



Brazilian Institute for the Environment and
the Natural Renewable Resources
- IBAMA -



International Tropical Timber
Organization
- ITTO -

PRE-PROJECT PPD 07/97 REV.1 (F):

FOREST INVENTORY FOR THE CONSERVATION AND SUSTAINABLE
MANAGEMENT OF MAHOGANY (*SWIETENIA MACROPHYLLA* - KING) IN THE
BRAZILIAN AMAZON REGION

COMPLETION REPORT

Brasília, Brazil

July 2004

A. Pre-project identification

- a) Title: Forest Inventory for the Conservation and Sustainable Management of Mahogany (*Swietenia Macrophylla* - King) in the Brazilian Amazon Region
- b) Serial number: PPD 7/97- Rev. 1 (F)
- c) Executing Agency: Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis – Ibama
- d) Host Government: Brasil
- e) Starting date: September 1998
- f) Actual duration: 24 months
- g) Actual pre-project costs: US\$ 147,700

PART I. Executive Summary

1. Background information about the pre-project

1.1 Introduction

Although since 1965 required by law, the forest management of the Brazilian Amazon Region has been regulated only from the decade 1990 onwards, when commerce sharply increased. A great offer of raw materials resulting from deforesting on areas meant for agriculture and cattle raising made it impossible to undertake management scale activities until end of 1980 decade. However, results of research accumulated in institutions since the decade of 1950.

The number of the region's timber species commercially utilised increased each year. In the decade of 1960, the work by a FAO consultant pointed 40 species as being "well known and commercially utilised." The Superintendency for Development of the Amazon Region (SUDAM), in a document published at the end of the following decade, related 228 species as "presently utilised." At the end of the decade 1980, specialists on this matter estimated 250 commercial species in the region. Today this number surpasses 400 species. The Brazilian Institute for Geography and Statistics

(IBGE) numbers 476 timber species as economically important only in the northern region. Sure, the number of commercial timber species varies from one area to another and from region to region. The list of commercial species changes in space, time, with the improvement of processing technologies, with technological studies of new species, as well as with the access of new markets.

From the regulation of 1994 onwards, forest management practices focused on groups of timber species commercially accepted at local, regional, national and international levels. Among these species stands out mahogany (*Swietenia macrophylla* King) due to its high commercial value, its technological qualities and the timber's aesthetic characteristics.

IBAMA controls reveal that in 1990 Brazil exported 110,000 m³ of mahogany; in 1995, 94,000 m³ and in 2000 the exported volume reduced to 43,000 m³. The curtailment imposed by the government (150,000 m³ in 1990; 50,000 m³ in 2000), together with a set of other measures, caused a strong reduction on the annually exported volume. Nevertheless, mahogany species assumed a peculiar symbology at both national and mainly international level, due to assumptions and ostentation on a possible extinction of this species. This caused the Brazilian Government to undertake, in the second half of the 1990's, two complementary actions already in course: to include mahogany into CITES Annex III, as well as to prepare a project for inventory of this species' occurrence in the area (approximately 1.5 million km²). In this context, the pre-project "PPD 07/97: Forest Inventory for the Sustainable Production of Mahogany Timber" was submitted to ITTO. ITTO allocated US\$ 147.7 thousand for the elaboration of the inventory project.

Thus, the specific aim of the Pre-Project was to elaborate a project to execute a "Forest Inventory for the Sustained Production of Mahogany Timber – *Swietenia macrophylla* King – in the Brazilian Amazon Region." The project's document was elaborated (the main output was reached) under the title "Forest Inventory for the Conservation and Sustainable Management of Mahogany – *Swietenia macrophylla* King – in the Brazilian Amazon Region." Thus, the project aims at effecting the inventory for mahogany in the area of its occurrence in the Brazilian Amazon Region. It proposes to elaborate an occurrence map for the species, through remote sensing

techniques, under the delimitation of environmental districts. Within the delimited area of occurrence, photos of medium size shall be utilised for photo-interpretation and geo-reference of the sample units. A subsequent field survey of these sample units will allow to obtain results about the timber stock, as well as the species' phytosociology.

1.2. Pre-project objectives

1.2.1 Development objective

To provide information required for national planning and adoption of strategies to support the achievement of sustainability of tropical forests and sustainable development of the tropical regions.

1.2.2 Specific objective

To develop a program on the inventory for *Swietenia macrophylla* natural stands in Brazil in order to corroborate with sustainable management and ensure sustainable timber production of this species.

1.3 Strategy

The strategy adopted for the accomplishment of the Pre-Project consisted of four steps:

To contract consultants to elaborate the documents referring to the outputs 1, 2 and 3. The document referring to output 3 served as instrument for discussion and consultation at several Brazilian institutions (Annex A3 of that document).

To visit consultant/institutions, discuss the basic document, gather information, receive suggestions and to verify disposability of material and human resources, besides the interest of future participation in the execution of part of the project.

To realize a workshop together with experts in inventories and related areas for final discussion and closure of the project document.

To submit the project document to the respective Brazilian governmental agencies (IBAMA, Ministry for Environment as well as Ministry for Foreign Relations) to forward to ITTO.

The Pre-Project which started in September of 1998 was officially concluded through this report, notwithstanding the project inventory document having been concluded in June 2000 (24 months of execution). The allocated resources were sufficient for the proposed goals' consecution in the Pre-Project.

The Inventory Project forwarded to ITTO in the first semester of 2000 was submitted to the "Twentieth Expert Panel for the Technical Appraisal for Project Proposals 24-28 July 2000 Yokohama, Japan." It was approved by the panel and for effects of financial viability divided into three stages, but up to the present date no interested stakeholders appeared.

2. Project Achievements

The Pre-Project consists of three outputs:

Output 1:

Available information on silviculture, ecology, management, resources, production and trade and other relevant aspects of *Swietenia macrophylla* collected, analyzed and compiled.

This output was entirely executed and is reported in the document "Forest Inventory for Mahogany Timber Production: Bibliographic Revision on Mahogany – Result 1 – Existing Information" elaborated by the consultant Joésio Deoclécio Pierin Siqueira.

Output 2:

Technology, facilities and expertise available for the implementation of a forest inventory in the region of natural occurrence of *Swietenia macrophylla* of the Brazilian Amazon identified.

This output was entirely executed and is reported in the following documents:

- i) "Forest Inventory for the Sustained Production of Mahogany Timber – Financial Institutions," elaborated by the consultant Roberto Pedro Bom;
- ii) "Forest Inventory for the Sustained Production of Mahogany Timber – Organisation and Implementation of the Inventory Project (subsides for workshop execution)" elaborated by the consultant Roberto Pedro Bom.

Output 3:

A Project Proposal for the implementation of a forest inventory covering the region of natural occurrence of *Swietenia macrophylla* in the Brazilian Amazon, prepared and discussed.

This output was entirely executed and is reported in the following documents:

- i) Forest Inventory: Workshop Executive Summary;
- ii) Forest Inventory for the Conservation and Sustainable Management of Mahogany – *Swietenia macrophylla* King – in the Brazilian Amazon Region" elaborated by the consultant Roberto Pedro Bom;
- iii) Addendum dividing the Project into three phases to facilitate financing acquisition;
- iv) "Forest Inventory for the Conservation and Sustained Management of Mahogany (*Swietenia macrophylla* King) in the Brazilian Amazon Region" elaborated by the consultant Roberto Pedro Bom.

The document contemplates the results of the consultations made for the research and development institutions (Annex A3 of that document), as well as suggestions and proposals from the workshop realised on 24, 25 and 26 of May 1999.

The accomplishment of the mahogany inventory constitutes a fundamental phase for the species' conservation and management. In this sense, Brazil prepared the project in view of searching for financial sources for the execution of the work. The project was elaborated as strategic part of the consecution of the specific objective intended, and as important instrument for the accomplishment of the inventory, as well as to contribute to the achievement of Pre-Project PPD 07/97 Rev. (F), together with the elaborated document, and Output 1 (Available information on silviculture, ecology,

management, resources, production and trade and other relevant aspects of *Swietenia macrophylla* collected, analysed and compiled).

The situation prior to the Pre-Project conclusion still exists. This situation caused the Brazilian Government to adopt precaution measures of mahogany export curtailment, as well as to propose the inclusion of mahogany into CITES Appendix, without being aware of the real necessity of accomplishing them. The Project proposed is a mean of effectively contributing to mahogany conservation by providing the way of knowing its stock available. Politically, the Brazilian position was strengthened by having in hands a Mahogany Inventory Project on negotiation tables.

3. Target beneficiaries involvement

Pre-Project direct beneficiaries are: the Brazilian Government, forest based enterprises, mahogany exporters and importers, educational and research institutions, neighbour governments. The Brazilian Government, by disposing of information and data to correctly formulate policies for the species' sustained production and conservation. Forest based enterprises which will benefit from the inventory's results in planning the utilisation of those areas with major economic potential of the species. Mahogany exporters and importers will be able to dispose of commercial volumes from sustained bases. Educational and research institutions through gaining knowledge and information about the species. Neighbour governments through the possibility of exchanging experiences with the project execution in Brazil. The ITTO financed Pre-Project (object of this report) resulted in a project. The benefits' plenitude should be achieved through the project's implementation. The elaboration by itself generated favourable expectations, as well as a movement among the future beneficiaries in the sense of looking for means of study concretion.

4. Lessons Learned

a) Development Lessons

Contributing to the conservation and sustained production of mahogany (*Swietenia macrophylla*) timber within its area of occurrence in Brazil is the goal for developing

the project elaborated, resulting from Pre-Project PPD 07/97. The learnt lessons were:

- To accumulate available information about the species;
- To contact the educational and research institutions' human capital so as to contribute to the consecution of the mahogany inventory;
- To construct a consensual methodology at accomplishing the inventory for the species' area of occurrence.

All the proposed activities foreseen in the Pre-Project document have been proved as being well designed, contributing to its successful completion. This includes: preparation of TORs; review of literature; analysing/compiling information and/or report; visiting research centers etc; survey regional infrastructure; critical analyses including discussions in a workshop specially designed for it; and writing a Final Project and Report.

The Pre-Project shall reach its completion successfully once the proposed Mahogany Inventory Project gets financial support.

b) Operational Lessons

The main operational lessons learnt throughout the Pre-Project's execution were picked out during the elaboration of the Mahogany Inventory Project document. It was possible to verify the physical and human resources' conditions of the main Brazilian institutions capacitated on executing the forest inventory work in Brazil. The workshop allowed joining great experts in Brazilian forest inventory matters, providing very rich discussions on the sampling of systems, processes and methods applicable to the Mahogany Forest Inventory. As a result, the methodology considered as the most adequate was defined by consensus to inventory the mahogany in its area of occurrence.

c) Development lessons

Systemisation of the disposable information on mahogany in Brazil.

The consultation process effected at educational and research institutions for the elaboration of the Pre-Project mapped the technologies available in Brazil to be utilised through the mahogany inventory in its area of occurrence. The process also furnished substantial information on material and human resources which might be put into motion for the work's execution of such an extent.

The interactions during the consultation process and the workshop evidenced that Brazil disposes of critical mass resources capable of conducting the Project based on the Pre-Project, without any difficulties. The material and human resources, besides the high motivation of the institutions to execute the mahogany inventory are available and executable in Brazil; what still is missing are the financial resources to make the work viable.

5. Recommendations

There are no recommendations, since the Pre-Project operational structures were well designed.

PART II. Main text

1. Project Content

Not applicable to projects < US\$ 500,000.

2. Project Context

Not applicable to projects < US\$ 500,000.

3. Project Design and Organization

Not applicable to projects < US\$ 500,000.

4. Project implementation

Not applicable to projects < US\$ 500,000.

5. Project results

In the second half of the 1990 decade mahogany species appeared with increasing intensity on international discussion issues. The international environmental movement was proclaiming that the species was strongly being pressured, under risks of extinction. In consequence, the demand for a project arose for the accomplishment of a forest inventory in the area of its occurrence to provide a real situation of its stocks and its state of exploitation. The Brazilian Government compromised itself in preparing a project aiming at finding financial alternatives. The project was prepared with ITTO support.

The specific objective of the Pre-Project was plainly fulfilled through the elaboration of the Mahogany Inventory Project.

Impacts on sector programs as well as on physical, social and beneficiary development could only be assessed by means of implementing the Project resulting from the Pre-Project. Notwithstanding, the Pre-Project's conclusion redounded to significantly positive impacts, tracing expectations capable of reverting the image of pressure. Politically the Brazilian position was strengthened by having in hands a project for negotiation.

The sustainability's assessment of the Pre-Project is not possible, as the Pre-Project ends through the elaboration of the project.

6. Synthesis of the Analysis

a) Specific Objective Achievement	Realized
b) Outputs	Realized
c) Schedule	Realized
d) Actual Expenditures	According planned
e) Potential for replication	Significant potential
f) Potential for scaling-up	Significant potential

PART III. Conclusions and recommendations

The main conclusion that can be drawn from the Pre-Project implementation is the adopted methodology's validation to propose the execution of a Project of such importance and extent of the order of US\$ 16 million.

To survey the existing data as well as the existing human and infrastructure facilities, a first project's minute was to discuss it in a workshop with the participation of special experts in the matter. This was also essential to proposing a project of the order of US\$ 16 million.

Also, to have all consultants involved in the Pre-Project linked to the main executing agency through a qualified person who acts as a co-ordinator, furthers the Project's implementation flow.

Finally, it is essential to stand out that in the specific case of this Pre-Project, all of the foreseen outputs and objectives were successfully reached. However, it must be pointed out that the importance of the earmarked funds must be available to implement the proposed inventory project, aiming at effectively reaching the mahogany sustainability and conservation.

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Responsible for the report
Consultant

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Subject: PPD 07/97 - Mahogany Inventory
User-Agent: Internet Messaging Program (IMP) 3.2.3
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X-Spam-Level:
X-Spam-Status: No, hits=-4.9 required=5.0 tests=AWL,BAYES_00 autolearn=ham
version=2.63

Dear John Leigh,

We are pleased to send you in attach the Completion Report of the Pre-Project PPD 07/97 Rev.1 (F): Forest Inventory for the Conservation and Sustainable Management of Mahogany (*Swietenia Macrophylla* - King) in the Brazilian Amazon Region. We may inform you that we are posting the original version.

Yours sincerely,

Gustavo S. C. Pinho
Forest Engineer
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final report

Fwded to JL, 2 Aug. '04