

# INTERNATIONAL TROPICAL TIMBER ORGANIZATION

## ITTO

### COMPLETION REPORT

#### A – PROJECT IDENTIFICATION

**a) Title:** *DEVELOPMENT OF CRITERIA AND INDICATORS  
FOR SUSTAINABLE MANAGEMENT  
APPROPRIATED TO BRAZILIAN TROPICAL  
FORESTS*

**b) Serial Number:** *PD 140/02 – Rev.2 (M)*

**c) Executing Agency:** *ABIMCI – Brazilian Association of Mechanically  
Processed Timber*

**d) Host Government:** *GOVERNMENT OF BRAZIL*

**e) Starting Date:** *February 1<sup>st</sup>, 2003*

**f) Duration:** 24 months

|                          |              |                 |
|--------------------------|--------------|-----------------|
| <b>g) Project costs:</b> | ITTO:        | US\$ 396,313.00 |
|                          | COUNTERPART: | US\$ 166,100.00 |
|                          | TOTAL:       | US\$ 562,413.00 |

## **PART I: Executive Summary**

### **1 – BACKGROUND INFORMATION**

#### **1.1 – PROJECT DESCRIPTION**

The Project 140/02 REV. 2 (M): DEVELOPMENT OF CRITERIA AND INDICATORS FOR SUSTAINABLE MANAGEMENT APPROPRIATED TO BRAZILIAN TROPICAL FORESTS was submitted by the Government of Brazil for the consideration of the International Tropical Timber Organization-ITTO in November 2001 and approved on May 2002, having ABIMCI -The Brazilian Association of Mechanically Processed Timber as the implementing agency

The project agreement was signed by representatives on behalf of the involved parties, ITTO, ABIMCI and the Government of Brazil in November, 2002.

The key problems intended to be solved by the project were related to the necessity of the development of national Criteria and Indicator (C&I) for Brazilian tropical forests, at forest management unity level, and the necessity of build human capacity in its application.

In view of this problem, the development objective established by this project was to contribute with the national efforts to achieve the sustainable management of forest in Brazil. To achieve this general objective three specific objectives were established:

- I. To develop a set of criteria and indicators for sustainable management of Brazilian natural tropical forests, at forest management unity level, within the Brazilian Certification System (SBC), and taking ITTO and TARAPOTO Criteria and Indicators as a basis;
- II. To build up human capacity in the application of the Criteria and Indicators for sustainable forest management in Brazil, especially in the Amazon region; and,
- III. To test and disseminate information on forest management standards and train personnel on the use.

Taking in consideration the above listed specific objective the following outputs were established:

- Output 1.1 - A working group organized fully organized and formally established within the National Framework and operational;
- Output 1.2 - A set of C&I for sustainable management of Amazon natural tropical forest developed and adopted as a National Standard;
- Output 2.1 - A Manual for the Application of Criteria and Indicators for Sustainable Management of Amazon Natural Tropical Forest prepared and tested;
- Output 2.2 - Five thousand copies of the Manual for the Application of Criteria and Indicators for Sustainable Management of Amazon Natural Tropical Forest printed and distributed to relevant government agencies,

forest owners, NGOs, forest professionals and forest industry;

- Output 2.3 - One hundred professionals from government agencies, industry, NGOs and others organizations trained on the use of the Manual in assessing the sustainability of Amazon natural tropical forest;
- Output 3.1 - Management standards tested and disseminated;
- Output 3.2 - Ninety professionals trained on auditing forest management systems within the Brazilian Certification System (SBC); and
- Output 3.3 - Three workshops, one in each production region, aiming to disseminate information.

The strategy adopted by the project considered the development of basic tools to support the establishment and consolidation of a national certification program for tropical forests, and the improvement of local expertise in assessing the sustainability of tropical forests.

The project was planned to be implemented in 24 months. The total budget is US\$ 562,413.00, including direct costs and ITTO's monitoring and administration costs, as presented in table 1. ITTO total contribution was US\$ 396,313.00.

**Table 1 – Project Budget by Component by Source**

| BUDGET COMPONENT                                       | TOTAL          | ITTO           | ABIMCI/<br>FORUM/<br>SBS |
|--|----------------|----------------|--------------------------|
| <b>10. PROJECT PERSONNEL</b>                           |                |                |                          |
| 11. Project leader 21.5mm x 5.000                      | 107.500        | 107.500        |                          |
| 12. International consultant 2mm x 10.000              | 20.000         | 20.000         |                          |
| 13. Management certification consultant 19.5mm x 3.500 | 68.500         | 68.500         |                          |
| 14. Project adm. Manager 14mm x 3.000                  | 42.000         |                | 42.000                   |
| 15. Technical assistant 9mm x 1500                     | 13.500         |                | 13.500                   |
| 16. Secretary (support) 19mm x 500                     | 9.500          |                | 9.500                    |
| <b>19. Component Total</b>                             | <b>261.000</b> | <b>196.000</b> | <b>65.000</b>            |
| <b>20. SUB-CONTRACTS</b>                               |                |                |                          |
| 21. Sub-contract (edit / printing manual and standard) | 38.000         | 38.000         |                          |
| 22. Sub contract (mailing manuals)                     | 4.000          | 4.000          |                          |
| <b>29. Component Total</b>                             | <b>42.000</b>  | <b>42.000</b>  |                          |
| <b>30. DUTY TRAVEL</b>                                 |                |                |                          |
| 31. DSA / accommodation costs (700x 100)               | 70.000         | 49.000         | 21.000                   |
| 32. National travel (210 x 300)                        | 75980          | 50880          | 25100                    |
| 33. International travel (4 x 3.000)                   | 3.000          | 3.000          |                          |
| 34. Transport cost (local)                             | 8.000          |                | 8.000                    |
| <b>39. Component Total</b>                             | <b>156.980</b> | <b>102.880</b> | <b>54.100</b>            |
| <b>40. CAPITAL ITEMS</b>                               |                |                |                          |
| <b>49. Component Total</b>                             |                |                |                          |
| <b>50. CONSUMABLES ITEMS</b>                           |                |                |                          |
| 51. Fuel and utilities                                 | 5.000          |                | 5.000                    |
| 52. Office supplies                                    | 7.600          |                | 7.600                    |
| <b>59. Component Total</b>                             | <b>12.600</b>  |                | <b>12.600</b>            |
| <b>60. MISCELLANEOUS</b>                               |                |                |                          |

| BUDGET COMPONENT   | TOTAL          | ITTO           | ABIMCI/<br>FORUM/<br>SBS |
|--|----------------|----------------|--------------------------|
| 61. Auditing/ ABC monitoring costs                       | 8.000          | 8.000          |                          |
| 62. Field support (tests)                                | 15.000         |                | 15.000                   |
| 63. Contingencies  | 10.000         | 5.000          | 5.000                    |
| <b>69. Component Total</b>                               | <b>33.000</b>  | <b>13.000</b>  | <b>20.000</b>            |
| <b>70. EXECUTING AGENCY MANAGEMENT COSTS</b>             |                |                |                          |
| 71. Office facilities / Workshop facilities              | 14.400         |                | 14.400                   |
| <b>79. Component Total</b>                               | <b>14.400</b>  |                | <b>14.400</b>            |
| <b>SUBTOTAL</b>  | <b>519.980</b> | <b>353.880</b> | <b>166.100</b>           |
| <b>80. ITTO MONITORING EVALUATION AND ADMINISTRATION</b> |                |                |                          |
| 81. Monitoring and evaluation                            | 20.000         | 20.000         |                          |
| 82. Programme support Costs 6%                           | 22.433         | 22.433         |                          |
| <b>89. Component Total</b>                               | <b>42.433</b>  | <b>42.433</b>  |                          |
| <b>GRAND TOTAL</b>                                       | <b>562.413</b> | <b>396,313</b> | <b>166.100</b>           |

## 1.2 – THE NATIONAL FOREST SECTOR RELATED TO THE PROJECT

The Brazilian forest sector policies definition is based on its main legislation, the Brazilian Forest Code (Law 4771/65). In spite of the fact that the Brazilian Forest Code remains as the main guideline for forest practices in the last 40 years, new concepts of improved forest practices have been gradually incorporated to the national legislation.

However, the large deforestation along the last years, new global environmental concerns and the commitment of the country with the international efforts to protect forest ecosystems, motivated the government to review the policies along the last two decades.

This is reflected in the new legislation proposed for the adoption of sustainable forest management, in relevant activities implemented based on the international co-operation and on changes of the general government development policies that now takes into due consideration forests and environment related aspects.

Besides the environmental factor, tropical forest management in Brazil can give an important contribution to the economic development of the country.

The sustainability of the tropical timber industry, and thus indirectly of the tropical forests, has in principle to be based on market response. Consumers at the market are getting reluctant to the use of tropical timber product. Now it is clear that certification is an important tool to ensure future market access for tropical timber products.

This project was inserted in the national work towards the development of a certification scheme compatible with local conditions. Once become operational, the national forest certification program will ensure market access, the most important source of funds to support investments needed to improve the sustainable forest management in the country.

## **2 – PROJECT ACHIEVEMENTS**

### **2.1 – OUTPUTS ACHIEVED**

All the outputs related to each specific objective were fully achieved, as follows:

#### **a) In relation to Specific objective 1:**

- Output 1.1: A list of group members, potential opinion makers and local stakeholders for the meetings of the work group was prepared;
- Output 1.2: The C&I for sustainable management of Amazon natural tropical forest was adopted as National Standard (ABNT NBR 15789 – Forest Management – Principles, Criteria and Indicators for native forests);
- Output 2.1: The manual for the application of C&I for sustainable management was prepared, taking into consideration the review of existing relevant documents, the review of the agreed SBC C&I (criteria and indicators for planted forests), the results of the field tests, the international consultant recommendations and local stakeholders observations from the discussion workshop;
- Output 2.2: Five thousand copies of the manual for application of C&I for sustainable management were printed and it will be distributed to relevant government agencies, forest owners, forest professionals, along the year of 2005;
- Output 2.3: 119 professionals were trained on the use of the manual in three different locations;
- Output 3.1: Two field tests were implemented to confirm the applicability of the C&I and the national management standard for tropical forest was adopted and published.
- Output 3.2: 115 professionals were trained on auditing forest management practices, according to the national management standard, within the Brazilian certification System;
- Output 3.3: As the project staff have concentrate their efforts in the training program on the use of the manual there were implemented only two workshops to disseminate information. This modification was not prejudicial to the project success. Due to the large number of participants in the courses, the major objective of disseminate information on forest management standard was fully achieved.

## **2.2 – SPECIFIC OBJECTIVES ACHIEVED**

The three specific objectives of the project were successfully achieved.

The set of Forest Management C&I, prepared after several meetings, discussions and field testings, was approved as National Standard within the SBC Framework, in accordance with the activities of the specific objectives 1 and 3.

The impact of the C&I discussion and preparation process was very positive to the national efforts to achieve the sustainable management of forests in Brazil. The contribution of some of the most respected national forest experts was collected to prepare the final version of the national forest management standard.

Besides the adoption of the Forest Management C&I as National Standard, the project built human capacity in the application of the C&I for sustainable forest management of Brazilian tropical forests, through the elaboration and dissemination of a manual for C&I application and the training of more than a hundred professionals on the use of the manual.

Finally, as part of the specific objective 3, the project promoted the training of 115 professionals on auditing of forest management practices in accordance to the National Standard, within the SBC framework. The project also promoted workshops to disseminate information about the National management standard and the mechanism related to the SBC framework.

Due to the satisfactory participation of professionals on the events promoted by the project, actually the National Forest Management Standard is wide disseminated within the national forest sector and some companies are starting to prepare their operations aiming to reach the forest certification in accordance with the CERFLOR standard.

## **2.3 – CONTRIBUTION TO THE ACHIEVEMENT OF THE DEVELOPMENT OBJECTIVE**

The project contributed to the achievement of the development objective as it promoted the creation of a national tropical forest management standard and the establishment of tools to support its implementation.

The manual for application of the national standard is been largely disseminated within the forest sector and 119 professional have been trained and are fully familiarized with and able to apply the standard of sustainability assessment of forest management in Brazil.

## **3 – TARGET BENEFICIARY INVOLVEMENT**

All target beneficiaries of the project had a strong involvement in the project activities. The forest owners and the tropical timber industry, the main target beneficiaries, actively participated in the process of discussion of the C&I.

The participation of Several Federal and State government institutions, also target beneficiaries on the process of discussion and specially in the training program were also very satisfactory.

## **4 – LESSONS LEARNED**

### **4.1 – DEVELOPMENT LESSONS**

Considering the development of the project, it is important to evidence the positive lessons from this phase:

- The participation of institutions representing different segments related to the management of tropical forests was very important on the consolidation of the standard contents;
- The realization of the discussion workshops in different localities was an important way to facilitate the participation of a large number of professionals;
- The pilot tests were useful to adjust the C&I in accordance with the field reality;
- The project management should consider local particularities of different regions of the country in order to generate democratic and representative C&I;
- The participation of an international consultant was important to the consolidation of the process beyond the national limits.

Besides the success in the implementation of the project, some external aspects that made difficult the realization of the activities during the process can also be listed as development lessons:

- It is important to consider national political circumstances when planning similar projects. The changes occurred in the Government of Brazil during the project implementation, with new orientation of the activities directly or indirectly related to the Ministry of the Environment, made that this Ministry's support temporarily diminish, contradicting its initial role as a facilitator of the project implementation;
- In the same way, the Brazilian Forest Sector aspects should also be considered in the project planning. Currently, there are some facts that are bringing insecurity to the productive sector, like the slow evolution of the mechanisms over the development and use of the natural resources, the dispute for the land occupation (invasions, documents adulteration, new settlements, among others) and the slowness of control and regulation governmental organizations;
- The lack of financial resources could become a menace to the project sustainability, as the standards adoption depends on the dissemination, promotion and incentive, and technological foment. As the Brazilian standards for the management of tropical forests are inserted in the CERFLOR, the strengthening and consolidation of this program has direct implications on the sustainability of the project results.

### **4.1 – OPERATIONAL LESSONS**

In relation to the project operationalization, the following relevant lessons were learned:

- The experience of the implementing agency and of the project consultants was fundamental to the success of a project with such technical and political

characteristics;

- The implementation of field activities should be planned in accordance with seasonal factors that affect the productive activity in the Amazon region, like the rainy season;
- Also due to the natural external factors, the planning of similar projects should consider the possibility of reallocating physical and financial resources in accordance with climatic variables.

## **5 – RECOMMENDATIONS**

Based on the lessons learned, the following recommendations for guaranteeing the sustainability of the results obtained by the project and for the elaboration of future project are relevant:

- Pursuit strengthening and consolidation of the C&I established by the project PD-140/02 (M) as a tool to promote the sustainable management of the Brazilian tropical forests, guaranteeing the sustainability of the results obtained in the long term;
- Promote technical capacity in different operational and scientific levels, regarding the adoption of the national forest management standards established by the project;
- Foment the national forest management standards adoption in low and medium scale forest management operations;
- Update the CERFLOR standards set, looking forward the incorporation of improvements accumulated through time;
- Quest for the involvement of organizations representing different segments of the forest sector in the discussions for the forest management improvement;
- The Amazon region rain season must be foreseen in the activities planning, looking for the optimization of the field operations;
- A more active participation of the operational level professionals should be pursuit;
- In the beginning of the projects' execution, a workshop should always take place, counting with the participation of all personnel involved to discuss the work plan activities and related responsibilities. The external consultants team hiring should take place still in the project initial development phase, making the foreseen timetable more easily attended.



## **PART II – MAIN TEXT**

### **1 – PROJECT CONTENT**

#### **1.1 – PROJECT GENERAL DESCRIPTION**

This project's development objective is to contribute with the national effort to achieve the sustainable management of forests in Brazil. To achieve this general objective, the following specific objectives and outputs were established:

Specific objective 1: To develop a set of criteria and indicators for sustainable management of Brazilian natural tropical forests, at forest management unity level, within the Brazilian Certification System (SBC), and taking ITTO and TARAPOTO Criteria and Indicators as a basis.

- Output 1.1 - A working group fully organized and operational, formally established within the National Framework;
- Output 1.2 - A set of C&I for sustainable management of Amazon natural tropical forest developed and adopted as a National Standard;

Specific Objective 2: To build up human capacity in the application of the Criteria and Indicators for sustainable forest management in Brazil, especially in the Amazon region.

- Output 2.1 - A Manual for the Application of Criteria and Indicators for Sustainable Management of Amazon Natural Tropical Forest prepared and tested;
- Output 2.2 - Five thousand copies of the Manual for the Application of Criteria and Indicators for Sustainable Management of Amazon Natural Tropical Forest printed and distributed to relevant government agencies, forest owners, NGOs, forest professionals and forest industry;
- Output 2.3 - One hundred professionals from government agencies, industry, NGOs and other organizations trained on the use of the Manual for the Application of Criteria and Indicators for Sustainable Management of Amazon Natural Tropical Forest ;

Specific objective 3: To test and disseminate information on forest management standards and training personnel on the use.

- Output 3.1 - Management standards tested and disseminated;
- Output 3.2 - Ninety professionals trained on auditing forest management systems within the Brazilian Certification System (SBC); and
- Output 3.3 - Three workshops, one in each production region, aiming to disseminate information.

The strategy adopted by the project considered the development of basic tools to support the establishment and consolidation of a national certification program for tropical forests, and the improvement of local expertise in assessing the sustainability of

tropical forests. In this line, the project strategy was built considering some relevant aspects, which are listed below:

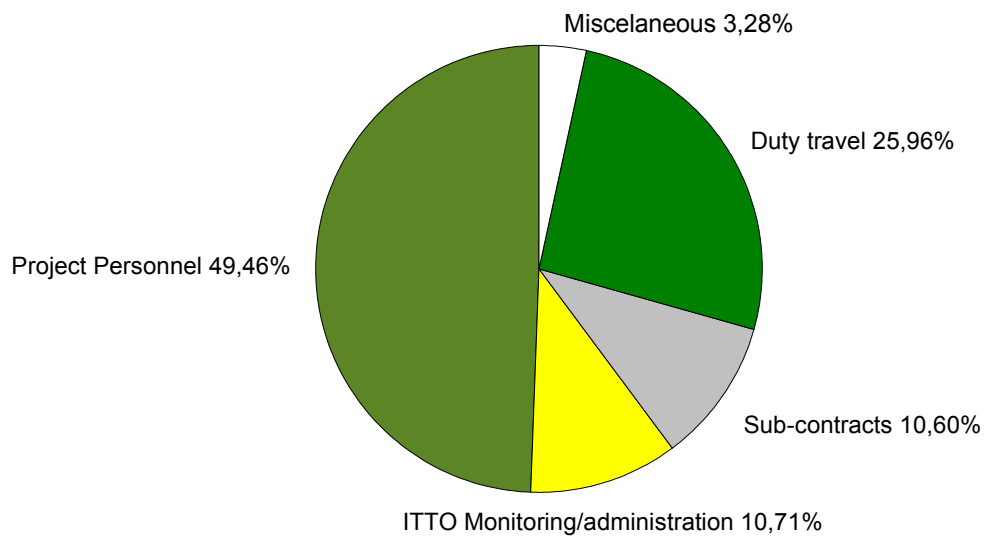
- Lessons learned from projects developed in the past. Among the most relevant projects implemented along the last few years are two projects on training and dissemination of ITTO Guidelines and Criteria. These projects (PD39/92 and PD30/95) were financed by ITTO and covered all Brazilian Amazon States;
- The national consultation process related to TARAPOTO process, part of the Amazon Cooperation Treaty, proposed strategy to develop regionally agreed criteria and indicators, taking into consideration local conditions;
- Use of an already existing structure related to the National Standards Framework for certification (supported by the National Institute for Metrology, Standardization and Industrial Quality – INMETRO) to assure the insertion of the C&I into CERFLOR (National Forest Certification Program). Within this structure, it was already operating the working group interested in the development of other standards, such as C&I for planted forests, assessment of the chain of custody and rules for the qualification of auditors;
- International recognition and credibility of the INMETRO, in order to facilitate the discussions related to the mutual recognition of the certification scheme; and,
- The advantage of transparency and credibility of an ongoing process, by involving a large group of stakeholders within the ABNT (Brazilian National Standards Organization), a non-governmental organization that ensures the participation of the different stakeholders, including the private sector, governmental organizations, research and training institutions, NGOs, consumers and others.

The workplan timetable developed for the implementation of this project is presented in table 2. The project effectively started on February 2003 and its total duration was of 24 months

The total budget for this project was of US\$ 562,413 and the ITTO contribution was US\$ 369,313. The main inputs of the project were the project staff (project leader, management certification consultant and international consultant) and travel expenses, as observed on Figure 1.

The geographical coverage of the Project was the Brazilian Amazon forests. The project was designed to consider and cover different regions within the Amazon forests, classified as: Pará/Maranhão, Amazonas and Mato Grosso/Rondônia.

**Figure 1 – Participation of Each Component in the Total Budget (ITTO Contribution)**



In relation to the management structure, the project was implemented by ABIMCI (Brazilian Association of Mechanically Processed Timber), a national association representing the solid timber product's industry, in cooperation with the FORUM (National Forum of Forest Organizations), SBS (Brazilian Society for Silviculture), and INMETRO (Brazilian Institute for Metrology, Standardization and Industrial Quality).

The project was benefited for the use of already existing structure of the ABNT, the National Forum for Discussion on Standards, and for the developments already made on management standards for plantation, chain of custody and auditing systems.

Operational technical activities of the project were conducted by the the Project Leader, a professional with large experience in forest policies, forest management and other related issues, in close cooperation with the Management Certification Consultant, an expert in forest certification at management unity level. An Administrative Manager carried out the project administration, with the cooperation of a secretary for general support and all the administrative structure of the implementing agency.





## 1.2 – ITTO PROJECT CONTEXT

Project specific objectives and outputs were fully related to several of the objectives set out in Article 1 of the International Tropical Timber Agreement 1994, particularly with the following objectives:

- Objective (c): To contribute to the process of sustainable development;
- Objective (d): To enhance the capacity of members to implement a strategy for achieving exports of tropical timber and timber products from sustainable produced managed sources (Year 2000 Objective);
- Objective (e): To promote the expansion and diversification of international trade in tropical timber from sustainable sources by improving the structural conditions in international markets, by taking into account, on one hand, a long-term increase in consumption and continuity of supplies, and, on the other hand, prices which reflect the costs of sustainable forests management and which are remunerative and equitable for members, and the improvement of market access;
- Objective (f): to promote and support research and development with a view to improving forest management and efficiency of wood utilization as well as increasing the capacity to conserve and enhance other forest values in timber production tropical forests;
- Objective (l): To encourage members to develop national policies aimed at the sustainable utilization and conservation of timber producing forests and their genetic resources, and at maintaining the ecological balance in the regions concerned, in the context of tropical timber trade.

This project considered the priorities and guidelines established in the ITTO Libreville Action Plan (1998-2001). In particular, the actions recommended under Goal 3 of the Economic Information and Market Intelligence area, related to improve market access for tropical timber exports from sustainable managed sources. Under this goal, members are encouraged to:

- Develop public awareness that timber harvesting can be consistent with the sustainability of tropical forests, and that trade with tropical timber produced from sustainably managed forests is an important tool in forest conservation;
- Identify trade barriers and other obstacles to the tropical timber trade and propose measures to improve market access.

The Project was also in line with Goal 2 of Reforestation and Forest Management area of the Action Plan, particularly with Action 4: to facilitate the development, testing and implementation of regional and national criteria and indicators for sustainable forest management in member countries.

## 2 – PROJECT CONTEXT

The project objectives and activities are in line with the national sectorial necessities. It was proposed taking into consideration the national priorities related to tropical forests, an important ecosystem and also an important resource for the social and economic development of the country.

Tropical forests in Brazil are mostly represented by the Amazon forests, that cover almost 50% of the 8.5 million square km of the country total area. It is estimated that in the Amazon there are more than 250 million ha that can be classified as production forests, representing an enormous development potential.

It is recognized that the country has not been able to fully develop this forest potential, and in some areas deforestation has led to soil degradation and other negative impacts to the environment. In order to revert this situation, several actions have been taken by the Brazilian Government. Among its actions is the PNF (National Forest Program). The PNF proposes mechanisms to support the forest development of the country considering the principles of sustainability.

The PNF is an important mechanism to implement the new forest and environmental policies that have been adopted along the last few years. In view of these new policies, government agencies at federal level have been reformulated, and the States have been asked to participate in the monitoring and control processes, aiming at reducing deforestation and the depletion of forest resources.

Changes in forest policies and practices have happen everywhere, and international organizations have played an important role in developing mechanisms to improve forest management. These mechanisms include the important and pioneer initiative of ITTO in developing criteria and indicators for the sustainable management of tropical forests. Brazil, as an ITTO member, supported the initiative and actively promoted ITTO Criteria and Indicators, implementing two large projects on training and dissemination of ITTO Guidelines and Criteria (Projects PD39/92 and PD30/95).

The pioneer ITTO initiative served as a model for the development of other regional Criteria and Indicators. The TARAPOTO C&I were discussed in a meeting held in 1994 in Peru, under the coordination of The Amazon Cooperation Treaty.

Another initiative is the CERFLOR process. This process, initially proposed by SBS, was officially presented for the first time to the international community in 1991, during the 10<sup>th</sup> World Forestry Congress, held in Paris.

In June 1996, SBS contacted ABNT with the objective of making CERFLOR operational. In March 1997, ABNT created the Technical Committee N. 5, for Forest and Environmental Certification. This committee, made up of representatives from government agencies, private industry and social and environmental NGOs, has prepared preliminary C&I for the sustainable management of planted forests.

In March 2001, the Special Temporary Study Committee on Forest Management (CEET) was established by ABNT. This committee has set up four Working Groups, with the objective of preparing basic documents related to: management of planted forests, chain of custody, forest auditors qualification, and management standards for natural forests.

In April 2001, the CBC (Brazilian Certification Committee), which is part of the CONMETRO (National Council for Metrology, Standardization and Industrial Quality), established the Technical Subcommittee on Forest Certification, with the specific objective of developing additional rules for the forest certification within the framework of the SBC (Brazilian Certification System).

CERFLOR was included in the objectives of the PNF, as well as in Forum for Competitiveness of the Production Chain of the Wood and Furniture Industry, established by the Brazilian Ministry for Industry, Development and Foreign Trade. As the work of the INMETRO Forest Certification Subcommittee advanced, CERFLOR became the National Program of Forest Certification, part of the SBC.

CERFLOR is a certification program with the purpose of recognizing forest producers that follow forest management procedures that are environmentally sound, socially fair and economically viable, which characterize sustainable forest management. CERFLOR is an important step towards the international recognition of forest products certified in Brazil, as discussed in the meeting "Market Discussions" organized by the TAG (Trade Advisory Group), during the ITTO Council Session held in Yaoundé, Cameroon, in June 2001.

In view of the importance of natural forests for the economic development of Brazil, and considering the interests of its members, ABIMCI promoted a national discussion to evaluate the importance of having national criteria and indicators for natural forests.

Discussions were carried out in the meetings of the CERFLOR technical committee, which was jointly coordinated by SBC, ABIMCI and the FORUM. ABIMCI was asked to lead the process related to natural forests.

FORUM also took the issue to the Ministry of Environment and other government organizations, and to regional forest and timber industry associations. All organizations and persons contacted have agreed that ABIMCI, FORUM and SBS should take actions in order to develop the project, aiming to facilitate and accelerate the process for the development of national criteria and indicators for the sustainable management of natural tropical forests, to be included as part of the CERFLOR.

Considering the presented sectorial background, the Project 140/02 REV. 2 (M): DEVELOPMENT OF CRITERIA AND INDICATORS FOR SUSTAINABLE MANAGEMENT APPROPRIATED TO BRAZILIAN TROPICAL FORESTS was submitted by the Government of Brazil for the consideration of the ITTO in November 2001.

The project was analyzed by the Expert Panel for Technical Appraisal of Project Proposals, and after amendments made based on the Panel recommendations, it was submitted to the Economic Information and Market Intelligence Committee, for final appraisal at the Session held in Bali on May 2002. The Project was approved by the relevant Committee, and submitted to the Council for consideration. At the same session the Project was approved and recommended by the Council to be financed, having ABIMCI as the implementing agency



### **3 – PROJECT DESIGN AND ORGANIZATION**

The project agreement was signed by representatives on behalf of the involved parties (ITTO, ABIMCI and the Government of Brazil) in November, 2002. Before the first funding transference for the implementing agency account, Mr. Jeziel Adam de Oliveira, Executive Superintendent of ABIMCI, took the necessary steps to hire the project leader and the forest certification consultant, in accordance with the recommendations made by ITTO and with the terms of reference presented at the work plan. The ITTO acceptance letter about the consultants proposed by ABIMCI is presented in Annex I.

In the preparation and discussion of the work plan, the original proposal was revised and a discussion was held with the participation of the representatives of ABIMCI, SBS and the FORUM.

The work plan was also revised by the Project Leader, responsible for the planning and organization of the operational technical activities and for the mobilization of the needed resources (consultants and sub-contractors).

The project was organized by the Project Leader with the administrative support of the Administrative Manager and ABIMCI staff. Technical support was given by a national forest certification consultant, a professional with large experience in natural forest management and forest certification. This consultant was responsible to review literature and documents related to forest management, to coordinate the process of consultation and C&I discussion, to coordinate the field tests of criteria and indicators, to participate in the activities related to the manual for the application of the national C&I (elaboration, field testing and revision), to cooperate in the activities related to the training program and to support the Project Leader and the Administrative Manager in the preparation of the project reports.

An international consultant was also hired to support the project leader in the preparation of the final version of the manual and other relevant issues related to project objectives. The international experience of this consultant in the development of forest management criteria and indicators was very positive to the process of elaborating the manual.

Cooperation of the Forum and SBS was very important in the process of dissemination of the project activities to a large number of forest sector players in all Amazon region States. In the same way, the participation of INMETRO and ABNT was fundamental to the process of adoption of the C&I as national standard.

Support received by ABC (Brazilian Agency of Cooperation) was also important to facilitate the contact between the implementing agency and ITTO. ABC participated in most of the project activities, including the steering committee meeting, workshops, technical meetings and training courses.

There was also an important contribution of some potential project beneficiaries (local professionals and institutions), such as the FIEMT (Federation of the Industries of the State of Mato Grosso), EMBRAPA (Brazilian Agriculture Research Corporation) and INAM (Amazon Nature Institute), among others.

## 4 – PROJECT IMPLEMENTATION

During the project implementation, the period of execution of some activities of the *Output 2.1 – Manual of Application* and *Output 2.2 – Manual Printed and Disseminated* had to be adjusted aiming to adequate them to field locations availability and to the international consultant schedule, as listed below. The rearrangement of the period of implementation of the activities did not affect the completion of each related output.

- Activity 2.1.3 – Field Tests: field tests of the manual for C&I application were conducted by the project staff in close cooperation with the professional responsible for the areas where the tests were implemented. Due to this fact, there was the necessity of adequate the period of realization of the test to the availability of the forest management area and its responsible professional schedule;
- Activity 2.1.4 – Workshop: workshop to the discussion of the field tests results and the presentation of the international consultant recommendations was carried out four months later than the original timetable due to the redefinition of the field tests period and the necessity of adaptation to the international consultant schedule;
- Activity 2.1.5 – Final Version: the manual final version was completed five months later than the original timetable. After the compilation of the workshop results, the manual was revised again by the international consultant and by the project staff, and the final version was created;
- Activity 2.2.1 – To edit and print: the manual final version was edited and printed by a subcontracted company in February, 2005.

As result of the activities of the Output 2.2, four thousand copies of the Portuguese version of the manual for C&I application will be mailed to target receivers and will be distributed to professionals in sectorial events during the year of 2005. In spite of the one month dissemination period originally defined in the project timetable, the executive agency believes that a longer period of dissemination will be more effective to the project's objectives.

As the project staff have concentrated its efforts in the conclusion of the manual for C&I application courses over the project's last months, there were implemented only two workshops to disseminate information (output 3.3). This modification was not prejudicial to the project success due to the large number of participants in the courses. The major objective of disseminating information on forest management standards was fully achieved.

In relation to the project budget, in order to rearrange the appropriateness of the project inputs, part of the resources foreseen for the items “Payment of the International Consultant” and “Travel Expenses” was relocated within the item related to air ticket expenses, since the value initially foreseen for each flight was below the country's reality.

Still related to the budget, the use of the amount reserved for eventual contingencies was requested by the Executive Agency, as accorded in the Article 11 of the project agreement. The total amount of US\$ 5,000.00 was used to translate the Criteria and Indicator into official ITTO languages (English and Spanish), as well to edit and print a

thousand copies of the translated version.

As the project have reached its specific objectives, it is expected that the results from the activities and outputs implemented by the project will guarantee the project sustainability, due to the following aspects:

- C&I for tropical forests management was developed within the National Certification System and adopted as national standard, guaranteeing the maintenance of future operations. Some forest companies are now starting to prepare their operations aiming to reach the forest certification in accordance with the CERFLOR standard;
- Due to all the meetings, workshops and discussions promoted by the project, the National Standard for tropical forest management is now fully disseminated into a large number of professionals from forest companies, research institutions and governmental agencies;
- More than two hundred professionals were trained on auditing practices and on the application of the forest management standards;
- Four thousand copies of the manual for C&I application will be distributed during 2005 to relevant organizations and professionals, making a continuous process of C&I dissemination into the national forest sector.

As the project objectives were reached and the activities were implemented with minor adjustments, the executive agency believes that the inputs provided by ITTO and the counterpart inputs were appropriated.

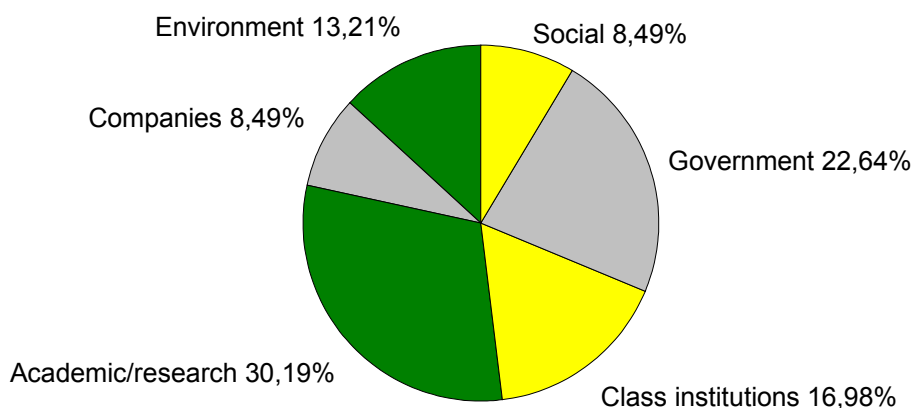
## **5 – PROJECT RESULTS**

In an overall analysis, the project achieved its development objective. The project contribution to the promotion of the sustainable management of forests in Brazil could be noticed in several aspects.

Activities related to the development of the C&I for tropical forest management were very important to the dissemination of sustainable forest management concepts and forest certification into the country. The C&I for natural forests were developed considering the opinion of a large number of professionals of several institutions representing several segments involved with forest management.

The four C&I discussion workshops, implemented in the main Brazilian Amazon States (Pará, Mato Grosso, Acre and Amazonas) had a satisfactory number of participants, including the involvement of the main target beneficiaries, such as forest owners and the tropical timber industry, and others such as Federal and State government institutions, as presented in Figure 2. The complete list of participants in the C&I discussion workshops is presented in Annex II.

**Figure 2 – Participation of Professionals by Sector on the C&I Discussion Process**



Besides the process of discussion, the C&I preliminary version, was submitted to field tests. The field tests were implemented in two stages, a preliminary one carried out during the period that the C&I was being discussed and a final stage after the C&I discussion.

The first field test was implemented in July 2003, at the forest management area of Cikel, one of the Brazilian largest tropical forest companies, located at the State of Pará. The second field test was carried out in November 2003, at the forest management area of Manoa company, located in the State of Rondônia.

Tests were conducted in accordance to a process of forest auditory, where the criteria were the C&I preliminary version. They were conducted by one leader auditor, one forest management auditor and one social aspects auditor. The audit team work was observed by other professionals with the objective of asses the weakness of the C&I. The list of auditors and observers involved in each field test is presented in table 3.

**Table 3- Field Tests**

| TEST | COMPANY                           | DATE          | AUDITORS   | OBSERVERS   |
|------|-----------------------------------|---------------|--|---|
| I    | Cikel Brasil Verde Ltda.          | July, 2003    | <ul style="list-style-type: none"> <li>• Mariana Fellows – leader auditor</li> <li>• André Souza – social area auditor</li> <li>• Eliezer Santana – forest management auditor</li> </ul> | <ul style="list-style-type: none"> <li>• Andrea Maffeis – SBS</li> <li>• Roberto Mendonça – INMETRO</li> <li>• Ricardo Montagna - ASCAE</li> </ul>                        |
| II   | Indústria de Madeiras Manoa Ltda. | November 2003 | <ul style="list-style-type: none"> <li>• Mariana Fellows – leader auditor</li> <li>• Roberto Mendonça– social area auditor</li> <li>• Evaldo Braz – forest management auditor</li> </ul> | <ul style="list-style-type: none"> <li>• Andrea Maffeis – SBS</li> <li>• Eliezer Santana – project management consultant</li> <li>• Fernando Castanheira-FORUM</li> </ul> |

The field tests audit work were basically conducted in three phases:

- i. Data collection on the company technical documents, such as the Management Plan, the Yearly Plan of Operation and interview with the responsible professionals;
- ii. Visit to the company's office and industry of wood processing;
- iii. Visit to the forest management area.

The results were compiled, and reported by the leader auditor to the project staff to enrich the C&I discussion process.

After the realization of the four workshops and the field tests, the set of C&I was made available for public consultation during 40 days. As all the discussion process was developed into the ABNT rules and with the attendance of INMETRO, the C&I were adopted as the national standard NBR 15789 (presented in Annex III) completing the set of CERFLOR standards, as follows:

- NBR 14789 – Forest Management: Principles, Criteria and Indicators for Planted Forests;
- NBR 14790 – Chain of Custody;
- NBR 14791 – Directives for Forest Audit: General Principles;
- NBR 14792 – Audit Procedures: Forest Management Audit;
- NBR 14793 – Audit Procedures: Qualification Criteria for Forest Auditors;
- **NBR 15789 – Forest Management: Principles, Criteria and Indicators for Natural Forests.**

After the development, testing and adoption of the Criteria and Indicator as the national standard for the management of natural forests, the project promoted the establishment of tools to facilitate its dissemination and application.

- **Manual for the C&I Application**

The first tool was a manual for the application of the national natural forest standard. A draft version of the manual created by the project staff was based on the reviewing of relevant documents related to the project, particularly the ITTO Manual for the application of the Criteria and Indicators (ITTO Policy Development Series No. 9 and 10) and on the national standard ABNT NBR 15789.

Aiming to improve the quality of the manual, the version created by the Project Staff was studied by a working group, composed by five forest management experts (from the states of Pará, Rondônia, Amazonas and Paraná). The individual contributions were presented and discussed by the working group in a meeting held in Curitiba, between July 26<sup>th</sup> and 27<sup>th</sup>, 2004, creating the preliminary version of the manual.

The preliminary version was sent for the revision of the international consultant, Dr. Markku Simula, forest expert with more than 30 years of experience in international

consulting. The selection of this professional was made in accordance with ITTO recommendations.

Along the working period of the international consultant, the preliminary version of the manual was submitted to two field tests, in different forest management areas, aiming to assess the applicability of the document. The tests were conducted by the project's forest management consultant, with the participation of forest management experts and in close cooperation with the professional responsible for the area.

The manual's first field test was conducted at Cikel Company, located in the State of Pará, in October 2004. The second test was conducted at Maracaí Company, located in the State of Mato Grosso, in November 2004. Besides the project's forest management consultant, the tests participants are presented in Table 4.

**Table 4 – Manual Field Tests Participants**

| TEST | COMPANY                  | DATE           | PARTICIPANTS   |
|------|--------------------------|----------------|--|
| I    | Cikel Brasil Verde Ltda. | October, 2004  | <ul style="list-style-type: none"> <li>• Rodrigo Pereira– Instituto Natureza Amazônia</li> <li>• Fernando Castanheira– FORUM</li> <li>• Josué Ribeiro - CIKEL</li> </ul> |
| II   | Maracaí                  | November, 2004 | <ul style="list-style-type: none"> <li>• Rodrigo Feijó– TECPAR</li> <li>• Ederson Zanetti - UNEMAT</li> <li>• Maudício di Domenico - MARACAÍ</li> </ul>                  |

The results of the field tests and the international consultant findings and recommendations were presented in a workshop held in December, 2004. The workshop was directed to previously invited key-participants, as presented in Annex IV.

Based on the discussion and recommendations made by the workshop participants, and also on the recommendations of the international consultant, the project's staff made a revision of the manual and prepared its final version. This version was translated to ITTO official languages, edited, printed and will be disseminated during 2005 to relevant forest organization and professionals and target receivers.

• **Training Courses on the use of the Manual**

After the establishment of the final version of the manual, as part of the specific objective 2, the project staff promoted training courses on the use of the manual.

Experience of the project leader and the forest certification consultant were very important in the preparation of the course program. The selection of participants and implementation of the the courses were made in cooperation with an external consultant, expert in forest management courses, Mr. Rodrigo Pereira, from the Amazon Nature Institute, INAM.

There were implemented three courses on the use of the manual in different locations, as showed in table 5. The complete list of participants in each course is presented in Annex V.

**Table 5- Distribution of Participants in the Manual Courses**

| LOCATION       | DATE  | NUMBER OF PARTICIPANTS |
|----------------|---|------------------------|
| Rio Branco, AC | January, 19 <sup>th</sup> to 21 <sup>th</sup> , 2004                              | 17                     |
| Cuiabá, MT     | January, 24 <sup>th</sup> to 26 <sup>th</sup> , 2004                              | 45                     |
| Belém, PA      | January, 31 <sup>th</sup> , February 01 <sup>st</sup> and 02 <sup>nd</sup> , 2004 | 57                     |
| <b>TOTAL</b>   |   | <b>119</b>             |

In spite of the original number of professionals to be trained on the use of the manual (100), the efforts made by the project staff to disseminate the courses instigate the interest of a large number of professionals. The result of this activity was very positive: 119 professionals were trained during a 20 hour course to be able to apply the instructions of the manual in field conditions.

• **Training Courses of Forest auditors**

Training of forest auditors was another tool promoted by the project to stimulate the dissemination of the national standard. Organization of the training courses was made by SBS, with the supervision of the project staff and the support of the FORUM, and included the following activities:

- Preparation of the training program and the training material;
- Advertisement of the participants and the local supporters;
- Selection of the participants, considering regional and sectorial balance;
- Implementation of the training courses;
- Evaluation of the participants under the INMETRO procedures.

There were implemented four forest auditor training courses, in the locations of Belém (PA), Cuiabá (MT), Brasília (DF) and Xerém (RJ). As output of this activity, a total number of 115 auditors were trained to be able to audit forest management areas in accordance to the standards NBR 15789 (natural forests) and NBR 14789 (planted forests). The number of participants in each location is presented in Table 6, and the list of the 115 trained auditors is presented in annex VI.

**Table 6 - Distribution of Participants in the Training Program**

| <b>LOCATION</b> | <b>DATE</b>  | <b>NUMBER OF PARTICIPANTS</b> |
|-----------------|--|-------------------------------|
| Brasília        | August, 02 <sup>nd</sup> to 06 <sup>th</sup> , 2004  | 30                            |
| RJ              | January, 22 <sup>nd</sup> to 26 <sup>th</sup> , 2004 | 22                            |
| Cuiabá          | July, 19 <sup>th</sup> to 23 <sup>th</sup> , 2004    | 33                            |
| Belém           | June 28 <sup>th</sup> to July 2 <sup>nd</sup> , 2004 | 30                            |
| <b>TOTAL</b>    |  | <b>115</b>                    |

Besides the adoption of the C&I as part of the CERFLOR, the process of discussion and all the support given by the project to the participation of a large number of stakeholders were responsible to consolidate CERFLOR. It is probable that If it was not by the support given by ITTO, the national standard for natural forest management would be still unfinished, retarding the conclusion of CERFLOR program and its international recognition.

Now, CERFLOR is a complete system to improve forests practices, corroborating to the national efforts for the sustainable of natural and planted forests. Due to the satisfactory participation of professionals on the events promoted by the project, nowadays the National Forest Management Standard is widely disseminated within the national forest sector and some companies are starting to prepare their operations aiming to reach the forest certification in accordance with the CERFLOR standard.

The way in which the project was conceptualized and the success in the implementation of the activities will permit its sustainability after its completion. Besides all the events promoted and professionals trained by the project, the dissemination of the national standard will continue due to the interest of several companies in the CERFLOR certification and due to the large dissemination of the manual for the application of the national standard. It is expected that the first natural forest area will be certified by CERFLOR until 2006.



## 6 – SYNTHESIS OF THE ANALYSIS

Specific Objectives Achievements

Realized

Partly realized

Unrealized

Outputs

Realized

Partly realized

Unrealized

Schedule

In advance / on time

Delayed but not seriously

Seriously delayed

Actual Expenditures

As planned

More than 10%  
above planned

More than 20%  
above planned

Potential for Replication

No Potential

Modest Potential

Significant Potential

Potential for scaling-up

No Potential

Modest Potential

Significant Potential

## **PART III – CONCLUSIONS AND RECOMMENDATIONS**

### **a) Development Lessons**

Considering the lessons learned during the project development, some aspects were fairly positive for its implementation success:

- Participation of different institutions, directly or indirectly connected to the forest sector, representing technical, environmental, social and political segments, as well as institutions connected to the standardization process, which were fundamental in the adoption of the C&I as a national standard for natural forests;
- Workshops carried out in different localities, which made possible the participation of a substantial number of professionals that work directly or indirectly with the management of tropical forests;
- Pilot tests that made possible the realization of adjustments in the C&I in relation to field reality;
- Participation of an international consultant, very important aspect for the consolidation of the entire process beyond the national limits, once that CERFLOR shall be mutually recognized by the PEFC (Program of Endorsement of Forest Certification Schemes) still in 2005;
- Effective participation of research and educational institutions in the working group, as well as class entities, productive sector, governmental organizations, non-governmental organizations, among others;
- Experience of the consultants team that conducted the project, regarding the natural forests management in its technical, administrative and political aspects, related to the local particularities of different parts of the country where the adequate management of the tropical forests takes place.

Besides the success in the implementation and achievement of the goals proposed by the project, some external aspects that made difficult the realization of the activities during the process may compromise the sustainability of the results achieved.

- During the project implementation there were changes in the Government of Brazil, with new orientation of the activities directly or indirectly related to the Ministry of the Environment, as in the case of this project. These changes made that this Ministry's support to temporarily diminish, contradicting its initial role as a facilitator of the project implementation;
- The Brazilian Forest Sector is going through a delicate moment. The consolidation of mechanisms over the development and use of the natural resources is being too slow, and it brings insecurity to the productive sector. The land ownership problem, characterized by the difficulty in legitimating the property, the dispute for the land occupation (invasions, documents adulteration, new settlements, among others) and lowness of control and regulation governmental organizations is the main antagonistic factor that may compromise the project sustainability in the long term;
- Elaboration of the Brazilian tropical forests management standards was only possible due to ITTO's financial resources. One of the menaces to the sustainability of the results obtained by the project is the lack of financial resources, as the standards adoption depends on the dissemination, promotion and incentive, and technological

foment. As the Brazilian standards for the management of tropical forests are inserted in the CERFLOR, the strengthening and consolidation of this program has direct implications on the sustainability of the project results.

## **b) Operational Lessons**

Considering the operational lessons learned during the project execution, the following conclusions can be take:

- Project execution has achieved the proposed planning and objectives;
- To accomplish the intended results, project PD 140/02 (M) counted with the Implementing Agency professionalism and administrative experience, and with the consultants team technical experience. The Implementing Agency is a forest sector organization established more than 50 years ago, and that maintains a solid administrative structure, able to administrate projects like this one. The project consultants have a wide experience in the elaboration and execution of similar projects, as well as in the formulation of public policies for the forest sector;
- As for the Implementing Agency, there were no difficulties regarding the project documentation. The documents generated by the consultants were constantly sent to ITTO with a copy to the project monitoring team, ABC, the Federal Government representative;
- Initial planning established in the project work plan was accomplished. There were made small adjustments in the initial execution timetable due to seasonal factors affecting the productive activity in the Amazon region, arising from the occurrence of a rainy season in the region, and from the international consultant agenda.
- There were also small changes in the resources allocation, arising from price oscillations of some of the budgeted components, such as air tickets and accommodation. The planning adjustments carried out were accepted by ABC and ITTO. Such changes did not compromise the quality of the activities implementation, and made possible a better utilization of the available resources;
- As this was a project that involved different organizations, partners and interested parts in a long process of composition and consolidation of its contents, it must be considered that the field activities depend on climatic variables for its execution. Therefore, in the planning of similar projects it must be considered the possibility of reallocating the physical and financial resources when necessary.

## **b) Recommendations**

In Brazil, the management of tropical forests is a new activity, that will demand a long period for its consolidation. Some cultural barriers related to the sustainable use of the forest resources must be overcome. Project PD-140/02 (M) contemplated key aspects for the forest management consolidation, such as: standardization, dissemination, technical qualification, workshops, and the involvement of different actors in the sector as partners. Thus, based on the lessons learned, the following recommendations for guaranteeing the sustainability of the results obtained by the project and for the elaboration of future project are interesting:

- Pursuit strengthening and consolidation of the C&I established by the project PD-140/02 (M) as a tool to promote the sustainable management of the Brazilian tropical forests, guaranteeing the sustainability of the results obtained in the long term;
- Promote technical capacity in different operational and scientific levels, regarding the adoption of the national forest management standards established by the project;
- Foment the national forest management standards adoption in low and medium scale forest management operations;
- Update the CERFLOR standards set, looking forward the incorporation of improvements accumulated through time;
- Quest for the involvement of organizations representing the different segments of the forest sector in the discussions for the forest management improvement;
- The Amazon region rain season must be foreseen in the activities planning, looking for the optimization of the field operations; a more active participation of the operational level professionals should be pursuit;
- In the beginning of the projects' execution, a workshop should always take place, counting with the participation of all personnel involved to discuss the work plan activities and related responsibilities. The external consultants team hiring should take place still in the project initial development phase, making the foreseen timetable more easily attended.

**ANNEX I – ITTO's acceptance letter about the consultants of the project**

FROM : ABIMCI

PHONE NO. : 0412254358

Feb. 18 2003 11:03AM P01



**International Tropical Timber Organization (ITTO)**  
INTERNATIONAL ORGANIZATIONS CENTER - 5F, PACIFICO-YOKOHAMA  
1-1-1, MINATO-MIRAI, NISHI-KU, YOKOHAMA 220-0012, JAPAN

**F A C S I M I L E**

Fax: (81-45) 223-1111

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e-mail: [itto@itto.or.jp](mailto:itto@itto.or.jp)

Page No. 1 of 1 page(s)

Date: 17 February 2003

Ref. No. F-03-0139

To:

Mr. Jeziel Adam de Oliveira  
Executive Superintendent  
ABIMCI  
Al. Dr. Américo, 474 - 2o andar - sala 23  
80010-120, Curitiba, PR  
BRAZIL

From:

Manoel Sobral Filho  
Executive Director  
ITTO - Yokohama, Japan

Fax: (81-45) 223-1111

Dear Mr. Adam de Oliveira,


PD 140/02 Rev.2 (M)

**Development of Criteria and Indicators for  
Sustainable Management Appropriated to Brazilian Tropical Forests**

Thank you for your letter of 13 February 2003 (Ref. 191/SUP-188) regarding your proposal to engage **Mr. Bernard M. Delespinasse** and **Mr. Eliezer José Santana** as Project Leader and Management/Certification Consultant, respectively. It is our understanding that the appointment of Mr. Bernard M. Delespinasse will be for 21.5 months with an honorarium of US\$5,000.00/month, not exceeding the total amount of US\$107,500.00 and the appointment of Mr. Eliezer José Santana will be for 19.5 months with an honorarium of US\$3,500.00/month, not exceeding the total amount of US\$68,500.00.

I am pleased to inform you that I have no objection to your proposal to engage Mr. Delespinasse and Mr. Santana, provided that the terms of reference and related costs for the work assigned are in accordance with the provisions specified in the project document.

Yours sincerely,

  
Manoel Sobral Filho  
Executive Director

**ANNEX II - List of participants in the C&I discussion workshops**

| <b>NUMBER</b> | <b>NAME</b>                  | <b>INSTITUTION</b>      | <b>STATE</b> | <b>SECTOR</b>     |
|---------------|------------------------------|-------------------------|--------------|-------------------|
| 1             | Germano Muller               | Rural Projetos          | Mato Grosso  | ENVIRONMENT       |
| 2             | Dalva Amaral                 | UFAC                    | Acre         | ENVIRONMENT       |
| 3             | Maria Luiza S. Coelho        | FEMACT / RR             | Pará         | ENVIRONMENT       |
| 4             | Mike Hopkins                 | GEOMA                   | Pará         | ENVIRONMENT       |
| 5             | Roseane Adorno               | -----                   | Mato Grosso  | ENVIRONMENT       |
| 6             | Elsa Mendoza                 | IPAM                    | Acre         | ENVIRONMENT       |
| 7             | Júlio Dourado                | EEDSA                   | Acre         | ENVIRONMENT       |
| 8             | Maria Dalce Ricas            | AMDA                    | Acre         | ENVIRONMENT       |
| 9             | Luciana de Souza             | UFAC/GEMA               | Acre         | ENVIRONMENT       |
| 10            | Aderval José Dalmaso         | DALMO                   | Pará         | ENVIRONMENT       |
| 11            | Andréa Pires                 | Instituto Mamirauá      | Acre         | ENVIRONMENT       |
| 12            | Angela Maria C. Viana        | NUMA / UFPA             | Pará         | ENVIRONMENT       |
| 13            | Oswaldo Carvalho Jr.         | IPAM                    | Pará         | ENVIRONMENT       |
| 14            | Iranildo Siqueira            | Fund. Vitória Amazônica | Amazonas     | ENVIRONMENT       |
| 15            | Josmar M. Costa              | DUNORTE LTDA.           | Pará         | COMPANIES         |
| 16            | Raimundo Nonato F. Vargas    | SYLLABUS Consultoria    | Pará         | COMPANIES         |
| 17            | Beatriz Bezeros              | BERTG Florestas         | Mato Grosso  | COMPANIES         |
| 18            | Luiz Carlos de Oliveira      | CEMEX S.A.              | Pará         | COMPANIES         |
| 19            | Adalton Pinheiro da Cruz     | JARI CELULOSE S.A.      | Pará         | COMPANIES         |
| 20            | João Carlos Henriques        | Mineração Rio do Norte  | Acre         | COMPANIES         |
| 21            | Cesar Remon                  | MAD. AMAJUARA           | Pará         | COMPANIES         |
| 22            | Oseas Nunes de Castro        | Ind. Madeireira         | Pará         | COMPANIES         |
| 23            | Francisco R. T. Araújo       | CENTENOR EMP. S/A       | Pará         | COMPANIES         |
| 24            | Ian Thompson                 | DELP / EMBRAPA          | Pará         | ACADEMIC/RESEARCH |
| 25            | Juliana Delfino              | UFMT/FENF               | Mato Grosso  | ACADEMIC/RESEARCH |
| 26            | Jânio Cândido Português      | UFMT/FENF               | Mato Grosso  | ACADEMIC/RESEARCH |
| 27            | Rogério Costa e Silva        | EMPAER – MT             | Mato Grosso  | ACADEMIC/RESEARCH |
| 28            | Iracema Maria C. C. Cordeiro | UFPA / EMBRAPA          | Pará         | ACADEMIC/RESEARCH |
| 29            | Olegário Carvalho            | EMBRAPA                 | Pará         | ACADEMIC/RESEARCH |
| 30            | Péricles Botelho             | UFMT/FENF               | Mato Grosso  | ACADEMIC/RESEARCH |

| <b>NUMBER</b> | <b>NAME</b>            | <b>INSTITUTION</b>  | <b>STATE</b> | <b>SECTOR</b>      |
|---------------|------------------------|---------------------|--------------|--------------------|
| 31            | Marília de O. Costa    | UEPA / EMBRAPA      | Pará         | ACADEMIC/RESEARCH  |
| 32            | Paulo Contente         | UFRA                | Pará         | ACADEMIC/RESEARCH  |
| 33            | Patricia Kato          | Dendrogene/Embrapa  | Pará         | ACADEMIC/RESEARCH  |
| 34            | Osmar Aguiar           | EMBRAPA             | Pará         | ACADEMIC/RESEARCH  |
| 35            | Luciano Arruda         | UFAC/SETEMPL        | Acre         | ACADEMIC/RESEARCH  |
| 36            | Lúcia Wadt             | EMBRAPA             | Acre         | ACADEMIC/RESEARCH  |
| 37            | Plínio Sist            | CIRAD               | Pará         | ACADEMIC/RESEARCH  |
| 38            | Miguel Loureiro        | EMBRAPA             | Pará         | ACADEMIC/RESEARCH  |
| 39            | Evaldo Braz            | EMBRAPA – MT        | Mato Grosso  | ACADEMIC/RESEARCH  |
| 40            | Sonia H. M. dos Santos | EMBRAPA             | Pará         | ACADEMIC/RESEARCH  |
| 41            | Tânia D. Rosa          | UFMT/FENF           | Mato Grosso  | ACADEMIC/RESEARCH  |
| 42            | Eduardo Paes           | UFMT/FENF           | Mato Grosso  | ACADEMIC/RESEARCH  |
| 43            | Eduardo C. da Cruz     | UFAM                | Pará         | ACADEMIC/RESEARCH  |
| 44            | André E. B. de Lacerda | Dendrogene/Embrapa  | Pará         | ACADEMIC/RESEARCH  |
| 45            | Alexandre Eberte       | UFMT/FENF           | Mato Grosso  | ACADEMIC/RESEARCH  |
| 46            | Carlos Alberto Passos  | UFMT/FENF           | Mato Grosso  | ACADEMIC/RESEARCH  |
| 47            | Antonio Rocha Vital    | EMPAER – MT         | Mato Grosso  | ACADEMIC/RESEARCH  |
| 48            | Gracialda C. Ferreira  | Dendrogene/Embrapa  | Pará         | ACADEMIC/RESEARCH  |
| 49            | Rubens Rondon Neto     | CNPq/UFMT           | Mato Grosso  | ACADEMIC/RESEARCH  |
| 50            | Gilson Mesquita        | DCN/UFAC            | Acre         | ACADEMIC/RESEARCH  |
| 51            | Rafael Mason           | UFMT/FENF           | Mato Grosso  | ACADEMIC/RESEARCH  |
| 52            | Moisés de Souza        | UFAC/BIOMA          | Acre         | ACADEMIC/RESEARCH  |
| 53            | Nabor da Silveira Pio  | UFAM                | Amazonas     | ACADEMIC/RESEARCH  |
| 54            | João Paulo Mastrangelo | UFAC                | Acre         | ACADEMIC/RESEARCH  |
| 55            | Francesca Salla        | UFAC                | Acre         | ACADEMIC/RESEARCH  |
| 56            | Afrânio Migliari       | FARESMAT            | Mato Grosso  | CLASS INSTITUTIONS |
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| <b>NUMBER</b> | <b>NAME</b>                 | <b>INSTITUTION</b>   | <b>STATE</b> | <b>SECTOR</b>      |
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| 64            | Justiniano de Q. Clesso     | FIEDA / SINDISERPA   | Pará         | CLASS INSTITUTIONS |
| 65            | João Bosco Soares           | UTAM                 | Amazonas     | CLASS INSTITUTIONS |
| 66            | Evaristo Terezo             | AIMEX                | Pará         | CLASS INSTITUTIONS |
| 67            | Evanildo Nascimento Souza   | AREIMAG              | Pará         | CLASS INSTITUTIONS |
| 68            | Sandro Andreani             | AMEF                 | Mato Grosso  | CLASS INSTITUTIONS |
| 69            | Rita Carvalho               | ABNT                 | Acre         | CLASS INSTITUTIONS |
| 70            | Rui S. L. Martins           | UNIFLOR              | Pará         | CLASS INSTITUTIONS |
| 71            | Ribenildes Souza            | FIEMT                | Mato Grosso  | CLASS INSTITUTIONS |
| 72            | Edna G. T. Guimarães        | ASSIMAS              | Pará         | CLASS INSTITUTIONS |
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| <b>NUMBER</b> | <b>NAME</b>              | <b>INSTITUTION</b>   | <b>STATE</b> | <b>SECTOR</b> |
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**ANNEX III – National Standard for Brazilian Natural Forest Management**

NOV 2003

**00:001.39-006**

Forest management. Principle. Criterion. Indicator

8 pages

Origin:

ABNT/CEET-00:001.39 – Special Temporary Study Commission for Forest Management

Project 00:001.39-006 - Forest management - Principles, criteria and indicators for natural forests

Descriptors: Forest management. Principles. Criteria. Indicator

## Summary

Foreword

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3 Definitions

4 Principles, Criteria, and Indicators.

## Foreword

ABNT – The Brazilian Organization for Standardization – is the National Forum for Standardization. Brazilian Standards, whose contents are the responsibility of the Brazilian Committees (ABNT/CB) and of the Sectoral Standardisation Organisms (ABNT/ONS), are prepared by Study Committees (CE), made up by representatives of the sectors involved, including: producers, consumers, and neutral participants (universities, laboratories and others).

The Brazilian Standards Projects, prepared within ABNT/CB and ABNT/ONS, are circulated in Public Consultations among ABNT members, and other interested parties.

### 1 Objective

This Standard establishes the principles, criteria, and indicators for the forest management of natural forests.

### 2 Normative references

The standards laid down as follows contain the provisions, which, once mentioned in this text, comprise prescriptions for this Standard. The editions indicated were in force at the moment of this publication. Since all standard is subject to revision, it is recommended that those who close agreements based on this check the convenience of using more recent editions of the standards mentioned as follows. ABNT has the information of the standards in force in a given moment.

NBR 14789:2001 – Forest management – Principles, criteria, and indicators for natural forests

### 3 Definitions

For the due purposes of this Standard, the NBR 14789 definitions and the following definitions apply:

**3.1 clearing:** Open path in the vegetation of the forest management unit or in its perimeter to prevent the spread of fire, division into parcels or plots or for the movement of goods or people. [NBR 14789]

**3.2 degraded area:** Area of land or vegetation that changed into a category with a higher degree of deterioration due to anthropic activity or natural phenomena. [NBR 14789]

**3.3 permanent preservation area:** Area protected, covered or not by natural vegetation, with the environmental function of preserving the water resources, landscaping, the geological stability, the biodiversity, the genic flow of the fauna and flora, the soil, assuring the welfare of the populations.

**3.4 legal reserve area:** Area located in the inside of a real estate, excluding permanent preservation area, aimed at the sustainable use of the natural resources, the conservation, and the re-licensing of the ecological processes, the conservation of the biodiversity, at shelter and protection to natural fauna and flora.

**3.5 environmental aspect:** Element of the activities, products or services of an organization, which can interact with the environment.

NOTE – Significant environmental aspect is that which can or can not have a significant environmental impact.

**3.6 criterion:** Expression of the posture in relation to the parameters or requirements that translate the accession of a principle and that relate to the state or to the dynamics of a system. [NBR 14789]

**3.7 rights of use:** Right to the use of forest resources that can be defined by local customs, mutual agreements or prescribed by other entities with accession rights. These rights can restrict the use of certain resources in specific levels of consumption or in specific harvest techniques.

**3.8 legal rights:** The right of use and land tenure acquired backed by federal, state or local legislations in force.

**3.9 non-predatory traditional rights:** Right to the use of natural resources of a property, by a traditional population, without threatening their sustainability.

**3.10 biological diversity:** Diversity of species, communities, and populations, existing in a certain ecosystem. [NBR 14789]

**3.11 ecosystem:** Dynamic complex of plants, animals, and microorganisms and its abiotic environment, interacting with a functional unit. [NBR 14789]

**3.12 species:** Species, subspecies or a geographically isolated population.

**3.13 endemic species:** Native species limited to occurrence in certain environments or certain geographical area with self-ecology restricted to a specific habitat.

**3.14 threatened species:** Species that for various reasons face a high probability of extinction if direct pressures upon them or their habitat continue.

**3.15 rare species:** Species that have low numbered natural populations or that are located in restricted habitats.

**3.16 edaphic:** That belongs or is related to the soils. [NBR 14789]

**3.17 forest:** Plant community predominantly composed of arboreal forest species, in any stage of its development and other plants that grow next to it, its soil, flora, and fauna, its interrelations and the resources and values given to it. [NBR 14789]

**3.18 high conservation level forest:** Are the forest areas that present high value of biodiversity; contain rare or threatened ecosystems; promote basic environmental services; make it possible to supply natural demands of local

populations, contemplating its subsistence or maintenance of its cultural, religious, and historic identity or possess archaeological and speleological features.

**3.19 environmental impact:** Any modification of the environment, adverse or beneficial, which results, in part or as a whole, from the activities, products or services of an organisation. [NBR 14789]

**3.20 indicator:** Quantitative or qualitative parameter that describes, in an objectively verifiable and non-ambiguous form, the characteristics of the forest ecosystem or of the social system related to this ecosystem or describes forest management elements, and of the productive processes conducted in the forest ecosystem. [NBR 14789]

**3.21 pre-harvesting inventory (forest census):** Survey of all trees with commercial value existing in an annual harvest unit. The census activities shall be carried out one or two years before harvesting, involving demarcation of the stands, opening of the guidance and identification trails, location and assessment of the trees with commercial value.

**3.22 road network:** Series of roads and routes used for locomotion, transport of machines and equipment, supply of consumables and products in the forest management area. [NBR 14789]

**3.23 forest management:** Forest management for obtaining products and services, respecting environmental and social variables that guarantee the mechanisms of sustainability of the ecosystem object of forest management. [NBR 14789]

**3.24 environment:** Series of conditions, laws, influences, and interactions of physical, chemical, and biological kind, which enable, shelter, and rule life in all its forms. [NBR 14789]

**3.25 organisation:** Company, corporation, firm, company, or institution, or part or combination of these, public or private, **public company**, limited or with another statutory form, which has its own functions and administrative structure. [NBR 14789]

**3.26 stakeholder:** Individual or group interested or affected by the activities of the forest management area. [NBR 14789]

**3.27 indigenous population:** Series of families or indigenous communities, who live in complete state of isolation concerning the other sectors of the national community, in intermittent or permanent contacts, without, however, being integrated in them. The Indians are considered:

a) isolated – when they live in unknown groups or in groups that have little and vague information by means of possible contacts with elements of the national community;

b) under integration - when, in intermittent or permanent contact with external groups, conserve less or greater part of the conditions of its natural life, but accept some practices and forms of existence common to the other sectors of the national community, which need, each time more for their own sustention;

c) integrated - when incorporated to the national community and acknowledged in full exercise of their civil rights, even if they conserve their practices, customs, and traditions related to their culture.

**3.28 local population:** Human group adjacent to the forest management areas.

**3.29 traditional populations:** População vivendo em estreita relação com o ambiente natural, dependendo de seus recursos naturais para a sua reprodução sócio-cultural, por meio de atividades de baixo impacto ambiental.

**3.30 tenure:** Right acquired on property, occupancy, access or use of a unit of a particular area or of its associated resources or due to legal statutes acknowledged by the legislation in force in the country.

**3.31 principle:** Legislation or fundamental rule that serves as basis for action and that is expressed in the form of objective or attitude regarding the function of the forest ecosystem and aspects related to the social system that are related to this ecosystem. [NBR 14789]

**3.32 agrotoxic products:** Products and agent of physical, chemical or biological processes, aimed at being used in the sectors of production, storage and of enrichment of agricultural products, in pastures, protection, storage, and enrichment of agricultural products, in pastures, forest protection, natural or planted, and of other ecosystem and of urban, water and industrial environments, with the purpose of changing the composition of the flora or fauna, in order to preserve them from damaging action of live beings considered harmful, as well as substances and products employed as defoliants, **desiccants**, stimulators, and **inhibitor** of growth.

**3.33 forest products:** all products obtained from the forest, wood products or not.

**3.34 recovery:** Process through which an ecosystem is managed aiming at re-establishing one or more of its functions or services.

**3.35 recomposition:** Series of measures that aim at re-establishing the degraded areas with improvement of some elements of the previous vegetation.

**3.36 sustainability:** Use of natural resources in an environmentally responsible, socially just and economically viable manner, such that attending to actual needs will not compromise possibilities of use for future generations. [NBR 14789]

**3.37 forest management area:** Area, object of certification, defined for the purpose of good forest management practices in social, environmental, and economic terms.

#### **4 Principles, Criteria, and Indicators – natural forest**

The principles established in this standard constitute the forest management reference.

The principles are broken up into criteria, which are the expression of the requirements that describe the states or dynamics of a forest ecosystem and of a social system associated to it.

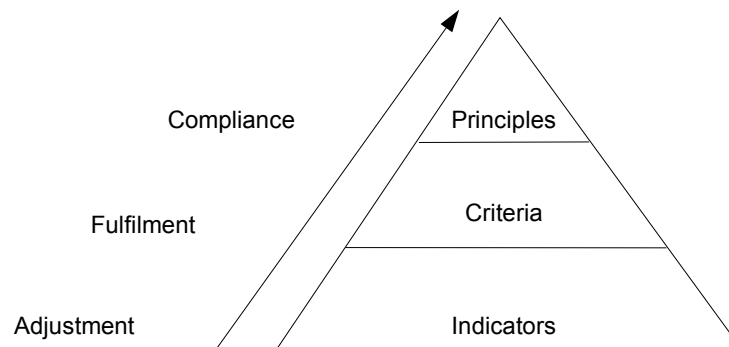
The compliance verification of each criterion is established by means of an assessment of the compliance with a series of specific indicators, which can be quantitative or qualitative.

Depending on the location and purpose of the forest management, not all indicators shall be applicable or present. However, it shall always be necessary to assess all those pertinent to the local situation.

Thus, a hierarchic structure of the principles, criteria, and indicators (see figure 1) are defined, which have the function of establishing the surveillance and demonstration of good forest management and the reference for the quality assessment of the forest management.

The implementation of a criterion is considered met when it is shown that its respective indicators are appropriately met. In its turn, a principle is considered to have been implemented, when it is confirmed that the respective criteria are met. Finally, it is considered that forest management in conformity with this Standard is implemented when it becomes evident that the principles are met.

Depending of the region and place, the indicators can have a different relative importance.



**Figure 1 – Hierarchic structure**

#### **4.1 - Principle 1 – Legal compliance.**

The forestry enterprise shall be managed by employing attitudes and actions that ensure compliance with current Federal, State and Municipal legislation. Federal law, as well as international treaties and agreements shall be disseminated to all of those involved in the process of obtaining the forest products. The following criteria and indicators should be met:

##### **4.1.1 - Criterion 1.1 - The organisation should carry out the activities related to forest management, according to legislations and forest and environmental regulations in force.**

Indicators:

- a) existence of procedures that identify the legislation and other regulations applicable to the activities carried out in the forest management area.
- b) existence of records that prove fulfilment of legislation and of other regulations applicable to the activities carried out in the forest management area.

##### **4.1.2 - Criterion 1.2 – The rights of the local, traditional, and indigenous populations, of using and occupying forestlands, shall be respected, according to the legislation in force.**

Indicators:

- a) evidence that the legal rights of the local, traditional, and indigenous populations are respected;
- b) evidence that the borders between neighbouring or bordering areas and the forest management area, are identified, delimited, and respected;  
Note – In the case of the communities existing within the property, the area of forest management use should be delimited.
- c) existence of document of direct use, domain or land tenure, according to the agrarian legislation in force;
- d) evidence that the organisation acts in an effective form for the resolution of possible conflicts or legal disputes related to land tenure and losses inflicted to third parties.

##### **4.1.3 - Criterion 1.3 – The labour, pension, and tax legislations should be complied with.**

Indicators:

- a) evidence that pension issues of all forest workers is in conformity with the legislation in force;
- b) evidence that the aspects pertinent to the labour issues are in conformity with the legislation in force, regulatory labour standards, agreements and collective conventions;
- c) evidence that the organisation has fulfilled its fiscal and tax obligations;
- d) evidence that the measures with the service providers are taken, aiming at meeting labour, tax, and pension legislation, as well as regulatory labour standards, agreements, and collective conventions; and
- e) existence of an occupational safety and health management programme.

NOTE – It is understood that a management programme consists of at least:

- policy, objectives, and targets;
- planning;
- procedures;
- resources;
- measurement, analysis, and improvement.

**4.1.4 - Criterion 1.4 - The organisation shall disseminate to those involved in forest management the applicable legislation in force.**

Indicators:

- a) existence of the procedures for the dissemination of the applicable legislation in force;
- b) evidence of the efficacy of the dissemination mechanism for the applicable legislation in force.

**4.2 - Principle 2 – Rational use of forest resources in the short, medium, and long terms, in search of its sustainability.**

Forest management shall be planned and executed, through the organisation's own services or by means of third parties. The organisation shall show and present attitudes that lead to the sustainable use of resources and services offered by the forest, fulfilling the following criteria and indicators:

NOTE – Among some examples of services offered by the forest the following can be mentioned: ecological, leisure, research, and for other purposes.

**4.2.1 - Criterion 2.1 – The organisation shall adopt strategies oriented towards sustainable use and management of forest resources**

Indicators:

- a) existence of procedures aimed at:
  - identifying all environmental aspects that can be influenced and the resulting impacts;
  - characterising and analysing the significant environmental impacts;
  - establishing measures for turning positive environmental impacts possible;
  - establishing measures for avoiding, mitigating or compensating significant negative environmental impacts caused by forest management activity;
  - monitoring the implementation of measurements in order to avoid, mitigate, or compensate significant negative environmental impacts caused by forest management activity.
- b) Evidence of the adoption of practices that indicate efficient and environmentally adequate use of forest resources;
- c) existence of documented procedures for activities of silvicultural treatments, opening, and maintenance of roads, harvest, and transport of forest products;
- d) evidence of the procedures of protection against land invasion and illegal logging of forest products in the Forest management area.

**4.2.2 - Criterion 2.2 – The Forest operations shall be backed by sustainable forest management plans.**

Indicators:

- a) existence of a legally approved forest management plan.
- b) evidences that the forest management plan assures the sustainability of the harvest in terms compatible with the cutting cycle. When it is the case, the forest management plan shall assure the incorporation of new areas;
- c) existence of technical and economical justifications, documented for the dimensioning of forest management operations;
- d) existence of planning of the pre-harvesting and harvesting operations, aiming at minimising the negative impacts, caused by the harvest of the remaining forest;
- e) evidence that the forest management plan was made and is carried out by a legally licensed professional;
- f) evidence that the organisation aims at improving the botanical identification;
- g) evidence that the forest management plan is monitored and revised by a legally licensed professional, incorporating the surveillance results;
- h) existence of preparation procedures documented and fulfilment of emergencies and contingency plans;
- i) existence of continuous forest inventory, adjusted to the planning, assessment of the harvesting and monitoring of the forest;
- j) evidence that the objectives and targets of the forest management plan are known by the forest workers and disseminated to the local populations;

**4.2.3 - Criterion 2.3 - The organisation shall implement appropriate forest technology to the local peculiarities.**

Indicators:

- a) evidence that the technology employed is backed by the results of studies and researches carried out for conditions similar to those of the forest management area;
- b) evidence of revision of the procedures for execution of the forest management operations;
- c) evidence that the operational procedures incorporate successful results and technically based on experiences, tests or researches carried out in the region, in order to improve the conduction of forest management;
- d) evidence that the equipment, machines, and consumables are adequate for the local topographic, soil, climatic conditions and to the forest management characteristics.
- e) evidence that training and labour capacity-building programmes are implemented, with the following purposes:
  - technically build the capacity of forest workers;
  - avoid occupational illnesses and accidents;

- minimise occurrences of negative environmental impacts.

**4.2.4 - Criterion 2.4 – There shall be system implemented that makes it possible to trace the flow of forest products from their origin.**

Indicators:

- a) existence of updated register of the forest management area;
- b) existence of documented identification procedures for forest products in the forest management area;
- c) existence of documented procedures of identification, protection, and handling of forest products at intermediary storage yards;
- d) existence of stock control records.

**4.3 - Principle 3 – Care for Biological Diversity.**

The organisation shall manage the forest in order to minimise the negative impacts of its activities upon the flora and fauna. It shall take care of the maintenance of the biological diversity, fulfilling the following criteria and indicators:

**4.3.1 - Criterion 3.1 Forest protection technique shall be adopted.**

Indicators:

- a) existence of information and resources adequate for prevention, vigilance, and control of forest fires;
- b) existence of information and resources adequate for the prevention and control of pests, illnesses, invading species;
- c) evidence of the procedures that aim at the adequate use and minimisation of the employment of agrotoxic products.

**4.3.2 - Criterion 3.2 – The biological resources of the Forest management area shall be monitored in order to provide information for the confirmation or revision of the forest management plan.**

Indicators:

- a) existence of initiative, support or partnership for the surveillance of the fauna and local flora;
- b) evidence of incorporation of the surveillance results of the flora and fauna to the forest management plan.

**4.3.3 - Criterion 3.3 – The forest operations shall be carried out considering the protection of the remaining ecosystems. Unique ecosystems with environmental, archaeological, historic cultural, or social importance have to be preserved.**

Indicators:

- a) existence of procedures for the conservation of flora and fauna within its natural habitat;
- b) existence of protection procedures in case of the occurrence of endemic species, rare or endangered in the forest management area;
- c) existence of mapping, demarcation and protection of historic, archaeological sites of cultural or social value;
- d) identification of the existing conservation units in the influence area of the enterprise;
- e) existence of clear definition, mapping, and documentation of the permanent preservation areas and of the legal reserve, within the forest management area.

**4.3.4 - Criterion 3.4 – The degraded areas within the forest management area shall be recovered or recomposed, according to the legislation in force.**

Indicators:

- a) existence of maps, sketches or images that indicate the degraded areas in the forest management area;
- b) existence of silvicultural practices and procedures that aim at recovering or recomposing the degraded areas.

**4.3.5 - Criterion 3.5 - Hunting and fishing activities shall be controlled within the forest management units, in accordance with current legislation.**

Indicators:

- a) existence of vigilance measures and hunting and fishing control;  
NOTE – It is understood that the activities above are carried out in collaboration with the competent authorities.
- b) existence of signalisation and warning instruments for hunting and fishing control;
- c) existence of forest worker information and local populations for hunting and fishing control.

**4.4 - Principle 4 – Respect to water, soil, and air.**

Forest management and technological development programmes shall foresee and adopt techniques that consider soil conservation, water and air resources, fulfilling the following criteria and indicators:

**4.4.1 - Criterion 4.1 – Forest management shall be based on environmental planning before the use the area.**

Indicators:

- a) documented evidence of the characterisation of the water resources, considering the microbasin(s) in which the forest management area is inserted;
- b) existence of procedures for the definition of the forest management area and locating of the road network, taking into consideration the local topography, the soils, and the water resources;
- c) evidence that the forest management activities are planned and carried out, taking into consideration the topography, soils, water resources, and the climate.

**4.4.2 - Criterion 4.2 - Water and soil resource conservation, monitoring and maintenance practices shall be adopted.**

Indicators:

- a) evidence of the adoption of techniques that aim at the conservation of the soil of the water resources;
- b) existence of assessment of qualitative and quantitative parameters of water and soil resources, which are, directly or indirectly under the control and influence of the organisation<sup>1)</sup>;
- c) evidence that the road network and clearings are kept in conditions that do not favour erosion and that keep the water courses;
- d) evidence that practices for the conservation and recomposition of the permanent preservation areas are adopted.

**4.4.3 - Criterion 4.3 – The organisation shall adopt a policy of rational use of agrototoxic, oil, and fuel products, and forwarding of its residues and packaging.**

Indicators:

- a) evidence that the technical recommendations for the handling, preparation, and applying of the necessary agrototoxic products in the forest operations;
- b) existence of agronomic guidelines in the use of agrototoxic products;
- c) evidence that agrototoxic products banned by international agreements or laws in force in the country are not used;
- d) evidence that the storage of the agrototoxic products, oils, and fuels meet the recommendations of the manufacturers and of the legislation in force;
- e) existence of a control and forwarding system of agrototoxic products, oils, and fuels, and of packaging;
- f) evidence that the forest workers who handle and apply agrototoxic products are licensed and make use of individual protection equipment;
- g) evidence that the transport of agrototoxic products, oils, and fuels among the storage places and the field is carried out with appropriate equipment and vehicles, according to legislation in force.

**4.4.4 Criterion 4.4 - The organisation shall adopt and implement a policy for the reduction, re-utilisation, recycling, or adequate treatment of solid residues, liquid effluents, and gaseous emissions.**

Indicators:

- a) existence of a system of selective collection and residue storage;
- b) evidence that the dangerous residues are forwarded to the licensed industrial landfills or sent to licensed companies, in order for them to carry out the adequate treatment;
- c) evidence that the residues and effluents are treated and laid out according to legislation in force;
- d) existence of control plans and monitoring of spills and leakages;
- e) existence of initiative for the reduction and use of forest harvest residues;
- f) existence of the preventive and corrective maintenance programming of machines, vehicles, and equipment.

**4.5 - Principle 5 – Environmental, economic, and social development of the regions in which forest activity is inserted.**

The organisation shall have a policy of interrelating with employees and communities within the forest management unit's area of influence, and shall provide evidence of the benefits of the forest activities on social, environmental and economic aspects. The following criteria and indicators shall be complied with:

**4.5.1 - Criterion 5.1 – The forest organisation shall incentive programmes of community interest, in order to improve the life conditions of the local population.**

Indicators:

- a) evidence of the identification of social and economic aspects upon which it is possible to have influence and the resulting impacts;
- b) evidence of actions for avoiding, mitigating or, when applicable, compensating significant negative social and economical impacts resulting from its operations;
- c) evidence of measures aiming at turning feasible positive social and economic impacts;
- d) evidence that the non-predatory habits and customs of the local, traditional, and indigenous populations are respected;
- e) evidence that the intellectual property of the traditional and indigenous populations is respected;

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<sup>1)</sup> When pertinent, is based on the identification carried out of significant aspects and environmental impacts, according to what has been laid down in item 4.2.1-a).

- f) evidence that priority is given to the participation of inhabitants of the local populations in the different activities related to the forest management area;
- g) existence of actions that stimulate local enterprises;
- h) existence of actions that stimulate health programmes with local populations;
- i) existence of forest worker health, alphabetisation, security, and hygiene programmes implemented, accessible to their direct dependents;
- j) existence of actions that stimulate environmental education programmes developed with local populations;
- k) existence of environmental education programmes for the workers of the enterprise;



**4.5.2 - Criterion 5.2 - The organisation shall implant programmes of dissemination and communication with the interested parties.**

Indicators:

- a) existence of procedures and instruments for clear and objective dissemination of the activities and forms of action of the forest enterprise;
  - b) existence of communication channel between forest organisation and the interested parties;
  - c) evidence of conciliatory measures adopted for the resolution of conflicts between forest producer and the interested parties;
  - d) evidence of good relationship with representative organisations of the local society and related entities;
  - e) evidence of the civil society or public institutions in the dissemination and communication programmes.
-

**ANNEX IV - List of participants of the workshop for the manual discussion**

| <b>NAME</b>           | <b>INSTITUTION</b>                               |
|-----------------------|--|
| Jeziel Adam Oliveira  | ABIMCI - Project manager                         |
| Bernard Dellespinasse | ABIMCI - Project leader                          |
| Markku Simula -       | ABIMCI - Project International consultant        |
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| Eduardo Coutinho      | UFAM   |
| Rodrigo Pereira       | INAM   |
| Rodrigo Feijó         | TECPAR   |
| Sérgio Ahrens         | EMBRAPA  |
| José Augusto de Abreu | SEXTANTE   |

**Justified absences**

| <b>NAME</b>                | <b>INSTITUTION</b>  |
|----------------------------|---------------------|
| Rubem Guevara              | ITTO America Latina |
| Josué Evandro Ribeiro      | CIKEL               |
| Maurício Bridi Di Domenico | MARACAÍ             |

**ANNEX V - List of participants of the Manual application courses**

| <b>NUMBER</b> | <b>NAME</b>                            | <b>LOCATION</b> |
|---------------|--|-----------------|
| 1             | Adriana Fernandes Batista              | Cuiabá          |
| 2             | Adriano Souza D'Almeida                | Cuiabá          |
| 3             | Alessandro Yukio Figueiredo Matsubara  | Cuiabá          |
| 4             | Alice Marques da Silva                 | Cuiabá          |
| 5             | Anibal Machado Tannuri                 | Cuiabá          |
| 6             | Artenio Campos                         | Cuiabá          |
| 7             | Benedito Carlos de Almeida             | Cuiabá          |
| 8             | Carlos Alberto Moraes Passos           | Cuiabá          |
| 9             | César Carvalho                         | Cuiabá          |
| 10            | Claudimar Pereira de Sousa             | Cuiabá          |
| 11            | Cléber Lopes                           | Cuiabá          |
| 12            | Darvin Ivan Houklef                    | Cuiabá          |
| 13            | Domingos Roberto Mesquita de Magalhães | Cuiabá          |
| 14            | Fábio Jean Lüdke                       | Cuiabá          |
| 15            | Jânio Cândido Portugues                | Cuiabá          |
| 16            | João Manoel de Souza Peres             | Cuiabá          |
| 17            | Joselito Alves Antunes                 | Cuiabá          |
| 18            | Josimar Barbalho Bezerra               | Cuiabá          |
| 19            | Juliana Silva Delfino                  | Cuiabá          |
| 20            | Junio João da Silva                    | Cuiabá          |
| 21            | Lázaro Ferreira Rodrigues              | Cuiabá          |
| 22            | Loise Nunes Velasco                    | Cuiabá          |
| 23            | Luciana Ferraz                         | Cuiabá          |
| 24            | Marcelo de Freitas Silva               | Cuiabá          |
| 25            | Márcia Sulek de Carvalho               | Cuiabá          |
| 26            | Marcos Leandro Garcia                  | Cuiabá          |
| 27            | Maria Alice Corrêa Tocantins           | Cuiabá          |
| 28            | Maria Lenice Mattos Conceição          | Cuiabá          |
| 29            | Maritsa Missae Sonohata                | Cuiabá          |

| <b>NUMBER</b> | <b>NAME</b>                           | <b>LOCATION</b> |
|---------------|---------------------------------------|-----------------|
| 30            | Maurício Bridi di Domenico            | Cuiabá          |
| 31            | Mauro Matricardi                      | Cuiabá          |
| 32            | Navarro da Costa Ferreira Júnior      | Cuiabá          |
| 33            | Nitza Natalia Diniz                   | Cuiabá          |
| 34            | Orenil de Andrade                     | Cuiabá          |
| 35            | Oscarlina de Jesus                    | Cuiabá          |
| 36            | Paulo Celso Alvarez Ramires           | Cuiabá          |
| 37            | Roberto Corrêa de Arruda              | Cuiabá          |
| 38            | Rozimeiry Gomes Bezerra               | Cuiabá          |
| 39            | Tânia de Fátima de Deus Rosa          | Cuiabá          |
| 40            | Tarcísio da Silva Santos Júnior       | Cuiabá          |
| 41            | Tarcísio José Gualberto Fernandes     | Cuiabá          |
| 42            | Tatiane Frosi                         | Cuiabá          |
| 43            | Vanderson Luiz Schmidtfrozi           | Cuiabá          |
| 44            | Vera Maria Gouveia                    | Cuiabá          |
| 45            | Wagner Diogo Rondini                  | Cuiabá          |
| 46            | Alfrio de Macedo Mory                 | Belém           |
| 47            | Alisson Rodrigo Souza Reis            | Belém           |
| 48            | ANA CRISTINA MAGALHÃES CARVALHO       | Belém           |
| 49            | Anadilza Maria Valente Baima          | Belém           |
| 50            | Breno Pinto Rayol                     | Belém           |
| 51            | Carmen Roseli Caldas Menezes          | Belém           |
| 52            | Cecília Hernandez Ochoa Coutinho      | Belém           |
| 53            | CRISTIANE ROSÁRIO DO MONTEIRO         | Belém           |
| 54            | Eduardo Santos Pereira                | Belém           |
| 55            | Elton Luciano Correa Ribeiro          | Belém           |
| 56            | Fabrizia de Oliveira Alvino           | Belém           |
| 57            | Gabriela Costa de Sousa               | Belém           |
| 58            | George Adriano Tavares Silva          | Belém           |
| 59            | Iracema Maria Castro Coimbra Cordeiro | Belém           |
| 60            | Jakeline Ramos de Carvalho            | Belém           |

| <b>NUMBER</b> | <b>NAME</b>                          | <b>LOCATION</b> |
|---------------|--------------------------------------|-----------------|
| 61            | João Ricardo Vasconcellos Gama       | Belém           |
| 62            | Jorge Fernando Barros de Freitas     | Belém           |
| 63            | José de Sousa Teixeira Júnior        | Belém           |
| 64            | José Luis Rabello da Silva           | Belém           |
| 65            | José Luís Said Cometti               | Belém           |
| 66            | Lia Mara Rabelo Vasconcelos          | Belém           |
| 67            | Mara Souza dos Santos Fonseca        | Belém           |
| 68            | MARCELA GOME DA SILVA                | Belém           |
| 69            | Márcia Orié de Sousa Hamada          | Belém           |
| 70            | Marcos Paulo Mamoré Fernandes        | Belém           |
| 71            | Mariana Fellows Garcia               | Belém           |
| 72            | Mario Artur Nunes Vitor              | Belém           |
| 73            | Marivalber Guimarães de Lima         | Belém           |
| 74            | Mauro Seródio Silva Araújo           | Belém           |
| 75            | Paulo Roberto da Gama Bittencourt    | Belém           |
| 76            | Raquel do Socorro Pereira de Miranda | Belém           |
| 77            | ROBSON JOSÉ CARRERA RAMOS            | Belém           |
| 78            | Rodrigo Cunha da Silva               | Belém           |
| 79            | Rogério Puerta                       | Belém           |
| 80            | Ruy de Nazaré de Souza Lima          | Belém           |
| 81            | Sabrina Santos Ribeiro               | Belém           |
| 82            | SANDRA DEZUITE BALIEIRO DA SILVA     | Belém           |
| 83            | Sérgio Souza                         | Belém           |
| 84            | Sidiane Costa de Lima                | Belém           |
| 85            | Silvio César de Abreu Oliveira       | Belém           |
| 86            | Simonne Sampaio da Silva             | Belém           |
| 87            | Thiago Almeida Vieira                | Belém           |
| 88            | Ulisses Sidnei Da Conceição Silva    | Belém           |
| 89            | Valquiria Souza Miranda              | Belém           |
| 90            | Wilzer Cristiane Lopes Gonçalves     | Belém           |
| 91            | Joaquim Lima Lobato                  | Belém           |

| <b>NUMBER</b> | <b>NAME</b>                       | <b>LOCATION</b> |
|---------------|-----------------------------------|-----------------|
| 92            | João da Cunha Mourão              | Belém           |
| 93            | Zilma Patrícia Dias do Nascimento | Belém           |
| 94            | João Leite Santiago Jr.           | Belém           |
| 95            | Klewton O. Pinheiro               | Belém           |
| 96            | Helaine Kéllem O. Dias            | Belém           |
| 97            | Victor Hugo P. Moutinho           | Belém           |
| 98            | Silvana B. Maves de Medeiros      | Belém           |
| 99            | Rosiene K. B. da Paixão           | Belém           |
| 100           | Elaine F. de Almeida              | Belém           |
| 101           | Eliezer Santana                   | Belém           |
| 102           | Fernando P. Barbosa               | Belém           |
| 103           | Oder José C. Gurgel               | Rio Branco      |
| 104           | Antonio Gilson Gomes Mesquita     | Rio Branco      |
| 105           | Frederico Soares Machado          | Rio Branco      |
| 106           | Rocio Chacchi Ruiz                | Rio Branco      |
| 107           | Pedro Arruda Campos               | Rio Branco      |
| 108           | Augusto Magg                      | Rio Branco      |
| 109           | Edilson Marques Silva             | Rio Branco      |
| 110           | Francisco Samonek                 | Rio Branco      |
| 111           | Roberto O. Mendonça               | Rio Branco      |
| 112           | Marineide da Silva Maia           | Rio Branco      |
| 113           | José Luiz Purri                   | Rio Branco      |
| 114           | Geraldo Divinode Assis            | Rio Branco      |
| 115           | Geasy Martins Miranda             | Rio Branco      |
| 116           | André Gomes                       | Rio Branco      |
| 117           | Roberta Graf                      | Rio Branco      |
| 118           | Marcelo Takaki                    | Rio Branco      |
| 119           | Elsa Mendoza                      | Rio Branco      |

**ANNEX VI - List of participants of the Forest Audit courses**

| <b>NUMBER</b> | <b>NAME</b>                     | <b>LOCATION</b> |
|---------------|---------------------------------|-----------------|
| 1             | Ademar Takeo Matsunaga          | Brasília, DF    |
| 2             | Alexandre Florian da Costa      | Brasília, DF    |
| 3             | André Luiz Baby                 | Brasília, DF    |
| 4             | Antonio Marcos Generoso Cotta   | Brasília, DF    |
| 5             | Carlos Chagastelis Martins Leal | Brasília, DF    |
| 6             | Dinarte Adão Corazza            | Brasília, DF    |
| 7             | Donizeti Barbosa de Oliveira    | Brasília, DF    |
| 8             | Eliezer Santana                 | Brasília, DF    |
| 9             | Fábio Solter                    | Brasília, DF    |
| 10            | Fernando Castanheira Neto       | Brasília, DF    |
| 11            | Fernando de Oliveira Santos     | Brasília, DF    |
| 12            | Fernando Dorta M. de Souza      | Brasília, DF    |
| 13            | Gilson F. Silva                 | Brasília, DF    |
| 14            | Glauco de Oliveira Gonzales     | Brasília, DF    |
| 15            | Jansen Custódio                 | Brasília, DF    |
| 16            | João Carlos Nolêto Ribeiro      | Brasília, DF    |
| 17            | Joaquim Carlos Gonzalez         | Brasília, DF    |
| 18            | José Paulo Andahur              | Brasília, DF    |
| 19            | José Ricardo M. V. A. Neto      | Brasília, DF    |
| 20            | Leila do Vale Monteiro          | Brasília, DF    |
| 21            | Leonardo Machado Rocha          | Brasília, DF    |
| 22            | Marcos de Matos Ramos           | Brasília, DF    |
| 23            | Mardel Moraes Teixeira          | Brasília, DF    |
| 24            | Maria Tereza Rodrigues Rezende  | Brasília, DF    |
| 25            | Mario Augusto Cardoso           | Brasília, DF    |
| 26            | Rafael Magalhães Ferreira       | Brasília, DF    |

| <b>NUMBER</b> | <b>NAME</b>                  | <b>LOCATION</b> |
|---------------|------------------------------|-----------------|
| 27            | Rafaelo Balbinot             | Brasília, DF    |
| 28            | Ricardo Montagna             | Brasília, DF    |
| 29            | Silvio Pedreira P. de Sá     | Brasília, DF    |
| 30            | Stênia Alves Guimarães       | Brasília, DF    |
| 31            | Adisnei Barzotto Ribeiro     | Xerém, RJ       |
| 32            | Ana Carolina Ferraro         | Xerém, RJ       |
| 33            | Ana Luiza de Campos Paula    | Xerém, RJ       |
| 34            | Andréa Barroso Melo          | Xerém, RJ       |
| 35            | Cristina Ebersbach Aznar     | Xerém, RJ       |
| 36            | Dirk Adler                   | Xerém, RJ       |
| 37            | Dulcemary Uchoa Ribeiro      | Xerém, RJ       |
| 38            | Elaina Aparecida Rodrigues   | Xerém, RJ       |
| 39            | Glauber M. Sumar Pinheiro    | Xerém, RJ       |
| 40            | José de Paula Diniz          | Xerém, RJ       |
| 41            | Karla Cristina Diniz Falcão  | Xerém, RJ       |
| 42            | Laerte Almeida de Figueiredo | Xerém, RJ       |
| 43            | Luiz Henrique O. Wilhers     | Xerém, RJ       |
| 44            | Maurício Péricles D. Pereira | Xerém, RJ       |
| 45            | Paulo Sérgio da S. Souto     | Xerém, RJ       |
| 46            | Ricardo Bonato Dias          | Xerém, RJ       |
| 47            | Robson Reis Santiago         | Xerém, RJ       |
| 48            | Samuel Pereira de Freitas    | Xerém, RJ       |
| 49            | Sandra Magalhães Saraiva     | Xerém, RJ       |
| 50            | Teófilo Said Neto            | Xerém, RJ       |
| 51            | Tiago Leal Agne              | Xerém, RJ       |
| 52            | Ubirajara Melato Brasil      | Xerém, RJ       |
| 53            | Adelar Becalli               | Cuiabá, MT      |



| <b>NUMBER</b> | <b>NAME</b>                  | <b>LOCATION</b> |
|---------------|------------------------------|-----------------|
| 54            | Afrânio César Migliari       | Cuiabá, MT      |
| 55            | Álvaro F. C. Leite           | Cuiabá, MT      |
| 56            | Antonio Carlos Rebouças Lins | Cuiabá, MT      |
| 57            | Carlos A. M. Passos          | Cuiabá, MT      |
| 58            | Celso Fenoy bins             | Cuiabá, MT      |
| 59            | Dino Cesar de M. Lameira     | Cuiabá, MT      |
| 60            | Evaldo M. Braz               | Cuiabá, MT      |
| 61            | Eliane Carvalho de Jesus     | Cuiabá, MT      |
| 62            | Eurico Arteaga Santiago      | Cuiabá, MT      |
| 63            | Gilberto Fiocco              | Cuiabá, MT      |
| 64            | José de Paula Diniz          | Cuiabá, MT      |
| 65            | José Franklim Chichorro      | Cuiabá, MT      |
| 66            | José Jorge de A. Bahia       | Cuiabá, MT      |
| 67            | José Juarez P. de Faria      | Cuiabá, MT      |
| 68            | juliana de Paiva Nunes       | Cuiabá, MT      |
| 69            | Laura Cristina B. Da Silva   | Cuiabá, MT      |
| 70            | Mariani Teixeira Monteiro    | Cuiabá, MT      |
| 71            | Moacyr Araújo Silva          | Cuiabá, MT      |
| 72            | Orlando Assumpção            | Cuiabá, MT      |
| 73            | Oscarlina de Jesus           | Cuiabá, MT      |
| 74            | Paulo Pompermayer Neto       | Cuiabá, MT      |
| 75            | Péricles Baicere Schmidt     | Cuiabá, MT      |
| 76            | Renato Cândido de Souza      | Cuiabá, MT      |
| 77            | Ricardo Carneiro B. Campello | Cuiabá, MT      |
| 78            | Robson de Almeida Britto     | Cuiabá, MT      |
| 79            | Rosimeiry Gomes Bezerra      | Cuiabá, MT      |
| 80            | Sandro Andreani              | Cuiabá, MT      |

| <b>NUMBER</b> | <b>NAME</b>                         | <b>LOCATION</b> |
|---------------|-------------------------------------|-----------------|
| 81            | Versides S. de Moraes Silva         | Cuiabá, MT      |
| 82            | Waldete Gomes de S. Cintra          | Cuiabá, MT      |
| 83            | Wellington Albuquerque Neiva        | Cuiabá, MT      |
| 84            | Marcelo de Freitas Silva            | Cuiabá, MT      |
| 85            | Ozana Rosala da Silva               | Cuiabá, MT      |
| 86            | Carlos Alberto Almeida Gonçalves    | Belém, PA       |
| 87            | Cilene do Socorro Saraiva da Silva  | Belém, PA       |
| 88            | Cléo Gomes da Mota                  | Belém, PA       |
| 89            | Dilce Maria Oliveira da Mota        | Belém, PA       |
| 90            | Dulce Helena Martins Costa          | Belém, PA       |
| 91            | Edna Gomes Tenório Guimarães        | Belém, PA       |
| 92            | Eduardo da Silva Barreto            | Belém, PA       |
| 93            | Fábio Leônidas Campos dos Santos    | Belém, PA       |
| 94            | Francisco José Pimentel Guimarães   | Belém, PA       |
| 95            | Guilherme Carvalho                  | Belém, PA       |
| 96            | Joaquim Lima Lobato                 | Belém, PA       |
| 97            | Jose Augusto Pereira Carneio Muniz  | Belém, PA       |
| 98            | José Ribamar de Souza Pantoja       | Belém, PA       |
| 99            | Laerte Almeida de Figueiredo        | Belém, PA       |
| 100           | Marcelo Gonçalves Cortez            | Belém, PA       |
| 101           | Marcelo Schmid                      | Belém, PA       |
| 102           | Marcos Paulo Mamoré Fernandes       | Belém, PA       |
| 103           | Maristela Machado Araújo            | Belém, PA       |
| 104           | Miguel Lanzaolo de Paula            | Belém, PA       |
| 105           | Nara Cinthia Cardozo Pinheiro Silva | Belém, PA       |
| 106           | Nilson César Corrêa Padilha         | Belém, PA       |
| 107           | Osana do Socorro Leal da Silva      | Belém, PA       |

| <b>NUMBER</b> | <b>NAME</b>                    | <b>LOCATION</b> |
|---------------|--------------------------------|-----------------|
| 108           | Oswaldo de Carvalho Junior     | Belém, PA       |
| 109           | Paulo Augusto Lopes de Barros  | Belém, PA       |
| 110           | Rivaldo Lopes de Andrade       | Belém, PA       |
| 111           | Rodrigo Antonio Pereira Junior | Belém, PA       |
| 112           | Rodrigo Ritzmann Feijó         | Belém, PA       |
| 113           | Samuel Corrêa Pereira          | Belém, PA       |
| 114           | Sílvia Maria Alves da Silva    | Belém, PA       |
| 115           | Vanise Barbosa de Almeida      | Belém, PA       |