

CHAPTER 1
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1.1 Background of the Study

The Pará State, of the Federative Republic of Brazil, has a total area of approximately 1,250,000 km², out of which about 15% (approx. 180,000 km²) is degraded. The main causes of this natural forest degradation are considered to be the exploitation of wood, development of pastures and the migratory agriculture carried out by agricultural settlers. Although the Federal and State Governments have been implementing several protection measures to the Amazon region tropical forest, the deforestation still persists. Since this deforestation is not only related to wood extraction, measures that also encompass the agricultural sector should be necessary.

Currently, the development of pastures and the migratory agriculture are considered the main causes of the Amazon region deforestation. The forest fires carried out for the development of new pastures and by agricultural settlers surpass the recovery capacity of these tropical forests that have a closed ecosystem. Few are the farmers who can live only on agriculture. The activities of forest products' extraction are as much important as the agriculture in terms of income generation.

The population of the Marabá Micro region, in Pará State, is rapidly increasing. The new agricultural settlers are carrying out intensive firing in the migratory agriculture causing the increase of degraded areas. This agriculture method does not conduct to the improvement of these farmers' lives but cause a fast deterioration of soil also affecting the biodiversity due to the fire. These fires are being carried out mainly due to the lack of information and awareness, thus a sustainable development that allows the improvement of local residents' life conditions is necessary.

The pressure over the natural forests can be reduced by creating transition areas between the forest and the economic activity zones. For this purpose, the degraded areas surrounding the forests could be utilized since they do not have any economic value. These areas could be recuperated thus increasing their productivity and creating sustainability conditions.

The Micro region of Marabá is considered to be economically benefited, for example in the transports sector, by the Carajás railway and by the reasonable roads' system developed in the region and that includes the Transamazônica Highway. The efficient utilization of the region's potential could raise the life conditions of residents through the increase of income and of employment opportunities, besides the recuperation of degraded areas and the conservation of

forests. As a consequence, the forest functions could be enhanced.

The Brazilian Government requested for a technical cooperation related to the “Master Plan Study on Degraded Areas Restoration in the State of Pará” to the Government of Japan in May of 1998. In response to the request, the Japan Government, through the Japan International Cooperation Agency (JICA), sent a Project Formation Study Team in April 1999, to evaluate the possibilities for such cooperation. Then, a Preliminary Study Team was sent in December 1999 to discuss the Scope of Works (S/W) with the Pará Government. Based on the S/W, the Study Team composed by specialists was sent for the realization of the Study. And, the results of the Study are elaborated in this report.

1.2 Objectives of the Study

The Study objectives are as follows:

1. Elaboration of the Master Plan in concern with the Recuperation Plan of Degraded Areas in the Micro region of Marabá in Pará State, of which the main items are as follows:
 - a. Recuperation of Natural Forests;
 - b. Reforestation for the Utilization of Forest Products;
 - c. Introduction of Agroforestry Activities, etc.
2. Technical Transfer of the Methodology applied in the Study and in Planning to the Brazilian Counterpart personnel.

1.3 Study Area

The Study Area encompasses 5 municipalities (Marabá, São João do Araguaia, São Domingos do Araguaia, Brejo Grande do Araguaia and Palestina do Pará) of the Marabá Micro region, in the State of Pará, with an approximate area of 20,000 km². Regions outside the Marabá Micro region can be taken into consideration, if necessary, for the collection of existing information and recommendations.

1.4 Scope of the Study

The Study is accomplished to reach the proposed objectives including the following works:

- a. Collection and analysis of data and related information;
- b. Analysis of satellite images of the degraded areas;
- c. Elaboration of the map of the existing degraded areas (1/100.000);
- d. Analysis of limiting factors, potentials for recuperation and technical alternatives for the recuperation of the degraded areas;
- e. Analysis of basic guidelines of recuperation of the degraded areas;
- f. Elaboration of the master plan of recuperation of the degraded areas;
- g. Elaboration of the map of the plan of recuperation of the degraded areas.

1.5 Members of the Study Team and the Counterparts

The members of the Japanese Study Team and the Brazilian Counterparts in regard to the Study components are as follows:

Study Component	Study Team	Counterparts
Leader	Yutaka NOZAKI	Permínio Pascoal Costa Filho
Silviculture	Kazumi WATANABE Hitoshi KATO	Sebastião Anísio dos Santos José Renato Duarte de Barros
Agroforestry	Yoshiyuki KAWAMATA Wataru YAMAMOTO	José Renato Duarte de Barros Amadeu Farage
Soils	Chellasamy MURUGABOOPATHI	Benjamin Carlos Ferreira Paulo Lima Guimarães Reginaldo Luso Fontinhas
Forest Products Processing / Market	José Toshimori NAKANE	Sérgio da Fonseca Dias
Socioeconomy / Projects Evaluation	Bogo ABE	Ivan da Conceição Barbosa
Processing of Satellite Images	Manabu KAWAGUCHI Yoshitaka GOMI	Flávio Augusto Altieri dos Santos Carlos Mariano Guilherme Ferreira Bentes
Livestock and Pasture	Toshikazu NAGAMITSU	José Joaquim do Nascimento
Interpreter	Natsumi KUSUNO	-
Coordinator	Marilda Midori NAKANE	Paulo Sérgio Altieri dos Santos Francisca Lúcia Porpino Teles