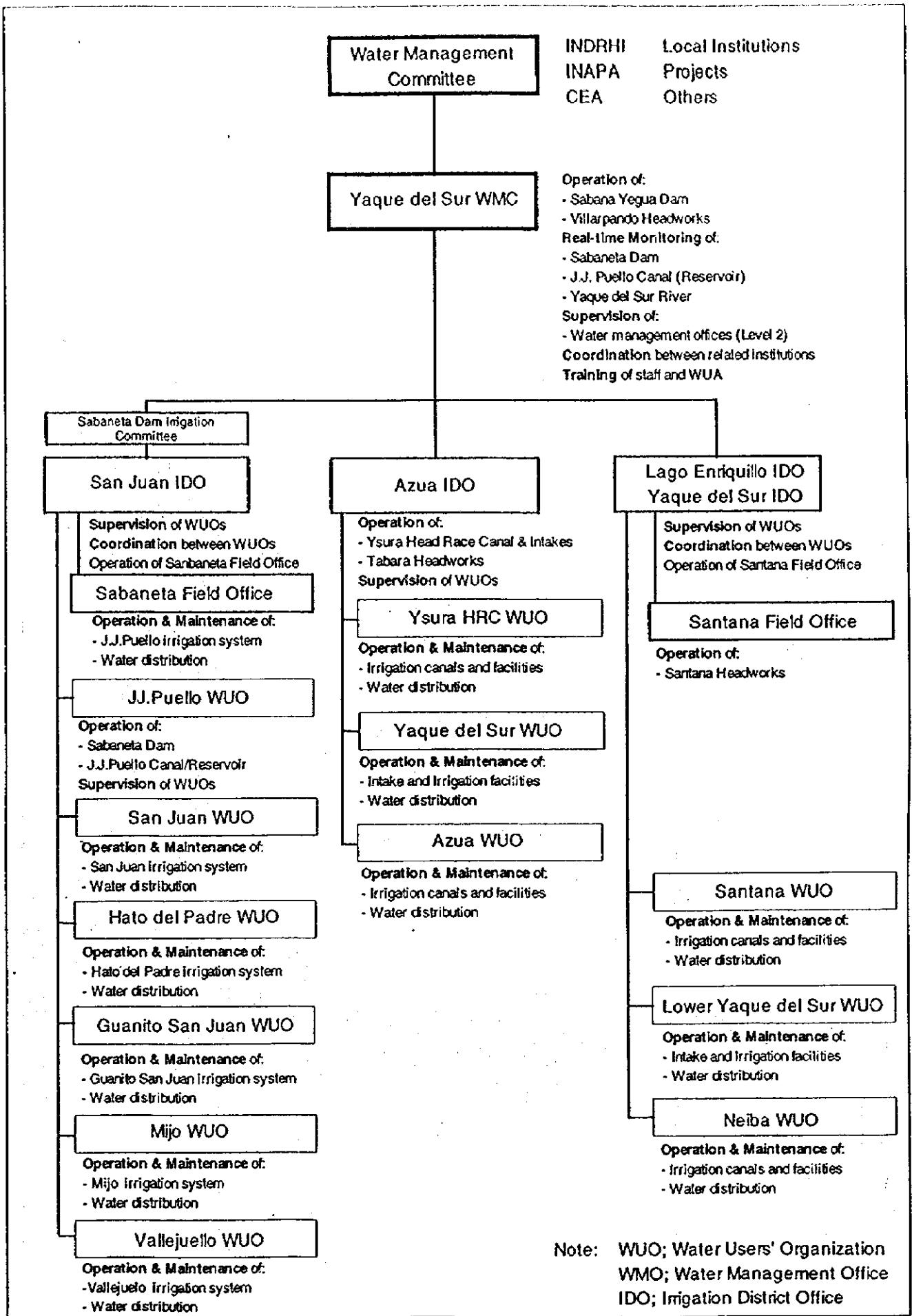
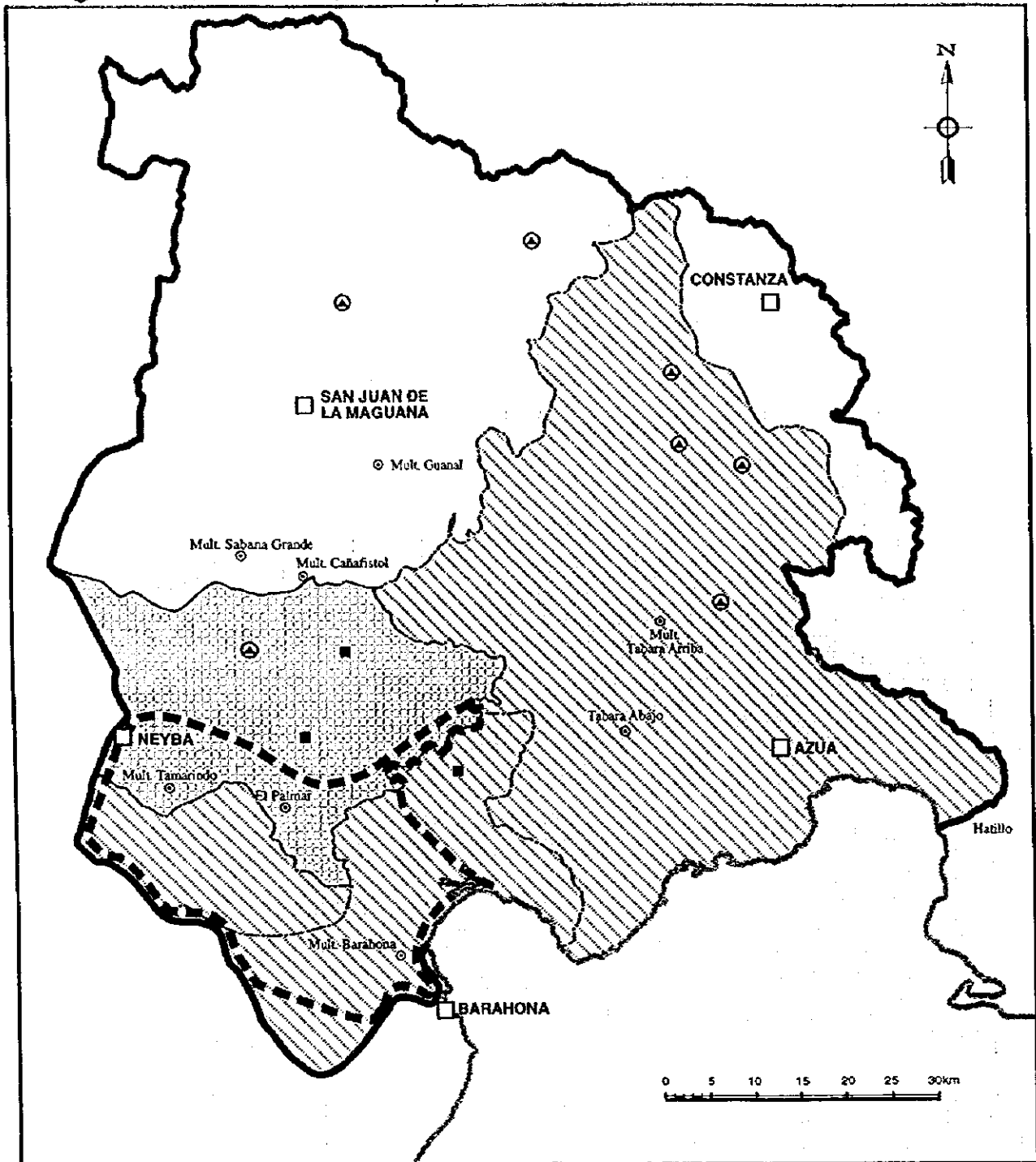


LEGEND

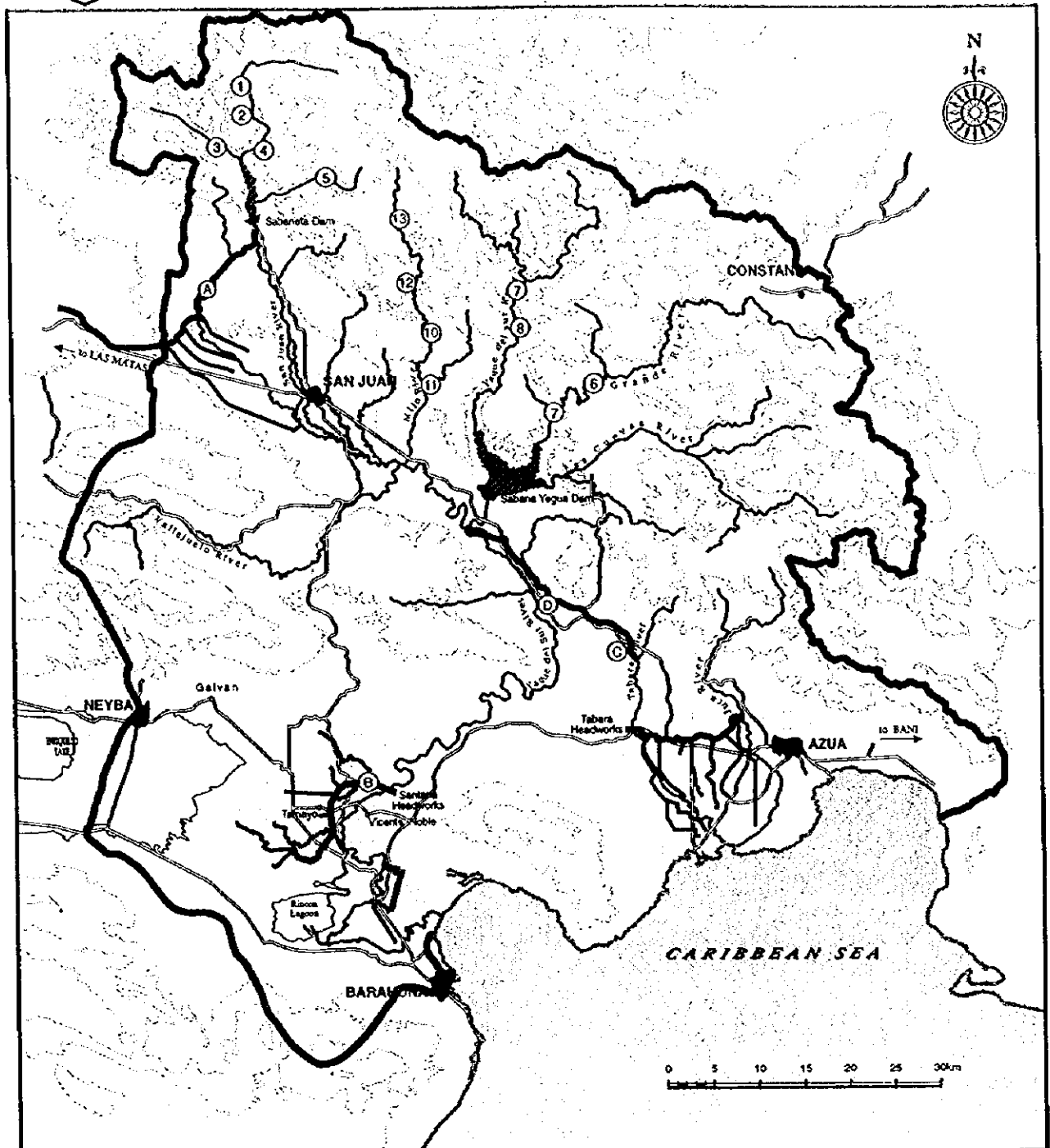
- Existing reservoir
- Existing headworks
- Proposed reservoir
- Proposed reservoir

Note: HW; headworks
IA; irrigation area
IT; intake





LEGEND	
	Project Area
	Provincial Boundary
	Water Supply Project Planned for Construction by INAPA
	Water Supply Project Proposed in the Present Study (Tube Well)
	Water Supply Project Proposed in the Present Study (Surface Water)
	Planned Barahona Water Supply Project under Detailed Design by INAPA
	Master Plan Study for Groundwater Development Planned by INAPA (Stage I)
	Master Plan Study for Groundwater Development Planned by INAPA (Stage II)



LEGEND			
Boundary of Project Area	Village	① Hondo Valle	Ⓐ José Joaquín Puello
Road	Dam	② La Higuera	Ⓑ Santana
Canal	Headworks	③ Los Jaiminez	Ⓒ Los Toros
	River	④ San Pedro-Avispas	Ⓓ Magueyal
	Contour	⑤ Los Guanos	
		⑥ Palomino	
		⑦ Boca de los Rios	

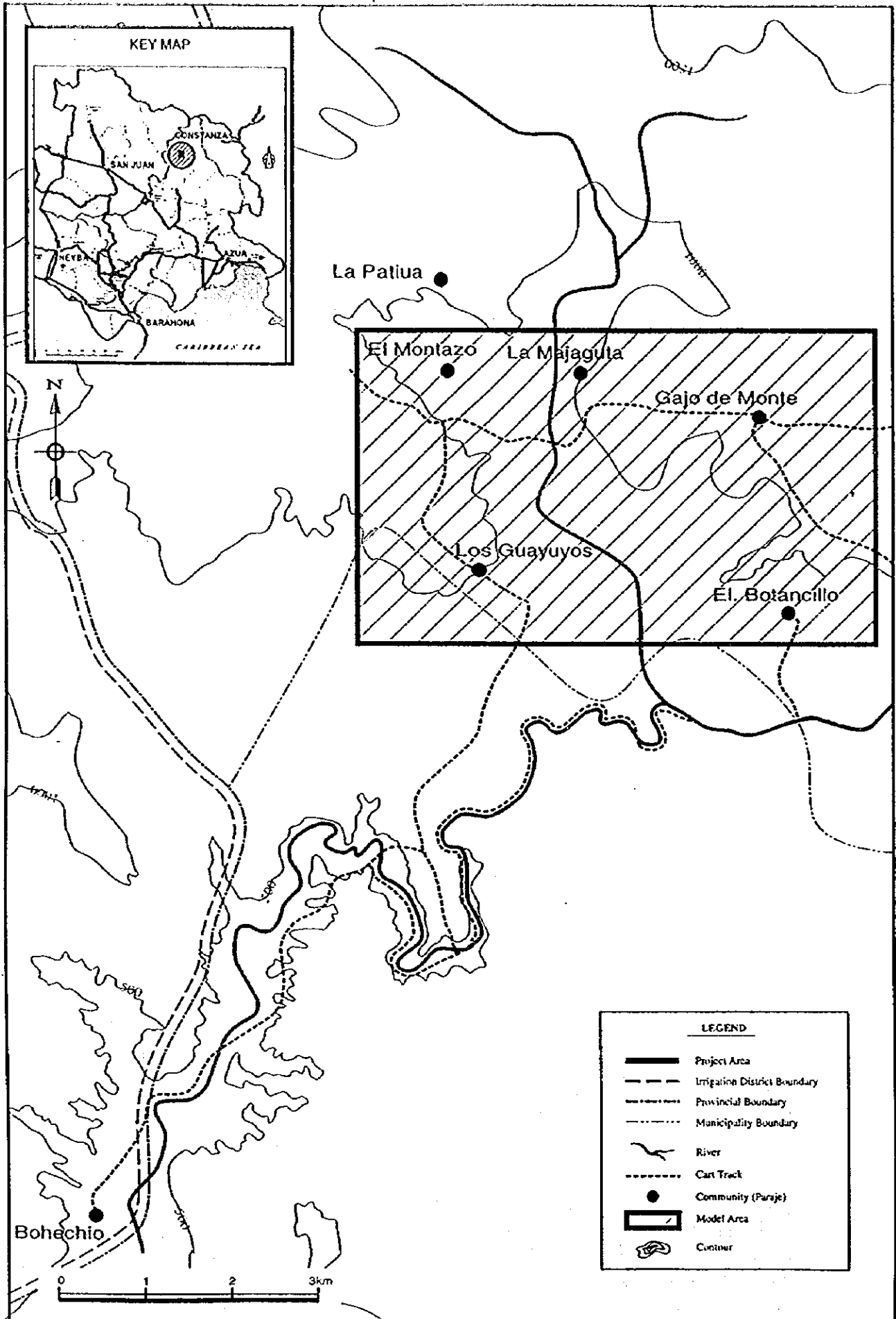


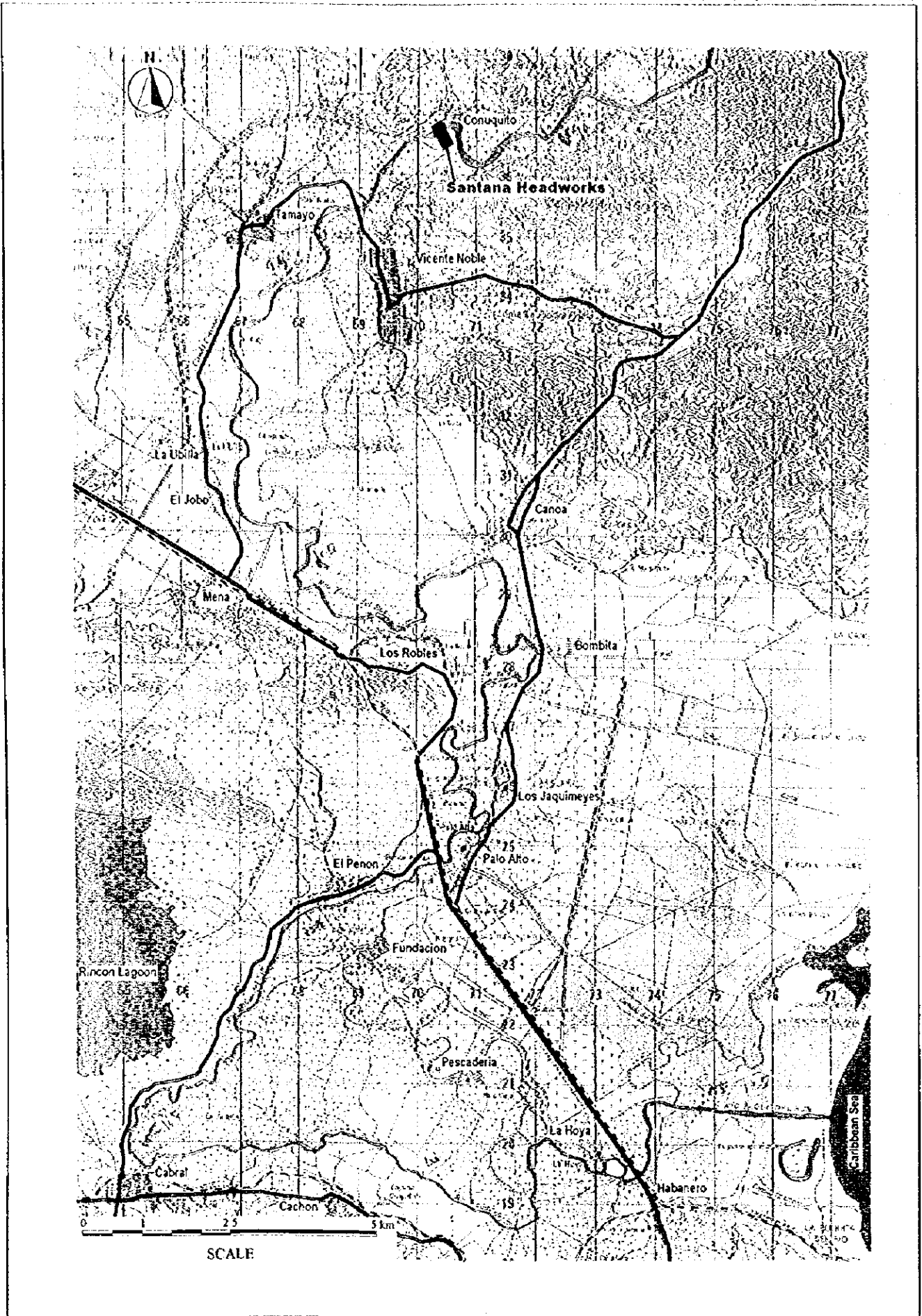
図 21

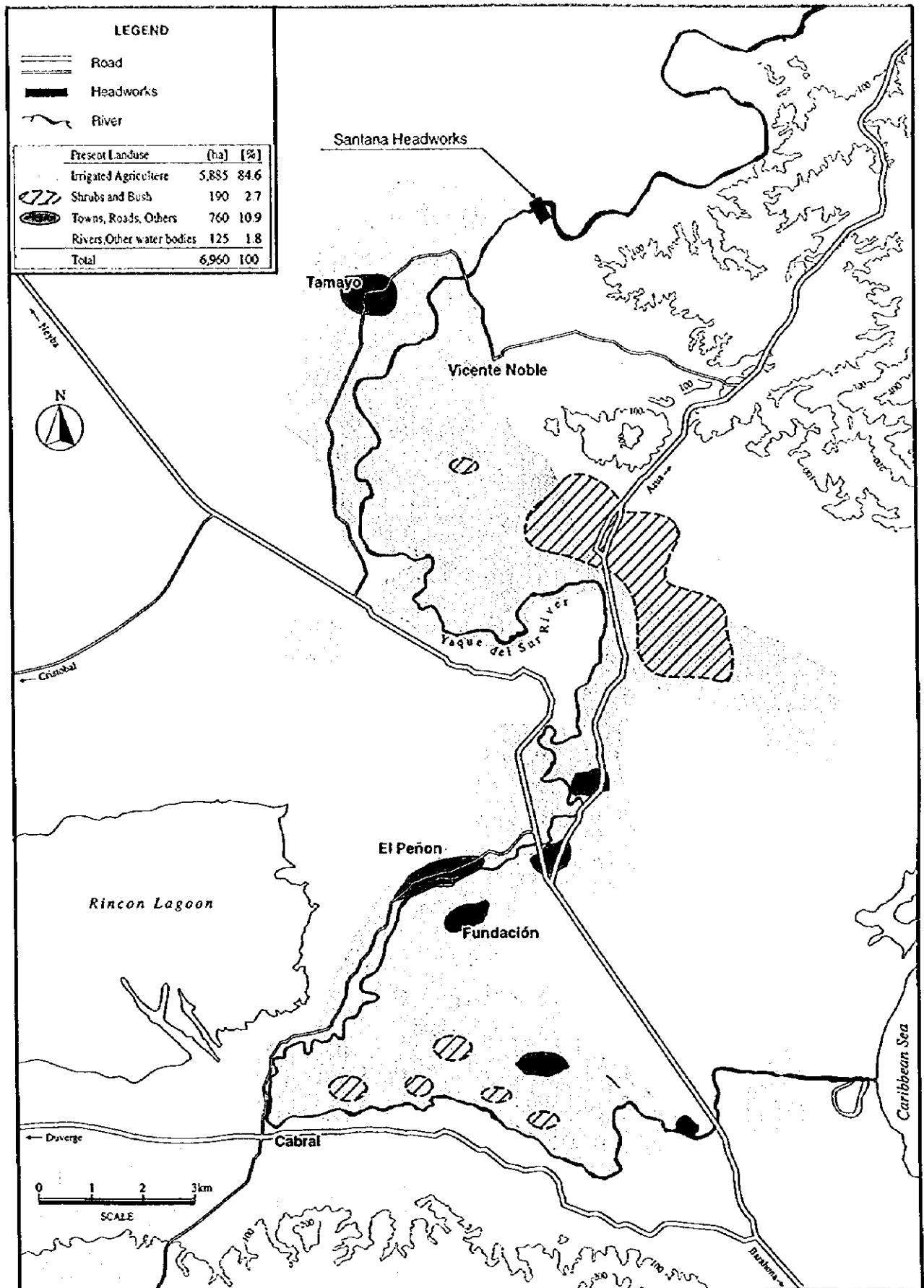
事業別事業実施工程表

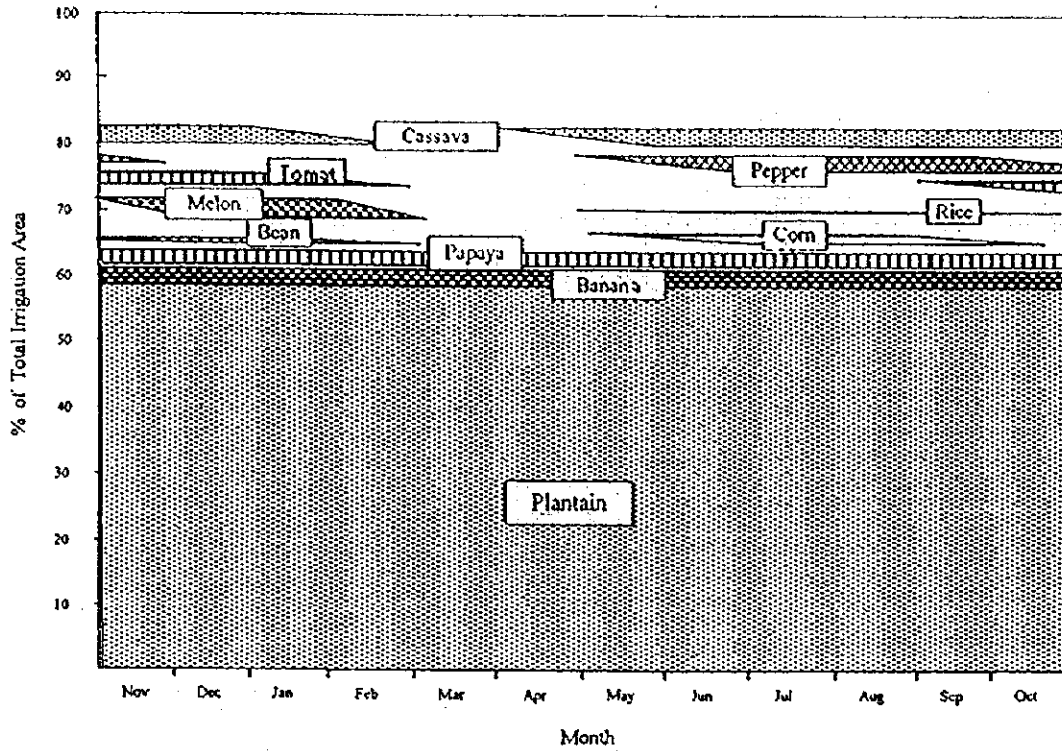
▬ : F/S, D/D, Program preparation ▨ : Construction / Training - - - - : Operation / Implementation of Program

Name of Project	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agriculture											
A-1 Coffee Production Improvement Project											
<i>Pilot Area (2 plots) and Trading Center</i>											
<i>Formation of Farmers association / Training</i>											
<i>Nurseries / Planting</i>											
<i>Drying Yard / Storage Facilities / Procurement of Equipment</i>											
<i>Rural Roads</i>											
Agricultural Support											
S-1 Plan for Credit Services											
S-2 Plan for Strengthening CIAZA Research Center											
S-3 Plan for Seed Multiplication											
S-4 Plan for Strengthening Extension Services											
S-5 Plan for Market Information Systems											
S-6 Plan for Agricultural Cooperatives											
Overall Water Management											
O-1 Plan of Villarparando Water Management Center											
<i>Rehabilitation of Villarparando Headworks / Installation of Telemetering System</i>											
<i>Training</i>											
Irrigation and Drainage											
I-1 Night Storage Pond Project											
<i>In J. J. Puello</i>											
<i>in Hato del Padre</i>											
<i>in San Juan</i>											
<i>in Mijo</i>											
I-2 Guanito San Juan Irrigation System Improvement Project											
I-3 YSURA Area Irrigation Improvement Project											
I-4 YSURA Extension Area Development Project											
I-5 YSURA Headrace Small Irrigation System Improvement Project											
I-6 Yaque del Sur Lower Reaches Irrigation and Drainage Project											
<i>Left Bank System</i>											
<i>Santana System</i>											
I-7 Galvan Groundwater Irrigation Project											
I-8 Yaque del Sur Small Gravity Irrigation System Improvement Project											
Rural Infrastructure											
R-1 Magueyal Mini-Hydropower Project											
R-2 Rural Water Supply Plan											
R-3 Rural Road Improvement Plan											
R-4 Other Social Infrastructure Improvement Plan											
Environment											
E-1 Reforestation Plan in the Upper Watershed Area of Grande River											
E-2 Wildlife Conservation Plan in Rincon Lagoon											
Water Resources											
W-1 J. J. Puello Dam Development Project											
W-2 Sabana Yegua Dam Rehabilitation Project											

図 22 下流域におけるジャケデルスル川

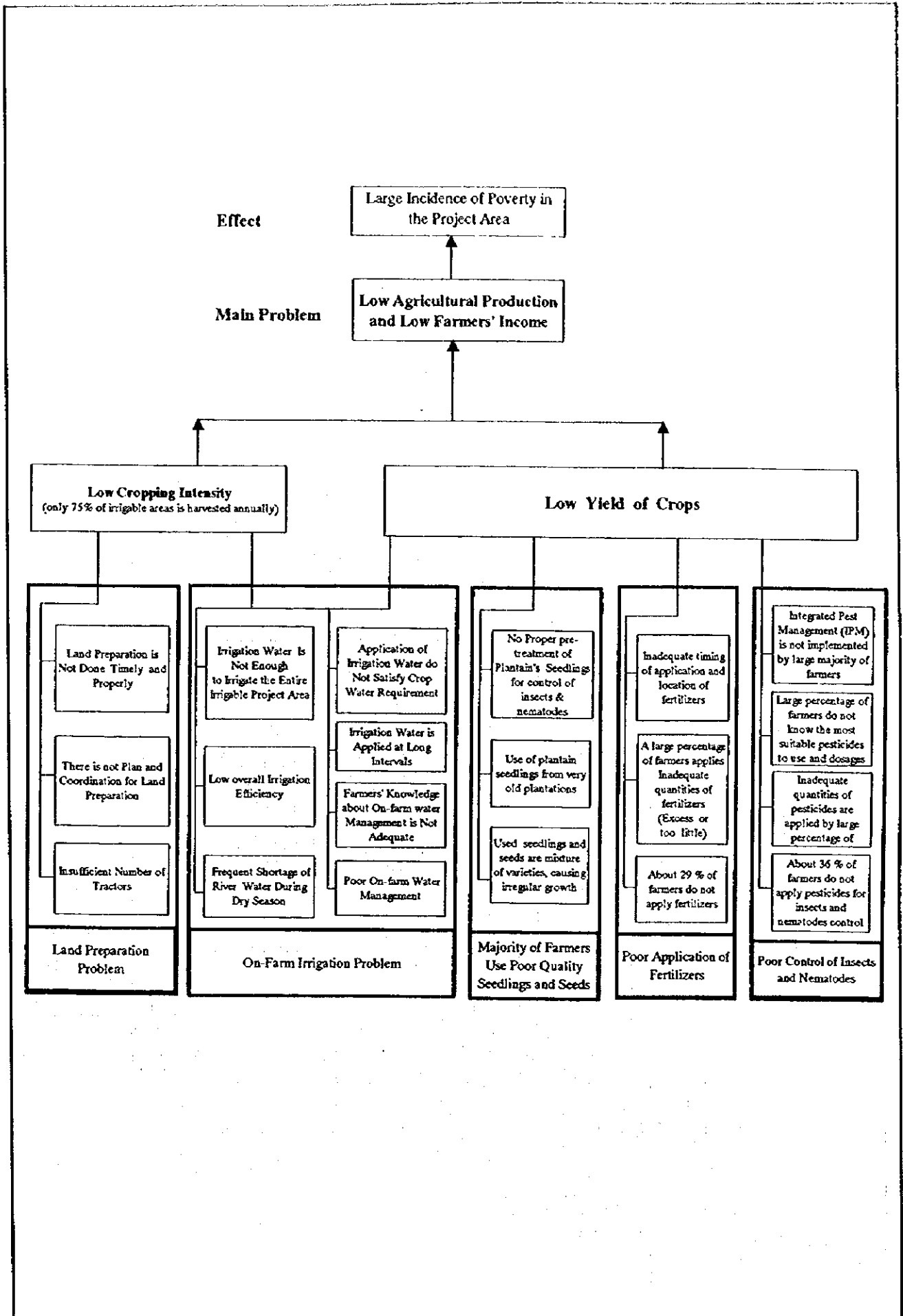






Present Cropping Pattern in the Project Area

Crop Name	Cropping Area (ha)	Planting Date		Planting Duration Days	Crop Duration Days
		Day	Month		
Plantain	3,430	1			365
Banana	180	1			365
Cassava	170	21	5	60	270
Pepper	150	1	5	60	150
Tomato	120	1	10	45	90
Melon	115	1	11	45	90
Papaya	110				365
Corn	80	1	5	60	120
Bean	50	1	11	45	90
Rice	25	1	5	60	150
Total	4,430				



Farmgate Red Bean, 1996-1998			Farmgate Corn, 1996-1998			
RD\$/MT	Farmgate	Farmgate	RD\$/MT	Farmgate	Farmgate	
	1996	1997	1998	1996	1997	1998
January	13,405	15,481	19,536	3352	3879	4774
February	12,376	14,080	18,700	3339	3743	4598
March	16,709	14,755	17,875	3683	3988	5368
April	14,010	16,102	17,974	3740	4048	5082
May	13,950	18,401	18,975	3906	4968	4813
June	13,860	21,560	20,086	3658	4647	6600
July	13,564	19,580	17,303	3540	4798	3465
August	13,030	18,066	16,500	3212	5032	3751
September	15,621	17,641	17,600	3502	4413	3080
October	15,664	14,960	15,840	3456	4223	4818
November	15,161	14,400	16,500	3375	3689	3751
December	14,168	16,102	17,875	3247	3860	3273

Source: Secretaria de Estado de Agricultura (SEA), Dirección Regional Agropecuaria, Zone Sur (1996 - 1998).

Figure E. Farmgate Price for Red Bean 1996-1998

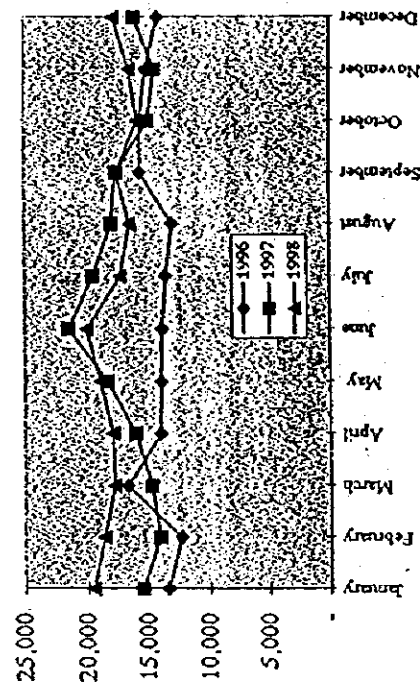
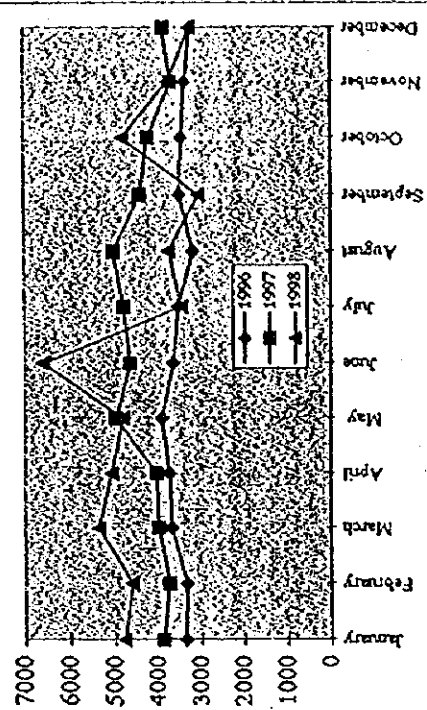


Figure F. Farmgate Price for Corn 1996-1998



Farmgate Rice, 1996-1998				Farmgate Cassava, 1996-1998			
RDS/MT				RDS/MT			
1996		1997		1996		1997	
Farmgate	Farmgate	Farmgate	Farmgate	Farmgate	Farmgate	Farmgate	Farmgate
January	7,522	8,208	11,550	2,343	2,750	4,857	
February	8,164	9,507	10,400	2,353	3,101	5,903	
March	7,993	10,393	9,350	2,588	3,422	5,355	
April	8,624	8,371	9,630	2,508	4,200	5,390	
May	7,700	8,177	9,900	2,772	4,415	5,390	
June	6,545	8,960	9,625	2,794	4,490	4,704	
July	8,450	7,949	10,450	3,080	4,580	4,434	
August	6,529	9,203	8,800	2,668	4,469	3,384	
September	8,951	9,066	11,000	2,730	4,867	3,069	
October	8,149	9,313	11,000	2,863	4,469	2,640	
November	8,143	9,059	11,000	2,625	4,127	3,520	
December	9,291	8,670	8,800	2,840	3,894	3,586	

Source: Secretaria de Estado de Agricultura (SEA), Dirección Regional Agropecuaria, Zone Sur (1996 - 1998).

Figure C. Farmgate Price for Rice, 1996-1998

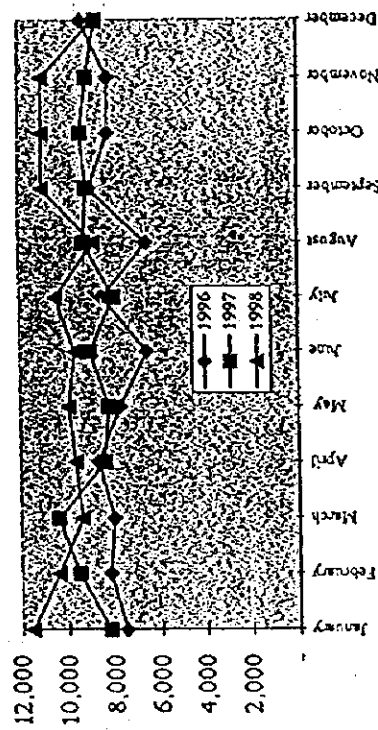
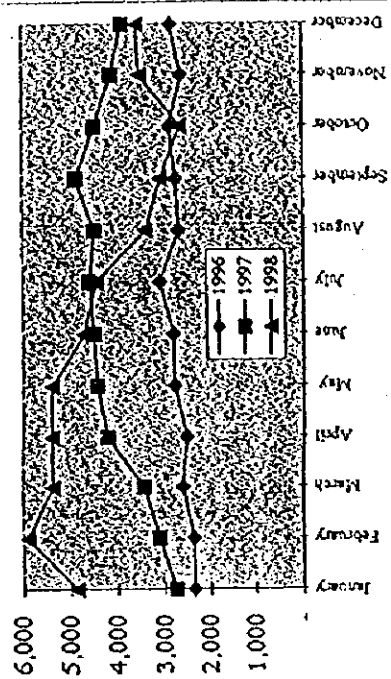


Figure D. Farmgate Price for Cassava 1996-1998



Farmgate Plantain , 1996-1998			Farmgate Banana , 1996-1998		
RDS/MILLAR			RDS/RACIMO		
	Farmgate	Farmgate	Farmgate	Farmgate	Farmgate
	1996	1997	1998	1996	1997
January	1045	746	1543	23	27
February	984	698	1393	23	24
March	703	549	1013	24	22
April	633	649	1122	23	18
May	667	737	1122	22	20
June	627	678	1089	19	25
July	608	1250	1151	22	27
August	579	1420	989	23	32
September	553	1351	910	18	33
October	547	1400	982	16	43
November	515	1467	1280	20	39
December	653	1264	3862	18	36

Source: Secretaria de Estado de Agricultura (SEA), Dirección Regional Agropecuaria, Zone Sur (1996 - 1998).

Figure A. Farmgate price for Plantain.

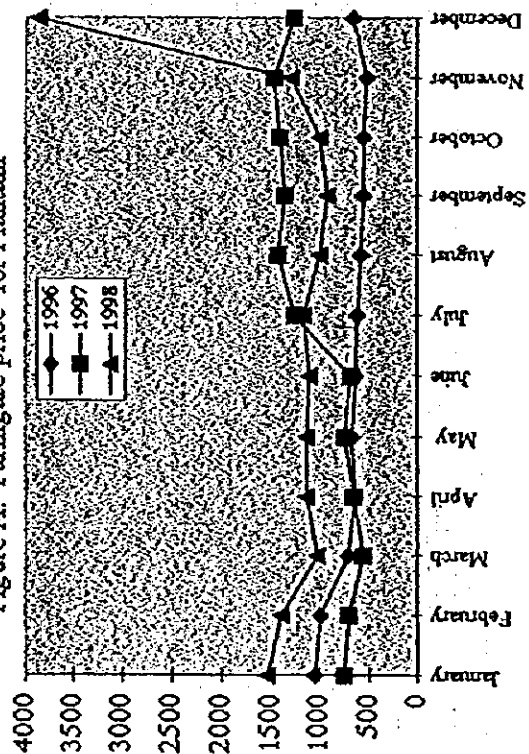
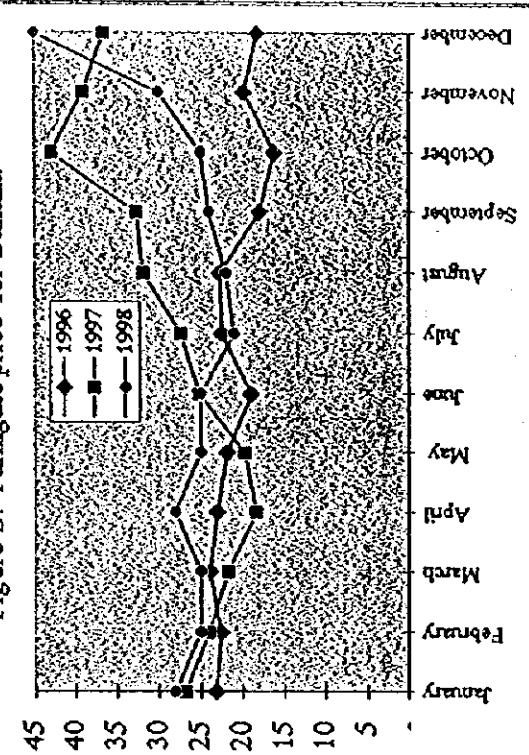
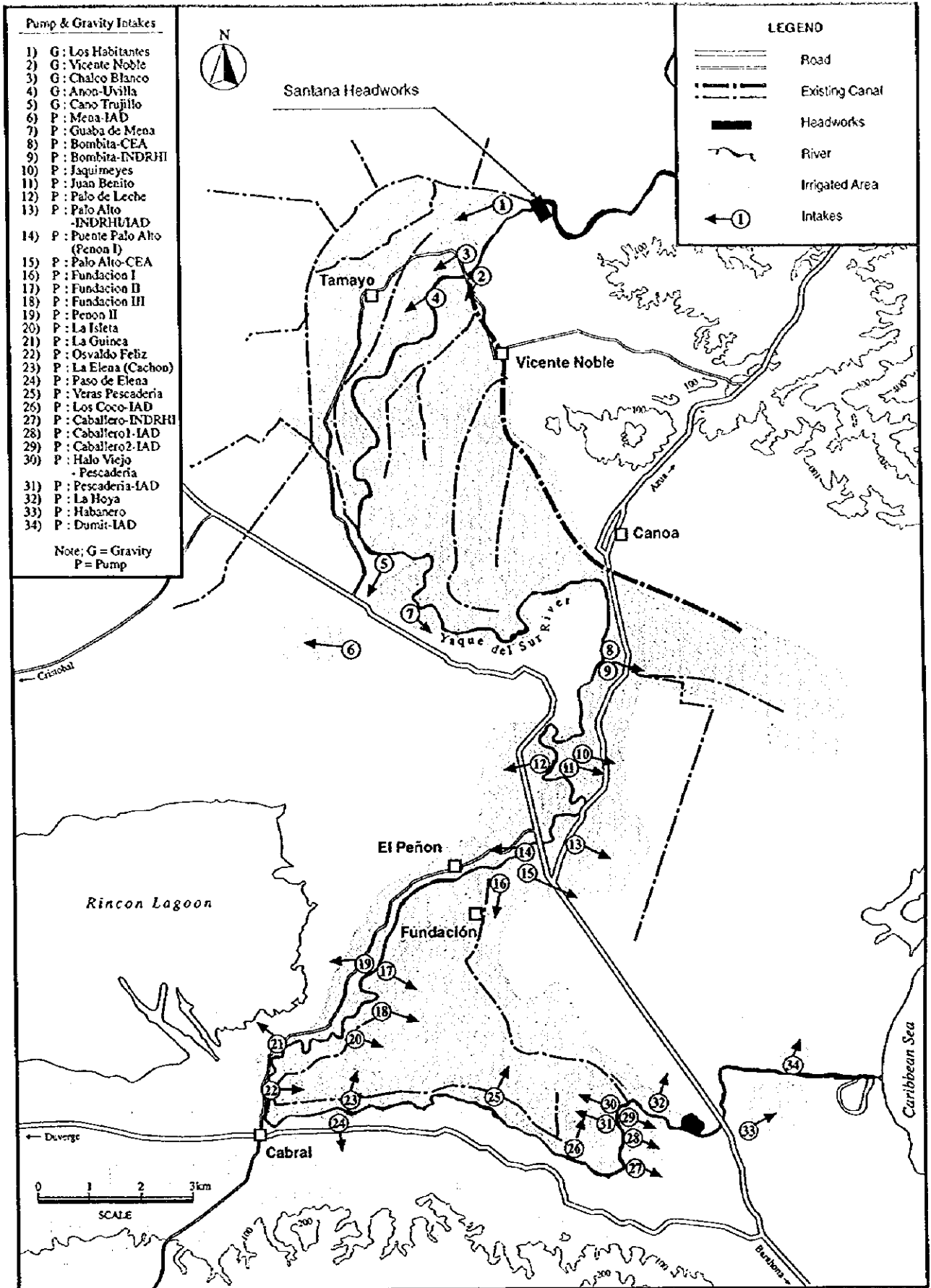
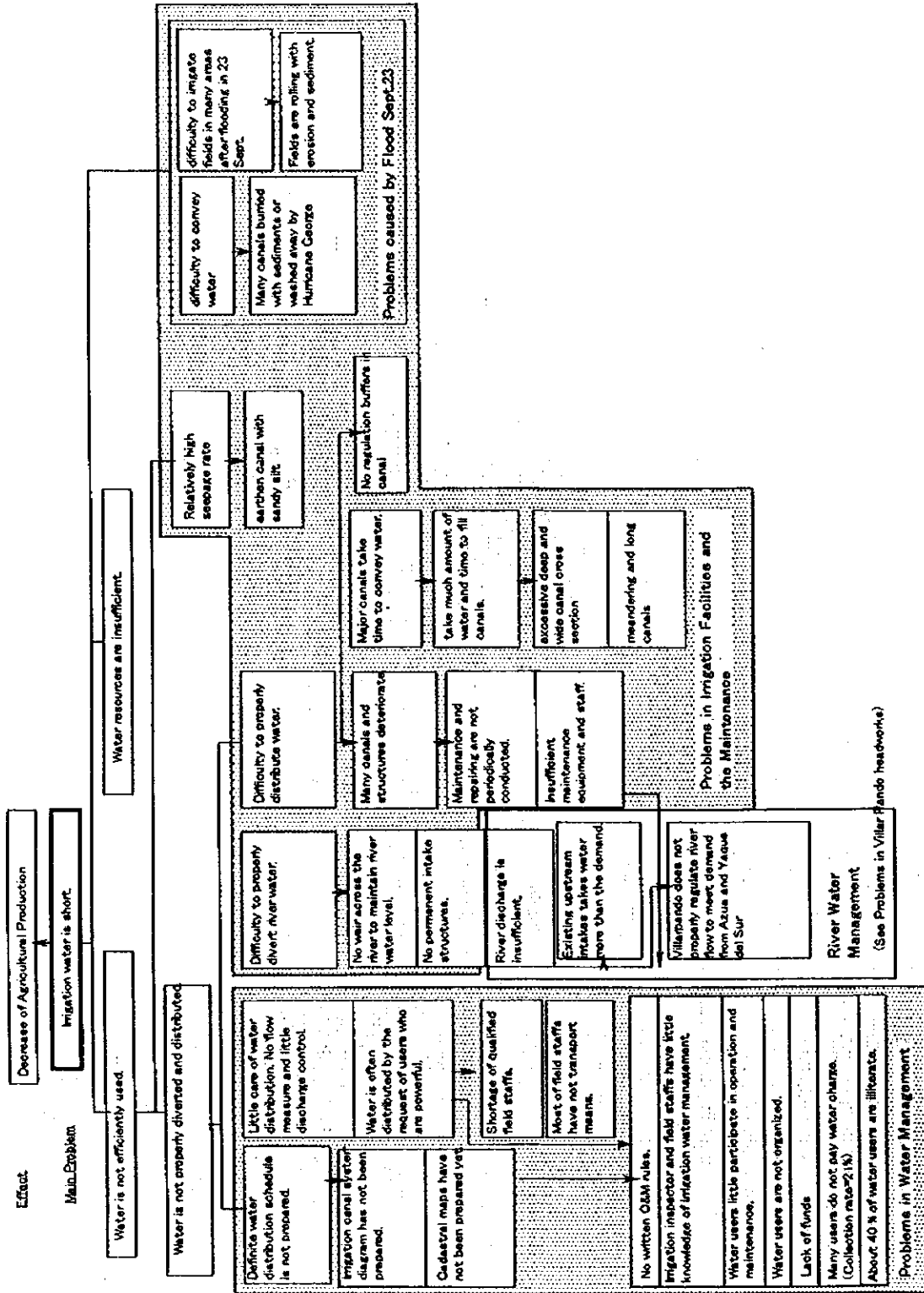


Figure B. Farmgate price for Banana.

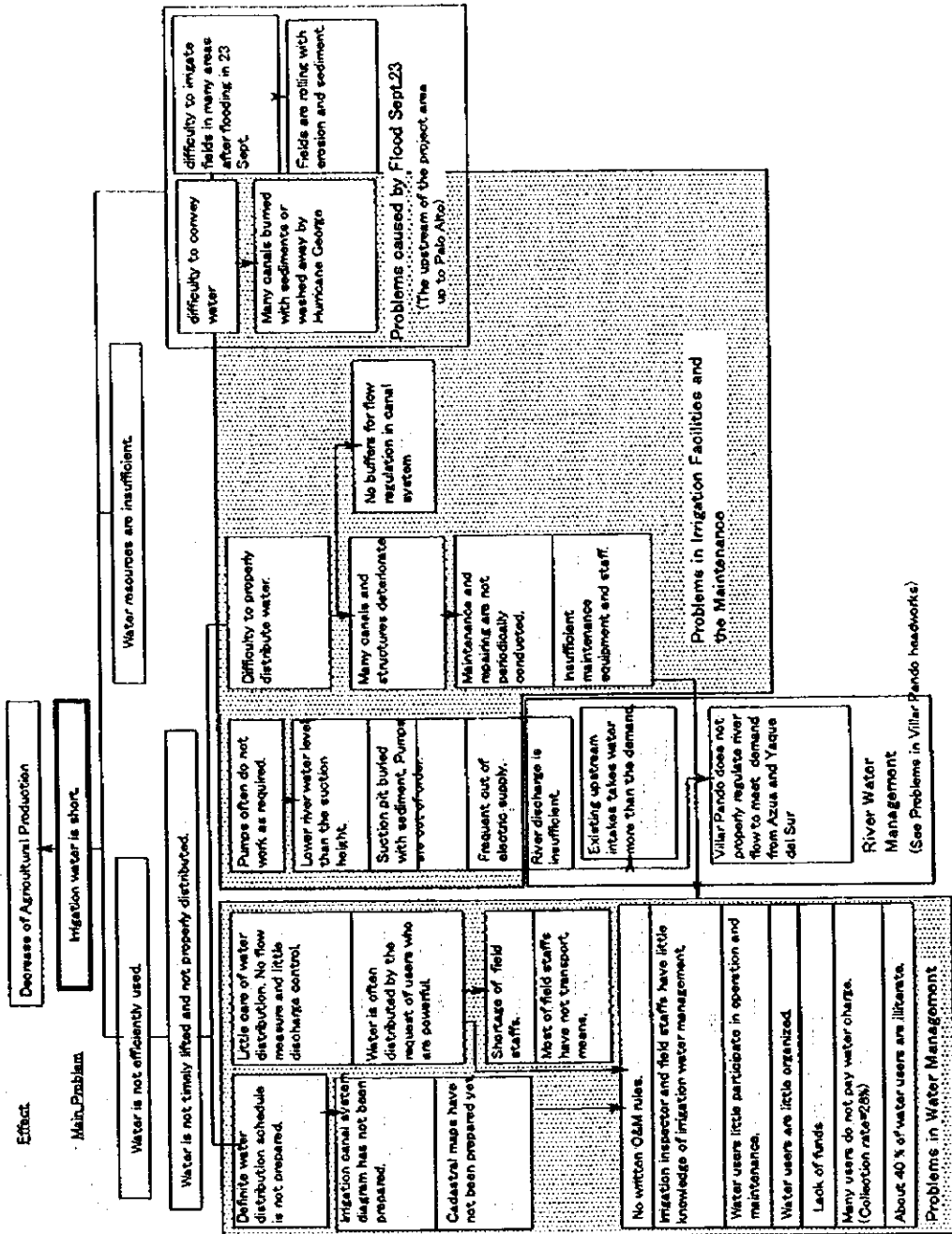




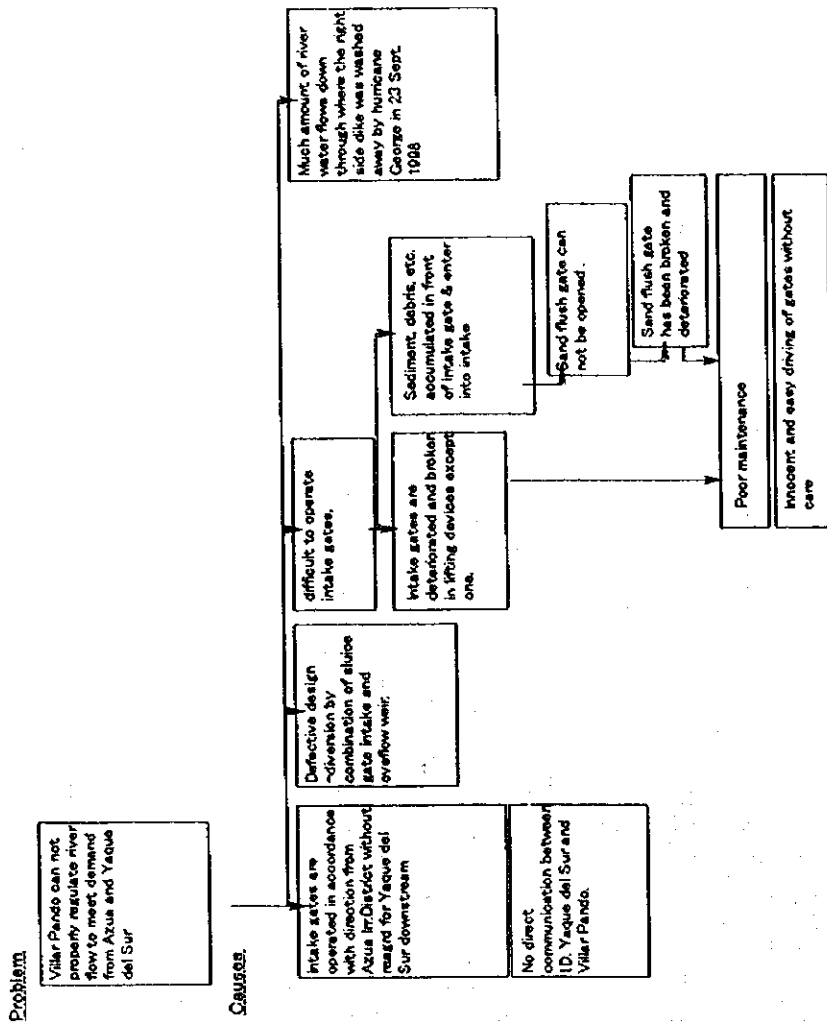
(1) Gravity Irrigation System (Tamayo and Vicente Noble)

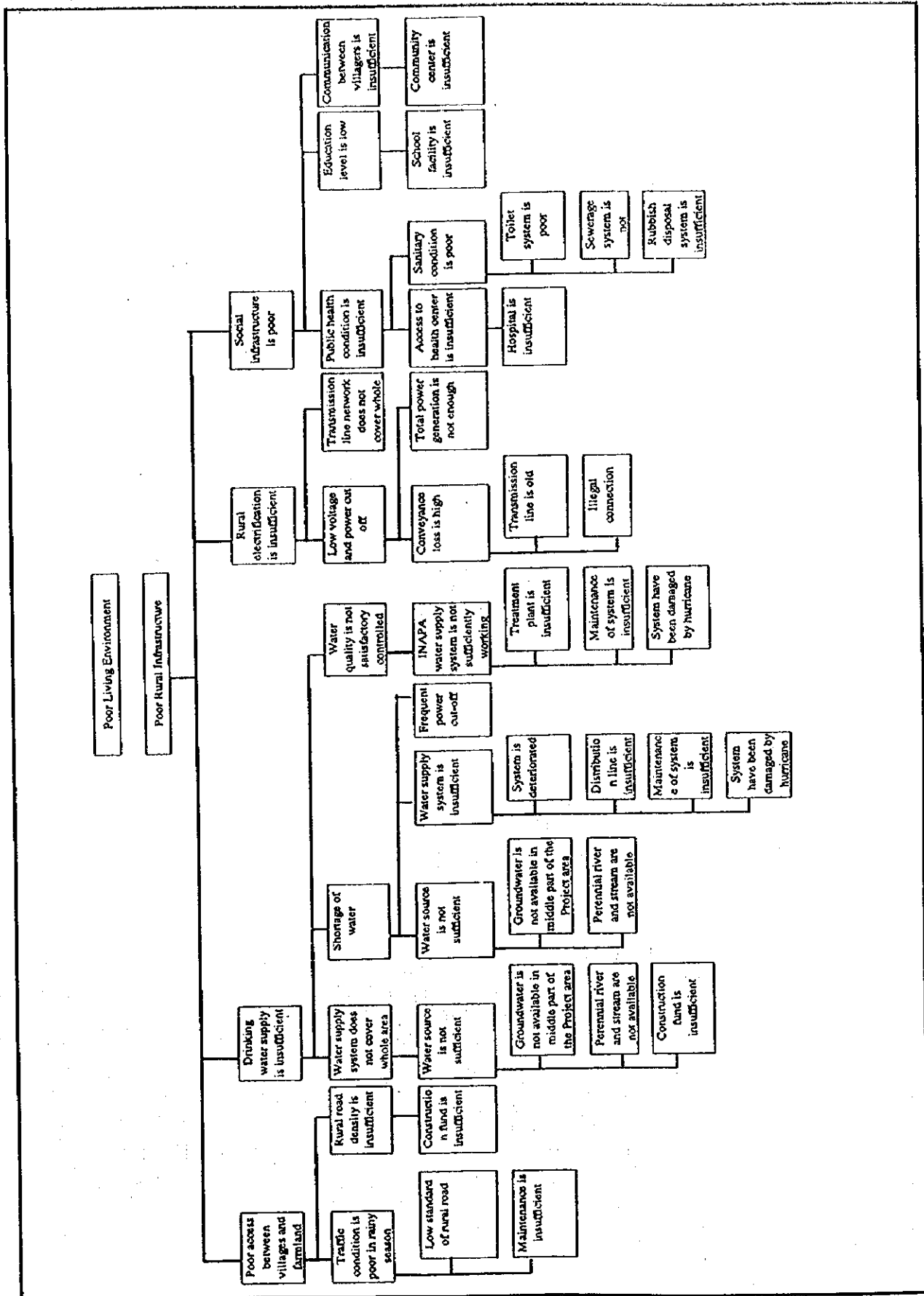


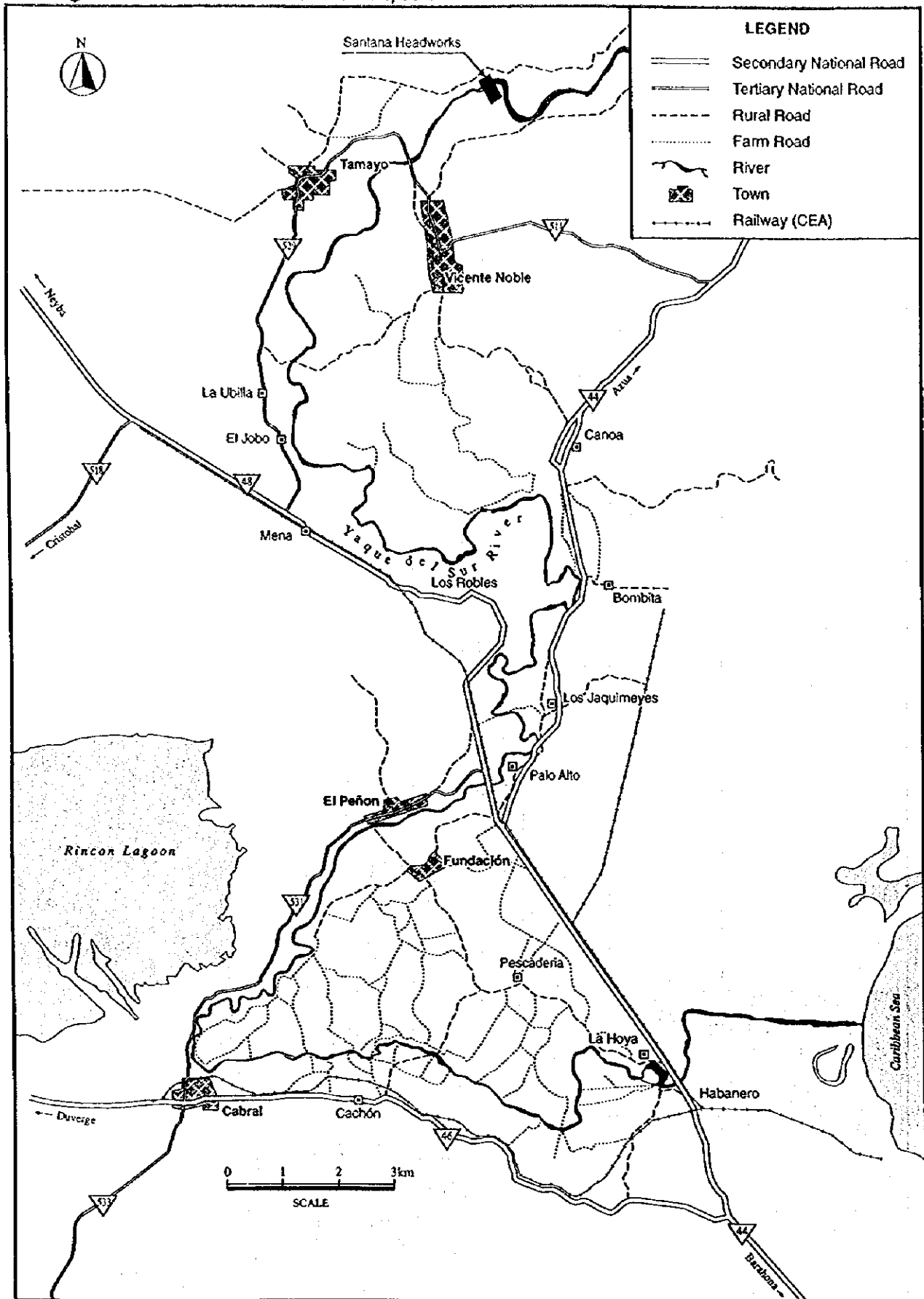
(2) Pump Irrigation System

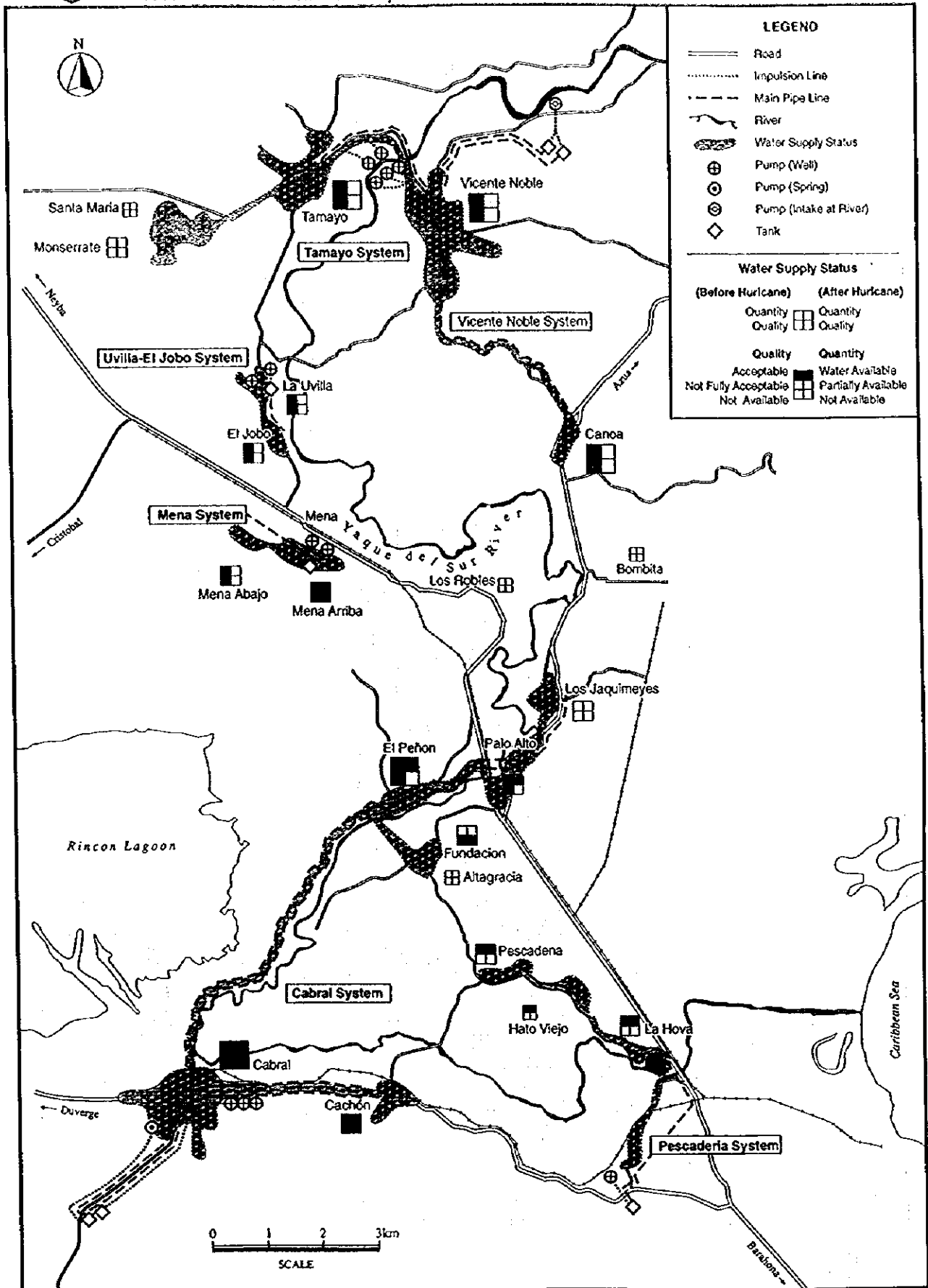


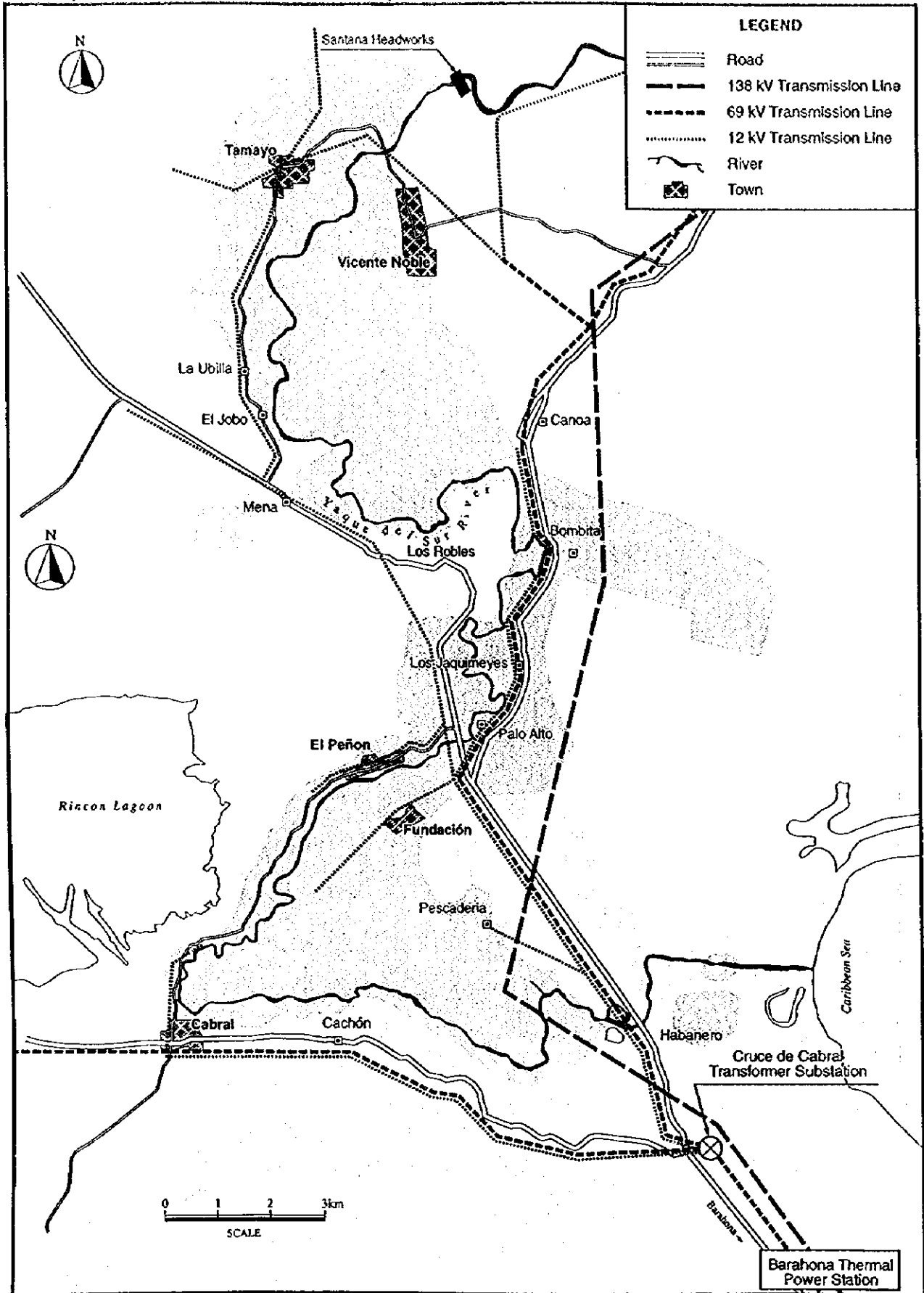
(3) Villarpando headworks

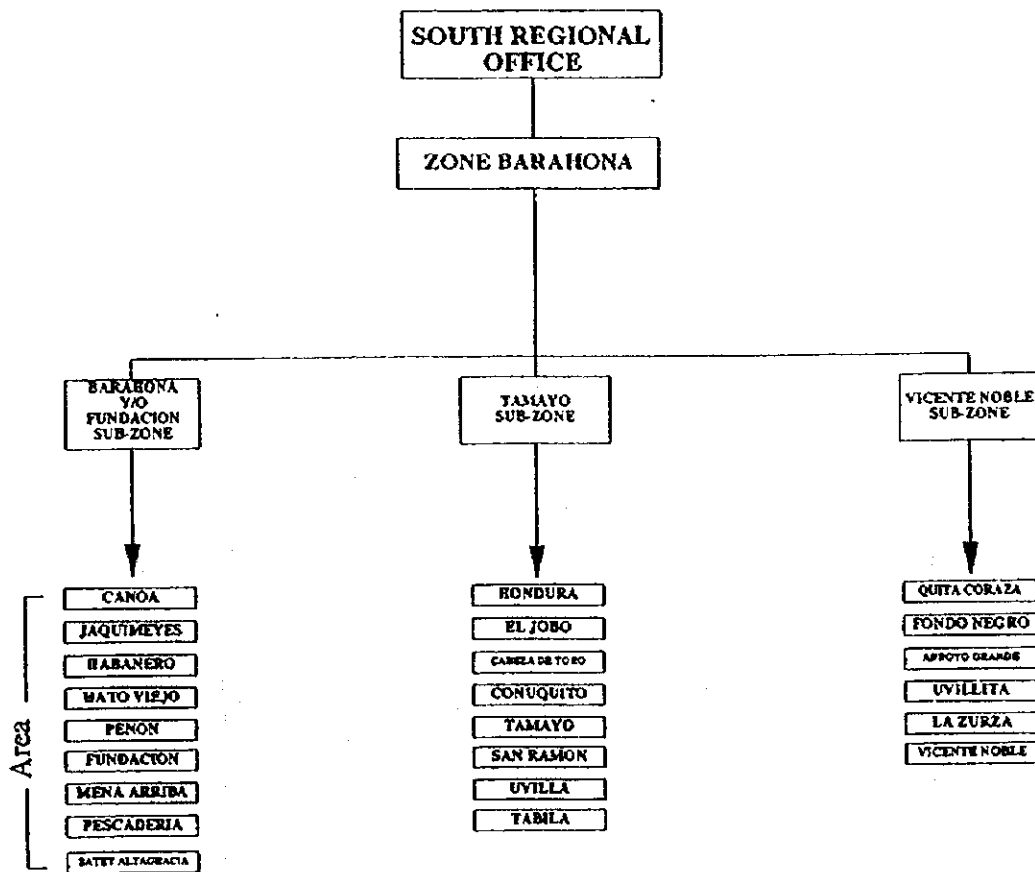




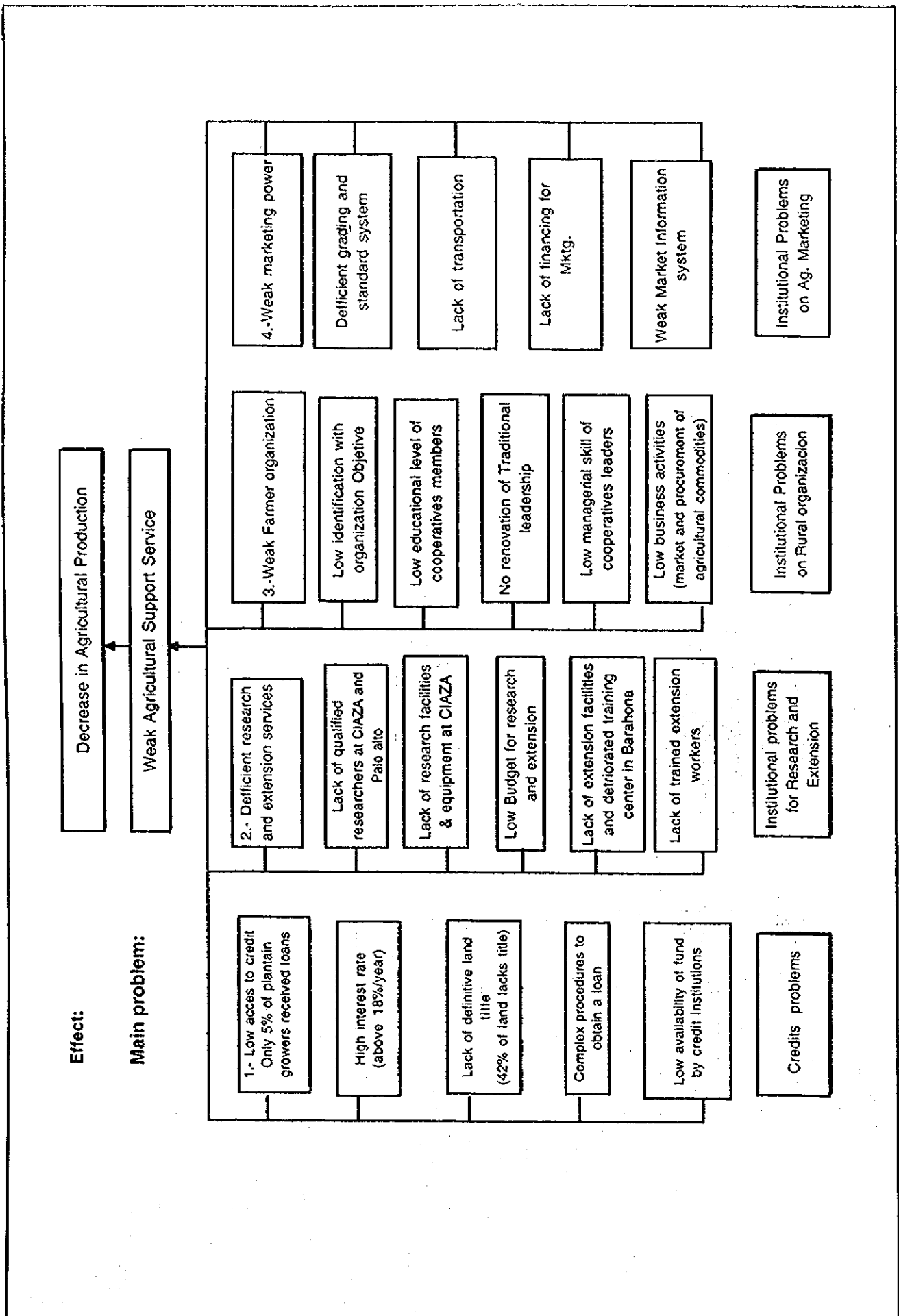




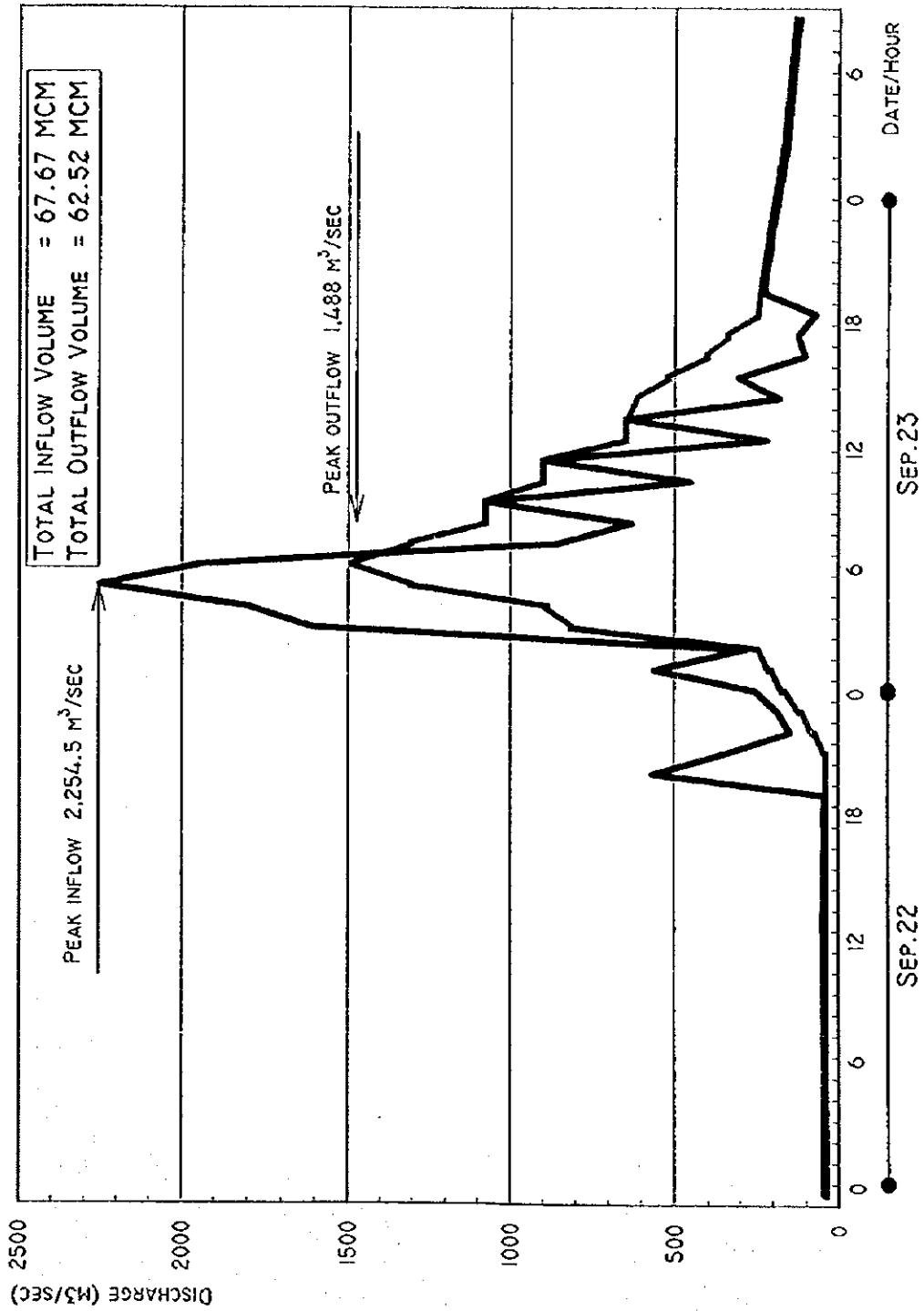




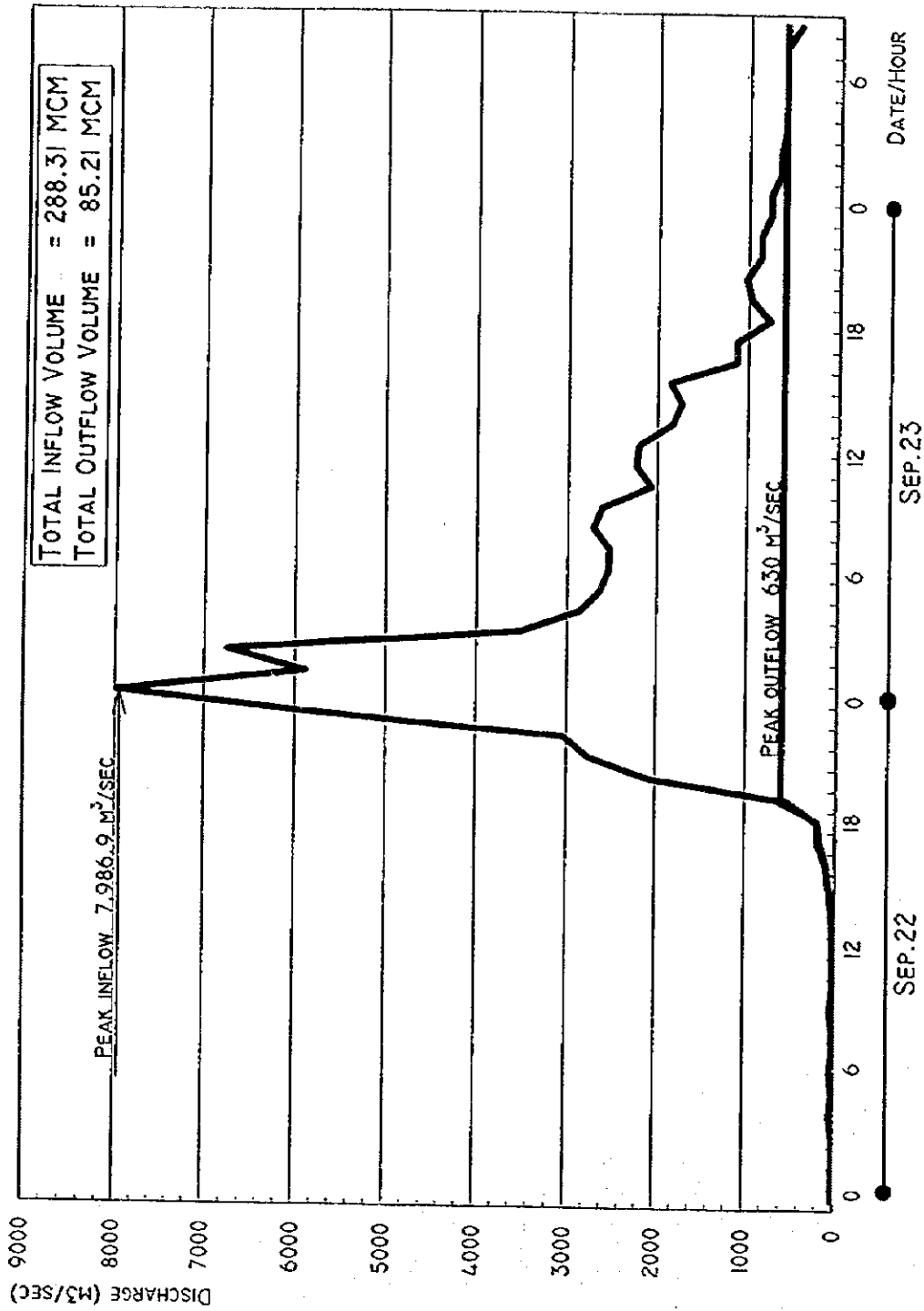
SOURCE : SECRETARIA DE ESTADO DE AGRICULTURA . EXTENSION DEPARTMENT 1999.

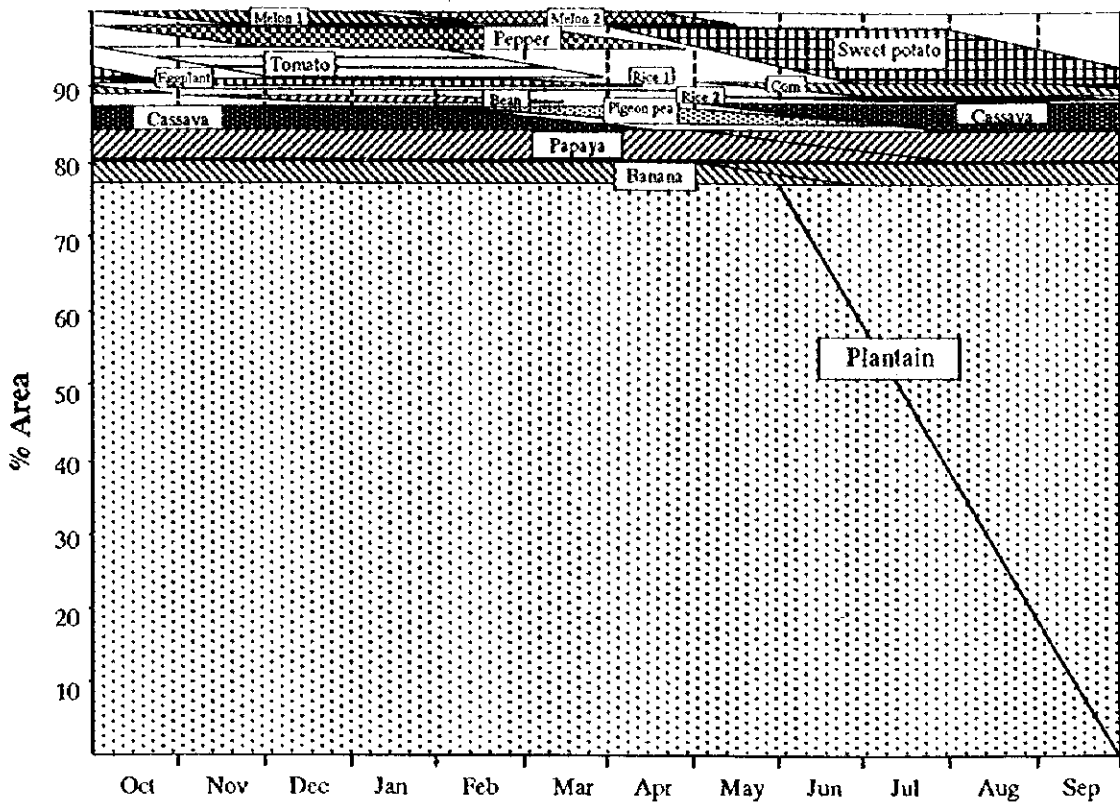


SABANETA DAM

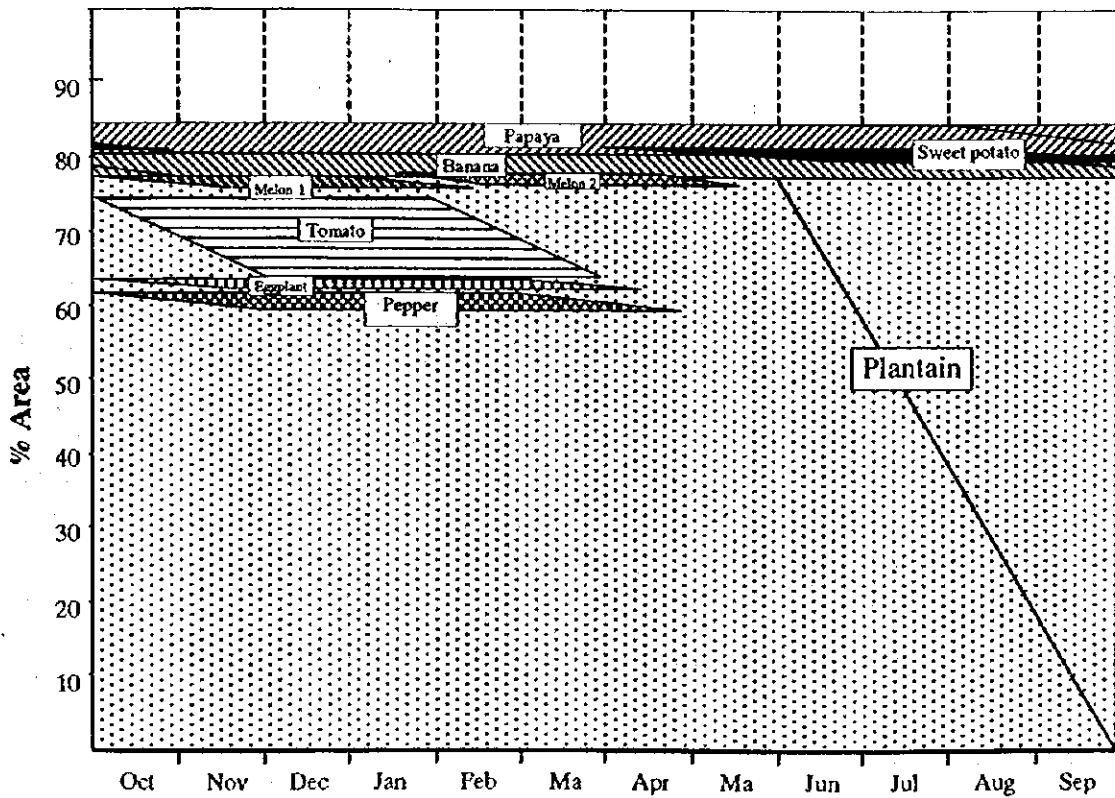


SABANA YEGUA DAM

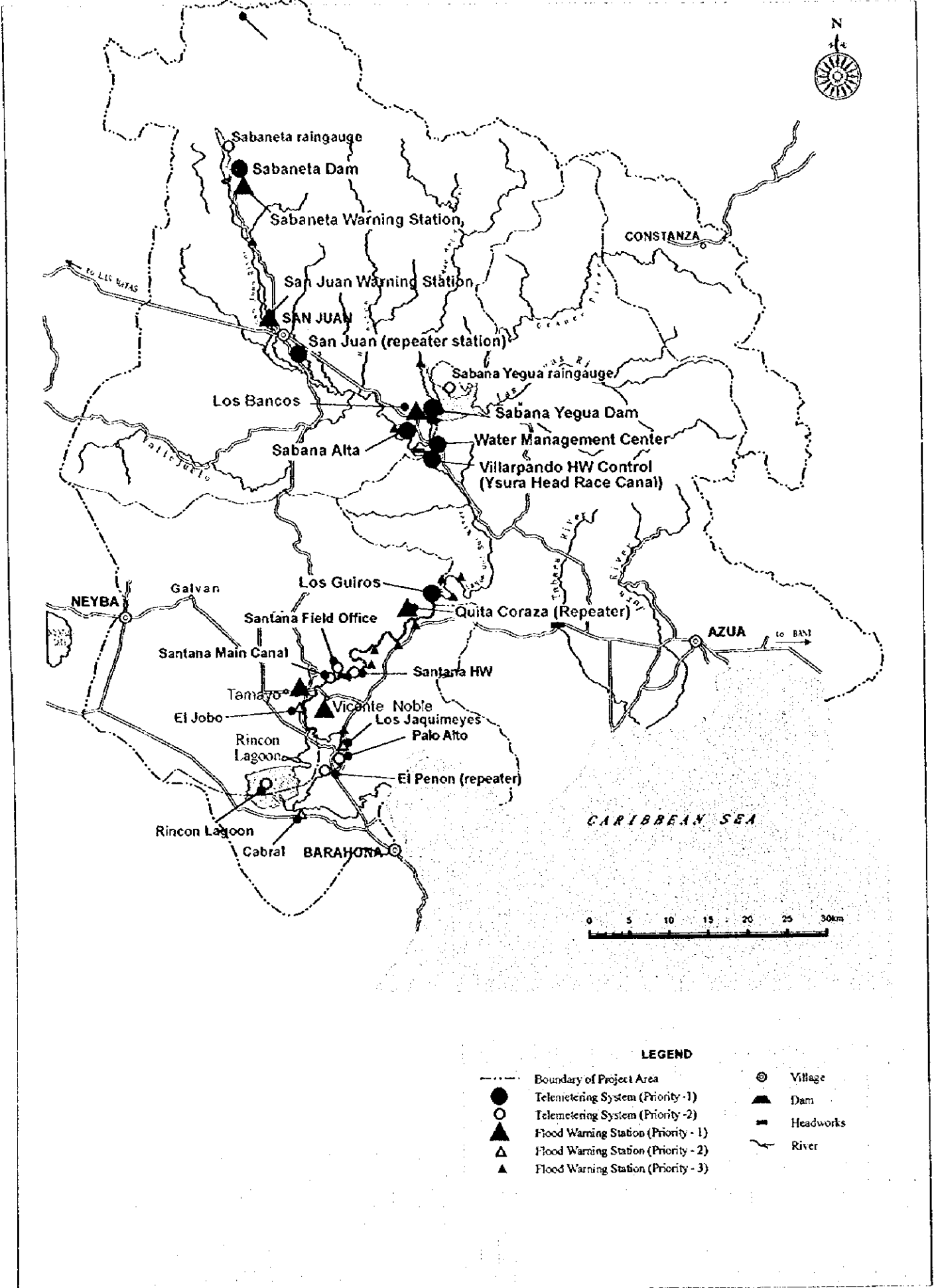


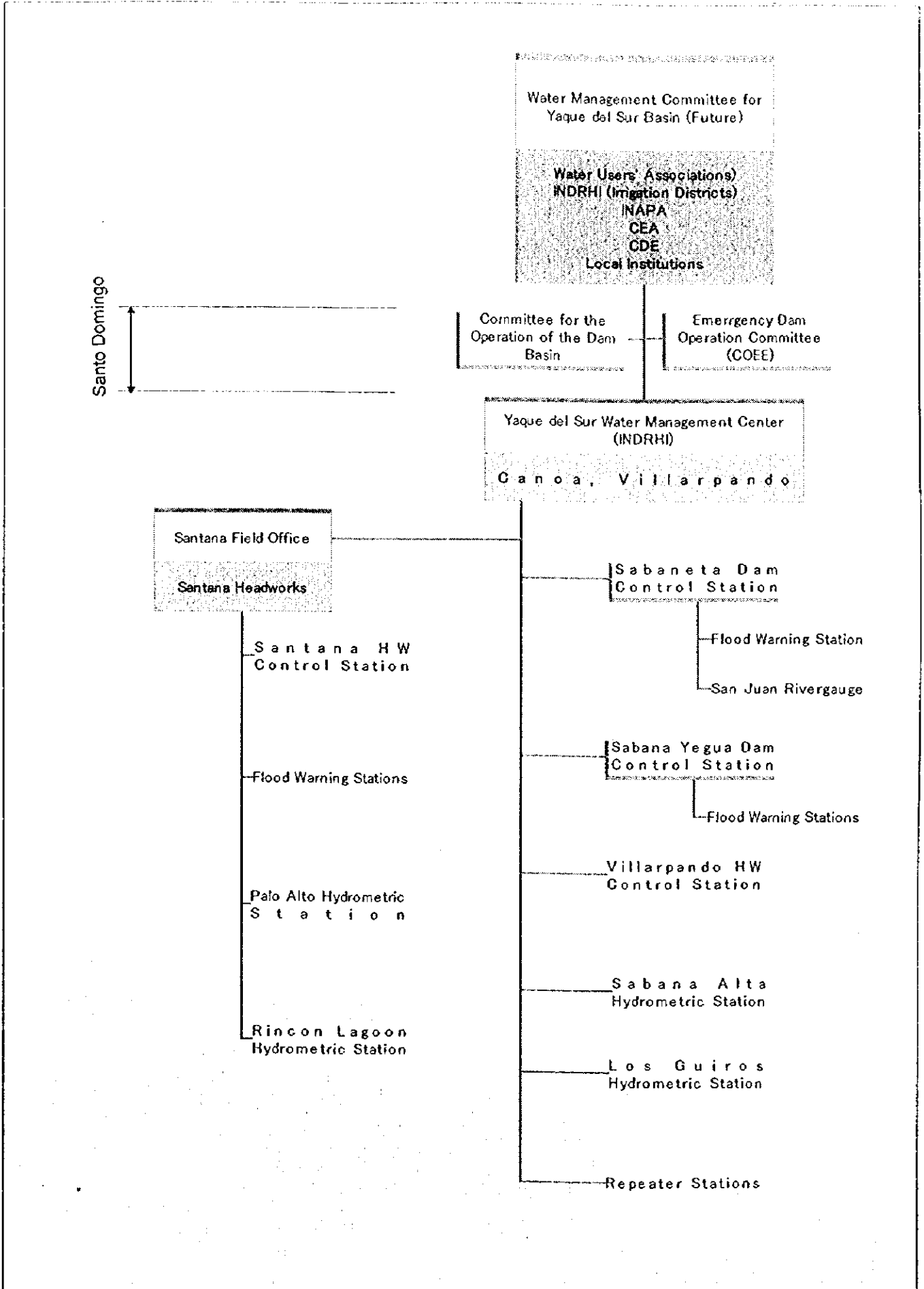


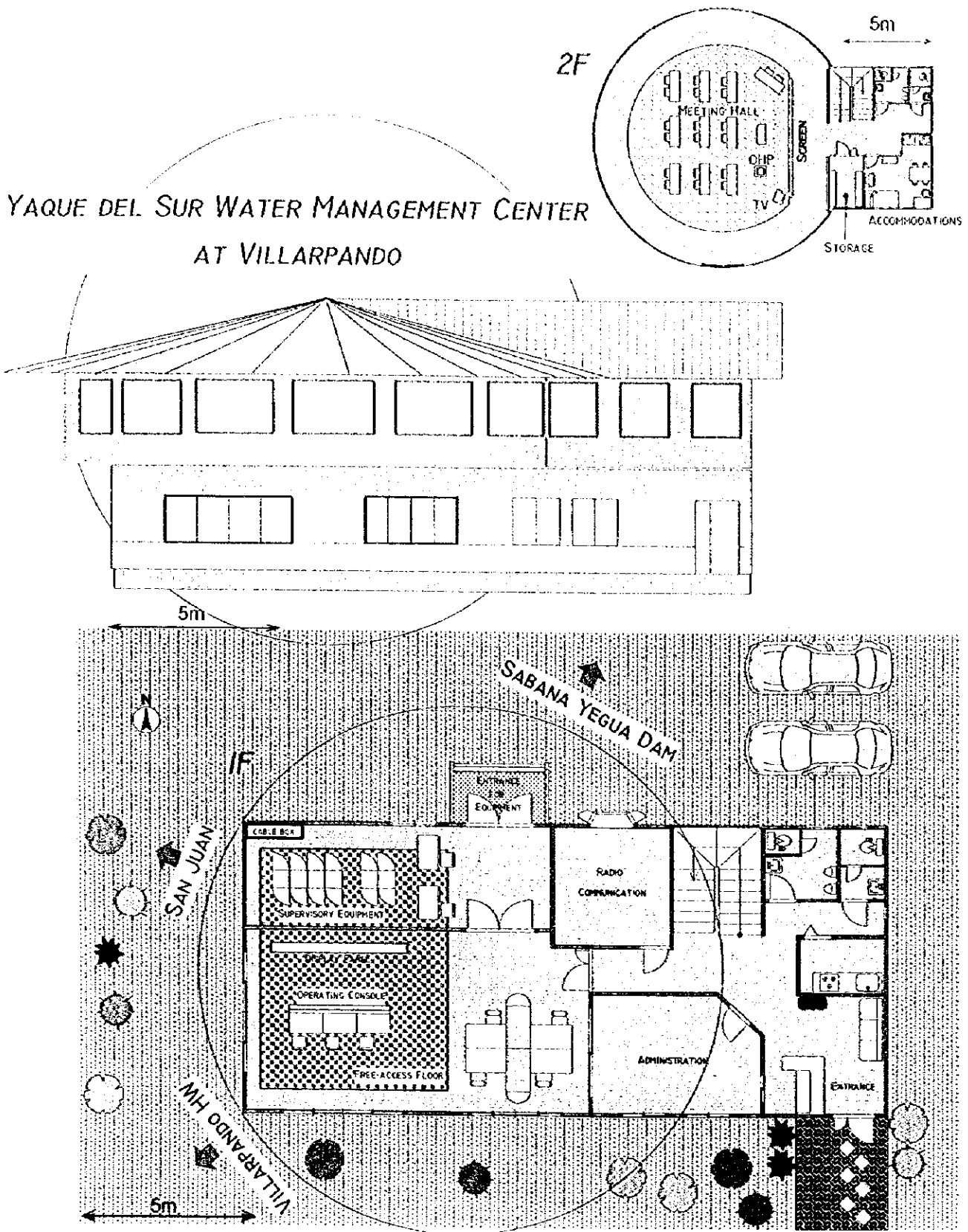
Proposed Cropping Pattern for the Project Area

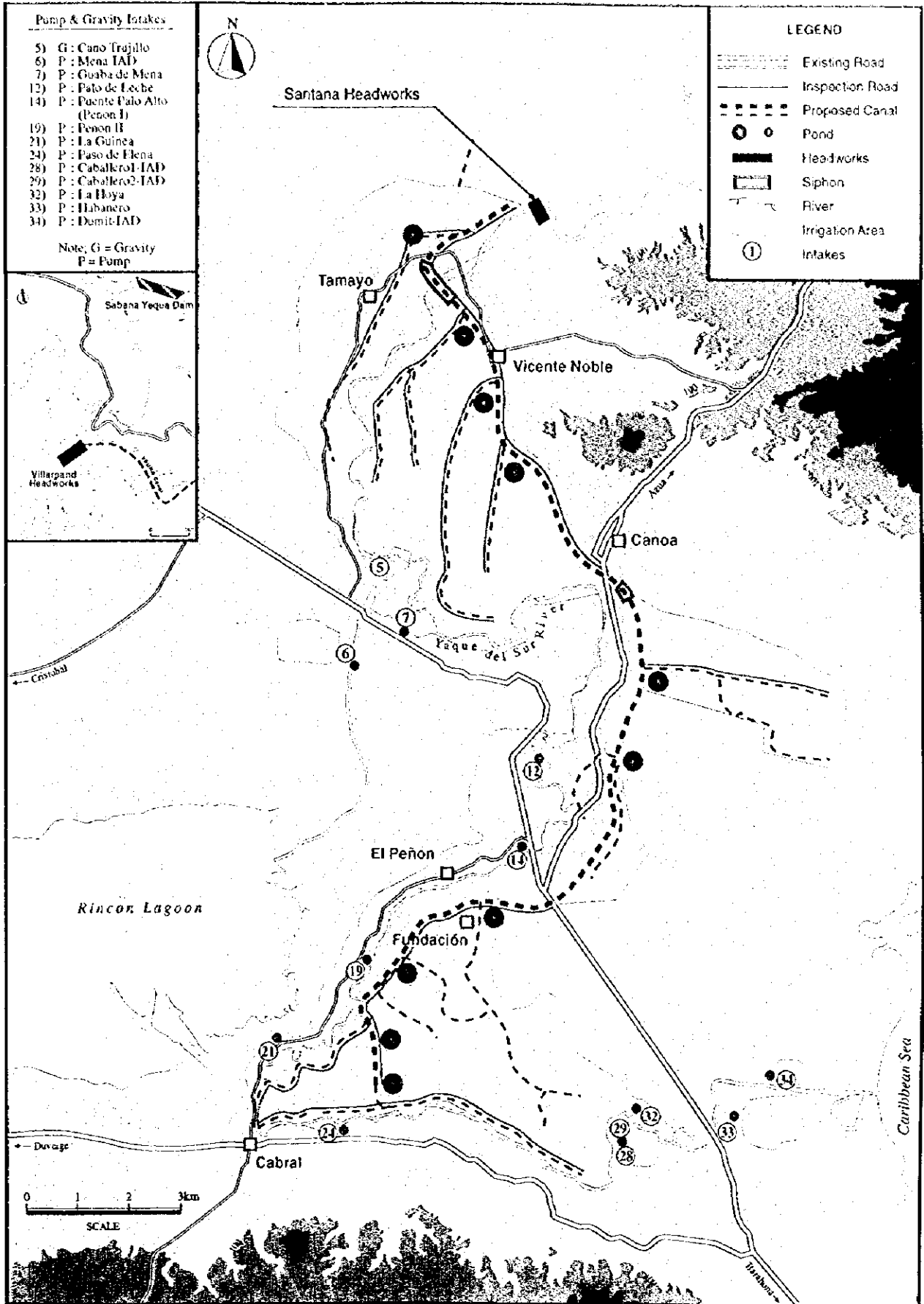


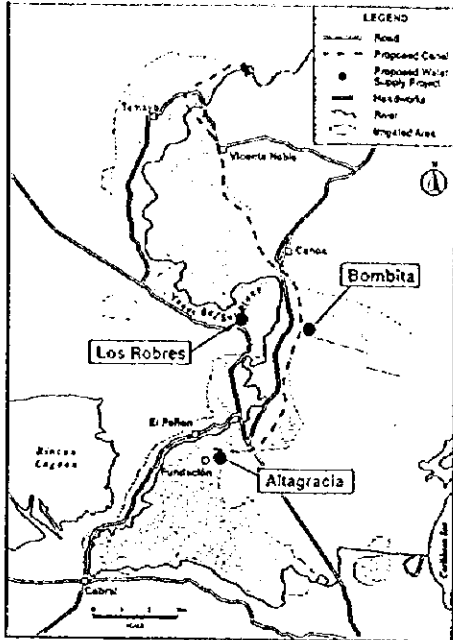
Proposed Inter-Cropping Pattern with Plantain, Banana, and Papaya in



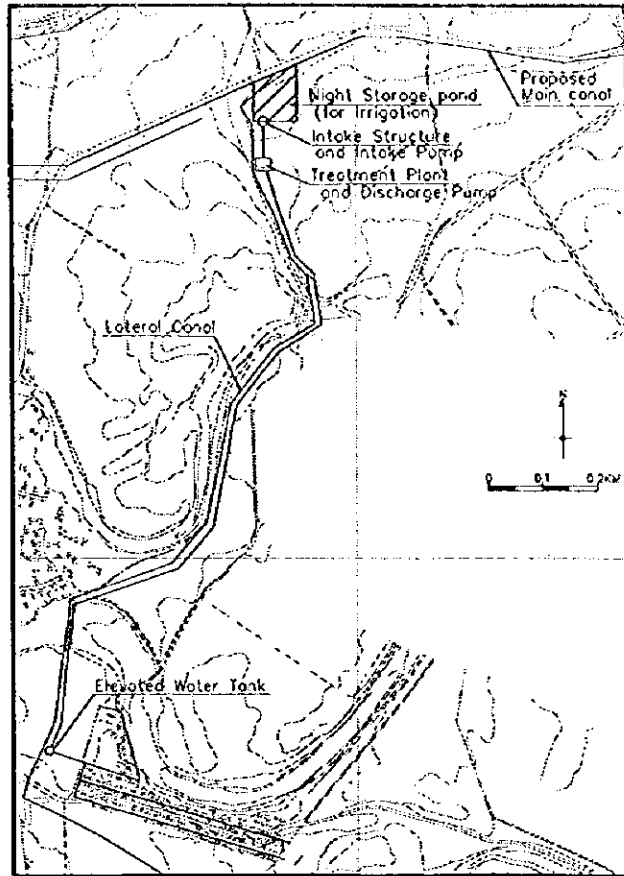




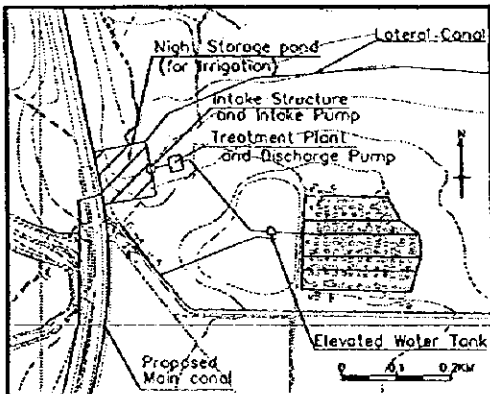




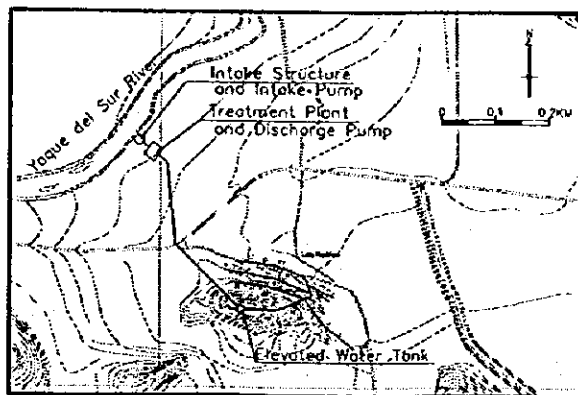
Key Map



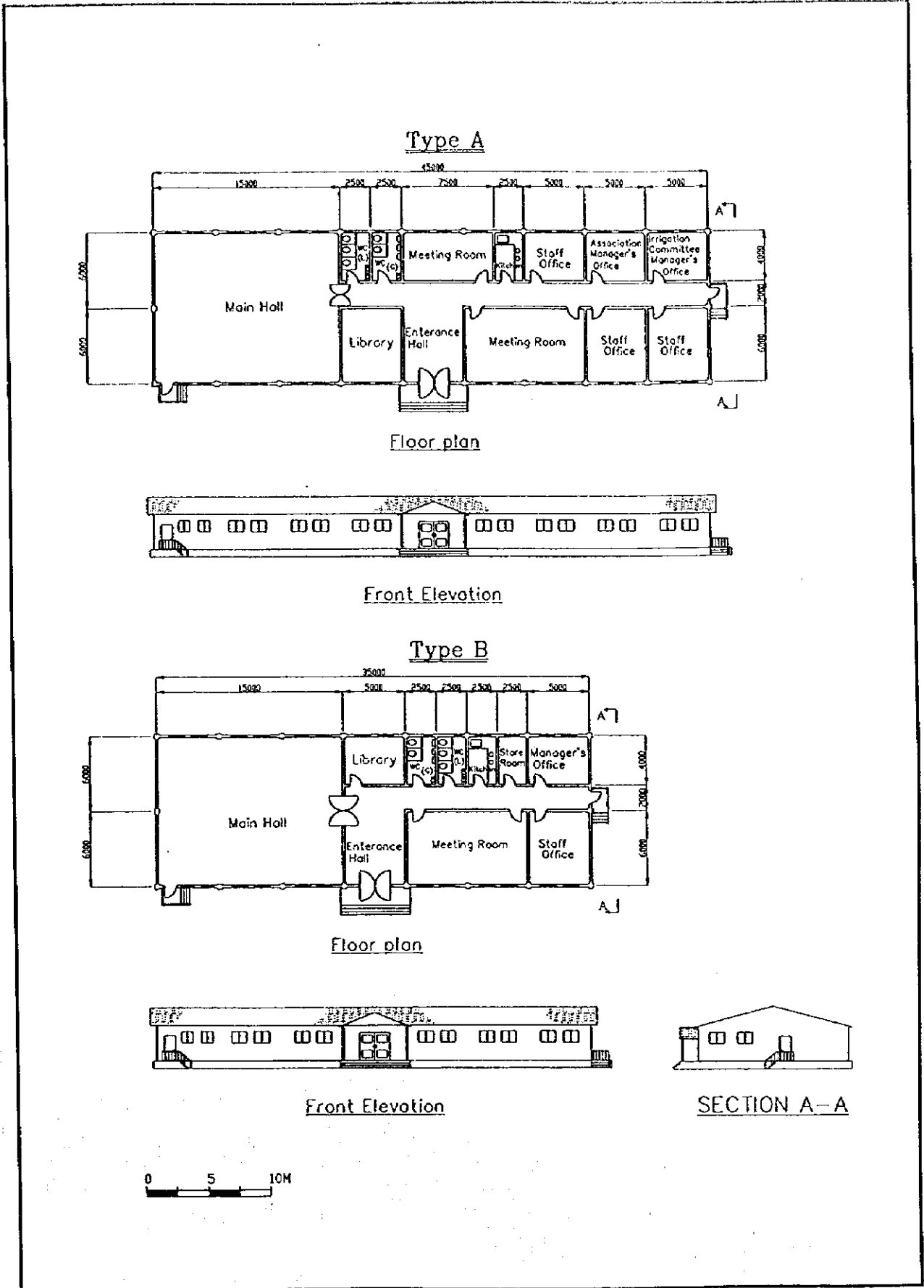
Altagracia System

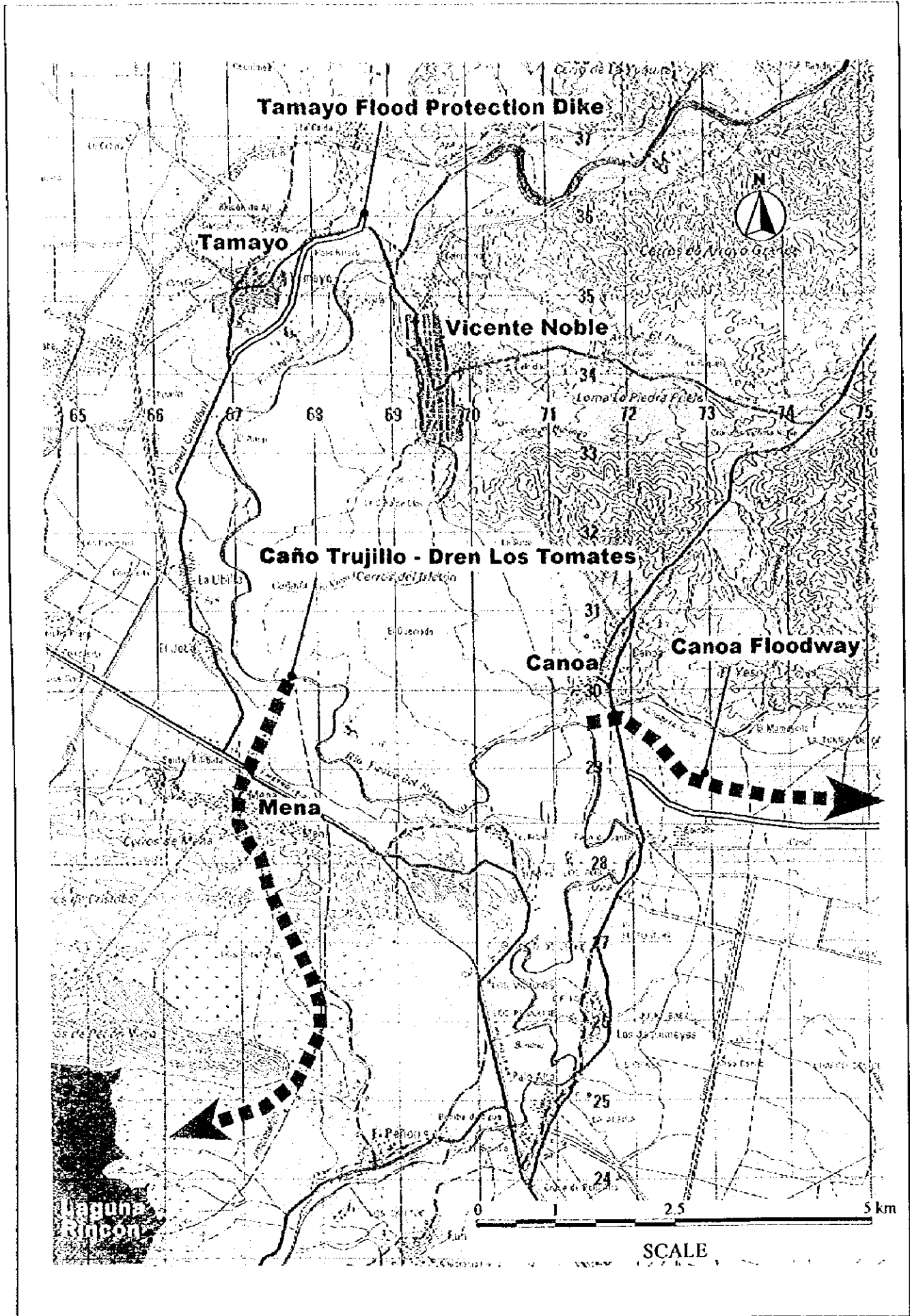


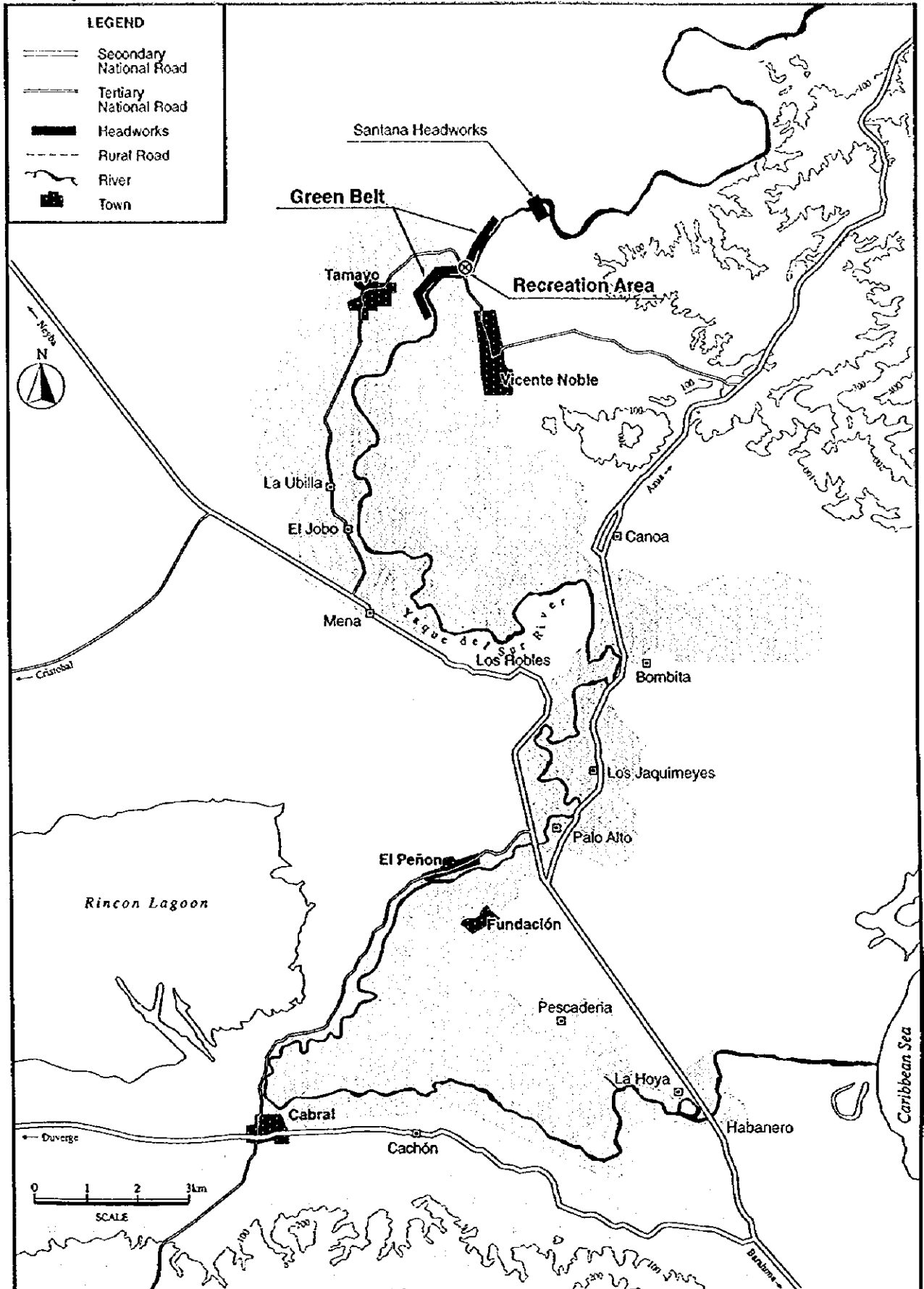
Bombita System



Los Robles System







Work Items	Implementation Year				
	1st year	2nd year	3rd year	4th year	5th year
(1) Agriculture/Agricultural Support Project					
1) Project for Strengthening extension service					
2) Project for Strengthening research service					
3) Project for Strengthening credit services					
4) Agricultural cooperative Strengthening project					
5) Agricultural information system project					
(2) Overall Water Management Project					
1) Yaque del sur Water Management Center Project					
(3) Irrigation Development Plan					
1) Rehabilitation of Villarand Intake Weir					
2) Improvement Project of the Irrigation Facilities					
3) Irrigation Water Management education/training/setting-up Project (selecting MUU)					
(4) Rural Infrastructure					
1) Rural Water Supply Project					
2) Project for Community center construction					
(5) Environmental Conservation Project					
1) Green Belt Formation Project for Watertown Conservation					
2) Environmental Monitoring Program in Juncos Lagoon					

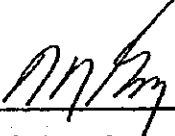
添付資料

- | | |
|---------|------------------------|
| 添付資料-1. | 調査実施細則 |
| 添付資料-2. | インセプションレポートに係わる協議議事録 |
| 添付資料-3. | プロGRESSレポート-1に係わる協議議事録 |
| 添付資料-4. | インテリムレポートに係わる協議議事録 |
| 添付資料-5. | プロGRESSレポート-2に係わる協議議事録 |
| 添付資料-6. | ドラフトファイナルレポートに係わる協議議事録 |

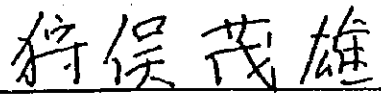
SCOPE OF WORK
FOR
THE STUDY
ON
THE INTEGRATED RURAL DEVELOPMENT PROJECT
OF
YAQUE DEL SUR RIVER BASIN
IN
THE DOMINICAN REPUBLIC

AGREED UPON
BETWEEN
NATIONAL INSTITUTE OF HYDRAULIC RESOURCES
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

SANTO DOMINGO, 2 JULY, 1997



Ing. Mariano Geyman
Executive Director,
National Institute of Hydraulic Resources



Mr. Shigeo KARIMATA
Leader,
Preparatory Study Team,
Japan International Cooperation Agency

I. INTRODUCTION

In response to the request of the Government of the Dominican Republic, the Government of Japan has decided to conduct the Study on the Integrated Rural Development Project of Yaque Del Sur River Basin in the Dominican Republic (hereinafter referred to as "the Study"), in accordance with the relevant laws and regulations in force in Japan.

Accordingly, 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 Dominican Republic.


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 an integrated rural development project of Yaque Del Sur River Basin of which components shall include water resources development and agricultural and rural development.
2. To conduct a Feasibility Study of priority areas selected in the Master Plan.
3. To transfer technology, which is used for this study, to the Dominican Republic counterpart personnel through on-the-job training in the course of the Study.

III. STUDY AREA

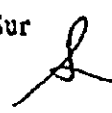
 The Study area is shown in the location map attached as ANNEX I, in which irrigated area (about 65,000 ha) and potentially irrigable area (about 33,000 ha) are included.

IV. SCOPE OF THE STUDY

In order to achieve above objectives, the Study will consist of two(2) phases and will cover the following items:

1. Phase 1

Formulation of a Master Plan on the integrated rural development project of Yaque Del Sur River Basin and Selection of priority area(s).



1-1. To collect and review ;

- relevant data and information
- relevant plan(s) and project(s)

1-2. To collect and analysis of the following data and information through the field survey.

A. Natural condition

- hydrology (surface water and groundwater)
- water quality
- soil (agricultural suitability, erosion, salinity, permeability, etc.)
- land use
- others

B. Social and economic condition

- rural society
- gender
- others

C. Agriculture and livestock

- agronomy and farm management
- livestock farming
- agricultural machinery
- farmers' economy
- others

D. Agricultural infrastructure

- irrigation and drainage facilities
- farm road networks

E. Rural infrastructure

- rural water supply
- sanitation
- others

F. Agricultural supporting system

- farmer's organizations
- agricultural credit system
- agricultural research, extension services and training
- post-harvest (marketing, agro - industry, etc.)

G. Operation, maintenance and management

- integrated water management
- operation and maintenance of facilities
- water user's organizations and water charges

M

S

- others

H. Environmental aspects including watershed management

- natural aspects

- social, economical and cultural aspects

1-3. To conduct Initial Environmental Examination.

1-4. To identify development needs, constraints and potential for the study area.

1-5. To formulate a M/P on the integrated rural development project of Yaque Del Sur River Basin.

1-6. To select the priority area(s) for a feasibility study.

2. Phase 2

Feasibility Study on priority area(s).

2-1. Preparation of a topographic map(s) at scale of 1 / 5,000 for the priority area(s), if necessary.

2-2. Field survey to collect supplementary data and information on the priority area(s).

2-3. Formulation of the optimum improvement plan(s) for integrated rural development of priority project(s) considering following items:

(1) Agricultural Infrastructure (Irrigation and Drainage facilities, etc.)

(2) Operation, Maintenance and Management

(3) Agriculture and Livestock

(4) Agricultural supporting system

(5) Rural Infrastructure

(6) Environmental conservation

2-4. Environmental Impact Assessment, if necessary.

2-5. Preparation of implementation schedule.

2-6. Estimation of the project cost and benefits.

M

2

2-7. Overall evaluation of the project.

V. STUDY SCHEDULE

The Study will be carried out in accordance with the attached tentative schedule. (See ANNEX II)

VI. REPORTS

JICA shall prepare and submit the following reports to the Government of Dominican Republic, which consists of two versions:

- complete English version and
- Spanish version with English appendixes.

In case any doubt arises in interpretation, English text shall prevail.

1. Inception Report

Five (5) copies in English and twenty (20) copies in Spanish at the commencement of the Phase 1 field work.

2. Progress Report (I)

Five (5) in English and twenty (20) copies in Spanish at the end of the Phase 1 field work.


3. Interim Report

Five (5) in English and twenty (20) copies in Spanish at the beginning of the Phase 2 field work

4. Progress Report (II)

Five (5) in English and twenty (20) copies in Spanish at the end of the third part of the Phase 2 field work.


5. Draft Final Report

 Five (5) in English and twenty (20) copies in Spanish at the beginning of the fourth part of the Phase 2 field work. The Government of Dominican Republic will provide JICA with its comments on the Draft Final Report within one (1) month after receipt of the Draft Final Report.

6. Final Report

Thirty (30) copies in English and fifty (50) copies in Spanish within two (2) months after receipt of the Government of Dominican Republic's comments on the Draft Final Report.

VII. UNDERTAKING OF THE GOVERNMENT OF DOMINICAN REPUBLIC

1. To facilitate smooth conduct of the study, the Government of Dominican Republic shall take  necessary measures;

- 1-1. To secure the safety of the Japanese study team,
- 1-2. To permit the members of the Japanese study team to enter, leave and sojourn in the Dominican Republic for the duration of their assignment therein and exempt them from foreign registration requirements and consular fees,
- 1-3. To exempt the members of the Japanese study team from taxes, duties, fees and any other charges on equipment, machinery and other materials brought into the Dominican Republic for the conduct of the Study,
- 1-4. 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,
- 1-5. To provide necessary facilities to the Japanese study team for the remittance as well as utilization of the funds introduced into the Dominican Republic from Japan in connection with the implementation of the Study,
- 1-6. To secure permission for entry into private properties or restricted areas for the implementation of the Study,
- 1-7. To secure permission for the Japanese study team to take all data and documents including photographs and maps related to the Study out of the Dominican Republic to Japan and
- 1-8. To provide medical services as needed. Its expense will be chargeable on the members of the Japanese study team.

M

2. The Government of Dominican Republic shall bear claims, if any arises, against the members of the Japanese study team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Japanese study team.

3. National Institute of Hydraulic Resources (hereinafter referred to as "INDRHI") shall act as counterpart agencies to the Japanese study team and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.

4. INDRHI shall, at its own expenses, provide the Japanese study team with the following, in cooperation with other organizations concerned ;

d

- 4-1. Available data and information related to the Study,
- 4-2. Counterpart personnel,
- 4-3. Suitable office spaces with necessary equipment Santo Domingo, the study area(s) and
- 4-4. Credentials or identification cards.

VIII. UNDERTAKING OF JICA

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

1. To dispatch, at its own expense, study team to the Dominican Republic and
2. To pursue technology transfer to the Dominican Republic counterpart personnel in the course of the Study.

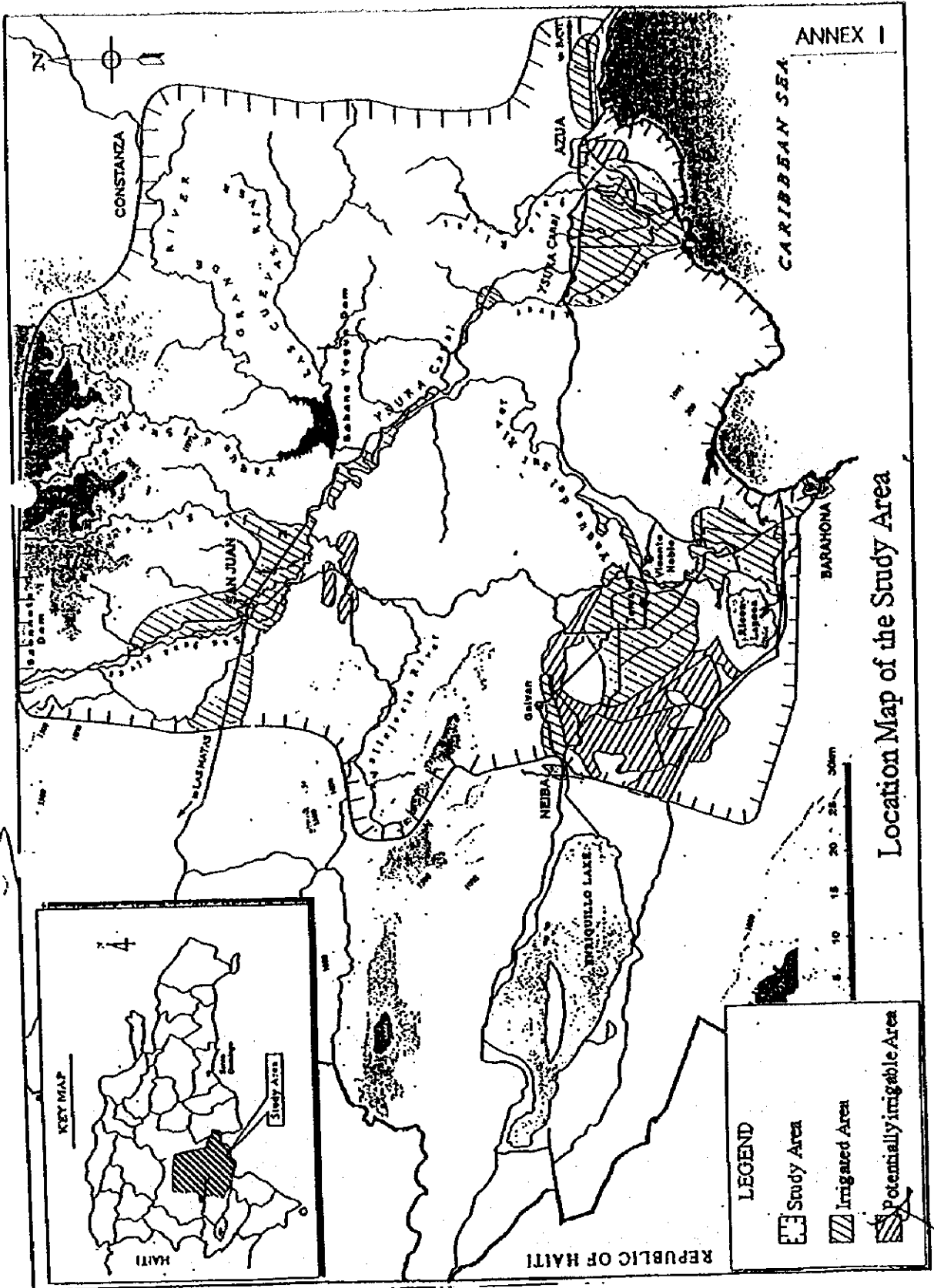
IX. LANGUAGE

In case any divergence arises about interpretation of this Scope of Work, which is done in English and Spanish, the English text shall prevail.

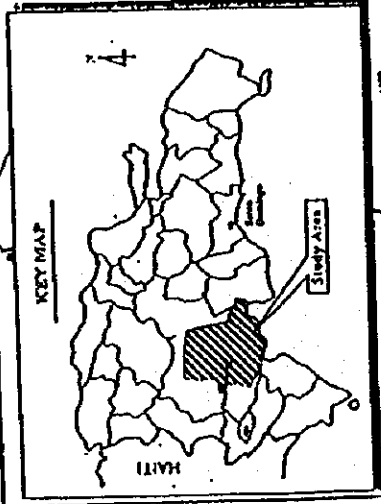
X. CONSULTATION

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








Location Map of the Study Area



LEGEND

-  Study Area
-  Irrigated Area
-  Potentially irrigable Area

TENTATIVE SCHEDULE

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Work in Dominican Republic										■											■			
Work in Japan																								
Mapping																								
Phase	← Phase I →										← Phase II →													
Reports	△ Ic/R										△ It/R						△ P/R (II)			△ DF/R				△ F/R

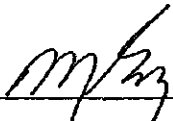
Remarks

Ic/R : Inception Report	P/R (I) : Progress Report (I)
It/R : Interim Report	P/R (II) : Progress Report (II)
DF/R : Draft Final Report	F/R : Final Report

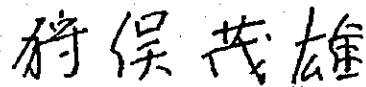
MINUTES OF MEETING
FOR
SCOPE OF WORK
FOR
THE STUDY
ON
THE INTEGRATED RURAL DEVELOPMENT PROJECT
OF
YAQUE DEL SUR RIVER BASIN
IN
THE DOMINICAN REPUBLIC

AGREED UPON
BETWEEN
NATIONAL INSTITUTE OF HYDRAULIC RESOURCES
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

SANTO DOMINGO, 2 JULY, 1997



Ing. Mariano German
Executive Director,
National Institute of Hydraulic Resources



Mr. Shigeo KARIMATA
Leader,
Preparatory Study Team,
Japan International Cooperation Agency

The preparatory study team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA"), and headed by Mr. Shigeo KARIMATA, visited the Dominican Republic from June 23 to July 3, 1997 for the purpose of discussing and confirming Scope of Work for the Study on the Integrated Rural Development Project of Yaque Del Sur River Basin in the Dominican Republic (hereinafter referred to as "the Study").

The Team had a series of discussions and changed views with the officials of National Institute of Hydraulic Resources (hereinafter referred to as "INDRHI") and other concerned organizations on the Scope of Work for the Study. The list of participants in the meetings is attached in the Annex.

As a result of the discussions, the Dominican side and the Team agreed on Scope of Work for the Study.

The followings are the main issues discussed by both sides in relation to Scope of Work for the Study. In case any divergence arises about interpretation of this Minutes of Meeting, which is done in English and Spanish, the English text shall prevail.

I Both sides agreed upon the followings:

1. Introduction

The study will be conducted in close cooperation between the Japanese study team, which will be dispatched later, (hereinafter referred to as "the Study Team") and INDRHI.

2. Scope of the Study

(1) "Rural infrastructure" includes community center and small scale power plants.

(2) The Dominican side and the Study Team will select the priority area(s) for a feasibility study through discussion.

3. Reports

The Final Report shall be opened to public whenever it is requested.

4. Undertaking

(1) INDRHI shall act as coordinating body in relation with other concerned authorities, especially with Ministry of Agriculture (hereinafter referred to as "SEA") and Dominican Agrarian Reform Institute (hereinafter referred to as "IAD").

M (2) INDRHI is responsible for the assigning of counterpart personnel (including SEA's and IAD's personnel) to the Study Team, necessary for smooth and effective implementation of the Study.

(3) Joint seminars will be held by the Dominican side and the Study Team at the end stages of phase I and phase II respectively for effective technical transfer.

(4) INDRHI will provide offices for the Study Team equipped with telephones, electricity, water supply and necessary number of desks and chairs in Santo Domingo and other place in the study area that the Study team indicates at the commencement of the Study.

5. The Study should be conducted with the participation of the inhabitants in the Study Area in order to make an appropriate plan.



II The Dominicanside requested the followings;

1. Thirty(30) copies of Reports of Spanish version for Inception, Progress Report (I), Interim Report, Progress Report (II) and Draft Final Report respectively.
2. Appendixes of reports written in Spanish.
3. Preperation of the following equipments for the Study.
 - vehicles
 - atomic absorption spectrophotometers
 - total organic carbon analizers
 - water distillers
 - magnetic current meters
 - climatic survey instruments (water level meter and rain gauge)
 - copy machines
 - personal computers
 - water quality analizers
 - GPSs (global positioning system)
4. Counterparts training in Japan (not less than two persons at the stage of compiling of Interim Report and Draft Final Report).

The Team promised to convey the requests to the JICA headquarter in Tokyo.



LIST OF PARTICIPANTS

1. DOMINICAN SIDE

FOR THE NATIONAL INSTITUTE OF HIDRAULIC RESOURCES (INDRHI)

<i>Mariano Germán</i>	Executive Director of INDRHI
<i>Manuel Saleta</i>	Technical Subdirector
<i>Gilberto Reynoso</i>	Planning Department Director
<i>Freddis Pérez Trejo</i>	Director of Irrigation District Department
<i>Juan Chalas</i>	Land and Water Division
<i>Tsugio Horii</i>	Japanese Adviser for the Planning Dept
<i>Laureano Acosta</i>	Agrology Division
<i>Jose Geraldo Mendez</i>	Operation Section
<i>Henry Adames</i>	Hydrologic Section
<i>Magnolia María A.</i>	Technician for the Land and Water Division
<i>Alice E. Bautista R.</i>	Agricultural Technician
<i>Jose Ogando</i>	Cartographic Section
<i>Isabel Santos</i>	Environmental Education Department
<i>Ramon Santana</i>	Section of Cuenca
<i>Ana Perez</i>	Political Division

For the Agriculture Ministry (SEA)

<i>Manuel German Piron</i>	Technical Assistant
<i>Fernando Fernandez</i>	Organization Sub-director
<i>Henry Guerrero</i>	Agricultural Extension

For the Dominican Agrarian Institute (IAD)

<i>Quilvio Cabrera</i>	Sub-Director
<i>Servio Montero D'Oleo</i>	Manager AC-454, The Canoa and 265, The Banks, San Juan.
<i>Luis C. Garabito</i>	Planning Dept. YSURA Project
<i>Ramon Modesto Diaz</i>	Production Dept. IAD
<i>Jose Cavaldo</i>	Manager for the Coffee Land, Unit #6 Barahona.



2. JAPANESE SIDE

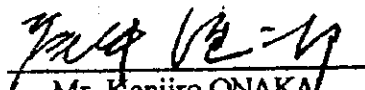
Shigeo Karimata	Leader
Toshimitsu Kudo	Agricultural and Rural Infrastructure
Takeo Tanada	Agronomy and Farm Management
Shigehisa Ooba	Agricultural Support
Masahiro Tajima	Environmental Impact Assessment
Kazuhiro Yoshida	Coordinator
Yoshimi Sugano	Interpreter
Masayuki Takahashi	Jica



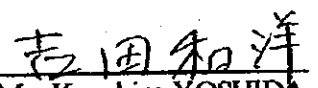
MINUTES OF MEETING
ON
THE INCEPTION REPORT
FOR
THE STUDY
ON
THE INTEGRATED RURAL DEVELOPMENT PROJECT
OF
THE YAQUE DEL SUR RIVER BASIN
IN
THE DOMINICAN REPUBLIC

Santo Domingo, 25 November 1997


Ing. Mariano GERMAN
Executive Director, INDRHI


Mr. Kenjiro ONAKA
Team Leader, JICA Study Team

Witnessed by


Mr. Kazuhiro YOSHIDA
Coordinator, JICA Advisory Team

MINUTES OF MEETING
ON
THE INCEPTION REPORT
FOR
THE STUDY
ON
THE INTEGRATED RURAL DEVELOPMENT PROJECT
OF
THE YAQUE DEL SUR RIVER BASIN
IN
THE DOMINICAN REPUBLIC

DATE : November 21, 1997
TIME : 9:15 am to 1:30 pm
VENUE : National Institute of Hydraulic Resources (INDRHI)
Conference Room, Santo Domingo
ATTENDANCE : As listed in Annex 1

M
1. The meeting was convened to explain and discuss the Inception Report, being submitted to the Government of the Dominican Republic on 18th November 1997 by JICA Study Team. The Report defines the Objectives of the Study, Scope of the Study, the Plan of Operation, and the Basic Approach for the Study.

2. The Team Leader of JICA Study Team made a thorough explanation of the Inception Report.

3. After the explanation of the Inception Report, discussions were made between the Dominican side and the Japanese side. The results of the discussions are summarized below:

(1) The contents of the Report were accepted by the Dominican side.

(2) The Dominican side suggested that the Study Team should consider the following points for the formulation of the Integrated Rural Development Plan:

- The utilization of groundwater
 - Construction of regulating ponds
 - Development of reservoirs and dams in the middle and downstreams of the Yaque Del Sur river
- TJ
TJ

- Environmental impacts on the Enriquillo lake
- Increasing irrigation efficiency on farm level
- Analysis of water management and crop production in the sugar cane areas
- Mini-hydropower potential

M

In reply to the Dominican suggestions, the JICA Study Team stated that the Team will prepare the development plan taking into consideration these suggestions. In regard to the groundwater, study will be made based on the existing data and information which the government of Dominican side provides to the Study Team. Special study on dam construction on the middle and downstreams of the Yaque Del Sur river will be proposed, if required.

4. The Dominican side strongly requested that counterpart would be trained in Japan.

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BY

Annex 1

LIST OF PARTICIPANTS

The Government of the Dominican Republic

Gilberto Reynoso	Chief counterpart, Coordinator of Project with Foreign Assistance
Freddy Perez T.	Coordinator, PROMASIR
Eugenio Burrough	Officer, PROMASIR
Juan Chalas	Officer, PROMASIR
Rafaela Lima	Counterpart, officer of INDRHI
José Ogando Montero	Counterpart, officer of INDRHI
Nelson E. De los Santos Mateo	Counterpart, officer of INDRHI
Mayra A. Sanchez Santana	Counterpart, officer of INDRHI
Yasiris Gonzales Pineda	Counterpart, officer of INDRHI
Alice E. Bautista R.	Counterpart, officer of INDRHI
Sergio J. Tejada R.	Counterpart, officer of INDRHI
Aulette Tobal	Officer of Dominican Institute of Agrarian Reform
Tsugio Horii	Japanese adviser for the Planning Department, INDRHI

JICA Office in the Dominican Republic

Masayuki Takahashi

JICA Headquarters, Tokyo

Kazuhiro Yoshida

JICA Study Team

Kenjiro Onaka	Team Leader, JICA Study Team
Fumiaki Murakami	JICA Study Team
Jesus De los Santos	JICA Study Team
Luis Rosado	JICA Study Team

Ja

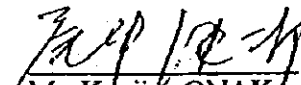
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MINUTES OF MEETING
ON
THE PROGRESS REPORT-1
FOR
THE STUDY
ON
THE INTEGRATED RURAL DEVELOPMENT PROJECT
OF
THE YAQUE DEL SUR RIVER BASIN
IN
THE DOMINICAN REPUBLIC

Santo Domingo, March 3rd 1998



Ing. Mariano GERMAN
Executive Director, INDRHI



Mr. Kenjiro ONAKA
Team Leader, JICA
Study Team

MINUTES OF MEETING
ON
THE PROGRESS REPORT-1
FOR
THE STUDY
ON
THE INTEGRATED RURAL DEVELOPMENT PROJECT
OF
THE YAQUE DEL SUR RIVER BASIN
IN
THE DOMINICAN REPUBLIC

Date : March 2nd, 1998
Time : 13:50 to 17:00
Venue : National Institute of Hydraulic Resources (INDRHI)
Conference Room, Santo Domingo
Attendance : As listed in Annex-1

1. The meeting was convened to explain and discuss the Progress Report-1, being submitted to the Government of the Dominican Republic on March 2nd 1998 by the JICA Study Team. The Report presents (1) project background, (2) assessment of the present conditions in the Study area, (3) preliminary basic development concepts and (4) further study in Japan.
2. The Team leader of JICA Study made a global explanation of the contents of the Report. Each Dominican counterpart explained the results of the study of his/her field and the JICA experts made additional explanations.
3. After the explanation of the Progress Report-1, discussions were made between the Dominican side and the Japanese side. The conclusion may be that basic development concepts were accepted by both sides and the formulation of the Integrated Rural Development Project in the Yaque Del Sur river basin would be made based on these concepts.



List of Participants(E)

ANNEX-1 LIST OF PARTICIPANTS

The Government of the Dominican Republic

Gilberto Reynoso	Chief Counterpart, Coordinator of Project with Foreign Assistance, INDRHI
Avelino de León	Project Department Head, INDRHI
Fernando E. Luciano	Dams Department Head, INDRHI
Eliseo A. González	Planning Department Head, INDRHI
Nelson Modesto Romero Gómez	Water District Department Head, INDRHI
Olmedo Racero	Hydrology Division Head, INDRHI
Danilo Herrera	Programs and Norms Division, INDRHI
Ysócrates Hernando	Conservation Division, INDRHI
Laureano A. Acossta	Agrology Division, INDRHI
José Gerardo Méndez	Soil and Water Management Division, INDRHI
Dionisio A. Mejía	Organization and Training Division, INDRHI
Eugenio Burroughs	Technical Director, PROMASIR, INDRHI
Freddis José Pérez Trejo	Coordinator, PROMASIR, INDRHI
Juan R. Chalas	O&M, PROMASIR, INDRHI
Teófilo Pacheco D'Oleo	Coordinator, PPAH- Chinese Mission on Small Dams, INDRHI
José E. Popa Santana	Infrastructure, PROMASIR, INDRHI
Rafael Sánchez O.	PROMASIR, INDRHI
Persio Solis	Organization and Training PROMASIR, INDRHI
Rafaela Lima	Counterpart, INDRHI
José Ogando Montero	Counterpart, INDRHI
Nelson de los Santos	Counterpart, INDRHI
Mayra Sánchez	Counterpart, INDRHI
Yasiris González P.	Counterpart, INDRHI
Alice E. Bautista	Counterpart, INDRHI
Sergio J. Tejada R.	Counterpart, INDRHI
Martha Corsino	Counterpart, IAD
Tsugio Horii	Japanese adviser for the Planning Department, INDRHI

JICA Office in the Dominican Republic

Masayuki Takahashi

JICA Study Team


Kenjiro Onaka	Team Leader, JICA Study team
Hiroyoshi Matsuura	JICA Study team
Jesus de los Santos	JICA Study team
Luis Rosado	JICA Study team
Nobuo Sambe	JICA Study team
Kunita Okuwa	JICA Study team
Fumiaki Murakami	JICA Study team



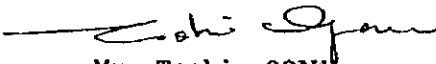
MINUTES OF MEETING
ON
THE INTERIM REPORT
FOR
THE STUDY
ON
THE INTEGRATED RURAL DEVELOPMENT PROJECT
OF
THE YAQUE DEL SUR RIVER BASIN
IN
THE DOMINICAN REPUBLIC

Santo Domingo, 14 July 1998


Ing. Mariano GERMAN
Executive Director, INDRHI


Mr. Kenjiro ONAKA
Team Leader, JICA Study Team

Witnessed by


Mr. Toshio OGAWA
Leader, JICA Advisory Team

MINUTES OF MEETING
ON
THE INTERIM REPORT
FOR
THE STUDY
ON
THE INTEGRATED RURAL DEVELOPMENT PROJECT
OF
THE YAQUE DEL SUR RIVER BASIN
IN
THE DOMINICAN REPUBLIC

DATE : July 9, 1998
TIME : 14:30 to 18:00
VENUE : National Institute of Hydraulic Resources (INDRHI)
Office of Executive Director and
Conference Room, Santo Domingo
ATTENDANCE : As listed in Annex 1

1. The meeting was convened to explain and discuss the Interim Report, being submitted to the Government of the Dominican Republic on 9th July 1998 by JICA Study Team. The Report presents the Master Plan of the Integrated Rural Development project of the Yaque del Sur River Basin and the selection of priority areas for feasibility Study in the Phase II.

2. The Team Leader of JICA Study Team made a thorough explanation of the Interim Report.

3. The Dominican side pointed out that, at present, the groundwater development projects at Galvan and Azua areas are not being carried out by the LOME IV project.

4. After the explanation of the Interim Report, discussions were made between the Dominican side and the Japanese side. The results of the discussions are summarized below:

(1) The contents of the Report were accepted by the Dominican side.

(2) The Dominican side accepted the feasibility study is to be conducted for the lower reaches of Santana headwork of about 6,000 hectares coupled with rehabilitation of the Villarpando Headwork and water distribution program. The area under the sugar corporation is, however, excluded from the area of feasibility study.

M (3) The Dominican side requested that two counterpart personnel should be trained in the Phase II study period in Japan. The advisory team replied that one counterpart personnel would be accepted for training in Japan for the period of Phase II study. With respect to the training in Japan to an additional counterpart personnel, the advisory team agreed to forward this request to the headquarter of JICA in Tokyo.

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Annex 1

LIST OF PARTICIPANTS

The Government of the Dominican Republic

Mariano German	Executive Director, INDRHI
Gilberto Reynoso	Chief counterpart, Coordinator of Project with Foreign Assistance
Ysocrates Hernando Fernandez	Department Head Irrigation Districts
Rafaela Lima	Counterpart, officer of INDRHI
Jose Ogando Montero	Counterpart, officer of INDRHI
Nelson E. De los Santos Mateo	Counterpart, officer of INDRHI
Mayra A. Sanchez Santana	Counterpart, officer of INDRHI
Yasiris Gonzalez Pineda	Counterpart, officer of INDRHI
Alice E. Bautista R.	Counterpart, officer of INDRHI
Sergio J. Tejada R.	Counterpart, officer of INDRHI
Tsugio Horii	Japanese adviser, INDRHI

JICA Advisory Team

Toshio OGAWA	JICA Headquarters, Tokyo
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JICA Study Team

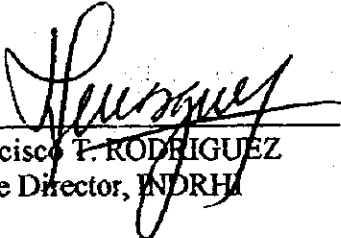
Kenjiro ONAKA	Team Leader, JICA Study Team
Hiroyoshi MATSUURA	JICA Study Team
Jesus De los Santos	JICA Study Team

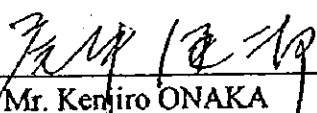
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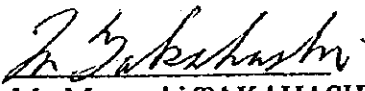
MINUTES OF MEETING
ON
THE PROGRESS REPORT II
FOR
THE STUDY
ON
THE INTEGRATED RURAL DEVELOPMENT PROJECT
OF
THE YAQUE DEL SUR RIVER BASIN
IN
THE DOMINICAN REPUBLIC

Santo Domingo, 22 January 1999


Ing. Francisco T. RODRIGUEZ
Executive Director, INDRH


Mr. Kenjiro ONAKA
Team Leader, JICA Study Team

Witnessed by


Mr. Masayuki TAKAHASHI
JICA Office in Dominican Republic

MINUTES OF MEETING
ON
THE PROGRESS REPORT II
FOR
THE STUDY
ON
THE INTEGRATED RURAL DEVELOPMENT PROJECT
OF
THE YAQUE DEL SUR RIVER BASIN
IN
THE DOMINICAN REPUBLIC

DATE : January 22, 1999
TIME : 9:30 am to 1:15 p.m.
VENUE : Salon Bohechio, Santo Domingo Hotel
Santo Domingo
ATTENDANCE : As listed in Annex 1

1. The meeting was convened to explain and discuss the Progress Report II, being submitted to the Government of the Dominican Republic on 22nd January 1999 by JICA Study Team. The Report presents a description of the present condition in the project area, findings of the Study Team in relation to main problems affecting each sector such as agriculture farming, agriculture supporting services, overall water management, irrigation and drainage, rural infrastructure, flood, and environment conservation in the Project area; It also presents the preliminary formulation of projects by sectors, the basic concepts, objectives, and target of the project in order to solve the problems.
2. The Team Leader of JICA Study Team made a brief explanation of Project background and the Proposed project components. Each counterpart explained in details the finding of the Study and the Proposed Project components.
3. The Dominican side accepted the contents of the Report.
4. After the explanation of the Progress Report, a section of questions and

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discussions between the Dominican side and the Japanese side was made. The results of the discussions are summarized below:

(1) The Dominican side suggested that the Study Team should consider the following points for the formulation of the Integrated Rural Development Plan:

- The conceptual framework of the project should emphasize the need for integrated rural development and not only irrigation development. In this regard, project activities others than agriculture should be identified for improvement of living conditions of youth and women.
- The project should consider the participation of farmers in project development; Farmers should not expect that every thing will be made by the government.
- This is a big project, therefore its regional and national impacts should be evaluated
- The concept of water scarcity should be revised because in the project area the main problem is poor water management and not water scarcity.
- The need for empowerment of water users' organizations, including their participation in activities such as support services and marketing, in addition to water management should be emphasized.
- To study the possibility to conform a fourth level of organization of water users; a federation of Yaque del Sur water users associations should be organized. That organization will have the function to discuss and plan solutions to problems related to water diversion at river and main system level.

In reply to the Dominican suggestions, the leader of JICA Study Team stated that:

- The report includes the basic development concept of each planning sector and this will be finalized in Japan.
- The final report will include detailed explanation on how the farmers' participation will be integrated in the different stages of project implementation, such as construction, operation and maintenance.
- The evaluation of the project will include not only the increase in cropping intensity and crop yield, but also the economic feasibility and technical soundness, and project impacts to social and living environment.
- Under present condition water shortage during dry season is serious. It is

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mainly due to two main reasons: one is insufficient river water and the other is inefficient use of water in the canal systems and at field level; the project focuses on how to increase irrigation water use efficiency.

- JICA Team leader said that it is better to strengthen first the function of water user organization separately from others functions, such as supporting services and marketing in order that water users associations could smoothly function.



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Annex 1

LIST OF PARTICIPANTS

The Government of the Dominican Republic

Ing. Francisco T. Rodriguez	Director Executive, INDRHI
Ing. Manuel Saleta	Sub-director, INDRHI
Ing. Manuel Camilo	Advisor for the Executive Director
Lic. Sergio Cueto	Assistant and In charge of Public Relations
Ing. José Betances	Advisor, Dams
Ing. Eliseo Gonzalez	Head Planning Department
Isocrates Hernando	Head Irrigation Districts Department
Ing. Avelino De León	Head Irrigation Projects Department
Ing. Fernando Luciano	Head Dams and Hydropower Department
Ing. Gilberto Reynoso	Coordinator Project with Foreign Assistance, Chief counterpart
Ing. Raúl Pérez	Projects Planning Division
Ing. Homero Lara	Design Division
Ing. Geraldo Méndez	Land and Water Division
Ing. Miguel Espinal	Dams and Hydropower Division
Ing. Felipe Vicioso	National Office, River Basin Management
Ing. Laureano Acosta	Agrology Division
Ing. Nelson Romero	Coordinator, PROMASIR
Ing. Freddy Perez T. Eugenio Burrough	Officer, PROMASIR
Juan Chalas	Officer, PROMASIR
Rafaela Lima	Officer, PROMASIR
José Ogando Montero	Counterpart, officer of INDRHI
Fausto Colón	Counterpart, officer of INDRHI
Mayra A. Sanchez Santana	Counterpart, officer of INDRHI
Yasitis Gonzales Pineda	Counterpart, officer of INDRHI
Alice E. Bautista R.	Counterpart, officer of INDRHI
Sergio J. Tejada R.	Counterpart, officer of INDRHI
Martha Corcino	Officer Agrarian Reform Institute
Tsugio Horii	Japanese adviser for the Planning Department, INDRHI

JICA Office in the Dominican Republic

Masayuki TAKAHASHI
Tomohiro SHINAGAWA, JICA's Volunteer for INDRHI

JICA Study Team

Kenjiro ONAKA
Fumiaki MURAKAMI
Nobuo SAMBE
Masahiro ICHIKAWA
Kunita OKUWA
Hiroyoshi MATSUURA
Jesus De los Santos
Luis Rosado

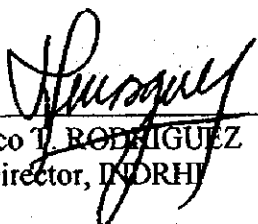
Team Leader, JICA Study Team
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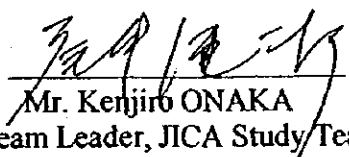


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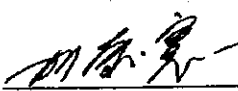
MINUTES OF MEETING
ON
THE DRAFT FINAL REPORT
FOR
THE STUDY
ON
THE INTEGRATED RURAL DEVELOPMENT PROJECT
OF
THE YAQUE DEL SUR RIVER BASIN
IN
THE DOMINICAN REPUBLIC

Santo Domingo, May 25, 1999


Ing. Francisco T. RODRIGUEZ
Executive Director, INDRHI


Mr. Kenjiro ONAKA
Team Leader, JICA Study Team

Witnessed by


Mr. Kenichi KATO
Leader, JICA Advisory Team




MINUTES OF MEETING
ON
THE DRAFT FINAL REPORT
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OF
THE YAQUE DEL SUR RIVER BASIN
IN
THE DOMINICAN REPUBLIC

DATE : May 24, 1999
TIME : 10:00 am to 1:30 p.m.
VENUE : Meeting Hall, INDRHI Headquarters, Santo Domingo
ATTENDANCE : As listed in Annex

The meeting was convened to explain and discuss the Draft Final Report, being submitted to the Government of the Dominican Republic on May 21, 1999 by JICA Study Team. JICA Study Team submitted 30 copies of the Spanish version and 5 copies of the English version of the Draft Final Report.

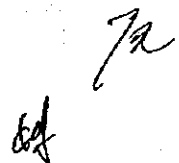
The meeting was opened by the Executive Director of INDRHI, who pointed out the importance of this Project for the region and the entire country.

The Team Leader of JICA Study Team made a brief explanation of the Draft Final Report. Major points agreed upon by both sides in the meeting are as follows;

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1. The Dominican side accepted the contents of the Draft Final Report in principle.
 2. The Dominican side promised to send the comments on the Draft Final Report by June 25, 1999 to JICA headquarters through JICA Dominican office.
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3. The Dominican side agreed that the Final Report shall be accessible to any person who has interest in knowing the Study.

This document is prepared in both English and Spanish. In case any discrepancy of interpretation arises between the two languages, the English version shall prevail.



Annex

LIST OF PARTICIPANTS

The Government of the Dominican Republic

Francisco T. Rodriguez	Executive Director, INDRHI
Manuel Camilo	Advisor, INDRHI
Manuel Saleta	Sub-director, INDRHI
Gilberto Reynoso	Chief counterpart, Coordinator of Project with Foreign Assistance
Eliseo Gonzalez	In charge, Planning Department, INDRHI
Valentin Cordero	Coordinator, PROMATREC, INDRHI
Fernando Luciano	In charge, Dams and Hydropower Department
Ysocrates Hernando	Department Irrigation Districts, INDRHI
Raul Perez	Planning Division, INDRHI
Francisco De León	Coordinator, Los Toros Project, INDRHI
Valentín Cordero	Coordinator, PROMATREC, INDRHI
Wilfredo Machuca	Coordinator, PRODAS, INDRHI
Nelson M. Romero G.	Coordinator, PROMASIR
José E. Popa Santana	PROMASIR
Freddy Perez T.	Coordinator, PROMASIR
Eugenio Burrough	Officer, PROMASIR
Juan Chalas	Officer, PROMASIR
Rafaela Lima	Counterpart, officer of INDRHI
José Ogando Montero	Counterpart, officer of INDRHI
Mayra A. Sanchez Santana	Counterpart, officer of INDRHI
Alice E. Bautista R.	Counterpart, officer of INDRHI
Sergio J. Tejada R.	Counterpart, officer of INDRHI
Tsugio HORII	Japanese adviser for the Planning Department, INDRHI

JICA Office in the Dominican Republic

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Hiroyoshi MATSUURA JICA Study Team

Jesus De los Santos JICA Study Team

JICA