PROJECT SUMMARY (F/S)

Compiled Mar.1995
Revised Mar.1996

CSA PAN/S 307/93

I. OUTLINE OF STUDY

1.COUNTRY Panama

2.NAME OF STUDY
Study of Alternatives to the Panama Canal

3.SECTOR
Transportation/Marine Transportation & Ships

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Commission for the Study of Alternatives to the Panama Canal

7.OBJECTIVES OF STUDY
Economic analysis and impact analysis on the alternatives prescreened by the Com. Study of 47 canal alternatives on egineering and cost estimate for screenings.

8.DATE OF S/W 1991/7

9.CONSULTANT(S)
Mitsubishi Research Institute
Yachiyo Engineering Co., Ltd.

10.STUDY TEAM
No.of Members 30
Period Jul.1991-Aug.1994 (38 months)

Total M/M	Japan	Field
119.75	91.99	27.76

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
N/A

12.EXPENDITURE
Total 846,574 (¥'000)
Contracted 428,972

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Canal Zone

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	5,400,000		5,400,000
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
Economic and Impacts Study (A)
- To construct the third locks at both entrances capable of handling ships of a design of 150,000 DWT.
- To prepare approach channels from the third locks to the present Canal.
- To widen the Gaillard Cut.

Engineering and Cost Estimate Study (B)
Most feasible alternative reported by the Commission is as follows.
- construction with one lane lock for 150,000DWT ship parallel to the existing locks.
- two lane canal except one lane on Culebra Cut.
- The alternative project shall be constructed by the year 2020.
- Sea level canals are estimated not feasible.

Imp. Period: 2005. -2020.

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes/No

EIRR1)	85.00	FIRR1)	15.80
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
A :
Additional investigation will be required in the areas of impacts on the environment and of natural conditions and toll structure.
The feasibility study have to be updated to take into account the world trade picture at the time of inplementation.
B :
No comments on the project proprietor and resource of fund.
Progressive impacts will be expected on the world marine transportation and also on the Republic of Panama.

5.TECHNICAL TRANSFER
not included in this study

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- ☐ Completed or in Progress
- ○ Completed
- ○ Partially Completed
- ○ Implementing
- ○ Processing
- ☐ Promoting
- ☒ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)
By the Final Report of the commission (Sept 1993), existing canal will be available until 2020 and the improved canal by this project will be available after 2020. The project shall be completed by 2020.
The canal will be transferred from USA to the Republic of Panama in December 31, 1999.
This project has been suspended and the Commission was closed after completing the study.

(FY1995 Domestic Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①

[F/S,D/D]

和名 パナマ運河代替案調査

PROJECT SUMMARY (F/S)

Compiled Mar.1995
Revised Mar.1996

CSA PAN/S 308/93

I. OUTLINE OF STUDY

1.COUNTRY: Panama

2.NAME OF STUDY: Improvement of Panama-Colon Highway

3.SECTOR: Transportation/Road

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: Ministry of Public works

7.OBJECTIVES OF STUDY:
To formulate a Masterplan for arterial road development between Panama and Colon
To carry out a Feasibility Study on selected projects of the Masterplan

8.DATE OF S/W: 1992/9

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

10.STUDY TEAM
No.of Members 13
Period Dec.1992-Mar.1994(16 months)

Total M/M	Japan	Field
59.18	24.96	34.22

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:
Fiels Survey(monumentation, elgnalization, horizontal ground control survey, etc), Boring

12.EXPENDITURE

Total	320,726 (¥'000)
Contracted	305,043

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA:
Area between Panama and Colon

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	138,641	63,169	75,472
2)	264,120	101,324	162,796
3)			

3.CONTENTS OF MAJOR PROJECT(S)
1)Construction of a full access controlled 4-line highway with design speed of 110km/h in Alcavde Diaz Section(20.2km).
2)Construction of a full access controlled 4-line highway with design speed of 110km/h in Sabanitas Section(26.2km).

Imp. Period: 1995. -1999. 1995. -2004.

4.FEASIBILITY AND ITS ASSUMPTIONS
Feasibility: Yes

EIRR1)	41.00	FIRR1)	7.80
EIRR2)	31.10	FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
1)Vehicle operating cost saving
2)Reduction of traffic accident
3)Impact for regional development in Colon
4)Creation of job opportunity by Highway construction
5)To secure an alternative route of Panama Canal

5.TECHNICAL TRANSFER:
The study showed the environment impact study example.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- ■ Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ○ Implementing
  - ● Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)
Since the final report was officially presented to the Panama Government in June '94, the project shall be in procedure concretely for securing fund on this project, detailed design execution including Japanese government aid.

(FY1995 Domestic Survey)
The Government of Panama signed on an agreement with PYSCA, a Panamanian Representative of a Mexican Contractor, and approved the construction works of the Panama-Colon express highway.
Based on this agreement, the construction has been commenced by means of BOT Process.

2.MAJOR REASONS FOR PRESENT STATUS
1)Just immediately after presentation of the final report
2)Waiting the new gocernment policy starting in Sept.'94

3.PRINCIPAL SOURCE OF INFORMATION
①

和名 パナマ・コロン間高速道路計画調査

{F/S,D/D}

PROJECT SUMMARY (Other)

Compiled Mar.1990
Revised Mar.1996

CSA PRY/S 601/76

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 /

9.CONSULTANT(S)
Central Consultant, Inc.

10.STUDY TEAM
No.of Members 2
Period Sep.1976-Jan.1977(4 months)

Total M/M	Japan	Field

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
None

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	4,387
2)			

3.CONTENTS OF MAJOR PROJECT(S)
Following the F/S undertaken by a USA consulting firm on the road between Carapeguara 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

*Contents of OECF Loan
The implementation of liner reformation and pavement of the road with total length of 28.5km.

(FY1994 Domestic Survey)
In 1994, although there is no serious damage on the paved road by the Project, there are some places which need to be repaired. Now the main roads have been reformed nationwidely and continuously, therefore, there is a possibility to be the target of reformation of this activity.

(FY1995 Domestic Survey)
No additional information.

(FY1995 Overseas Survey)
Reinvestigation works for the route along the highway was completed in 1995. It has been concluded that this route is connecting with major agricultural and livestock farming areas of the country and make it easy to supply foodstuff to the capital city of Asuncion. And also, it is expected to encourage the orchard industry at the area along the highway.It is also considering to extend the highway further down south from the capital city.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②、④

和名 ラ・コルメナ道路アフターケア

{M/P,Basic Study,Other}

PROJECT SUMMARY (F/S)

Compiled Mar.1986
Revised Mar.1996

CSA PRY/S 301/78

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 Mercante del Estado (FME)

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

8.DATE OF S/W: /

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 Paraguay.
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 Paranagua 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
  - ( ) Partially 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,D/D}

PROJECT SUMMARY (F/S)

Compiled Mar.1986
Revised Mar.1996

CSA PRY/S 302/79

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 1978/12

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
24km 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(),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: 1981.1-1994.12 1995.1-2004.12

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
  - (●) Completed
  - ( ) Partially Completed
  - ( ) Implementing
  - ( ) Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] 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

(FY1993 Overseas Survey)
Due to heavy rainfall, the construction period has been postponed from August,1993 to October,1994.
Construction works of the signal tower and settlement of the antenna have been completed on march,1993.

(FY1994 Domestic Survey)
New airport facilities was completed their constructions in Oct.1993. According to the survey, the newly completed airport has not been operational for international flights due to the delay in getting approval from the Gov't and has currently been served by a domestic flight per day.

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

3.PRINCIPAL SOURCE OF INFORMATION
①, ② ANAC

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,D/D]

PROJECT SUMMARY (F/S)

Compiled Mar.1990
Revised Mar.1996

CSA PRY/A 301/82

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/(Agriculture in)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: 1980/3

9.CONSULTANT(S): Naigai Engineering 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: None

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: 1983. -1994.

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
  - ○ Partially 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.

(FY1994 Domestic Survey)
No additional information.

(FY1995 Domestic Survey)
Paraguayan organization in charge considers this project as for discontinued or cancelled due to the difficulty to get the fund.

(FY1995 Overseas Survey)
Reinvestigation and the official notice of the 'Lake Ypoa National Park' have been carried out based on the regulations of RAMSAR Treaty signed on 1994. In order to develop this area successfully, it is necessary to fulfil almost all of the public opinions concerned, to examine the land owners or representatives carefully, and to ask the participation of the local organizations from the planning stage.
For the implementation of the F/S, it should be made arrangements and negotiations among the Government, the financing authorities and the local organizations.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①, ②

和名 イポア湖北西部農業開発計画

{F/S,D/D}

PROJECT SUMMARY (Basic Study)

Compiled Mar.1990
Revised Mar.1996

CSA PRY/A 501/83

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
To contribute the sustainable development by formulating forest management plan to counter the deforestation by unplanned irregular cutting.

8.DATE OF S/W 1980/6

9.CONSULTANT(S)
Japan Forest Technical Association

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 Paraguay. 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
- Off 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.

(FY1994 Domestic Survey)(FY1995 Domestic Survey)
No additional information.

(FY1995 Overseas Survey)
The results of this survey work are utilized for certain purposes at the limited area.
Especially, the data of retaining volume of forestal resources are very useful and utilized to make administraiting, managing and utilizing plans for the area of targetted forest.

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, ②

和名 北東部林業資源調査

{M/P,Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1986
Revised Mar.1996

CSA PRY/S 201B/83

I. OUTLINE OF STUDY

1.COUNTRY: Paraguay

2.NAME OF STUDY: National Telecommunications & Broadcasts Development Project

3.SECTOR: Communications & B/(Comms. & Broad. in)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)
-Formulation of a long-term development plan(1983-1997) and a F/S of urgent projects

8.DATE OF S/W: 1980/9

9.CONSULTANT(S):
Nippon Telegraph & Telephone Corporation
Kokusai Denshin Denwa Co, Ltd.
Japan Telecom. Eng. and Consulting Service

10.STUDY TEAM

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

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY: None

12.EXPENDITURE

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

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA:
M/P for the entire country; F/S for Asuncion Area, Concepcion, Hohenau, San Pedro, Villarrica, Carapegua

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

		Local Cost	Foreign Cost	Total
M/P	1)	907,443	177,043	630,400
	2)			
F/S	1)	12,188	2,783	9,405
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

M/P(1983-97)
1) Domestic telecommunications.
336,000 lines of subscriber telephones/ 3,394 public telephones/ 3,060 rural telephones/ digitized local exchanges/ 14 optical fiber systems/ 10 microwave routes/ 7 television transmission routes, etc.
2) International telecommunications
International circuits/ modification of the Aregua earth station/ international subscriver dialling/ a second earth station,etc.
3) Development of the Radio Regulation and Monitoring System
4) Establishment of a National Educational Television Service
5) Personnel development

F/S(Stage I< 1983-87)
1) Introduction of an international subscriber dialling system in the Asuncion area
2) Introduction of a digital switching system in the Asuncion area (11 exchanges by the end of 1997)
3) Consolidation of rural telephone systems in five areas (Conception, Hohenau, San Pedro, Villarrica, Carapegua) by 8-channel multiple access subscriber(MAS) radio systems

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:
[Planning Conditions] 1) Financial analysis covers only domestic and international telecommunications 2) Loan agreements every three years, with 3-year grace period ; opportunity cost of capital 12%; depreciation period 20 years; residual value zero
3) FIRR: Domestic Telecom. 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 in government and business operations; more competitive agricultural products in domestic and export markets; Improved standard of living; etc. 2) International telecom.: Contribution to diplomatic relations and cultural exchange. Narrowing information gaps, etc. 3) Radio regulation & monitoring: More efficient use of frequencies and systematic response to the demand for radio communications; Improving government services, national security, protection of life and property,etc. 4) Educational TV: Improvement of nation-wide education.

5.TECHNICAL TRANSFER
1)Dispatch of survey mission and experts
2)Accept the trainees in Japan
3)Dispatch of JOCV members

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- [■] Completed or in Progress
- [ ] Promoting
- ○ Completed
- ● Partially Completed
- [ ] Delayed or Suspended
- ○ Implementing
- ○ Processing
- [ ] 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 10,000 telephones, and is formulating a telephone network expansion plan in cooperation with ITU.

(FY1991 Overseas Survey)
No additional information.

(FY1995 Domestic Survey)
No additional information.
(Data are not available due to the person in charge had been shifted to the other place.)

(FY1995 Overseas Survey)
This project is consisted of various sub-projects.The implementation of the main portion has been completed and a remained part is now processing and the other remained part is suspended.
To develop and to expand the service area of radio regulation/ monitoring system and the standard of registration of the radio listners seem to be possible at certain range, however it is not enough to fulfil the demands. Conformation of the administrative organization for establishment of the state-owned educational television is not implemented due to lack of various resources.Training project is carrying on by IFT in order to supply the qualified professionals with certain necessary technological level for the increasing necessities.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②、④

和名 電気通信拡充計画（電気通信・放送拡充計画のF/S）

{M/P+F/S}

PROJECT SUMMARY (M/P)

Compiled Mar.1990
Revised Mar.1996

CSA PRY/A 101/84

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/(Agriculture inlGeneral

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Ministerio de Agricultura y Ganaderia

7.OBJECTIVES OF STUDY
Elaboration of M/P for the Integrated Agricultural Development Project in the Adjacent Area to Yacyreta Dam

8.DATE OF S/W 1982/9

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)		Total Cost	Local Cost	Foreign Cost
	1)	230,917	115,937	114,980
US$1=240Gs in May 1984	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) crested 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 agriculturusl 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.

(FY1993 Overseas Survey)
Farmers resided at the site are migrating and/or trying to get new area to live under the guidance of the authority concerned.
It is planned to commence to pour water into the dam at the fiscal year of 1994 or 1995. Still feasibility study for the plan how to utilite the dam water is needed.
At the time of JICA's development survey, there were no participation of beneficial in habitants. Howéver, in future, it will be recommended to let these people participate as circumstances will be changed.

(Remarks)
According to the information by overseas survey in 1992, INSTITUTO DE BIENESTAR RURAL purchased the farmland(5,000ha) adjacent area to AYOLAS and commenced settlement of small farmers. This plan will be expanding in the future.

(FY1994 Domestic Survey)(FY1995 Domestic Survey)
No additional information.

(FY1995 Overseas Survey)
The environmental effects of the dam construction for surrounding area are now under investigation. The data obtained by this M/P are a little old, however, they are still very useful. In order to study the agricultural development in case of the paddy cultivation is commenced at this area, it becomes necessary to research the way of irrigation, drainage, and to estimate and evaluate their environmental influences.
Paraguay side desires to establish a center to transfer Japanese technologies concerned.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①, ② Ministerio de Agricultura y Ganaderia

和名 ヤシレタダム隣接地域農業総合開発計画

[M/P,Basic Study,Other]

PROJECT SUMMARY (F/S)

Compiled Mar.1990
Revised Mar.1996

CSA PRY/A 302/84

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: 1983/6

9.CONSULTANT(S):
Japan Forest Technical Association

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

3.CONTENTS OF MAJOR PROJECT(S)

Based on the results of investigations on related natural and socieconomic conditions, a basic plan comprising land use principles and forest management systeas was formulated. Using this basic plan, the project plan was prepared and consists of the following components. The duration of the project is assumed to be 50 years after the initiation.

1) Reforestation Plan:
The planned reforestation totally covers 6,628ha during 6 years.
2) Breeding Plan:
The necessary seedlings for the above activity, totally amounting to some 30,000 are to produced. The total area of nursery site including the various facilities is planned as some 8ha.
3) Forest Road Plan:
Some 107km of forest roads is to be constructed during 6 years.
4) Felling Plan:
Some 6 million cu.m would be felled for the 50 years.
5) Facilities Plan:
Administrative facilities, which are needed for the project implementation, including the central office eand durmitory are to be constructed.
6) Sales Plan:
The total sales price of the above total cutting volume is estimated as some 800 billions Gs.

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
- ○ Partially 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).

(FY1993 Overseas Survey)
Afforestation works for the sandy areas are implementing by means of the funds with an amount of Yen 376 million during 1988 to 1994.
Infuture, this activity will be expanded whole over the country.
It has been requested to let local counterparts to join with the decision makings on the various technical matters, and also to participate similar training courses which will be held in some countries nearby.

(FY1994 Domestic Survey)
The project is under way.

(FY1995 Domestic Survey)
An information said that the implementation of above-mentioned project has been completed.

(FY1995 Overseas Survey)
As it is very profitable to sale the products of forestry, the sales business is carring on by means of the investments consisted of 403 million J$ from JICA and 128 million Gs from Paraguayan side, respectively.
More than 20 engineers and/or technicians are being trained either in Japan or Paraguay, and more than 96 of various kinds of technical workers and specialists are being fostered by vocational training in this field.
To afforest the Capiibary zone, the traditional farm-land or meadows, it is expected to create new industry and employment opportunities and also better environmental effects for this area.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①, ② National Forest Service

和名 カピバリ地区森林造成計画

[F/S,D/D]

PROJECT SUMMARY (M/P)

Compiled Mar.1990
Revised Mar.1996

CSA PRY/S 101/86

I. OUTLINE OF STUDY

1.COUNTRY Paraguay

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

3.SECTOR
Transportation/Urban Transportaion

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Municipality of Asuncion City

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

8.DATE OF S/W 1984/3

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)
The M/P consists Road Plan, Urban Road Plan and Public Transportation Plan.
1) Road Network Plan
- Urban Arterial Road Plan - Rural area arterial Road Network
- Rural area connecting Road among urbans - Semi Arterial Road

2) Road Improvement Project
- Av. Ayala-Av.R.Francia Improvement Project
- Av.Espana-Av.San Teresa Improvement Project
- Lambare-San Antonio Improvement Project
- Urban Outer Rink Road Improvement Project

3) Urban Area Road Plan
Plan of classifiging pedestrian, automobile and bus road

4) Public Transportation Plan
- Reformation of bus network
- Bus Facilities Plan
(bus terminal, exclusive bus truck, transit passenger terminal)

4.CONDITIONS AND DEVELOPMENT IMPACTS
1) As a whole evaluation, in case the Master Plan is excuted in accordance with the investment plan, EIRR for the project is estimated at 37.1% considering vehicle operation cost savings under estimations a B/C ratio at 2.7% and a discount ratio at 12%. From an economic standpoint, considerable return can be expected in the implementation of the project.

2) Urban Traffic inflastructure provides not only reduction of vehicle operation cost but also an impact and effect on social economic widely.
- Saving oil energy and foreign money reserve
- Securing public transportation service
- Promotion and employment demand with road construction project

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.

(FY1993 Overseas Survey)
Due to coup d'etat, change of national economic policy, etc., the implementation works are not so much progressed except a part of main construction works and some of sectional works.
Some other works has been conducted in place of planned works in order to solve urgent problems. This matter should be evaluated again.

(FY1994 Domestic Survey)
No information.

(FY1995 Domestic Survey)
MOPC has officially requested to improve the roads at the surrounding urban area of Asuncion.

(FY1995 Overseas Survey)
This project intended to implement taking into consideration that the relationship with the other project which is to improve the environment of Asuncion and the surrounding area. At present, recommended construction works as the result of M/P are implemented only for a limited part.

2.MAJOR REASONS FOR PRESENT STATUS
Because of the other survey works such as 'the treatment of the urban waste form Asuncion' have been carried out with higher priority.

3.PRINCIPAL SOURCE OF INFORMATION
①、②

和名 アスンシオン首都圏都市交通整備計画

{M/P,Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1990
Revised Mar.1996

CSA PRY/S 202B/86

I. OUTLINE OF STUDY

1.COUNTRY: Paraguay

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

3.SECTOR: Social Infrastructu/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: 1985/2

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: Topographic Survey

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)

		Local Cost	Foreign Cost	
M/P	1)	165,720		
	2)			
F/S	1)	42,308	22,154	20,154
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

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

<F/S>
The storm water control works will be basically carried out by means of river channel improvement and the installation of drainage facilities in both Mburicao and Itay river basins. Besides, at the downstream end of the improved section of the Itay River, the retarding will be constructed to cope with the anticipated increase of discharge due to the proposed improvement works in the upper reaches of Aviadores del Chaco Avenue in accordance with the results of the Master Plan. The outline of the major projects include river improvement of 21.2 km, retarding basin, construction of bank protection work of 97,000 m2, falling works of 32 units, river bed protection of 7,800 m2, bridge of 48 units, etc.

Imp. Period: 1988. -1993.

4.FEASIBILITY AND ITS ASSUMPTIONS: Feasibility: Yes

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

Conditions and Development Impacts:

[Conditions]<M/P> 1)The target year 2005. 2)The scale of the proposed project is 3-year return period. 3)The project targets regions having suffered from severe floods. Project implementation could favorably influence on not only the planning area but also the whole nation. <F/S> The purpose of the study on the First Stage Project is to provide a means to realize immediate flood damage mitigation in the Mburicao and the Itay river basins which are currently suffering from serious flood damage. The First Stage Project was formulated on the following conditions: 1)The target year is 1993. 2)A 3-year return period flood is adopted as the scale. 3)Land use pattern which was used for benefit estimation and runoff discharge estimation shall correspond to that presumed in the year 1995. 4)The project targets regions having suffered from severe floods in both the Mburicao and the Itay river basins.

5.TECHNICAL TRANSFER

1) A seminar on infiltration facilities for the counterparts.
2) O/T 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
  - ○ Partially 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)
CORPOSANA has been preparing part of the proposals in cooperation with Municipality of Asuncion & Ministry of Public Works.

(FY1993 Overseas Survey)
CORPOSANA is trying to provide funds for implementation for the urgent construction works cooperating together with local municipality of the project site.
As its budget is very limited, CORPOSANA is now transferring this project to the concerning municipalities.
Besides, whether implementation of the project will be successfully carried out or not will depend on the matter that how much of funds will be allocated for CORPOSANA by the Central Government.

(FY1994 Domestic Survey)
The Gov't of Paraguay has never taken any action to promote the Project.

(FY1995 Domestic Survey)
In spite of that the management and administrative works have been transfered from CORPOSANA to the municipality, at present, the procurement of equipment and materials have been officially requested as for the Grant Aid to JICA by CORPOSANA.

(FY1995 Overseas Survey)
It has been delayed because of the delay of financing and D/D.
However, on 1995,CORPOSANA borrowed certain amount of the fund from the contractor and implemented the construction of the drainage pipeline with a total length of 1.8km and the drainage canal with a length of 0.4km upto the mid of this year.
The total cost comes 108 Gs.
At present, the tender is called for the construction of 1.1km drainage pipeline and 38m of drainage canal in order to commence the works on 1996.
It is considered very effective to shift the construction works under the control of the beneficial municipalities, and let them collect the tax concerned for expenditures of the works.
The negotiations about above-mentioned subjects, including

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION

①、② CORPOSANA

和名 アスンシオン市雨水排水施設整備計画

Continued on [M/P+F/S]

状況（要約表添付文書）

CSA PRY/S 202B/86 (M/P+F/S)

Name of Study: Storm Drainage System Improvement Project in Asuncion City

Country: Paraguay

Type of Study: M/P+F/S

Sector: Social Infrastructu/River & Erosion Control

Present Status: Implementing

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

(FY1993 Overseas Survey)
CORPOSANA is trying to provide funds for implementation for the urgent construction works cooperating together with local municipality of the project site.
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The Gov't of Paraguay has never taken any action to promote the Project.

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In spite of that the management and administrative works have been transfered from CORPOSANA to the municipality, at present, the procurement of equipment and materials have been officially requested as for the Grant Aid to JICA by CORPOSANA.

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However, on 1995,CORPOSANA borrowed certain amount of the fund from the contractor and implemented the construction of the drainage pipeline with a total length of 1.8km and the drainage canal with a length of 0.4km upto the mid of this year.
The total cost comes 108 Gs.
At present, the tender is called for the construction of 1.1km drainage pipeline and 38m of drainage canal in order to commence the works on 1996.
It is considered very effective to shift the construction works under the control of the beneficial munisipalities, and let them collect the tax concerned for expenditures of the works.
The negotiations about above-mentioned subjects, including establishment of a branch organization of CORPOSANA at the office of them, with each beneficial municipalities are carried out again.

PROJECT SUMMARY (M/P)

Compiled Mar.1990
Revised Mar.1996

CSA PRY/A 102/87

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/(Agriculture in)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.
To elaborate a master plan for the execution of integrated agricultural development project with some 510,000ha aiming to increase principal grain production so as to improve economic

8.DATE OF S/W: 1985/3

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 irrigation : 5,580 ha Drainage canal : 14 km
Stock facilities, Establishment of fund to increase main grains production, Improvement of small farmers, Electrification of rural area.
The following particular programmes have been formulated taking into account the basic concept with emphasis on soybean, wheat, rice and cotton.
1) Seed supply programme 2) Agricultural research and diffusion programme 3) Farm road project (127km long of principal road, 264km of main road and 465km of branch road) 4) Agricultural land development projet (84,000ha) 5) Soil conservation project (117,600ha) 6) Afforestation project (24,700ha) 7) Paddy field irrigation (5,580ha) 8) Drainage project (14km long) 9) Grain storage facility (20,000ton of capacity) 10) Social infrastructure improvement project (electrification, education, medical service, telecommunication etc.) 11) Financial supporting servie (establishment of agriculitural fund) 12) Small size farmers supporting programme

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.
It is expected to increase agricultural production of main grains i.e. soybean, wheat, rice and cotton in the area remarkable. Soybean achieves future production of 419,000ton from actual 225,000ton, similarly,
wheat 182,000ton from 99,000ton, rice 49,000ton from 22,000ton and cotton 61,000ton from 28,000ton. At the same time, international compatibility is strengthened by means of stability of agricultural production, decrease of farming cost and improvement of grain quality. Accordingly, socio-economic cindition in the project are is modified and well-balanced regional development with consideration of small size farmers and environment is executed.

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
- [x] In Progress or In Use
- [ ] Delayed
- [ ] Discontinued

(Description)
Based on the findings of the master plan study, the following technical cooperation project was commenced 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.

(FY1994 Domestic Survey)
No information.

(FY1995 Domestic Survey)
The construction works for the preferencial roads at the target area are carried on by the earth moving equipment provided by the Yen Credit.

(FY1995 Overseas Survey)
Following works are now carrying on:-
1)Suppliment of seeds 2)Planning of agricultural expeniments
3)Cultivation of soybean, maize, wheat and sunflower at the local Agricultural Research Centers 4)Construction of rural roads at the surrounding area. The other works are not commenced as yet. According to the original plan, this project is going to complete on 1995.However, as the results of this project are highly appreciated, the beneficiaries desire to extend and expand these kind of technical cooperation, such as suppliment of excellent seeds, etc., about 10 years more, if possible.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①, ②

和名 イタプア県中部地域主要穀物増産計画

{M/P,Basic Study,Other}

PROJECT SUMMARY (F/S)

Compiled Mar.1990
Revised Mar.1996

CSA PRY/S 303/88

I. OUTLINE OF STUDY

1.COUNTRY: Paraguay

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

3.SECTOR: Transportation/Urban — Transportaion

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: 1987/5

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)
1) The following road project for East-West corridor in Asuncion.
- Improvement of M.Esttigarribia road and Avenue E. Ayala (expansion)
- Improvement of connection road between Av. Ayala and Av.Francia (expansion)
- Improvement of Av.R.Francia (expansion)
- Construction of Public Market No. 4 and bus terminal (new facility)
- Improvement of streets/roads in rural area (traffic, signal, parking area, etc.)

2) Improvement of Av.MME.Lynchi of South-north corridor in Asuncion (expansion)

3) Extension of Av.Espana (new construction)

Imp. Period: 1990. -2000.

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

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

Conditions and Development Impacts:
[Direct effect]
Calculating the benefit for saving of the vehicle operation cost, EIRR of the road projects (East-west corridor, South-north corridor and Av.Espana new extension) comes remarkably high as 19.2%.

[Indirect effect]
1) Preparation of good quality vehicle travelling
2) Dissolution of traffic interception by water flood
3) Impact on commertial activity along route
4) Securing a space for introduction of bulk transportation system
5) Expansion of employment demand

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
- ■ Promoting
  - ○ Completed
  - ○ Partially Completed
  - ○ Implementing
  - ○ Processing
- ☐ 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.

(FY1994 Domestic Survey)
The request for dispatch of expert in order to carry out the Project was submitted to the Gov't of Japan in 1993.

(FY1995 Domestic Survey)
No additional information.

(FY1995 Overseas Survey)
As it becomes necessary to implement this project urgently, on Sept.1993, JICA's cooperation has been requested.
The central government guarantees to get the foreign financial assistance for this project, but it is not materialized as yet.
The number of items to improve or arrange under this project seem to be doubled because of increasing demands.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①, ②

和名 アスンシオン首都圏都市交通施設整備計画

{F/S,D/D}

PROJECT SUMMARY (M/P)

Compiled Mar.1991
Revised Mar.1996

CSA PRY/S 102/89

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: 1987/2

9.CONSULTANT(S):
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 tourist 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) Rehabilitation 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 (Yuguyry 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:
1) Technical transfer in the technique of water quality analysis for monitoring of water pollution
2) 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 Government 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.

(FY1993 Overseas Survey)
The results of survey works will be utilized as for the basic data of the feasibility study under the coordination of the Ministry of Natural Resources and Environment with the funds from IDA of U.S.A. during a period of six months started from April,1994.
It is requested to let more local staffs join with these survey works, in future.

(FY1994 Domestic Survey)
No additional information.

(FY1995 Domestic Survey)
After the completion of this survey works, the Government of Paraguay requested to despatch the experts in the field of environmental administration in every year, however, it has been passed up due to the difficulty of recruiting the adequate personnel. On April, 1995, an expert of water quality analysis has been despatched from a private firm to SENSA for two years.

(FY1995 Overseas Survey)
The Ministry of Natural Resources and Environment is investigating the circumstances of the Lake Ypacarai and surrounding area especially from the viewpoint of the reduction of water contamination.
This work is implementing based on the results of JICA's survey work, by two(2) American consultants by means of AID fund.
To contract with American consultant for the work, the privileges, such as financing and studying the other problems at the Lake, are able to expect.
The Technical Planning Secretariat transfered the equipment and the facilities concerned to the Ministry of Natural Resources and Environment .

2.MAJOR REASONS FOR PRESENT STATUS:

3.PRINCIPAL SOURCE OF INFORMATION:
①, ② Technical Planning Secretariat, Environmental Study Dept.

和名 イパカライ湖流域水質汚濁対策計画

{M/P,Basic Study,Other}

PROJECT SUMMARY (F/S)

Compiled Mar.1991
Revised Mar.1996

CSA PRY/A 303/89

I. OUTLINE OF STUDY

1.COUNTRY Paraguay

2.NAME OF STUDY
Integrated Rural Infrastructure Improvement Project in La Colmena

3.SECTOR
Agriculture/(Agriculture in)General

4.REFERENCE NO.

5.TYPE OF STUDY F/S

6.COUNTERPART AGENCY
Ministry of Agriculture and Livestock, Techinical Secretariat

7.OBJECTIVES OF STUDY
Formation of agricultural and rural development plan

8.DATE OF S/W 1988/1

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

10.STUDY TEAM
No.of Members 9
Period Jul.1988-Jun.1989(12 months)

Total M/M	Japan	Field
34.86	10.40	24.46

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Boring survey

12.EXPENDITURE

Total	175,299 (¥'000)
Contracted	120,904

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Paraguari, La Colmena City

2.PROJECT COST

(US$1,000) US$1=1,000G in 1988	Total Cost	Local Cost	Foreign Cost
1)	14,855	8,069	6,786
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

Project	Overall Components	First Stage	Future Stage
Road Improvement	97.4km	69.8km	27.6km
Irrigation Facilities	900ha	400ha	500ha
Drainage Improvement	10.0km	4.0km	6.0km
Rural Water Supply	L=70,050m	L=56,650	L=13,400m
Electricity	L=48.8km	L=48.8km	-
Medical Care Facilities	1 set	1 set	-
Telecommunication System	L=24.3km	L=14.0km	L=10.3km
Educational Facilities	2 schools	2 schools	6 ground
O & M Center	1 place	1 place	-
Sub-Center	10 Places	4 Places	6 Places
Rural Park	10 Places	4 Places	6 Places
Sewage & Garbage Treatment	6 Places	1 Place	5 Places
Agricultural Processing Facilities	Facility	One of facility	Facility
Marketing Facilities	Facilities	Collecting	Granding
Demonstration Farm	5,000 sq.m	5,000 sq.m	-
O & M Machines	1 unit	1 unit	-

Imp. Period: 1989.12-1992.12

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes

EIRR1)	12.00	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
Condition: 1)Growth rate of the farmer's agricultural income for future 10 years will be projected over 6 percent per annum; 2)To conserve the natural environment, land use of the development scheme will be concentrated to the existing farm lands; 3)In the agricultural developemtn secter, integrated development plan referred to the farming, management and operation will be established on the premise that the water resources development, improvement of the farm roads, building and bringing-up of the agricultural coogerative; 4)Rural electrification will be introduced to the area where the electricity is not available. This will be the core project to accelerate the modernization of living standards and agricultural form in the projected area. 5)In line with the projected rucal infrastructure plan, establishment of the O & M center will be proposed together with the organization and working plan.

Benefits:(Unit: 1,000G)

	Overall	First Stage	Future Stage
Increased agricultural production	1,940,336	916,418	1,023,918
Improved qualities of products	114,080	57,040	57,040
Reduction of costs	2,101,179	924,636	1,176,543
Others	789,074	286,549	502,525

5.TECHNICAL TRANSFER
OJT
Senior Expert was dispatched to transfer and extend the irrigation technology.(1993.4-1994.4)

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- ■ Completed or in Progress
  - ● Completed
  - ○ Partially Completed
  - ○ Implementing
  - ○ Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)
Out of the components formulated in the F/S study, following priority projects were implemented as the grant aid projects of the Japanese government.
1.Road Improvement;Improvement:9 routes L=21.6km
Bridge:1 Place, Culvert:13 Places
2.Irrigation Facilities;Intake Facilities:2 Places
Regulating Pond:2 Places, Conducting Pipeline:L= 5.1km
Distribution Pipeline:L=23.2km
3.Rura Water Supply Facilities;Well:1 Place
Filtration Plant:1 Place, Distribution Tank:1 Place
Distribution Pipeline:L=36.6km
4.O&M Facilities;O&M Center:1 Place A=280sq.m
O&M Machines:Grader 1 unit, Pickup 1 unit, Bike 1 unit
The project implementation was as follows.
-1989/Aug.-1990/Feb. B/D by Naigai Engineering Co.,Ltd.
-1990/Jul. E/N(10.526 billion Yen) for the phase 1 works
-1990/Aug.-Dec. D/D
-1991/Feb. Commence of the phase 1 works
-1991/Jul. E/N(0.621 billion Yen) for the phase 2 works
-1991/Sep. Commence of the phase 2 works
(FY1991 Overseas Office Survey)
-1992/May. Completion
-1992/Jun. Hand over
(FY1992 Overseas Survey)
No additional information.
(FY1993 Overseas Survey)
Implementation had been completed on 1992.
Total expenses was 1,147 plus 2,294 billion G, which is equivalent to approximately 1,376 billion Yen.
(FY1994 Domestic Survey)
-1992/Feb. Completion of the phase 1 works
-1992/Mar. Hand Over
-1992/May. Completion of the phase 2 works
-1992/Jun. Hand Over
-1993/May. Defects Inspection

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①, ② Ministry of Agriculture and Livestock

和名 ラ・コルメナ地区農村総合整備計画

{F/S,D/D}

PROJECT SUMMARY (M/P)

Compiled Mar.1993
Revised Mar.1996

CSA PRY/S 103/91

I. OUTLINE OF STUDY

1.COUNTRY Paraguay

2.NAME OF STUDY
National Transport Master Plan

3.SECTOR
Transportation/(Transportation inlGeneral

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Ministry of Public Works and Communication

7.OBJECTIVES OF STUDY
- Planning to the optimum transport system for regional development and to support foreign trade.
- Planning of short to long term transport improvement policy and implementation program.

8.DATE OF S/W 1989/10

9.CONSULTANT(S)
Yachiyo Engineering Co., Ltd.
Mitsubishi Research Institute
Overseas Coastal Area Development Institute
Japan Railway Technical Service

10.STUDY TEAM
No.of Members 14
Period Mar.1990-Jan.1992(10 months)

Total M/M	Japan	Field
100.15	26.01	74.14

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Road Side OD Survey; Industries Comodity flow interview; and Transport Industries interview

12.EXPENDITURE
Total 409,981 (¥'000)
Contracted

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Whole Paraguay and its export corridor

2.PROJECT COST

(US$1,000)		Total Cost	Local Cost	Foreign Cost
	1)	2,576,500	1,156,000	1,720,500
	2)			

3.CONTENTS OF MAJOR PROJECT(S)
1) Highway Transport:
R-1 Trunk Road Development; Primary highways Development; Secondary Highways Development. R-2 Rural Road Development. R-3 Amistad Bridge Expansion. R-4 Sant Tome - Sao Borja Bridge Construction.
2) Water Transport:
N-1 Domestic Cereals Export terminals. N-2 Cereales Export Terminals at Free Zones. N-3 Main Foreign Trade Port at Villeta. N-4 Regional Freight Terminals. N-5 Petrorium Distribution Terminals. N-6 Paraguay River Improvement and Maintenance. N-7 Parana River Improvement and Maintenance. N-8 Fleet Enhancement.
3) Rail Transport:
F-1 Asuncion Suburban Area Rail Improve. F-2 Gral. Artigas - Encarnacion Rail Improve. F-3 Villarrica - Gral.Artigas Rail Improve.F-4 Ypacarai - Villarrica Rail Improv. F-5 Encarnacion - Sao Borja & Rail System Development. F-6 Cereals Export Railway Terminals. F-7 Enhancement of Rolling Stocks. F-8 Nueva Palmira Port Branch Construction.
4) Air Transport:
A-1 International Airports Facilities Development. A-2 Local Airports Facilities Development. A-3 Air Route Facilities Development. A-4 GSE Enhancement.

4.CONDITIONS AND DEVELOPMENT IMPACTS
(Condition)
Elevation of water level in the early mid of 90s by the Yacireta Dam Construction. (Project N-5, N-7, F-2, F-3, F-4)

(Development Impacts)
1) Improvement of inter city access time by the trunk road development.
2) Promotion of agriculture activities by the rural road development.
3) Promotion of export by the improvement of export corridor facilities.

5.TECHNICAL TRANSFER
Transfer of transport related data base.

III. PRESENT STATUS OF STUDY RESULTS

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

(Description)
The short term (-1995), mid term (-2000) and long term (-2010) road development program based on the M/P network is going to be approved by the Cabinet. The various financial assistences are requested along with the program.

1991.12 The improvement of the National Highway No.3 Limpio-San Estanislao (127km) for World Bank Loan.

1991.12 The official request to dispatch Japanese experts to the MDPC as an activity to enhance the transport information secter was sent.

(FY1994 Domestic Survey)
The F/S of the trunk road was concelled offjcially because of the environmental problem in 1994.

(FY1995 Domestic Survey)
Preliminary survey was carried out for the secondary highway development between Carmen and Villarrica. For the other trunk roads development are now carrying on by the financing from ADB and so on. For the improvement of surburban railway, now the investigation work is on the way to implement by means of BOT process.

(FY1995 Overseas Survey)
Various plans recommended by this M/P have been integrated in the shape of the National Plan of Transportation Policy.The Department of Integrated Planning of Transportation has been newly established in OPIT of the Ministry of the Department will decide the order to implement various plans.
As each of these plans are very important and with high priority for whom may concerns to road, marine and railway transportations , each performances should be evaluated and reported additionally, one after another.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②

{M/P,Basic Study,Other}

和名 総合交通計画

PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1995
Revised Mar.1996

CSA PRY/S 216/93

I. OUTLINE OF STUDY

1.COUNTRY: Paraguay

2.NAME OF STUDY:
The Establishment of Educational Television Broadcasting Network

3.SECTOR:
Communications & B/Broadcasting

4.REFERENCE NO.:

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

6.COUNTERPART AGENCY:
Ministry of Education & Culture
National Administration of Telecommunication (ANTELCO)

7.OBJECTIVES OF STUDY:
To draw up a Master Plan on the establisment of educational television broadcasting Network throughout the country and to carry out a Feasibility Study of the Priority Project.

8.DATE OF S/W: 1992/4

9.CONSULTANT(S):
Integrated Technology Inc.
Yachiyo Engineering Co., Ltd.

10.STUDY TEAM

No.of Members 11

Period Nov.1992-Aug.1993(11 months)

Total M/M	Japan	Field
56.85	21.78	35.07

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:
None

12.EXPENDITURE

Total	247,124 (¥'000)
Contracted	224,330

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA:
Whole areas of the country

2.PROJECT COST (US$1,000) (US M$)

		Local Cost	Foreign Cost	
M/P	1)			
	2)			
F/S	1)	45,400	11,900	33,500
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

Work 1
Construction of a television transmitting station in Asuncion, which covers 40% of Paraguayan population, and supplementation of existing studio facilities(US$4.7 million)

Work 2
Construction of the ETV Center in Asuncion and construction of stations in three major regional cities, which increases total population coverage to 62%(US$19.3 million)

Work 3
Construction of remaining nine regional transmitters of 13 1st-plan station, which increases total population coverage to 84%(US$10.8 million)

Work 4
Construction of ten 2nd-plan regional stations, which increases total poulation coverage to 94%, and construction of studios in major regional stations(US$10.6 million)

Imp. Period: 1995.1-1995.12 | 1997.7-1998.12 | 2000.7-2001.12

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes/No

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

Conditions and Development Impacts:
1)The Priority Project of creating an educational television broadcasting network is designed to meet the basic human needs forming the basis of the educational system composed of primary education and education for the socially-disadvantaged. For Paraguay, a country not endowed with significant natural resources, the education or the development of her human resources, although it will take time, is the only way to be able to stand on an equal footing with other nations in the future.
2)As the Master Plan will target education, the principal operational source of budget should come from National Treasurey. However, in order to reduce the burden shared by the Government, it is forecast that in the later part of the Master Plan period, revenue from commercials will be able to almost cover the operational expenses.

5.TECHNICAL TRANSFER
To be given guidance on program selection, efficient program production methodology and evaluation methodology.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- ☐ Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ○ Implementing
  - ○ Processing
- ■ Promoting
- ☐ Delayed or Suspended
- ☐ Discontinued or Cancelled

(Description)
A large initial investment will be required to implement the Master Plan to create an educational television broadcast network. However, in light of the current development budget of the Government and the expansion of the ANTELCO's investment, it will be difficult to obtain such a large amount for capital investment. Particularly, the implementation of the Priority Project should be financed by grants or very soft loans, so as to ease the repayment burden as much as possible.
The Priority Project is most essential in establishing the educational television broadcasting service in Paraguay. In particular, the implementation of work 1 to construct transmitting facilities in Asuncion has an important meaning in securing the TV channel, which the Paraguayan Government has retained for years for educational television in the capital city. With the Asuncion station put into service, some 40% of the entire population of the country will be able to receive education through the television service. Consequently, Work 1 of the Priority Project should be taken up for implimentation at an earliest possible date.

(FY1995 Domestic Survey)
No additional information.

(FY1995 Overseas Survey)
The Minister of Education approved to request the cooperation for this Project to the Government of Japan on 20th June,1994.
And the officers in charge of the Ministry of Education explained the necessity and the priority of this project to the Parliament and asked to allocate national budget to materialize a part of the Project. Simultaneously, negatistions with the investors are also commenced.

2.MAJOR REASONS FOR PRESENT STATUS
Preparations for the establishment are now being promoted.

3.PRINCIPAL SOURCE OF INFORMATION
①, ⑥ Tele education Dep., Ministry of Education(Lic Jorge Ernesto Garbett)

和名 教育テレビ放送網整備計画調査

{M/P+F/S}

PROJECT SUMMARY (M/P)

Compiled Oct.1995
Revised Mar.1996

CSA PRY/A 103/94

I. OUTLINE OF STUDY

1.COUNTRY Paraguay

2.NAME OF STUDY
Integrated Agricultural and Livestock Development Project at Lower Chaco

3.SECTOR
Agriculture/(Agriculture in)General

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Ministry of Agriculture and Livestock

7.OBJECTIVES OF STUDY
Formulation of the Master Plan on agricultural and livestock farming development at the Presidente Hayes Prefecture (with an area of approx.73,000sq.km) in southern Lower Chaco district.

8.DATE OF S/W 1990/11

9.CONSULTANT(S)
Japan Agricultural Land Development Agency

10.STUDY TEAM
No.of Members 13
Period Oct.1991-Mar.1994(29 months)

Total M/M	Japan	Field
127.72	53.18	74.54

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY

12.EXPENDITURE (¥'000)
Total
Contracted 402,405

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Presidente Hayes prefecture (with an area of 73,000sq.km, location Lat.22°10' to 25°20'S, Long.57°10' to 60°45'W) at the southern end of Chaco District

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)	714,570	159,320	555,250
2)			

3.CONTENTS OF MAJOR PROJECT(S)

1)Support the research workd of agricultural and livestock farming industry:
Experiment station of livestock farming 1, Stock farm 1, Research center 1, Diffusing station 4, Cooperation society of agricultural equipment 1, Seed/Seedling supplying facility 1, etc.

2)Infrastructure improvement for agricultural and livestock farming society:
Improvement of trunk roads (701km), Preparation of farm (177,00ha) and Meadow (479,000ha), Preparation of irrigation waterway and drainage (43,000ha) and maintenance of the farmland (17,000ha)

3)Facilities of social infrastructure:
7 clinics, 37 educational facilities, 4 sets of electrification, 9 sets of living water supplying facilities and 3,780 residential housings

4)Facilities of distribution and/or processing:
3 cotton gins, 4 citrus selection facilities, 6 factories for dairy products, 5 meat processing and 1 cooperative forwarding facility for fruits and vegetables

4.CONDITIONS AND DEVELOPMENT IMPACTS

[Conditions]

1)Preparation for the implementation of this M/P project including the financing should be carried on quickly.

2)it is necessary condition to acquire the ownership of the land for the settlement in advance.

3)It is indispensable to proveide various supporting systems to make immigrantspossible to operate their farming successfully as the foundatin of the development programs.

4)It is necessary to diversify the agricultural and livestock farming products and processed goods in order to accomplish the Master Plan by means of a certain pilot-scaled enterprises.

[Development Impacts]

1)Increase of the products: Compare with 1991, increasing ratio of various products are estimated as Peanuts 71%, Cotton 7%, Citrus 38%, Tropical friuts 13%, Cattle 26% and Sheep/Goat 50%.

2)Increase of the employment: 6,500 opportunities of employment per annun.

3)Contribution to solvency of the problems connecting peasants and making the rural life more stable.

5.TECHNICAL TRANSFER
Cooperation to make the report
Seminar for technical transfer at the site
Training in Japan (2 persons)

III. PRESENT STATUS OF STUDY RESULTS

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

(Description)
At present, 1.5 yearas after the completion of this survey works, it seems to be on the stage of that an official request for implementation of the Feasibility Study in connection with the integrated agricultural and livestock farming development plan for Pozo Colorado District and Campo Azeval District is going to be submitted to the GOvernment of Japan.

(FY 1995 Overseas Survey)
In order to obtain various data, a dam has been constructed and reserved water during rainy season.
The pilot farm has been irrigatel by the water from the dam to cultivate winter wheat and other crops.
This test was planned to comlete on 1995, however, due to pay much environmental and ecological cautions, it will be extended until 1996. it is planned to continue various experimental works including the research for the other crops under this Project.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②

相名リーア、チャコ地域農牧業総合開発計画

{M/P,Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

Compiled Oct.1995
Revised Mar.1996

CSA PRY/S 203/94

I. OUTLINE OF STUDY

1.COUNTRY: Paraguay

2.NAME OF STUDY: Solid Waste Management for Metropolitan Area of Asuncion

3.SECTOR: Public Utilities/Urban Sanitation

4.REFERENCE NO.:

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

6.COUNTERPART AGENCY: Ministry of Health and Welfare, Union of Autonomy of the Metropolitan Area (AMUAM)

7.OBJECTIVES OF STUDY:
(1)Drau up the basic plan to treat waste material
(2)Feasibility Study for the project with the top priority

8.DATE OF S/W: 1993/1

9.CONSULTANT(S): Kokusai Kougyo Co., Ltd.

10.STUDY TEAM
No.of Members 11
Period Jun.1993-Aug.1994(14 months)

Total M/M	Japan	Field
60.17	25.50	34.67

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:
1)Analysis of Waste Material 2)Topographic Survey 3)Geological Survey 4)Environmental Survey 5)To make VIDEO for the Education of

12.EXPENDITURE
Total 274,929 (¥'000)
Contracted

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Asuncion Metropolitan Zone:Waste Collection
Chaco-i Proposed Site :Final Disposal
Av. Madam Linch :Transit Base

2.PROJECT COST (US$1,000)

		Local Cost	Foreign Cost	
M/P	1)			
	2)			
F/S	1)	4,726	161	4,565
	2)	11,060	1,594	9,466
	3)	5,224	1,282	3,942

3.CONTENTS OF MAJOR PROJECT(S)
1)Improvement of waste collection (at 14 autonomies outside of Asuncion Metropolis).
2)Improvement of waste collection (at the city of Asuncion).
3)Construction of the transit base at Av. Madam Linch.
4)Construction of the disposal for wider area.

Imp. Period: 1996. 1995. -1996. 1996.

4.FEASIBILITY AND ITS ASSUMPTIONS
Feasibility: Yes/No

EIRR1)		FIRR1)	10.67
EIRR2)		FIRR2)	56.95
EIRR3)	18.00	FIRR3)	5.10

Conditions and Development Impacts:
[Development Impacts]
1)Level up of the public sanitation
2)Increase of the revenue from tour business
3)Increase of the chance of employment
4)Increase of the value of estate
5)Protection of the contamination of underground water

5.TECHNICAL TRANSFER
1)JICA's training in Japan for two counterparts.
2)Survey team held a seminar of waste disposal at the site.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- [ ] Completed or in Progress
- [■] Promoting
- ○ Completed
- ○ Partially Completed
- [ ] Delayed or Suspended
- ○ Implementing
- ○ Processing
- [ ] Discontinued or Cancelled

(Description)
Authorities concerned in Paraguay (Ministry of Health and Welfare, SENASA and 15 autonomies of the city of Asuncion and the surrounding area) eagerly wish to implement this project. They wish to have grant aid for the finance to commence the project implementation, and simultaneously to have technological cooperation by the Japanese experts in order to improve their organization, technologies and the staffs.

(FY 1995 Overseas Survey)
The implementing schedule of this project is now drawing. SENASA will settle the regulations with regard to this issue, and AMUAM will establish the Urban Cleaning Office.
Additionally, SENASA will join with a consultation organization of the Presidential Office to reseach the socio-economical impacts of this Project, and will construct a disposal treatment facility for wider area at Chaco-i.
SENASA is going to publish a manual book for reduction and recycling of the disposals and the wasted materials from families, and distribute the manual book for each families in the municipality.And also to research the components of disposal in order to apply the results to this project and to introduce to the other cities and districts of the country. Above actions are considered as for a part of the National Plan. At present, it is still on the promoting stage such as designing, financing and providing the tender documents.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②

和名 アスンシオン首都圏廃棄物処理総合計画調査

[M/P+F/S]

PROJECT SUMMARY (F/S)

Compiled Mar.1990
Revised Mar.1996

CSA PER/A 301/77

I. OUTLINE OF STUDY

1.COUNTRY: Peru

2.NAME OF STUDY: Proyecto de la construccion del complejo pesquero del centro

3.SECTOR: Fisheries/Fisheries

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY:

7.OBJECTIVES OF STUDY:

8.DATE OF S/W: /

9.CONSULTANT(S):

10.STUDY TEAM

No.of Members

Period Oct.1976-Dec.1976(2 months)

Total M/M	Japan	Field

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:

12.EXPENDITURE

Total: 56,672 (¥'000)

Contracted:

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Ventanilla

2.PROJECT COST (US$1,000)

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

3.CONTENTS OF MAJOR PROJECT(S)

-Planning of proper scale facilities and their arrangement in fishing base
-Basic design of the structure
-Estimate of construction cost and period
-Economic and financial analysis

Imp. Period:

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

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

Conditions and Development Impacts:

The proportion of fish for processed use accounts for large part of fishery of Peru.
Production of fish for food as a supplyer of protein will be promoted by the effective operation of comprehensive fishing base.

5.TECHNICAL TRANSFER:

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)

No information is available.

(FY 1993 Overseas Survey)
-Financial aid has been requested to the Government of Japan on December, 1990(waiting for reply).
-It is ready to commence the implementation whenever the fund becomes available.
-Following effects are expected on this Project :
1)Supply enough sea foods to 6.5 millions of inhabitants in the metoropolitan area,
2)Export sea products and earn foreign exchange,
3)Rural development by means of the establishment of a new fishing port, and
4)Create new employment opportunities.

(FY1995 Domestic Survey)
No additional information.

(FY1995 Overseas Survey)
- F/S commenced on 1988 and completed on 1990.
- The grant aid has been requested based on the F/S, and waiting for the response.
- The implementation of the project is delayed because of the financial problem.
- This project is very important and eagerly wished to materialize.
- It is expected much more technical transfer in the field of harbor industry, since technological innovation of fisheries industry becomes necessary.
- It is considerd followings as for the subjects in the near future:-
  1) Construction of new facilities at a fishing port near by Lima.
  2) Improvement of the Port of Callao, and
  3) Construction of new fishing ports at the central part of the country.

2.MAJOR REASONS FOR PRESENT STATUS:

3.PRINCIPAL SOURCE OF INFORMATION

①、② Empresa Nacional de Puertos S.A.

和名 中部漁業総合基地建設計画

{F/S,D/D}

PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1986
Revised Mar.1996

CSA PER/S 201B/83

I. OUTLINE OF STUDY

1.COUNTRY: Peru

2.NAME OF STUDY: Development Project of the Port of Callao

3.SECTOR: Transportation/Port

4.REFERENCE NO.:

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

6.COUNTERPART AGENCY: Empresa Nacional de Puertos S.A.

7.OBJECTIVES OF STUDY:
-Formulation of a Master Plan through 2000
-Formulation of a Short-term Development Plan through 1987

8.DATE OF S/W: 1982/4

9.CONSULTANT(S): Overseas Coastal Area Development Institute

10.STUDY TEAM

No.of Members 12

Period Jul.1982-Sep.1983(15 months)

Total M/M	Japan	Field
101.93	75.80	26.13

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY: None

12.EXPENDITURE

Total	233,886 (¥'000)
Contracted	280,126

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Lima Capital Area (metropolitan area)

2.PROJECT COST (US$1,000) (US$1=257Yen)

		Local Cost	Foreign Cost	
M/P	1)	553,792	193,874	359,918
	2)			
F/S	1)	99,634	29,634	
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

<M/P>
The main purpose of the Short-term Plan through 1987 is containerization and provision of enough facilities.
- container berths 4 new berths
- grain berths 2 new berths
- general cargo berth 1 new berth, 2 renovated berths
- petroleum berth 1 new berth
- breakwater, basin, handling equipment

<F/S>
To handle 8.4 million tons in 1987, the following facilities will be prepoared.
The main purpose of the Short-term Plan through 1987 is containerization and provision of enough facilities.
- container wharf 1 berth with -12m depth and with 15ha area
- grain wharf 1 berth with -12m depth (for 60,000 DWT)
- container crane 2 cranes
- handling machines 2 machines

Imp. Period: 1984.6-1987.12

4.FEASIBILITY AND ITS ASSUMPTIONS — Feasibility: Yes

EIRR1)	19.53	FIRR1)	35.31
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

[Prerequisites]
<F/S>
- Project life is 25 years from 1982 until 2006.
- Port tariff will be as it is in 1982.
- Prices will be in 1982.

[Impact]
<M/P, F/S>
The project will solve the problem of long waiting time that occurs both due to superannuation and shortage of the port facilities of Callao and due to the defective handling operation system. It will also help prepare the port to handle containers and larger ships.

5.TECHNICAL TRANSFER

OJT of counterparts on the method of Port Planning and F/S.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)
Delayed after the completion of F/S due to the problem of external debt accumulation.

(FY1991 Overseas Survey)
The Peruvian government assigns high priority to the proposed project, and plans to resubmit the applicaton for Japanese aid during 1992 after reducing the scale of the project.

(FY1992 Overseas Survey)
The port facility of handling the volume of cargoes is expected to be beyond the future volume of cargoes.

(FY 1993 Overseas Survey)
Still under the investigation to revise the master plan to make it more applicable for the present situations, such as the provision for the vessels of full-container type and of in bulk type cargoes, and to implement the feasibility study.

(FY1994 Domestic Survey)
The Project proposed was not implemented in 1980's. However,since the President Fujimori came to power,the Gov't of Peru put high priority on the Project and ENAPU conducted the fre-F/S based on the short-term plan of JICA Study. The Gov't of Pecu requested the Yen Loans from the Gov't of Japan based on the pre-F/S. The Gov't of Japan pledged to examine the Yen Loan and OECF carried out SAPROF(Special Assistance for Project Formation) Study to formulate the project that was eligibale for OECF financing since Oct.1994. this Study will be completed by the end of this Dec..

(FY1995 Domestic Survey)
No additional information.

(FY1995 Overseas Survey)
Financial assistance is requested to the Government of Japan. Expecting the OECF aid.

2.MAJOR REASONS FOR PRESENT STATUS

-Deterioration of economic conditions and accumulation of external debts.
-Political and social destabilization in recent years.

(FY1992 Overseas Survey)
A request was made to the Instituto Nacional de Planificacion for financing the project. However, it was not yet accepted.

3.PRINCIPAL SOURCE OF INFORMATION

①, ② Empresa Nacional de Puentos S.A.

和名 カジャオ港整備計画

{M/P+F/S}

PROJECT SUMMARY (F/S)

Compiled Mar.1990
Revised Mar.1996

CSA PER/A 302/84

I. OUTLINE OF STUDY

1.COUNTRY: Peru

2.NAME OF STUDY: Chancay-Huaral Valley Rehabilitation Project

3.SECTOR: Agriculture/(Agriculture in)General

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: Instituto nacional de ampliacion de la frontera agricola

7.OBJECTIVES OF STUDY: Agricultural development

8.DATE OF S/W: 1983/12

9.CONSULTANT(S): Naigai Engineering Co., Ltd.
Chuo Kaihatsu International Corp.

10.STUDY TEAM

No.of Members 12
Period Feb.1984-Mar.1985(14 months)

Total M/M	Japan	Field
55.51	23.31	32.20

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY: Soil Analysis

12.EXPENDITURE

	(¥'000)
Total	167,369
Contracted	154,361

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Chancay-Huaral valley, 80km from Lima

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	41,474	18,890	22,584
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

Irrigated area : 20,200 ha
Intake facilities : 8 places
Irrigation canal : 175km
Pond : 18 places
Drainage canal : 70 km Underdrainage : 407 km
Road : 174 km
Dike : 14 km
The cost above is estimated in 1984 prices.

Imp. Period: 1985.4-1992.10

4.FEASIBILITY AND ITS ASSUMPTIONS: Feasibility: Yes

EIRR1)	17.80	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

Benefits:

Increase of agricultural products	18,600(1,000US$/year)
Reduction of O/M costs	101(1,000US$/year)
Improvement of roads	184(1,000US$/year)

5.TECHNICAL TRANSFER
1.Acceptance of 2 trainees
2.OJT
3.Maintenance and management plan(draft)

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [■] Completed or in Progress
  - (●) Completed
  - ( ) Partially Completed
  - ( ) Implementing
  - ( ) Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)

The priority project(rehabilitation of irrigation and drainage facilities) proposed in the F/S was implemented by the grant from the Japanese government. 14,400 ha of farm land was developed in two stages.

Nov.1987 Request for grant aid
Jan.1989 B/D (Naigai Engineering Co.,Ltd.)
Jun.1989 grant aid E/N 1984 million Yen)
Jul.1989 D/D (Naigai Engineering Co.,Ltd.)
Jan.1990 - Mar.1991 Stage 1 construction
Oct.1990 Grant aid E/N (691 million yen)
Feb.1991 - 1992 Stage 2 construction

(FY1991 Overseas Survey)
No additional information.

(FY1994 Domestic Survey)
Jul.1991 Suspended due to the act of terrorism
Aug.1992 Re-opening of the project
Mar.1993 Completion of the Stage 2 construction

(FY1995 Domestic Survey)
The construction work of Phase-II was once suspended due to the dangerous terrorists' activity, however, it was completed on 1993.

(FY1995 Overseas Survey)
At present, necessary measures are carrying on to request the detailed design and the implementation at Esperanza region which has been planned by the F/S of this project.

2.MAJOR REASONS FOR PRESENT STATUS

The project was given top priority for early implementation to raise the self-sufficiency of basic foods and to increase exports.

3.PRINCIPAL SOURCE OF INFORMATION
①、②

和名 チャンカイ・リラル谷かんがい復旧計画

{F/S,D/D}

PROJECT SUMMARY (Basic Study)

Compiled Mar.1990
Revised Mar.1996

CSA PER/S 501/86

I. OUTLINE OF STUDY

1.COUNTRY: Peru

2.NAME OF STUDY: Topographic Mapping Project for Satipo Area, Department of Junin

3.SECTOR: Social Infrastructu/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: 1977/1

9.CONSULTANT(S): International Engineering Consultants Association

10.STUDY TEAM

No.of Members 17

Period Jun.1977-Feb.1987(115 months)

Total M/M	Japan	Field

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:

12.EXPENDITURE

Total 957,287 (¥'000)

Contracted

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Satipo Area(20,000 sq.km.)

2.PROJECT COST

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

3.CONTENTS OF MAJOR PROJECT(S)

1)Aerophotos
Scale: 1/60,000
Coverage: 31,259 sq.km
2)Topographic maps
64 plates, covering 12,070 sq.km

4.CONDITIONS AND DEVELOPMENT IMPACTS

Maps will be utilized as basic information for development planning.

5.TECHNICAL TRANSFER:

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

- [■] In Progress or In Use
- [ ] Delayed
- [ ] Discontinued

(Description)

(FY1991 Overseas Survey)
The maps are highly appreciated. The National Geographic Institute hopes for further Japanese assistance in land use mapping, automated drawing system, and so on.

(FY1994 Domestic Survey)(FY1995 Domestic Survey)
No additional information.

(FY1995 Overseas Survey)
The performances of this study project are enrolled into the map of whole country and are utilized for the planning works of enterprises concerned by the Presidential Office, the Ministry of Agriculture, etc.
The aerial photographs are utilized to draw the map of the whole country in scales of 1 & 50 and 100 thousand.
The measures are taken to make it possible to print these maps automatically. It is desirable to computerire these mapping works in future.

2.MAJOR REASONS FOR PRESENT STATUS:

3.PRINCIPAL SOURCE OF INFORMATION

①, ②

和名 ペルー国サティポ地区地形図作成事業

{M/P,Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1990
Revised Mar.1996

CSA PER/S 202B/86

I. OUTLINE OF STUDY

1.COUNTRY Peru

2.NAME OF STUDY
Development Project of Jorge Chavez Lima-Callao International Airport

3.SECTOR
Transportation/Air Transportation & Airport

4.REFERENCE NO.

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

6.COUNTERPART AGENCY
Ministerio de Transportesy Communicaciones

7.OBJECTIVES OF STUDY
To make up Master Plan(2005).
To examine technical, economic and financial feasibility of the short-term(1995) development project.

8.DATE OF S/W 1984/11

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

10.STUDY TEAM
No.of Members 8
Period Jul.1985-Jun.1986(12 months)

Total M/M	Japan	Field
43.63	33.23	13.40

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
None

12.EXPENDITURE

Total	129,645 (¥'000)
Contracted	116,180

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Existing Lima Int'l Airport in Lima, Peru

2.PROJECT COST (US$1,000) (US$1=240Yen)

M/P	1)	99,022 Local Cost	38,229 Foreign Cost	60,773
	2)			
F/S	1)	13,700	3,800	9,900
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
<M/P>
The Master plan was formulated to meet the demand of 2005 and the improvement measures to be taken under the master plan are summarized as follows;
1)Grading of Runway Strip 2)Bituminous overlay of Runway 3)Bituminous overlay of Taxiway and construction of a high-speed exit taxiway 4)Expansion of Apron with concrete pavement 5)Expansion of main terminal building and construction of satellites 6)Relocation of export cargo terminal and customs office 7)Construction of a Airport administration building 8)Relocation of fire station 9)Expansion of car parks 10)Replacement of VOR aid NDB, inreduction of MLS, and installation of weather data recorder.
<F/S>
The short-term development plan of the airport was prepared, to solve the problems of the existing facilities and also to meet the demand of 1995. The improvement measures for the short-term development plan are summarized as follows.
1)Bituminous overlay of Runway(3,507m x 45m) 2)Construction of a high-speed exist taxiway 3)Expansion of Apron(31 spots) 4)Expansion of Main terminal building and constructio of satellites(40,000m2) 5)Relocation of export cargo terminal and customs office(14,000m2) 6)Expansion of Car parks(1,370 cars) 7)Replacement of VOR and NDB, introduction of PAPI, upgrading of ALS to Cat-II.

Imp. Period: 1987. -1995.

4.FEASIBILITY AND ITS ASSUMPTIONS Feasibility: Yes

EIRR1)	33.60	FIRR1)	4.10
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
[Conditions]<M/P> Air transport demand forecast and airport facility requirement in 2005 are summarized as follows. 1)Int. and Dom. Passenger:2,000,000, 2,360,000 2)Runway : 3,507m x 45m 3)Apron:34 spots 4)pax. terminal Bldg.:60,000 m2 5)Int. Cargo Bldg.:25,000m2
<F/S> 1)Inflation:Not considered 2)Exchange rate:US$1.0=Yen 240 3)Analisis period:20 years from 1991 to 2010
[Development Impacts]<M/P> 1)Secure air safety 2)Maintain a service level of international standard 3)Forein exchange earning 4)Time saving effects of air passengers 5)Employment effects and Economic multifier effects <F/S> 1)Secure air safety by replacement of navigation facilities 2)Maintains service level of international standard by expansion of terminal facilities,apron etc. 3)Net increase of tourisminconme by foreign passengers 4)Airport revenue increments by foregin aircraft and foreign passengers 5)Employment effect. Economic multiplier effect and adleration of the national economic development.

5.TECHNICAL TRANSFER
Two counterpart officials were familiarized with the methods and procedures of F/S.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- ■ Completed or in Progress
- ○ Completed
- ○ Partially Completed
- ○ Implementing
- ● Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)
Delayed after the completion of F/S.

(FY1991 Overseas Survey)
<M/P> The proposals of the study was incorporated into the national air navigation plan. Due to the reduction of technical personnel and budget allocations, steps necessary for the plan realization has been slowed down.
<F/S> The Ministry still assigns high priority to the proposed project, and hopes to revive its implementation by undertaking detailed design with external assistance.

(FY1992 Overseas Survey)
The F/S is discontinuation.
The reduction of budget has slowed down the project. The Minisry, however, still assigns high priority to the project and hopes to revive its implementation by under taking the F/S and the D/D with external assistance.

(FY1993 Overseas Survey)
Since the existing master plan becomes not fit for the present situations, it will be necessary to amend the master plan posed on the present circumstances, and to carry out the survey works in order to improve the access roads to the Airport.

(FY1994 Domestic Survey)
The government has succeeded in acquiring a project loan from IBRD in the amount of US$150 million for the rehabilitation of Lima International Airport runway. Airport engineering consultants are being selected for design and construction supervision.

(FY1995 Domestic Survey)
To draw up the M/P of the terminal for passengers by the financial aid from the US Trade and Development Agency of U.S. Government has been decided to be commenced from September, 1995. The construction of the runway will be financed by IBRD. At present, selecting an adequate consultant for the construction administration.

(FY1995 Overseas survey)
JICA's F/S is not better than the ICAO's master plan of this project on 1976. It is necessary to reinvestigate the M/P+F/S to fit in the present circumstances. And supplementary, the survey for improvement of runway should be carried out.

2.MAJOR REASONS FOR PRESENT STATUS
-Accumulation external debts and deterioration of the economy.
-Political and social destabilization.

3.PRINCIPAL SOURCE OF INFORMATION
①, ② Ministry of Transport and Communications

和名 リマ国際空港整備計画

{M/P+F/S}

PROJECT SUMMARY (M/P)

Compiled Mar.1990
Revised Mar.1996

CSA PER/S 101/87

I. OUTLINE OF STUDY

1.COUNTRY: Peru

2.NAME OF STUDY: Disaster Prevention Project in the Rimac River Basin

3.SECTOR: Social Infrastructu/River & Erosion Control

4.REFERENCE NO.:

5.TYPE OF STUDY: M/P

6.COUNTERPART AGENCY: Instituto Nacional de Defensa Civil (Institute of National Defence)

7.OBJECTIVES OF STUDY: To formulate a Master Plan for disaster prevention in Rimac river basin

8.DATE OF S/W: 1986/11

9.CONSULTANT(S): Nippon Koei Co., Ltd.

10.STUDY TEAM

No.of Members 9

Period Feb.1987-Mar.1988(14 months)

Total M/M	Japan	Field
42.17	20.80	21.37

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY: None

12.EXPENDITURE

Total	157,531 (¥'000)
Contracted	126,518

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Rimac river basin 3,500 sq.km

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
	1) 84,640		
(US$1=130Yen)	2)		

3.CONTENTS OF MAJOR PROJECT(S)

Major recommendations:
1) To carry out a feasibility study soon
2) To implement non-structural measures
- Establishment and implementation of land use regulation
- Establishment of a coordinated administrative organ to implement the overall watershed management
- Establishment of an implementing agency of disaster prevention
structural measures
- Training of engineers

4.CONDITIONS AND DEVELOPMENT IMPACTS

Structural measures against debris flow disaster in 7 tributaries and inundation disaster in urban areas will reduce the human and economic losses.

5.TECHNICAL TRANSFER

1) Technical seminar on disaster prevention in Peru
2) Two counterparts inspected disaster prevention facilities in Japan.

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

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

(Description)

Owing to the political destabilization and the serious constraints in public finance, it is extremely difficult to find funds for implementing the proposals of the study.

(FY1991 Overseas Survey)
The process of specifying areas for feasibility study was suspended after the Japanese expert who had been assigned for this purpose left the country because of the political and social destabilization. The National Institute of Civil Defense assigns high priority to the implementation of the proposals of the study.

(FY1992 Overseas Survey)
The maps and basic data have been utilized in the determination of priority for emergency works.

(FY1993 Oversias Survey)
Under the present economic situation, it will be no possibility to implement this project unless devide into several stages and carry out one by one, since it is too expensive to repair the collapsed portion according to the recommendation made by Japanese Side.
The maps and basic data, which come out as the results of the survey works, are very useful for the disaster prevention in this river basin.
Dispatch of experts who will manage and administrate the desaster prevention in this river basin are requested.

(FY1994 Domestic Survey)(FY1995 Domestic Survey)
No additional information.

(FY1995 Overseas Survey)
- Following to the indications of this master plan, INDC is implementing the disaster pretection works at the dangerous points by their own detailed plans since this project did not provide any detailed designs. These works were designed and requested to INDC by each autonomies.
- Oct., 1995, a project conforming team of JICA visited the Peru and conformed a F/S project of disaster protection at the upper stream of the Atarjea.
- The technologies introduced by this project is very high in the costs. So, it is difficult to apply. After that, in Peru, a new bank protection method has been developed, and this method is very effective, even now.

2.MAJOR REASONS FOR PRESENT STATUS

The serious security problem and financial difficulty in Peru make it extremely difficult to promote the project(FY1991).

3.PRINCIPAL SOURCE OF INFORMATION

①, ② Instituto Nacional de Defensa Civil

和名 リマック川防災対策計画

[M/P,Basic Study,Other]

PROJECT SUMMARY (F/S)

Compiled Mar.1991
Revised Mar.1996

CSA PER/S 301/89

I. OUTLINE OF STUDY

1.COUNTRY: Peru

2.NAME OF STUDY: Improvement of Sewerage System in Southern Part of Lima

3.SECTOR: Public Utilities/Sewerage

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: Servicio de agua potable y alcantarillad de Lima (SEDAPAL)

7.OBJECTIVES OF STUDY: Improvement of sea water contamination around the Lima and environmental health condition.

8.DATE OF S/W: 1989/11

9.CONSULTANT(S): Nippon Jogesuido Sekkei Co., Ltd.

10.STUDY TEAM

No.of Members 9

Period Apr.1989-Mar.1990(12 months)

Total M/M	Japan	Field
58.19	24.14	34.05

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY: Topographic Survey, Geological Survey

12.EXPENDITURE

Total	185,557 (¥'000)
Contracted	172,727

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: 16 southern districts of Lima City (122 sq.m, pop. 1.8 million)

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	98,301,000	50,857,000	47,444,000
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

The project proposes to treat the raw sewage from the Surco drainage canal and to utilize treated water for agricultural and other purposes in San Bartolo Plains.

-Intake Facility

-Transmission Facility

-Grit Chamber Facility

-Sewerage Treatment Plant

Imp. Period: 1990. -1995.

4.FEASIBILITY AND ITS ASSUMPTIONS — Feasibility: Yes/No

EIRR1)	9.67	FIRR1)	1.15
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

Development Impacts:

1.The proposed sewerage system will result in benefits to individuals in the service area, such as reduction in the risk and incidence of water-borne diseases.

2.Investments in sewerage facilities will raise the value of land

Note: The financial B/C ratio is 1.21.

5.TECHNICAL TRANSFER

1)OJT for counterparts on the planning and design method of transmission line, treatment and feasibility study

2)Acceptance of trainees to the JICA counterpart training program

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)

SEDAPAL, the executing agency of this project, is aware of the importance of this project, but does not have the financial means to implement it.

(FY1991 Overseas Survey)
The Peruvian government submitted the application for grant aid from Japanese government in June 1990.

(FY1992 Overseas Survey)
1) The Peruvian government submitted the application for Grant Aid from Japanese government in 1991. It was not yet realized. However, the Peruvian government is hopinf for Japanese financial aid.
2) The archaeological evaluation study and the study of agricultural development in the San Bartolo pampas were completed.

(FY1993 Overseas Survey)
-Waiting for grant aid from Japanese Government.
-JICA's coopérations are requested for the methods of
1)estimation in order to get financing,
2)official notice to raise financing, and
3)provision of the tender documents.
-This project aims :
1)Reduction of contaminating materials,
2)Protect coastal ecosystem and development of tourist enterprise, and
3)Prevention of spread the deseases caused by the headwaters.
It coincides with the line and the target of the National Development Plan.

(FY1995 Domestic Survey)
No additional information.

(FY1995 Overseas Survey)
- Dec., 1995, after revising a part of contents of F/S, such as the location of the treatment plant and expansion of the capacity of San Juan Treatment plant, the loan has been officially requested.
- Officers in charge of infrastructure at the Presidential Office are drawing the general sewage treatment plan for Lima Metropolitan Area including the performances of this project.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION

①, ② SEDAPAL

和名 リマ市南部下水道整備計画

{F/S,D/D}

PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1992
Revised Mar.1996

CSA PER/A 201B/90

I. OUTLINE OF STUDY

1.COUNTRY: Peru

2.NAME OF STUDY: Desarrollo Pesquero y Construccion del Puerto Pesquera en la Costa Central

3.SECTOR: Fisheries/Fisheries

4.REFERENCE NO.:

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

6.COUNTERPART AGENCY: Ministerio de Pesqueia (MIPE) de Planification Y Presuquesto

7.OBJECTIVES OF STUDY: To establish the short-term plan for a fishing port construction and to study its feasibility

8.DATE OF S/W: 1988/12

9.CONSULTANT(S): Nippon Tetrapod Co., Ltd.
System Science Consultants
Joint Venture/

10.STUDY TEAM

No.of Members 9

Period Mar.1989-Dec.1990(18 months)

Total M/M	Japan	Field
49.84	31.68	18.16

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
- Marine Conditions Study
- Social and Economical Conditions Study

12.EXPENDITURE

Total 189,615 (¥'000)

Contracted

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Ventanilla

2.PROJECT COST (US$1,000) US$1=144 yen

		Local Cost	Foreign Cost	Total
M/P	1)	165,220	87,206	78,014
	2)			
F/S	1)	37,182	24,844	12,338
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

<M/P>The proposed fishing port in Ventanilla is planned as a fishery base for supplying fish products to residents in the central district of Peru, aiming at moving and expanding the functions of the present fishing port in the Callao Port. The facilities of the fishing port will be provided to meet the landing of 88,788 tons in the target year of 2005.

i) Basic facilities
- -4.0 m quay (480 m in length)
- -7.5 m quay (91 m in length)
- -2.0 m quay (510 m in length)

ii) Function facilities
- Freezer, cold storage facilities
- Ice making machine
- Fish market, sorting facilities
- Other facilities

<F/S> The purpose of the urgent plan is to develop Ventanilla fishing port having basic and functional facilities which will accomodate fishing boats of under 300GRT, with view to transfer fishing port function of existing Callao Port to ventanilla fishing port.

1) basic Facilities

Southern Breakwater:	355m
Northern Breakwater:	320m
Quay Wall(-4.0):	345m
Revetment:	565m
Anchorage:	16,800 sq.m
Dredging:	

2) Functional facilities

Sorting facilities:	1,780sq.m
Cold Storage:	1,250t
ICE Plant:	22t/day
Ice storage:	450t
Others:	

Imp. Period: 1991. -1993.

4.FEASIBILITY AND ITS ASSUMPTIONS — Feasibility: Yes/No

EIRR1)	10.90	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

Conditions:<M/P>Financial subsidies mentioned below will be conditioned by implementation of the project.
<F/S> 1) Basic facilities will be constructed during 1991-1993, and functional facilities during 1993.
2) Fishing boats of less than 20 tons will be transferred to the Bentanilla Port from the Callao Port during 1994 and fishing boats of 20 tons or more during 1995.
3) The proposed Urgent Plan is designed to meet the estimated demand in 1995. The quay wall and the functional facilities will have to be expanded in 1996 in order to meet the future demand through 2005.

Impacts:<M/P,F/S>
1) Increase of fish catch and improvement of freshness of fish catch due to reduction of unloading and waiting time.
2) Port dues payed by the user for utilization of fishing port facilities.
3) Land use of fishing port area in the Callao Port.

5.TECHNICAL TRANSFER

Wave height recorder and current meter were provided by Gorvernment of Japan for the oceanographic survey to promote technical transfer.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- ■ Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ○ Implementing
  - ● Processing
- □ Promoting
- □ Delayed or Suspended
- □ Discontinued or Cancelled

(Description)

(FY1991 Overseas Survey)
<M/P> The Master Plan was incorporated into the national plan in its entirety, but the 1st Stage Plan has been considerably reduced in its scale.

<F/S>
The Ministry of Fisheries assigns high priority to the proposed project and hopes to implement it as soon as possible when successful in obtaining external assistance. In Dec. 1991, the Government of Peru submitted the application for financial assistance from the Japanese Government.
The project scale of the First Stage Plan was substantially reduced, and the Government allocated funds in 1991 nd 1992.

(FY1992 Overseas Survey)
No additional information.

(FY1994 Domestic Survey)(FY1995 Domestic Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION

①, ②

和名 沿岸漁港開発計画

{M/P+F/S}

PROJECT SUMMARY (Basic Study)

Compiled Mar.1994
Revised Mar.1996

CSA PER/S 502/92

I. OUTLINE OF STUDY

1.COUNTRY: Peru

2.NAME OF STUDY: The Topographic Mapping of Lima Metropolitan Area

3.SECTOR: Social Infrastructu/Survey & Mapping

4.REFERENCE NO.:

5.TYPE OF STUDY: Basic Study

6.COUNTERPART AGENCY: Institute Geografico Nacional (IGN)

7.OBJECTIVES OF STUDY:
Topographic Mapping
Land Use Mapping

8.DATE OF S/W: 1989/9

9.CONSULTANT(S):
International Engineering Consultants Association
Aero Asahi Cor.

10.STUDY TEAM

No.of Members 20

Period Feb.1990-Jul.1992(29 months)

Total M/M	Japan	Field
80.57	25.12	55.45

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:
Aerial photography
Servicio Aerofotografico Nacional (SAN)

12.EXPENDITURE

Total	617,462 (¥'000)
Contracted	586,673

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA:
Lima Metropolitan Area 1,570 km2

2.PROJECT COST

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

3.CONTENTS OF MAJOR PROJECT(S)

1.Air-Photographing	Scale 1:30,000	1,570 km2
2.Tophgraphic Napping	Scale 1:10,000	1,250 km2
3.Landuse Mapping	Scale 1:10,000	500 km2

4.CONDITIONS AND DEVELOPMENT IMPACTS

Results of the study will provide many important fundamental information to such urban developing plans as seage system, housing, road construction and others, and contribute promoting various urban developing and preserving projects.

5.TECHNICAL TRANSFER

Through the execution of the Study, technical transfer was considered to the IGN counterpart personnel.

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS:
- [■] In Progress or In Use
- [ ] Delayed
- [ ] Discontinued

(Description)

In spite that the Landuse Mapping is still be suspended due to the unexpected tragic accident (killed three JICA expected by terrorist), Aia-Photographs and Topographic Maps which have already completed and delivered to Peru would be applied for promoting various urban developing projects or land preserving projects.

(FY1994 Domestic Survey)(FY1995 Domestic Survey)
No additional information.

(FY1995 Overseas Survey)
The topographic maps with a scale of 1/10,000 are utilized for the urban planning works to expand the metropolitan area, and the aerial photographs are used to grasp the circumstances at neighboring areas of the metropolitan area.
In future, it is desirable to computerize the drawing works of topographic maps and to draw up the land utilization maps.

2.MAJOR REASONS FOR PRESENT STATUS

Basic map information are very important for the land development plans or land preservation plans.

3.PRINCIPAL SOURCE OF INFORMATION

①, ②

和名 リマ首都圏都市基本図作成

{M/P,Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1993
Revised Mar.1996

CSA TTO/S 201B/91

I. OUTLINE OF STUDY

1.COUNTRY: Trinidad and Tobago

2.NAME OF STUDY:
Improvement of Water Supply Supervisory System

3.SECTOR:
Public Utilities/Water Supply

4.REFERENCE NO.:

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

6.COUNTERPART AGENCY:
Ministry of Settlements and Public Utilities
Water and Sewerage Authority (WASA)

7.OBJECTIVES OF STUDY:
Formation of M/P on the WASA Water Supply Supervisory System (target year: 2000) for the improvement and expansion of the central water operation and management and F/S.

8.DATE OF S/W: 1988/5

9.CONSULTANT(S):
Nihon Suido Consultants Co., Ltd.
Nippon Koei Co., Ltd.

10.STUDY TEAM

No.of Members 10

Period Sep.1989-Aug.1991(27 months)

Total M/M	Japan	Field
77.76	44.88	32.88

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:
None

12.EXPENDITURE

Total	252,189 (¥'000)
Contracted	235,819

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA:
Water supply area of four main water purification plants (Caroni, North Oropuche, Navet and Hollis) on the Trinidad Island (70% of the water supplied populationon the Trinidad Island)

2.PROJECT COST (US$1,000)

		Local Cost	Foreign Cost	Total
M/P	1)	85,530	19,935	65,595
	2)			
F/S	1)	46,367	11,089	35,278
	2)			
	3)			

3.CONTENTS OF MAJOR PROJECT(S)

<M/P> The master plan for the Water Supply Supervisory System(WSSS)will be implemented in two stages, viz. The 1st Stage Plan (1992-1995) and the 2nd Stage Plan (1996 ~ 2005).
The System comprises two sub-system, namely, the Central Supervisory System (CSS) which covers four large systems (Caroni/Arena, North Oropuiche, Navet and Hollis) and nearby medium and small systems, and the Local Supervisory System (LSS), which consists of numerous small-sized facilities.
Major Facilities Proposed: - Expansion of CSS Building ; - Central equipment of CSS, Repeater Station, Work stations with CRTs at regional offices; - RTU stations - Remote operation unit of booster pumping stations; - Remote control unit with mini-graphic of flow control valves; - Monitoring equipment flow meters, level meters & pressure gauges and flow control valves at strategic points in waterworks and the transmission/distribution system
<F/S> Feasibility analisis was under taken on the 1st Stage Plan proposed in the Master Plan. Major facilities proposed:
1) Central data processing system (CDPS) 2) 48 remote terminal units 3) Data radio communication system 4) Field instruments and equipment 5)Remote control equipment on booster pumping facilities and control valves 6) 139 flow meters and 105 motor-driven valves on production facilities and transmission/distribution mains 7) 21 level meters and 111 pressure gauges on production and transmission/distribution facilities

Imp. Period: 1992. -1995.

4.FEASIBILITY AND ITS ASSUMPTIONS

Feasibility: Yes

EIRR1)	9.60	FIRR1)	0.30
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

<M/P>Planning Frame:

	1990	1995	2005
Pop. in service area('000)	1,192	1,299	1,540
Serviced pop.(ditto)	1,133	1,234	1,463
Water demand ('000 cu.m/day)	666.3	641.9	639.5
(assumed unaccounted-for water)	(50%)	(40%)	(20%)

<F/S>[Assumptions] By undertaking intensive wastage control measure, it is assumed that the unaccounted-for water (UFW) ratio be substantially improved from the present 50% to a rather optimistic 40% in 1995. The future water demand in the project area, including UFW, is projected to increase from 531,000 cu.m/day in 1990 to 513,000 cu.m/day in 1995. Dependable yields from the water sources in dry season, which would more than satisfy the projected water requirement.
[Impacts] The average tariff rate should be raised as follows.

FIRR	8%	10%	12%	(0.3%)
Av.tariff(TT$/cu.m)	1.74	1.98	2.24	(0.99)

5.TECHNICAL TRANSFER

OJT for the duration of the development study, especially the transfer of techniques on inventory survey, water leak survey and protection, discharge survey, and water supply analysis.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [ ] Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ○ Implementing
  - ○ Processing
- [■] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)
The study proposed the project implementation in three stages, and proposed that the datailed design study for the 1st stage be started sometime during the latter half of 1992. No concrete action has been taken with respect to the proposed D/D.
The seepage control was among the study's suggestions which do not directly concern the proposed project, and is now undeway by IDB financing.

(FY1992 Overseas Survey)
The implementation of D/D is preparing now.The aim of it is to provide the measuring facilities in the commercial and industrial sections.In order to fulfill the JICA's precondition for the project execution,loan from the world bank was requested.The data of the project are utilized by IDB and others.

(FY1993 Overseas Survey)
Source of fund hasn't been decided yet at the time of September 1993.

(FY1994 Domestic Survey)(FY1995 Domestic Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①、②

和名 水管理計画

{M/P+F/S}

PROJECT SUMMARY (M/P)

Compiled Mar.1990
Revised Mar.1996

CSA URY/A 101/86

I. OUTLINE OF STUDY

1.COUNTRY: Uruguay

2.NAME OF STUDY: Establecimiento de plantaciones de arboles y utilizacion de la madera plantada

3.SECTOR: Forestry/Forestry & Forest Conservation

4.REFERENCE NO.:

5.TYPE OF STUDY: M/P

6.COUNTERPART AGENCY: Forest Department Ministry of Cattle Raising Agriculture and Fishery

7.OBJECTIVES OF STUDY:
(1)Preparation of a forest plan for tree plantation
(2)Efficient utilization of timber produced from tree plantation

8.DATE OF S/W: 1986/1

9.CONSULTANT(S): Japan Overseas Forestry Consultants Association

10.STUDY TEAM:
No.of Members 5
Period Jul.1986-Jun.1987(8.5 months)

Total M/M	Japan	Field
26.50	17.50	9.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY: None

12.EXPENDITURE

Total	89,434 (¥'000)
Contracted	77,439

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Existing forest and incentive areas of forestation 2,700,000ha

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)			
2)			

3.CONTENTS OF MAJOR PROJECT(S)
1)Establishment of guidelines for wood utilization
2)Establishment of a master plan of reforestation
3)Measures for improvement of wood industries
4)Establishment of system to promote the reforestation
5)Enhancement of social and public function of forests

4.CONDITIONS AND DEVELOPMENT IMPACTS
1)Import substitution by the increase of national wood production
2)Development of export industry including logs and pulp and paper, etc.
3)Regional development
4)Improvement of the productivity of inadequate land for agriculture and cattle raising
5)Conservation of national land

5.TECHNICAL TRANSFER
1)Method of the estimation of increment; 2)Formation of the system of forestation technology; 3)Method of the estimation of wood demand; 4)Method of the establishment of guidelines of wood utilization; and

III. PRESENT STATUS OF STUDY RESULTS

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

(Description)
After the World Bank approval of a loan for reforestation, the Government of Uruguay requested the Japanese Government to undertake a feasibility study (including a Reforestation Manual). The study was duly implemented by JICA during 1989 - 1990. In addition, a JICA expert (tree breeding) was assigned to Uruguay.

(FY1994 Domestic Survey)
The F/S was implemented as the JICA Development Study, which was "5-year Plan of National Reforestation", based upon this M/P.

(FY 1994 Overseas Survey)
The afforestation is promoted under the five-year afforestation plan which covers the area of 200 thousand hectare,double size of the original plan. The financing for the administration of this afforestation project is obtained by the loan of the World Bank,etc.

(FY1995 Domestic Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS
1) Uruguayan Government approved the M/P of the report of JICA as the national long term forestation plan of Uruguay; and 2) based on this plan, the Government decided to establish the national five year forestation plan, which was prepared in 1989 and 1990 with JICA cooperation.

3.PRINCIPAL SOURCE OF INFORMATION
①, ③

和名 造林・木材利用計画

{M/P,Basic Study,Other}

PROJECT SUMMARY (F/S)

Compiled Mar.1991
Revised Mar.1996

CSA URY/S 301/89

I. OUTLINE OF STUDY

1.COUNTRY: Uruguay

2.NAME OF STUDY: Development Plan of the International Airport of Carrasco

3.SECTOR: Transportation/Air Transportaion & Airport

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: Direccion general de infraestructra aerondutica

7.OBJECTIVES OF STUDY: Improvement of runway, taxiways and apron. Renewal or upgrading of navigation aids

8.DATE OF S/W: 1988/11

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

10.STUDY TEAM

No.of Members 9

Period Apr.1989-Mar.1990(12 months)

Total M/M	Japan	Field
40.00	21.00	19.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY: Topographic Mapping. Longitudinal and transversal levelling of runways, taxiways and apron. Geological and pavement survey

12.EXPENDITURE

Total	157,531 (¥'000)
Contracted	139,600

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Uruguay: 176,000 sq.km, population 3.01 million. Montevideo(Capital): population 1.36 million

2.PROJECT COST (US$1,000) (US$1=500N)

	Total Cost	Local Cost	Foreign Cost
1)	49,881	28,917	20,964
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)

The study examined 3 alternatives of 1)Grade 1, 2)Grade 2, and 3)Grade 3. Major development components are as follows.
1)Improvement of Main runway, taxiway and apron(rehabilitation of deteriorated portion by means of overly during unoperational night time hours)
2)Improvement of secondary runway(day-time povement overly, Grades 1 and 2)
3)Extension of the secondary runway(to meet the takie-off distance of the short haul aircraft (from 1,750m to 2,050m) Grade 1 only)
4)Renewal or upgrading of navigation aids
5)Installation of terminal equipment asuch as metal detector, etc.

Imp. Period: 1991. -1994.

4.FEASIBILITY AND ITS ASSUMPTIONS — Feasibility: Yes

EIRR1)	16.10	FIRR1)	
EIRR2)	17.50	FIRR2)	5.70
EIRR3)	19.90	FIRR3)	7.70

Conditions and Development Impacts:

Economic evaluation:
This project is economically feasible since the opportunity cost of capital is estimated to be 12.0%.
Financial evaluation:
Under the current airport tariff structure, FIRR is negative in all three alternatives. If the tariff be raised by 100%, the FIRR will be positive for Grades 2 and 3 as shown above. The assumptions on fund procurement are as follows.

	Foreign	Local
Grade 2	Soft Loan	Government own finance
Grade 3	Hard Loan	without any repayment

5.TECHNICAL TRANSFER

1)Methodology for airport master planning.
2)General and technical information on night-time asphalt overlay.
3)Computerization of airport administration date.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)

Project has been susupended since the completion of F/S in March 1990.
The worst economic situation has virtually prevented the Government from seeking a new loan from the developed countries.
The following procurement works have been conducted in an extremely small scale:

1) There was no duty-free shops inside the terminal building, and the Government has acquired these shop facilities in January 1991 through competitive tendering method.
2) Direction General de Infraestructura Aeronautica (DGIA) invited tenders for procurement of ground support equipment such as passenger and cargo handling equipment and airport support vehicles in February 1992.

The amount of Urugurayan GNP per capita was US$2,560 in 1989 and is far greater than the eligibility per capita limit of US$1,235 which is set for concessionary loan (OECF). There will be no likelihood that OECF will approve any loan for this projcet for this eligibility reason alone.

(FY1993 Overseas Survey)
The term of reference for the consultants has been made with the cooperation from UNDP and ICAO.
The government approved to allocate some of particular financing. Additionally, financial support from FONPLATA will be available.
It is very urgent to repair the access roads.

(FY1994 Domestic Survey)
The country's GNP per capita rises to US$2,620 in 1989, which prohibited official development assistance from DAC foreign governments such as Germany, Italy and France. The government seeked foreign investment in a form of BOT(built-operate-transfer), inviting foreign joint ventures, but no successful contract had been made to put ahead the project.

(FY 1994 Overseas Survey)
The work proposed by this F/S is consisted of 3 grades. Each of them was not implemented,however,F/S, detail design and preparation of tender documents, concerning with arrangement works of the main runway 06/24 for the year of 1994 (in 70% scale of grade 3), are ordered to a consultant. It is planned to commence the designing at the beginning of 1995 and the construction in January,1996. But the financial resources are not disclosed.

2.MAJOR REASONS FOR PRESENT STATUS

The debt reduction in 1987-89 were all due to debt-equity swaps according to Brady-Initiative operations. In addition, a basic agreement was reached between commercial creditor bank consortia and the Government to reschedule the commercial bank portion of US$1.69 billion debt out of total debt stock of US$7.2 billion in December 1990. The annual rate of inflation in 1990 was worsened by 129% and the economic growth rarte became lower to 0.5% pre annun.

3.PRINCIPAL SOURCE OF INFORMATION

①, ② Transportation / Air, ③

和名 カラス:[国際空港整備計画

Continued on [F/S,D/D]

状況（要約表添付文書）

CSA URY/S 301/89 (F/S)

Name of Study: Development Plan of the International Airport of Carrasco

Country: Uruguay

Type of Study: F/S

Sector: Transportation/Air Transportaion & Airport

Present Status: Promoting

(Description)

Project has been susupended since the completion of F/S in March 1990.
The worst economic situation has virtually prevented the Government from seeking a new loan from the developed countries.
The following procurement works have been conducted in an extremely small scale:

1) There was no duty-free shops inside the terminal building, and the Government has acquired these shop facilities in January 1991 through competitive tendering method.
2) Direction General de Infraestructura Aeronautica (DGIA) invitedtenders for procurement of ground support equipment such as passenger and cargo handling equipment and airport support vehicles in February 1992.

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It is very urgent to repair the access roads.

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The work proposed by this F/S is consisted of 3 grades. Each of them was not implemented,however,F/S, detail design and preparation of tender documents, concerning with arrangement works of the main runway 06/24 for the year of 1994 (in 70% scale of grade 3), are ordered to a consultant. It is planned to commence the designing at the beginning of 1995 and the construction in January,1996. But the financial resources are not disclosed.

(FY1995 Domestic Survey)
For this project, it has been learnt that the Government is eagerly trying to materialize by means of invitation to the BOT tender and so on, however, no news of success come out as yet.
For the development of Punta del Este Airport, located at a tourist resort, Canadian cooperation has been decided by the group which promoted the privatization of Tronto Airport. It is also by means of BOT process. Under the present situation that there are no official foreign financial aid including Yen Credit, it will be inevitable to try to find private financing.

PROJECT SUMMARY (F/S)

CSA URY/A 301/90

Compiled Mar.1992
Revised Mar.1996

I. OUTLINE OF STUDY

1.COUNTRY: Uruguay

2.NAME OF STUDY: National Reforestation Plan

3.SECTOR: Forestry/Forestry & Forest Conservation

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: INIA

7.OBJECTIVES OF STUDY
to make the implementation plan on national five year plan of tree planting and to execute the F/S of the plan.

8.DATE OF S/W: 1989/4

9.CONSULTANT(S)
Japan Overseas Forestry Consultants Association

10.STUDY TEAM
No.of Members 17
Period Oct.1989-Mar.1991(17 months)

Total M/M	Japan	Field
57.00	29.88	25.28

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Preparation of a Reforestation Handbook

12.EXPENDITURE

Total	191,747 (¥'000)
Contracted	177,771

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Afforestation promoting area at Paysandu and Tacuarembo Districts.

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	73,896		
2)			
3)			

3.CONTENTS OF MAJOR PROJECT(S)
The study proposed the reforestation of some 100,000 ha during five years, by planting eucalypti, pines, poplars and willows. Annual planting targets are as follows.

1991	10,000 ha
1992	15,000
1993	20,000
1994	25,000
1995	30,000

Imp. Period: 1991.1-1995.2

4.FEASIBILITY AND ITS ASSUMPTIONS
Feasibility: Yes

EIRR1)	15.23	FIRR1)	13.80
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
[Conditions]
1) Increase and training of forestry experts in the government and the private sector
2) Institutional improvement of forestry-related research
3) Expansion of subsidization programs
4) Promotion of timber marketing and processing
[Impacts]
1) Stable supply of timber
2) Increase of forestry resources for export
3) Improvement of water catchment and soil conservation

5.TECHNICAL TRANSFER
1) Transfer of methodology during the period of the study and at the seminar
2) Compilation of a Technical Handbook of Reforestation

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- [■] Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ● Implementing
  - ○ Processing
- [ ] Promoting
- [ ] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)
1) The World Bank loan for reforestation was fully disbursed.
2) The newly elected President doubled the five-year target of the National Reforestation Plan from 100,000 to 200,000hs.
3) In view of the growing export (Eucalyptus for pulp) to Europe, the Government of Uruguay is trying to obtain new external funds (bilateral ODA and private capital) for reforestation.

(FY1993 Overseas Survey)
Reforestated area during 1990 to 1992 was 18,000ha per annum in average. On the year of 1993, this figure bozomes 26,000ha. During recent 4 years, the reforestation progressed very rapidly.
Capital investment for forestry is also increasing considerably and the exportation of precious lumber has been commenced.
This project is financed by the World Bank.

(FY1994 Domestic Survey)
Under the circumstance mentioned above, waiting for the expansion of investment from abroard.

(FY1994 Overseas Survey)
At present, under the 5-year afforestation plan which covers 200 thousand hectare, double size of the originl plan, the afforestation are continuously promoted. Fund for the administration of afforestation has been obtained through financing by the World Bank, etc.

(FY1995 Domestic Survey)
At present, the authority concerned is still trying to get more foreign investment in order to implement this project. And also it is considering to make F/S for maintenance of the natural forests.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
① Forestry/General、②、③

和名 国家造林5ヶ年計画

(F/S,D/D)

PROJECT SUMMARY (F/S)

Compiled Mar.1994
Revised Mar.1996

CSA URY/S 302/92

I. OUTLINE OF STUDY

1.COUNTRY: Uruguay

2.NAME OF STUDY: Development of New Port Terminals at Montevideo Port

3.SECTOR: Transportation/Port

4.REFERENCE NO.:

5.TYPE OF STUDY: F/S

6.COUNTERPART AGENCY: National Administration of Ports (ANP)

7.OBJECTIVES OF STUDY: To prepare a F/S of the short-term form Development Plan for main port facilities in Montevideo Port for the period up to the year 1988.

8.DATE OF S/W: 1991/3

9.CONSULTANT(S): Overseas Coastal Area Development Institute
Nippon Tetrapod Co., Ltd.

10.STUDY TEAM

No.of Members 8

Period Jan.1992-Dec.1992(11 months)

Total M/M	Japan	Field
45.10	19.10	26.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY: None

12.EXPENDITURE

Total	193,076 (¥'000)
Contracted	171,038

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Montevideo

2.PROJECT COST (US$1,000)

	Total Cost	Local Cost	Foreign Cost
1)	94,818	54,769	40,049
2)	7,564	4,676	2,888
3)			

3.CONTENTS OF MAJOR PROJECT(S)

- Grain Terminal (1998)(Proposed project cost 1))
  - Depth : 12m
  - Length : 270m
  - Silo : 93,000 ton
- Foreign Fishing Terminal (1998)(Proposed project cost 2))
  - Depth : 5m, 6m
  - Length : 415m

Imp. Period: 1994. -1997. 1996. -1997.

4.FEASIBILITY AND ITS ASSUMPTIONS — Feasibility: Yes/No

EIRR1)	11.30	FIRR1)	8.50
EIRR2)	15.90	FIRR2)	8.00
EIRR3)		FIRR3)	

Conditions and Development Impacts:

EIRR/FIRR 1) Grain Terminal
2) Fishing Terminal

<Conditions>
- Grain Terminal
  1998 : 2,000,000 ton
- Fishing Terminal
  1998 : 500 ships (Under 1,000 GRT)

<Development Impacts>
- Saving River Areas transportation cost of grain cargoes
- Promotion of econoic growth

5.TECHNICAL TRANSFER

1)Promotion of technical transfer by joint study
2)Counterpart traiing

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

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

(Description)

(FY1993 Overseas Survey)
The inplementation of this project delayed due to low effectiveness of the investment.
Foreign fishing terminal should be reconsidered based on the expected number of vessels in and out from the terminal.
For Grain terminal, it was suggested to be implemented through out the private investment or joint venture according to the new Port's Policy.
After a new Port's Law approval in 1992, the most of the authorities' energy was devoted to increase the port efficiency with the private sector participation and internal reorganization rather than to develop new infrastructure that primarily seemed not to be the first priority.

(FY1994 Overseas Survey)
At present, there is no implementation plan of this project. Since the plan of the arrangement of river transportation route between Rosario, Argentine to the Atlantic Ocean is being carried on, the meaning of this project as for a transship point of the port of Montevideo becomes suspicious. The geovernment of Uruguay wishes to develop a new port with a deep draft along the Atlantic Coast, and sounded the possibility to get the technical transfer of concerning technologies to the government of Japan.

(FY1994 Domestic Survey)(FY1995 Domestic Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION

① Transportation/Port, ②, ③

和名 モンテヴィデオ港新ターミナル開発計画

{F/S,D/D}

PROJECT SUMMARY (M/P)

Compiled Mar.1986
Revised Mar.1996

CSA VEN/S 101/80

I. OUTLINE OF STUDY

1.COUNTRY: Venezuela

2.NAME OF STUDY: Design on Cargo Handling Equipments

3.SECTOR: Transportation/Port

4.REFERENCE NO.:

5.TYPE OF STUDY: M/P

6.COUNTERPART AGENCY: Institute Nacional de Puertos (INP)

7.OBJECTIVES OF STUDY: Preparation of design criteria and specifications for major mechanical equipment

8.DATE OF S/W: 1979/8

9.CONSULTANT(S): Japan Cargo Handling Mechanization Association

10.STUDY TEAM

No.of Members 5

Period Aug.1979-Jul.1980(12 months)

Total M/M	Japan	Field
14.20	12.90	1.30

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY:

12.EXPENDITURE

Total	32,454 (¥'000)
Contracted	30,193

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Puerto Cabello

2.PROJECT COST

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

3.CONTENTS OF MAJOR PROJECT(S)

The project recommended the installation of loading and unloading systems at the training facility for dockworkers, including one 5-ton derrick cranes, two 5-ton jib-cranes, a mock-up 8,000-ton liner boat to simulate the actual cargo handling operation, a set of simulators for the derrick operation including electrical equipment.

4.CONDITIONS AND DEVELOPMENT IMPACTS

The project will assist the technical transfer on, and improve the service quality of, cargo handling operations.

5.TECHNICAL TRANSFER

III. PRESENT STATUS OF STUDY RESULTS

1.PRESENT STATUS

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

(Description)

The Project was cancelled as a result of the negotiations between the INP and the dockworkers union in that the improved cargo handling operations would cause unemployment.

(FY1994 Domestic Survey)
No information.

(FY1994 Overseas Survey)
It already passes more than 15 years after completion of this M/P. The project had been cancelled as the organization in charge had been privatized and changed, and without any support of the locals.

2.MAJOR REASONS FOR PRESENT STATUS

The improved cargo handling operations were considered to cause unemployment among dockworkers.

3.PRINCIPAL SOURCE OF INFORMATION

①, ③

和名 港湾技術訓練センター建設計画

{M/P,Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1991
Revised Mar.1996

CSA VEN/S 2018/89

I. OUTLINE OF STUDY

1.COUNTRY: Venezuela

2.NAME OF STUDY: Chama River Basin Conservation Project

3.SECTOR: Social Infrastructu/River & Erosion Control

4.REFERENCE NO.:

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

6.COUNTERPART AGENCY: Ministerio del Ambiente y de los Recursos Naturales Renovales

7.OBJECTIVES OF STUDY: Downstream Basin Flood Control and Upstream Sabo Projects of Chama River

8.DATE OF S/W: 1988/6

9.CONSULTANT(S): CTI Engineering Co., Ltd.
Nippon Koei Co., Ltd.

10.STUDY TEAM

No.of Members 12

Period Nov.1988-Feb.1990(16 months)

Total M/M	Japan	Field
68.16	25.80	42.36

11.ASSOCIATED AND/OR SURCONTRACTED STUDY: Surveying work, constructon of Observation Stations

12.EXPENDITURE

Total	273,306 (¥'000)
Contracted	243,477

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA: Entire Chama River Basin (3,785 sq.m)

2.PROJECT COST (US$1,000) (US$1=130Yen=40Bs.)

		Local Cost	Foreign Cost
M/P	1)	88,775	
	2)		
F/S	1)	27,575	
	2)		
	3)		

3.CONTENTS OF MAJOR PROJECT(S)

<M/P> The study proposed a master plan of river and flood control by projecting future development and transportation demands in the basin area through the year 2020.
For wide area disaster prevention, the study recommended the construction of 10 units of Sabo dams, 110 units of torrent works, 1,400 units of hillside works and also 53.4km in length of river improvement.
For the local disaster prevention project, disaster prevention works at 100 of prone to danger locations and river improvement of 5.4km in length were recommended.

<F/S>Construction of 3 units Sabo dams, 18 units of torrent works, 340 units of hillside works and 35.1 km in length of downstream river improvement proposed as the wide area disaster prevention project.

Imp. Period: 1991. -2000.

4.FEASIBILITY AND ITS ASSUMPTIONS: Feasibility: Yes

EIRR1)	13.20	FIRR1)	
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:

<M/P>The effects of development:
1) 7,480,000 cq.m out of 9,600,000 cq.m of the design annual sediment discharge will be detained and controlled by Sabo facilities.
2) The remaining balance of 2,120,000 cq.m is safely discharged by the increase of sediment load discharge capacity through river channel improvement.
The flood control of downstream inundation will be done by Chama River channel improvement (a 100-year probable rate of flow of 2,300 cu.m/s). The annual average benefit is estimated at 231 million bolivares.
<F/S> The construction period is 10 years ending in the year 2000.
Proposed sabo facilities will be implemented in accordance to the order of priority suggested in the master plan. The project will detain and control one-third of the estimated sediment discharge of 9.6 million cu.m. River improvement will eliminate up to 1,450 cu.m/s of the down-stream inundation with a 10-year probable rate of flow.

5.TECHNICAL TRANSFER: OJT for the counterparts on hydrologic observation procedures. Conducted a seminar on flood control and sabo planning.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS

- [ ] Completed or in Progress
  - ○ Completed
  - ○ Partially Completed
  - ○ Implementing
  - ○ Processing
- [ ] Promoting
- [■] Delayed or Suspended
- [ ] Discontinued or Cancelled

(Description)

The Government of Venezuela applied for an IDB loan on the basis of the Action Plan proposed by the Master Plan. To promote the project implenentation, one Japanese Sabo expert was assigned in June 1990.

(FY1991 Overseas Survey)
The proposed project was initially high in priority, but not any longer. There is no prospect of procuring finance, and the project has not been integrated to the national development plan. There is a possibility of reviving the project. but the timing is yet unknowable.

(FY1994 Domestic Survey)
No additional information.

(FY1994 Overseas Survey)
This project was not implemented. The financing for this project was requested to IDB on 1990, but it failed. It is planned to try it again after making the detail plan and the administrating organitations more clear. The recipient country wishes to implement the works of IDB finance first,and to realize the whole of JICA's tasks as the second .

(FY1995 Domestic Survey)
It was planned to implement by the financing of IDB, however, suspended due to the lack of fund.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION: ①, ②, ③

和名 チャマ川流域防災計画

{M/P+F/S}

PROJECT SUMMARY (M/P)

Compiled Mar.1995
Revised Mar.1996

CSA VEN/S 111/93

I. OUTLINE OF STUDY

1.COUNTRY Venezuela

2.NAME OF STUDY
Comprehensive Improvement of the Apure River Basin

3.SECTOR
Social Infrastructu/River & Erosion Control

4.REFERENCE NO.

5.TYPE OF STUDY M/P

6.COUNTERPART AGENCY
Ministry of Environment and Natural Resources

7.OBJECTIVES OF STUDY
To formulate the basic concepts and measures for the comprehensive improvement of the Apure river basin for stabilization of river channels and the mitigation of flood damages.

8.DATE OF S/W 1991/10

9.CONSULTANT(S)
Nippon Koei Co., Ltd.
Nikken Consultants., Inc.

10.STUDY TEAM
No.of Members 11
Period Mar.1991-Oct.1993(20 months)

Total M/M	Japan	Field
79.00	34.00	45.00

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
River Survey, Floody Water Survey

12.EXPENDITURE

Total	460,013 (¥'000)
Contracted	371,061

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
The Apure river basin having catchment area of 111,800 sq.km, which is one of the largest tributaries of the Orinoco river.

2.PROJECT COST

(US$1,000)	Total Cost	Local Cost	Foreign Cost
1)	128,293		
2)	93,848		

3.CONTENTS OF MAJOR PROJECT(S)
(1) Channel Stabilization Plan
1)Channel Stabilization Measures for Navigation
2)Short-term plan aims to accomplish 8 months navigation from river mouth to San Fernando port and 7 months from San Fernand port to Santos Luzardo port.
3)Mid-term plan aims to accomplish 9 months navigation from river mouth to San Fernando port and 8 months from San Fernand port to Santos Luzardo port.
4)Total cost will be US$128,793,000(EIRR=13.7%, B/C=1.46)

(2) Flood Mitigation Plan
1.Several alternative plans such as dike, dam, retarding basin etc. were formulated and studied from engineering and environmental aspects.
2.Long-term plan aims to accomplish the entire flood management plan consisting of :
1)construction of dike on the right bank of Portuguesa river(187km long).
2)right bank of Guonare river(145km). 3)left bank of Apure river(155km).
3)Short-term plan for priority works in Long-term plan
4)Total cost is US$93,848,000(EIRR=9.2%,B/C=1.15)

4.CONDITIONS AND DEVELOPMENT IMPACTS
Channel Stabilization Plan
1)Channel stabilization will be accomplished through flow improvement and channel improvement.
2)With short-term plan, 8 month navigation from river month to San Fernando port and 7 month navigation from San Ferunando port to Santos Luzardo port will be accomplished.
3)With mid-term plan, 9 month navigation from river mouth to San Fernando port and 8 month navigation from San Fernando port to Santos Luzardo port will be accomplished.

Flood Management Plan
1)Flood managing plan with dike, dam, retarding basin etc. is established.
2)Within the study area of 21,000km2, the flood mangement plan will mitigate flood damages in the following area.
a)Area extending on the right bank side of Cano Igues
b)Area extending on the right bank side of Guonare river
c)Area extending on the left bank side of Apure river
d)San Fernando city and its surrounding area

5.TECHNICAL TRANSFER
1)Seminare for technical transfer. 2)Workshop on method of analyses(computer programs). 3)On-the-job training with small seminars.

III. PRESENT STATUS OF STUDY RESULTS

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

(Description)
1)Concerning channel stabilization plan, M/P for navigation by International Development Bank was delayed, thus, the results could not be incorporated in this study. Therefore, F/S for channel stabilization plan will be postponed until the M/P by IDB is completed. Concerning flood management plan, environmental problems of the project have been a significant issue in Venezuera, thus, Environmental Impact Assessment shall be an integral part of the F/S. 2)Government of Venezuera is much concerned with channel stabilization plan. Accordingly, it is quite possible that the Government of Venezuela will request Japanese Government to conduct F/S for channel stabilization plan and flood management plan after the master plan by IDB is completed.

(FY1995 Domestic Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①, ③

和名 アプレ川河川改修計画調査

{M/P,Basic Study,Other}

PROJECT SUMMARY (M/P+F/S)

Compiled Mar.1994
Revised Mar.1996

OCE COK/S 201B/92

I. OUTLINE OF STUDY

1.COUNTRY: Cook Islands

2.NAME OF STUDY: Coastal Protection and Port Improvement

3.SECTOR: Development Plan/(Development Plan in)General

4.REFERENCE NO.:

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

6.COUNTERPART AGENCY: Ministry of Planning and Economic Development

7.OBJECTIVES OF STUDY
1) To formulate a coastal protection along the coastline of Rarotonga Is.
2) To formulate a coastal protection for Avarua/Avatiu area including port improvement plan

8.DATE OF S/W: 1991/4

9.CONSULTANT(S)
Pacific Consultants International
Overseas Coastal Area Development Institute

10.STUDY TEAM
No.of Members 7
Period Oct.1991-Aug.1992(11 months)

Total M/M	Japan	Field
19.46	9.60	9.86

11.ASSOCIATED AND/OR SUBCONTRACTED STUDY
Soil Investigation and Sounding by Coastal Environmented International Ltd.

12.EXPENDITURE

Total	80,807 (¥'000)
Contracted	70,903

和名 海岸保全・改良計画

II. SUMMARY OF STUDY RESULTS

1.SITE OR AREA
Coastline of Rarotonga Is. 13.5 km long, population 18,000, 9,000 live on the island.

2.PROJECT COST (US$1,000)

		Local Cost	Foreign Cost	
M/P	1)			
	2)			
F/S	1)	32,047		
	2)	15,432	5,269	10,163
	3)			

3.CONTENTS OF MAJOR PROJECT(S)
<M/P>
1) Coastlines to be protected are as follows: (US$14,626,000)
- Avarua/Avatiu town area - North-east of Mstavera/Tupapa village and east end of the airport - West end of the airport - Pokuinu I.R. and north-west of Tokerau/Inava village - South-west of Area village - Akapuao and south-east of Tikioki village - Areite, Mukupute, akoko and east of Avana village
2) Plans for port improvement are as follows: (US$17,421,000)
- Extension of container stock yard - Extension of Avatiu east breakwater, widening of port entrance and ship turning basin and deepening of basin and wharf - Rehabilitation of the existing wharf - Providing facilities for fishery activities - Marina for pleasure boats
- Protection facilities for small fishing boats during cyclones
<F/S>Description of Short-term Plan for 1997 are as follows:
(Costal Protection) US$5,458,000
- Seawall constructions in front of Health Dept. and its adjacent coast, between Avatiu/Avarua town area including reclamation, along the airport's east coast, along the airport's west coast.
(Port Improvement of Avatiu port area.) US$9,974,000
- Extension and strengthening of east and west breakwaters, - Expansion of port area by way of dreging and reclamation, construction of fishing wharf and related facilities, dredging, rehabilittion of existing quay and construction

Imp. Period: 1997. -2010.

4.FEASIBILITY AND ITS ASSUMPTIONS — Feasibility: Yes/No

EIRR1)	10.70	FIRR1)	3.90
EIRR2)		FIRR2)	
EIRR3)		FIRR3)	

Conditions and Development Impacts:
Assumptions: <M/P>(M/P for coastal protection) - Coastlines where overtopping heights by large cylones are estimated 2m or higher - Coastlines where remarkable erosions were reported -To prevent environmental pollution considering the tourism industry (M/P for port improvement) -To recognize that Avatiu port is the lifeline of commodities transpotation -Cargo demands to be handled in both Avatiu/Avarua ports are as follows:

	1997	2011
International cargo	46,400FT(1,390TEU)	54,200FT(1,730TEU)
Domestic cargo	2,400FT	2,800FT

-Function allocations are Avatiu as commercial/fishery and Avarua as marina.
<F/S> EIRR/FIRR are estimated on condition that the existing port management cost be eliminated by 70% and port charges by increased by 50%
Effects:<M/P, F/S> -Reduction of cyclone damages by the coastal protections. Amount of the said damage reduction is estimated as

5.TECHNICAL TRANSFER
1) Counterparts accompanied the study team and carried out the investigations together.
2) One counterpart was dispatched to Japan for training course.

III. PRESENT STATUS OF STUDIED PROJECT

1.PRESENT STATUS
- ☐ Completed or in Progress ■ Promoting
  - ○ Completed
  - ○ Partially Completed ☐ Delayed or Suspended
  - ○ Implementing
  - ○ Processing ☐ Discontinued or Cancelled

(Description)
A Supplementary Study Team was dispatched to Cook Islands to re-formulate a new M/P from Oct. to Dec. 1993.
A new M/P is expected to be completed soon and F/S will be conducted accordingly.

(FY1994 Domestic Survey)
The final report was submitted in Aug.1992. Since then, the physical conditions of the coast were changed because of the removal of the breakwaters of Avarua Harbor. The additional study was conducted and the report was submitted in Sep.1994.
The additional study concluded that the coastal protection works along all the northern coast was not feasible. It recommends that protection works for selected important facilities,i.e.,the airport runway, fuel depot.
It is still to be informed how to the Gov't of the Cook Islands will execute the protection works.

(FY1995 Domestic Survey)
No additional information.

2.MAJOR REASONS FOR PRESENT STATUS

3.PRINCIPAL SOURCE OF INFORMATION
①

{M/P+F/S}