JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

INSTITUTE OF AGRICULTURAL AND LIVESTOCK DEVELOPMENT OF THE STATE OF AMAZONAS (IDAM)

# THE STUDY FOR IMPROVING RURAL PEOPLE'S LIVELIHOODS THROUGH AGRICULTURAL ACTIVITIES AND SOUND NATURAL RESOURCES MANAGEMENT IN THE STATE OF AMAZONAS IN THE FEDERATIVE REPUBLIC OF BRAZIL

## **MAIN REPORT**

FEBRUARY 2002

## NIPPON KOEI CO., LTD.

AFA
JR
02 - 06

### **LIST OF REPORTS**

SUMMARY

#### **MAIN REPORT**

#### **Currency**

US \$ = United State Dollars, R\$ = Brazilian Real US \$ 1.00 = R\$ 2.699 (31 October, 2001) J ¥ = Japanese Yen US \$ 1.00 = J¥ 122.441 (31 October, 2001) R\$ 1.00 = J¥ 45.370 (31 October, 2001)

#### PREFACE

In response to the request from the Government of Brazil, the Government of Japan decided to conduct the Study for Study for Improving Rural People's Livelihoods through Agricultural Activities and Sound Natural Resources Management in the State of Amazonas in the Federative of Brazil and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Brazil the Study Team headed by Mr. Masamitsu Fujioka, Nippon Koei Co. Ltd., four times during the study period from March 2000 to February 2002.

The Team held discussion with the officials concerned to the Government of Brazil, and conducted field surveys in the Study area. In succession, the Team made further study and the present report was prepared.

I do hope this report will contribute to promotion of the Project and to enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned to the Government of Brazil for their close cooperation extended to the Team.

February 2002

Mr. Takao KAWAKAMI The President of Japan International Cooperation Agency

February 2002

Mr. Takao KAWAKAMI President Japan International Cooperation Agency Tokyo, Japan

#### LETTER OF TRANSMITTAL

Dear Sir,

We have the pleasure to submit you herewith the report on the Study for Improving Rural People's Livelihoods through Agricultural Activities and Sound Natural Resources Management in the State of Amazonas in the Federative of Brazil.

This report presents the results of all works performed in both Brazil and Japan during a total period of 24 months from March 2000 to February 2002.

The Study Area is extended over the three municipals of Iranduba, Itacoatiara and Maues (51,000 km<sup>2</sup> in total) of the state of Amazonas. The objective of the Study is to formulate a plan for income generation and provision of employment opportunity through creating agricultural system under rational natural resources use, which will contribute to natural environmental conservation. The development component formulated in the Study consists of improvement of productivity and quality on target crops and fishes, strengthening of farmers' organisations, improvement of marketing and credits, improvement of agricultural support services and facilities, environmental conservation, and so on, based on three project strategies (productivity and quality improvement, marketing improvement and social conditions improvement) and two basic strategies (capacity building for farmers, and capacity building for implementation agencies). The numbers of beneficial farm households are estimated at 5,874.

We believe that the project implementation will help to improve farmers' living standards in the Study areas and to develop socio-economy in the rural area, and to prosper the cordial relations and good-will between Japan and Brazil.

We wish to express our deep appreciation and sincere gratitude to your Agency, the Ministry of Foreign Affairs, and the Ministry of Agriculture, Forestry and Fisheries for the kind co-operation extended to us. We also wish to express our deep gratitude to your Brazil Offices, the Embassy of Japan, the Consulate of Japan in Manaus, the Institute of Agricultural and Livestock Development of the State of Amazonas (IDAM) and other authorities concerned of the Government of Brazil for the close co-operation and assistance extended to us during our field investigations and studies.

Very truly yours,

Masamitsu FÚJIOKA Team Leader The Study Team of the Study for Improving Rural People's Livelihoods through Agricultural Activities and Sound Natural Resources Management in the State of Amazonas in the Federative of Brazil



LOCATION MAP OF THE STUDY AREA

## Photos ( 1/6 )







Iron Plate for Making Farinha ( roasting )



Farinha Making by Family



Floating Store, Maues



ASCOPE Floating Collecting and Processing Facility, Itacoatiara



Rural Canues, left one has "rabeta(simple motor)"



Vegetable (eggplant) Cultivation in Plasticulture, Iranduba



Farmland (Varzea) by Solimoes River

Photos ( 2/6 )



Flooded Forestry, Iranduba



Vegetables Cultivation by "Canteiras" ( 1/2 )



Vegetables Cultivation by "Canteiras" (  $2\!/\!2$  )



Improved "Canteiras" on demonstrative tested by Amazonas University



Improved "Canteiras" Medium (Scrap Charcoal, waste wood)



Slash and Burn (1/3), Maues



Slash and Burn (3/3), Maues



Slash and Burn (2/3), Maues

## Photos ( 3/6 )



Cleared Forestry

Agroforestry, Tome-Açu (1/4)



Agroforestry, Tome-Açu (2/4)



Agroforestry, Tome-Açu (3/4)



Agroforestry, Tome-Açu (4/4)



Cupuaçu Tree

Photos ( 4/6 )



Açai Tree

Maracuja Tree



Guaraná Tree



OrganicbCompost Making



Fish Market in Manaus ( Panair )



Market in Manaus ( Panair )



Tropical Fruits Processing Plant in Tome-Açu (Production Line )

Tropical Fruits Processing Plant in Tome-Açu (Packing of Frozen Plup)

Photos ( 5/6 )



Washed Cupuaçu for Processing



Guaraná Processing Products ( Bar, Powder, Concentrated Liquid )



Typical Fishing by Rural Fisherman

Net Cage Culture of Pirarucu in Iranduba, Amazonas Ecopexie LTDA.



Small-scale Net Cage of EMBRAPA, Lago do Arianzinho, Iranduba

IDAM Barbina Hatchery ( IBH )

Photos ( 6/6 )



Private Frozen Fish Production Plant



Workshop in Maués



Workshop in Itacoatiara



Rural Water Supply Facility



Rural Wireless Radio Station



Regular Boat (it is important to transport by rural people)



Church in Rural Area (Floating) , Communication Place in Community