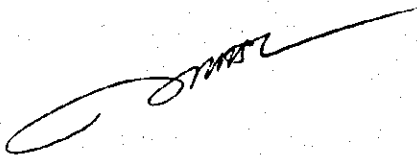



MINUTES OF MEETING
ON
THE DRAFT FINAL REPORT
OF
THE FEASIBILITY STUDY ON
THE CAN THO BRIDGE CONSTRUCTION
IN
SOCIALIST REPUBLIC OF VIET NAM
BETWEEN
MINISTRY OF TRANSPORT
PROJECT MANAGEMENT UNIT MY THUAN
AND
JAPAN INTERNATIONAL COOPERATION AGENCY
THE STUDY TEAM

Hanoi, 9th July 1998

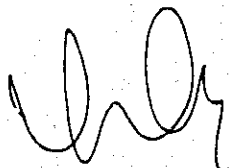


Mr. Le. Long Dinh
Director General
PMU My Thuan
Ministry of Transport

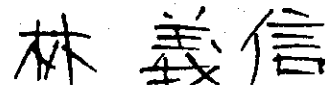


Mr. Katsufumi Matsuzawa
Team Leader
Study Team
Japan International Cooperation
Agency

Witnessed by



Mr. Truong Tan Vien
Deputy Director General
Planning & Investment Department
Ministry of Transport



Mr. Yoshinobu Hayashi
Chairman of Advisory Committee
Japan International Cooperation
Agency

MINUTES OF MEETING

In accordance with the Scope of Work (hereinafter referred to as "S/W") dated 25 March 1997 between the Japan International Cooperation Agency (hereinafter referred to as "JICA") and the Ministry of Transport (hereinafter referred to as "MOT"), the Study Team has sent 30 sets of the Draft Final Report of the Feasibility Study on the Can Tho Bridge Construction in the Socialist Republic of Viet Nam (hereinafter referred to as "the Study") to MOT in late June 1998.

A series of discussions were held between the PMU My Thuan of MOT and the Study Team from 2nd July 1998, and then a Steering Committee Meeting was held on 9th July 1998. The following items were concluded and agreed upon among the participants as per attachment.

1. Basically, the Steering Committee agreed with the contents of the Draft Final Report of the Feasibility Study on the Can Tho Bridge Construction.

2. Approval of Environmental Impact Assessment of the Feasibility Study

PMU My Thuan explained the proceeding as follows:

- The Committee meeting for appraisal was held on June 17, 1998, by the Ministry of Science, Technology, and Environment.
- The Certificate from the committee was issued on June 22, 1998 with some comments.
- Approval on the report would be within 2 weeks from now.

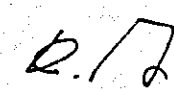
3. Navigational Clearance for the Hau River

Vietnamese Mekong Commission after consultation of International Mekong Commission notified that the vertical clearance of 37.5m for Can Tho Bridge is accepted by involved governments.

MOT suggests the vertical clearance of 39.0m should be applied for future development of the region. But Study Team should make further study to decide the water level taking into account tidal effect.

4. Other Requirements

The following items were confirmed.



- 1) Wind load, vessel collision force and measure to keep safety of the bridge should be further studied.
- 2) Span arrangements should be further studied for the approach span considering the span lengths of 33, 40 and 120m which are available in Vietnam. The precast concrete piles with square and round sections and bored piles should be considered as alternative of steel piles.
- 3) AASHTO 94 may be selected as the dominant standards for the subsequent design and the Vietnamese and Japanese standards would have to be used for the proof check.
- 4) Intersection with Highway No.54 on the Vinh Long side should be further studied. The round-about intersection on the Can Tho side should meet the Master Plan of Can Tho City including the traffic flows. The design of bridges on the approach roads should meet the requirement of waterways.
- 5) The chapter of the Training and Technology Transfer should be made in further detail in consistent with scales of the project.
- 6) An alternative of the implementation program reflecting the desire of the Vietnamese government to have the Project completion in 2004 should be added to the report.
- 7) Related to the financial aspect, the Vietnamese side wishes to increase the foreign loan, if possible, over 85% of the project cost taking into account the present difficult financing situation in Vietnam.
- 8) An access to the island from the bridge should be examined for the purpose of tourism development.
- 9) The Final Report should confirm the Feasibility of the bridge options, and a tunnel option is no need to be studied.
- 10) The Study Team will provide further reasonable explanation about the cost estimate.

5. Reports to be Confidential

Unless otherwise mutually agreed upon by MOT and JICA, all the documents of this F/S would have to be maintained as confidential until the date of the approval on the Project by the Vietnamese Government.

6. Further Schedule

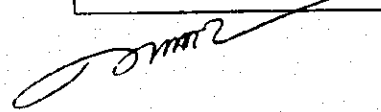
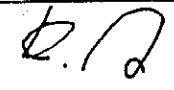
- 1) MOT will send the written comments of the Vietnamese side relating to the above issues and involved others to JICA Vietnam Office until the end of July 1998.
- 2) JICA will send the final reports until the end of September 1998.
- 3) MOT tries for obtaining the approval on the Project investment decision from the Vietnamese Government as soon as possible.

[Handwritten signature] *[Handwritten initials]*

PARTICIPANTS

9TH July 1998

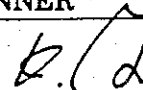
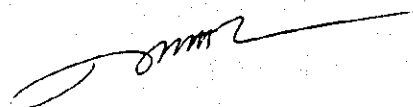
NAME	ORGANIZATION
~ VIETNAMESE SIDE ~	
1. NGUYEN TAN MAN	VICE MINISTER, MOT
2. DUONG DANH DUNG	DIRECTOR GENERAL, QUALITY CONTROL BUREAU, MOT
3. TRUONG TAN VIEN	VICE DIRECTOR GENERAL, PLANNING & INVESTMENT DEPARTMENT, MOT
4. TANG VAN LAM	DIRECTOR, TRANSPORT DEPARTMENT, VINH LONG PROVINCE
5. LE TUAN CONG	DIRECTOR, TRANSPORT DEPARTMENT, CAN THO PROVINCE
6. TONG TRAN TUNG	VICE DIRECTOR, SCIENCE AND TECHNOLOGY DEPARTMENT, MOT
7. LE VAN MINH	GENERAL SECRETARY, VIETNAM NATIONAL MEKONG COMMITTEE
8. LE THANH BAC	REPRESENTATIVE, VIETNAM NATIONAL MEKONG RIVER COMMITTEE
9. VU VAN TRI	VICE DIRECTOR, QUALITY CONTROL BUREAU, MOT
10. HOANG TRONG TRUY	EXPERT, DEPARTMENT OF CONSTRUCTION POLICY, MINISTRY OF CONSTRUCTION
11. HA NHAT TAN	EXPERT, MINISTRY OF PLANNING & INVESTMENT
12. NGUYEN TRUNG CU	EXPERT, PLANNING & INVESTMENT DEPARTMENT, MOT
13. LE LONG DINH	DIRECTOR GENERAL, PMU MY THUAN, MOT
14. DOAN QUANG HUNG	VICE DIRECTOR GENERAL, PMU MY THUAN, MOT
15. NGUYEN ANH TUAN	CHIEF, PLANNING & INVESTMENT DIVISION, PMU MY THUAN, MOT
16. NGUYEN XUAN HIEP	CHIEF, BRIDGE PROJECT DIVISION, PMU MY THUAN, MOT
17. DUONG TRAM ANH	CHIEF REPRESENTATIVE, PMU MY THUAN OFFICE IN HANOI
18. NHU NGUYEN HONG CUONG	REPRESENTATIVE, PMU MY THUAN OFFICE IN HANOI
19. NGUYEN XUAN GIANG	DEPUTY DIRECTOR GENERAL, TEDI
20. CHU NGOC SUNG	DIRECTOR, BRIDGE AND TUNNEL ENGINEERING CONSULTANCY
21. DAO TRONG KIM	BRIDGE AND TUNNEL ENGINEERING CONSULTANCY
22. PHAN BA DUNG	VICE DIRECTOR, TEDI SOUTH

PARTICIPANTS

9th July 1998

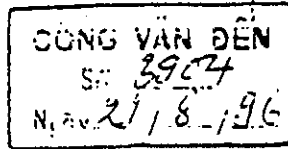
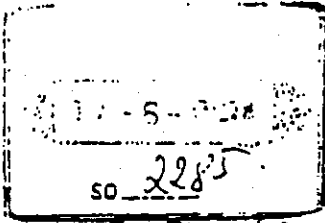
NAME	ORGANIZATION	
~ JAPANESE SIDE ~		
1. YOSHINOBU HAYASHI	JICA ADVISORY COMMITTEE	CHAIRMAN
2. HIDETO HATAKENAKA	JICA ADVISORY COMMITTEE	MEMBER
3. KAZUHIKO KIKUCHI	JICA VIETNAM OFFICE	
4. KOICHI KITO	JICA TOKYO	
5. KATSUFUMI MATSUZAWA	JICA STUDY TEAM	TEAM LEADER
6. AKIO NAKAMURA	JICA STUDY TEAM	CO-TEAM LEADER
7. TAKASHI KAMETANI	JICA STUDY TEAM	CONSTRUCTION PLANNER



Độc lập - Tự do - Hạnh phúc

Số: 53021/BKH/VPTĐ
V.V DATKT xây dựng
Cầu Cần Thơ

Hà Nội, ngày 21 tháng 8 năm 1996



Kính gửi: THỦ TƯỚNG CHÍNH PHỦ

Bộ Giao thông vận tải có tờ trình số 1402/KHĐT ngày 23/5/1996 trình Thủ tướng Chính phủ xin phê duyệt dự án tiền khả thi xây dựng cầu Cần Thơ. Căn cứ Nghị định 42-CP ngày 16/7/1996 của Chính phủ về việc trình duyệt các dự án đầu tư, Bộ Kế hoạch và Đầu tư trình Thủ tướng Chính phủ ý kiến về dự án này như sau:

1. Quốc lộ 1A đoạn từ Thành phố Hồ Chí Minh đến Minh Hải là tuyến giao thông huyết mạch của đồng bằng Nam bộ. Với tốc độ tăng trưởng lưu lượng vận tải trong tương lai, năng lực vượt sông Hậu bằng phà tại khu vực Cần Thơ hiện nay là không thể đáp ứng được. Vì vậy việc xem xét đầu tư xây dựng cầu Cần Thơ (quốc lộ 1A) là cần thiết để đáp ứng nhu cầu phát triển kinh tế xã hội của vùng. Bộ Kế hoạch và Đầu tư thống nhất với đề nghị của Bộ Giao thông vận tải trình Thủ tướng xem xét và phê duyệt dự án tiền khả thi đầu tư xây dựng cầu Cần Thơ.

2. Nhất trí với Bộ Giao thông vận tải các nội dung chủ yếu của dự án TKT cầu Cần Thơ như sau:

- Vị trí xây dựng: Cách bến phà Cần Thơ hiện nay khoảng 2,7 km về phía hạ lưu.

- Quy mô công trình:

+ Cầu vĩnh cửu, chiều dài khoảng 2.500m

+ Khố cầu: 4 làn xe ô tô + 2 làn xe máy + 2 luồng bộ hành và khoảng cách cho các kiến trúc an toàn cần thiết.

+ Đường vào cầu: Theo tiêu chuẩn đường cấp I đồng bằng.

+ Các thông số kỹ thuật khác sẽ được xác định cụ thể trong giai đoạn nghiên cứu khả thi.

- Tổng mức đầu tư: Khoảng 1.430 tỷ đồng (tương đương khoảng 130 triệu USD).

Hà Nội, ngày 21 tháng 8 năm 1996.
ĐẠI BIỂU CHÍNH PHỦ
TÊN
Cần Thơ
Đ. D. A. O. S. L. C. T. O.

- Nguồn vốn: ODA hoặc huy động các nguồn trong nước, gọi vốn đầu tư nước ngoài và trong nước dưới các hình thức đầu tư thích hợp (BOT, BT...). Nguồn vốn sẽ làm rõ hơn trong giai đoạn nghiên cứu khả thi.

- Thời gian thực hiện: Hoàn thành vào năm 2004.

3. Để có cơ sở quyết định đầu tư xây dựng cầu Cần Thơ đề nghị Thủ tướng Chính phủ:

- Giao Bộ Giao thông vận tải tổ chức nghiên cứu khả thi dự án này để trình duyệt theo quy định hiện hành và thực hiện một số điểm sau:

+ Làm việc và thống nhất với các địa phương (Cần Thơ và Vĩnh Long) về những vấn đề có liên quan trong việc quy hoạch, xây dựng, khai thác sử dụng công trình.

+ Nghiên cứu giải pháp tăng năng lực thông qua sông Hậu trong thời gian quá độ sau khi cầu Mỹ Thuận được đưa vào sử dụng.

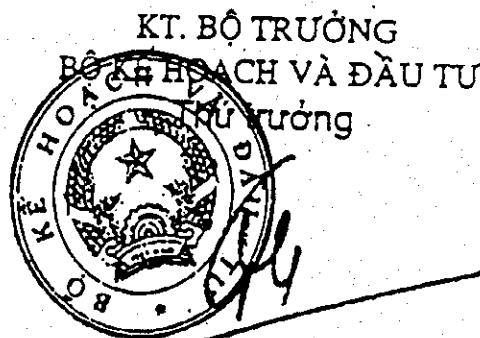
+ Chủ trì phối hợp với các cơ quan hữu quan tìm kiếm và xác định nguồn vốn cũng như phương thức thích hợp để đầu tư xây dựng công trình.

- Giao Ủy ban Sông Mê Kông Việt Nam làm việc với Ủy ban Sông Mê Kông quốc tế khẳng định rõ vai trò hàng hải quốc tế của sông Hậu nhằm xác định tính không và chiều rộng thông thuyền hợp ý.

Kính trình Thủ tướng xem xét và quyết định.

Nơi nhận:

- Như trên
- Bộ GTVT
- Bộ Xây dựng
- Bộ Quốc phòng
- Bộ KH-CN & MT
- UBND tỉnh Cần Thơ, Vĩnh Long
- Bộ Tài chính (TCĐT & PT)
- Ngân hàng NN
- Các vụ: VPTĐ, CSHT, ĐP
- Lưu VP.



Trần Xuân Giá

- 1.9 Submission on the Can Tho Bridge Construction by MPI based on Circular No.1402/KHDT May 25, 1996 from MOT, August 16, 1996

**MINISTRY OF PLANNING
AND INVESTMENT**

—OoO—

No: 3989 BKH/VPTD

SOCIALIST REPUBLIC OF VIETNAM
Independence - Freedom - Happiness

Ha Noi, 16th August, 1996.

Regarding: The Pre-feasibility project
on Can Tho Bridge Construction.

Dear: Governmental Prime Minister:

Ministry of Transport and Communications has already submitted the document No 1402/KHDT on 23rd May 1996 to Governmental Prime Minister for approval of the Pre-Feasibility project on the Can Tho Bridge construction. Based on the Government's Decree 42-CP on 16th July 1996 regarding the submission of investing projects, Ministry of Planning and Investment submits to Government's Prime Minister opinions on this project, as follows:

1. Highway No 1: The section from Ho Chi Minh city to Minh Hai is the main transport rout of the Southern Delta. Considering with increasing speed of transport volume in future, present capacity of ferry at Hau river in Can Tho is not able to meet it. Therefore, the consideration for investment on the Can Tho Bridge construction (Highway No 1) is necessary in order to meet needs on socio-economic development of the area. Ministry of Planning and Investment has already agreed to the suggestion of Ministry of Transport and Communications regarding submission to Prime Minister for consideration and approval of the Pre-feasibility project on the Can Tho construction.

2. Agreement with Ministry of Transport and Communications on the main contents of the Pre-feasibility project on the Can Tho Bridge construction are following:

- Construction location: It is far from Can Tho ferry about 2.7 km at down stream.
- Dimension of project:
 - + Permanent bridge, the length of 2.500m
 - + Bridge size: 4 lanes for cars + 2 lanes for motorcycle + 2 lanes for walking and distance for necessarily safe architectures.
 - + Approach road to bridge: Based on the criteria of the first category of road of Delta.
 - + Other technical parameters will be determined in the next stage of the feasibility study.
- Total Investment Capital: About 1,430 billions
(equivalent of about 130 millions USD)
- Capital source: ODA or mobilizing Inland capital, calling up investment capital from foreign countries and Inland country with properly investment form (BOT,BT...) Capital source will be made more clearly in the stage of the feasibility study.

- Performing time: will be completed in 2004.

3. In order to have the basis for decision on construction-investment on the Can Tho Bridge. We would like to suggest Governmental Prime Minister:

- Authorizing Ministry of Transport and Communications to organize the feasibility study for this project, and submit for approval as per the current regulations, and do the following points:

+ Working and discuss with local areas (such as Can Tho and Vinh Long) regarding the related matters with plan, construction, exploiting, using the project.

+ Studying the methods for increasing capacity across Hau River in the transitional stage after My Thuan Bridge is used.

+ Leading, cooperating with the authorizing companies to seek and determine the capital source as well as proper methods to invest and construct the project.

- Authorizing Viet Nam Mekong River Committee to work with International Mekong River Committee to affirm clearly the duty on International navigation of Hau River and determine properly Navigation clearance and Wide-Navigation Clearance.

We would like to submit the above problems to Prime Minister for consideration and decision.

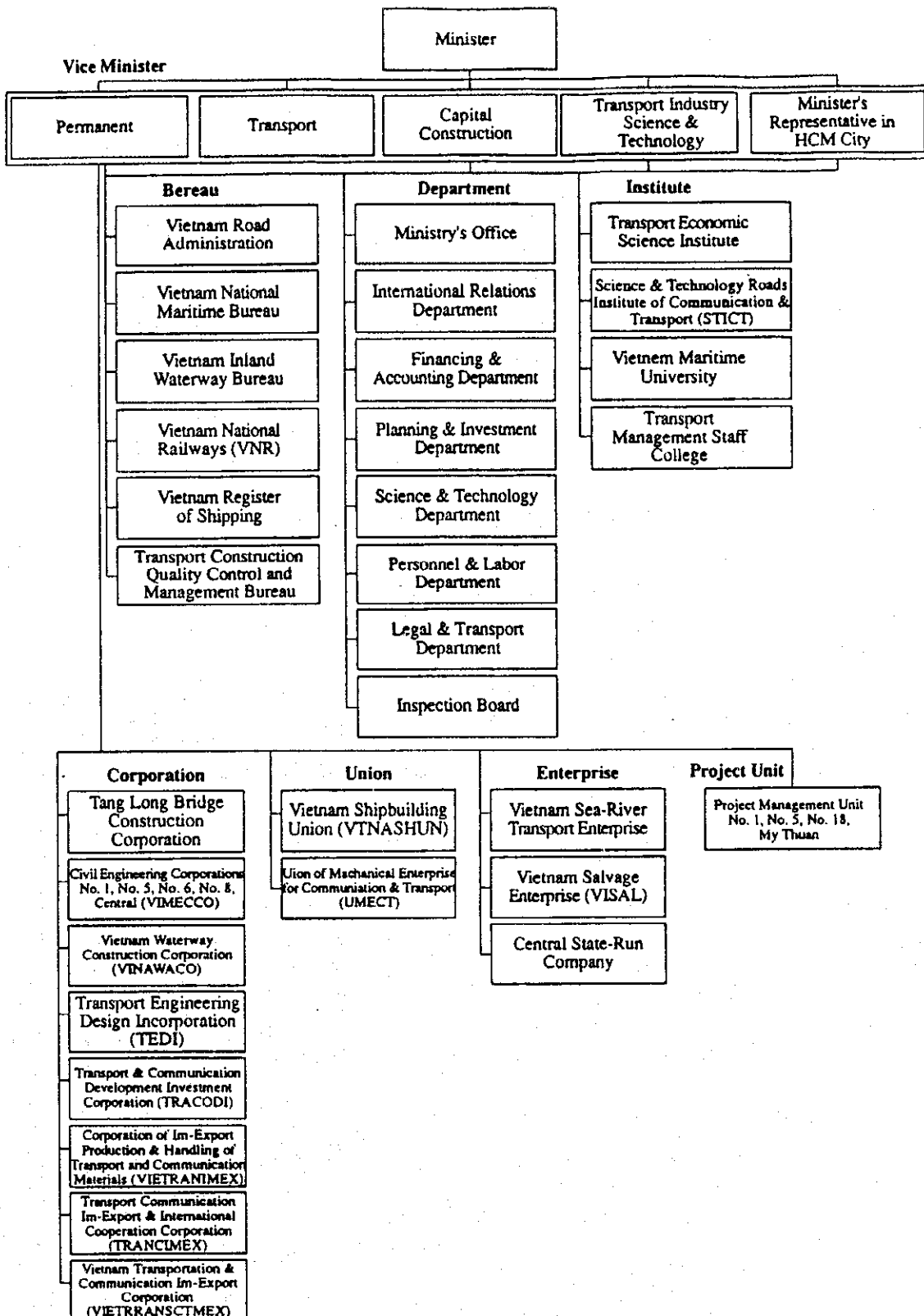
ON BEHALF OF MINISTER
MINISTRY OF PLANNING AND INVESTMENT
Vice-Minister

Received Place:

- As above.
- Ministry of Transport and Communication.
- Ministry of Construction.
- Ministry of Navigational Defence
- Ministry of Techno-Science Environment
- Can Tho, Vinh Long People's Committees.
- Vietcombank (General Department of Investment Development)
- Departments: VPTD, Infrastructure, Coordinating.
- File.

TRAN XUAN GIA

1.10 Organisation Chart of Ministry of Transport



ORGANIZATION CHART OF MINISTRY OF TRANSPORTATION

***The Feasibility Study
on The Can Tho Bridge Construction in
Socialist Republic of Viet Nam***

ANNEXURE 2

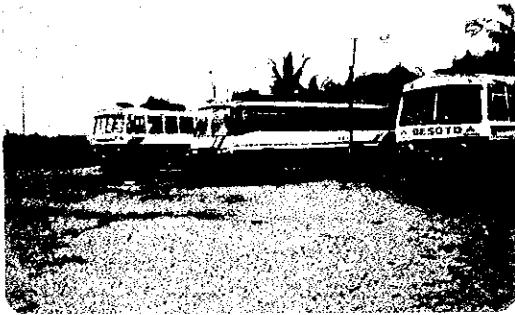
STUDY AREA

2.1	Photographs.....	A2-1
2.2	Socio-economic Data	A2-7
	- GDRP by Sector and Province (at constant price of 1989).....	A2-7
	- Basic Socio-economic Indicators in Viet Nam.....	A2-8
2.3	Taxes in Viet Nam	A2-9

2.1 Photographs



Near the Probable Location of Can Tho Bridge (Hau Giang, Max. Water Depth Approx., 20m)



Bus-Terminal in Ca Mau (Southernmost of National Highway No.1)



Widening Project in the Section of National Highway No.1(Soc Trang to Ca Mau)



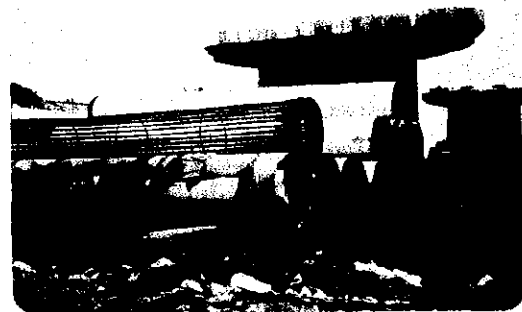
Vegetables beside the National Highway No.1 (Can Tho to Ca Mau)



Grain from the rice field along the National Highway No.1



Can Tho river flowing into the Hau Giaug



Concrete tube for pile foundations of Quang Trung bridge (Under Construction)



Traffic condition in the Can Tho city area



Vehicles on the Can Tho ferry boat area



Can Tho ferry boats
(National Highway No.1)



Can Tho ferry boats
(National Highway No.1)



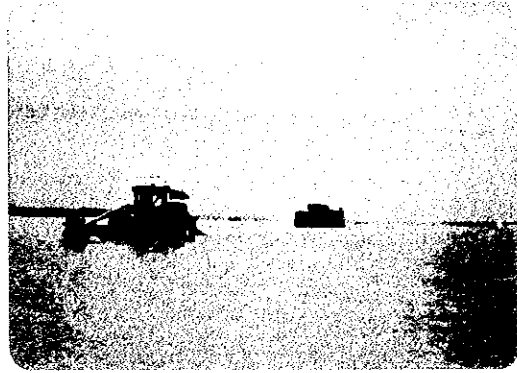
Vegetation (Mangrove) along Hau Giang



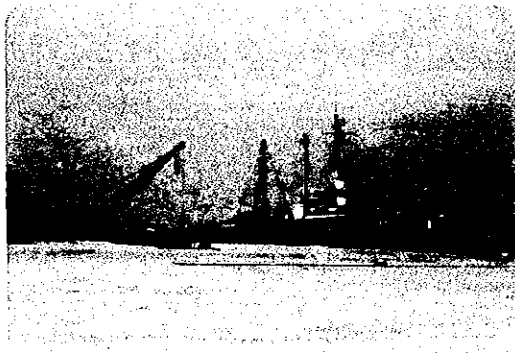
Prawn farming along Hau Giang



River bank erosion of Hau Giang



Waterway transportation of Han Giang



Existing Can Tho port



Export Processing Zone on the up-stream of the Can Tho port



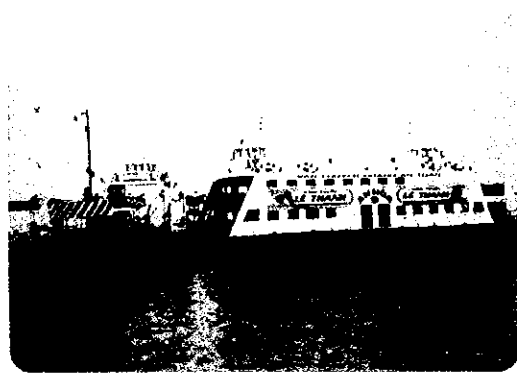
My Thuan ferry of the National Highway No.1



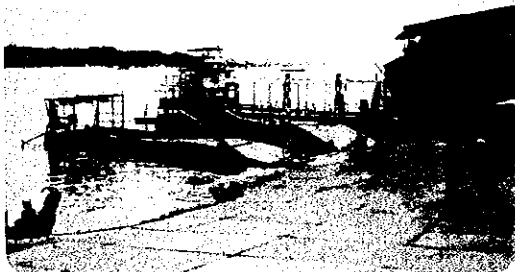
Trucks waiting for the my Thuan ferry boat



Ferry boat of Vam Cong
(National Highway No.80)



Ferry boat of An Hoa
(National Highway No.91)



Ferry boat of Chau Doc

KHU QUẢN LÝ ĐƯỜNG SỐ 7
PHÀ BẮC GIANG ĐẾN PHÀ YÊN PHÚ

BẢNG GIÁ CƯỚC QUA PHÀ

1. HÀNH KHÁCH ĐI BỘ	200
2. HÀNH KHÁCH ĐI XE ĐẠP	500
3. HÀNH KHÁCH ĐI XE GẮN MÁY	1500
4. XE LỬI BA GẮP THỎ SỎ	3000
5. XE DU LỊCH, XE LẠM	5000

THỜI GIỚI HẠN ĐÓNG PHÀ TỪ 05:00 ĐẾN 18:00
BẢNG GIÁ CƯỚC NÀY CHỈ LƯU KẾ TỪ NGÀY 01/7/9

Example of ferry fare board



Rach Gia Port
(National Highway No.80)



Chau Doc near the boundary to Cambodia
(National Highway No.9)



Resurfacing project by financial assistance of World bank
(HCM-city to can Tho)



Turning point between National highway No.1 & No.30



Turning point to My Thuan ferry
(National Highway No.1)



National Highway No.1
(Can Tho to Ca Mau)



National Highway No.91
(Can Tho Chau Doc)



National Highway No.80
(NH No.91 to Rach Gia)

2.2 Socio-economic Data

- GDRP by Sector and Province (at constant price of 1989)

Table GDRP by Sector and Province (at constant prices of 1989)

Province		GDRP 1991 (at 1989 constant prices, bil.dong)	share (%)	GDRP 1995 (at 1989 constant prices, bil.dong)	share (%)	Average annual growth rates
Long An	Agriculture	389.7	68	501.2	66	6.5%
	Industry	81.8	14	116.5	15	9.2%
	Service	97.7	17	136.9	18	8.8%
	Transport & post	15.9	3	19.8	3	5.6%
Dong Thap	Agriculture	494.8	78	695.1	76	8.9%
	Industry	53.8	9	71.6	8	7.4%
	Service	83.8	13	152.2	17	16.1%
	Transport & post	-	-	-	-	-
An Giang	Agriculture	533.0	61	760.3	59	9.3%
	Industry	101.2	12	167.9	13	13.5%
	Service	242.7	28	354.2	28	9.9%
	Transport & post	34.2	4	54.5	4	12.4%
Tien Giang	Agriculture	571.0	76	893.0	65	11.8%
	Industry	61.0	8	191.0	14	33.0%
	Service	119.0	16	298.0	22	25.8%
	Transport & post	-	-	-	-	-
Ben Tre	Agriculture	364.1	66	453.5	64	5.6%
	Industry	68.9	13	98.9	14	9.5%
	Service	115.8	21	160.5	23	8.5%
	Transport & post	9.2	2	12.4	2	7.9%
Vinh Long	Agriculture	374.3	73	481.9	69	6.5%
	Industry	46.9	9	76.2	11	12.9%
	Service	93.0	18	143.6	20	11.5%
	Transport & post	8.7	2	15.0	2	14.6%
Tra Vinh	Agriculture	215.1	66	333.0	66	11.5%
	Industry	32.4	10	59.1	12	16.2%
	Service	77.6	24	108.7	22	8.8%
	Transport & post	4.1	1	5.8	1	9.1%
Can Tho	Agriculture	440.1	62	578.9	55	7.1%
	Industry	123.3	17	244.1	23	18.6%
	Service	150.4	21	228.5	22	11.0%
	Transport & post	37.8	5	57.3	5	11.0%
Soc Trang	Agriculture	303.5	69	295.6	68	-0.7%
	Industry	60.8	14	109.7	25	15.9%
	Service	74.7	17	29.8	7	-20.5%
	Transport & post	1.8	0	5.0	1	28.9%
Kien Giang	Agriculture	471.0	56	682.0	50	9.7%
	Industry	95.0	11	238.0	18	25.8%
	Service	278.0	33	434.0	32	11.8%
	Transport & post	9.0	1	30.0	2	35.1%
Minh Hai	Agriculture	359.3	58	340.3	46	-1.3%
	Industry	132.6	21	210.5	29	12.2%
	Service	132.4	21	183.2	25	8.5%
	Transport & post	13.1	2	21.9	3	13.7%
Sub-total	Agriculture	4,515.9	66	6,014.7	61	7.4%
	Industry	857.7	13	1,583.4	16	16.6%
	Service	1,465.1	21	2,229.6	23	11.1%
	Transport & post	133.8	2	221.7	2	13.5%
Ho Chi Minh City	Agriculture	217.4	6	262.2	4	4.8%
	Industry	1,803.7	49	3,533.7	54	18.3%
	Service	1,661.3	45	2,728.4	42	13.2%
	Transport & post	358.2	10	581.4	9	12.9%
Viet Nam	Agriculture	12,264.0	39	14,892.0	34	5.0%
	Industry	7,228.0	23	12,113.0	28	13.8%
	Service	11,794.0	38	16,792.0	38	9.2%
	Transport & post	792.0	3	1,066.0	2	7.7%

Source: Economy and Society 1991-1995, Statistics Department of Ho Chi Minh City, Sep. 1996

- Basic Socio-economic Indicators in Viet Nam

Table Basic Socio-economic Indicators in Viet Nam

		1990	1991	1992	1993	1994	1995
Population	(1,000s pers.)	66,233	67,774	69,405	71,026	72,510	73,959
GDP growth rate (real)	(%)	5.1	6.0	8.6	8.1	8.8	9.5
Inflation rate	(%)	36.4	83.1	37.8	8.3	9.4	-
GDP (nominal)	(bil.dong)	41,955	78,707	110,535	136,571	170,258	222,840
Per capita GDP (nominal)	(dong/pers.)	633,448	1,131,806	1,592,604	1,922,723	2,348,062	3,012,980
Official exchange rate	(dong/US\$)	5,016	9,080	11,209	10,850	-	-
Gvt. expenditure (nominal)	(bil.dong)	9,186	12,081	23,711	37,010	44,655	54,462
Transport sector	(bil.dong)	569	762	1,554	2,561	-	-
Governmental income (nomi)	(bil.dong)	6,153	10,353	21,023	30,500	42,125	53,295
(Financial deficit)/GDP	(%)	7.2%	2.2%	2.4%	4.8%	1.5%	0.5%
Debt/Service Ratio	(%)	15%	9%	15%	13%	7%	6%
ODA infow	(mil.US\$)	-	239	580	258	897	829
Loan	(mil.US\$)	-	184	516	64	765	679
Grant	(mil.US\$)	138	55	64	194	132	150
Import	(mil.US\$)	2,752	2,338	2,541	3,924	5,826	7,500
Export	(mil.US\$)	2,404	2,087	2,581	2,985	4,054	5,200
(Ordinary balance deficit)/GI	(%)	0.6%	0.2%	0.0%	0.6%	0.7%	1.0%
Net capital inflow	(mil.US\$)	117	83	74	-289	757	2,309
Foreign investment	(mil.US\$)	120	220	260	300	1,048	1,780

Source: Statistical Yearbook, Central Statistical Office, Vietnam and Key Indicators of Developing Asian and Pacific Countries, Asian Development Bank

2.3 Taxes in Viet Nam

Taxes in Viet Nam

I. Value Added Tax

1. Legal basis

Law on Value Added Tax, May 1997

2. Date of enforcement

Jan., 1999

3. Brief description

- Value added tax is the tax imposed on the added value of goods or services in the process of their production, circulation and consumption.
- Goods and services used for production, business and consumption in Vietnam shall be subject to the value added tax.
- An organization or an individual that produces and trades in taxable goods and services (commonly referred to as "business establishments") and any organizations and individuals that import taxable goods (commonly referred to as "importers") are liable to value added tax.

4. Tax rates

- For goods and services, taxable price shall be the selling price without value added tax. For import goods, taxable price shall be the import price at the border gate plus (+) import tax.

- Scientific and technical services	5%
- Engineering products	10%
- Oil, gas, coal, ore and other mineral products	10%
- Cement, bricks, tiles and other construction materials	10%
- Construction and installation	10%
- Transportation and loading	10%

II. Export and Import duty

1. Legal basis

Decree No. 54/CP, Aug., 1993

2. Date of enforcement

Sep., 1993

3. Brief description

- All kinds of goods permitted to be exported and imported through border crossing points of Vietnam shall be subject to export and import duties.
- All organizations or individuals with goods for export or import shall pay export or import duties.

4. Duty rates

(ref. Table 1)

III. Enterprise Income Tax

1. Legal basis

Law on Enterprise Income Tax, May 1997

2. Date of enforcement

Jan., 1999

3. Brief description

- Organizations and individuals involved in production and trading of goods and service provision (hereafter referred to as business establishment) with incomes therefrom shall all have to pay the enterprise income tax.

4. Tax rates

- Taxable incomes from production, business and service activities are the turnover minus the reasonable costs related to the taxable incomes.
- Turnover subject to the calculation of taxable incomes is the total sum earned from the sale of goods, remuneration from sub-contracts and the provision of services, including price subsidies.
- The enterprise income tax rate applicable to domestic business establishments and foreign organizations and individuals doing business in Vietnam not under the Law on Foreign Investment in Vietnam shall be 32%.

IV. Turnover Tax

1. Legal basics

Law on Turnover Tax, 30 Jun., 1990

2. Date of enforcement

1 Sep., 1993

Table 1 Import Tariff Relevant to the Project

Commodity Type	Code	Goods	Rate (%)	
Materials	251600	Granite bassalt, pophir, sand rock,...for construction	2	
	251700	Cobble, pebble, crushed or milled for concrete, route constructi	2	
	252310	Portland cement	5	
	252321	White cement	10	
	252330	Alum cement	10	
	252390	Other water solidified cements	10	
	27100010	Gasoline kinds	55	
	27100020	Diesel kinds	15	
	32091010	Antirusting, acid-proof, heat-resistant, seawater resistant paints	10	
	32091090	Other paints and varnishes	25	
	34031090	Lubricants	25	
	680700	Asphalt or similar material	5	
	681000	Goods made by cement, concrete, reinforced or not	20	
	721310	Constructing steel with diameter up to 100mm	30	
	721320	Constructing steel with thickness up to 20mm	30	
	721390	Other construction steel	10	
	721400	Other rod forms of non-alloyed iron, steel	20	
	721600	Figured non-alloyed iron, steel (L,U,I,H,T,...)	5	
		Figured small non-alloyed iron, steel (L,U,I)	30	
	721700	Wires of non-alloyed iron, steel not for soldering	5	
	730810	Bridge and bridge-span made by iron or steel	0	
	730820	Tower and grid-column made by iron or steel	0	
	731300	Iron or steel wires	20	
	731411	Wire items made by stainless steel	1	
	73181590	Bolts with diameter over 16 mm	20	
	73181690	Nuts with diameter over 16 mm	20	
	73182390	Rivets with diameter over 16 mm	20	
	761020	Bridge, bridge span, tower, grid column	1	
	Equipments	841340	Concrete pump	0
		84136010	Motor rotating water pump up to 8000 cu.m/hour	25
		84136090	Motor rotating water pump over 8000 cu.m/hour	0
		84138110	Water pump having rate up to 3000 cu.m/h	30
		84138190	Water pump having rate over 3000 cu.m/h	0
		842511	Jack, pulley, windlass crane powered by electric motor	0
		8426	Cranes (gantry crane, tower crane,...)	0
		842831	Other loading and unloading equipments for underground use	0
		842833	Conveyor	0
		8429	Road making equipments and vehicles (bulldozer, excavator, ...)	0
		8462	Tool-machines for metal working for bending, cutting,...	0
		8463	Other tool-machines for metal working	0
		8464	Tool-machines for working rock, stones, concrete, cement,...	0
		8474	Machineries used to milling, mixing stone, cement,...	0
			Generator sets not over than 75 KVA rating	15
			Generator sets over 75 KVA but not over 375 KVA	10
		8515	Soldering, welding equipments using electric power	0

Source: The Decree No.54/CP(Aug.,1993), No.1138/TC/TCT(Nov., 1994), No.615A TC/TCT/QD(Jun.,1995)
 No. 1188 TC/QD/TCT(Nov.,1995), No. 1233/TC/TCT/QD(Dec., 1995), No. 443 TC/QD/TCT(May,1996)
 No. 542 TC/QD/TCT(Jun., 1996), 861A TC/QD/TCT(Sep., 1996)

3. Brief description

- Business organizations and individuals of all branches and trading and all economic sectors, irrespective of their business forms, which with or without business establishment in Vietnam, have their turnover generated in Vietnam shall be subject to the turnover tax.
- Activities of maintaining roads, dredging canals, wharves, bridges, dikes and passages are temporarily exempt from turnover tax.

4. Tax rates

- 1) Manufacturing construction materials 4% of tax rate shall apply.
 - Concrete grout includes sorts of grout of structure cement and asphalt etc used to construct factories, roads and bridges etc or to produce precast structural concrete.
- 2) Local passenger transportation by bus is 1% of tax rate applied for transport in local road routes to border.

Table Turnover Tax Rates

Branches	Rates (%)
I) Manufacturing branch:	
- Production of building materials	4
II) Construction branch	
- Installation, survey, design and other ones referring to construction	4
III) Transport branch:	
- Transporting goods	2
*Particularly, primary means in mountain and island region	0.5
- Transporting local passengers by bus	1
IV) Trading branch:	
- Production materials and raw materials	1
- Other transport means: ships, canoe, car, standard bus, crane (not including bicycles, motorcycles, car with 24 seats and over.	1
- Machinery and equipment used as means of production	1
V) Subcontracting activities	6

V. Excise Taxes

1. Legal basis

Law on Excise Tax, 1951

2. Date of enforcement

1, Oct., 1990

3. Brief description

- Local business lines involved in exported and imported goods such as, naphtha, petrol tobacco, alcoholic drinks, and cars with 24 seats shall be subject to the excise tax.
- Individual business and production households, government officials, public employees, cooperative members and laborers in non-state enterprises as well as business units which are joint-stock companies, limited liability companies cooperatives, production units all shall pay their excise tax at the fixed the fixed rate of 850,00 VND a year.
- The business establishments, branches, stores and shops which are dependent accounting or daily financial reporting units and cooperatives and production groups shall pay each an excise tax of 550,000 VND a year.

4. Tax rates

Commodity type	Code	Goods	Rates (%)
Imported cars (including SKD)		- Cars with 5 seats and under	100
		- Cars with 6-15 seats	60
		- Cars with 16-4 seats and other cars for both people and goods, microbus	30
		Types of petrol	
Types of petrol, naphtha, other finished products for making up petrol	27100010	Types of petrol	
	27100060	Naphtha, Reformat	

* Note:

- Excise tax is higher than other types of taxes because of regulating turnover, instructing consumer, protecting domestic goods.
- If some business establishments pay excise tax they shall not pay turnover tax.

VI. Natural Resource Tax

1. Legal basics

Law on Natural Resource Tax, 28, Dec., 1989

2. Date of enforcement

1, Jan, 1991

- Natural resource belonging to sovereignty of socialist republic of Vietnam shall be subject to the Natural resource tax.

- Organizations and individuals involved in economic sectors as well as companies with foreign invested capital or foreign business cooperation based on contract and with exploitation of natural resource are liable to pay Natural Resource tax.

4. Tax rates

Name of resource	Rates (%)
- Metal mineral product	3
- High-quality construction materials	3
- Popular construction materials (Stone, sand, grave, soil etc)	2
- Precious stone (alexandrit, black opal, and andradit, berin etc.)	12

VII. Income Tax on high income earner

1. Legal basis

Law on Income Tax on high income earner, Dec., 1990

2. Date of enforcement:

18, Feb. 1997.

3. Brief description

- Vietnamese citizens in the country and other individuals having settled in Vietnam at high income level are liable to pay private income tax.

- Forms of private incomes subject to incomes taxes.

a. Regular incomes: Salary, bonus and other incomes from business organizations.

b. Irregular incomes: Incomes in the form of presents and gifts in kind sent by organizations and individuals abroad to individual in Vietnam in all forms.

Incomes from construction technical designs, industrial technical designs and other services.

4. Tax rates

a. For Vietnamese citizens in the country and other individuals being settled in Viet Nam.

Level	Monthly average incomes/person	Rates (%)
1	2 million VND	0
2	over 2-3 million VND	10
3	over 3-4 million VND	20
4	over 4-6 million VND	30
5	over 6-8 million VND	40
6	over 8-10 million VND	50
7	over 10 million VND	60

b. For foreigners being settled in Viet Nam and Vietnamese Citizens do business abroad

Level	Monthly average incomes/person	Rates (%)
1	5 million VND	0
2	over 5-12 million VND	10
3	over 12-30 million VND	20
4	over 30-50 million VND	30
5	over 50-70 million VND	40
6	over 70 million VND	50

VIII. Profit Tax

1. Legal basis

Law on Profit Tax, Oct., 1990

2. Date of enforcement

28, Aug., 1993

3. Brief description

- Business establishments (except for small-scale business households, households engaged in a lot trading) shall pay profit tax at the fixed rates on the taxable profit earned in the whole year.

4. Tax rates

- Production of building materials 25%
- Transport 25%
- Construction including survey and designing activities 25%
- Construction of infrastructure for lease industrial zones, export processing zones, and hi-tech zones 25%
- Trading sectors, restaurants and service: 45%

For small-scale business households (or called retail businesses), the tax rates shall apply as follows:

- Production, construction and transportation 1%
- Trading sectors, restaurants and service 2%

For wholesale business the tax rates of 3% per the existing selling price shall be applied.

For business establishments the tax rates shall pay profit tax at the fixed rates.

IX. Others:

* Enterprise income tax will take effects on January 1st, 1999. It will replace profit tax.

* Value added tax (VAT) will take effects on January 1st, 1999. It will replace turnover tax.

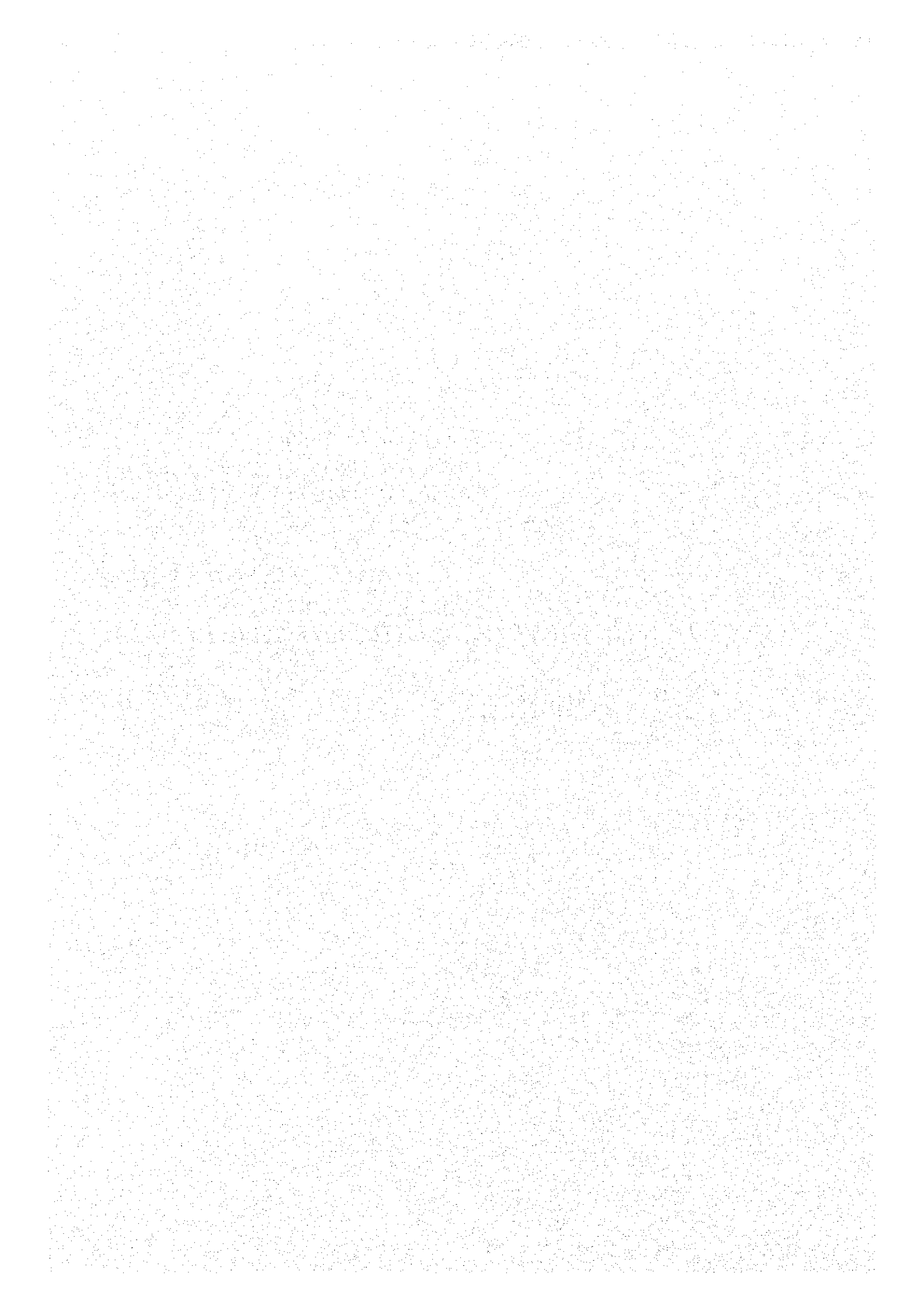
* Ferry station and bridge operation station are non-profitable organization. Total of input will subtract total of output; and then, total of the rest will put into state budget without paying tax.

***The Feasibility Study
on The Can Tho Bridge Construction in
Socialist Republic of Viet Nam***

ANNEXURE 3

TRAFFIC SURVEY AND FUTURE TRAFFIC DEMAND

3.1	Data of Traffic Count Results, September 1997	A3-1
3.2	Origin-Destination Matrix of Motorcycle Trips, AADT, Year 1997	A3-13
3.3	Traffic Assignment Results for the Hai Giang Crossing near Can Tho	A3-21



3.1 Data of Traffic Count Results, September 1997

Summary of 24-Hour Road-Based Traffic Count Results, Can Tho Ferry, Northbound, September 1997 (Without Seasonal Adjustment Factor)

Vehicle Type	Time of Day																								24-Hour Total
	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	
Pedestrian/Handcart	7	13	13	13	50	100	225	331	285	259	306	277	7	13	13	13	50	100	225	331	285	259	306	277	3,307
Bicycle	4	1	1	2	10	23	60	69	58	72	111	87	4	1	1	2	10	23	60	69	58	72	111	87	1,340
Bicycle-with-Trailer/Cycle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Motorcycle	3	6	3	13	20	62	99	142	152	136	137	138	3	6	3	13	20	62	99	142	152	136	137	138	2,014
Motorcycle-with-Trailer	-	-	-	2	2	2	1	1	6	4	4	4	-	-	-	2	2	2	1	1	6	4	4	4	163
Passenger Car/Sedan	4	2	4	3	6	8	7	12	12	12	11	9	4	2	4	3	6	8	7	12	12	12	11	9	297
Microbus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	83
Minibus/Van	16	9	15	15	9	6	14	18	19	21	12	19	16	9	15	15	9	6	14	18	19	21	12	19	305
Standard Bus	1	2	3	5	2	4	5	8	10	9	8	7	1	2	3	5	2	4	5	8	10	9	8	7	19
Truck with 2 axles	3	7	6	6	7	3	2	2	2	2	1	1	3	7	6	6	7	3	2	2	2	2	1	1	27
Truck with 3 axles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Police or Military Vehicle	2	-	-	-	-	1	1	4	2	2	1	2	2	-	-	-	1	1	4	2	2	1	2	27	
Total	33	34	45	62	104	210	414	592	556	525	599	556	33	34	45	62	104	210	414	592	556	525	599	556	7,616
Total No. of Vehicles	33	34	45	62	104	210	414	592	556	525	599	556	33	34	45	62	104	210	414	592	556	525	599	556	7,616
Total No. of Motorized Vehicles	29	26	31	47	44	87	129	192	213	194	182	192	29	26	31	47	44	87	129	192	213	194	182	192	4,309
Total No. of MVs not incl. MCs	26	20	28	32	24	23	29	49	55	54	41	50	26	20	28	32	24	23	29	49	55	54	41	50	2,968

Note: MV = motorized vehicle; MC = motorcycle.

Vehicle Type	Time of Day																								24-Hour Total
	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	
Pedestrian/Handcart	231	200	215	201	150	121	132	61	55	33	25	7	231	200	215	201	150	121	132	61	55	33	25	7	3,307
Bicycle	70	67	65	79	124	124	81	131	60	32	8	1	70	67	65	79	124	124	81	131	60	32	8	1	1,340
Bicycle-with-Trailer/Cycle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Motorcycle	125	114	139	122	144	135	105	63	94	33	18	11	125	114	139	122	144	135	105	63	94	33	18	11	2,014
Motorcycle-with-Trailer	4	4	8	4	4	4	4	2	1	1	3	3	4	4	8	4	4	4	2	1	1	3	3	3	163
Passenger Car/Sedan	10	14	12	11	6	7	4	2	1	1	1	2	10	14	12	11	6	7	4	2	1	1	1	2	297
Microbus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	83
Minibus/Van	15	20	17	16	11	13	3	2	3	4	3	16	15	20	17	16	11	13	3	2	3	4	3	16	305
Standard Bus	6	3	4	2	1	1	1	-	1	-	-	-	6	3	4	2	1	1	1	-	1	-	-	-	19
Truck with 2 axles	7	6	32	14	14	17	21	27	30	19	3	1	7	6	32	14	14	17	21	27	30	19	3	1	27
Truck with 3 axles	2	1	-	-	-	1	1	-	-	-	-	-	2	1	-	-	-	1	1	-	-	-	-	-	1
Police or Military Vehicle	1	2	2	1	4	2	-	-	-	-	-	-	1	2	2	1	4	2	-	-	-	-	-	-	27
Total	471	431	494	451	468	424	353	288	244	121	86	55	471	431	494	451	468	424	353	288	244	121	86	55	7,616
Total No. of Vehicles	240	231	279	250	308	303	221	227	189	88	61	48	240	231	279	250	308	303	221	227	189	88	61	48	4,309
Total No. of Motorized Vehicles	170	164	214	171	164	179	139	96	129	56	53	47	170	164	214	171	164	179	139	96	129	56	53	47	2,968
Total No. of MVs not incl. MCs	41	46	67	45	36	40	30	31	35	23	35	36	41	46	67	45	36	40	30	31	35	23	35	36	896

Note: MV = motorized vehicle; MC = motorcycle.

Summary of 24-Hour Road-Based Traffic Count Results, Can Tho Ferry, Southbound, September 1997 (Without Seasonal Adjustment Factor)

Vehicle Type	Time of Day												Total
	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	
Pedestrian/Handcart	5	-	-	4	39	45	156	252	304	289	280	252	470
Bicycle	-	-	-	-	22	78	185	59	52	40	40	46	1
Bicycle-with-Trailer/Cyclo	-	-	-	-	-	-	1	1	-	-	-	-	123
Motorcycle	-	-	-	3	20	47	134	118	136	136	122	1	7
Motorcycle-with-Trailer	-	-	-	1	-	-	3	4	5	6	1	-	23
Passenger Car/Sedan	3	6	5	9	9	9	5	7	14	16	19	-	-
Microbus	-	-	-	-	-	-	-	-	-	-	-	-	-
Minibus/Van	-	-	-	-	-	-	1	1	1	2	2	1	1
Standard Bus	-	-	-	-	-	-	1	5	5	7	9	9	9
Truck with 2 axes	26	29	14	8	9	8	16	12	9	10	4	7	7
Truck with 3 axes	-	-	-	-	-	-	-	-	-	-	-	-	-
Police or Military Vehicle	-	-	-	-	-	-	1	1	-	-	-	2	2
Total	34	35	19	25	99	187	503	460	526	506	479	479	218
Total No. of Vehicles	29	35	19	21	60	142	347	208	222	217	199	199	171
Total No. of Motorized Vehicles	29	35	19	21	38	64	161	148	170	177	159	159	171
Total No. of MVs not incl. MCs	29	35	19	17	18	17	24	26	29	35	36	36	41

Note: MV = motorized vehicle, MC = motorcycle.

Vehicle Type	Time of Day												Total
	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	
Pedestrian/Handcart	186	229	186	215	218	179	93	56	31	33	7	10	3,069
Bicycle	67	45	46	41	70	113	56	22	15	13	1	2	1,013
Bicycle-with-Trailer/Cyclo	-	-	-	-	-	-	-	-	-	-	-	-	3
Motorcycle	117	129	127	123	137	152	131	64	50	26	7	5	1,907
Motorcycle-with-Trailer	5	4	5	4	1	2	9	3	-	2	1	-	63
Passenger Car/Sedan	22	25	27	30	37	32	21	33	18	23	12	15	420
Microbus	-	-	1	-	1	-	-	-	-	-	-	-	2
Minibus/Van	3	3	2	3	4	2	2	1	2	-	-	1	31
Standard Bus	9	9	7	6	5	4	4	3	2	2	2	1	90
Truck with 2 axes	8	10	10	13	21	24	27	26	29	20	11	17	368
Truck with 3 axes	-	-	1	-	-	-	-	-	-	-	-	-	1
Police or Military Vehicle	1	1	-	1	1	1	1	1	-	-	-	-	12
Total	418	455	412	436	495	509	344	209	147	119	41	51	6,979
Total No. of Vehicles	232	226	226	221	277	330	251	153	116	86	34	41	3,910
Total No. of Motorized Vehicles	165	181	180	180	207	195	195	131	101	73	33	39	2,894
Total No. of MVs not incl. MCs	43	48	48	53	69	63	55	64	51	45	25	34	924

Note: MV = motorized vehicle, MC = motorcycle.

Summary of 24-Hour Road-Based Traffic Count Results, Vam Cong Ferry, Northbound, September 1997 (Without Seasonal Adjustment Factor)

Vehicle Type	Time of Day												Total
	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	
Pedestrian/Handcart	269	456	247	303	296	269	355	407	462	351	326	299	289
Bicycle	-	1	5	2	13	10	30	33	30	26	27	1	26
Bicycle-with-Trailer/Cyclo	-	-	-	-	-	2	2	1	2	-	1	1	-
Motorcycle	1	4	6	27	20	60	53	88	84	75	67	68	68
Motorcycle-with-Trailer	-	-	-	-	-	2	1	-	1	-	1	1	1
Passenger Car/Sedan	1	1	1	4	2	2	4	3	10	7	6	3	3
Microbus	-	-	-	-	-	4	-	1	-	-	2	2	2
Minibus/Van	6	1	2	4	2	4	5	5	5	12	4	4	4
Standard Bus	5	5	1	1	4	-	3	2	3	2	2	2	2
Truck with 2 axes	5	7	6	7	8	3	4	4	5	5	7	5	5
Truck with 3 axes	1	-	1	-	-	-	-	-	-	1	1	-	-
Police or Military Vehicle	-	-	-	-	-	1	-	-	-	-	1	-	-
Total	288	475	269	348	345	353	457	544	602	481	445	410	410
Total No. of Vehicles	19	19	22	45	49	84	102	137	140	130	119	111	111
Total No. of Motorized Vehicles	19	18	17	43	36	72	103	108	108	102	91	85	85
Total No. of MVs not incl. MCs	18	14	11	16	16	10	16	15	23	27	23	16	16

Note: MV = motorized vehicle; MC = motorcycle.

Vehicle Type	Time of Day												Total
	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	
Pedestrian/Handcart	323	274	324	292	326	270	324	250	267	118	244	96	7,148
Bicycle	35	28	34	23	38	37	25	11	1	-	-	-	437
Bicycle-with-Trailer/Cyclo	1	1	1	1	-	-	-	-	1	-	-	-	13
Motorcycle	73	70	82	90	97	73	106	51	23	6	2	4	1,230
Motorcycle-with-Trailer	2	-	1	2	2	2	2	1	1	-	1	2	18
Passenger Car/Sedan	5	8	8	5	6	1	1	1	5	-	5	-	90
Microbus	-	-	-	-	-	1	-	-	-	-	-	-	7
Minibus/Van	5	8	7	5	5	2	2	1	7	6	5	4	111
Standard Bus	1	-	-	-	1	1	-	-	7	-	-	2	41
Truck with 2 axes	6	9	10	11	8	8	16	17	29	21	19	8	228
Truck with 3 axes	-	-	-	-	-	-	-	-	3	1	1	-	8
Police or Military Vehicle	-	-	-	-	-	-	-	-	-	-	-	-	3
Total	451	398	457	429	482	395	475	331	344	152	277	116	9,335
Total No. of Vehicles	128	124	143	137	156	125	152	81	77	34	33	20	2,187
Total No. of Motorized Vehicles	92	95	108	113	118	88	127	70	75	34	33	20	1,737
Total No. of MVs not incl. MCs	17	25	25	21	21	13	19	19	51	28	30	14	488

Note: MV = motorized vehicle; MC = motorcycle.

Summary of 24-Hour Road-Based Traffic Count Results, Yam Cong Ferry, Southbound, September 1997 (Without Seasonal Adjustment Factor)

Vehicle Type	Time of Day												24-Hour Total
	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	
Pedestrian/Handcart	118	54	60	49	85	133	318	253	279	292	235	364	
Bicycle	-	2	-	1	8	15	33	20	18	24	21	25	
Bicycle-with-Trailer/Cyclo	3	1	1	1	4	8	-	1	1	1	1	1	
Motorcycle	7	5	4	2	9	15	66	71	73	76	80	76	
Motorcycle-with-Trailer	1	3	2	-	-	-	-	-	1	-	-	-	
Passenger Car/Sedan	4	1	3	-	4	5	1	2	3	3	6	2	
Microbus	-	-	-	-	1	2	1	1	1	-	-	-	
Minibus/Van	5	1	2	2	5	4	3	4	5	5	4	6	
Standard Bus	-	-	-	-	-	2	2	1	1	1	1	3	
Truck with 2 axles	15	13	15	15	8	6	6	6	6	5	5	4	
Truck with 3 axles	1	1	-	-	-	2	2	1	-	-	-	-	
Police or Military Vehicle	-	-	-	-	-	-	-	-	-	-	-	-	
Total	154	81	87	70	124	188	432	360	388	407	353	481	
Total No. of Vehicles	36	27	27	21	39	55	114	107	109	115	118	117	
Total No. of Motorized Vehicles	33	24	26	19	27	32	81	86	90	90	96	91	
Total No. of MVs not incl. MCs	25	16	20	17	18	17	15	15	15	14	16	15	

Note: MV = motorized vehicle; MC = motorcycle.

Vehicle Type	Time of Day												24-Hour Total
	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	
Pedestrian/Handcart	350	307	296	348	297	288	283	131	282	85	193	102	
Bicycle	24	17	20	23	31	24	17	3	-	-	5	-	
Bicycle-with-Trailer/Cyclo	1	1	1	-	1	-	1	-	-	-	-	-	
Motorcycle	73	76	57	64	62	64	30	17	7	3	9	-	
Motorcycle-with-Trailer	-	1	-	-	1	1	3	-	-	-	1	-	
Passenger Car/Sedan	2	4	6	6	4	6	1	4	5	5	7	2	
Microbus	1	1	-	-	-	1	-	-	-	-	-	-	
Minibus/Van	5	5	6	9	8	5	1	5	5	3	6	2	
Standard Bus	3	3	1	2	1	1	3	1	3	-	-	1	
Truck with 2 axles	3	4	7	9	8	9	14	6	14	12	7	6	
Truck with 3 axles	-	-	-	-	-	-	-	-	-	-	-	-	
Police or Military Vehicle	-	-	-	-	-	-	-	-	1	-	-	-	
Total	462	419	394	461	413	399	353	167	317	108	228	113	
Total No. of Vehicles	112	112	98	113	116	111	70	36	35	23	35	11	
Total No. of Motorized Vehicles	87	94	77	90	84	87	52	33	35	23	30	11	
Total No. of MVs not incl. MCs	14	17	20	26	21	22	19	16	28	20	20	11	

Note: MV = motorized vehicle; MC = motorcycle.

Summary of 24-Hour Road-Based Traffic Count Results, An Hoa Ferry, Northbound, September 1997 (Without Seasonal Adjustment Factor)

Vehicle Type	Time of Day												24-Hour Total
	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	
Pedestrian/Handcart	8	5	3	6	16	54	41	82	88	54	101	86	86
Bicycle	-	-	1	2	12	48	23	39	50	41	66	128	128
Bicycle-with-Trailer/Cyco	-	-	-	-	1	2	1	2	1	3	1	-	-
Motorcycle	8	2	14	10	6	19	56	90	84	79	97	92	92
Motorcycle-with-Trailer	-	-	-	-	-	-	-	2	1	1	-	1	1
Passenger Car/Sedan	2	-	-	-	1	2	2	1	3	2	2	2	2
Microbus	-	-	-	-	-	-	-	-	-	-	-	-	-
Minibus/Van	1	1	-	-	2	1	3	2	2	3	2	4	4
Standard Bus	3	2	2	2	3	2	2	2	4	2	5	2	2
Truck with 2 axes	-	2	2	1	5	2	-	2	1	2	1	-	-
Truck with 3 axes	-	-	-	-	-	-	-	-	-	-	-	-	-
Police or Military Vehicle	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	22	12	22	21	46	130	128	222	234	227	275	316	316
Total No. of Vehicles	14	7	19	15	30	76	87	140	146	133	174	230	230
Total No. of Motorized Vehicles	14	7	18	13	17	26	63	99	96	89	107	102	102
Total No. of MVs not incl. MCs	6	5	4	3	11	7	7	7	10	9	10	9	9

Note: MV = motorized vehicle; MC = motorcycle.

Vehicle Type	Time of Day												24-Hour Total
	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	
Pedestrian/Handcart	84	90	85	90	90	70	34	29	39	29	25	12	956
Bicycle	58	54	45	62	87	102	31	32	45	27	2	1	18
Bicycle-with-Trailer/Cyco	2	1	1	1	2	-	-	-	-	-	-	-	-
Motorcycle	101	98	99	108	138	103	86	42	50	34	43	37	1,496
Motorcycle-with-Trailer	-	-	-	1	1	1	-	-	-	-	-	-	8
Passenger Car/Sedan	1	2	1	1	1	1	-	-	-	-	-	-	26
Microbus	-	-	-	-	-	-	-	-	-	-	-	-	-
Minibus/Van	2	3	3	3	1	3	-	-	1	2	1	1	42
Standard Bus	2	2	2	1	1	1	-	-	-	3	3	3	48
Truck with 2 axes	1	2	2	1	1	1	1	-	1	1	1	-	29
Truck with 3 axes	-	-	-	-	-	-	-	-	-	-	-	-	1
Police or Military Vehicle	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	251	252	238	267	321	280	155	104	136	96	75	55	3,885
Total No. of Vehicles	167	162	153	177	231	210	121	75	97	67	50	43	2,624
Total No. of Motorized Vehicles	107	107	107	114	142	108	90	43	52	40	48	42	1,650
Total No. of MVs not incl. MCs	6	9	8	5	3	4	4	1	2	6	5	5	146

Note: MV = motorized vehicle; MC = motorcycle.

Summary of 24-Hour Road-Based Traffic Count Results, An Hoa Ferry, Southbound, September 1997 (Without Seasonal Adjustment Factor)

Vehicle Type	Time of Day												Total
	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	
Pedestrian/Handcart	4	2	2	6	39	125	121	134	125	102	79	95	95
Bicycle	3	1	1	3	12	102	164	59	38	36	36	99	99
Bicycle-with-Trailer/Cyclo	-	-	-	-	-	1	2	4	1	2	2	1	1
Motorcycle	2	-	-	1	1	14	128	106	102	96	86	88	88
Motorcycle-with-Trailer	-	-	-	1	-	1	1	2	-	1	-	-	-
Passenger Car/Sedan	-	-	-	-	-	2	2	2	2	3	2	1	1
Microbus	-	-	-	-	-	-	-	-	-	-	-	-	-
Minibus/Van	-	-	-	-	2	1	2	3	1	2	2	2	2
Standard Bus	-	-	-	-	-	2	2	1	1	1	3	3	3
Truck with 2 axles	-	1	-	2	2	3	2	1	2	2	1	1	1
Truck with 3 axles	-	-	-	-	-	-	-	-	-	-	-	-	-
Police or Military Vehicle	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	9	3	3	13	56	251	424	314	272	245	211	290	290
Total No. of Vehicles	5	1	1	7	17	126	303	180	147	143	132	195	195
Total No. of Motorized Vehicles	2	1	-	4	5	23	137	117	108	105	94	95	95
Total No. of MVs not incl. MCs	1	-	-	2	4	8	8	7	6	6	8	7	7

Note: MV = motorized vehicle; MC = motorcycle.

Vehicle Type	Time of Day												Total
	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	
Pedestrian/Handcart	60	69	70	53	46	41	65	18	2	-	2	-	1,260
Bicycle	62	49	56	52	37	45	55	8	3	1	2	-	923
Bicycle-with-Trailer/Cyclo	1	-	1	-	1	1	2	-	-	-	-	-	19
Motorcycle	90	105	92	80	73	72	93	25	22	6	2	-	1,266
Motorcycle-with-Trailer	-	1	1	1	1	1	1	1	1	-	1	-	15
Passenger Car/Sedan	2	3	2	2	4	3	3	2	1	-	-	2	38
Microbus	-	-	-	-	-	-	-	-	-	-	-	-	-
Minibus/Van	2	2	3	2	2	2	1	6	4	-	1	-	40
Standard Bus	5	2	4	2	3	2	-	3	3	2	-	1	37
Truck with 2 axles	2	1	2	2	2	2	2	2	3	2	-	1	38
Truck with 3 axles	-	-	-	-	-	-	-	-	-	-	-	-	-
Police or Military Vehicle	-	1	-	-	-	-	-	-	-	-	-	-	1
Total	224	233	231	194	169	169	222	62	39	11	8	4	3,657
Total No. of Vehicles	164	161	164	141	123	128	157	44	37	11	6	4	2,397
Total No. of Motorized Vehicles	101	115	104	89	85	82	100	36	34	10	4	4	1,455
Total No. of MVs not incl. MCs	11	9	11	8	11	9	6	10	11	4	1	4	154

Note: MV = motorized vehicle; MC = motorcycle.

Summary of 24-Hour Road-Based Traffic Count Results, Chau Doc Ferry, Northbound, September 1997 (Without Seasonal Adjustment Factor)

Vehicle Type	Time of Day												Total
	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	
Pedestrian/Handcart	9	3	9	6	16	25	39	51	65	91	113	128	
Bicycle	3	-	3	1	6	11	18	11	18	22	22	37	
Bicycle-with-Trailer/Cyclo	-	-	-	-	-	4	1	3	3	1	1	2	
Motorcycle	5	1	3	4	6	12	22	30	40	42	42	46	
Motorcycle-with-Trailer	-	-	1	-	-	1	1	-	1	1	1	1	
Passenger Car/Sedan	-	-	-	-	-	-	-	-	-	-	-	-	
Microbus	-	-	-	-	-	-	-	-	-	-	-	-	
Minibus/Van	-	-	-	-	-	-	-	1	-	1	1	1	
Standard Bus	-	-	-	-	-	-	1	-	-	-	-	-	
Truck with 2 axles	1	1	-	-	-	-	-	-	-	-	-	-	
Truck with 3 axles	-	-	-	-	-	-	-	-	-	-	-	-	
Police or Military Vehicle	-	-	-	-	-	-	-	-	-	-	-	-	
Total	18	5	16	11	28	54	82	96	127	158	181	216	
Total No. of Vehicles	9	2	7	5	12	29	43	45	62	67	68	88	
Total No. of Motorized Vehicles	6	2	4	4	6	14	24	31	41	44	45	49	
Total No. of MVs not incl. MCs	1	1	-	-	2	1	2	1	1	2	3	2	

Note: MV = motorized vehicle; MC = motorcycle.

Vehicle Type	Time of Day												Total
	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	
Pedestrian/Handcart	65	73	81	93	128	141	144	144	42	20	3	-	
Bicycle	21	20	20	20	31	42	47	34	15	8	2	2	
Bicycle-with-Trailer/Cyclo	2	1	2	1	1	2	2	1	1	-	-	2	
Motorcycle	46	45	38	37	45	54	45	25	28	6	5	6	
Motorcycle-with-Trailer	-	-	-	-	2	3	-	-	-	-	-	-	
Passenger Car/Sedan	1	1	1	1	1	-	-	-	-	-	-	-	
Microbus	-	-	-	-	-	-	-	-	-	-	-	-	
Minibus/Van	-	-	-	-	1	1	-	-	-	-	-	6	
Standard Bus	1	-	-	-	-	1	-	-	1	-	-	6	
Truck with 2 axles	1	-	1	1	1	-	-	-	-	-	-	6	
Truck with 3 axles	-	-	-	-	-	-	-	-	-	-	-	-	
Police or Military Vehicle	-	-	-	-	-	-	-	-	-	-	-	-	
Total	137	141	143	152	210	244	168	204	88	34	10	2,533	
Total No. of Vehicles	72	68	62	59	82	103	94	60	46	14	7	1,114	
Total No. of Motorized Vehicles	49	47	40	38	50	59	45	25	29	5	5	669	
Total No. of MVs not incl. MCs	3	2	2	1	3	2	-	-	1	-	-	28	

Note: MV = motorized vehicle; MC = motorcycle.

Summary of 24-Hour Road-Based Traffic Count Results, Chau Doc Ferry, Northbound, September 1997 (Without Seasonal Adjustment Factor)

Vehicle Type	Time of Day												24-Hour Total
	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	
Pedestrian/Handcart	8	4	6	12	4	73	183	71	85	38	51	101	
Bicycle	2	4	4	1	4	19	106	37	21	17	21	49	
Bicycle-with-Trailer/Cyclo	-	1	-	1	1	2	1	1	1	1	1	-	
Motorcycle	-	2	4	-	4	36	59	59	50	35	46	46	
Motorcycle-with-Trailer	-	-	1	1	1	1	1	1	-	-	1	-	
Passenger Car/Sedan	-	-	-	-	-	-	-	-	-	-	-	-	
Microbus	-	-	-	-	-	-	-	1	-	-	-	-	
Minibus/Van	-	-	-	-	-	-	-	1	-	-	-	-	
Standard Bus	-	-	-	-	-	-	-	-	-	-	-	-	
Truck with 2 axles	-	-	-	-	-	-	-	-	-	1	-	-	
Truck with 3 axles	-	-	-	-	-	-	-	-	-	-	-	-	
Police or Military Vehicle	-	-	-	-	-	-	-	-	-	-	-	-	
Total	10	11	16	15	16	133	350	170	157	92	121	196	
Total No. of Vehicles	2	7	10	3	10	60	167	99	72	54	70	95	
Total No. of Motorized Vehicles	2	2	5	1	5	39	60	61	50	36	48	46	
Total No. of MVs not incl. MCs	-	-	2	-	-	2	1	2	-	1	2	-	

Note: MV = motorized vehicle, MC = motorcycle.

Vehicle Type	Time of Day												24-Hour Total
	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	
Pedestrian/Handcart	162	85	54	46	65	40	44	27	19	10	8	11	
Bicycle	52	37	46	33	35	32	34	16	5	13	6	590	
Bicycle-with-Trailer/Cyclo	1	-	1	1	-	-	-	1	-	-	-	14	
Motorcycle	43	43	41	44	38	47	29	14	21	14	4	676	
Motorcycle-with-Trailer	1	1	1	1	1	1	1	1	-	-	-	6	
Passenger Car/Sedan	-	1	1	1	1	1	1	1	-	-	-	10	
Microbus	-	-	-	-	-	-	-	-	-	-	-	-	
Minibus/Van	1	1	1	1	1	1	1	1	1	1	1	7	
Standard Bus	1	-	-	-	-	-	-	-	-	1	-	5	
Truck with 2 axles	-	-	-	1	-	-	-	1	-	1	-	5	
Truck with 3 axles	-	-	-	-	-	-	-	-	-	-	-	-	
Police or Military Vehicle	-	-	-	-	-	-	-	-	-	-	-	-	
Total	261	167	144	127	139	122	109	60	46	38	19	2,516	
Total No. of Vehicles	98	82	90	81	74	82	65	33	27	28	11	1,313	
Total No. of Motorized Vehicles	46	45	43	47	39	50	31	16	22	15	5	709	
Total No. of MVs not incl. MCs	2	2	2	2	1	2	2	2	1	1	1	27	

Note: MV = motorized vehicle, MC = motorcycle.

Summary of 24-Hour Road-Based Traffic Count Results, National Route 1, Northbound, September 1997 (Without Seasonal Adjustment Factor)

Vehicle Type	Time of Day												Total
	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	
Pedestrian/Handcart	-	3	-	-	12	4	48	21	-	8	9	11	200
Bicycle	-	-	-	-	-	119	-	1	-	116	-	-	325
Bicycle-with-Trailer/Cyclo	14	9	1	6	41	98	457	1	413	371	369	-	325
Motorcycle	5	8	9	9	28	43	120	153	146	125	108	92	92
Motorcycle-with-Trailer	6	2	3	1	3	3	13	13	16	17	14	13	13
Passenger Car/Sedan	1	1	2	2	3	5	13	20	20	17	14	12	12
Microbus	15	8	7	2	4	8	13	10	13	20	13	12	13
Minibus/Van	3	1	1	1	5	4	10	13	14	17	17	17	13
Standard Bus	6	8	6	6	6	13	5	9	8	15	13	14	14
Truck with 2 axes	-	-	-	-	-	-	-	1	-	1	1	1	2
Truck with 3 axes	2	-	-	-	-	-	1	1	1	2	1	1	1
Police or Military Vehicle	52	40	32	28	101	298	1,434	924	801	709	680	695	695
Total	52	37	32	28	101	294	1,386	903	789	701	671	684	684
Total No. of Motorized Vehicles	52	37	31	27	89	175	633	652	631	585	550	484	484
Total No. of MVs not incl. MCs	33	20	21	12	20	34	56	67	72	89	73	67	67

Note: MV = motorized vehicle; MC = motorcycle.

Vehicle Type	Time of Day																								Total
	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	24-Hour												
Pedestrian/Handcart	21	8	4	5	11	7	19	15	13	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	223
Bicycle	194	151	147	145	230	224	185	251	55	41	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3,356
Bicycle-with-Trailer/Cyclo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,918
Motorcycle	329	328	370	404	525	455	396	262	162	91	45	25	25	25	25	25	25	25	25	25	25	25	25	25	1,643
Motorcycle-with-Trailer	105	91	94	112	96	92	69	67	23	32	10	6	6	6	6	6	6	6	6	6	6	6	6	6	251
Passenger Car/Sedan	17	20	18	17	16	13	10	11	4	9	7	7	7	7	7	7	7	7	7	7	7	7	7	7	198
Microbus	11	8	16	11	15	10	11	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	251
Minibus/Van	9	4	18	21	21	9	3	13	4	9	5	10	10	10	10	10	10	10	10	10	10	10	10	10	169
Standard Bus	10	7	8	8	10	11	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	339
Truck with 2 axes	14	13	18	20	20	20	13	27	24	30	16	15	15	15	15	15	15	15	15	15	15	15	15	15	26
Truck with 3 axes	5	4	2	3	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Police or Military Vehicle	3	1	1	-	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67
Total	718	635	656	746	947	842	700	654	289	217	87	67	67	67	67	67	67	67	67	67	67	67	67	67	12,392
Total No. of Vehicles	697	627	682	741	936	835	681	639	276	215	87	65	65	65	65	65	65	65	65	65	65	65	65	65	12,169
Total No. of Motorized Vehicles	503	476	545	596	706	611	496	388	221	174	86	54	54	54	54	54	54	54	54	54	54	54	54	54	8,812
Total No. of MVs not incl. MCs	69	57	81	80	85	64	41	59	36	51	31	33	33	33	33	33	33	33	33	33	33	33	33	33	1,251

Note: MV = motorized vehicle; MC = motorcycle.

Summary of 24-Hour Road-Based Traffic Count Results, National Route 1, Southbound, September 1997 (Without Seasonal Adjustment Factor)

Vehicle Type	Time of Day												Total
	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	
Pedestrian/Handcart	-	-	-	-	4	14	60	183	207	23	17	18	356
Bicycle	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycle-with-Trailer/Cyclo	-	-	-	1	13	44	101	324	489	418	412	412	365
Motorcycle	10	2	6	9	25	59	114	144	157	141	127	115	115
Motorcycle-with-Trailer	11	3	6	9	25	59	114	144	157	141	127	115	115
Passenger Car/Sedan	4	2	-	1	2	10	14	15	20	21	17	19	12
Microbus	-	-	-	-	-	1	11	15	20	21	19	19	16
Minibus/Van	8	2	3	3	2	7	11	9	10	11	13	13	18
Standard Bus	-	1	-	3	3	10	10	8	10	13	13	24	13
Truck with 2 axles	17	16	10	5	16	10	8	8	13	25	29	24	13
Truck with 3 axles	-	1	-	-	1	1	1	-	1	1	4	1	2
Police or Military Vehicle	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	50	27	20	38	108	269	706	941	965	865	859	859	929
Total No. of Vehicles	50	27	20	38	108	269	706	941	965	865	859	859	929
Total No. of Motorized Vehicles	50	27	20	34	94	209	495	711	744	654	654	654	560
Total No. of MVs not incl. MCs	29	22	13	12	25	49	57	78	92	95	95	95	80

Note: MV = motorized vehicle; MC = motorcycle.

Vehicle Type	Time of Day																								Total		
	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	24-Hour														
Pedestrian/Handcart	6	8	15	146	18	29	35	23	7	96	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	285	
Bicycle	148	108	108	179	18	267	563	254	96	111	49	5	-	-	-	-	-	-	-	-	-	-	-	-	-	3,363	
Bicycle-with-Trailer/Cyclo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Motorcycle	304	331	375	385	331	526	511	464	250	220	169	72	8	8	8	8	8	8	8	8	8	8	8	8	8	8	6,299
Motorcycle-with-Trailer	111	105	105	104	133	118	118	83	29	33	24	26	24	24	24	24	24	24	24	24	24	24	24	24	24	24	1,806
Passenger Car/Sedan	15	13	14	21	8	15	16	8	7	6	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	232
Microbus	15	15	18	17	18	16	16	4	2	-	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	293
Minibus/Van	14	18	16	23	18	21	18	8	12	15	7	12	7	7	7	7	7	7	7	7	7	7	7	7	7	7	176
Standard Bus	15	17	13	11	9	9	9	5	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	388
Truck with 2 axles	17	15	19	18	18	20	23	23	10	29	14	8	11	11	11	11	11	11	11	11	11	11	11	11	11	11	28
Truck with 3 axles	3	2	2	2	1	1	1	1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Police or Military Vehicle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	648	632	723	788	788	1,035	1,309	873	414	435	274	126	54	54	54	54	54	54	54	54	54	54	54	54	54	54	13,088
Total No. of Vehicles	642	624	708	770	770	1,006	1,274	850	407	419	274	126	54	54	54	54	54	54	54	54	54	54	54	54	54	54	12,823
Total No. of Motorized Vehicles	494	516	562	591	516	739	711	596	311	308	225	121	54	54	54	54	54	54	54	54	54	54	54	54	54	54	9,460
Total No. of MVs not incl. MCs	79	80	82	82	80	82	82	49	32	55	32	23	22	22	22	22	22	22	22	22	22	22	22	22	22	22	1,355

Note: MV = motorized vehicle; MC = motorcycle.

Summary of 24-Hour Road-Based Traffic Count Results, National Route 91, Northbound, September 1997 (Without Seasonal Adjustment Factor)

Vehicle Type	Time of Day																								24-Hour Total
	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00													
Pedestrian/Handcart	1	-	-	-	7	18	21	20	141	8	15	306	10												
Bicycle	1	2	-	-	54	164	456	-	-	-	-	111	235												
Bicycle-with-Trailer/Cyolo	-	-	-	-	-	-	-	-	400	-	-	-	281												
Motorcycle	5	13	9	19	27	92	412	512	178	339	137	4	152												
Motorcycle-with-Trailer	2	6	6	16	30	84	156	195	15	11	11	13	13												
Passenger Car/Sedan	-	-	2	1	3	1	11	15	3	2	2	2	2												
Microbus	-	-	-	-	-	1	1	3	1	3	12	12	8												
Minibus/Van	-	1	5	1	3	3	7	10	12	13	12	8	10												
Standard Bus	-	2	-	1	3	10	14	12	10	13	8	15	15												
Truck with 2 axes	5	8	4	1	1	5	8	22	23	29	8	3	3												
Truck with 3 axes	-	-	-	-	1	1	4	5	6	3	1	1	1												
Police or Military Vehicle	-	-	-	-	-	-	2	2	1	3	1	1	1												
Total	13	33	27	43	129	383	1,082	1,053	797	747	595	747	730												
Total No. of Vehicles	13	32	27	43	122	365	1,071	1,043	789	732	293	720	485												
Total No. of Motorized Vehicles	12	30	27	39	68	201	615	776	648	585	182	41	52												
Total No. of MVs not incl. MCs	5	11	12	4	11	25	47	69	70	74	41	52	52												

Note: MV = motorized vehicle; MC = motorcycle.

Vehicle Type	Time of Day																								24-Hour Total
	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00													
Pedestrian/Handcart	5	6	12	11	14	21	21	9	12	5	3	2	517												
Bicycle	125	60	123	133	253	288	98	77	52	44	28	7	2,880												
Bicycle-with-Trailer/Cyolo	-	-	-	-	-	-	-	-	-	-	-	-	-												
Motorcycle	216	247	337	321	364	355	245	203	210	136	87	39	5,026												
Motorcycle-with-Trailer	138	121	149	153	125	127	104	51	38	25	20	12	2,064												
Passenger Car/Sedan	7	9	14	13	12	9	10	3	5	5	8	5	187												
Microbus	2	2	1	3	3	3	1	1	1	2	-	-	31												
Minibus/Van	6	7	10	9	11	8	6	6	3	1	1	1	143												
Standard Bus	8	7	8	8	9	6	3	3	3	3	2	1	144												
Truck with 2 axes	10	12	18	16	18	13	10	6	11	8	5	1	256												
Truck with 3 axes	2	2	2	4	2	1	-	-	-	4	-	-	41												
Police or Military Vehicle	1	-	1	4	1	1	-	-	1	1	-	-	20												
Total	520	483	675	675	632	832	498	356	336	234	154	66	11,319												
Total No. of Vehicles	515	487	663	664	618	811	477	349	324	229	151	64	10,802												
Total No. of Motorized Vehicles	350	407	540	531	565	523	379	272	272	185	123	57	7,912												
Total No. of MVs not incl. MCs	36	39	54	57	56	41	30	18	24	24	15	6	822												

Note: MV = motorized vehicle; MC = motorcycle.

Summary of 24-Hour Road-Based Traffic Count Results, National Route 91, Southbound, September 1997 (Without Seasonal Adjustment Factor)

Vehicle Type	Time of Day																								24-Hour Total
	24:00-01:00	01:00-02:00	02:00-03:00	03:00-04:00	04:00-05:00	05:00-06:00	06:00-07:00	07:00-08:00	08:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	
Pedestrian/Handicart	-	-	-	-	6	13	8	7	114	98	105	176	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycle	-	-	3	2	36	86	404	179	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycle-with-Trailer/Cyclo	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Motorcycle	8	12	10	10	26	80	370	403	392	339	345	291	-	-	-	-	-	-	-	-	-	-	-	-	
Motorcycle-with-Trailer	10	4	1	16	33	100	169	185	156	168	143	147	-	-	-	-	-	-	-	-	-	-	-	-	
Passenger Car/Sedan	-	-	-	-	-	5	11	9	9	12	14	7	-	-	-	-	-	-	-	-	-	-	-	-	
Microbus	2	-	-	-	2	2	1	1	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	
Minibus/Van	-	1	3	5	1	3	6	7	8	11	10	8	-	-	-	-	-	-	-	-	-	-	-	-	
Standard Bus	-	-	1	2	1	7	10	12	13	12	20	13	-	-	-	-	-	-	-	-	-	-	-	-	
Truck with 2 axles	3	7	3	1	5	2	7	12	25	24	12	12	-	-	-	-	-	-	-	-	-	-	-	-	
Truck with 3 axles	-	-	-	-	-	2	2	4	5	4	2	2	-	-	-	-	-	-	-	-	-	-	-	-	
Police or Military Vehicle	-	-	-	-	-	2	2	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	
Total	23	24	21	37	110	303	993	821	738	690	653	662	-	-	-	-	-	-	-	-	-	-	-	-	
Total No. of Vehicles	23	24	21	37	104	290	985	814	726	671	654	658	-	-	-	-	-	-	-	-	-	-	-	-	
Total No. of Motorized Vehicles	23	24	18	35	58	204	578	635	611	573	548	482	-	-	-	-	-	-	-	-	-	-	-	-	
Total No. of MVs not incl. MCs	5	8	7	9	9	24	39	47	63	56	60	44	-	-	-	-	-	-	-	-	-	-	-	-	

Note: MV = motorized vehicle; MC = motorcycle.

Vehicle Type	Time of Day																								24-Hour Total
	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00	16:00-17:00	17:00-18:00	18:00-19:00	19:00-20:00	20:00-21:00	21:00-22:00	22:00-23:00	23:00-24:00	
Pedestrian/Handicart	3	6	4	6	6	6	14	22	78	40	31	8	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycle	151	97	125	127	216	215	109	78	-	79	64	6	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycle-with-Trailer/Cyclo	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Motorcycle	228	254	265	333	447	444	331	211	189	105	64	29	-	-	-	-	-	-	-	-	-	-	-	-	
Motorcycle-with-Trailer	129	117	126	128	142	132	111	62	46	22	10	10	-	-	-	-	-	-	-	-	-	-	-	-	
Passenger Car/Sedan	13	12	12	14	14	10	10	6	5	4	3	2	-	-	-	-	-	-	-	-	-	-	-	-	
Microbus	2	3	2	2	3	1	3	1	-	6	-	4	-	-	-	-	-	-	-	-	-	-	-	-	
Minibus/Van	3	9	10	12	11	6	6	12	4	2	1	3	-	-	-	-	-	-	-	-	-	-	-	-	
Standard Bus	10	8	8	8	11	10	13	5	4	3	1	1	-	-	-	-	-	-	-	-	-	-	-	-	
Truck with 2 axles	9	15	24	22	15	11	1	3	10	4	5	4	-	-	-	-	-	-	-	-	-	-	-	-	
Truck with 3 axles	3	3	5	3	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Police or Military Vehicle	-	1	-	3	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	551	526	581	659	871	847	598	400	342	190	121	60	-	-	-	-	-	-	-	-	-	-	-	-	
Total No. of Vehicles	548	520	577	652	865	832	584	378	337	187	115	60	-	-	-	-	-	-	-	-	-	-	-	-	
Total No. of Motorized Vehicles	397	422	452	525	649	617	475	300	258	147	84	52	-	-	-	-	-	-	-	-	-	-	-	-	
Total No. of MVs not incl. MCs	40	51	61	64	60	41	33	27	23	20	10	13	-	-	-	-	-	-	-	-	-	-	-	-	

Note: MV = motorized vehicle; MC = motorcycle.

ANNEXURE 3.3 Traffic Assignment Results for the Hau Giang Crossing near Can Tho

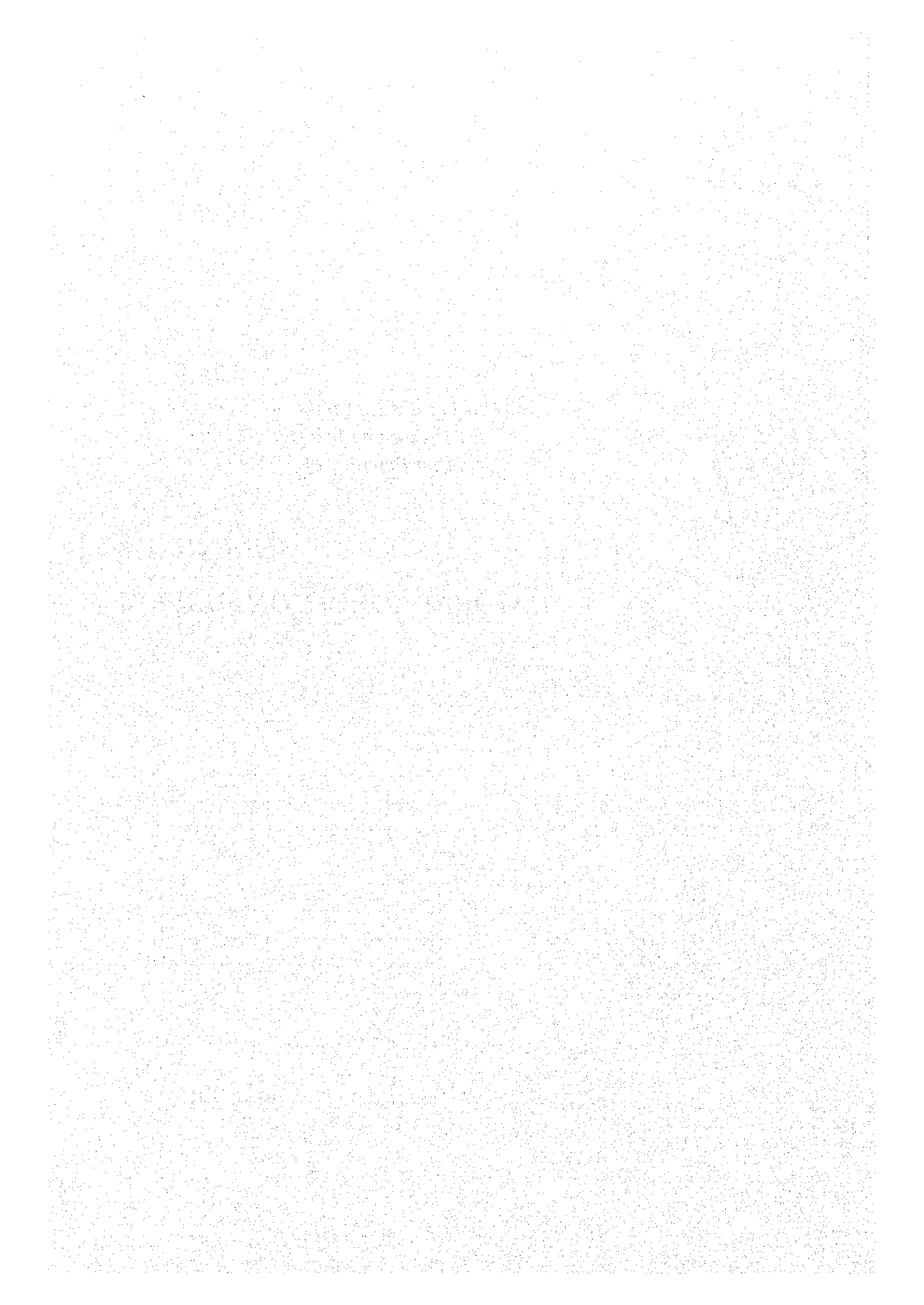
Description		No Bridge	Alternative A Bridge	Alternative B Bridge	Alternative C Bridge
Total Traffic in Vehicles /Day					
2006	MC	9,585	14,360	15,448	15,165
	PC	2,083	2,727	2,798	2,777
	LB	1,038	1,239	1,280	1,267
	HB	475	556	569	566
	LT	738	908	923	918
	MT	1,853	2,182	2,210	2,201
	HT	74	180	189	185
	PCU/Day	13,015	16,728	17,298	17,134
2010	MC	14,125	21,447	22,700	22,281
	PC	3,846	5,080	5,180	5,139
	LB	1,676	2,024	2,074	2,051
	HB	750	887	904	898
	LT	1,332	1,712	1,730	1,721
	MT	3,484	4,152	4,194	4,175
	HT	138	387	404	397
	PCU/Day	22,359	29,184	29,909	29,628
2020	MC	31,877	47,751	50,552	49,612
	PC	10,471	13,795	14,080	13,965
	LB	3,612	4,361	4,466	4,420
	HB	1,532	1,808	1,846	1,834
	LT	3,835	4,923	4,983	4,958
	MT	10,006	11,906	12,035	11,978
	HT	396	1,033	1,073	1,053
	PCU/Day	57,213	74,176	75,951	75,262
PCU factors:		MC 0.25	LB 2.00	LT 1.50	
		PC 1.00	HB 3.00	MT 2.00	
				HT 3.00	

**The Feasibility Study
on The Can Tho Bridge Construction in
Socialist Republic of Viet Nam**

ANNEXURE 4

NATURAL CONDITION SURVEYS

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4.1 Boring Location and Geological Profile

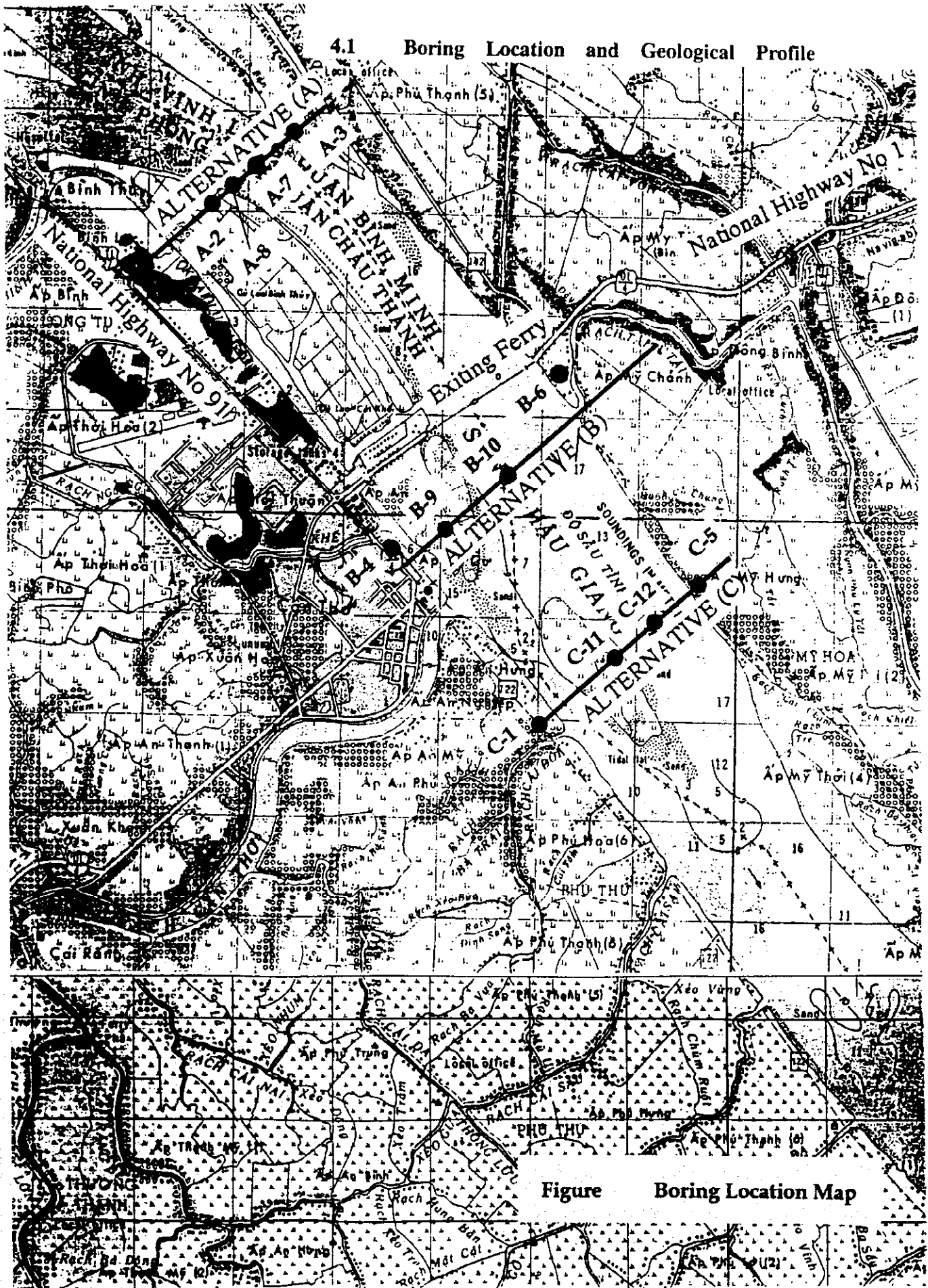
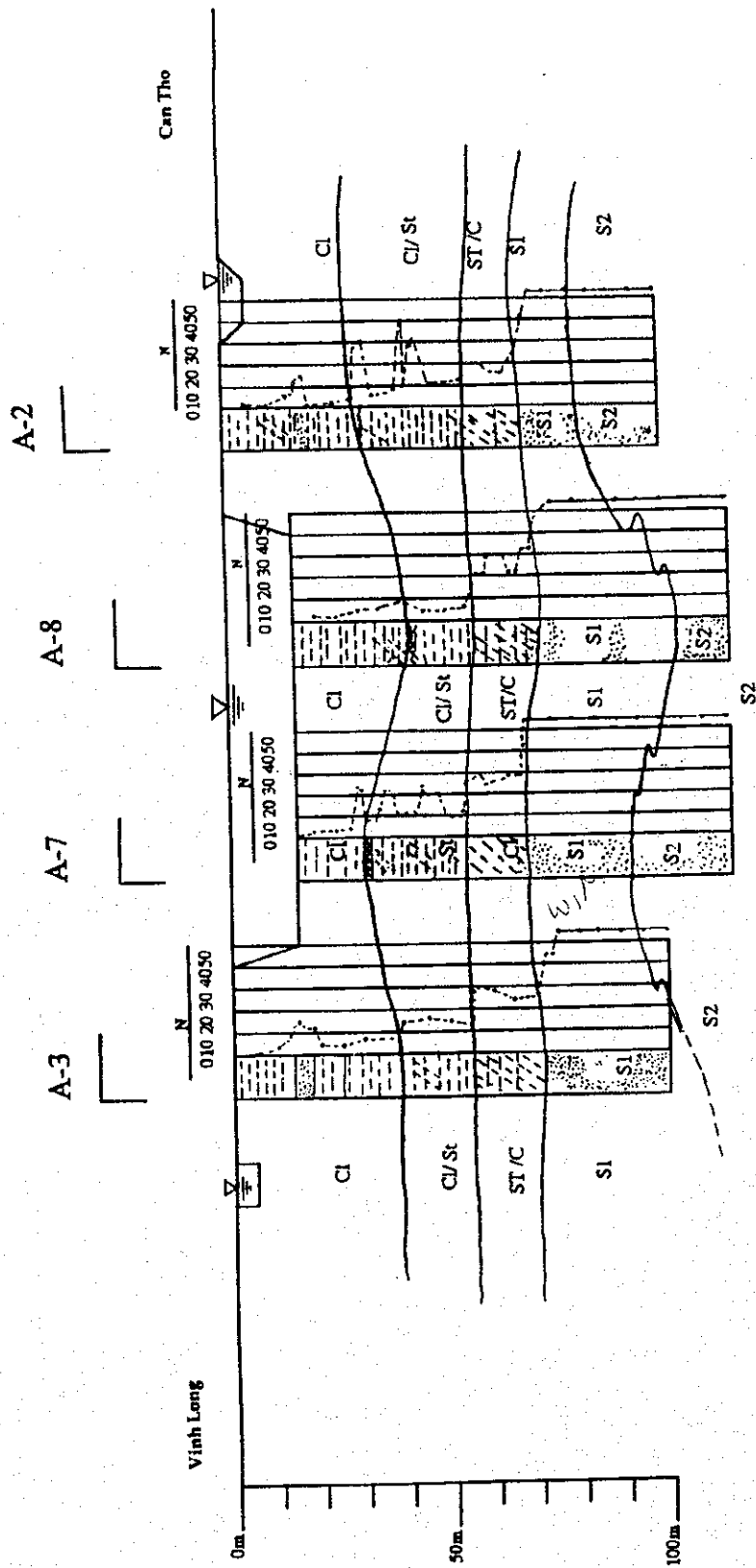


Figure Boring Location Map

ALTERNATIVE A



LELEND

CL	Clay, Soft, high plastic.
CL/ST	Clay with Silt, Soft
ST/C	Silt with clay, Hard.
SI	Fine, Medium Sand, High density.
S2	Fine Sand, High Density.

SCALE

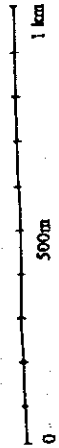
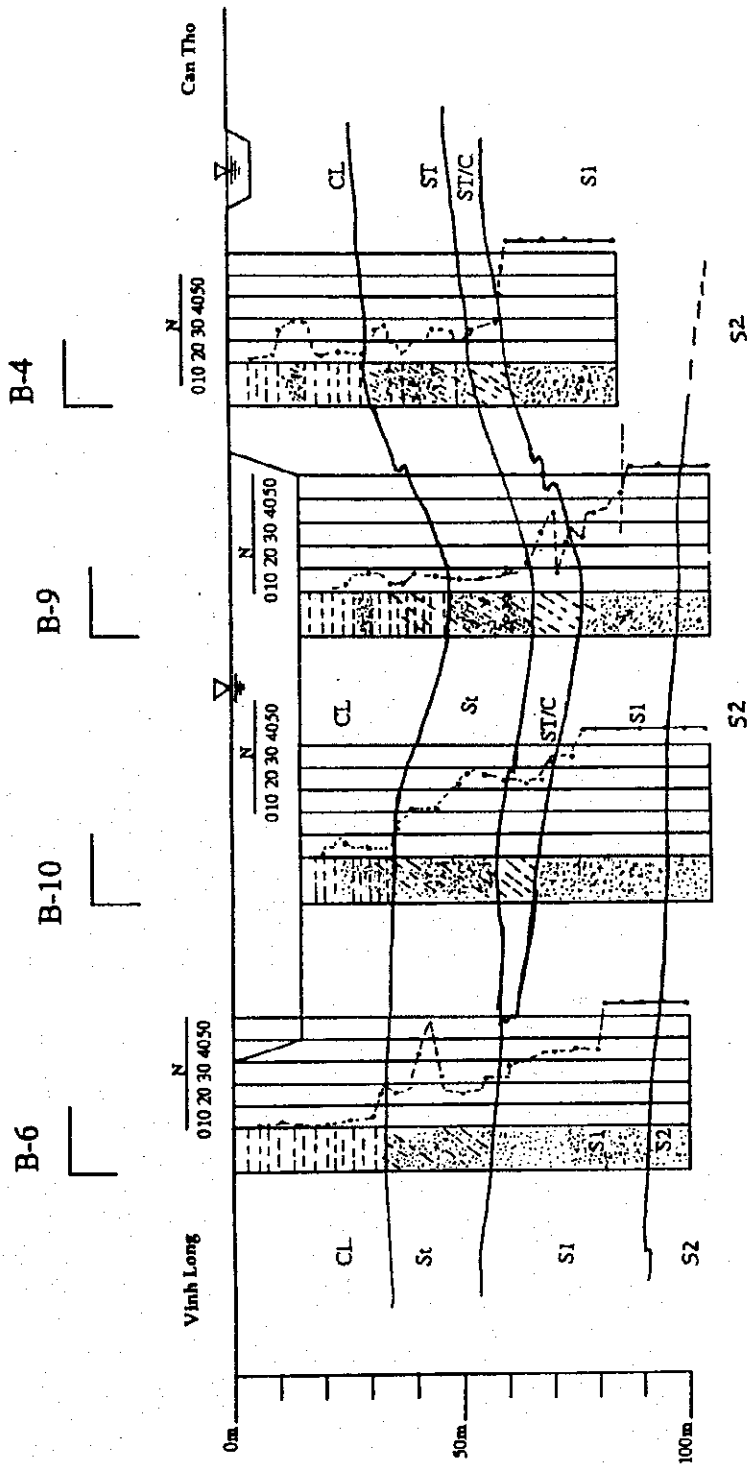


Fig 7.3.2 (1/3)
Geological Profile
Alternative A Route

ALTERNATIVE B



LEND

CL	Clay, Soft, high plastic.
ST/C	Silt with clay, Loose.
St	Silt with clay, Hard.
S1	Fine, Medium Sand, High density.
S2	Fine Sand, High Density.

SCALE

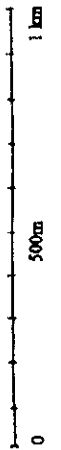


Fig 7.3.2 (2/3)
Geological Profile
Alternative B Route

ALTERNATIVE C

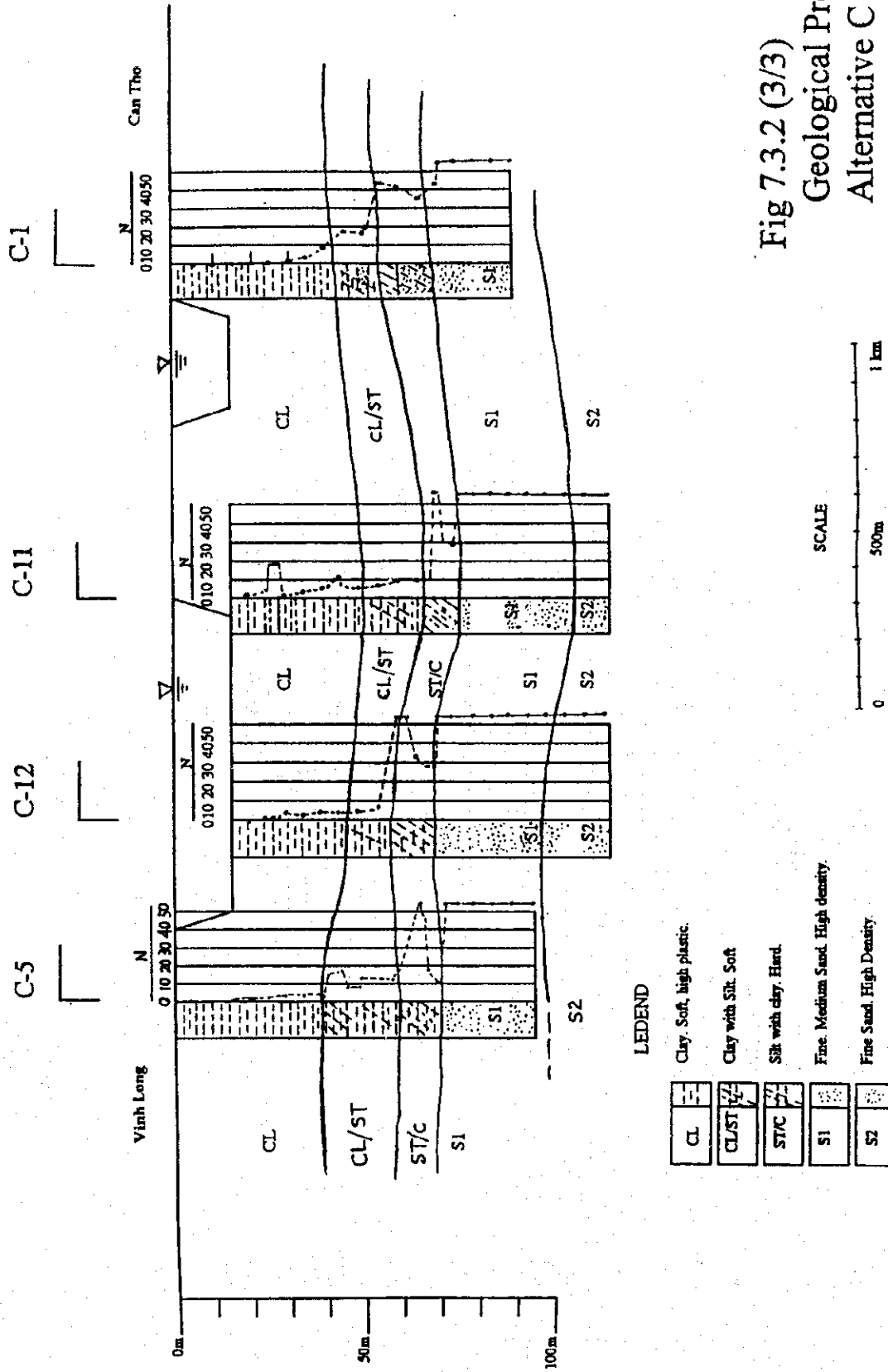


Fig 7.3.2 (3/3)
Geological Profile
Alternative C Route

4.2 Hydrological and Hydraulic Data

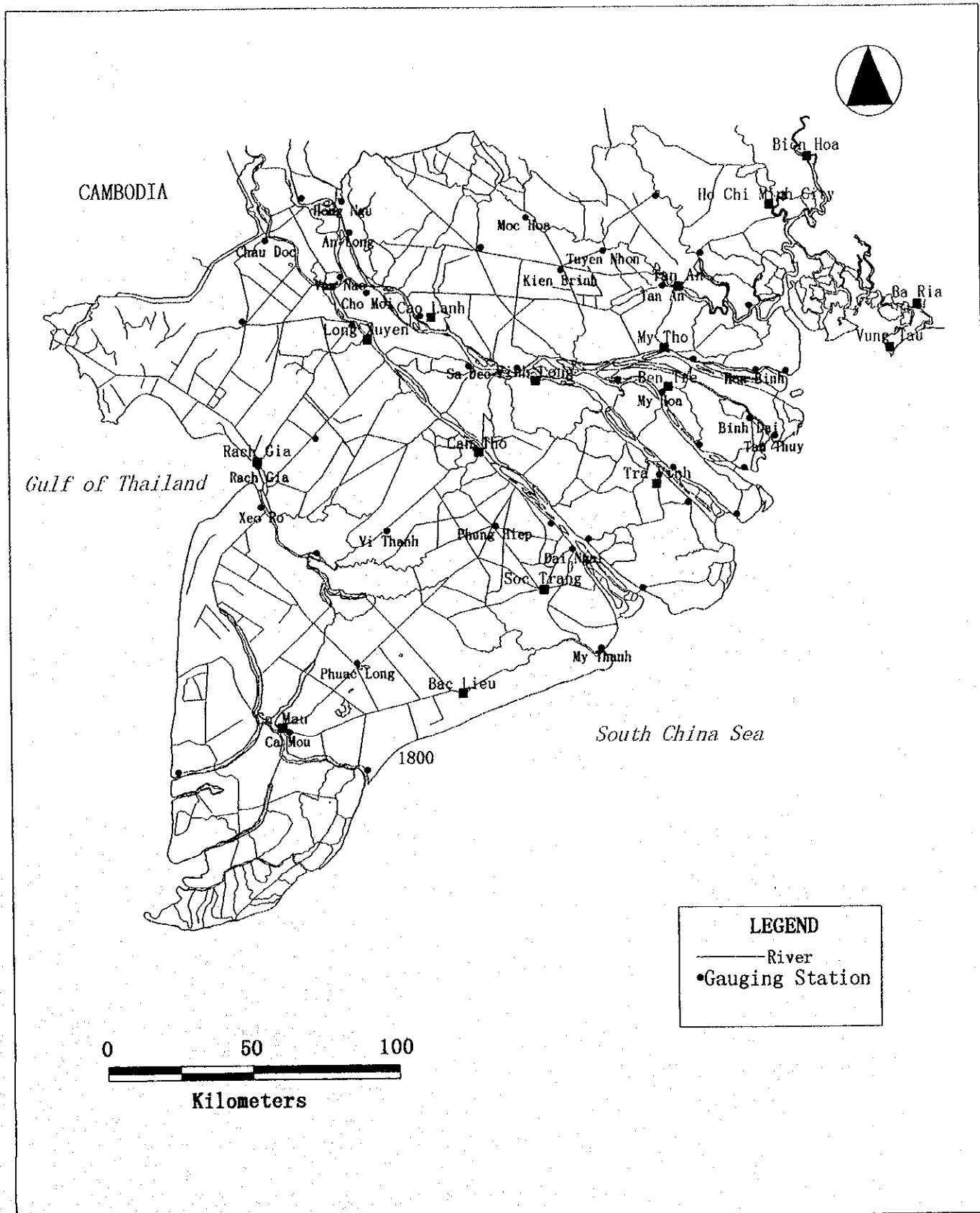


Figure GAUGING STATION MAP

- Meteorological Observatories Map

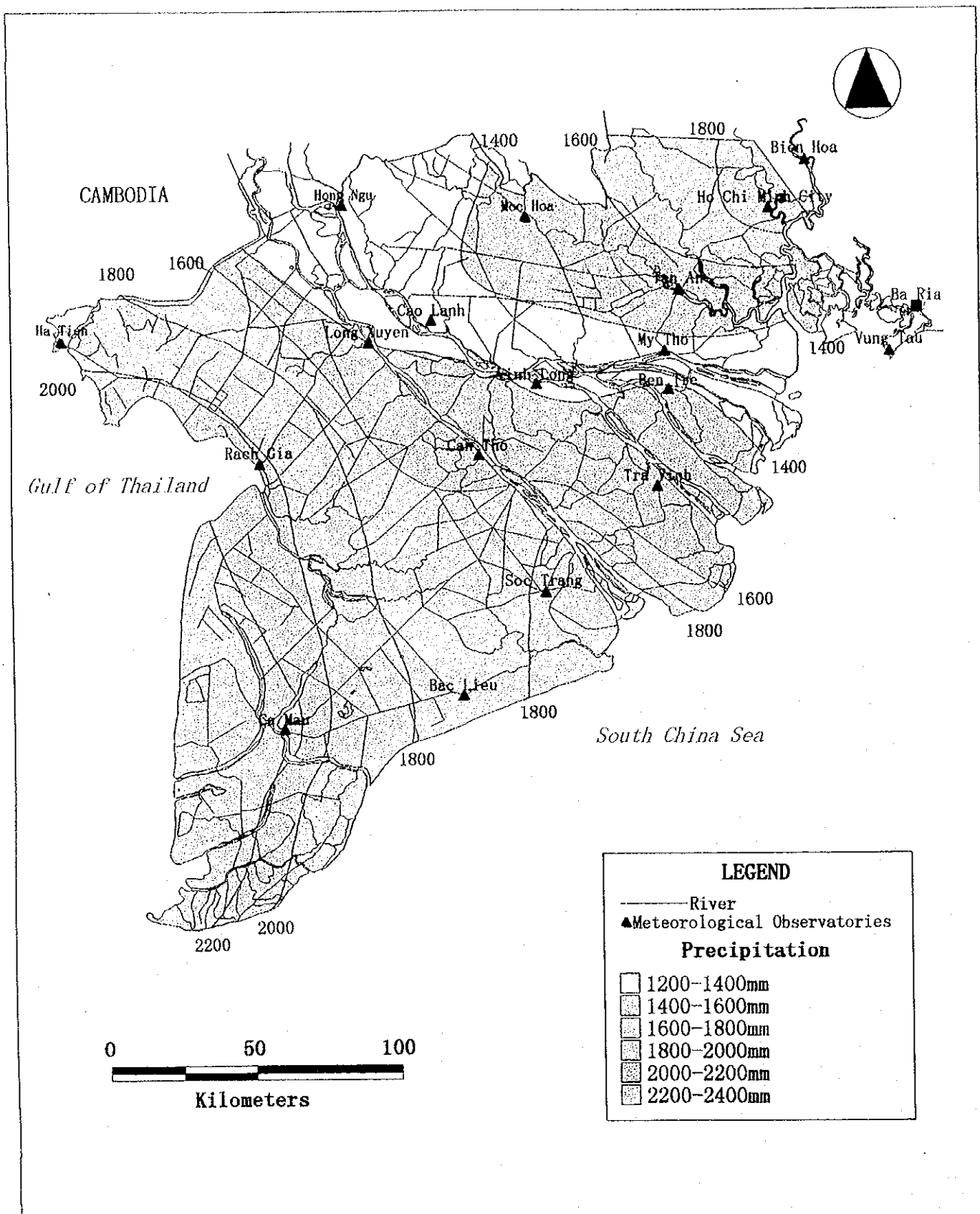


Figure METEOROLOGICAL OBSERVATORIES MAP

- Rainfall at Can Tho in 1984

RAINFALL AT CAN THO IN 1984

		(mm)											
Month	Day	1	2	3	4	5	6	7	8	9	10	11	12
	1	0.3				25.4	0.0	0.7		9.0		1.2	0.8
	2					35.4	1.9	0.5	4.0	3.5	1.7	1.1	
	3					1.2	4.9	0.4	3.3	0.6	4.5	0.0	
	4					3.2	0.4	0.1	7.2	0.6	30.0	0.7	
	5					29.1	1.4		2.1	5.2	14.7	0.1	7.3
	6				0.1		3.7		6.2	9.1	1.7	0.4	10.4
	7				0.1		1.8		14.7	6.5	63.1	8.4	
	8					2.6	0.8	2.1	44.2	6.4	7.9	3.3	
	9					0.2	11.3	1.7	40.9	1.9	4.8	0.1	
	10					0.6	3.0	0.2	20.7	15.8	8.3		0.5
	11						14.8	4.7	14.2	22.0	22.6		
	12								0.3	12.9			
	13							3.7		0.0	21.3	0.1	1.3
	14				0.0			0.2		29.1	0.3		
	15							1.2		0.5	16.7		
	16					0.0	0.5	40.0	2.2	0.5			
	17					4.3	0.4		1.0	4.8	1.3		
	18					7.0	0.0		33.8	10.2	3.1	6.2	
	19				0.0		6.9		14.5	35.2			
	20	26.2			2.2	2.6	13.9	8.7	1.8				
	21				0.1		54.7	3.4					
	22						22.3	1.4		1.8			
	23				18.2		20.9	0.9		0.3			
	24				0.3	8.5		0.5		11.2			
	25				1.3	0.6		0.0		3.6			
	26	0.2			66.5	0.0	37.5			41.8	0.8		
	27					4.6	52.3	0.4	0.2				3.4
	28	8.6			11.6	0.7	2.7	12.9	1.4	2.9		28.8	0.3
	29			0.0		27.4	20.9	2.0	22.5	1.0		21.9	
	30			1.7	10.4	0.8	21.8	0.0	22.2	0.9		6.2	
	31					1.8			18.4				

- Rainfall at Can Tho in 1994

RAINFALL AT CAN THO IN 1994

Month Day	1	2	3	4	5	6	7	8	9	10	11	12
1	1.6				0.0	34.0	0.0	9.1	2.8			
2	0.4					14.3	1.1	23.0	3.9	0.2		
3				0.0		12.2	54.3	0.9	25.4	1.5	2.2	
4						3.2	0.1	13.3	5.6	6.7		
5					0.0		1.8	8.2	0.3	6.6	2.1	40.0
6					7.1	21.0	36.3	18.2	3.0		2.7	1.5
7						0.9	3.3	17.4	0.1			
8					23.1	31.2	6.0	0.3		7.0		0.0
9	0.0			1.6	7.8	3.2	6.4			0.9	0.0	
10	0.0			1.1	12.7	15.7	6.9	0.0	34.2	1.3		0.1
11					8.6	1.0	43.7		29.2	3.4	4.0	25.0
12					0.4	6.0	11.6	3.7	26.7	6.3	0.0	115.0
13			0.0	0.0		11.0	11.2	0.0	1.4	0.5	31.4	0.4
14					30.3	1.8	4.8		1.5	0.0		
15					6.6	0.1	19.1	5.0	0.8			
16						0.0	10.8	12.0	0.8		2.3	0.0
17							0.5		4.4	4.6	0.0	0.9
18			0.0	0.0	17.0	1.0	7.3		5.1	0.6		
19	1.1			0.6	2.1	5.0	3.1	1.7	1.3			
20	1.0			0.0	0.1	3.6	20.2		0.9	4.7		
21						0.3	0.1			10.6		0.0
22				0.0		8.3	1.8		0.0	0.4	0.7	
23		0.0	0.1			16.8		2.0				0.0
24			0.0		0.0	2.2	5.0	3.7	15.5		0.2	
25					8.5	0.8	1.2	11.9			3.0	0.0
26		0.0			6.7		0.0	0.2	1.4	9.2	1.6	0.0
27					14.7		0.6	6.7	13.3	4.5	0.0	0.0
28					4.2	43.2	0.2	8.7	4.3	0.0		0.0
29						3.8	9.9	30.8	13.8	2.8	1.1	
30						3.0	13.2	7.5	1.0	23.9		0.0
31					3.3		23.6	20.5				0.0

- Water Level of Hau River at Can Tho

(cm)

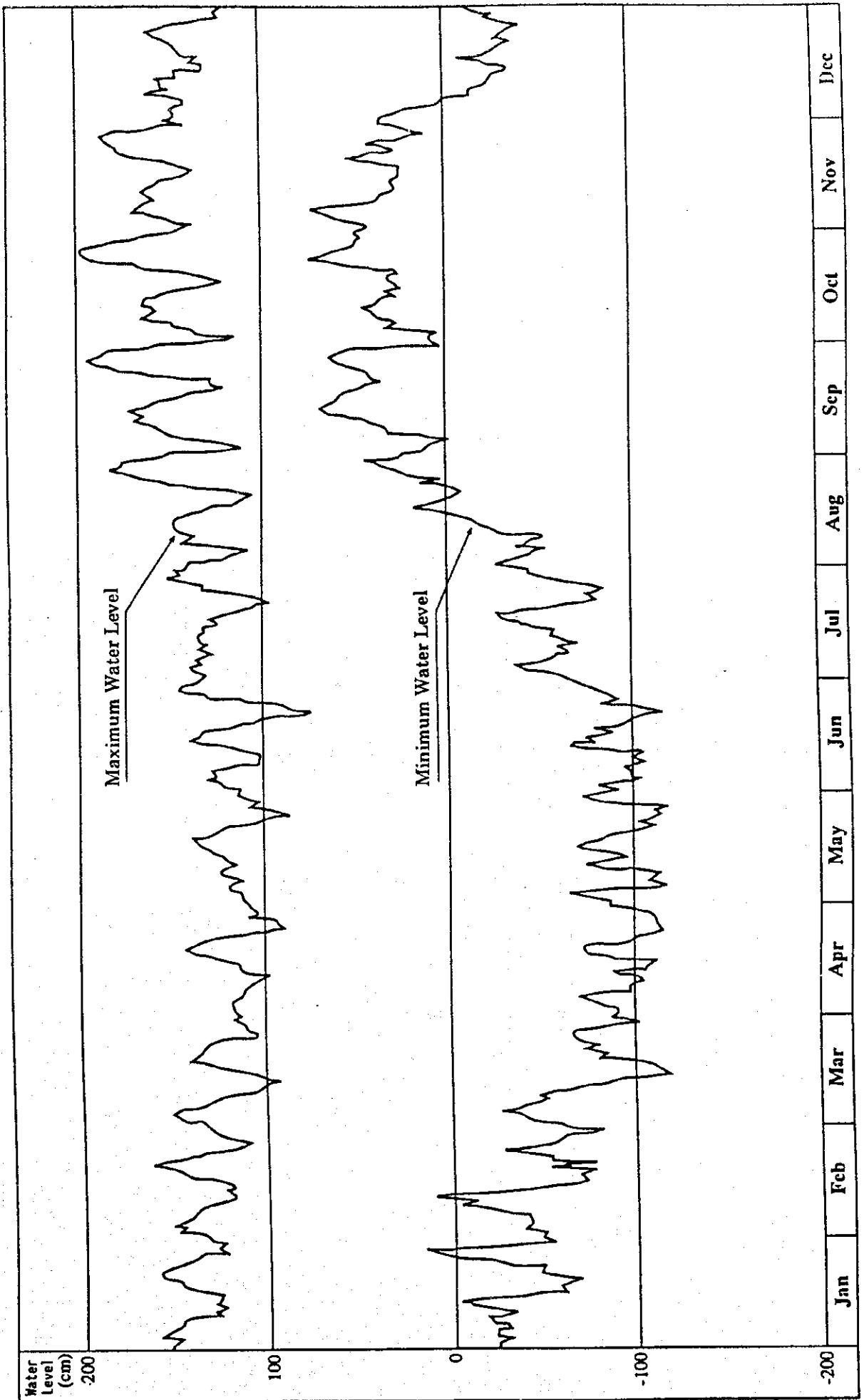
Year	Month	1	2	3	4	5	6	7	8	9	10	11	12
1982	Max	169	156	156	152	152	137	163	170	192	200	195	180
	Min	-56	-95	-109	-106	-119	-112	-92	-74	-25	17	14	-60
	Mean	70	54	40	43	27	22	45	59	87	114	102	85
1983	Max	173	160	150	140	124	147	145	170	189	197	203	188
	Min	-72	-73	-93	-107	-119	-127	-103	-71	-25	-17	30	-13
	Mean	68	45	39	27	19	19	35	63	82	103	119	98
1984	Max	162	164	153	144	140	140	153	187	200	206	197	171
	Min	-68	-80	-114	-113	-118	-114	-82	-53	1	10	12	-32
	Mean	57	45	26	11	13	12	38	66	105	103	106	74
1985	Max	157	148	163	151	140	142	154	166	194	190	192	177
	Min	-65	-82	-96	-117	-104	-126	-73	-55	-4	31	-5	-38
	Mean	65	55	58	32	33	30	56	67	92	105	102	81
1986	Max	170	157	152	145	150	146	157	172	179	196	199	180
	Min	-64	-99	-115	-117	-135	-100	-83	-55	-22	30	10	-45
	Mean	74	54	48	36	24	33	45	69	92	109	105	82
1987	Max	170	167	160	148	135	127	146	162	182	197	184	177
	Min	-62	-103	-108	-98	-110	-118	-112	-70	-28	12	-10	-41
	Mean	70	49	39	39	28	26	40	57	86	103	95	88
1988	Max	167	166	151	150	142	132	133	182	182	190	179	161
	Min	-55	-88	-114	-102	-120	-120	-100	-51	-32	-20	-9	-52
	Mean	67	58	46	41	25	30	41	68	80	93	105	77
1989	Max	155	159	165	147	142	141	150	171	192	209	191	177
	Min	-59	-106	-117	-108	-118	-107	-102	-65	-10	29	19	-49
	Mean	71	57	48	28	25	32	47	69	85	112	109	83
1990	Max	170	154	147	160	141	152	156	165	173	190	190	188
	Min	-46	-103	-107	-104	-106	-100	-72	-46	-24	34	22	-46
	Mean	76	58	51	36	34	44	54	68	87	113	108	91
1991	Max	171	178	160	146	140	137	161	171	191	198	187	177
	Min	-52	-86	-106	-99	-99	-102	-78	-51	11	27	17	-24
	Mean	75	62	47	38	33	29	51	72	103	118	115	91
1992	Max	173	154	149	149	132	135	165	184	206	203	182	161
	Min	-53	-86	-91	-99	-100	-110	-88	-84	-26	23	-4	-46
	Mean	73	53	41	33	29	27	49	66	85	110	106	77

- Water Level of Tien River at My Thuan

(cm)

Year	Month	1	2	3	4	5	6	7	8	9	10	11	12
1982	Max	160	147	136	140	137	125	148	156	196	187	196	177
	Min	-38	-78	-97	-94	-105	-91	-68	-50	-1	45	32	-16
	Mean	83	67	50	54	38	32	54	69	99	128	119	100
1983	Max	162	143	136	123	113	133	128	164	172	177	189	174
	Min	-43	-66	-103	-95	-94	-103	-78	-54	-10	-4	57	19
	Mean	84	58	47	35	32	27	42	74	91	115	130	111
1985	Max	152	143	158	140	131	137	150	161	183	186	189	178
	Min	-32	-59	-72	-98	-83	-103	-50	-32	8	54	16	-11
	Mean	82	71	73	45	48	42	70	79	107	133	121	110
1986	Max	176	163	159	145	150	127	148	166	172	191	192	180
	Min	-44	-73	-91	-96	-119	-80	-67	-36	-8	48	31	-16
	Mean	95	75	68	56	45	53	58	84	108	126	120	99
1987	Max	104	162	155	141	126	122	136	156	172	103	174	176
	Min	-29	-76	-95	-94	-94	-102	-96	-62	-7	25	6	-14
	Mean	87	65	49	47	36	34	52	71	102	118	109	103
1988	Max	161	156	143	138	132	132	135	176	172	176	176	158
	Min	-42	-65	-95	-90	-104	-94	-76	-31	-16	-16	36	-26
	Mean	81	72	59	54	34	42	54	82	93	107	119	91
1989	Max	152	150	136	138	126	130	140	160	179	192	184	170
	Min	-33	-79	-89	-80	-90	-80	-60	-30	-10	40	37	-4
	Mean	85	70	62	39	36	42	59	82	97	125	121	97
1990	Max	163	153	136	138	136	138	146	156	175	179	185	179
	Min	-23	-72	-80	-89	-88	-80	-57	-26	-10	28	30	-4
	Mean	90	69	63	48	44	53	66	83	101	130	125	106
1991	Max	164	158	144	142	130	126	148	166	182	197	180	164
	Min	-18	-70	-87	-86	-82	-92	-77	-22	26	51	49	0
	Mean	91	75	57	52	44	38	63	86	119	136	130	104
1992	Max	165	142	132	131	122	125	156	169	183	192	175	157
	Min	-58	-66	-78	-82	-90	-92	-68	-35	-11	40	18	-23
	Mean	86	66	51	42	37	35	58	79	94	120	115	88

1984 WATER LEVEL H-MAX. AND H-MIN. AT CAN THO



- Max. Discharge of Can Tho and My Thuan

Year	Cah Tho (m ³ /s)	My Thuan (m ³ /s)
1977	19,800	21,000
1978	27,200	22,600
1979	20,700	17,100
1980	23,400	19,773
1981	27,300	17,600
1982	21,600	19,100
1983	22,669	19,773
1984	24,100	24,400
1985	25,400	20,800
1986	23,700	23,100
1987	19,900	21,000
1988	18,600	15,800
1989	18,200	16,700
1990	24,500	19,300
1991	27,900	24,300
1992	22,600	17,100
1993	17,800	16,700
<i>Max.</i>	27,900	24,400
<i>Min.</i>	17,800	15,800
<i>Ave.</i>	22,669	19,773

- Max. Discharge of Can Tho and My Thuan

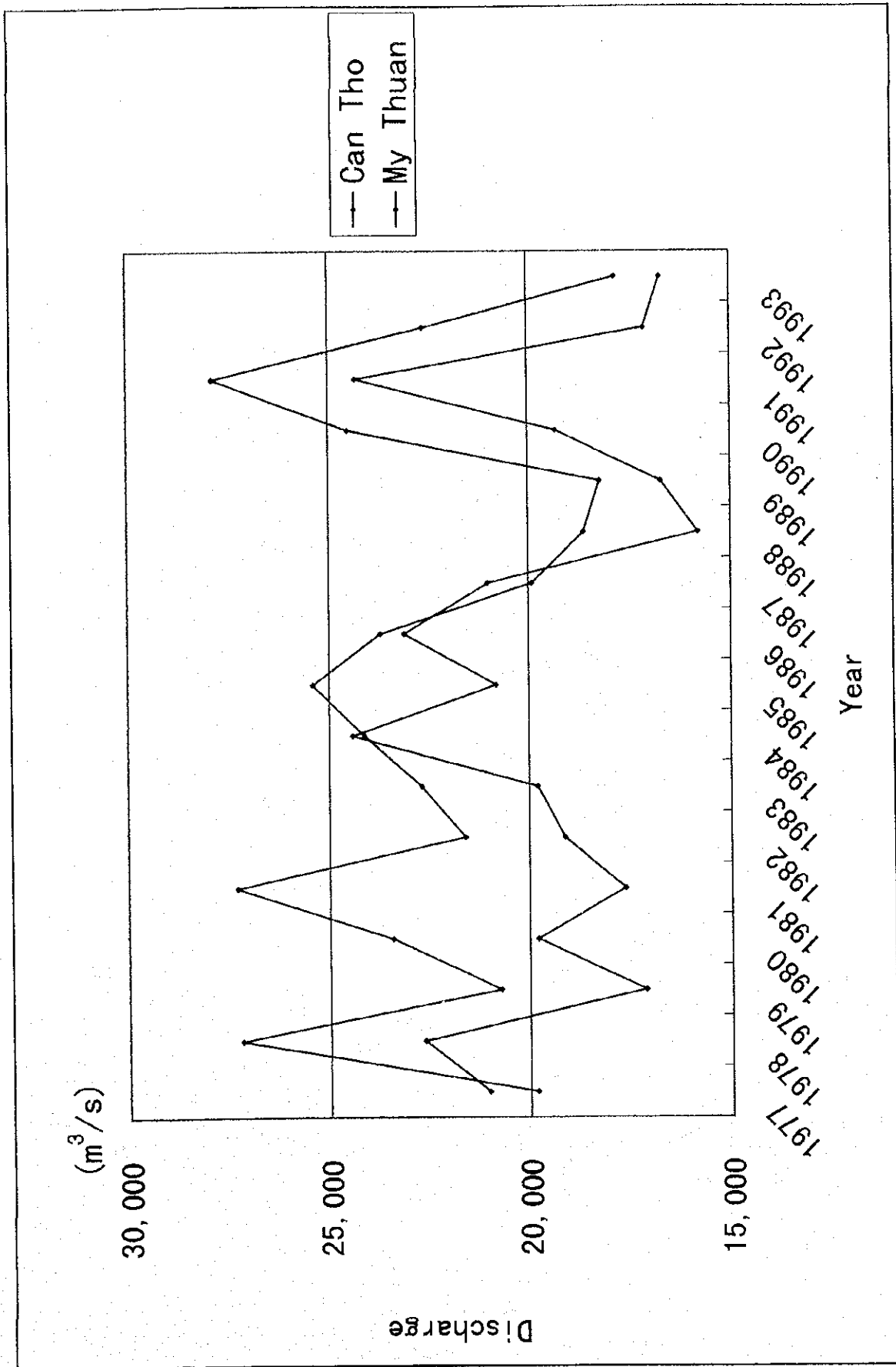
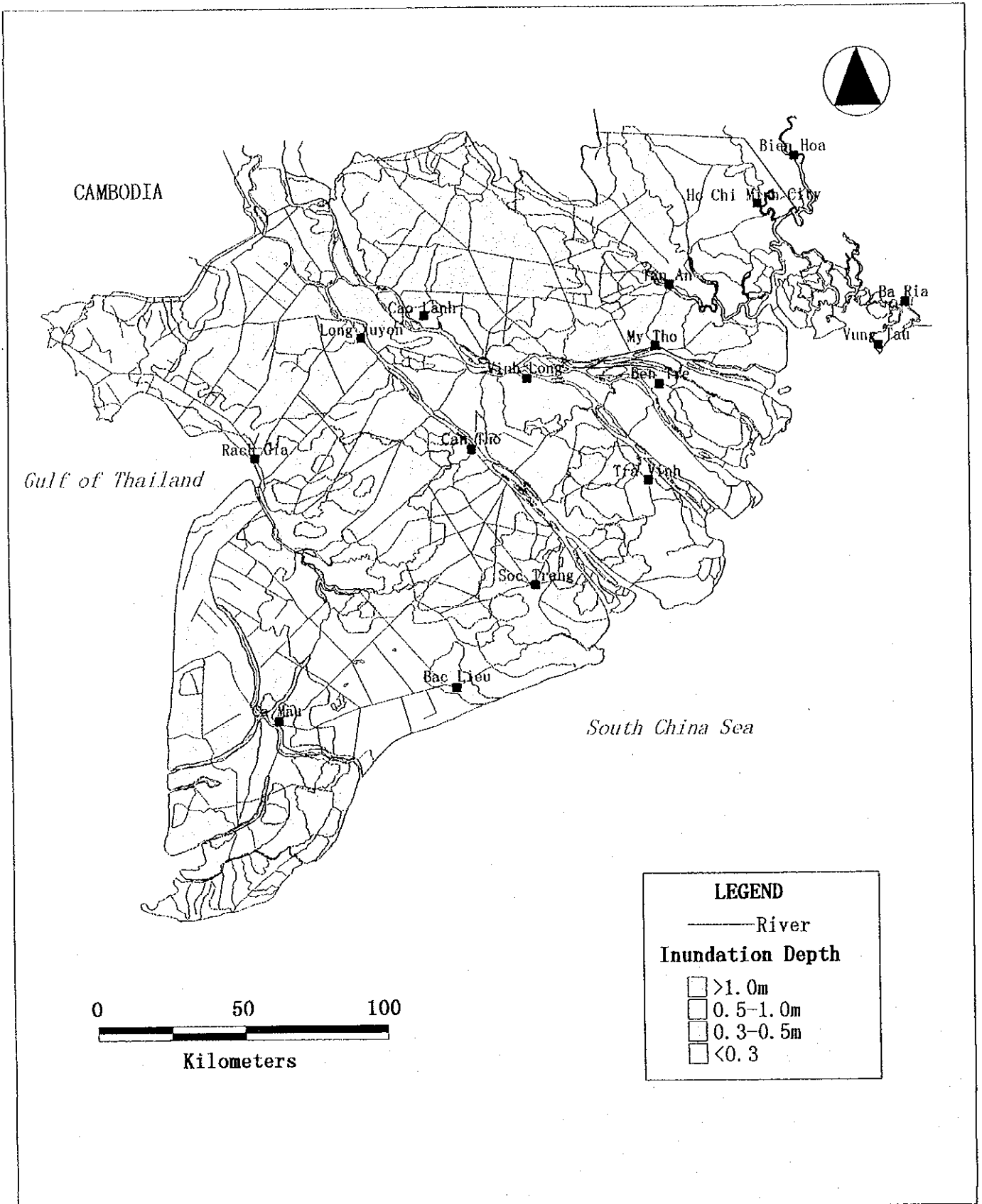
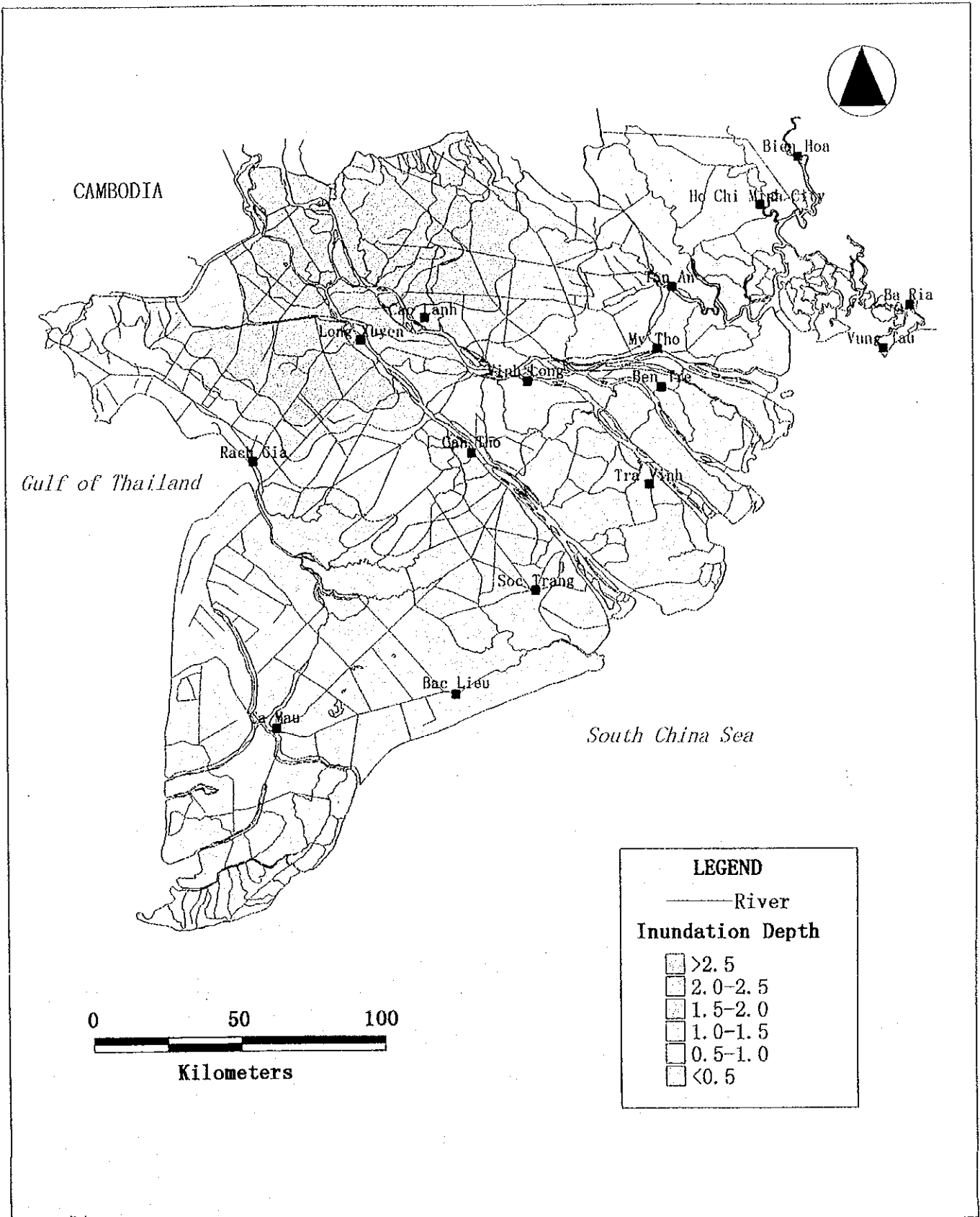


Figure MAX. DISCHARGE OF CAN THO AND MY THUAN



1984 FLOOD MAP



1994 FLOOD MAP

- Continuous Duration of 1984 Flood

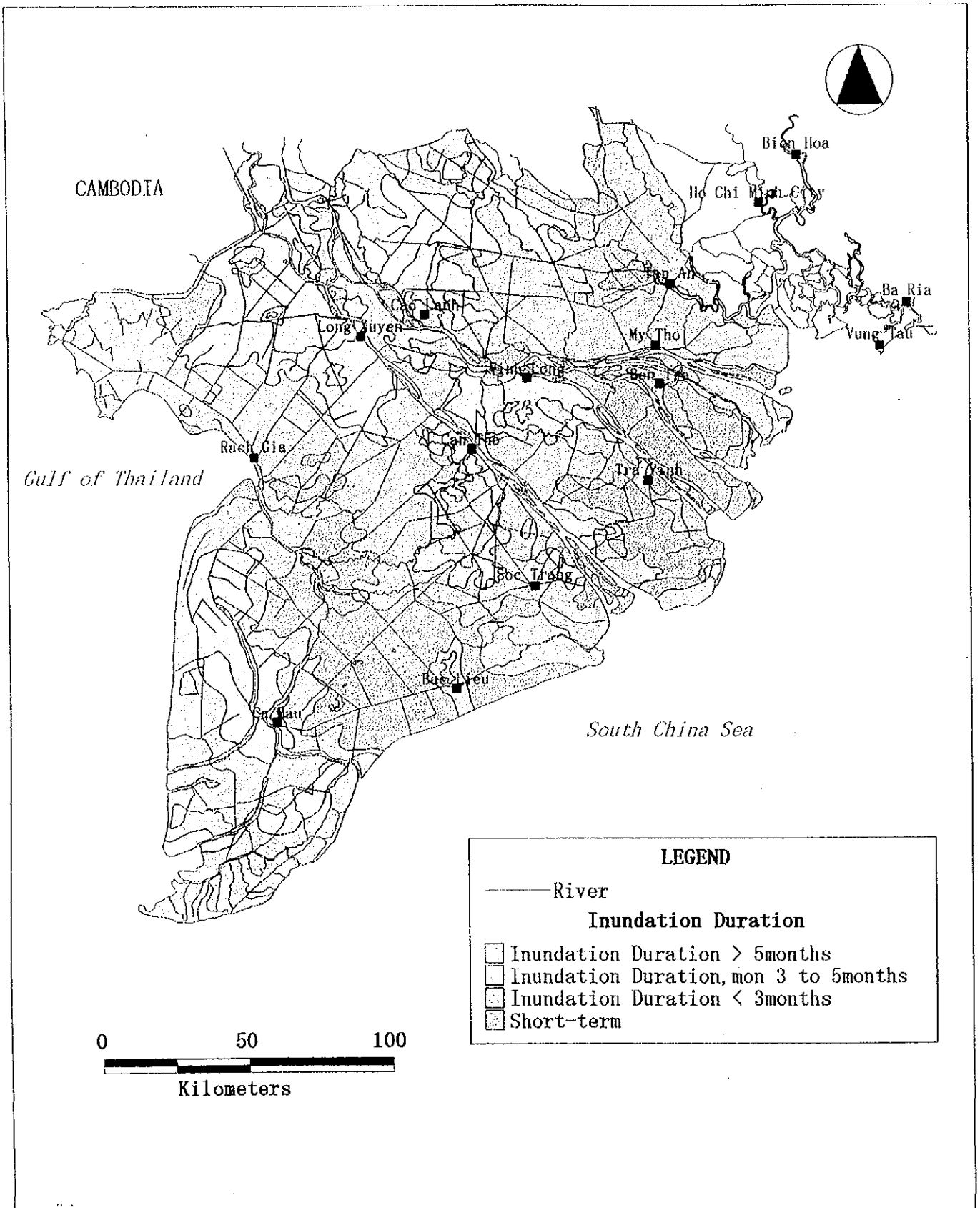


Figure CONTINUOUS DURATION OF 1984 FLOOD



Figure 7.2-18 1997.09 FLOOD CONDITION OF CHAU DOC



1997.09 FLOOD CONDITION OF LONG XUYEN

Results of the Velocity Measurement at Route A, B & C of Can Tho Bridge Site

RESULTS OF THE VELOCITY MEASUREMENT ROUTE - A, B AND C OF CAN THO BRIDGE

DATE	ROUTE (A, B, C)	X From NE RIVERBANK (m)	LAT.	Lon.	TIME	WATER E. L. (m)	DEPTH - H (m)	DEPTH - 0.2H (m)	VELOCITY (m/s)
21 Sep. 1997	A	100.0	10° 4.68'	105° 46.42'	7h 00	1.617	12.200	2.440	0.363
	A	500.0	10° 4.52'	105° 46.26'	7h 00	1.617	18.400	3.680	0.469
	A	1000.0	10° 4.34'	105° 46.07'	7h 00	1.617	13.400	2.680	0.393
	A	100.0			13h 00	0.907	11.000	2.200	0.557
	A	500.0			13h 00	0.907	17.300	3.460	0.680
	A	1000.0			13h 00	0.907	12.500	2.500	0.724
22 Sep. 1997	B	100.0	10° 3.13'	105° 48.13'	8h 00	1.320	17.400	3.480	0.698
	B	600.0	10° 2.96'	105° 47.91'	8h 00	1.320	13.200	2.640	0.454
	B	1100.0	10° 2.80'	105° 47.69'	8h 00	1.320	3.000	0.600	0.635
	B	100.0			14.30	0.290	16.000	3.200	1.181
	B	600.0			14.30	0.290	11.800	2.360	1.666
	B	1100.0			14.30	0.290	2.000	0.400	0.637
22 Sep. 1997	C	100.0	10° 2.25'	105° 48.73'	8h 00	1.220	17.500	3.500	0.700
	C	500.0	10° 2.11'	105° 48.56'	8h 00	1.220	16.800	3.360	0.692
	C	1000.0	10° 1.94'	105° 48.35'	8h 00	1.220	1.700	0.340	0.061
	C	100.0			14.30	0.190	16.600	3.320	1.975
	C	500.0			14.30	0.190	15.700	3.140	2.033
	C	1000.0			14.30	0.190	0.700	0.200	0.076

- Monthly Average Tidal Range (1979 - 1983)

MONTHLY AVERAGE TIDAL RANGE(1979-1983)

(cm)

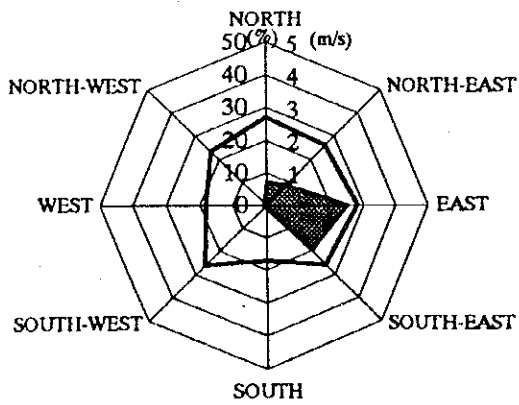
Station	Month												Distance from the sea (km)
	1	2	3	4	5	6	7	8	9	10	11	12	
My Thuan	150	155	152	175	172	161	164	121	100	94	103	152	112
Tan Chau	62	74	85	84	84	78	21	10	8	3	22	35	220
My Tho	214	211	216	222	236	259	232	222	205	189	202	207	56
Can Tho	174	181	191	203	208	225	166	146	117	118	134	162	88

- Monthly Provability and Velocity of Wind Each Direction at Can Tho

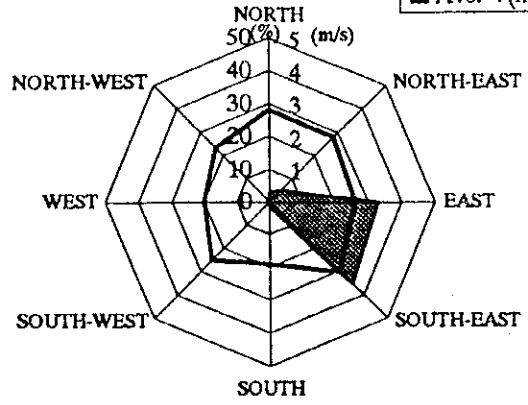
MONTHLY PROBABILITY AND AVERAGE VELOCITY OF WIND EACH DIRECTION AT CAN THO

Month	1		2		3		4		5		6		7		8		9		10		11		12	
	P(%)	V(m/s)	P(%)	V(m/s)	P(%)	V(m/s)	P(%)	V(m/s)	P(%)	V(m/s)	P(%)	V(m/s)	P(%)	V(m/s)	P(%)	V(m/s)	P(%)	V(m/s)	P(%)	V(m/s)	P(%)	V(m/s)	P(%)	V(m/s)
NORTH	7.3	2.7	3.0	2.8	0.3	1.7	0.4	2.0	1.3	2.9	0.6	2.5	0.5	2.0	0.3	1.7	1.6	1.8	9.0	2.9	18.7	2.9	19.9	2.8
NORTH-EAST	9.0	2.6	5.2	2.8	1.6	3.2	1.3	2.4	2.6	2.4	0.4	2.2	0.2	5.0	0.2	3.0	1.3	2.3	4.4	2.6	13.0	2.7	12.5	2.6
EAST	25.3	2.8	33.0	2.6	22.7	3.2	17.7	3.1	6.6	2.8	1.4	2.0		0.0		0.0	1.8	2.4	7.5	2.5	14.0	2.5	11.7	2.5
SOUTH-EAST	20.0	2.6	35.6	3.0	34.6	2.7	28.9	2.5	12.1	2.4	2.6	1.7	1.2	2.3	0.3	2.7	1.9	2.0	3.2	2.3	4.3	2.0	6.7	2.5
SOUTH	1.2	1.7	1.6	1.9	7.0	2.2	9.7	1.9	12.8	1.7	7.7	1.8	8.6	1.9	2.8	2.1	4.3	1.9	2.8	2.2	1.2	1.8	0.4	1.5
SOUTH-WEST	0.8	2.6	0.2	2.5	1.4	2.2	3.0	2.0	12.7	2.4	23.4	2.5	29.0	2.5	32.8	2.9	19.1	2.5	7.7	2.1	0.5	2.2	0.2	1.0
WEST	0.9	1.8	0.7	2.0	0.4	3.2	1.0	2.8	7.6	3.4	23.7	3.5	23.8	3.4	30.9	3.6	22.3	3.1	9.4	2.8	1.5	1.7	0.3	2.7
NORTH-WEST	0.9	2.3	0.4	2.3	0.4	0.2	0.1	4.0	0.8	4.4	2.3	3.3	2.0	3.0	2.3	4.3	2.8	2.9	7.6	2.9	4.4	2.7	3.6	2.4
WINDLESS	34.6		20.3		31.5		37.9		43.5		37.9		34.7		30.4		45.0		48.4		42.4		44.7	

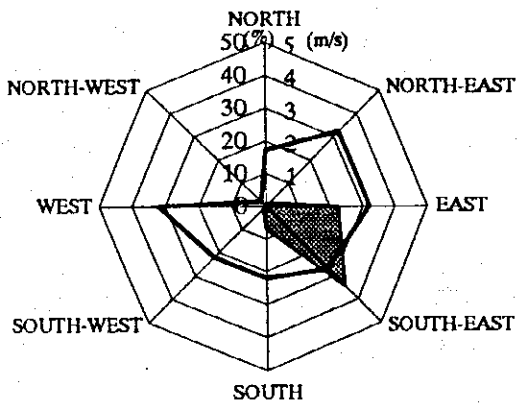
Probability(%)
 Ave.-V(m/s)



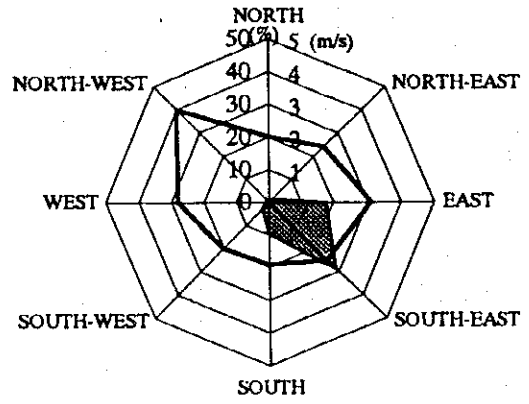
JANUARY



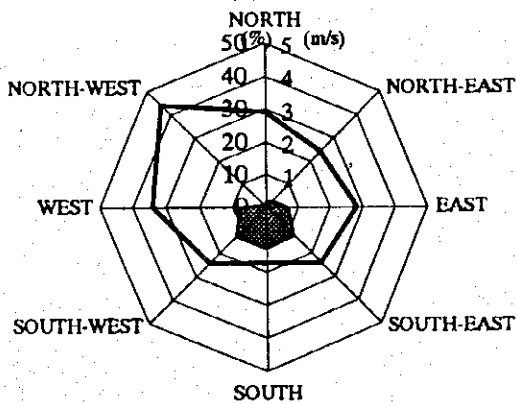
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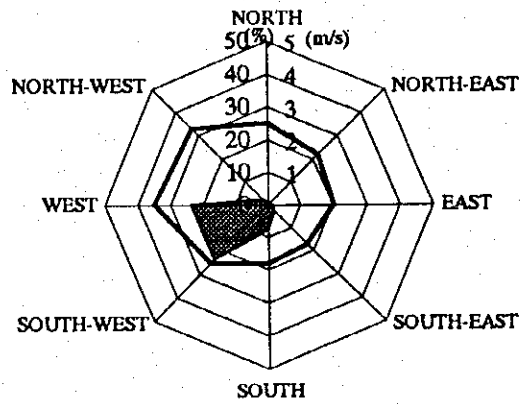
MARCH



APRIL

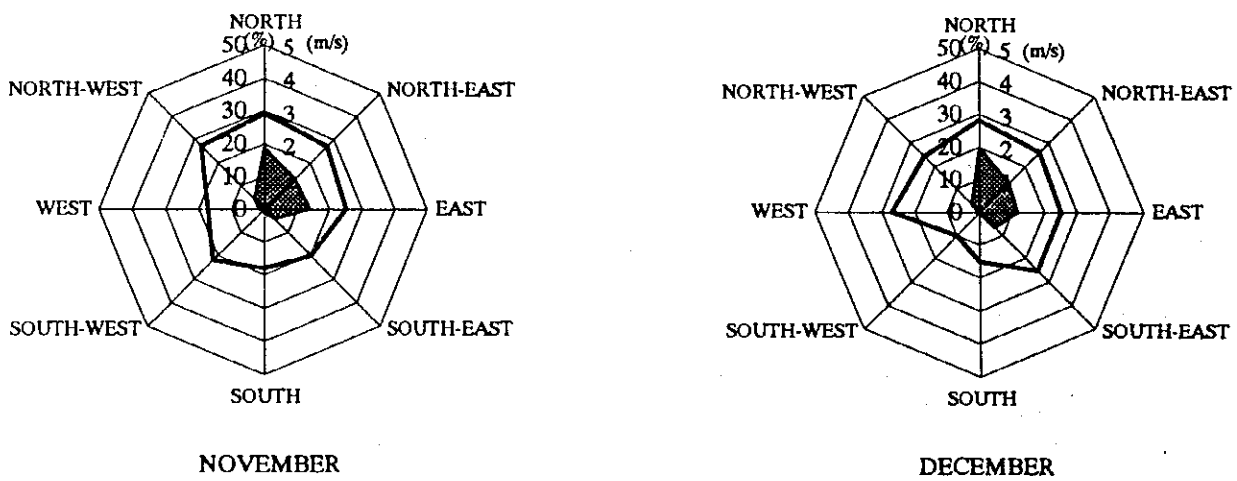
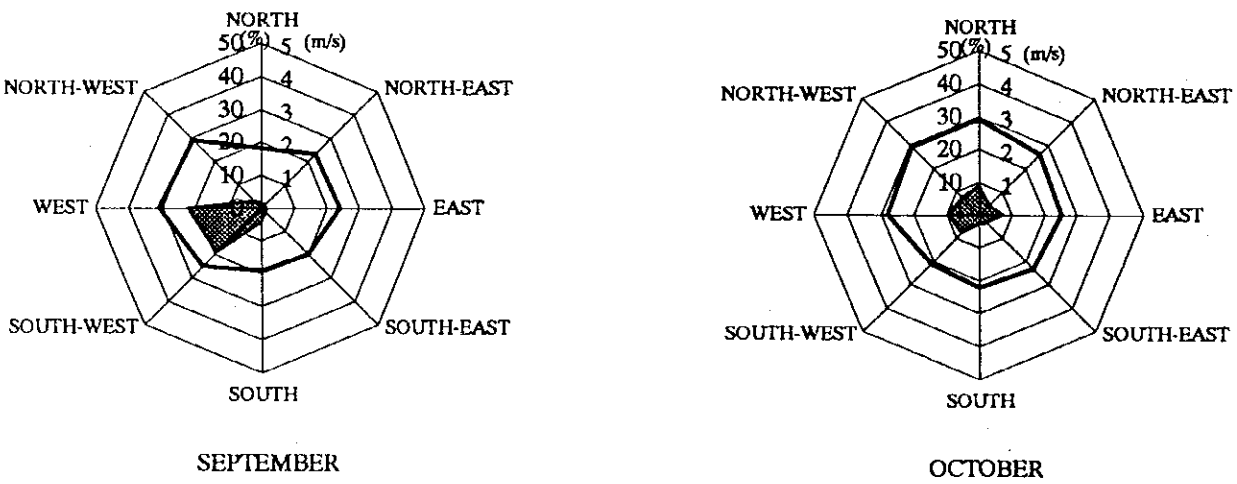
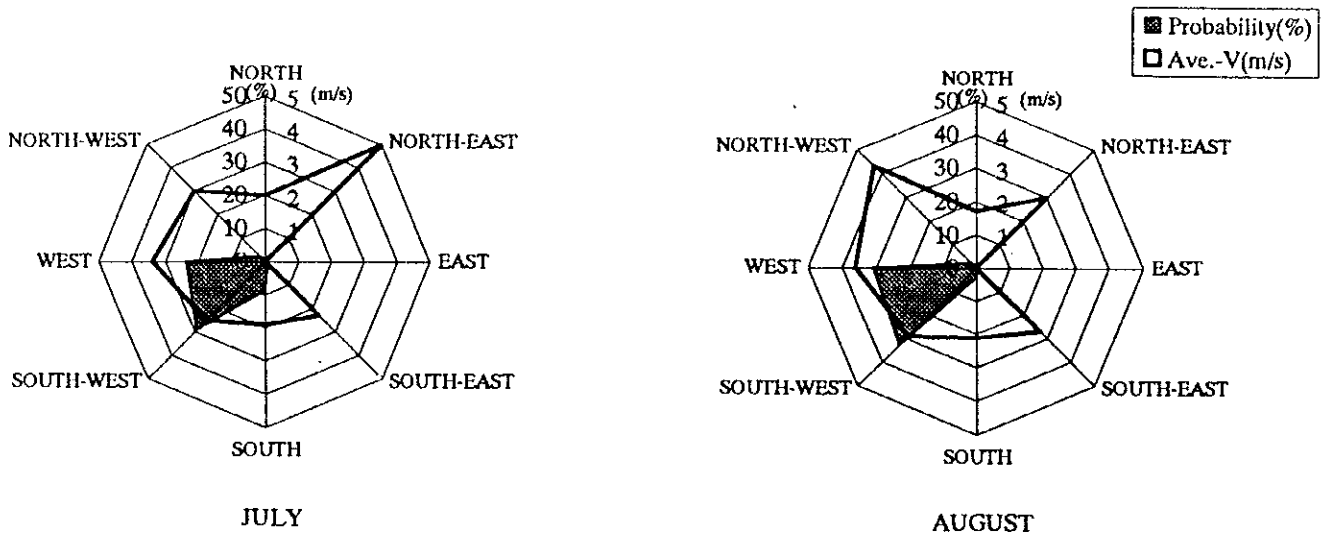


MAY



JUNE

MONTHLY PROBABILITY AND AVERAGE VELOCITY EACH DIRECTION AT CAN THO (JAN - JUN)



MONTHLY PROBABILITY AND AVERAGE VELOCITY EACH DIRECTION AT CAN THO (JUL - DEC)