of Water Level Gauge (1/2)

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