PROJECT SUMMARY (Basic Study)

CSA GTM/S 501/86

Compiled Mar.1990
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Guatemala

2.NAME OF STUDY
Ground Water Development Project

3.SECTOR
Social Infrastructures/Water Resource Development

4.REFERENCE NO.

5.TYPE OF STUDY Basic Study

6.COUNTERPART AGENCY
EMPAGUA (Empresa Municipal de Agua de la Ciudad de Guatemala)

7.OBJECTIVES OF STUDY
To obtain water source for portable water supply for Guatemala City

8.DATE OF S/W Dec.1984

9.CONSULTANT(S)
Chuo Kaihatsu International Corp.

10.STUDY TEAM

No.of Members 8
Period Jul.1985-Sep.1986(15 months)

Total M/M	Japan	Field
50.11	17.44	32.67

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Geological survey and boring

12.EXPENDITURE

Total	311,081 (¥'000)
Contracted	241,154

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Guatemala City, surrounding Guatemala City valley and adjacent northeastern area

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
	1)	38,688	12,495	
(US$1=1Q)	2)			

3.CONTENTS OF MAJOR PROJECT(S)

- Deep well excavation 38wells
- Water distribution facilities 34.2km
- Distribution tank 1,260cu.m-2,835cu.m
- Power distribution facilities 23,000m
- Existing well rehabilitation
- Work shop

4.CONDITIONS AND DEVELOPMENT IMPACTS

- Direct benefit is the qualitative and quantitative improvement of EMPAGUA's service.
- Indirect effects include (i)improved sanitation through clean water supply; (ii)reduced labor burden for women and children heretofore forced to carry water over long distances; and (iii) expanded employment opportunities through project related construction.

5.TECHNICAL TRANSFER
1) Counterpart OJT on the analysis of aerophotos, etc. 2) Training in Japan in F/S methodology

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- ■ In Progress or In Use
- ☐ Delayed
- ☐ Discontinued

(Description)

Dec. 1990	E/N of OECF loan (4,711 million yen)
Mar. 1991	OECF L/A Mission
Dec. 1991	L/A not signed because of the delay in formal approval at the Parliament
Jun. 1992	OECF L/A signed
Dec. 1993	Construction scheduled to begin
Oct. 1995	Construction scheduled to end

OECF finance:
1) Construction of 38 deep wells and related facilities
2) Rehabilitation of 22 existing wells

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②④

和名 グァテマラ市地下水開発計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (F/S)

CSA GTM/S 301/88

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Guatemala

2.NAME OF STUDY
Development Project of the Port of Santo Tomas de Castilla

3.SECTOR
Transportation/Port

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Port of Santo Tomas Authority

7.OBJECTIVES OF STUDY
Formulation of Stage III development plan

8.DATE OF S/W Dec.1986

9.CONSULTANT(S)
Overseas Coastal Area Development Institute of Ja
Yachiyo Engineering Co., Ltd.

10.STUDY TEAM

No.of Members 10
Period May.1987-Jul.1988(0 months)

Total M/M	Japan	Field
47.85	24.33	23.52

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	158,211 (¥'000)
Contracted	150,278

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Santo Tomas on the Caribbean coast

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	97,031	30,343	66,683
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
- Short Term Plan (Target year: 1995)

1) A container terminal
   - Length: 500 m (-11m)
   - Area: 25 ha
   - Handling equipment: 3 qantry cranes, 6 strand carriers, 1 forklift

2) A petroleum terminal
   - Length: 270 m (-11m)

3) Access Channel
   - depth: -11m
   - width: 80m
   - navigation aid system

Imp. Period: .1992-.1994

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes/No

EIRR1)	23.40	FIRR1)	7.30
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
Development Impacts:
1) Saving of the cost of waiting
2) Reduction of transport costs by the use of larger vessels
3) Reduction of transport costs by eliminating the need to use other ports
4) Establishment of efficient manaqement and operation system for the new container terminal.
5) Introduction of appropriate maintenance system for cargo landling equipment.

5.TECHNICAL TRANSFER
Participation of counterparts in the JICA training program

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Implementing
  - ○ Processing
- ■ Promoting
- ☐ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)
The Government of Guatemala (GOG) requested the OECF finance in 1988 and the OECF mission visited the country in the same year. Subsequent steps have not been taken by the GOG toward loan actualization.
The President of EMPORNAC, Puerto Santo Tomas de Castilla, paid a visit to the Embassy of Japan in May 1991, and expressed his wish to have the port developed by OECF funding.
The Latin American Economic Cooperation Mission of the Japanese Government visited Guatemala in June 1991, and the new President and the Minister of Finance expressed their intention to expand the port with Japanese financial asssitance.

(FY1991 Overseas Survey)
The report of the study was utilized by the Planning Unit and the Engineering Dept. of EMPORNAC. The project is considered high priority, and will be revived in the future.

(FY1992 Overseas Survey)
Waiting for the answer.

2.MAJOR REASONS FOR PRESENT STATUS
The negotiation on the project funding has been stalled because two other projects on which the E/Ns were already signed have not been processed due to the delay of the congressional approval.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 サント・トーマス港開発計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

Compiled Mar.1990
Revised Mar.1993

CSA GTM/A 301/88

I. OUTLINE OF STUDY

1.COUNTRY Guatemala

2.NAME OF STUDY
Monjas Irrigation Project

3.SECTOR
Agriculture/General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Ministerio de Agricultura, Ganaderia y Alimentacion

7.OBJECTIVES OF STUDY
Formulation of a water resource development and utilization plan to promote agricultural development in Monjas

8.DATE OF S/W Feb.1987

9.CONSULTANT(S)
Pacific Consultants International
Sanyu Consultants Inc.

10.STUDY TEAM

No.of Members 11

Period Jul.1987-Jul.1988(13 months)

Total M/M	Japan	Field
61.01	21.50	39.51

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Survey, geological survey, sample analysis, Installation of hydrography, testing of embankment material

12.EXPENDITURE

Total	201,930 (¥'000)
Contracted	179,719

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Jalapa, Monjas (Area 7,100ha, population 14,130, 150km from the capital)

2.PROJECT COST

(US$1,000) US$1=2.5Q		Total Cost	Local Cost	Foreign Cost
	1)	46,850	18,464	28,386
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
Irriqation area: 4,800 ha

Reservoir : Main dam: Height 49m Length 1,072m, capacity 2.63MCM
Sub dam : Height 31m Head work : Water Intake 4.3cu.m/s

Driving canal: 4.0 cu.m/s 9.5km

Diversion canal: South 3.28cu. m/sec 8km
North 2.23cu.m/sec 15.2km

Main canal: 1,526 cu.m/sec 18km

Latenal canal: 0.338 cu.m/sec 39km

Requlating pond : 3 units

* The cost is estimated in Oct. 1987 prices.

Imp. Period: Apr.1989-Sep.1995

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	18.50	FIRR1)	6.20
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
Conditions: Pasture land will be transformed to farms with irriqation facilities, and mostly vegetables will be grown. The cultivated area will be doubled to 11,250ha, and the increase in crop will be 234%.

Development Impact: The visible benefit of this project is the increase in agricultural production. The annual profits will be 20,000,000Q when the planned output is realized.

The following social economic effects may also be expected: Contribution to national development plan, acquisition of foreign currency, stable supply of food, increase in employment opportunities, improved living standards, improved distribution and processing of agricultural products, correcting regional differences, tourism and economic stimulus.

5.TECHNICAL TRANSFER
1.Acceptance of trainees(2)
2.Instruction on geological soil and farm studies.
Input of numerical data using computers.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Implementing
  - ○ Processing
- ■ Promoting
- ☐ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)
In view of the high priority of the proposed project, the Government of Guatemala applied for Japanese Grant Aid in March 1989, but it was not successful.

(FY1991 Overses Survey)
The ministry assigns high priority to the proposed project and plans to revive the request for Japanese Grant Aid in 1992.

(FY1992 Overses Survey)
Waiting for the answer.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 モンハスかんがい計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

CSA GTM/S 302/89

Compiled Mar.1991
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Guatemala

2.NAME OF STUDY
Development Project of La Aurora and Santa Elena Airports

3.SECTOR
Transportation/Air Transportation & Airport

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Dirección General de Aeronáutica Civil (AGDC)

7.OBJECTIVES OF STUDY
Improvement and expansion of La Aurora and Santa Elena airports

8.DATE OF S/W Aug.1988

9.CONSULTANT(S)
Nihon Koei Co., Ltd.

10.STUDY TEAM

No.of Members 8
Period Jan.1989-Feb.1990(14 months)

Total M/M	Japan	Field
46.72	27.65	19.07

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	180,576 (¥'000)
Contracted	169,031

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
La Aurora airport in Guatemala city and St.Elena airport in Peten City

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	60,261	37,124	23,137
2)	18,815	6,688	12,127
3)			

3.CONTENTS OF MAJOR PROJECT(S)

(Emergency Programs)
1. Renovation of radar systems including installation of ASR/SSR equipment and renovation of CFR facilities at La Aurora.
2. Renovation of secondary power system at Santa Elena.

(Short-term Development)
1. Improvement of runway, taxiway and apron.
2. Improvement of drainage and other infrastructures.
3. Improvement and expansion of terminal buildings.
4. Improvement of aviation support facilities, including visual navaids.
5. Improvement of electrical power supply and other airport supporting facilities.

Note: Cost 1) is for La Aurora Airport and Cost 2) for Santa Elena Airport.

Imp. Period: .1991-.1993

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	50.00	FIRR1)	16.00
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
1.To improve safety and operational capacity by improvement of runway, taxiway and apron
2.To improve safety and operational efficiency by drainage and other infrastructures improvement
3.To provide better services and meet traffic demand by improvement of terminal buildings
4.To prevent a near-miss by the improvement of navigation aid facilities (especially rader)
5.To improve safety and operational efficiency by improvement of electric supply and other airport supporting facilities

5.TECHNICAL TRANSFER
OJT during field survey periods, and training of 2 counterpart engineers invited by JICA and JTCA

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ■ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)
A definite schedule of implementation is not yet decided due to political and financial reasons. However, in view of the urgent need of improving radar systems to ensure the safe operation of La Aurora Airport, the request for Japanese Grant Aid was forwarded through the Embassy in May, 1990.
The Ministry of Transportation, Communication and Public Works divided the proposed short-term plan into two phases and made preparations to apply to the OECF finance for the Phase I improvement.
The urgent need for improving the operation of La Aurora Airport was unfortunately substantiated by an airplane crash in May 1990.

(FY1991 Overseas Survey)
The DGAC restudied the proposed project and formulated a new project of reduced scale and cost, but has not yet decided on the schedule of its implementation due to political and economic reasons.

2.MAJOR REASONS FOR PRESENT STATUS
As described above.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 国際空港整備計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (M/P)

CSA GTM/S 101/91

Compiled Mar.1993
Revised

I. OUTLINE OF STUDY

1.COUNTRY Guatemala

2.NAME OF STUDY
Comprehensive Urban Transportation System in Guatemala Metropolitan Area

3.SECTOR
Transportation/Urban Transportation

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Guatemala Municipality

7.OBJECTIVES OF STUDY
To formulate a Master Plan on the comprehensive urban transportation system in Guatemala Metropolitan Area.

8.DATE OF S/W Nov.1989

9.CONSULTANT(S)
Yachiyo Engineering Co., Ltd.
Central Consultant, Inc.

10.STUDY TEAM

No.of Members 11
Period Jul.1990-Dec.1991(17 months)

Total M/M	Japan	Field
73.00	6.00	67.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	390,260 (¥'000)
Contracted	329,276

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Guatemala Metropolitan Area 937 sq.km

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)	477,400		
2)			

3.CONTENTS OF MAJOR PROJECT(S)
Road Network Plan:
Development of inner ring road, middle ring road, etc.
Public Transport Plan:
Introduction of bus exclusive lane on major roads, etc.
Traffic Management Plan:
Improvement of traffic signals on urban area.

4.CONDITIONS AND DEVELOPMENT IMPACTS
Impacts:
will mitigate the traffic congestion
will ensure traffic safety and smooth trafiic flow
will increase travel speed
will maintain good urban environment
will keep economic transport energy

5.TECHNICAL TRANSFER
On the job traing, counterpart training, and holding a seminar.

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)
The government of Guatemala is preparing to submit the terms of reference on the four priority projects in the Master Plan to the embassy of Japan in Guatemala.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①

和名 首都圏交通網整備計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

CSA GTM/S 202A/91

Compiled Mar.1993
Revised

I. OUTLINE OF STUDY

1.COUNTRY Guatemala

2.NAME OF STUDY
Solid Waste Management in Metropolitan Area of Guatemala City

3.SECTOR
Public Utilities/Urban Sanitation

4.REFERENCE NO.

5.TYPE OF STUDY M/P+(F/S)

6.COUNTERPART AGENCY
Public Service Bureau (DSP)
Municipal Public Cleaning Department (DLPM)

7.OBJECTIVES OF STUDY
1)To Contribute the development of the systematic management of the solid waste in the Metropolitan area of Guatemala City with an object of improving and safe garding the public helth as well as protecting the environment.

8.DATE OF S/W Nov.1989

9.CONSULTANT(S)
CRC Research Institute, Inc.
Environmental Technologic Consultants Co., Ltd.

10.STUDY TEAM

No.of Members 12

Period Jun.1990-Sep.1991(16 months)

Total M/M	Japan	Field
70.88	24.40	46.48

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
TELECTRO S.A. (measuring)

12.EXPENDITURE

Total	286,892 (¥'000)
Contracted	271,975

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Guatemala City, Mixco City, Villa Nueva City, Chinautla City, Villa Canales City, Sta. Catarina Pinula City (350 sq.km)

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
US$1=Q5=26.25yen	1)	33,663		
	2)			

3.CONTENTS OF MAJOR PROJECT(S)
1) Expansion of collection service
2) Improvement of final disposal
 - Immediate improvement of the EL Trebol disposal site to convert it into a controlled landfill.
 - Construction of a new sanitary landfill
3) Institutional development
 - Concessions of collection service to private collectors
 - Preventive maintenance and repair program
 - Education and community participation programs
 - Personal training program
 - Recycling and resouce recovery program
 - Institutional organization of the DSP
 - Initiate metropolitan committee in charge of solid waste
4) Strengthening of finance

4.CONDITIONS AND DEVELOPMENT IMPACTS
Planning conditions:
1) Planning period: until the year 2000
2) Population: In 1990 1,530,000 and 2,047,000 in the year 2000.
3) Types of solid waste: Solid waste not including hazardous materials
4) Annual increase of real GDP: From 1990 to 1995 4%, from 1996 to 2000 3%
5) Maintain and promote the dual collection system of municipal and private collectors during the period until the year 2000.
6) Continue and promote the support of the community
7) It is indispensable to count on the support of the community.

Accrued Benefits:
1) Establishment of institutional and organizational support-systems
2) Improvement of collection service in non-served areas
3) Through the observation of the improvement of the EL Trebol final disposal site, consensus among residents to open a new additional sanitary landfill will mature.
4) Improvement of environmental and sanitary conditions in the metropolitan area.

5.TECHNICAL TRANSFER
During the field survey, the counterpart was associated with sampling, analysis and measurement of waste with the study team. A seminar was also held in Japan in 1991.

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- ■ In Progress or In Use
- ☐ Delayed
- ☐ Discontinued

(Description)
(1) Establishment of a lamp-way arrangement of carrying in soil, treatment of disposal site which was completely filled up (into a park or a land covered with soil), housing of scavengers are in progress. while opening a new landfill disposal site is interrupted by a residential oppsition, it is projected to make endeavors to open the new disposal site utilizing the effective improvement of the EL Trebol disposal site.

(2) Adjustment between two private collectors has been conducted. Discussions with DLPM is also still continued regarding concessions of collection service to private collectors.

(3) The municipality established a central vehicle maintenance factory, merging DLPM's facilities for efficient equipments control and cost reduction.

(FY1992 Overseas Survey)
Waiting for the answer.

2.MAJOR REASONS FOR PRESENT STATUS
As mentioned above, when examining the concrete M/P utilization, it would be appropriate to judge present status as promoting according to the obvious progress of the project based on the surbey results.

3.PRINCIPAL SOURCE OF INFORMATION
①

和名 首都圏生活廃棄物処理計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

CSA GTM/S 202B/91

Compiled Mar.1993
Revised

I. OUTLINE OF STUDY

1.COUNTRY Guatemala

2.NAME OF STUDY
Solid Waste Management in Metropolitan Area of Guatemala City

3.SECTOR
Public Utilities/Urban Sanitation

4.REFERENCE NO.

5.TYPE OF STUDY (M/P)+F/S

6.COUNTERPART AGENCY
Public Service Bureau (DSP),
Municipal Public Cleaning Department (DLPM)

7.OBJECTIVES OF STUDY
To determine the possibility of the implementation of some first priority projects which must be achieved by 1995 at the latest.

8.DATE OF S/W .0

9.CONSULTANT(S)
CRC Research Institute, Inc.
Environmental Technologic Consultants Co., Ltd.

10.STUDY TEAM

No.of Members 12

Period Jan.1991-Mar.1991(0 months)

Total M/M	Japan	Field
70.88	24.40	46.48

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
TELECTRO S.A.(boring, measuring)
ACEROS AGRICOLAS E INDUSTRIALES S.A.(construction of containers)

12.EXPENDITURE

Total	286,892 (¥'000)
Contracted	271,975

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Guatemala City, Mixco City, Villa Nueva City, Chinautla City, Villa Canales City, Sta. Catarina Pinula City (350 sq.km)

2.PROJECT COST

(US$1,000)
US$1=Q5 =26.25yen

	Total Cost	Local Cost	Foreign Cost
1)	7,910		
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
Among the proposed projects in the MP, the FS was undertaken on 3 projects regarding urgent implementation.
1) The improvement of collection in marginal areas(Implementation of experiments on container collection and equipments control): Zone concession to private collection, increase in the rate of vehicle operation, improvement of loading efficiency, improvement of collection service in the isolated areas.

2) Improvement of final disposal sites (Proposal of plan and design on improvement and establishment): the improvement of the EL Trebol landfill and the opening of a new sanitary landfill in Las Guacamayas.

3) The improvement of the institutional organization: Formation of a work group, organize the Metropolitan Solid Waste Committee, Development of the community education and participation program, personnel training, improvement of private collection, increase of the SWM's budget, obtaining of financing from international and bilateral technical cooperation and credit organization, implementation of a pilot test on sanitary education for residents.

Imp. Period: .1991-.1996

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes/No

EIRR1)	8.00	FIRR1)
EIRR2)	20.00	FIRR2)
EIRR3)		FIRR3)

Conditions and Development Impacts:
Planning Conditions:
1) Planning period: until the year 1996
2) Population: In 1990 1,532,000 and 1,841,000 in the year 1996
3) Types of solid waste: Solid waste not including hazardous materials
4) Annual increase of real GDP: From 1990 to 1995 4%
5) Maintain and promote the dual collection system of municipal and private collectors during the period until the year 1996
6) Continue and promote the support of the community
7) It is indispensable to count on the support of the community.

Development Impacts:
1) Zone concessions to the private sector will increase collection efficiency and service level.
2) The institutional development and the improvement of collection service solve the collection problem from marginal areas.
3) The improvement of the EL Trebol landfill allows to improve the environmental conditions of the zone and the development of the Las Guacamayas landfill.
4) The improvement of transport efficiency and the decrease in the number of clandestine open-dumping sites.
5) Through promotion of community education, residents will participate in the Solid Waste management program.

Through the implementation of these projects, solid waste collection service for

5.TECHNICAL TRANSFER
During F/S period, the counterpart joined the sanitary education for residents through audio-visual aids, which worked very well.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ■ Completed or in Progress
- ○ Completed
- ● Implementing
- ○ Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)
The equipments were donated through Japanese Grant aiming at urgent improvement of the EL Trebol and expansion of collection service to neighboring areas.

Title of D/D: Solid Waste Management in Metropolitan Area of Guatemala City
1992.5.15 Signature on E/N
Amount on E/N: 309,000,000 yen
1992.7.21 Public Announcement for Tender
1993.3.15 Completion of Shipment

Grant Equipments:

Bulldozer:	4
Wheel loader:	2
Soil dump truck:	4
Refuse dump truck:	10

(FY1992 Overseas Survey)
Waiting for the answer

2.MAJOR REASONS FOR PRESENT STATUS
For the D/D has been completed or in progress.

3.PRINCIPAL SOURCE OF INFORMATION
Contacts with municipality of Guatemala, especially with DSP.

和名 首都圏生活廃棄物処理計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

CSA HND/A 301/78

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Honduras

2.NAME OF STUDY
Agricultural Development in the Choluteca River Basin

3.SECTOR
Agriculture/General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Ministry of Natural Resources

7.OBJECTIVES OF STUDY
F/S

8.DATE OF S/W Mar.1977

9.CONSULTANT(S)
Nihon Koei Co., Ltd.

10.STUDY TEAM

No.of Members 10

Period Jul.1977-May.1978(11 months)

Total M/M	Japan	Field

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	139,496 (¥'000)
Contracted	122,985

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
CHOLUTECA plan, southern part of Honduras

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
	1)	88,020	31,580	56,440
	2)	63,910		
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
1.San Fernando Dam : concrete qravity dam, Height of dam 93.5m
2.Irriqation Area(net): 16,000 ha(new 14,370ha, existinq pumpinq 1,630ha)
3.Irriqation Facilities :
Intake weir 1 place
Irriqation Canal 158km(Main 26.3km, Branch 46.5km)
Drainaqe Canal 144km(Main 121.9km, Secondary 22.5km)
Farm Road 122km
4.Power Station: Installed capacity 14MW
Annual Power Generation 58.4GWh

The project cost 1) is for the entire project and 2) for the 1st Staqe(the dam and irrigation development of 12,400ha).

Imp. Period: Jun.1978-Dec.1983

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	12.20	FIRR1)	
EIRR2)	9.10	FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
Conditions: Agricultural benefits are estimated as the difference of net income from crop production between with-project and without-project conditions. Electric power benefits are estimated by the cost of thermal power plants.

Output of Major Crops	Without Project	With Project (1,000 tons)
Sugarcane	800	800
Rice, Maize, Sorghum	3.8	33.2
Cotton	1.5	15.3
Melons and Vegetables	3.1	23.4
Total Net Value(US$1000)	4,680	13,950

Development Impacts: Increased crop production, qrowth of agricultural exports, fishinq in the reservoir, tourism development, rural electrification, flood control in the downstream, etc.
*EIRR 1) above is for the entire project, and 2) for the 1st Staqe.

5.TECHNICAL TRANSFER

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ■ Completed or in Progress
- ○ Completed
- ○ Implementing
- ● Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)
The feasibility study was updated by JICA in 1984. Detailed Design was completed by OECF E/S loan. (L/A Aug.1985)
The Government of Honduras applied in Mar.1987 for an OECF loan to implement the project, but did not get the approval.

(FY1991 Overseas Survey)
Official and unofficial requests for an OECF loan have been made repeatedly but with no avail.

2.MAJOR REASONS FOR PRESENT STATUS
Honduras is currently implementing its Structural Adjustment Program. OECF is rethinking the appropriateness of financing a project requiring large capital.

3.PRINCIPAL SOURCE OF INFORMATION
①②④

和名 チョルテーカ川流域農業開発計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

CSA HND/S 301/79

Compiled Mar.1986
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY: Honduras

2.NAME OF STUDY: New Tegucigalpa Airport Development

3.SECTOR: Transportation/Air Transportation & Airport

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: Directorate General of Civil Works, Min. of Communications, Public Works & Transport

7.OBJECTIVES OF STUDY: To select suitable site for new airport to replace the existing airport seriously handicapped by aircraft operation problems

8.DATE OF S/W: Oct.1977

9.CONSULTANT(S): Japan Airport Consultants, Inc.

10.STUDY TEAM

No.of Members 13

Period Dec.1977-Jul.1979(20 months)

Total M/M	Japan	Field
70.50	48.83	21.67

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	169,696 (¥'000)
Contracted	135,354

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Valle de Talanga, 60km north of Capital City

2.PROJECT COST (US$1,000) (US$1=200Yen)

	Total Cost	Local Cost	Foreign Cost
1)	66,002	29,042	
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

Facilities to be developed	Size/quantity
- Runway	2,700m x 45m
- Apron	69,100sq.m
- Passenger Terminal Bldg.	12,000sq.m
- Airport lighting and radio navaids	CAT-I total system
- Utilities (power, telephones water supply/sewerage)	Total system
- Access road	45km x 75m

Imp. Period: Jul.1981-Dec.1995

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	13.80	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

Conditions: 1) Ultimate Target Year 2005; 2) Two-phase construction with Phase I designed to accommodate 1995 traffic demand of 1.324 M passengers and 30,050 tons of cargo, and Phase II for 2.50 M passengers and 62,020 tons of cargo for year 2005; 3) To construct an airport at a new site because it is difficult to expand the existing airport.

Expected Effects: 1) Increased capacity to service overflowing passenger traffic; 2) Increase in tourism income; 3) Increase in airport tariff revenue from foreign aircrafts; 4) Saving in aviation fuel; 5) Improved runway usability; 6) Improved aircraft operation safety; 7) Increase in employment opportunities.

5.TECHNICAL TRANSFER

Trainee invited to Japan : One official participated in JICA's Aerodrome Seminar.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ☐ Delayed or Suspended
- ■ Discontinued or Cancelled

(Description)

The Government of Honduras applied for yen credit, but subsequently decided to withdraw the application.

(FY 1991 Overseas Survey)
The government still has a strong desire for the new airport, but no action has been taken.

2.MAJOR REASONS FOR PRESENT STATUS

After filing the application for Yen Credit, the president and the Minister of Transport involved with the Project were replaced, and the priority of the Project was lowered reflecting the political unrest of the neighboring countries.

3.PRINCIPAL SOURCE OF INFORMATION

①②

和名 デグシガルパ新空港建設計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (Basic Study)

CSA HND/A 501/83

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Honduras

2.NAME OF STUDY
Inventario forestal del distrito forestal de La Mosquitia

3.SECTOR
Forestry/Forestry & Forest Conservation

4.REFERENCE NO.

5.TYPE OF STUDY Basic Study

6.COUNTERPART AGENCY
Forest Development Corporation of the Republic of Honduras

7.OBJECTIVES OF STUDY

8.DATE OF S/W Sep.1980

9.CONSULTANT(S)
Japan Forest Technical Association

10.STUDY TEAM

No.of Members 21

Period Dec.1980-Mar.1983(28 months)

Total M/M	Japan	Field
97.00	46.00	51.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Aerial photography

12.EXPENDITURE

Total	296,353 (¥'000)
Contracted	264,673

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
An area of 2,000 sq.km in Mosquitia District, Gracias A Dios Province

2.PROJECT COST

(US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)			
2)			

3.CONTENTS OF MAJOR PROJECT(S)
In order to utilize Caribbean pines in the subject area, a forest management plan was proposed containing following components:
-Countermeasures against forest fires
-Improvement of forest road network
-To enlarge natural regeneration and re-afforestation
-To increase the timber production

4.CONDITIONS AND DEVELOPMENT IMPACTS
In this area, there is not any road leading to any other areas, therefore the transportation is limited to sea transport.
On the other hand, this area has been developed by the capitals from Nicaragua since 1950's and from Honduras since 1975.
The implementation of this forest management plan would result in the forest protection and sustainable yield management so that local society and economy in this area would be improved in spite of the transport constraints.

5.TECHNICAL TRANSFER
- To accept trainees
- To conduct on the job training on the forest inventory survey

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)

The results of this study such as the aerial photographs, the topographic maps, forest type maps, etc. are used by the authorities concerned.

In recent years the government of Germany implemented a technical cooperation project using this forest management plan.

(1991 Overseas Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 ラ・モスキチア地区林業資源調査

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (Basic Study)

CSA HND/A 502/83

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY: Honduras

2.NAME OF STUDY: Fisheries Resources Survey

3.SECTOR: Fisheries/Fisheries

4.REFERENCE NO.:

5.TYPE OF STUDY: Basic Study

6.COUNTERPART AGENCY: Bureau of Rehabilitation, Ministry of Natural Resources; Fishery Section, Economic Planning Agency

7.OBJECTIVES OF STUDY:

8.DATE OF S/W: Sep.1980

9.CONSULTANT(S):

10.STUDY TEAM

No.of Members

Period Jun.1981-Mar.1983(20 months)

Total M/M	Japan	Field

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:

12.EXPENDITURE

Total 166,926 (¥'000)

Contracted

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA

From Torujillo to Puerto Cortes, North sea-shore of Honduras

2.PROJECT COST

(US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)			
2)			

3.CONTENTS OF MAJOR PROJECT(S)

- Fishing port is necessary between Tela and La Ceiba.
- It is necessary to improve the distribution system.
- Under the proper condition of distribution, fishing base, etc., bottom gillnet, shark long line, trawl fishing are useful for marine resource development.

4.CONDITIONS AND DEVELOPMENT IMPACTS

The amount of fish consumption is extremely small, therefore it is important to expand the demand of marine products.

5.TECHNICAL TRANSFER

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

- ■ In Progress or In Use
- ☐ Delayed
- ☐ Discontinued

(Description)

(FY 1991 Overseas Survey)
The findings of the study have been utilized by the FAO-assisted study of coastal fisheries and other studies of marine biology and coastal fishermen.
The Ministry of Natural Resources is requesting Japanese assistance for similar studies in other areas.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION

①②

和名 水産資源調査

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (F/S)

CSA HND/A 302/84

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Honduras

2.NAME OF STUDY
Choluteca River Basin Agricultural Development Project (Updating Study)

3.SECTOR
Agriculture/General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Ministry of Natural Resources

7.OBJECTIVES OF STUDY
Update of feasibility study made in 1977 in Choluteca Area

8.DATE OF S/W Jun.1984

9.CONSULTANT(S)
Nihon Koei Co., Ltd.

10.STUDY TEAM

No.of Members 15

Period Aug.1984-Mar.1985(8 months)

Total M/M	Japan	Field
14.80	8.60	6.20

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	51,164 (¥'000)
Contracted	44,855

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
CHOLUTECA plain, southern part of Honduras (Investigated Area 36,000ha, population 22,600person)

2.PROJECT COST

(US$1,000) US$1=2Lempiras		Total Cost	Local Cost	Foreign Cost
	1)	188,419	53,674	134,744
	2)	184,810	53,031	131,779
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
1. San Fernando Dam:Concrete gravity, dam height 100m, crest length 320m
2. Irrigation Area:20,600ha(Western Area 16,000ha, East-A Area 4,600ha)
3. Irrigation Facilities
   1 intake weir(concrete type, weir height 4.8m, crest length 140m)
   Main canals 30.6km(Western Area 23.6km, East-A Area 7.0km)
   Branch canals 75.5km(Western Area 45.2km, East-A Area 30.3km)
   Secondary canals 33.6km(Western Area only)
   Main Drainage canals 113.0km(W.Area 90.5km, E.-A Area 22.5km)
   Secondary drainage canals 27.0km(Western Area only)
4. Power Plant:Installed Cap. 18.2MW, Annual Output 53.6GWh

*The project cost 1) above is for the entire project, and 2) for the 1st Stage(Dam & Power plant and irrigation dev. of Western Area)
*The implementation period below pertains to the 1st Stage of the project.

Imp. Period: Mar.1985-Apr.1991

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	14.20	FIRR1)	13.10
EIRR2)	13.70	FIRR2)	11.70
EIRR3)		FIRR3)	

Conditions and Development Impacts:
Conditions:Agricultural benefits are estimated as the difference of net income between the with-projection and the without projection condition. The benefit of power generation is estimated for the average generating capacity in dry season, by the value of thermal power of 0.1311Lem/KWh.

With-project Outputs of Major Crops:1st Stage	2nd Stage	Total(1000t)
Sugarcane 856	-	856
Cotton 16.9	8.0	24.9
Paddy 20.2	11.5	31.7
Maize 9.0	10.4	19.4
Melons/Vegetables 66.4	-	66.4
Total Net Income(1000 Lempiras): 38,191	11,327	49,518

Develpment Impacts: Increased and diversified crop outputs, increased agricultural exports, rural electrification, downstream flood control, employment creation (e.g.2.7 million from agricultural dev.), etc.

5.TECHNICAL TRANSFER
Technology transfer to counterpart in the course of the study.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ■ Completed or in Progress
- ○ Completed
- ○ Implementing
- ● Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)
Detailed Design was completed by the OECF E/S loan.
L/A : August 2nd,1985, 1.651 billion yen
Period : Dec.1985 - May 1988
Consultant : Nippon Koei Co.,Ltd.

(FY1991 Overseas Survey)
Official and unofficial requests for an OECF loan have been made repeatedly but to no avail.

2.MAJOR REASONS FOR PRESENT STATUS
Honduras is currently implementing its Structural Adjustment Program. OECF is rethinking the appropriateness of financing a project requiring large capital.

3.PRINCIPAL SOURCE OF INFORMATION
①②④

和名 チョルテカ川流域農業開発計画補完調査

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

CSA HND/A 303/85

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Honduras

2.NAME OF STUDY
Aguan Valley Agricultural Development Project (Saba-Olanchito Area)

3.SECTOR
Agriculture/General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
National Agrarian Institute

7.OBJECTIVES OF STUDY
The objective of the Feasibility Study is to evlauate the technical and economic feasibility of the development plans which include: introduction of new irrigation, drainage and road systems, improvement and consolidation of

8.DATE OF S/W Nov.1983

9.CONSULTANT(S)
Pacific Consultants International

10.STUDY TEAM

No.of Members 19
Period Feb.1984-Jun.1985(17 months)

Total M/M	Japan	Field
76.30	21.48	54.82

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Geological Survey

12.EXPENDITURE

Total	271,812 (¥'000)
Contracted	241,257

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Yoco, Aquan Central Valley(Saba-Oranchito)
188,000 people, 200km from capital, 23,000ha

2.PROJECT COST

(US$1,000)
US$1=2Lps. in 1984

	Total Cost	Local Cost	Foreign Cost
1)	64,425	22,733	41,692
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
Irrigation area : 9,100ha
Headworks : 4
Syphon : 2
Pumping Station : 3
Arterial drainage : 73,650 m

Imp. Period:

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1) 13.00 FIRR1)
EIRR2) FIRR2)
EIRR3) FIRR3)

Conditions and Development Impacts:
80% of the study area in the 23,000ha central valley of the Aquan is arable, however the actual amount of presently arable land is 20%.
The rest is pasture or unused land.
Water will be obtained from the Aquan and its tributary and distributed naturally downstream(or partly by small pump) for the cultivation of oranges, cocoa, rice, and vegetables.
By increasing settlements in this poorly populated area, rather than the heavily populated southern area, land will be put to more effective use.

5.TECHNICAL TRANSFER
1.Acceptance of trainees
2.Provision of machinery (boring machine) and instruction on its use. 3.Cooperation in field studies and reports

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ■ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)

After the completion of F/S, the economic situation of the country worsened, foreign debts accumulated. The other project (Choluteca River Basin Agricultural Development) was suspended after the D/D, and there has been no progress regarding this project.

(FY 1991 Overseas Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS

Considering the present economic condition of the country, it will be economically difficult to implement large projects (such as the Elcahon power station project and the Choluteca project) in succession. There are other high priority projects like road construction and it will take time to implement this project.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 アグアン川流域農業開発計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (M/P)

CSA HND/S 101/89

Compiled Mar.1991
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Honduras

2.NAME OF STUDY
Groundwater Development Project in Comayagua

3.SECTOR
Social Infrastructures/Water Resource Development

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Ministry of Public Health

7.OBJECTIVES OF STUDY
Groundwater Potential Evaluation & Master Plan of Rural Water Supply

8.DATE OF S/W Nov.1987

9.CONSULTANT(S)
Nihon Koei Co., Ltd.

10.STUDY TEAM

No.of Members 8
Period Feb.1988-Oct.1989(21 months)

Total M/M	Japan	Field
44.76	17.59	27.17

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Test Well Drilling & Pumptest

12.EXPENDITURE
Total 206,708 (¥'000)
Contracted

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Comayagua Basin (Municiparity Comayagua & La Paz)

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)	14,939	4,359	10,580
2)	12,047	4,506	7,541

3.CONTENTS OF MAJOR PROJECT(S)
The Final Report recommended that the project should be implemented in staqes, and by the end of the second staqes, of which the tarqet year is 1996, 60 units of the type 1 and 22 units of the type 3 should be constructd as the rural water supply system.

4.CONDITIONS AND DEVELOPMENT IMPACTS
The project has a character of "Basic Human Needs" and is feasible economically, and it is expected that the project would make a significant contribution to socio-economic development and the improvement of health and sanitary conditions in the study area.

5.TECHNICAL TRANSFER
OJT for counterparts during the site study (1988-89) about routine site study, management of well-boring and analytical works.

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)
The Government of Honduras requested Japanese grant aid in Nov.1989, and the basic design study was conducted in Mar.1990.

(FY1991 Overseas Survey)
Phase I: 1,108 million yen
Well-excavation (53 units)
Placement of water supply system
June 1990: E/N
1990: D/D
Dec. 1990: Contracts with the constructors
Mar. 1993: Scheduled to be completed

Phase II: 394 million yen
Well-excavation (36 units)
Placement of water supply system
July 1991: E/N
Nov. 1991: contracts with the constructors
Nov. 1994: Scheduled to be completed

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 コマヤグア県地下水開発計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (F/S)

CSA HND/A 304/90

Compiled Mar.1992
Revised

I. OUTLINE OF STUDY

1.COUNTRY Honduras

2.NAME OF STUDY
Rehabilitation of Coyolar Dam and Irrigation Improvement Project in Comayagua Valley

3.SECTOR
Agriculture/Irrigation, Drainage & Reclamation

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Ministry of Natural Resources, General Directorate of Water Resourcesement of existing Plan

7.OBJECTIVES OF STUDY
Establishment of Coyolar Dam Rehabilitation Plan and Improvement Plan of Flores Irrigation System

8.DATE OF S/W Apr.1989

9.CONSULTANT(S)
Pacific Consultants International

10.STUDY TEAM

No.of Members 9

Period Dec.1989-Mar.1990(15.5 months)

Total M/M	Japan	Field
50.22	21.30	28.92

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Boring/Cross and Level Survey of Canal/Echo Sounding of Reservoir/Others

12.EXPENDITURE

Total	209,325 (¥'000)
Contracted	35,420

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Flores Irrigation District and its adjacent area of about 3600 ha

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	51,617	29,878	21,739
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
- Rehabilitation Plan of Coyolar Dam
- Reinforcement of existinq plan
- Construciotn of new spillway
- Rehabilitation of Maintenance Road
- Improvement of Flores Irriqation System
- Diversion Weir
- Irriqation Canal Main 12.55 Km
  Secondary 27.70 Km
- Inspection Road 40.2 Km

Imp. Period: .1991~.1998

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes

EIRR1)	15.71	FIRR1)	15.00
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

Conditions:
- The storage capacity recovers from 9 million qubic-meters to 12.6 million qubic-meters.
- Irriqation efficiency is improved by the reform of irriqation facilities on the flowless area.
- A part of pasture land 790ha is chanqed over to cultivated land.
- Irriqation areas are to icrease from 830ha to 1,260 ha.

Development Impacts:
- Increase of agricultural production
- Increase of agricultural productivity
- Increase in exports of Agricultural Products
- Evasion from assumed collapse of the Dam

Benefit of increased agricultural products and possible damages from the accidental collapse of the Dam as potential benefit are considered to estimate C/B.

5.TECHNICAL TRANSFER
JICA Counterpart Training

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Implementing
  - ○ Processing
- ■ Promoting
- ☐ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)
The Government of Hondurus strongly requested Japanese Grant Aid for rehabilitation of Coyolar Dam.
The possibility of implementation of the Project is being studied in the Ministry of Foreign Affair in Japan

(FY1992 Overseas Survey)
Waiting for the answer.

2.MAJOR REASONS FOR PRESENT STATUS
Ministry of Foreign Affairs is under consideration, because this project is too big to be a grant aid financed project.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 コヨラルダム灌漑復旧計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

CSA JAM/A 301/85

Compiled Mar.1990
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Jamaica

2.NAME OF STUDY
Agricultural Development Project on the Black River Lower Morass

3.SECTOR
Agriculture/General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Ministry of Agriculture, Department of Planning and Policy

7.OBJECTIVES OF STUDY
F/S
- to formulate the project and verify its technical and economic feasibility

8.DATE OF S/W Dec.1983

9.CONSULTANT(S)
Nihon Koei Co., Ltd.
Taiyo Consultants Co., Ltd.

10.STUDY TEAM

No.of Members	Total M/M	Japan	Field
10	11.14	1.55	9.59

Period Feb.1984-Jun.1985 (17 months)

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE
Total 239,697 (¥'000)
Contracted 217,840

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Black River Lower Morass Area(situated in the western part of Jamaica near the southern cost in the Parish of St.Elizabeth)

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)	54,300	17,800	36,500
2)	11,700	900	10,800
3)	5,600	5,600	

3.CONTENTS OF MAJOR PROJECT(S)
I. Major Investment for the Project
a. Irrigation Area : 3,080 ha
B. Major Facilities: (1) Diversion Weir: 1place, (2) Irrigation Pump St: 1 place with 4 units of 120kW 700mm diameter, (3) Drainage Pump St. : 4 places with 15 units of 100-125HP 800mm diameter, (4) Irrigation Canal: main 35.2km & secondary 31.6km, (5) Drainage Canal: main 41.3 km, secondary 154.0km & catch drain 17.0km, (6) Farm Road:main 35.2km & secondary 83.4km, (7) Flood Protection Dike: 29.0km, (8) Others: Office & Quarters, Ground water level observation wells & Environment conservation.

II. Post Harvest Facility: 5 drying & storage stations and 1 rice mill

III. Social Infrastructure: Upgrading/construction of Housing, Schools, Health center Road, Water supply and Community center
Implementation period will be 6 years which consists of Phase-I of 3 years including detailed design and Phase-II of 3 years.

Imp. Period:

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes

EIRR1)	13.30	FIRR1)	
EIRR2)	14.10	FIRR2)	
EIRR3)	15.60	FIRR3)	

Conditions and Development Impacts:
Conditions:
1. Agricultural benefit was estimated as the net incremental benefit derived from difference of net crop production between with project and without project conditions.
2. Project area consists of mineral soil area (780ha) and peat soil area (2300ha) where different agricultural development plan is adopted.
3. Net annual profit will be expected from twice of paddy in a year on both mineral and peat soil areas and soya bean on mineral soil area in case of with project condition, while it would be born from sugar cane (310ha), rain-fed paddy (100ha) and upland crops 960ha) in mineral soil area only, in case of without project condition.
4. The Project cost for economic evaluation does not include costs for procurement and installation of post harvest facility (2 of above), and construction or upgrading of socail infrastructure (3 of above).
5. EIRR of small (1480ha in case 3) and medium (2280ha in case 2) scale development plans woulds be slightly higher than them of whole scale development plan (case 1). However, the Net Present Value, production of paddy and foreign exchange saving of case 1 are substantially larger than those of smaller scale develpment plans, and secondary benefit from adjacent project area would be expected in case 1 which was recommended.

5.TECHNICAL TRANSFER
To undertake on-the-job training and transfer the technology to the Jamaican counterpart personnel in the course of the study.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ■ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)
It was subject to establish a holding company who would be responsible for construction of civil engineering works, development and operation of the pilot farm, land lease and management as well as recruitment, training, selection and settlement of farmers. However, due to some reasons such as rather expensive cost per unit area, etc., some agency (National Investment Bank) refused to establish the holding company, as of November, 1985. Proposed membership of the Board of Directors to be appointed by the Government was, Permanent Secretary of the Ministry of Agriculture or his nominee, Commissioner of Land, a representative from the Ministry of Finance, a representative from the Jamaica National Investment Bank, a representative from the National Water Commission, and two other nominees.

(FY1992 Overseas Survey)
Waiting for the answer.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①

和名 ブラックリバーローアモラス農業開発計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

CSA JAM/A 302/87

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Jamaica

2.NAME OF STUDY
Modernization and Expansion of the Rio Cobre Irrigation scheme

3.SECTOR
Agriculture/General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Ministry of Agriculture

7.OBJECTIVES OF STUDY

8.DATE OF S/W Dec.1985

9.CONSULTANT(S)
Taiyo Consultants Co., Ltd.
Nihon Koei Co., Ltd.
Kokusai Kougyo Co., Ltd.

10.STUDY TEAM

No.of Members 13

Period Jan.1986-Jun.1987(18 months)

Total M/M	Japan	Field
88.32	32.33	55.99

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Geological survey Analysis of samples

12.EXPENDITURE

Total	276,497 (¥'000)
Contracted	251,952

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
22km far from Kingstone in the west (the surveyed area: 274 sq.km, population 130,000)

2.PROJECT COST
(US$1,000)
US$1=5.5J$ in 1986

	Total Cost	Local Cost	Foreign Cost
1)	64,290	30,190	34,100
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

The project area is situated in the eastern part of Jamaica near the southern coast in the parish of St. Catherine.
Rio Cobre Irrigation System: 12,990ha(completed in 1874)
St. Dorothy Irrigation System: 2,340ha(completed in 1963)
The main concepts of the project are:
- to modernize and expand the present irrigation system by reconstructing and improving existing infrastructures.
- to introduce diversified cropping patterns including non-traditional crops into the annual rotation of cropping.
- to increase and stabilize yields and production of crops by means of sound management of irrigation and drainage.
- to achieve successful small scale farmer enhancement through appropriate training and agricultural support services.
- to promote the leveling up of living standards and more equitable distribution of income to the people.

The main civil works are:
1)rehabilitation of headworks, 2)rehabilitation of canals, 3)reservoirs 4)land consolidation, 5)road construction.

Imp. Period: .1988-.1991

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	24.00	FIRR1)	15.80
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

The project implementation:
1) The construction schedule is drawn up in such a way as to make capital investment productive as soon as possible.
2) The major civil works and on-farm development works are rationally integrated in due to consideration of the agricultural development programme particularly paddy land development.
3) Rehabilitation and improvement works for the head works and main canal will be carried out without cutting off the existing water supply to the douwnstream irrigated area and municipal water supply to Spanish Town.
4) The time required for construction of the project would be about 4 years including detailed design and contract award.
Development Impacts:
1)Foreign exchange saving: approximately US$17.5 million per annual of foreign exchange will be saved by substituting for imported commodities; 2)Demonstration effects: Farmers in other areas become familiar with modern irrigation and drainage practices; 3)Increased employment opportunities: It is expected that the present unemplyment in and around the project area will be reduced by implementation of the project; 4)Secondary benefit: The socio infrastructure and local trasportation system will be improved.

5.TECHNICAL TRANSFER
(1) Acceptance of one trainee on in-service training in Japan.
(2) OJT

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ■ Completed or in Progress
- ○ Completed
- ○ Implementing
- ● Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)
Progress

This project is given a high priority in the "Food and Agriculture Policies/Production Five-Year-Plan(1983/84-1987/88)" of the government. Based on the F/S report, the project has been carried out partly sparing local funds and partly with financial support of the USAID.
However, those funds are quite limited and cover only the small portion of the project.

(FY1992 Overseas Survey)
Waiting for the answer.

2.MAJOR REASONS FOR PRESENT STATUS
Shortage of the funds due to deterioration of the economic circumstances.

3.PRINCIPAL SOURCE OF INFORMATION
①

和名 リオ・コブレ農業開発計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (Other)

CSA MEX/S 601/77

Compiled Mar.1986
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Mexico

2.NAME OF STUDY
Mexico City Suburban Railways Construction Project

3.SECTOR
Transportation/Railway

4.REFERENCE NO.

5.TYPE OF STUDY Other

6.COUNTERPART AGENCY
Secretaria de Comunicaciones y Transportes

7.OBJECTIVES OF STUDY
Review of the Mexican Government's basic plan for new railway lines, and technical advice on construction works

8.DATE OF S/W Aug.1977

9.CONSULTANT(S)
Japan Railway Technical Service

10.STUDY TEAM

No.of Members 12
Period Sep.1977-Mar.1978(7 months)

Total M/M	Japan	Field
20.70	10.70	10.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
None

12.EXPENDITURE

Total	50,856 (¥'000)
Contracted	38,688

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Suburban railways of Mexico City; 5 lines with total extension of 77km

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
	1)		
(US$1=23pesos)	2)		

3.CONTENTS OF MAJOR PROJECT(S)

Alternatives:	A	B
Civil engineering Works(stations)	9,022	7,821
Electric engineering Works (power transmission)	2,221	1,395
Signal and telecommunication equipment (including interference countermeasures)	1,731	1,416
Rolling stock (318 - 369 cars)	6,107	4,952
Rolling Stock bases	1,327	1,296
	(in million pesos)	

Note: The costs of Alternative A correspond to the figures for 1) and Alternative B for 2) above.

4.CONDITIONS AND DEVELOPMENT IMPACTS
It is assumed that the construction cost for grade separation be paid by the government fund, and moreover, that the cost be excluded from the construction costs to be covered by fare revenues.

Railways will contribute to the amelioration of air pollution caused by the exhaust from motorized traffic in the metropolitan area.

5.TECHNICAL TRANSFER
Some counterparts participated in the JICA training program.

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- ☐ In Progress or In Use
- ☐ Delayed
- ■ Discontinued

(Description)
This study was to review, from the technical and economic standpoints, the basic plan for new suburban railway lines which was being prepared by the Mexican Government as part of the overall urban transport improvement policy for Mexico City, and to undertake a pre-feasibility study of the construction plan.
Based on the results of this study, Mexican Government came to the conclusion that the estimated costs of construction would be too large for the already financially-strapped National Railways to bear, and decided on the alternative of subway construction which was being promoted by the Federal District Government.
In other words, the proposals of this study were not adopted for implementation, but served as one of the bases for the important policy decision by the Mexican Government.

(FY 1991 Overseas Survey)
No Additional Information.

2.MAJOR REASONS FOR PRESENT STATUS
Because of the huge construction costs necessary for new suburban railway lines, the Mexican Government chose the alternative of subways.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 メキシコ市内通勤鉄道建設計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (Other)

CSA MEX/S 602/79

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Mexico

2.NAME OF STUDY
Suburban Railways Project (follow-up)

3.SECTOR
Transportation/Railway

4.REFERENCE NO.

5.TYPE OF STUDY Other

6.COUNTERPART AGENCY
Secretaria de Comunicaciones y Transportes

7.OBJECTIVES OF STUDY
Technical advice and guidance on the physical planning and the operation and management for the trunk line electrification plan of the Mexican National Railway

8.DATE OF S/W .0

9.CONSULTANT(S)
Japan Railway Technical Service

10.STUDY TEAM

	No.of Members	Period	Total M/M	Japan	Field
	4	Jun.1979-Aug.1979(2 months)			

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
None

12.EXPENDITURE
Total 7,326 (¥'000)
Contracted

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Suburbs of Mexico City

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)			
2)			

3.CONTENTS OF MAJOR PROJECT(S)
As part of the railway modernization policy, the Mexican Government is planning the electrification of the entire railway system. The Government requested Japanese technical cooperation concerning feasibility studies on two of the high priority sections selected for electrification: Namely, the section between Mexico City and Queretaro (244km) and the section between Mexico City and Irapuato (95km).
In response to the request, the Japanese Government sent a team of experts to assist the undertaking of the feasibility studies.

4.CONDITIONS AND DEVELOPMENT IMPACTS

5.TECHNICAL TRANSFER

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)
1) Section between Mexico City and Queretaro (244km)
1981 Construction works started.
1982 - 86 Due to the decline of oil prices, construction works were virtually suspended.
(FY1991 Overseas Survey)
Feb. 1992 About 80% of the construction works completed.
1993 Scheduled to be operated on commercial basis.

2) Section between Mexico City and Irapuato (95km)
Suspended until the section between Mexico City and Queretaro begin operation.

2.MAJOR REASONS FOR PRESENT STATUS
Financial problems.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 近郊鉄道計画（アフターケア）

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (Other)

CSA MEX/S 603/81

Compiled Mar.1986
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Mexico

2.NAME OF STUDY
Proyecto de electrificacion de la linea de Mexico a Irapuato

3.SECTOR
Transportation/Railway

4.REFERENCE NO.

5.TYPE OF STUDY Other

6.COUNTERPART AGENCY
Secretaria de Comunicaciones y Transportes

7.OBJECTIVES OF STUDY
Technical advice and guidance on technical standards and specification for detailed study on electrification of the section between Mexican City and Irapuato, as part of the trunk line electrification plan of the Mexican

8.DATE OF S/W .1980

9.CONSULTANT(S)
Japan Railway Technical Service

10.STUDY TEAM

No.of Members 23
Period May.1980-Mar.1981(10 months)

Total M/M	Japan	Field
32.87	18.50	14.37

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	111,252 (¥'000)
Contracted	87,967

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Section between Mexican city and Irapuato(351.2km)

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)			
2)			

3.CONTENTS OF MAJOR PROJECT(S)

The Japanese team provided technical advice and quidance on technical standards, specifications and bidding documents for detailed design, covering the following major areas.

1) Preparation of train operation plans
2) Introduction of locomotives
3) Track design
4) Upgrading of signal facilities
   a) Signal automation (double-track type)
   b) CTC for all sections
   c) Introductin of ATC on all sections
6) Upgrading of telecommunication systems
7) Upgrading of systems for rolling stock inspection and repair

4.CONDITIONS AND DEVELOPMENT IMPACTS

5.TECHNICAL TRANSFER
On-the-job training for Mexican counterparts through joint work.

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)

The recommendations of this study were used by the Mexican Government for preparing tender documents and evaluating the bids. The progress of construction works is as follows:

1) Section between Mexico City and Queretaro (244km)
   1981 Construction works started.
   1982 - 86 Due to the decline of oil prices, construction works were virtually suspended.
(FY1991 Overseas Survey)
Feb.1992 About 80%k of the construction works is completed.
1993 Scheduled to be operated on commercial base.

2) Section between Mexico City and Irapuato (95km)
Suspended until the section between Mexico City and Queretaro begin operation.

2.MAJOR REASONS FOR PRESENT STATUS
Financial problems.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 幹線鉄道電化計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (Other)

CSA MEX/S 604/82

Compiled .1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY: Mexico

2.NAME OF STUDY
Development Plan of Industrial Ports

3.SECTOR
Development Plan/Integrated Regional Development Plan

4.REFERENCE NO.

5.TYPE OF STUDY: Other

6.COUNTERPART AGENCY
Comision Nacional Coordinadora del Disarollo, Secretaria de Presidente, (SCT)

7.OBJECTIVES OF STUDY
Technical advice on all aspects of port development for coastal industrial growth

8.DATE OF S/W: .0

9.CONSULTANT(S)
Overseas Coastal Area Development Institute of Ja

10.STUDY TEAM

No.of Members

Period Jul.1980-Mar.1982(20 months)

Total M/M	Japan	Field

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total 50,192 (¥'000)

Contracted

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA

2.PROJECT COST

(US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)			
2)			

3.CONTENTS OF MAJOR PROJECT(S)

The Japanese expert team provided technical advice and guidance on the port development necessary for coastal industrial growth, covering such areas as planning of physical facilities (including cargo facilities at multi-purpose wharves), cargo handling operations, and alternatives of physical development.

4.CONDITIONS AND DEVELOPMENT IMPACTS

5.TECHNICAL TRANSFER

On-the-job training was provided to Mexican counterparts concerning planning, design, investigation, management, man- power training and other areas necessary for port development. This technical transfer contributed to the formlation of master

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)

The progress of development in the selected ports has been as follows:

1) Altamira Port
- 1985 Multi-purpose berth (No.1 Berth) completed for use
- 1990 Feb. No.2 Berth completed for use
- 1990 May Construction of No.3 Berth to started and to be completed in 1992. (Infrastructural development to be financed by own funds, and necessary equipment by World Bank.)

2) Lazaro Cardenas Port
- 1985 General cargo berth completed for use

No.3 Berth (muti-purpose) will be constructed dependent on the future increase of cargo throughput.

3) Oschon Port
Development is suspended.

4) Salina Cruz Port
The construction of the breakwater was completed, but the development of the port is suspended. However, the development of oil-exporting port facilities have been under way.

2.MAJOR REASONS FOR PRESENT STATUS

Reasons for 3) problems in land acquisition

3.PRINCIPAL SOURCE OF INFORMATION

①②

和名 臨海工業地帯建設にかかる技術協力計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (F/S)

CSA MEX/S 301/83

Compiled Mar.1986
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Mexico

2.NAME OF STUDY
Guanajuato New Railway Development Project

3.SECTOR
Transportation/Railway

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Gobierno del Estado de Guanajuato

7.OBJECTIVES OF STUDY
Construction of a new railway line for passenger transport in the Bajio Industial Corridor in Guanajuato State.

8.DATE OF S/W Dec.1982

9.CONSULTANT(S)
Japan Railway Technical Service

10.STUDY TEAM

No.of Members 12
Period Mar.1983-Nov.1984(8 months)

Total M/M	Japan	Field
75.11	46.80	28.31

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	149,529 (¥'000)
Contracted	140,700

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
A line linking major cities between Apaseo el Grande and Francisco del Rincon (167km)

2.PROJECT COST

(US$1,000) (US$1=111.95pesos)		Total Cost	Local Cost	Foreign Cost
	1)	386,000	237,000	149,000
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

	(100 million pesos)
Civil engineering works	169
Electric engineering works	86
Rolling stock bases and workshops	34
Land acquisition (compensation)	12
Rolling stock	131

Imp. Period: Jan.1984-Jun.1999

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes/No

EIRR	FIRR
EIRR1)	FIRR1)
EIRR2)	FIRR2)
EIRR3)	FIRR3)

Conditions and Development Impacts:

Assumptions:
- Partial opening of the line in 1990
- Opening of the entire line in 1995
- Completion of double tracking in 2000

Expected development impacts:
Balanced development of new residential cities and new industrial parks in the Bajio Industrial Corridor of Guanajuato State.

5.TECHNICAL TRANSFER
One counterpart participated in the JICA training program. On-the-job training for undertaking feasibility studies.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ☐ Delayed or Suspended
- ■ Discontinued or Cancelled

(Description)

The implementation of the proposed project was suspended in October 1983, when the then Governor of Guanajuato was replaced together with his technical staff.

Because the construction of highways and the electrification of national railways are currently under way, the present Government of Guanajuato State is unlikely to reconsider the project. Therefore, the project is judged as cancelled.

(FY1991 Overseas Survey)
After the election in 1991, the opposition party took the political power. As a result, the personnel who knows the background of this project left the state government.

2.MAJOR REASONS FOR PRESENT STATUS

1) Departure of the Governer of Guanajuato State
2) Financial difficulty in Mexico
3) Policy change

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 グアナファト州高速鉄道開発計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

CSA MEX/S 302/83

Compiled Mar.1986
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Mexico

2.NAME OF STUDY
Development Project of the Industrial Port of Tuxpan

3.SECTOR
Transportation/Port

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Comision Nacional Coordinadora de Puertos, Secretaria de Comunicaciones y Transportes

7.OBJECTIVES OF STUDY
Formulation of a master plan through 2000, the formulation of a short-term development plan, and the execution of a feasibility study

8.DATE OF S/W May.1982

9.CONSULTANT(S)
Overseas Coastal Area Development Institute of Ja

10.STUDY TEAM

No.of Members 10
Period Jul.1982-Nov.1983(16 months)

Total M/M	Japan	Field
78.33	58.00	20.33

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	173,817 (¥'000)
Contracted	169,244

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Tuxpan, Veracruz State

2.PROJECT COST

(US$1,000) (US$1=250Yen)		Total Cost	Local Cost	Foreign Cost
	1)	622,000	196,000	426,000
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

1. Facilities	Scale of Development
2.Breakwater	4,900m
3. Quaywall	5,625m
4.Dredging	68.6 million cum
5. Others	

Imp. Period: Apr.1984-Dec.1986

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	14.00	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

Assumptions:
- Industrial, commercial and fishery port functions are taken into consideration. Industrial and commercial cargo fore-casts for 1988 are 20.54 million tons and 1.2 million tons, respectively.

- Industries consist of iron and steel, machinery, automobile, ship- building, petrochemical, petroleum refining, food processing, paper and pulp, and fish processing. The area of about 3,000 ha is considered necessary for industrial location.

Development Impacts:
- New industrial location will create direct employment of about 15,000.
- A new urban agglomeration will emerge in the hinterland to support the industrial development and direct employment creation.
- The population of the new urban center is estimated to be 190,000, requiring 4,000 ha for settlement.

5.TECHNICAL TRANSFER
On-the-job training was provided to counterparts through joint work of data collection and analysis and report writing.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ☐ Delayed or Suspended
- ■ Discontinued or Cancelled

(Description)

The project was suspended after the completion of the F/S.

The project was identified as part of the industrial port development plan by the Mexican Government. The Tuxpan Port was considered as one of the development projects to support and expedite the petroleum development plan in Chicontepec Basin. Because petroleum-producing strata in the Basin were found to be very deep, the petroleum development was suspended in 1982.

In response to the onset of severe economic crisis in 1982, the President De la Madri announced in January 1983 that the industrial port development would be limited to the Altamira Port and the Lazaro Cardenas Port. This policy has been continued by the President Sarinas who took power in December 1988.

Under the circumstances, the development of the Tuxpan Port as an industrial port is currently suspended.

(FY1991 Overseas Survey)
The development of the Tuxpan Industrial Port must be suspended presently, as far as the transportation problems (railway and roads) can not be solved.

(FY1992 Overseas Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS
The national financial and economic crisis in 1982 - 1983 suspended petroleum development in Chicontepec Basin, and the policy changed over the industrial port development.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 トクスパン工業港開発計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

CSA MEX/S 303/85

Compiled Mar.1988
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Mexico

2.NAME OF STUDY
Development Project of the Port of Manzanillo

3.SECTOR
Transportation/Port

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Comision Nacional Coordinadora de Puertos, Secretaria de Comunicaciones y Transportes

7.OBJECTIVES OF STUDY
Formulation of a master plan through 2000, the formulation of a short-term development plan, and the execution of a feasibility study

8.DATE OF S/W Jun.1984

9.CONSULTANT(S)
Overseas Coastal Area Development Institute of Ja

10.STUDY TEAM

No.of Members	8	
Period	Sep.1984-Oct.1985(13 months)	
Total M/M	Japan	Field
59.54	41.80	17.74

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	153,736 (¥'000)
Contracted	147,906

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Manzanillo, Colima State

2.PROJECT COST (US$1,000) (US$1=192pesos=240yen)

	Total Cost	Local Cost	Foreign Cost
1)	32,800	20,800	12,000
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

Facilities	Scale or capacity
- Dredging	1,170,000 cum
- Quaywall	900 m
- Railway	1,500 m
- Road	7,500 m
- Storage	15,000 sqm
- Water and electricity supply facilities	1 system

Imp. Period: Jan.1985-Dec.1989

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes

EIRR1)	16.04	FIRR1)	7.21
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

Assumptions:
Cargo throughout projected for 1990 and 2000 are 2.3 and 3.08 million tons, respectively. The existing facilities including those under construction are to be utilized efficiently.

Development Impacts:
The proposed port development will stimulate the growth of production and population in Manzanillo. The Manzanillo area will become one of the major bases of physical distribution in Mexico. This will contribute to dampen a further expansion of Mexico City.

5.TECHNICAL TRANSFER
One of the counterparts participated in the JICA training program on methods of feasibility analysis.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ■ Completed or in Progress
  - ● Completed
  - ○ Implementing
  - ○ Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)

The project is now under implementation as shown below:

1986 Land development behind Berth B and construction of Berth C started
1987 Cargo handling facilities behind Berth B, Berth C and petroleum tanks and associated facilities completed
1988 Land development and surface pavement behind Berth C completed
1990 A container yard and a berth behind Berth C (land reclamation started in 1990, and the Berth expected to be completed in 1991)

The Mexican side completed the detailed design, but the application for an OECF loan fell through. Construction has been partly financed by the World Bank sector loan, but mostly by own funds.

(FY1991 Overseas Survey)
1992 Berth C is scheduled to be completed and to be operated from the forth quarter

(FY1992 Overseas Survey)
1993.2 Completion of 9 Berths.

2.MAJOR REASONS FOR PRESENT STATUS
This is the most important port along the Pacific coast.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 マンサニージョ港開発計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

CSA MEX/S 304/87

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Mexico

2.NAME OF STUDY
Repair Dockyard in Lazaro Cardenas

3.SECTOR
Transportation/Marine Transportation & Ships

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Banco Mexicano SOMEX

7.OBJECTIVES OF STUDY
Feasibility analysis of a repair dockyard and technical transfer to Mexican counterparts

8.DATE OF S/W Sep.1986

9.CONSULTANT(S)
Overseas Ships Building Cooperation Center

10.STUDY TEAM

No.of Members 9
Period Mar.1987-Mar.1988(13 months)

Total M/M	Japan	Field
40.67	26.13	15.54

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
None

12.EXPENDITURE

Total	127,908 (¥'000)
Contracted	109,909

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Industrial City of Lazaro Cardenas which is centrally located in the Pacific coast

2.PROJECT COST

(US$1,000) (US$=150yen)		Total Cost	Local Cost	Foreign Cost
	1)	101,700	49,000	52,700
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

Facilities	Scale
Floating dock	230m x 55m
Work Bay	230m x 40m
Repair berth and other associated facilities	

Imp. Period: Jan.1990-Dec.1996

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes/No

EIRR1)	11.00	FIRR1)	9.90
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

Assumptions:
- Repair demand is projected for 1995, 2005 and 2015.
- Gross income is estimated on the basis of past performance, with modification from Japanese data. Project period is 30 years.
- The floating dock and (funadai method) are adopted after comparative analysis of four alternatives of lifting ships.
- Development of related infrastructure, such as access channel, access road and water supply to the dockyard, is to be financed by the public sector.

5.TECHNICAL TRANSFER
On-the-job training for counterparts about thechinique of F/S.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ☐ Delayed or Suspended
- ■ Discontinued or Cancelled

(Description)
SOMEX initially expected to select one of its 117 subsidiary enterprises for operation and management of the proposed dockyard. However, privatization of those enterprises was completed in October 1988.
Along with the election of the new President in December 1988, top management of SOMEX was also replaced, necessitating the suspension of the proposed project.

(FY1991 Overseas Survey)
Futhermore, the privatization of the SOMEX itself was determined in 1992 and the necessary procedure is being taken including personnel transfer. The project is now judged cancelled.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 ラサロカルデナス港修繕ドック整備計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (Other)

CSA MEX/S 605/88

Compiled .1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Mexico

2.NAME OF STUDY
Air Pollution Control Plan in the Federal District

3.SECTOR
Administration/Environmental Problems

4.REFERENCE NO.

5.TYPE OF STUDY Other

6.COUNTERPART AGENCY
Departamento del Distrito Federal, Direccion General de Reordenacion Urbana y Pro Ecologia

7.OBJECTIVES OF STUDY
Recommendation of measures for air pollution control

8.DATE OF S/W Jul.1986

9.CONSULTANT(S)
Pacific Consultants International
Research, Analysis and Computing

10.STUDY TEAM

No.of Members 15
Period Feb.1987-Dec.1988(23 months)

Total M/M	Japan	Field
72.61	32.47	40.14

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
- Chassis dynamo test
- Traffic volume estimation (aerophoto reading)

12.EXPENDITURE

Total	448,778 (¥'000)
Contracted	239,000

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Mexico City Metropolitan Area

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)			
2)			

3.CONTENTS OF MAJOR PROJECT(S)

The study did not identify specific projects per se, but reviewed various measures for air pollution control which the Mexican Government has been either implementing or plans to implement, and evaluated the expected effects of these measures. On the basis of the findings, the study made the following recommendations.
1) Introduction of the secondary air supply device for used cars
2) Further desulphurization of qasoline
3) Improvement of rules and regulations in accordance with the Environmental Law
4) Strengthening of the air pollution monitoring network
5) Institution building and manpower training
6) Strengthening of surveillance over sources of pollutants

4.CONDITIONS AND DEVELOPMENT IMPACTS

On-going and planned measures for air pollution control in Mexico are as follows:
1) Thermal power generation: change of fuels from heavy oil to natural gas, and increased smoke elimination and desulfurization
2) Factories: change of fuels from heavy oil to natural gas, increased use of low-sulphur fuels, and increased use of low-NOx burners
3) Motorized vehicles: introduction of clear gasoline and tertiary catalytic devices, strengthening of the emission standards and the automobile inspection system

5.TECHNICAL TRANSFER

1) On-the-job training on measuring and detection of atomospheric pollution, factory exhaust gas and so on, 2) A seminar on air pollution control was held for some 200 participants from DDF, SEDUE and environmental NGOs, and 3) Three counterparts

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)
1) The findings and recommendations of the study were incorporated into the Integrated Air Pollution Control Program for the Federal District announced in September 1989.
2) The air pollution control campaign was launched in January 1989, introducing such measures as compulsory automobile inspection, restrictions on the use of private automobiles, promotion of pollution- preventive devices and additives, and institution building.
3) Based on the findings of the study, a JICA-financed feasibility study (Air Pollution Control Measures for Fixed Sources of Emission???) is now being undertaken (Dec. 1989 - Sept. 1991).
4) In Mar.1991, some oil refineries in the midtown area were closed. The heavy polluted refineries were regulated.
5) The plant for low-sulphur heavy oil and the plant for gasolin and light oil has been operated since 1991 by co-financing of OECF, Import & Export Bank and the World Bank.

(FY1991 Overseas Survey)
No additinal Information.

2.MAJOR REASONS FOR PRESENT STATUS

Control measures on factory emission, which is easier to implement than those on automobiles, are relatively weak in Mexico. In this regard, it is considered necessary to identify specific and realistic measures in order to ensure the technical aspects of "the improvement of rules and regulations" as mentioned in the recommendation 3).

3.PRINCIPAL SOURCE OF INFORMATION

①②④

和名 メキシコ市大気汚染対策

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (F/S)

CSA MEX/S 305/90

Compiled Mar.1992
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Mexico

2.NAME OF STUDY
Improvement of the Pacific Coast Ports

3.SECTOR
Transportation/Port

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Puertos Mexicanos

7.OBJECTIVES OF STUDY
1. Urgent Improvement Plan of each port
2. Long-term development policy of each port
3. Feasibility study of selected ports

8.DATE OF S/W Oct.1988

9.CONSULTANT(S)
Overseas Coastal Area Development Institute of Ja
Nihon Koei Co., Ltd.

10.STUDY TEAM

No.of Members 15
Period Mar.1989-Jul.1990(17 months)

Total M/M	Japan	Field
75.33	25.24	50.09

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
O/D analysis of the Pacific coastal area

12.EXPENDITURE

Total	261,520 (¥'000)
Contracted	252,593

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Port of Salina cruz, Larzaro cardenas, Manzanillo, Mazatran, Guaymas and Engenada

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	71,088	37,200	33,888
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

(Lazaro cardenas)
Pavement etc. : 49050 s.m
C.F.S. : 1 nos
Gate : 1 nos
Utilitis : 1 nos
Gantry Crane : 1 nos
Transfer Crane : 1 nos
Others : 1 nos

(Manzanillo)
Dredging : 750000 c.m
Pavement etc. : 133000 s.m
C.F.S. : 1 nos
Quay wall : 1 nos
Utilities : 1 nos
Gantry Crane : 2 nos
Transfer Crane : 4 nos
Others : 1 nos

Imp. Period: Mar.1989-Jun.1990

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes/No

EIRR1)	29.05	FIRR1)	10.06
EIRR2)	13.75	FIRR2)	6.22
EIRR3)		FIRR3)	

Conditions and Development Impacts:

Conditions:
1. The existence of the problem of superannuated low cargo handling productivity and shortage of cargo handling facilities/equipment.
2. The forecast of an increase of the containerized cargo volume in the objective port.

Development Impacts:
1. The future cargo volume could be treated based on the pivotal 2 ports.
2. The project could create the new employment in the objective port and is expected to make the ripple effect to the other industry.

5.TECHNICAL TRANSFER
The method of port planning detail design and the ways of economic and finacial analysis are transferred.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ■ Completed or in Progress
  - ● Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ☐ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)
- Container Terminals are scheduled to start operation in summer 1992 in the port of Manzanillo and Larzaro Cardenas.
  Manzanillo: construction of a new container terminal.
  Larzaro Cardenas: addition of a gantry crane.
- For the realization of efficient cargo handling systems, some measures such as privatization are taken based on this study.

(FY 1991 Overseas Survey)
- The World Bank committed 45 million dollar loan in order to implement the improvement plan of each port.
  (Total amount of investment: 50 million dollars.)
- The project implementation (equipment procurement & port improvement) is scheduled to start in 1991 and to end in 1994.
- As far as the urgent improvement plan is concerned, the concret plan is under preparation by the Mexican side.
- As far as short-term efficiency improvement plan is concerend, a detailed plan is under preparation.

(FY1992 Overseas Survey)
1993.3 The target year of starting operation (both ports)

2.MAJOR REASONS FOR PRESENT STATUS
In Mexico, improvement of the efficiency of the port and maritime is considered important for the promotion of export.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 太平洋港湾整備計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (Basic Study)

CSA PAN/S 501/81

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY: Panama

2.NAME OF STUDY: Topographic Mapping Project of the Caribbean Coastal Area

3.SECTOR: Social Infrastructures/Survey & Mapping

4.REFERENCE NO.:

5.TYPE OF STUDY: Basic Study

6.COUNTERPART AGENCY: Instituto Geografico Nacional

7.OBJECTIVES OF STUDY: Preparation of basic information for development planning

8.DATE OF S/W: Jun.1978

9.CONSULTANT(S): International Engineering Consultants Association

10.STUDY TEAM

No.of Members 20

Period Jan.1979-May.1980(17 months)

Total M/M	Japan	Field

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:

12.EXPENDITURE

Total 442,096 (¥'000)

Contracted

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Northwest region along the Caribbean coast (8,000 sq.m)

2.PROJECT COST

(US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)			
2)			

3.CONTENTS OF MAJOR PROJECT(S): National base maps (scale:1/50,000, 12 plates)

4.CONDITIONS AND DEVELOPMENT IMPACTS: Maps will be used as the basis for planning hydropower generation, and road and railway construction.

5.TECHNICAL TRANSFER: OJT and lectures on aerophotography and cartography

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)

(FY1991 Overseas Survey)
The result of the study is utilized especially in electricity, communication, broadcasting and social infrastructure. The map will be utilized for the future development planning.

2.MAJOR REASONS FOR PRESENT STATUS:

3.PRINCIPAL SOURCE OF INFORMATION: ①②

和名 カリブ海沿岸地区地図作成事業

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (Basic Study)

CSA PAN/A 501/83

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY: Panama

2.NAME OF STUDY: Fisheries Resources Survey of the Atlantic Coast

3.SECTOR: Fisheries/Fisheries

4.REFERENCE NO.:

5.TYPE OF STUDY: Basic Study

6.COUNTERPART AGENCY: Bureau of Marine Resources, Department of Commerce and Industry

7.OBJECTIVES OF STUDY

8.DATE OF S/W: Nov.1981

9.CONSULTANT(S): Universal Fisheries Inc.

10.STUDY TEAM

No.of Members 3

Period

Total M/M	Japan	Field

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	516,500 (¥'000)
Contracted	463,837

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: In the water basin within 200 nautical miles, deeper than 100m, in the offshore of Caribean Sea of Republic of Panama

2.PROJECT COST

(US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)			
2)			

3.CONTENTS OF MAJOR PROJECT(S)

-Survey of fishery development in the shore of the Atlantic Ocean (1981,82,83)
-Improvement of fishing base

4.CONDITIONS AND DEVELOPMENT IMPACTS

-Expansion of fishing places which have been limited to shrimp fishing in the shore of the Atlantic Ocean
-Development of Pink Shrimp
-Comprehensive and long-term development plan is necessary including the Pacific Ocean side for tuna and spearfish.

5.TECHNICAL TRANSFER

two trainees

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

- ■ In Progress or In Use
- ☐ Delayed
- ☐ Discontinued

(Description)

(FY1991 Overseas Survey)
This study drew international attention to the fisheries resources of the Atlantic Ocean. Three groups of private firms including Japanese firms are interested in investing in the fishery. The result of the study is fully utilized.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION

①②

和名 大西洋岸漁業資源調査

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (F/S)

CSA PAN/S 302/84

Compiled Mar.1988
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Panama

2.NAME OF STUDY
Urban Transport Project in the Panama Metropolitan Area(ESTAMPA II)

3.SECTOR
Transportation/Urban Transportation

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Ministry of Public Works

7.OBJECTIVES OF STUDY
A Feasibility study for the priority projects selected through the master plan study

8.DATE OF S/W Mar.1983

9.CONSULTANT(S)
Yachiyo Engineering Co., Ltd.

10.STUDY TEAM

No.of Members	Total M/M	Japan	Field
11	84.94	13.84	71.10

Period May.1983-Jan.1985(20 months)

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
- Topographic and geological survey.
- Air photograph and mapping
(Sub-Contract with local consultants)

12.EXPENDITURE

Total	741,557 (¥'000)
Contracted	295,841

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Panama Metropolitan Area

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	111,100	70,900	
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

Contents:	Scale:
1. New road construction	Approx. 20 km.
2. Betterment of the existing road	
- Ordinary road	Approx. 15 km.
- Grade separation	One (1) point

Imp. Period: Jan.1987-Jun.1990

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes/No

EIRR1)	26.40	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

Conditions:
1. Future traffic volume was forecast for 1990 and 2000.

2. Standards for road structure, land problems and construction materials were adjusted in consultation with Ministry of Public Works.

Development effects :
1. Solution of traffic problems in the center of the City
2. Reduction in energy consumption
3. Acquisition of foreign currency
4. Promotion of regional development

5.TECHNICAL TRANSFER
1) OJT : Seminar on urban transport in Panama City
2) Acceptance of trainees : Training on specific fields for five counterparts.
3) Use of local consultants : Soil survey

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ■ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)
A detailed design study on new road construction was completed in 1990 by IDB finance. The priority of the project is high, but the implementation has been postponed indefinitely due to the continued political destabilization.

(FY1991 Overseas Survey)
Financial assistance was requested to Japan, the World Bank and the IDA. However, it was not succeeded because of the invasion of Panama by the United States. Domestically, financial assistance is planned to be requested to Banco Prirad con obras Concesionadas.

(FY1992 Overseas Survey)
In spite of the final design plans, the government of Panama does not have enough disposable finance for the implementation of this project. Therefore, there are negotiations to assure the finance through either international loans or administrative grants.

2.MAJOR REASONS FOR PRESENT STATUS
- Political and economical instability were created by the invasion.
- High priority

(FY1992 Overseas Survey)
Problems in obtaining funds.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 パナマ首都圏都市交通計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

CSA PAN/S 301/84

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY: Panama

2.NAME OF STUDY: Short-Wave Broadcast Station Project

3.SECTOR: Communications & Broadcasting/Broadcasting

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: Ministry of Interior and Justice

7.OBJECTIVES OF STUDY: Construction planning for the experimental short-wave broadcasting

8.DATE OF S/W: Nov.1983

9.CONSULTANT(S):

10.STUDY TEAM

No.of Members

Period Jun.1984-Jan.1985(7 months)

Total M/M	Japan	Field

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:

12.EXPENDITURE

Total 53,132 (¥'000)

Contracted

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Entire country

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)			
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

Necessary experimental equipment and facilities are proposed to undertake the following services.
1)Domestic broadcasting (short-wave)
2)International broadcasting (short-wave)
3)International broadcast relay

Imp. Period:

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes/No

EIRR1)	FIRR1)
EIRR2)	FIRR2)
EIRR3)	FIRR3)

Conditions and Development Impacts:
1)There are about 60 AM or FM stations operating in Panama, but because of the difficult terrains, the coverage of these stations are inadequate. The short-wave station will improve the situation.
2)Panama can participate in the international broadcasting network.
3)Panama will become one of the regional relay centers connecting South and North America.

5.TECHNICAL TRANSFER

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
- ○ Completed
- ○ Implementing
- ○ Processing
- ☐ Promoting
- ■ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)

(FY1991 Overseas Survey)
The hearing of the background of ths project was impossible owing to the political and economic disorder caused by the American invasion.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION

①②

和名 短波放送施設建設計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (Basic Study)

CSA PAN/A 502/84

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY: Panama

2.NAME OF STUDY: Inventario forestal del distrito de Donoso

3.SECTOR: Forestry/Forestry & Forest Conservation

4.REFERENCE NO.:

5.TYPE OF STUDY: Basic Study

6.COUNTERPART AGENCY: National Direction of Renewable Natural Resources

7.OBJECTIVES OF STUDY:

8.DATE OF S/W: Sep.1982

9.CONSULTANT(S): Japan Forest Technical Association

10.STUDY TEAM

No.of Members 26

Period Dec.1982-Mar.1985(28 months)

Total M/M	Japan	Field
137.00	58.00	79.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY: Aerial Photography

12.EXPENDITURE

Total	325,490 (¥'000)
Contracted	295,242

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: An area of 1,534 sq.km of Donoso district in Colon state of Panama

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)			
2)			

3.CONTENTS OF MAJOR PROJECT(S)

Guideline for forestry development plan in undeveloped area in Donoso district in Colon state was prepared containing the following components:
1. Introduction of forest planning system
2. Promotion of forest products industry
3. Enforcement of land use planning
4. Enrichment of forest experimentation and study

4.CONDITIONS AND DEVELOPMENT IMPACTS

Development of roads for regional development are indispensable immediately, starting from the pacific coastal road because there are no roads from other areas and there are no roads in objective area.
Forest is diminishing by shifting cultivation, but it is possible to utilize forest appropriately and to conserve it by introduction of land use plan and forest planning system.

5.TECHNICAL TRANSFER

- Trainee acceptance
- OJT of forest survey
- Guidance for how to analyze topography - Method of data processing

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

- ■ In Progress or In Use
- ☐ Delayed
- ☐ Discontinued

(Description)

(FY1991 Overseas Survey)
Technology and methods which were transfered to Panama during the study are utilized in the formulation of guidelines for forest resources development.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION

和名 林業資源調査

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (F/S)

CSA PAN/S 303/87

Compiled Mar.1990
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Panama

2.NAME OF STUDY
Corredor Sur Development Project in the Panama Metropolitan Area (ESTAMPA III)

3.SECTOR
Transportation/Urban Transportation

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Ministry of Public Works

7.OBJECTIVES OF STUDY
F/S study of South Link Road Construction Project that was selected as priority project in the Master Plan

8.DATE OF S/W Feb.1987

9.CONSULTANT(S)
Yachiyo Engineering Co., Ltd.

10.STUDY TEAM

No.of Members 11
Period Jul.1986-Feb.1988(20 months)

Total M/M	Japan	Field
60.63	3.71	56.92

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Traffic Survey, qeological and soil survey, topoqraphic and aerial survey, and mapping.

12.EXPENDITURE

Total	278,876 (¥'000)
Contracted	259,501

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Area along the Bay at the southern Panama metropolitan area

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	258,000	165,120	
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

Corredor Sur I (in the built-up area)	Expansion into 6 lanes, new construction: about 10km
Corredor Sur II (suburbs)	New construction of 6 lanes and 4 lanes: about 12km
Major access road	Expansion into 6 lanes, new construction: about 13km
Extension of Corredor Sur	Expansion into 4 lanes: about 2km

Imp. Period: .1988-.1999

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	30.00	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

Conditions for IRR calculation:
EIRR was calculated with the benefits of reduction in operating costs and travelling time.

Development effects:
Establishement of the west-east axis in the Panama metropolitan area

5.TECHNICAL TRANSFER
1) OJT : Caluculation by the use of personal computer, 2) Accepted trainees: Three (3), 3) Report : Joint works for preparation of Enqlish reports in Panama, 4) Use of local consultant: Topoqraphic survey, qeological and soil survey, and 5) Prevision an instruction of equipment : Personal computers

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ■ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)
The preparation for loan application was under way in late 1989, but the application has been postponed indefinitely due to the political destabilization.

(FY1991 Overseas Survey)
Ministry of Public Works is planning to request budget for Fondo de Preinversion.

(FY1992 Overseas Survey)
There are no final design plans . There are attempts to obtain funds for both construction and final design plans of the project either by international loans or administrative grants.

2.MAJOR REASONS FOR PRESENT STATUS
- Political and economic instability were created by the invasion of Panama by the United States.
- Delay of Diseno Final
- Low priority

(FY1992 Overseas Survey)
- The absence of final design plans.

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 パナマ市南部回廊建設計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (Other)

CSA PRY/S 601/76

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY: Paraguay

2.NAME OF STUDY:
La Colmena Highway (follow-up)

3.SECTOR:
Transportation/Road

4.REFERENCE NO.:

5.TYPE OF STUDY: Other

6.COUNTERPART AGENCY:
Dept.of Road, Ministry of Public Works and Communications

7.OBJECTIVES OF STUDY:
Review of the F/S

8.DATE OF S/W: .0

9.CONSULTANT(S):
Central Consultant, Inc.

10.STUDY TEAM

	Total M/M	Japan	Field
No.of Members 2			
Period Sep.1976-Jan.1977(4 months)			

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:

12.EXPENDITURE

Total	5,872 (¥'000)
Contracted	5,770

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA:
Acaai - La Colmena in the south of Asuncion

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)	6,257	1,870	
2)			

3.CONTENTS OF MAJOR PROJECT(S)

Following the F/S undertaken by a USA consulting firm on the road between Carapequara and La Colmena, the study reviewed the F/S on the section between Acaai and La Colmena and proposed the following development.
-Road construction (28.5 km, surface treatment by the two-layer method)
-Bridge construction (replacement of 8 bridges, new construction of culverts at 3 bridges)

4.CONDITIONS AND DEVELOPMENT IMPACTS

The project will enable the closer integration of 40-year-old La Colmena settlement communities to metropolitan Asuncion.

5.TECHNICAL TRANSFER

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)
Sept.1977 OECF loan agreement (1,850 million yen)
Apr. 1979 Construction commenced
Apr. 1982 Construction completed

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①④

和名 ラ・コルメナ道路アフターケア

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (F/S)

CSA PRY/S 301/78

Compiled Mar.1986
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Paraguay

2.NAME OF STUDY
Fleet Expansion Project

3.SECTOR
Transportation/Marine Transportation & Ships

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Flota Hercante del Estado (FME)

7.OBJECTIVES OF STUDY
To evaluate the fleet expansion program of FME

8.DATE OF S/W .0

9.CONSULTANT(S)

10.STUDY TEAM

No.of Members 7
Period Mar.1978-Oct.1978(7 months)

Total M/M	Japan	Field

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE
Total 18,318 (¥'000)
Contracted

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA

2.PROJECT COST

(US$1,000) US$1=200Yen=126G		Total Cost	Local Cost	Foreign Cost
	1)	36,870	2,312	34,557
	2)	53,652	1,857	51,795
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

FME's vessels, including 8 vessels purchased by the OECF loan of 1957, are now superannuated and their service ratio shows a marked decline. The study examined the technical and economic feasibility of the fleet expansion program proposed by the Government of Paraquay.

1. Ocean-going vessels (cereals, general and container cargo)
   one 6,000DWT-ship and two 1,500DWT-ships
2. Dry-cargo barge systems (general cargo, cereals, cement, etc.)
   1) 20 barges (365DWT), 2 pushers (1,200PS) and 1 pusher (300PS)
   2) 10 barges (800DWT) and 1 Pusher/tug (2,400PS)
3. Oil barge system (crude and diesel oil, liquid gas, etc.)
   4 barges(2,000 cu.m) and 1 Pusher/tug (2,400PS)

Note: 1) OECF loan 2) BOT.EXIM loan

Imp. Period:

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)		FIRR1)	4.70
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

Conditions:
1. The entire 42 vessels are considered as one project.
2. Project cycle of 25 years, including 2 years of ship building
3. Inflation and rises in wages and other costs are excluded from analysis.
4. The benefit consists of fleet revenues and the project cost consists of the costs of ships/barges (excluding depreciation and capital costs) and O/M costs.

Results of Analysis:
1. FIRR of the project is low, indicating the need for FME to improve the efficiency of cargo collection and transportation.
2. Small-barge and large-barge systems have some problems, but will be feasible if properly operated.
3. The operation of oil barges and smaller ocean-going ships is feasible
4. The operation of the 6,000DWT ship will not be profitable, but sufficiently feasible as part of the projects, and has the following advantages.
   1) Facilitation of shipping product from Paranaqua Free Port
   2) Saving of foreign exchange
   3) Acquisition of ocean navigating skills as a step to the operation of large ocean liners in the future

5.TECHNICAL TRANSFER

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ■ Completed or in Progress
  - ● Completed
  - ○ Implementing
  - ○ Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)
Jun.1979 OECF loan agreement on the national commercial fleet (7,500 million yen)
BOT.EXIM loan (about 10.5 billion yen)
Jan.1986 Entire fleet delivered
Sep.1987 - Sep.1989 Technical assistance by Japanese experts

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②④

和名 船舶増強計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

CSA PRY/S 302/79

Compiled Mar.1986
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Paraguay

2.NAME OF STUDY
New Airport Construction Project in Ciudad Presidente Stroessner

3.SECTOR
Transportation/Air Transportation & Airport

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Civil Aviation Administration (ANAC)

7.OBJECTIVES OF STUDY
1) To examine technical, economic and financial feasibility of project
2) Technology transfer to counterpart officials

8.DATE OF S/W Dec.1978

9.CONSULTANT(S)
Japan Airport Consultants, Inc.

10.STUDY TEAM

No.of Members	11	
Period	Apr.1979-Feb.1980(10 months)	
Total M/M	Japan	Field
44.33	12.00	32.33

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Geological survey (1,002,000 yen)

12.EXPENDITURE

Total	96,378 (¥'000)
Contracted	84,840

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
24 km west of Ciudad Del Este which is situated on the border with Brazil

2.PROJECT COST

(US$1,000) (US$1=220Yen=140gua.)		Total Cost	Local Cost	Foreign Cost
	1)	77,793	22,325	55,468
	2)	11,015	3,201	7,814
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
The new airport will be constructed in two stages.

1. Airfield facilities
Runway(3,400m x 45m); taxiways (161m x 23m x 2); passenger apron (42,443 sq.m in 1994, 55,107 in 2004); cargo apron (6,831 sq.m in 2004); general aviation apron (52,500 sq.m in 1994, 70,000 in 2004)

2. Buildings
Passenger terminal (8,100 sq.m in 1994, 14,200 in 2004); cargo terminal (1,800 sq.m in 1994, 5,100 in 2004)

3. Airport equipment
Aeronautical telecommunications 1 set; radio navigational aids (ILS Category 1, VOR/DME, NDB); airfield lighting 1 set; airport surveillance radar 1 set; meteorological service 1 set

4. Power supply and fuel supply facilities

*Cost 1) is for Stage I construction, and 2) for Stage II construction.

Imp. Period: Jan.1981-Dec.1994 Jan.1995-Dec.2004

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes

EIRR1)	11.00	FIRR1)	3.80
EIRR2)		FIRR2)	5.60
EIRR3)		FIRR3)	

Conditions and Development Impacts:
Conditions:
1. A new airport will be constructed, because it is difficult to expand the existing airport.
2. Project life of 20 years
3. Traffic forecast:

	Passengers('000)		Cargo(tons)		Scheduled Aircraft Movements
	Dom.	Int'l	Dom.	Int'l	
1994	214	325	1,979.8	3,785.2	9,840
2004	394	612.9	3,020.4	5,837.8	11,120

4. Direct benefits: 1) saving in travel time and cost of domestic and international passengers, 2) saving in access transport cost of international cargo, 3) flight cost saving due to the new port becoming alternate airport to Asuncion, 4) increased foreign exchange earnings from tourism, and 5)postponed investment on the expansion of Asuncion Airport
5. FIRRs are calculated for two cases of raised airport charges.
FIRR 1) above is for Case 1, and 2) for Case 2.
Development impacts:
1. Contribution to Alto Parana regional development
2. Increase in foreign exchange earnings
3. First airport in Paraguay to serve as an alternate aerodome to Asuncion International Airport

5.TECHNICAL TRANSFER
1)OJT on data collection and analysis
2)Acceptance of trainees (JICA counterpart training program)

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

■ Completed or in Progress	☐ Promoting	
○ Completed		
● Implementing	☐ Delayed or Suspended	
○ Processing	☐ Discontinued or Cancelled	

(Description)

Dec.1980	OECF loan agreement (11,300 million yen)
Mar.1983	D/D completed
Apr.1987	Start of construction authorized
Feb.1989	After the coup d'etat, the new President Gonzalez directed to scale down the project.
Aug.1989	The name of the airport changed to Este International Airport
Nov.1990	Loan agreement changed (on local currency component)
Dec.1990	The contract of construction is being adjusted

2.MAJOR REASONS FOR PRESENT STATUS
1) Effectiveness
2) High priority

3.PRINCIPAL SOURCE OF INFORMATION
①

和名 ストロエスネル新空港建設計画／東部国際空港建設計画（1989.8から）

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (F/S)

CSA PRY/A 301/82

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Paraguay

2.NAME OF STUDY
Proyecto de desarrollo agricola en la zona noroeste del lago Ypoa

3.SECTOR
Agriculture/General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Instituto de bienestar rural

7.OBJECTIVES OF STUDY
Formulation of agriculture and rural development plan for colonization

8.DATE OF S/W Mar.1980

9.CONSULTANT(S)
Naigai Engineering Co., Ltd.
Kokusai Kougyo Co., Ltd.

10.STUDY TEAM

No.of Members 16
Period Nov.1980-Mar.1982 (17 months)

Total M/M	Japan	Field
66.45	37.80	28.65

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	347,604 (¥'000)
Contracted	315,928

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Northwest of the Lake Ypoa

2.PROJECT COST

(US$1,000) by 1981 price		Total Cost	Local Cost	Foreign Cost
	1)	70,633	33,222	37,411
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
Proposed components (40,000ha)
-Polder : 35km
-Drainage canal Main/Sub: 154/258km
-Road Main/Sub : 84/288km
-Irrigation facilities : 2,000ha
-Cultivation : 40,000 ha
-Preparation of community : 4 sites
-School : 10 sites
-Hospital : 1 site
-Health center : 3 sites

Imp. Period:

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes

EIRR1)	12.90	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
Conditions:
In the estimation of EIRR, construction cost of school buildings, hospital and sanitary center is excluded, however, land reclamation cost is included.
Impacts:
Increase of land productivity: net increase US$ 260/ha
Increase of agricultural income:
Average income US$ 7,600/house/year
Promotion of rural economy due to activation of agricultural activities

5.TECHNICAL TRANSFER
1.Training of counterparts in Japan
2.Furnishing of the equipment and guidance of its use
3.OJT

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ■ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)
After the completion of the F/S, the project implementation was suspended owing to the difficulty of allocating the local currency portion of the project cost.

(FY1991 Overseas Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 イポア湖北西部農業開発計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (M/P+F/S)

CSA PRY/S 201A/83

Compiled Mar.1986
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Paraguay

2.NAME OF STUDY
Nationol Telecommunications & Broadcasts Development Project

3.SECTOR
Communications & Broadcasting/General

4.REFERENCE NO.

5.TYPE OF STUDY M/P+(F/S)

6.COUNTERPART AGENCY
Administracion Nacional de Telecomunicaciones (ANTELCO)

7.OBJECTIVES OF STUDY
Formulation of a long-term development plan(1983~1997) and a feasibility study of urgent projects

8.DATE OF S/W Sep.1980

9.CONSULTANT(S)
Nippon Telegraph & Telephone Corporation
Kokusai Denshin Denwa Co, Ltd.
Japan Broadcasting Corporation
Japan Telecommunications Engineering and Consulti

10.STUDY TEAM

No.of Members		31
Period	Jul.1981-Jun.1983(24 months)	
Total M/M	Japan	Field
40.24	40.24	

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	220,326 (¥'000)
Contracted	98,239

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Entire country

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
	1)	907,443	177,043	630,400
US$1=230Yen=126G	2)			

3.CONTENTS OF MAJOR PROJECT(S)

The Study proposed the Master Plan for the period of 1983 - 1997, which are divided into three five-year periods (Staqes I, II and III). Major projects are as follows.

1) Domestic telecommunications
336,000 lines of subscriber telephones; 3,394 public telephones; 3,060 rural telephones in 25 areas; 11 diqitized local telephone exchanqes in Asuncion; 318 local telephone exchanqes in other areas; 8 toll telephone exchanqes; 14 optical fiber systems; 10 lonq distance microwave routes; 7 new television transmission routes; 5,500 telex terminals; and mobile telephones
2) International Telecommunications
Increased international circuits; Modificaton of Arequa Earth Station; Introduction of international subscriber dialinq in all automatic exchanqes in 1985; 2nd Earth Staton; and new services
3) Development of the Radio Requlation and Monitorinq System
4) National Educatonal Television
Establishment of a public broadcastinq enterprise and a television proqram production center; Television stations (Asuncion and 11 other places)
5) Manpower Development (Relocation and expansion of IPT, etc.)

4.CONDITIONS AND DEVELOPMENT IMPACTS

Financial analysis:
1) Financial analysis covers only domestic and international telecommunications.
2) Loan aqreements every three years, with 3-year qrace period; the opportunity capital cost of 12%; depreciation period of 20 years with residual value of zero
3) FIRR: Domestic Telcom. 24.6%, Int'l Telcom. 45.4%, Combined 27.4%
4) EIRR: Domestic Telcom. 36.7%, Int'l Telcom. 47.1%, Combined 38.1%

Development Impacts:
1) Domestic telecom.: Efficiency improvement of qovernment and business operations; Strenqthenino of competitiveness of aqricultural products in domestic and export markets; Improved standard of livinq; Narrowinq of information qaps, etc.
2) International telecom.: Contribution to diplomatic relations and cultural exchanqe; Narrowinq information qaps, etc.
3) Radio requlation & monitorinq: More efficient use of frequencies and systematic response to the demand for radio communications; Improvinq qovernment services, national security, protection of life and property,etc.
4) Educatonal TV: Improvement of nation-wide education

5.TECHNICAL TRANSFER
Techinical transfer has been conducted through dispatchinq mission, expert & JDCV and training in Japan.

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)
A feasibility study was subsequently undertaken.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 電気通信・放送拡充計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

CSA PRY/S 201B/83

Compiled Mar.1986
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Paraguay

2.NAME OF STUDY
National Telecommunications & Broadcasts Development Project

3.SECTOR
Communications & Broadcasting/General

4.REFERENCE NO.

5.TYPE OF STUDY (M/P)+F/S

6.COUNTERPART AGENCY
ANTELCO

7.OBJECTIVES OF STUDY
Formulation of a long-term plan (1983-1997)

8.DATE OF S/W Sep.1980

9.CONSULTANT(S)
Nippon Telegraph & Telephone Corporation
Kokusai Denshin Denwa Co, Ltd.
Japan Telecommunications Engineering and Consulti

10.STUDY TEAM

	Total M/M	Japan	Field
No.of Members 31			
Period Jul.1981-Jun.1983(24 months)			

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	220,326 (¥'000)
Contracted	98,239

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Asuncion Area, concepcion, Hohenau, San Pedro, Villarrica, Carapegua

2.PROJECT COST (US$1,000) US$1=230Yen=126G

	Total Cost	Local Cost	Foreign Cost
1)	12,188	2,783	9,405
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

The Feasibility Study was conducted prior to the Master Plan Study at the strong request from the government of Paraguay. The projects proposed in the Feasibility Study constitute the main segment of the domestic and international telecommunication programs in the 1st 5-year Master Plan (1983 - 1987).

1. Introduction of international subscriber dialling telephone system in the Asuncion Area (Asuncion City, Lambre and Fernando de la Mora).
2. Introduction of digital telephone switching system in the Asuncion Area
   1) In Asuncion, no new EMD switches will be purchased after 1986. Digitization will begin in 1987 and end in 1997.
   2) Replaced EMD switching equipment will be re-used for the expansion of EMD exchanges in Asuncion and the Interior.
   3) 11 exchanges will be digitized with a combined switching capacity of 312,600 by the end of 1997.
3. Consolidation of rural telephone systems
   1) Five areas of Concepcion, Hohenau, San Pedro, Villarrica and Carapegua
   2) Two 8-channel multiple access subscriber(MAS) radio systems with 90 subscribers for each area

Imp. Period: .1982-.1988

4.FEASIBILITY AND ITS ASSUMPTIONS — Feasibility: Yes

EIRR1)	27.86	FIRR1)	23.68
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
Development impacts:
1) Improvement of telecommunication services
2) Rationalization of the ANTELCO operation
3) Equity in telecommunication services by the introduction of the ISD system.
4) Modernization of telecommunication
5) Improvement of basic human services in five rural areas

5.TECHNICAL TRANSFER

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ■ Completed or in Progress
- ○ Completed
- ● Implementing
- ○ Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)

Apr.1982 OECF loan pledged (9,250 million yen)
Nov.1985 OECF loan agreement on automatic international dialling (1,420 million yen)
Oct.1988 The operation of the earth station and the international telephone exchange commenced

Note:
F/S on the 2nd earth station was undertaken, and the ATELCO has been considering the application for another OECF loan, although the effort was interrupted by the coup d'etat in 1989.
ATELCO has signed a provisional contract in Nov. 1991 with Siemens for the installation of 30,000 telephones, and is formulating a telephone network expansion plan in cooperation with ITU.

(FY1991 Overseas Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②④

和名 電気通信拡充計画（電気通信・放送拡充計画のF/S)

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (Basic Study)

CSA PRY/A 501/83

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY: Paraguay

2.NAME OF STUDY: Forest Inventory in the Northeastern Region

3.SECTOR: Forestry/Forestry & Forest Conservation

4.REFERENCE NO.:

5.TYPE OF STUDY: Basic Study

6.COUNTERPART AGENCY: National Forest Service The Republic of Paraguay

7.OBJECTIVES OF STUDY:

8.DATE OF S/W: Jun.1980

9.CONSULTANT(S): Japan Forest Technical Association
Kokusai Kougyo Co., Ltd.

10.STUDY TEAM

No.of Members 29

Period Jul.1980-Feb.1984(44 months)

Total M/M	Japan	Field
183.00	132.00	51.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY: Aerial Photography

12.EXPENDITURE

Total	524,662 (¥'000)
Contracted	500,167

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: An area of 15,000 sq.km of Department of Amamby, Concepcion, San Pedro and Canediyu

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)			
2)			

3.CONTENTS OF MAJOR PROJECT(S)

The forest management plan was presented containing following components for the above mentioned area which was the largest forest area in Northeastern region of Paraquay. This area's forest rate is 60%.
1.Promotion of advanced utilization of land
2.Normalization of forest operation
3.Sustained yield management of forest
4.Promotion of re-afforestation
5.Promotion and maintenance of function of public benefit of forest

4.CONDITIONS AND DEVELOPMENT IMPACTS

In order to improve domestic distribution channel, road networks from the capital city, Asuncion, must be improved.
It is necessary to promote wood processing industry and wood processed products for export.
It is expected that the forest diminution will be prevented and national forest products industry will develop by means of afforestation in cutover land and use of unknown species.

5.TECHNICAL TRANSFER

- Trainee acceptance
- OJT of forest survey
- Cooperate working of guideline of forestry development plan

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)

Afforestation projects are being encouraged particularly among the cattle ranchers, because of the serious deforestation reported by the study.

2.MAJOR REASONS FOR PRESENT STATUS

1.It is necessary to establish afforestation technique
2.It is impossible to carry out afforestation by local funds.

3.PRINCIPAL SOURCE OF INFORMATION

①

和名 北東部林業資源調査

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (M/P)

CSA PRY/A 101/84

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Paraguay

2.NAME OF STUDY
Irrigation and Drainage Project in the Adjacent Area to the Yacyreta Dam

3.SECTOR
Agriculture/General

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Ministerio de Agricultura y Ganaderia

7.OBJECTIVES OF STUDY
Elaboration of Master Plan for the Integrated Agricultural Development Project in the Adjacent Area to Yacyreta Dam

8.DATE OF S/W Sep.1982

9.CONSULTANT(S)
Japan Agricultural Land Development Agency

10.STUDY TEAM

No.of Members 20
Period Dec.1982-Mar.1985(28 months)

Total M/M	Japan	Field
216.00	101.00	115.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Data Analysis of LANDSAT Imagery

12.EXPENDITURE

Total	598,135 (¥'000)
Contracted	555,720

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
South east edge of enormous Parana Swamp located in right hand basin of Parana in the south of this country (poplation 150,000, Area 150,000, latitude 27'10" to 27'20"s and longitude 56'25"to 57'10"w)

2.PROJECT COST

(US$1,000)
US$1=240Gs in May 1984

	Total Cost	Local Cost	Foreign Cost
1)	230,917	115,937	114,980
2)			

3.CONTENTS OF MAJOR PROJECT(S)

Irrigation Canal	1,275km
Drainage Canal	1,173 km
Pumping place	3 sets,
Agricultural Land Reclamation	92,920 ha
Road	474 km

Agricultural processing facilities, Agriculture extension organization, Supplying system of improved seeds, Union to maintain facilities, Pilot farm (approximate scale 1,000 ha)

4.CONDITIONS AND DEVELOPMENT IMPACTS
This project aims to develop unused and/or inadequate used land which spread within right hand basin of Parana River closed to Yacyreta Island, to establish modernized irrigation agriculture by available utilization of water rights (108cu.m/sec) created by the construction of Yacyreta Dam, thanks to the project, to earn foreign currency by the export of agricultural products. Moreover, it is expected that resettlement of population in this area will be promoted through the resettlement of small farmers and other persons whose residences would sink following the construction of Yacyreta Dam.
The direct benefit produced from agriculturual production is estimated approximately 5.7 billion Gs annually. This amount would occupy just less than 1% of 1981's Gross Domestic Production (700 billion Gs).

5.TECHNICAL TRANSFER
1.Acceptance of trainees for Training Programme
2.Co-operative work to make report

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- ■ In Progress or In Use
- ☐ Delayed
- ☐ Discontinued

(Description)
This Master Plan has been suspended because of the delay of the construction of Yacyreta Dam.

(FY 1991 Overseas Survey)
No additonal information.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 ヤシレタダム隣接地域農業総合開発計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (F/S)

CSA PRY/A 302/84

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Paraguay

2.NAME OF STUDY
Proyecto de reforestacion en la zona de Capiibary, Departamento de San Pedro

3.SECTOR
Forestry/Forestry & Forest Conservation

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
National Forest Service
The Republic of Paraguay

7.OBJECTIVES OF STUDY

8.DATE OF S/W Jun.1983

9.CONSULTANT(S)
Japan Forest Technical Association
Kokusai Kougyo Co., Ltd.

10.STUDY TEAM

No.of Members 18

Period Aug.1983-Mar.1985(20 months)

Total M/M	Japan	Field
91.00	61.00	30.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Aerial Photography

12.EXPENDITURE

Total	224,778 (¥'000)
Contracted	205,463

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
An area of 272.5 sq.km in Capiibary district of San Estanisrao City of San Pedro Department

2.PROJECT COST

(US$1,000) US$1=240Gs in 1984		Total Cost	Local Cost	Foreign Cost
	1)	175,100	150,200	24,900
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
Planting area (total in 6 years): 6,628 ha
Nursery area: 7.5 ha
Forest road construction (total in 6 years): 107 km in length
Construction of related facilities and buildings

Imp. Period:

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	18.40	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
Precondition:
Plan period of afforestation project is 50 years.
First planting term is 6 years and the area is 6,628ha.
Rotations of planting tree are selected depending on species or uses. Yield income from natural forest is included to financial plan.
Development Impacts:
- To increase productivity of forest products.
- To increase water and soil conservation functions.
- To diffuse and to improve afforestation technics.
- Development of forestry relatated industry , etc.
  Especially yield from plantations under this project will be estimated to be more than 100,000 cu.m per year.

5.TECHNICAL TRANSFER
Trainee acceptance
OJT

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Implementing
  - ○ Processing
- ■ Promoting
- ☐ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)
1. The Government planned to implement the afforestation project with an OECF loan, but has not been successful to date.

2. Project type technical cooperation by JICA has been carried out since 1987 (Reforestation Project in Central Paraguay; 1987 - 1992).

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①

和名 カピバリ地区森林造成計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (M/P)

CSA PRY/S 101/86

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Paraguay

2.NAME OF STUDY
Transito Urbano de Asuncion y su area metropolitana

3.SECTOR
Transportation/Urban Transportation

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Municipality of Asuncion City

7.OBJECTIVES OF STUDY
Formulation of a master plan for urban transport system including public transport, land use planning, road network etc.

8.DATE OF S/W Mar.1984

9.CONSULTANT(S)
Yachiyo Engineering Co., Ltd.
Aero Asahi Cor.

10.STUDY TEAM

No.of Members 12
Period Aug.1984-Aug.1986(25 months)

Total M/M	Japan	Field
100.60	29.34	71.26

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Preparaion of land use map, OD survey, survey on actual road conditions, and traffic survey.

12.EXPENDITURE

Total	447,282 (¥'000)
Contracted	414,071

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Asucion Metropolitan Area(Asuncion City + 10 other cities 71,000ha.

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
(US$1=240Yen=600G.)	1)	109,195	57,405	
	2)			

3.CONTENTS OF MAJOR PROJECT(S)

1) Road project	Pavement plan
2) Public transport	Reformation of bus network, bus terminal plan, exclusive lane for bus
3) Traffic betterment in city center	Pedestrians' malls, parking lots

4.CONDITIONS AND DEVELOPMENT IMPACTS
Development effects:
It is expected that the traffic would be converted from other roads by the expansion of the major trunk roads and grade separation and social and economic activities would be harmonized by the alleviation of the traffic congestion in the city center.

5.TECHNICAL TRANSFER
1) OJT on the use of computer software
2) Acceptance of seven trainees on urban transport planning (JICA training program)

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- ■ In Progress or In Use
- ☐ Delayed
- ☐ Discontinued

(Description)
Based on the recommendations of the master plan, a feasibility study was undertaken by JICA during the period of Sept. 1987 - Oct. 1988. The feasibility study evaluated the following proposals.
1) Improvement of East-West and North-South corridors
2) Improvement of streets and traffic signal control in Minicentro
3) A bus terminal near the market No.4

(FY1991 Overseas Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 アスンシオン首都圏都市交通整備計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

CSA PRY/S 202A/86

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY: Paraguay

2.NAME OF STUDY
Storm Drainage System Improvement Project in Asuncion City

3.SECTOR
Social Infrastructures/River & Erosion Control

4.REFERENCE NO.:

5.TYPE OF STUDY: M/P+(F/S)

6.COUNTERPART AGENCY
CORPOSANA

7.OBJECTIVES OF STUDY
Year 2005 as the target, formation of flood control project covering 26 river basins of the Asuncion City

8.DATE OF S/W: Feb.1985

9.CONSULTANT(S)
CTI Engineering Co., Ltd.

10.STUDY TEAM

No.of Members 9

Period Jul.1985-Jan.1987(19 months)

Total M/M	Japan	Field
100.86	44.47	56.39

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Survey

12.EXPENDITURE

Total	314,473 (¥'000)
Contracted	273,592

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
26 rivers in Asancion

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
	1)	165,720		
(US$1=650G)	2)			

3.CONTENTS OF MAJOR PROJECT(S)

1)Development plan 1986-1995
Combination of river improvement, drainage facilities and discharge control for three rivers (Ytay, Mburicao and Lambre)
2)Development plan 1996-2005
Combination of river improvement and drainage facilities for the rest of rivers

4.CONDITIONS AND DEVELOPMENT IMPACTS
See next page.

5.TECHNICAL TRANSFER

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)
Followed by F/S.

(FY1991 Overseas Survey)
CORPOSANA has been preparing part of the proposals in cooperation with Municipality of Asuncion & Ministry of Public Works.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 アスンシオン市雨水排水施設整備計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

CSA PRY/S 202B/86

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Paraguay

2.NAME OF STUDY
Storm Drainage System Improvement Project in Asuncion City

3.SECTOR
Social Infrastructures/River & Erosion Control

4.REFERENCE NO.

5.TYPE OF STUDY (M/P)+F/S

6.COUNTERPART AGENCY
CORPOSANA

7.OBJECTIVES OF STUDY
Year 2005 as the target, formation of flood control project covering 26 river basins of the Asuncion City

8.DATE OF S/W Feb.1985

9.CONSULTANT(S)
CTI Engineering Co., Ltd.

10.STUDY TEAM

No.of Members 9
Period Jul.1985-Jan.1987(19 months)

Total M/M	Japan	Field
100.86	44.47	56.39

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE

Total	314,473 (¥'000)
Contracted	273,592

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Ytay and Mburicao Rivers of Asuncion City

2.PROJECT COST
(US$1,000)
(US$1=155Yen)

	Total Cost	Local Cost	Foreign Cost
1)	42,308	22,154	20,154
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
River Improvement: 21.2 km (Ytay 15.6km Mburicao 5.6km)
Retarding Basin at the down streem of Ytay river (one)(350,000)
Construction of Appurtenant Facilities (Bank Protection (97,000 square meters), Falling Works (32 units), Riverbed Protection (7,800 square meters) and Bridge (48 units))
Extention of Drainage Facilities (18.95km) and Appurtenant Facilities

Imp. Period: .1988-.1993

4.FEASIBILITY AND ITS ASSUMPTIONS
Feasibility: Yes

EIRR1)	11.60	FIRR1)
EIRR2)		FIRR2)
EIRR3)		FIRR3)

Conditions and Development Impacts:
With 1993 as the target year, direct damage caused by flood and indirect damage caused by traffic congestion are taken into consideration.
Foreign currency portion of the construction cost is a 30-year loan including grace period, with an interest rate of 3.5% and the 10-year repayment period.

5.TECHNICAL TRANSFER
1) A seminar on infiltration facilities for the counterparts.
2) OJT on the repair of the rain gauge and flow meter and the processing of observation date.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ☐ Completed or in Progress
  - ○ Completed
  - ○ Implementing
  - ○ Processing
- ☐ Promoting
- ■ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)
Because of the limited supply of budgetary resources, higher priority has been given to water supply projects over storm drainage projects.
The municipal government of Asuncion and the Public Corporation of Water Supply and Sewerage are hoping Japanese assistance on the first stage project (Mburicao - Ytay).

(FY1991 Overseas Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 アスンシオン市雨水排水施設整備計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (M/P)

CSA PRY/A 102/87

Compiled Mar.1990
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Paraguay

2.NAME OF STUDY
Proyecto de aumento de la produccion de granos principales en el area central del departamento de Itapua

3.SECTOR
Agriculture/General

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Ministry of Agriculture and Livestock

7.OBJECTIVES OF STUDY
Elaboration of Master Paln to increase main crop production in the central area of Itapua department

8.DATE OF S/W Mar.1985

9.CONSULTANT(S)
Japan Agricultural Land Development Agency

10.STUDY TEAM

No.of Members 25
Period Jul.1985-Mar.1988(33 months)

Total M/M	Japan	Field
166.00	83.00	83.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Data Analysis of LANDSAT Imagery

12.EXPENDITURE

Total	462,418 (¥'000)
Contracted	443,314

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Central Part of Itapua District located in the South of this country (Population 110,000, Area 510,000, latitude 26'35" to 27'20" S and Longitude 55'19" to 56'15" W)

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)	80,200	32,313	47,887
US$1=550Gs in Aug.1987 2)			

3.CONTENTS OF MAJOR PROJECT(S)
Seeds supply, Study and extension of agriculture,

Road	856 km	
Agricultural land reclamation	84,000 ha	
Soil conservation	117,600 ha	
Afforestation	24,700 ha	
Paddy irriqation	5,580 ha	Drainaqe canal

14 km
Stock facilities, Establishment of fund to increase main grains production, Improvement of small farmers, Electrification of rural area

4.CONDITIONS AND DEVELOPMENT IMPACTS
Thanks to this project it is expected that all kinds of main grains will double in production in comparison to current situation.
Concretely, total grain production is anticipated 650,000 ton (it consists of soybean 420,000 ton, wheat 180,000 ton, water field rice 50,000 ton). In addition, cotton production is considered to reach 60,000 ton as the effect of this project.

5.TECHNICAL TRANSFER
1.Acceptance of trainees for Training Programme
2.Co-operative work to make report.

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- ■ In Progress or In Use
- ☐ Delayed
- ☐ Discontinued

(Description)
Based on the findings of the master plan study, the following technical cooperation project was commenced by JICA for the duration of five years (June 1990 - May 1995).

Main Grain Crops Production Project:
The project aims to increase the production of soybean, wheat and other major grains, and will conduct research and development on the following areas and support the related training program.
1) Breeding and management of improved varieties
2) Development of suitable technology to multiply certified seeds
3) Improvement of cropping systems for soil conservation

(FY1991 Overseas Survey)
No additional information

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 イタプア県中部地域主要穀物増産計画

{M/P,M/P+(F/S),Basic Study,Other}

PROJECT SUMMARY (F/S)

CSA PRY/S 303/88

Compiled Mar.1990
Revised Mar.1993

I. OUTLINE OF STUDY

1.COUNTRY Paraguay

2.NAME OF STUDY
Transportation Facilities Improvement Project of the Asuncion Metropolitan Area

3.SECTOR
Transportation/Urban Transportation

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Municipality of Asuncion

7.OBJECTIVES OF STUDY
The establishment of the principal road by the corresponding road and the setting up of public transportation by the establishment of bus terminal.

8.DATE OF S/W May.1987

9.CONSULTANT(S)
Yachiyo Engineering Co., Ltd.

10.STUDY TEAM

No.of Members 8
Period Sep.1987-Oct.1988(13 months)

Total M/M	Japan	Field
46.50	10.50	36.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
- Topographic survey
- Geological survey

12.EXPENDITURE

Total	171,507 (¥'000)
Contracted	152,275

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Asuncion metropolitan area

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	88,000	39,500	48,500
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
-Widening and improvement of Allarra Av. (11.7 km)
-Improvement of R. Clancia (2.5 km)
-Widening and improvement of M. Lynch (5.4km)
-Extension of Espana Av. (0.5 km)
-Improvement of the Minicentro
-Construction of a bus terminal

Imp. Period: .1990-.2000

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	19.20	FIRR1)
EIRR2)		FIRR2)
EIRR3)		FIRR3)

Conditions and Development Impacts:
Direct benefit: Reduction of transport costs Indirect effects:
1)Provision of safe traffic environment
2)Mitigation of traffic congestions due to flooding
3)Activation of commercial activities along the way
4)Acquisition of space for the future introduction of a mass transit system
5)Increase of employment

5.TECHNICAL TRANSFER
1)OJT on computer software
2)Acceptance of trainees on urban transport (JICA Counterpart Training Program)

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- ■ Completed or in Progress
- ○ Completed
- ○ Implementing
- ● Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)
- After the completion of the feasibility study, the political situation become fluid because of the coup d'etat in Feb. 1989, and the mayoralty election in May 1991, among others. The proposals of the feasibility study and the application for the Japanese financing have been under review, but no specific decision has been made to date.

- The introduction of car-free suggested as one of measures for the roads the Centro has been implemented once a week since June 1991.

- The improvement of M.Lynch is scheduled to be implemented by the Ministry of Public works financed by the World Bank within 5 years.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①②

和名 アスンシオン首都圏都市交通施設整備計画

{F/S,(M/P)+F/S,D/D}

PROJECT SUMMARY (M/P)

CSA PRY/S 102/89

Compiled Mar.1991
Revised Mar.1992

I. OUTLINE OF STUDY

1.COUNTRY Paraguay

2.NAME OF STUDY
Water Pollution Control Plan for the Lake Ypacarai and its Basin

3.SECTOR
Administration/Environmental Problems

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Technical Planning Secretariat
Environmental Study Dept.

7.OBJECTIVES OF STUDY
Study on Water Pollution Conditions in Lake Ypacarai and formulation of Water Pollution Control Plan

8.DATE OF S/W Feb.1987

9.CONSULTANT(S)
Kokusai Kougyo Co., Ltd.
CTI Engineering Co., Ltd.

10.STUDY TEAM

No.of Members 13
Period Dec.1987-Aug.1989(21 months)

Total M/M	Japan	Field
75.20	31.20	44.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
- River Cross, Lake Bottom Survey
- Aerophotography

12.EXPENDITURE

Total	385,777 (¥'000)
Contracted	264,905

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Lake Ypacarai and its basin

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)			
2)			

3.CONTENTS OF MAJOR PROJECT(S)

Immediately
1. Construction of waste water treatment systems (for industrial plants and trourist installations)
2. Appropriate treatment of sludge and garbage in river beds and lake area
3. Construction of lakeshore vegetation

Whithin 2-3 years
4. Construction of sludge treatment plant
5. Rebhabilitaion of existing sewage treatment plants
6. Forest conservation and management
7. Control of erosion from roads, quarries and river banks

Within 5-10 years
8. Land use zoning, 9. Construction of sewage treatment plants
10. Afforestation, 11. Soil erosion control in cultivated land

After detailed F/S
12. Raw sewage collection system by vacuum trucks
13. Construction of flood control channel (Yuquyry River)
14. Construction of contact oxidation ditch (urban rivers)
15. Installation of a sluice at the mouth of the Salado River

4.CONDITIONS AND DEVELOPMENT IMPACTS

Water quality conservation measures are to be based on the following five items:
1. Basic investigation and research
2. Application of water quality improvement techniques
3. Formulation of environmental protection legislation(including new tax regulations)
4. Education on water quality conservation
5. Establishment of an independent "Lake Ypacarai Basin Management Authority"

Expected impacts of the pollution control plan:
1. Reduction in water potabilization costs
2. Reduction in the incidence of water transmitted diseases and the associated medical treatment costs
3. Reduction in the incidence of cattle diseases and the resulting increase in the market value of cattle
4. Increase in farmer's income resulting from reduced erosion and expanded irrigation
5. Employment generation and increased income in expanded recreation areas
6. Increased availability of firewood
7. Land value appreciation around the water area
8. Environmental conservation for a safe and comfortable life

5.TECHNICAL TRANSFER
- Technical transfer in the technique of water quality analysis for monitaring of water pollution
- Methods of evaluation of water quality improvement technique

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS
- ■ In Progress or In Use
- □ Delayed
- □ Discontinued

(Description)
The Government of Paraguay accepted the recommendations of the Study and now is preparing the establishment of the "Basin Management Authority", and requested the government of Japan the dispatch of an environment policy expert.
An expert in solid wastes management was dispatched by JICA to Asuncion City Government.
As of 1992, a related Paraguayan Governemt officer reported that the M/P would be revised by American consultants, as pre-requisite for implementation. However, this information could not be confirmed.

(FY1992 Overseas Survey)
Waiting for the answer

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①

和名 イパカライ湖流域水質汚濁対策計画

{M/P,M/P+(F/S),Basic Study,Other}