

**JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
STATE WORKING GROUP FOR CLEANING UP, CONSERVATION AND
DEVELOPMENT FOR THE HAVANA BAY (GTE)
THE REPUBLIC OF CUBA**

**THE DEVELOPMENT STUDY ON THE IMPROVEMENT OF
SEWERAGE AND DRAINAGE SYSTEM FOR THE HAVANA BAY
IN THE REPUBLIC OF CUBA**

**FINAL REPORT
VOLUME I EXECUTIVE SUMMARY**

MARCH 2004

NIHON SUIDO CONSULTANTS Co., Ltd.

EXCHANGE RATE

The currency exchange rates used in the Study are:

US Dollar (US\$) 1.00 = Cuban Peso (Ps) 1.00
= Japanese Yen (¥) 120

Note that considering the special characteristics of Cuban economy, two exchange rates: the official exchange rate of US\$1.00=Ps1.00 and the rate currently used for the limited domestic market of US\$1.00=Ps26.00, are applied in the economic and financial analyses.

(As of March 2003)

PREFACE

In response to a request from the Government of the Republic of Cuba, the Government of Japan decided to conduct a development study on the Improvement of Sewerage and Drainage System for the Havana Bay in the Republic of Cuba and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA selected and dispatched a study team headed by Mr. Harutoshi UCHIDA, Nihon Suido Consultants Co., Ltd. to the Republic of Cuba four times between July 2002 and January 2004. In addition, JICA set up an advisory committee headed by Mrs. Keiko YAMAMOTO, senior Advisor, Institute for International Cooperation JICA, between July 2002 and January 2004, which examined the study from specialist and technical point of view.

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

I hope that this report will contribute to the promotion of the 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 Republic of Cuba for their close cooperation extended to the team.

March, 2004

Kazuhisa MATSUOKA
Vice-President
Japan International Cooperation Agency

March, 2004

Mr. Kazuhisa MATSUOKA
Vice-President
Japan International Cooperation Agency
Tokyo, Japan

Letter of Transmittal

Dear Sir,

We are pleased to submit this Final Report on the Development Study on the Improvement of Sewerage and Drainage System for the Havana Bay in the Republic of Cuba. This report incorporates the views and suggestions of the authorities concerned of the Government of Japan, including your Agency. It also includes the comments made by the State Working Group for Cleaning Up, Conservation and Development for the Havana Bay (GTE), National Institute of Water Resources (INRH), Ministry of Science, Technology and Environment (CITMA), Ministry of Foreign Investment and Economic Collaboration (MINVEC), Water Corporations (Aguas del la Habana and Acueducto del Este) and other government agencies concerned in the Republic of Cuba during the meetings organized by the Steering Committee in Havana where the Draft Final Report was discussed.

The Final Report comprises a total of five volumes as listed below.

Volume I:	Executive Summary (English version)
Volume II:	Main Report (English version)
Volume III:	Supporting Report (English version)
Volume IV:	Executive Summary (Spanish version)
Volume V:	Main Report (Spanish version)

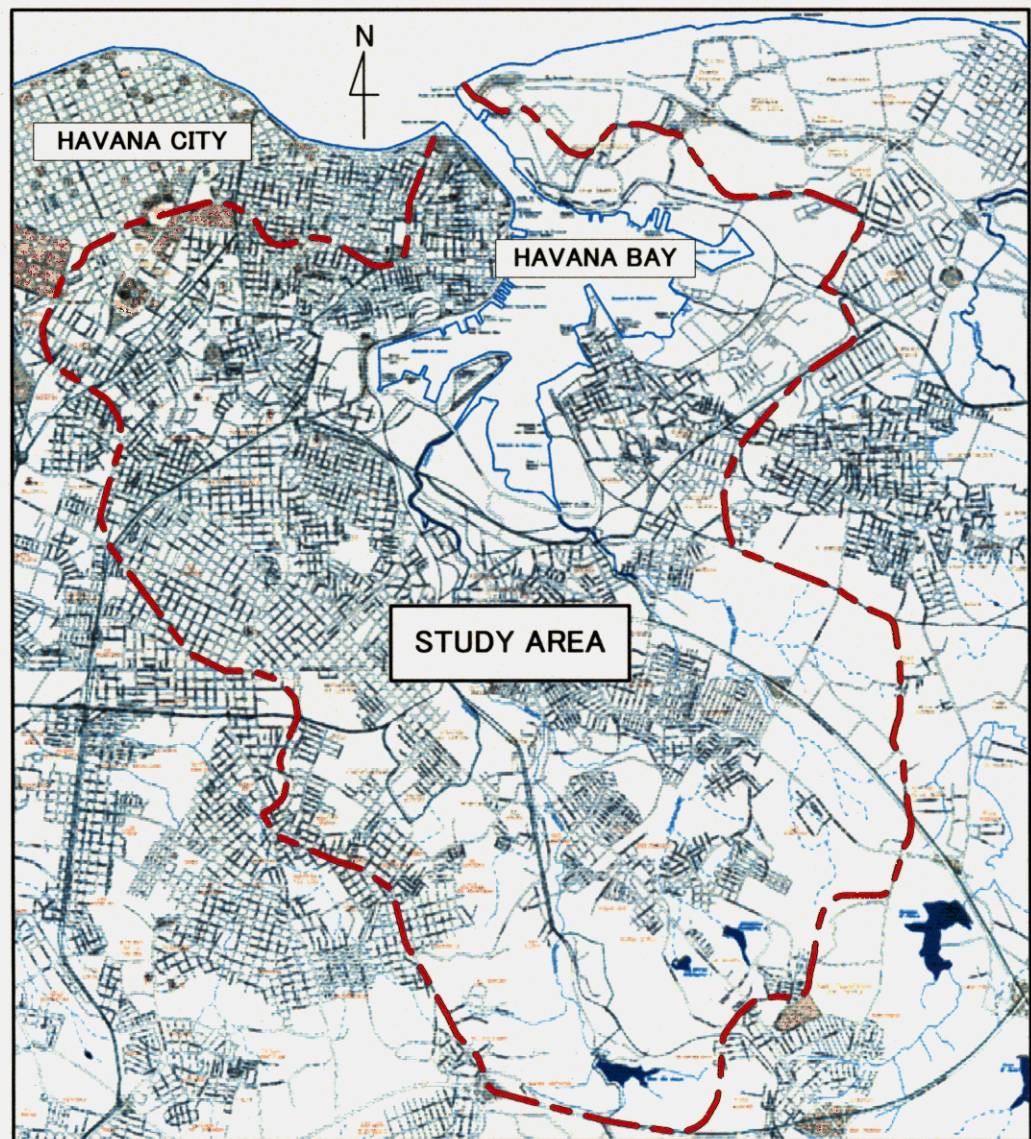
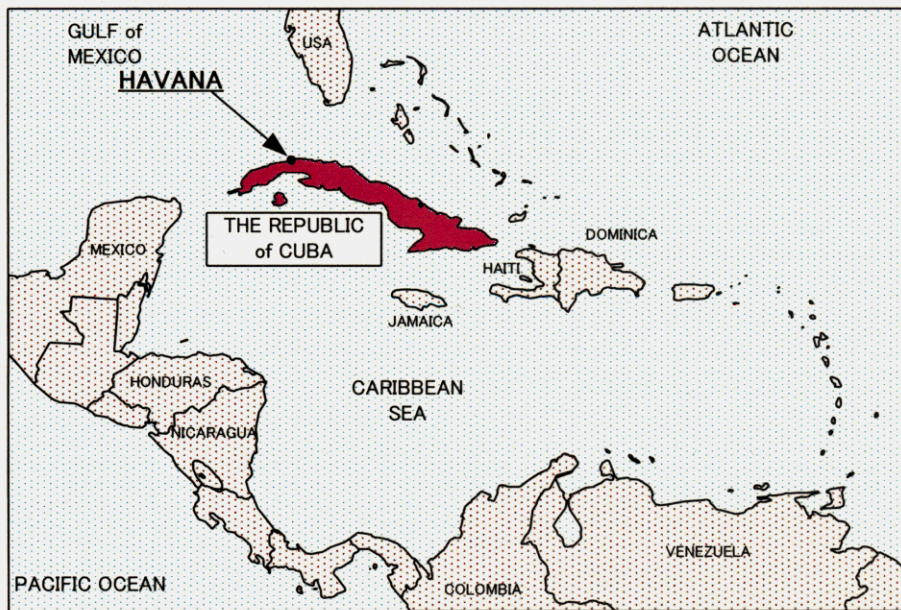
The report contains the Study Team's findings, conclusions and recommendations derived from the Phase 1 to Phase 3 Studies. The main objectives of the Phase 1 and Phase 2 Studies were to investigate current situations, to formulate a long term master plan and to identify priority projects, whilst that of the Phase 3 Study was to examine the feasibility of the priority project which had previously been identified in Master Plan during the course of the Phase 2 Study.

We wish to take this opportunity to express our sincere gratitude to your Agency, the Ministry of Foreign Affairs and the Ministry of Land, Infrastructure and Transport of the Government of Japan for their valuable advice and suggestions. We would also like to express our deep appreciation to the relevant offices for MINVEC, GTE, INRH and other agencies of the Republic of Cuba for their cooperation and assistance extended to us throughout our Study.

Very truly yours,

Harutoshi UCHIDA
Team Leader, Study on the Improvement of
Sewerage and Drainage System for the Havana Bay

LOCATION OF THE REPUBLIC OF CUBA



LOCATION OF THE STUDY AREA

LOCATION MAP