

**Summary Report**

**Final**



# **The Study on the Red River Inland Waterway Transport System in the Socialist Republic of Vietnam**



**March 2003**

**The Overseas Coastal Area Development Institute of Japan (OCDI)  
Japan Port Consultants, Ltd. (JPC)**

SSF

JR

03-70

The following foreign exchange rates are applied in this study:

US\$1.00 = VND(Vietnam Dong)15,000 = JP¥125

as of December 07, 2001

Japan International Cooperation Agency (JICA)  
Ministry of Transport (MOT)

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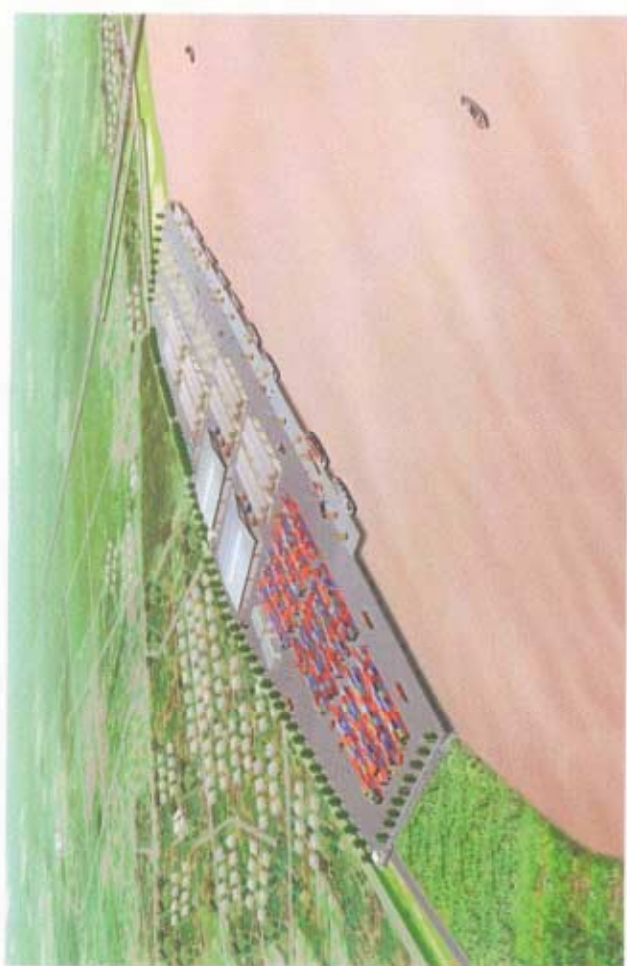
Hanoi Port



Khuyen Luong Port

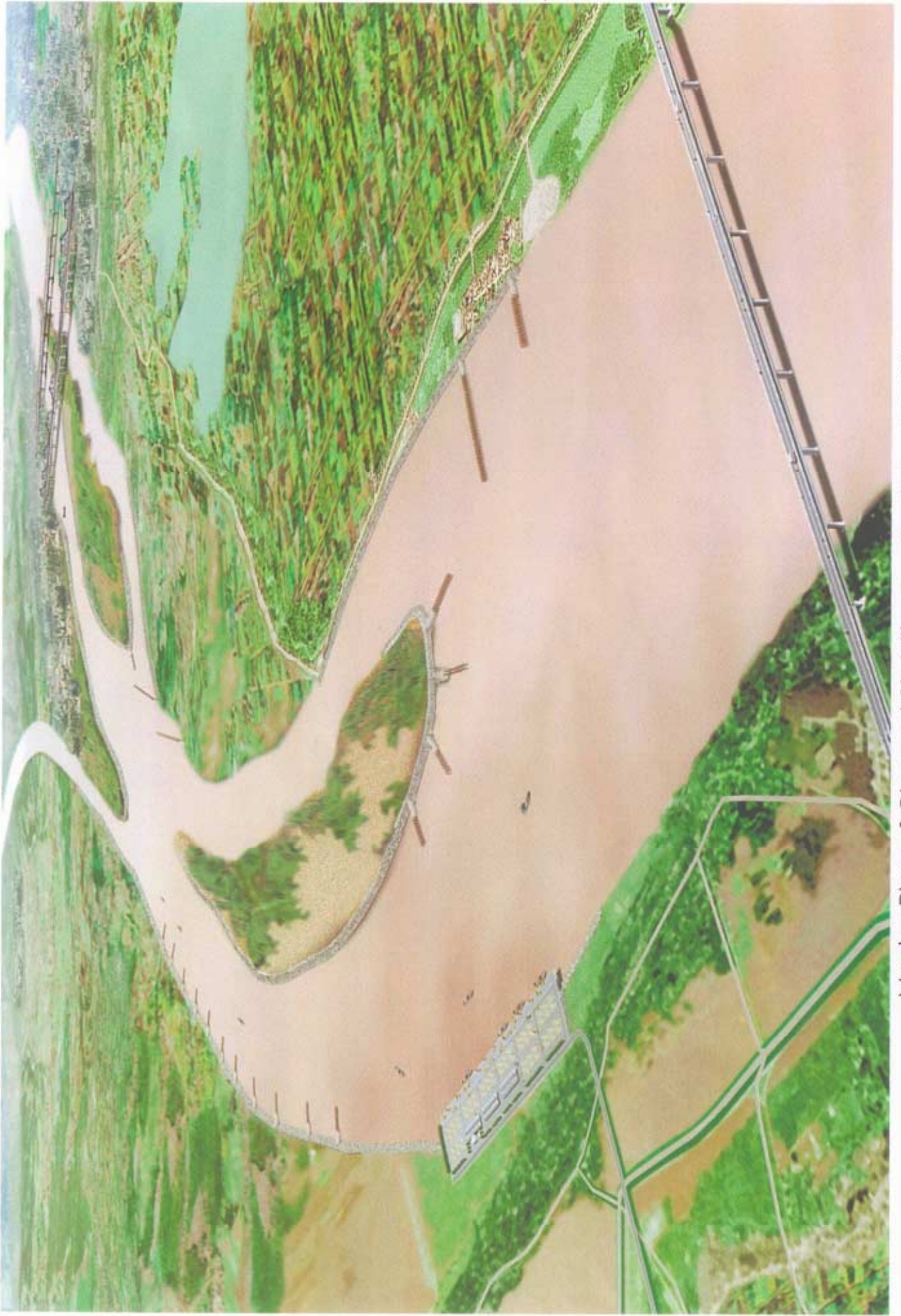


New North Port



New East Port

Master Plan (2020)



Master Plan of Channel Stabilization Facilities (2020)

## PREFACE

In response to a request from the Government of the Socialist Republic of Vietnam, the Government of Japan decided to conduct a study on the Red River Inland Waterway Transport System in the Socialist Republic of Vietnam and entrusted the study to the Japan International Cooperation Agency (JICA).

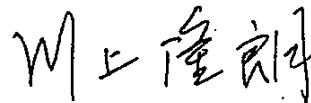
JICA dispatched a study team to Vietnam three times between December 2001 and January 2003, which was headed by Mr. Takechiho Tabata (December 2001 - June 2002) and Mr. Hisao Ouchi (June 2002 - January 2003) of the Overseas Coastal Area Development Institute of Japan (OCDI), and was comprised of OCDI and Japan Port Consultants, Ltd. (JPC).

The team held discussions with the officials concerned of the Government of the Socialist Republic of Vietnam and conducted field surveys at the study area. Upon returning to Japan, the study team conducted further studies and prepared this final report.

I hope that this report will contribute to this project and to the enhancement of friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of the Socialist Republic of Vietnam for their close cooperation extended to the study team.

March 2003



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Takao Kawakami  
President  
Japan International Cooperation Agency

**LETTER OF TRANSMITTAL**

March 2003

Mr. Takao Kawakami  
President  
Japan International Cooperation Agency

Dear Mr. Kawakami:

It is my great pleasure to submit herewith the Final Report of the Study on the Red River Inland Waterway Transport System in the Socialist Republic of Vietnam.

The study team comprised of the Overseas Coastal Area Development Institute of Japan (OCDI) and Japan Port Consultants, Ltd. (JPC) conducted surveys in Vietnam over the period between December 2001 and January 2003 as per the contract with the Japan International Cooperation Agency (JICA).

The study team compiled this report, which proposes the Long-term Strategy for the Inland Waterway Transport (IWT) System in the Red River Delta for the year 2020 as well as the Master Plan and the Short-term Development Plan for the IWT System in the Red River segment through Hanoi for the year 2020 and 2010 respectively, through close consultations with officials of the Ministry of Transport (MOT) and other authorities concerned of the Vietnamese Government.

On behalf of the study team, I would like to express my heartfelt appreciation to MOT and other authorities concerned of the Government of the Socialist Republic of Vietnam for their diligent cooperation and assistance and for the heartfelt hospitality extended to the study team.

I am also very grateful to your Agency, the Ministry of Foreign Affairs, the Ministry of Land, Infrastructure and Transport and the Embassy of Japan in Vietnam for valuable suggestions and assistance through this study.

Yours faithfully,

久内 久夫

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Hisao Ouchi  
Team Leader

The Study on the Red River Inland Waterway Transport  
System in the Socialist Republic of Vietnam

## ABBREVIATION LIST

AAGR	Average Annual Growth Rate
ADB	Asian Development Bank
AFTA	ASEAN Free Trade Agreement
APA	ASEAN Ports Association
ASEAN	Association of South East Asian Nations
BCR	Benefit Cost Ratio
BOT	Build, Operate and Transfer
CCTDI	Consulting Center for Transport Development Investment under TDSI
CCWACO	Consulting Company of Waterway Construction under VN Waterway Construction Corp
CFS	Container Freight Station
CIF	Cost, Insurance and Freight
CMB	Construction Consulting Company for Maritime Building under VINAMARINE
CSW	Channel Stabilization Works
CV	Cheval Vapeur (French expression, = HP: horse power)
CY	Container Yard
DC	Distribution Center
DNC Canal	Day - Ninh Co Canal
DSI	Development Strategy Institute under MPI
DWT	Dead Weight Tonnage
EDI	Electronic Data Interchange
EIA	Environment Impact Assessment
EPZ	Export Processing Zone
E/S	Engineering Service
ETA	Estimated Time of Arrival
FCL	Full Container Load
FDI	Foreign Direct Investment
FIRR	Financial Internal Rate of Return
FOB	Free on Board
GDP	Gross Domestic Product
GOJ	Government of Japan
GOV	Government of the Socialist Republic of Vietnam
GPS	Global Positioning System
GRT	Gross Registered Tonnage
GSO	General Statistical Office
GT	Gross Tonnage
HCMC	Ho Chi Minh City
HDI	Human Development Index
HHWL	Highest High Water Level



HNPC	Hanoi People's Committee
HWL5%	5% Occurrence Water Level
ICD	Inland Clearance Depot
IMO	International Maritime Organization
IRR	Internal Rate of Return
IW	Inland Waterway
IWMS	Inland Waterway Management Station
IWPA	Inland Waterway Port Authority
IWT	Inland Waterway Transport
IZ	Industrial Zone
JBIC	Japan Bank for International Cooperation
JETRO	Japan External Trade Organization
JICA	Japan International Cooperation Agency
JP¥	Japanese Yen
JPC	Japan Port Consultants, Ltd.
LAD	Least Available Depth of waterway
LAW	Least Available Width of waterway
LCL	Less than Container Load
LOA	Length Overall
LSD	National Land Survey Datum
LWL95%	95% Occurrence Water Level
MARD	Ministry of Agriculture and Rural Development
MIS	Management Information System
MOC	Ministry of Construction
MOSTE	Ministry of Science, Technology and Environment
MOT	Ministry of Transport
MPI	Ministry of Planning and Investment
MWL	Mean Water Level
N3	Confluence/Bifurcation
NFEA	Northern Focal Economic Area
MT	Metric Ton
NPV	Net Present Value
NOWATRANCO	Northern Waterway Transport Corporation
OCDI	Overseas Coastal Area Development Institute of Japan
O-D	Origin and Destination
ODA	Official Development Assistance
PAX	Passenger
PC	People's Committee
P/L	Profit/Loss
PMU	Project Management Unit
PMU-Waterways	Project Management Unit of Waterways

Q	Water Discharge
QGC	Quay-side Gantry Crane
RO/RO	Roll-on Roll-off
RTG	Rubber-Tired Gantry
RRD	Red River Delta
SBSTI	Shipbuilding Science & Technology Institute under VINASHIN
SCF	Standard Conversion Factor
SDL	National Survey Datum
Sh	Hydraulic Section
SOC	Ship Operation Cost
SOE	State-owned Enterprise
SPM	Suspended Particulate Matter
SRV	Sea-cum-river Vessel
SS	Suspended Solid
S/W	Scope of Work
SWR	Shadow Wage Rate
TDSI	Transport Development Strategy Institute under MOT
TEDI	Transport Engineering Design Incorporation
TEDI-Port	Port & Waterway Engineering Consultants under TEDI
TEDI-Wecco	Waterway Engineering Consultants under TEDI
TEU	Twenty-foot Equivalent Unit
US\$	US Dollar
VAT	Value Added Tax
VCCI	Vietnam Chamber of Commerce and Industry
VICT	Vietnam International Container Terminals
VINALINES	Vietnam National Shipping Lines
VINAMARINE	Vietnam National Maritime Bureau
VINASHIN	Vietnam Shipbuilding Industry Corporation
VINAWACO	Vietnam Waterway Construction Corporation
VITRANSS	Vietnam Transport Strategy Study
VIWA	Vietnam Inland Waterway Administration
VMRCC	Vietnam Maritime Regional Coordination Center
VMS	Vietnam Maritime Safety Agency
VN	Vietnam
VND	Vietnam Dong
VOC	Vehicle Operation Cost
VR	Vietnam Railway
VR	Vietnam Register
VRA	Vietnam Road Administration
VTMS	Vessel Traffic Management System

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