



COMPLETION REPORT OF PROJECT SUSTAINABLE MANAGEMENT OF PRODUCTION FORESTS AT THE COMMERCIAL SCALE IN THE BRAZILIAN AMAZON – PHASE II

ITTO PD 452/07 Rev.5 (F)

BRAZILIAN GOVERNMENT

Executive Agency

EMPRESA BRASILEIRA DE PESQUISA
AGROPECUÁRIA

EMBRAPA AMAZÔNIA ORIENTAL

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List of Abbreviations and Acronyms

ABC	Brazilian Cooperation Agency
BOManejo	Bom Manejo (software tool for timber harvest planning and management)
CDS	Committee for Sustainable Development of Porto de Moz
CFM	Community Forest Management
CFME	Community Forest Management Entrepreneur
CFMP	Community Forest Management Plan
CU	Conservation Unit (area under legal environmental protection)
EA	Executive Agency
Embrapa	Brazilian Agricultural Research Corporation
FIDESA	Institute Foundation for the Development of the Amazon
FMP	Forest Management Plan
GGF	Forest Management Group (group of Community Forest Management Entrepreneurs)
GPS	Global Positioning System
IBAMA	Brazilian Institute for Environment and Renewable Natural Resources
ICMbio	Chico Mendes Institute for Biodiversity Conservation
IDEFLOR-Bio	Institute for Forest Development and Biodiversity of Pará State
IEB	International Institute of Education of Brazil
IFPA	Federal Institute of Pará
IFT	Tropical Forestry Institute
IT	Information Technology
IMAFLOA	Institute of Agricultural and Forestry Management and Certification
ITTO	International Tropical Timber Organization
IUFRO	International Union of Forestry Research Organization
MEOF	Economic Monitoring of Forest Operations
MFT	Tropical Forest Monitoring (software tool)
MMA	Brazilian Ministry for Environment and Climate Change
MOP	Monitoring of (Forest Management) Operational Performance (software tool)
MRE	Brazilian Ministry of Foreign Affairs
NGO	Non-Governmental Organization

PD	Project Document
PRODES	Legal Amazon Deforestation Monitoring Project
RESEX	Extractive Reserve
SDG	Sustainable Development Goals
SFB	Brazilian Forest Service
SFM	Sustainable Forest Management
UFOPA	Federal University of West
UFPA	Federal University of Pará
UFRA	Federal Rural University of Amazônia
USD	United States Dollar
VpS	Verde para Sempre

Project Brief

The present Project “Sustainable Management of Production Forests at the Commercial Scale in the Brazilian Amazon – Phase II” had the final objective to encourage the adoption of good forest management practices by timber enterprises in the Brazilian Amazon. It was a follow up of Project PD 57/99 Rev.2 (F) with the same title. During the first phase, a set of silvicultural and managerial tools were developed to support enterprises working in terra firme forests of the Brazilian Amazon in planning, implementing and monitoring its operations to achieve sustained financial benefits under current and foreseeable environmental and social conditions. The here reported second phase Project (PD 452/07) focused on the transfer of these tools to timber enterprises and governmental agencies in the Amazon.

In detail, the Project originally foresaw to consolidate the Sustainable Forest Management (SFM) tools, but a necessary step beyond was taken and the tools were transcribed to another programming language to ensure their compatibility with modern computer operation systems as well as their maintenance in the long term. To multiply the transfer of the SFM tools to potential end users, capacities for training and capacitation were built up in cooperation with universities in the Amazon Region. Training courses were held for professionals of timber enterprises, governmental agencies responsible for forest management and young professionals and post-graduate students.

Another important priority was the dissemination of the tools and SFM itself as a strategy for forest conservation combined with economic and social benefits. A series of events were held and promoted, flyers and videos published, and the project team participated in a wide spectrum of national and international events. The project and its achievements have been disseminated to a large audience of relevant stakeholders.

Essentially due to the Covid19 Pandemic the Project’s foreseen duration of three years was finally more than doubled. This was possible with a proper management of the financial resources, without budget expansion.

During the Project it was decided to include a new and upcoming group in the regions commercial timber production: Community Forest Management Entrepreneurs (CFME). This meant an expansion of the Projects’ development objective which initially pointed only to medium and large-scale enterprises. The reason to include CFMEs were their high potential for Forest Conservation, social inclusion and socio-economic benefits in general combined with a high need for technical assistance and support. The decision took the Project into the center of attention about the present political discussion about CFM and led to new partnerships including government, grass root organizations and NGOs. The experiences were incorporated in a new project proposal submitted to ITTO in April 2024 (Sustainable Management of Production Forests driven by traditional Communities in The Brazilian Amazon, PD 938/24).

1 Project Identification

PROJECT NUMBER:	PD 452/07 Rev.5 (F)		
STARTING DATE:	August 1 st , 2017		
PROJECT DURATION:	3 years (originally; extended to April 30 th , 2024 – 81 month)		
PROJECT COSTS (USD)	ITTO	556,963.00	
	EMBRAPA	576,807.00	
	MMA	263,271.00	
	IFT	50,850.00	
	TOTAL(US\$)	1,447,891.00	
REPORT TITLE:	SUSTAINABLE MANAGEMENT OF PRODUCTION FORESTS AT THE COMMERCIAL SCALE IN THE BRAZILIAN AMAZON – PHASE II		
PROJECT COORDINATOR:	Milton Kanashiro (milton.kanashiro@embrapa.br)		

1.1 Context

The present project was conceived to enhance Tropical Forest Management in the Brazilian Amazon Region, which extends over 5 million km², about 75% of which is under forest cover. Wood production is an important element of local economy

In the time when the present project was proposed in 2007 Amazonia had about 20 million inhabitants, the region contributed to around 6 to 7 % of the country's GDP. In 2004 the estimated number of 3,100 timber operators based in the region extracted 24.5 million m³ round wood, representing 80% of the country's production from native forests.

This number changed since then. The production of roundwood in the Amazon region diminished and oscillated from 2010 to 2022 between 9 and 13 million m³. The explored forest area to provide this timber can only be roughly estimated since reliable data are not available but should be around 500 thousand ha.

(IBGE 2024 <https://anuario.ibge.gov.br/2023/territorio/recursos-naturais-e-meio-ambiente/aeb-2023-tabelas-recursos-naturais-e-meio-ambiente/22281-producao-de-madeira-em-tora.html>. [IMAZON 2022. https://imazon.org.br/wp-content/uploads/2022/06/Evolucao-do-Setor-Madeireiro-na-Amazonia-de-1980-a-2020.pdf](https://imazon.org.br/wp-content/uploads/2022/06/Evolucao-do-Setor-Madeireiro-na-Amazonia-de-1980-a-2020.pdf))

1.2 Origin and problem

The present Bom Manejo Phase II Project is a follow up of the first phase (PD 57/99 Rev.2 (F)) with the same title, "Sustainable Management of Production Forests at the Commercial Scale in the Brazilian Amazon", proposed in 1999 which started in November 1st, 2002 and was concluded at the end of 2007 (duration 62 month).

The first as also the present second phase focused on the need for adoption of fair management practices which has been low and also on the general low level of professionalism of the sector to be found at all enterprise levels, including forest managers, administrative staff including forest engineers, operators and forest workers, who are working with management tools far away from being suitable with regards to the existing demands and capacities of the sector.

In the first phase five computer aided managerial and silvicultural tools had been developed: (1) Monitoring Forest Dynamics - MFT, (2) Harvesting Planning and Control of Forest Production - originally PLANEJO, today named BOManejo, (3) Development of Volume Equations - SMALIAN, (4) Economic Monitoring of Forest Operations – MEOF and (5) Monitoring of Forest Management Operational Performance – MOP. Additionally, four guidelines had been published which treated Good Forest Management, Book-Keeping of Forest Operations, Assessment of Social Work and Auditing of Forest Management Plans. This first project partnered with the federal government, international research institutions and middle and large sized private timber companies.

The present Bom Manejo Phase II project was proposed in 2007 but implemented only in 2017. It focused on the enhancement of the computer tools developed in the first phase and their dissemination via a set of activities including the training of multipliers. Partnerships with forest entrepreneurs and the intention to verify the impact of the introduction of these tools in their management and administration processes has been another important focus as well as a policy brief for further measures to enhance forest management in the Amazon region.

Under the partners continued the Federal Ministry for Environment and their respective organs of control and support, today the Brazilian Forest Service (SFB) and the Institute for Biodiversity Conservation (ICMBio).

While during the first project phase the EA partnered with middle and large-scale timber enterprises, during the second phase Community Forest Entrepreneurs were included, which had an important influence on the project approach.

2 Project Objectives and implementation strategy

2.1 Development Objectives

The original development objective of the Project approved in 2007 had been to encourage the adoption of sustainable forest management (SFM) by medium and large size timber enterprises in terra firme forests of the Brazilian Amazon.

This objective has been widened by the inclusion of Community Forest Entrepreneurs because these actors achieved increasing importance regarding the production of roundwood in the Amazon region and the further potential is even higher because a proportionally significant area of public forests suitable for timber production in the region are viable to Community Forest Management (CFM) Projects. Community driven sustainable production has a high potential for the improvement of communities' livelihoods and social inclusion and, due to the bond of the traditional population to the Amazon biome, also for forest conservation. At the same time Community Entrepreneurs have a high need for technical assistance and support.

2.2 Specific Objectives

Increase the efficiency of relevant training and dissemination organizations to foster the adoption of SFM tools by timber enterprises and government environmental agencies responsible for forest management in the Amazon.

2.3 Implementation Strategy

The implementation strategy to achieve the specific objective was to enhance the SFM tools developed in the first phase of the Bom Manejo Project line, guarantee their maintenance and to strengthen key organizations for training and dissemination of the tools.

Enhancement and Maintenance

During the period between project approval and implementation (2007 to 2017) the EA had developed an internal IT sector which would be responsible for the enhancement and maintenance of the tools. This was not conceived in the original Project. Also, the tools had been programmed in an older platform and the compatibility with modern operating systems was not given. In order to ensure both, enhancement and maintenance, the tools had to be transcribed to another platform, to ensure modern requirements of functionality and

compatibility. As to be shown in chapter 3, these demands lead to adoptions to the original implementation strategy, putting more weight on the EAs Project team regarding the tasks of training and dissemination.

Dissemination

As key organizations for dissemination the Project focused on universities because of their task of education and training of professionals for the forest sector and their potential for extension and capacitation for external actors. The strategy was to train university personnel and to stimulate them to capacitate end users of the tools.

Inclusion of Community Forest Entrepreneurs proponents of Forest Management Plans in addition to medium and large-scale timber enterprises

In terms of implementation strategy, the inclusion of community forest actors led to expressively more interdisciplinary and interinstitutional arrangement with NGOs and civil society, covering issues of governance, community organization and capacities in management and administration.

3 Project Performance (Project elements planned and implemented)

3.1 General Considerations

In general, the project achieved its objectives through an intense agenda of activities, both in the field and in training courses. Institutional arrangement allowed the project's actions to be incorporated by other partners and carried out jointly.

Although this overall positive conclusion, it seems important for the understanding of the Projects performance that the coordination faced unusual challenges with considerable impact which forced adaptations of tactics and agenda. The three most important were the following:

- 1. Changes in the forest sector**

The Project Bom Manejo Phase 2 was approved in 2007 but the implementation began in 2017, almost a decade later. In this period the timber producing Forest Sector in the Brazilian Amazon changed significantly. Forest Concession based management had been established and Forest Community Management - CFM appeared to be a new model for commercial timber production with great appeal for forest conservation, socioeconomic benefit and social inclusion of peripheric rural communities but lacking technical assistance and support.

- 2. Computer technology and programming**

The programming platform on which the computer aided tools had been developed had been considered advanced in Bom Manejo phase 1, but did not match the requirements of operating systems and lacked compatibility with the advanced computer and internet technology ten years later.




- 3. Covid19 Pandemic**

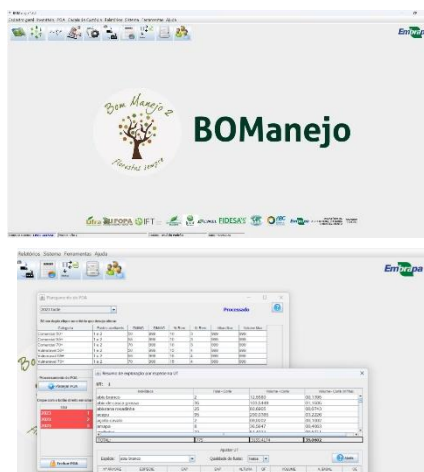
The Covid19 Pandemic had a profound impact on the Projects performance, because presential meetings and capacitation measures could not be carried out safely and adequately for more than 2,5 years. Additionally, the contact restrictions caused not only the interruption of activities but also the disruption of arrangements set in the first two years of the project. As to be shown also the partner organizations suffered under these interruptions and disruptions which caused additional, not expected problems.

These three factors have forced several adaptations to the original Project proposal which will be cited repeatedly in the follow.

3.2 Performance

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION
3.2.1 Output 1: Ten organizations for training and dissemination trained in using SFM tools		
<p>Overall Performance:</p> <p>In the first two project years the EA identified Institutions of Higher Educations as the most promising multipliers for the dissemination of the Bom Manejo silvicultural and managerial software tools. Effectively 5 institutions with 10 different campi have been prioritized and lecturers have been trained. For the purpose of replication of these trainings didactical material software installations, manuals and datasets for demonstrative purposes have been put at disposal. Already in the first capacitation potential end users have been integrated and, in this sense, activities related to output 2 had been anticipated.</p>		
Activity 1.1 Establishment of strategies and work plans for the transfer of SFM tools		
<p>Performance:</p> <p>The strategy for transferring the SFM tools established in the years 2017 and 2018 was to prioritize institutions of higher education because they routinely reach out to hundreds of graduate and postgraduate students and they also are hold to engage in extension activities in benefit of external actors. So, the strategy foresaw training university lecturers, promote the inclusion of the SFM tools in several disciplines and stimulate joint projects for extension courses for professionals in governmental agencies and private enterprises.</p>		
Activity 1.2 Establishment of institutional arrangements with selected organizations for training and dissemination to carry out training activities about SFM tools		
<p>Performance:</p> <p>Arrangements have been established in Pará State with UFRA (3 campi - Belém, Capitão Poço, Altamira); UFPA (Altamira, Rio Xingú), UFOPA (Santarém) IFPA (Castanhal). The Project experienced difficulties to extend these arrangements to other states, because the lecturers needed to establish personal contacts with the project team.</p>		
Activity 1.3 Elaboration of training programs and teaching material for each SFM tool		
<p>Performance:</p> <p>The project team prepared programs and material consisting of</p> <ul style="list-style-type: none"> • PowerPoint presentations containing context, purpose, theoretical base and functions of the softwares creating links to their application and manuals by screenshots. • Revised software manuals and relevant publications regarding theoretical backgrounds. • Data bases for demonstrative purposes • Training material for data input (database configuration and digiting of samples) and analysis. <p>These materials have been used during the training courses and put at the disposal of the lectures during the courses for further use.</p>		
Activity 1.4 Training courses for collaborating organizations for training and dissemination		
<p>Performance:</p> <p>Training courses for lectures of the institutions cited under activity 1.2 have been executed. These courses, since the beginning, had been held open to a broader public, especially potential end users, like forest engineers working in the forestry sector, technicians from governmental and non-governmental organizations. In this sense the Project consciously merged the activities related to output 1 and 2 because, in practice, this appeared to be more efficient.</p>		

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION
3.2.2 Output 2 Users of SFM tools trained		
<p>Overall Performance:</p> <p>The execution of activities regarding output 2 had been impacted by the dynamics of the IT sector which led to the necessity to transfer the SFM tools to another programming platform, which the EA chose to be Java. These transcriptions were more costly and time-spending as hoped with the effect that the tools were constantly changed and improved. This meant that the training courses had to be accompanied by the project team in any case. Also, the university lectures needed more time to sufficiently dominate the tools to be able to replicate the teachings and additionally almost all partner institutions needed a certain time to formalize new contents in their curricula. This together led to that most of the training of end users has been performed directly by the EA Project team. To assure the achievement of the project goals the training course continued during the whole project period and beyond.</p>		
<div>  <p>CAPACITAÇÕES NO ESTADO DO PARÁ, BRASIL</p> <ul style="list-style-type: none"> BELEM: 354 PARAGOMINAS: 90 CASTANHAI: 85 SANTAREM: 54 PARAUAPERBAS: 46 CAPITÃO POÇO: 33 PORTO DE MOZ: 30 MARABÁ: 20 <p>TOTAL: 712</p> </div> <div>  <p>Left: Group of students after a training course treating the SFM tool BOManejo at UFRAs campus in Belém, .</p> </div> <div>  </div> <p>In this changed constellation activities 2.2 - supervision of courses and 2.3 - evaluation of courses became obsolete and no more necessary. Time and resources for these activities have been concentrated to the capacitation of end users by the project team.</p> <p>Until the end of the Project end users have been trained in the application of at least one of the SMF tools prompted by the Project. The public is composed by professionals of forest enterprises and governmental agencies, students of graduate and postgraduate courses and NGOs. The graphic at left illustrates the number of trained people in the state of Pará.</p>		
Activity 2.1 Training courses organized by collaborating organisations for training and dissemination in the application of SFM tools		
Performance: (compare overall performance)		
Activity 2.2 Supervision of training activities by project staff		
Performance: (compare overall performance)		
Activity 2.3 Evaluation of training courses by project staff and collaborating organizations for training and dissemination		
Performance: (compare overall performance)		
3.2.3 Output 3 Five SFM computer tools consolidated, translated into Spanish and disseminated		
<p>Overall Performance:</p> <p>The validation and consolidation of Bom Manejo computer tools turned out to be more than a project activity but a</p>		

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION
constant task for the EA which began with the Bom Manejo 2 Project and continues beyond it. The processes promoted had been different for each tool: in the cases of BOManejo and MEOF special workshops have been organized to define the development strategy and activities, in the cases of MOP and MFT the processes were defined in constant consultations with governmental and research institutes. As mentioned, unfortunately, the consolidation of the tools has been much more costly and time spending than projected in the proposal conceived in 2007, because it was necessary to transcribe the tools into another code (Java) to ensure compatibility and maintenance. On the other hand, fortunately, the EA, had successfully strengthened its own IT sector during the ten years between conceiving and implementing the Project and therefore the task to develop a strategy to ensure the maintenance of SFM computer tools (Activity 3.3) - to certain extent - was already resolved: Embrapa included the tools in its data system and technicians in the IT sector are responsible for their maintenance.		
Activity 3.1 Evaluation and validation of SFM computer tools developed in the project 1st phase		
<p>Performance:</p> <p>All the computer tools were evaluated as to their suitability for use in forest management activities in the Amazon region in the months following the implementation of the project. The tools are based on the premise that their use complies with current forestry regulations. In general, the forestry regulations have not changed in any way that would make it impossible to use the tools. Some tools, such as BOManejo and MOP, have even received new versions with new functions and indicators. The process of validating the tools was carried out at the same time as the dissemination activities. This strategy allowed the tools to be constantly evaluated and adjustments to be made if necessary.</p> <p>BOManejo</p> <p>Among timber enterprises the BOManejo tool is the most popular, because it supports the vital process of production management. Hence, the demands for adaptation and optimization are constant. Still in the first year of the Project the tool had been officially launched, but a year later a, in April 2019 a 3 days workshop entitled “BOManejo quo vadis?” was organized at Embrapa in Belém with professionals from timber enterprises, governmental agencies, university teachers, researchers and NGO members. The objective was to discuss and analyze suggestions for improvement, corrections, extensions and the connectivity with other computer applications including the use of the tool in combination with the governmental licensing systems for forestry activities in the Amazon. The results have been resumed in a long “to do” list of suggestions and guided the further development of the tool. Probably the most important demand was to create a WEB based version which can be accessed from any location, especially attractive for the timber industry acting in the vast Amazon territory. At present a beta version of the “BOManejo WEB” is in restricted circulation and being tested.</p>  <p>MFT</p> <p>The MFT program in version 2008, with SQLServer database manager (MFT V02.2) became practically incompatible with the evolution of the system after Windows XP, several features generated conflicts of use and compromised the quality of the database and its consistence. This fact means that the capabilities for the dissemination of this computational application (MFT Software) were compromised. This tool, in addition to processing forest monitoring data, stores continuous monitoring data (robust Database). In view of the importance of the applicability and use of the tool, updates were carried out and new important functionalities for forest monitoring were added, generating the new version of MFT in Java.</p> <p>This computer tool is now fully compatible with modern operating systems allowing continued maintenance and updates of the software. Additionally, it gained new important functionalities which, all together, contributed to an increased acceptability and dissemination. The tool has been used by concessionary companies and technicians trained at universities in the state of Pará. The current version ensures easy accessibility and high quality and data processing capacity for monitoring forest dynamics.</p>		

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION
<p>MOP</p> <p>The MOP software has a set of over 600 verifiers associated with criteria and indicators of sustainability. The verifiers are grouped into five types of monitoring: monitoring for research, inspection of management plans, forest certification, assessment of the impacts of logging operations and operational monitoring. The software was evaluated and validated by the project team in partnership with the IFT. The verifiers were tested in an initial monitoring exercise carried out in the managed areas of the 6 communities in the Verde para Sempre RESEX¹. It is important to mention the collective construction of the Community Forest Management Monitoring Type, carried out with the IFT. Between February and July 2019, a series of meetings were held between Embrapa researchers and the IFT team to select MOP verifiers and create new verifiers for community forest management. In March 2019, for two days, a team of researchers, technicians and engineers held discussions with 60 members of 5 forest communities. A total of 96 verifiers were adapted and validated ². In July 2019, 12 community managers and 2 resident forest engineers from the Verde Para Sempre Reserve were trained to monitor community forest management activities using the MOP verifiers.</p> <p>https://www.ift.org.br/wp-content/uploads/2020/06/Boletim-Técnico14.pdf</p> <p>MEOF</p> <p>The tool for Economic Monitoring of Forest Operations (MEOF) has been designed to accompany financial aspects of timber production. Its implementation is exceptionally onerous for an enterprise, because it demands training of a significant amount of personnel and real time data collection for a long period. Hence, the intention was to flexibilize the tool and open less exigent options for its use.</p> <p>In October 2018, the 2 day lasting workshop “MEOF - Quo vadis?” was organized at Embrapa in Belém with the participation of members of the coordination team and the IT developers of Bom Manejos in first phase. Concept, potential and challenges of the tool were discussed with Embrapa's IT staff and a perspective for its further development has been formulated and documented (Steinbrenner, M. (2018): “Oficina de Trabalho: MEOF - Quo vadis?”, Protocolo de resultados da oficina e documento base para a adaptação do MEOF, 25 pgs.)</p>		
Activity 3.2 Refinement and elaboration of final version of the validated SFM computer tools and preparation of respective manuals		
<p>Performance:</p> <p>As already mentioned above the Project faced the challenge of the urgent need to transcribe the tools to the JAVA platform to assure compatibility and maintenance. Time and financial resources restricted the goal achievement. Nevertheless, the results have been considerable: BOManejo, MFT and MOP are running on Java with no restrictions for computer operating systems. Smalian, the fifth tool with the purpose to optimize the volumetric timber calculations has been integrated in the BOManejo tool. Only the tool for economic monitoring of the production level, MEOF, could not be adopted to JAVA, due to the lack of time and financial resources. But it is running smoothly on OS Windows and central elements of the methodology have been adapted to a spreadsheet application, without the capability to process large amounts of data, but fit to specific economic research.</p> <p>It seems crucial to mention that the development of the tools did not result in final versions as formulated in the project activity. In point of fact, very likely to the need for software maintenance, the continuous development and improvement appeared to be vital for the software's appeal and success.</p> <p>Links:</p> <p>BOManejo - https://bomanejo-app.a.cnpqc.embrapa.br/</p> <p>BOManejo WEB - https://bomanejo.online/</p> <p>MFT - https://nextcloud.cpatu.embrapa.br/index.php/s/qTBWQgqeisQWda5</p> <p>MOP - https://nextcloud.cpatu.embrapa.br/index.php/s/yZjfm92N8DAJybb</p>		
Activity 3.3 Elaboration of a strategy to ensure maintenance of SFM computer tools		

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION
<p>Performance:</p> <p>Activity 3.3 was formulated by the idealizers of the present Project in a situation in which the EA did not have infrastructure and personnel to guarantee the development and maintenance of the SFM tools. During Bom Manejos first phase all tools, except for BOManejo, had been programmed by contracted external IT experts. This was the reason why in 2007 a specific activity (3.3) was inserted in the Project agenda to assure the maintenance of the tools. Since then, the EA built up a IT sector which nowadays is capable of performing this task. The tools are now included in Embrapa's product portfolio and referenced in the organizations Data Base Management System (SGBD). No specific actions or Project resources have been applied to achieve this result.</p>		
Activity 3.4: Translation and dissemination of refined SFM computer tools		
<p>Performance:</p> <p>Activity 3.4 was not carried out in base of a Steering Committees recommendation, which presumed that the tools met specific conditions of the forest sector in Brazil and the legal and technical frameworks differ much between countries.</p>		
3.2.4 Output 4 Four guidelines to support SFM implementation prepared, translated into Spanish and disseminated		
<p>Overall Performance:</p> <p>The Bom Manejo phase 2 project was set to translate and disseminate the four guidelines for SFM created in the first phase. Early, during the implementation of the present Project the Steering Committee recommended to not prioritize the translation and to concentrate on the transcription and refinement of the SFM computer tools.</p>		
Activity 4.1 Refinement of SFM guidelines developed in the project 1st phase		
<p>Performance:</p> <p>The situation of the four guidelines is commented as follows:</p> <p>Guideline for Good Forest Management in Terra Firme Forests in the Brazilian Amazon.</p> <p>The final version of this guide was published in 2010, 3 years after the Projects approval. Hence, the EA had already anticipated the foreseen project activity. The document had already a broad dissemination in the past and reflects state of art and the Brazilian legislation.</p> <p>Guideline for Assessing the Social Dimension of Forest Management.</p> <p>After considering the guideline produced in the first phase of Bom Manejo Project and a literature review of existing publications available at present, the project co-ordination concluded there is no urgent need to produce a new guideline version for assessing social issues. Since the conception of BOM Manejo phase 2 significant papers about this theme have been published. An excellent example is the publication by Imaflora which provides a systematic inside of criteria and indicators for sustainability with operational suggestions for methods to be applied (Nobre da Silva, A.C. 2012).</p> <p>Field Auditing Manual for Timber Producing Forest Management Plans in the Amazon.</p> <p>The existing document jointly published in 2006 by Embrapa and IBAMA in the context of Bom Manejo phase 1, is still today the official auditing guideline of IBAMA for the monitoring of forest management plans in the Amazon. The project team has been and is in constant consultation with the agency because an actualization of the manual is indicated to include new and modern verification methods and to reduce the set of verifications to achieve a more efficient auditing procedure (received in June 2021). It is of excellent quality and IBAMA, until the end of the present Project did not publish a new version. IBAMA showed interest to adopt the now JAVA based MOP tool and is analyzing the monitoring methodology the Project team developed in cooperation with partner IFT and community forest entrepreneurs in the context of output 6 (memory of the meeting with IBAMA on 10/05/2021).</p> <p>It is important to note that IBAMA suffered significant budget cuts during the Federal Government in charge in the years 2019 until 2022.</p>		

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION
Guidelines for Book-Keeping of Forest Operations. It was intended to replace this guideline for Book-Keeping with a new one focusing on financial administration and management of forest production in the Amazon with the intention to better meet the practical demands of forest enterprises. Already in 2011 the EA published a succinct version with the essential theoretical background of forest economics elaborated by team members of the first phase of the Bom Manejo Project entitled “Costs of Forestry Operations. Notions and Concepts” (“Custos de Operações Florestais: Noções e Conceitos (2011), Pokorny, B.; Palheta, C.; Steinbrenner, M., http://www.infoteca.cnptia.embrapa.br/infoteca/handle/doc/912245). The intention was to combine the guideline with a training course. The base document for this course exists but due to the Covid19 Pandemic and the federal intervention in the Resex Verde para Sempre in 2023 the course could not be tested and validated.		
Activity 4.2 Elaboration of final versions of the refined SFM guidelines		
Performance: (compare activity 4.1)		
Activity 4.3: Translation and dissemination of the SFM guidelines		
Performance: (activity canceled by decision of steering committee)		
3.2.5 Output 5: (Reviewed) Communication and Outreach for Sustainable Forest Management and Conservation of Forest Resources in the Amazon. (Original Output 5: A compendium on current strategies for disseminating SFM tools in Brazil.)		
Overall Performance: The original output 5 was set to construct a dissemination strategy for SFM computer tools in five steps of activities to be finished by a final product in the form of a compendium. The project coordination decided to anticipate this final document by a concept paper entitled “Strategies to socialize computer tools – MFT, NEOF, MOP, and BOManejo and Guidelines to Strengthen Sustainable Forest Management.”, worked out by EAs staff, specialized in transfer of technology to orientate capacitation and dissemination activities of the Project. Instead of the dissemination of the SFM computer tools it appeared to be more urgent to prioritize the communication and outreach for SFM and Forest Conservation in general, themes that had been neglected in the public discussion agenda while the forest sector had passed through profound changes including the surge of the models of forest concessions for big enterprises and community forest management.		
Activity 5.1: Formulation of a methodology for dissemination of SFM tools (revised, anticipating the final product of output 5, compare activity 5.4 in the original version).		
Performance: This activity was initiated during the implementation workshop in 2017. Collaborators have been identified and collaborations had been mapped. Specialists for Technology Transfer out of the EAs staff prepared a document describing the methodological approach for the computer tools and guidelines as the new strategy for the dissemination planned in the second phase of the project. The document “Strategies to socialize computers tool – MFT, MEOF, MOP, and BOManejo and Guidelines to Strengthen Sustainable Forest Management.”. This document was conceived as an internal document to guide capacitation activities, also showing the importance to change the previously planned.		
Activity 5.2: Seminar on technical and institutional aspects related to Sustainable Forestry Timber Production. (= Positive Agenda)		
Performance:		

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION
<p>Having passed 10 years after the approval of the current project, the Amazonian forest sector changed significantly. Federal and State level forest concessions for medium and large-scale enterprises have been established, Community Forest Management surged producing timber in a considerable amount, and the number of forest science courses in Brazil has risen to about 70. Especially worrying was a sensitive change in the public perception and the way the media reported about timber production in the Amazon region, very much due to the fact that, yet, a high percentage of timber production is illegal.</p> <p>In the light of this perception an event entitled “Positive agenda for the Sustainable Forest Management” was organized at EMBRAPA Amazônia Oriental from June 4th to 5th, 2019. The event was intentionally placed to coincide with the week to celebrate the World International Environment Day (05th June 2019). It focused on three main topics of timber production: a) Legal Production, b) Sustainable Management and c) Skills and Abilities of Forestry Professionals.</p> <p>The event was very successful with around 80 participants representing more than 35 institutions from different segments of the forestry sector and it was overwhelmingly welcomed as a long over-due initiative to promote and to renew a dialogue between the sector's stakeholders. The participants came from universities, private companies and wood industry, NGO's, Community Forest Entrepreneurs, research institutes, governmental agencies responsible for licensing and monitoring of SFM plans and forest concessions, finance sector (e.g. Banco da Amazônia).</p> <p>The main output of this event was a list of actions agreed between the participants during the plenary section, listed and disseminated in a flier. The importance of this document lay in the fact that the representatives of institutions felt responsible to support the implementation of the proposed agenda. It was printed in and English, and disseminated in further events and served especially as a preparation for the upcoming IUFRO World Congress Curitiba-PR, Brazil, took place on October 17th to 19ths 2019 where the Bom Manejo Project was very present.</p>		
Activity 5.3: Further agenda for dialogue and dissemination of SFM and Forest Conservation including second edition of Positive Agenda Seminar.		
<p>Performance:</p> <p>Considering the great success of the first Seminar, which lead to the product “Positive Agenda”, the intention was to scale up the initiative by widening the partnerships including Emater (responsible for extension, capacitation and technical assistance), intensify the involvement of governmental agencies like SFB, ICMBio, IBAMA on federal level and agencies of state level like IDEFLOR-Bio and Secretariats for Environment with the goal to construct a brought platform of all relevant institutions and organizations dealing with issues related to the Forestry Sector.</p> <p>However, in 2020, completely unexpected, the COVID-19 Pandemic paralyzed the world as a whole and with it the efforts to pursue this agenda and the second seminar to evaluate and validate the Positiva Agenda had to be postponed, however to keep the importance of the SFM a virtual Live was carried out in September 2020. By the end of the project, the seminar competed with the need for time and resources for other Project activities and urgent demands of partner institutions and after all it could not be carried out as foreseen.</p> <p>Nevertheless, the Project Team and partners made efforts to specially support distant and rural communities. One important platform to coordinate these efforts during the Pandemic has been the Community and Familiar Forest Management Observatory (OMFCF, www.omfcf.org, compare also the publication “The future is NOW” (TFU 2020 Vol.29 (290:12-13)). This article followed a publication which was also translated in Portuguese.</p> <p>During the pandemic COVID-19 several important activities which could be performed in online mode have been developed and these activities somewhat compensated for the lack of field activities and on-site events. By the end of 2020 the Amazônia Forest Forum was reset, which had first been mentioned during a “Scope Dialogue”, held in Belém in August 2019 and was brought back to wider discussion by the Bom Manejo Project Coordination in December of 2020 in the context of the Brazilian National Forest Dialogue Council. The Amazon Forestry Forum - with regional scope - seemed to be very important since illegal logging turned out to be a frequent issue on daily media outlets at the time.</p> <p>During the whole first semester of 2021 there were several meetings to design mission, vision, strategic Objectives and scope of the Amazon Forestry Forum. Finally, the Forum (the 7th Forum) was launched under the umbrella of the National Forest Dialogue on June 16th, 2021. The event was successful and provoked a significant echo in popular media on local and national channels.</p>		

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION
<p>At that same timespan proceeded another articulation on international level, on behalf of the Global Landscape Forum – GLF, The event dedicated to Amazonia (GLF- Amazonia, Sept. 21 to 23, 2021) happened completely virtual, and together with the National Forest Dialogue and Embrapa Amazônia Oriental, under the title “Possible Pathways to Sustainable Forest Management in the Amazon”. It was expected to bring attention from the wide spectrum of national and international societies to the Amazon biome and its potentials for sustainable use and forest conservation. Participants came from science in general, the forestry sector, social movements, including rural communities; themes included women and youth related to Forest Management and Conservation.</p> <p>This virtual event GLF-Amazônia outreached to a broader and international audience and had similar effects that had been expected for the second edition of the Positive Agenda event, which could not take place due to the Covid19 Pandemic. The decisive session has been coordinated by Fernanda Rodrigues and Milton Kanashiro (coordination Bom Manejo). The central theme of the session was forest management considering social, environmental and economic aspects based on a collective construction involving key stakeholders in the Amazon, in detail:: (i) generation of value as a central point for conservation in the Amazon region, (ii) participation of a wide range of stakeholders to build paths to sustainable forest management, (iii) diversification to non-timber products CFM Projects in the Amazon, (iv) the urgent need to promote the legality of forestry production in the region, (v) livelihood and sustainable use of forest resources.</p>		
<div>  </div>		
<h3>3.2.6 Output 6: Assessment reports about technical, social, financial and environmental effects on six selected enterprises of efforts to disseminate SFM tools</h3>		
<p>Overall Performance:</p> <p>The efforts to disseminate SFM tools among medium and large-scale enterprises was the foreseen objective in the original project proposed in 2007. Until its implementation in 2017 the forest sector had changed significantly, and community forest enterprises appeared as a new actor in commercial scale timber production. Because of its high potential for SFM, forest conservation, socioeconomical benefits and social inclusion the project included and prioritized CFM in its activities (compare chapter 2).</p> <p>This had consequences for output 6, which intended to perform an impact analysis for the effects of the introduction of SFM tools. The reason is that the promotion of CFM requires an interdisciplinary and interinstitutional approach, which implies that a variety of actors - and not only the Bom Manejo Project team - work on different levels and issues with the community entrepreneurs. In consequence an impact analysis turned out to be methodically impossible because this type of approach requires a controlled environment to identify and isolate the effects of SFM tool introduction.</p> <p>In this light, an alternative approach has been put in execution: a participative methodology to monitor Sustainable Forest Management was developed and community forest managers were trained by applying it in the annual forest management areas. The activities had been executed as planned until the end of 2019 but were severely compromised by two unpredicted events: (i) the Covid19 Pandemic FROM early 2020 until the fall of 2022 and (ii) an intervention of federal government entities in 2023 because of irregularities regarding contractual relationships between communities and private timber enterprises which compromised social and cultural objectives of CFM and the long-term sustainability of timber production.</p> <p>Regardless, two thirds of the activities could be executed due to the prorogation of the project until the end of March 2024.</p> <p>The achieved results are: (i) a comprehensive and easy to apply methodology for forest monitoring in combination with the SFM tool MOP has been developed, (ii) community forest managers of the 6 partner community enterprises have been trained in this methodology, (iii) the method was introduced to IBAMA, the federal governmental environment agency organizations.</p>		
<p>Activity 6.1: Development of a methodology for forest monitoring.</p> <p>Originally: Development of a methodology to assess the effectiveness of SFM tools transfer to timber enterprises</p>		
<p>Performance:</p>		

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION
In cooperation with community entrepreneurs and partner IFT a methodology for forest monitoring was developed using the SFM tool MOP. The monitoring is a C&I based set of 80 essential verifiers. The methodology consists in a set of formular with easy-to-understand verifiers and simple means of verification. Each verification counts 10 repetitions, and the results are calculated as percentage of fulfilled and unfulfilled tests.		
Activity 6.2 Selection of timber enterprises (at least six) and establishment of arrangements (maintained)		
<p>Performance:</p> <p>Up to 2019 eight forest enterprises had been identified and arrangements had been established. Seven of them were community driven management projects and one has been an enterprise detaining a large forest management concession under federal regime. But due to the Covid Pandemic in early 2020 the relationships suffered an almost two years lasting interruption and only 6 of the partnerships with community forest entrepreneurs endured, all situated in the Extractive Reserve (Reserva Extrativista) Verde para Sempre, a Federal Conservation Unit of 1,3 million ha in Pará State).</p>		
<p>Activity 6.3 and 6.4: Training staff to carry out monitoring activities by applying the methodology for Sustainable Forest Management Monitoring</p> <p>Combination of original activities 6.3 and 6.4 ("Training staff to carry out monitoring activities" and Baseline studies in collaborating timber enterprises (including application of ITTO criteria and indicators)</p>		
<p>Overall Performance:</p> <p>Activity 6.3 consisted in training enterprises staff in the monitoring methodology and 6.4 was to execute a baseline-study to create a reference for comparison the future development of forest management performance. As the revised activity plan was to develop the monitoring method and to train the communities to be able to apply it with autonomy (and no more to measure the impact of SFM tool introduction), the two steps of baseline study and training have been merged into one activity. The first training course for forest management monitoring was held in the fall of 2019 in the harvest area of one community with 2 up to 3 forest managers from each of the six partner communities participating. After the course the application was repeated in the five resting community management projects.</p> <p>In this course participated also two recently graduated engineers and master students who – together with instructors from IFG and the ITTO Project team accompanied these replications.</p>		
Activity 6.5 Periodic assessment in collaborating timber enterprises including application of ITTO criteria and indicators (maintained)		
<p>Performance:</p> <p>The originally foreseen periodic assessments foreseen for 2020 and 2021 had to be canceled due to the Covid 19 Pandemic. Instead, the course was held again in 2022, applying the methodology by monitoring the management activities of 2021 and 2022. The repetition scheduled for 2023 could again not be executed, because the Annual Operation Plans (POAs) of the community partner entrepreneurs had been interrupted by federal governmental agencies (compare above - overall performance).</p> <p>Although the timeline of monitoring activities could not be established as intended, community forest managers dominate the methodology and have a tool for auto-monitoring their management activities at hand.</p>		
		
Activity 6.6: Organization of field days		
<p>Performance:</p> <p>The organization of field days had been foreseen for the end of the project with the objective to share and discuss the results. The Covid19 Pandemic had led to several project prolongation and the activity finally was planned for</p>		

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION
<p>the fall of 2023. But, due to the federal intervention in this year all activities related to the Forest Management Projects in the Resex Verde para Sempre, involved with the Project, had been postponed by orientation of the governmental agencies.</p> <p>In this situation Embrapa decided to adjust the agenda with the goal to support the process of information and communication between the governmental agency ICMBio (responsible for the administration of RESEX Verde para Sempre) and the Community Entrepreneurs (see Output 7).</p>		
<p>3.2.7 Output 7 A manual, a policy brief and a scientific article in Portuguese and Spanish about effective dissemination of SFM tools to timber enterprises in the Amazon</p>		
<p>Overall Performance:</p> <p>As already mentioned in (A 6.6), “Due to the administrative crisis concerning Community Forest Management Plans at the Resex Verde para Sempre which led to demands of support coming from community entrepreneurs and governmental entities, the EA decided to support an agenda to reconstruct the institutional and organizational arrangements of CFM.</p> <p>There was no possibility of having field activities until all the administrative issues were clarified and all the decisions taken to be delivered directly to the CDS and the respective responsible of these SFMPlans. The consequence was that that all Community Forest Management Projects in the Resex Verde para Sempre stood under intervention of the Federal Prosecution Service (Ministério Público Federal) and the orientation had been to postpone project activities until the initial investigation and a revision of the active Forest Management Plans would have been concluded.</p> <p>Therefore activities referring to Output 7 that had been planned for the last project year, could not be carried out, even the Final Seminar of the project that has been planned a the SC Meeting in Dec. 2022, to be held in September of 2023,has to be postponed twice (first for December 2023, and later on to March 2024), which made the end of project be postponed to end of April 2024.</p> <p>The crisis and its cause:</p> <p>The Brazilian Federal Government in charge between 2019 and 2022 promoted a significantly less restrictive exploration of natural resources in the Amazon Region. This also reflected in a more liberal attitude of governmental agencies responsible for the administration of the CUs the approval of FMPs, regarding contractual relationships between community entrepreneurs and the timber buying client enterprises. By 2022 the Federal Prosecution Service detected that the approval of FMPs in the Resex and these contractual relationships had not been in accordance with the legislation. Main issues have been (i) contracts unfavorable for communities (ii) de-characterization of Community Forest Management as legally defined modus operandi and (iii) undue high annual exploration rates of the timber resource.</p> <p>Hence, the execution of all FMPs had been interrupted in 2023 and the EA received the recommendation to postpone any project activities. At the same time an agenda to recover the Community Management and the necessary institutional arrangements surged and the EA and Bom Manejo Project have been asked to support this agenda. In this perspective the following activities were crucial:</p> <ol style="list-style-type: none"> 1. Participation and support of a seminar demanding from the social communities movements (November 2023) in order to reevaluate the current situation of the FCM write a document requesting tor a special attention to the FCM theme as an important land use system to keep forest cover, biodiversity conservation while generate income to the communities. This seminar was in Brasilia , and had been organized under the umbrella of the OMFCF and CNS (Community and Family Forest Management Observatory, and Conselho Nacional dos Seringueiros, respectively), and with the participation of community leaderships, civil society and public education and research organizations including the EA to articulate the resumption of CFM in the Amazon. This led to the open “Letter of Brazil” entitled “Resumption of the agenda for community and family Forest Management in the Amazon” with recommendations for measures which had been formally handed over to the Federal Government. 2. 6th Meeting of the Bom Manejo 2 Project Steering Committee 		

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION
<p>On December 12 to 16, 2023 took place the 6th meeting of the Project Steering Committee in the installations of Embrapa Amazônia Oriental in Belém, with the presence of ITTO, ABC, SFB, ICMBio, FIDES, IFT. Regarding the final Project phase the Committee considered the unexpected difficulties to develop the activities regarding Output 7 and related to this made the following three recommendations: (i) to extend the Project duration until end of March of 2024, (ii) to organize the final seminar in the second half of this month, (iii) to consider the elaboration of a new project focussed on CFM. This last recommendation has been considered in the execution of the following activities with the intention to discuss a new project with potential partners and gain inputs for such a proposal.</p>		
		
<p>3. Agenda of visits to communities (Caravana), in the Resex Verde para Sempre holders of FMPs Between January 20th and February 11th 2024 a three week lasting agenda of visits to all communities with FMPs had been organized by ICMBio and the CDS (a local civil society organization). Bom Manejo project supported this agenda with financial resources and project team members participated in the journey and contributed with presentations.</p> <p>The goal of this activity was (i) to communicate the legal matters and the issues which led to the intervention of the Federal Prosecution Service, (ii) to understand the perspective and situation of the communities and (iii) identify the needs of communities and (iv) to construct an agenda of activities to recover the functioning of the Community FMPs.</p>		
		
<p>The most important results have been lists of tasks for each community entity, ICMBio and partners to be executed with the goal to recover and / or stabilize the existing 12 FMPs in the Resex Verde para Sempre. One central activity was to vitalize the Forest Management Group (GGF), coordinated by CDS and which consists of representatives of the Community Forest Entrepreneurs, the responsible Federal agencies SFB and ICMBio as well as civil society organizations, research institutions (EA and Embrapa) and NGOs acting on the base of projects in the territory. The GGF has a long history of articulation, mutual support and agenda construction, but had been weakened during the Covid19 Pandemic and as a consequence of the altered federal government agenda since 2019.</p>		
4. GGF		Meeting
<p>On March 18th 2024 the first meeting of the GGF since the beginning of 2020 took place. The Project promoted, supported and participated in the meeting. Community leaders reported the situation of their FMPs and partner organizations presented their intended agenda of projects and activities. The GGF had been established as the central platform for communication, cooperation and collaboration in regard to CFM in the Resex Verde para Sempre.</p>		

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION
<p>5. Bom Manejo 2 Final Seminar</p> <p>Under the title “The Peoples Forest: a positive agenda for Community and Family Forest Management, Conservation and Protection of the Territory - Resex Verde para Sempre, Porto de Moz – PA” took place during March 19th to 21st 2024.</p> <p>The event's objective was to draw a balance of Bom Manejo 2's achievements and to discuss the opportunities and challenges for CFM in the extractive reserve in Porto de Moz and in the Amazon region in general. It was designed to gather central relevant stakeholders from local communities, governmental organizations (municipality, state and federal government), universities and research organizations, civil society and NGOs acting in the territory.</p> <p>As a result the event allowed to bring perspective and experiences of community forest entrepreneurs and inputs for the design of public policies to foster the activity regarding finance, territory governance and organizational arrangements and communication strategies.</p> <p>Of special importance had been the participation of the Federal Ministry for Environment (MMA) responsible for the development of a new Federal Community Forest Management Program with great expectation to be launched by the end of 2024.</p>		
<p>6. Preparation of a new third Bom Manejo Project Phase 3</p> <p>The decades of experiences coming from the first two phases of the Bom Manejo Project line and on base of the takeoffs gathered in the activities 1 to 5 described above the Project team conceived a proposal for a third phase of Bom Manejo, maintaining the implementation strategy to work aligned with the introduction of silvicultural and management tools adding special efforts to strengthen organizational and managerial capacities, pointing out to the potential of including women and young community members. The proposal has been submitted by the ABC (Brazilian Cooperation Agency, Ministry of Foreign Affairs).</p>		
The project activities that could not been worked out, due to the intervention of Federal Governmental (via MPF):		
Activity 7.1 Elaboration of preliminary assessment syntheses		
Activity 7.2 Collaborative field assessment		
Activity 7.3 Organization of a seminar to discuss experiences and analyze results		
Activity 7.4 Elaboration, translation and publication of a paper, a manual and a policy brief		
Activity 7.5 Organization of seminars		

3.3 Dissemination and Communication Agenda

Given the gap between the submission and technical approval of the project and its implementation phase, clearly the Dissemination and Communication Agenda need to be quite efficient to reach a diversified range of stakeholders. As already mentioned, the Community Forest Management Entrepreneurs are new actors in the forestry production scenario added another dimension for the improvement of communities' livelihoods and social inclusion as well as a need for technical assistance and support.

Besides the Communication and Outreach agenda, a diversified materials were prepared, including a visual logo, buttons and folders of the project and computer tools, technical videos and which during this long period of pandemic Covid-19, communication on social media has turned to be one of the main means of keeping the Sustainable Forest Management in

discussion and feeding a positive environmental agenda. Doubtlessly we can assure that the Communication and Outreach materials produced, and participation in different meetings and seminars, congress and conferences, were the high output and outcome of the project.

The material can be accessed under the following link:

<https://nextcloud.cpatu.embrapa.br/index.php/s/ibL9c793sESNiTr>

4 Project Outcome, Target Beneficiaries Involvement

4.1 Encourage Good Management Practices by the Introduction of SFM Tools through multiplying and dissemination

The development objective of the Project has been to encourage the adoption of sustainable forest management (SFM) by medium and large size timber enterprises in terra firme forests of the Brazilian Amazon. During the Projects execution Community Forest Entrepreneurs have been included and in the following process even prioritized.

The strategy of the project has been to strengthen universities in their capacity to disseminate the SFM tools offered by the project. These institutions were meant to replicate the training and capacitation offered by the project and pass them on to governmental agencies and professionals of the forest sector. Due to a set of factors and influences it turned out to be more efficient that the project team itself offered this training of end users. The following table reveals that the results of these efforts have been considerable, despite the limitations during the long period of restriction caused by the Covid-19 pandemic.

4.2 Encouraging Good Management practices by Dissemination of Forest Management and Conservation Itself

The development objective has been to encourage good management practices in timber production in the Amazon by dissemination and adoption of SFM computer tools offered by the Project. As mentioned above and to be elaborated in the chapter 3.2.5 it became clear that this approach had to be completed by actions to disseminate Forest Management for timber production and for Forest Conservation itself.

In this context it is important to remind the discussion about sustainability in a broad sense and the potential contribution of legal timber production in the Amazon region. Political actors and various segments of society look at the forest sector carefully. Their contribution to an appropriate development and necessary changes are utmost important and their involvement needs to come in a systematic and organized manner at all levels of government - federal, state and municipality and civil society. Also on a global level, using and conserving Natural Forest Resources is a mandatory requirement given the current situations of climate change.

An important Project outcome are the contributions and results achieved in supporting the construction of institutional arrangements and strategies for the sustainability of legal timber production from SFMP. The Observatory of Community and Family Forest Management (www.observatoriomfcf.org) and the Amazon Forest Forum (www.dialogoflorestal.org.br) are worthy to be highlighted in this context. These institutional arrangements can be seen as **Institutional Innovations**, since through these collective representations including private companies, research and teaching institutes, associations and cooperatives, representatives of traditional populations, etc., are advocating, to the legal governmental environmental agencies, at State and Federal level. A good example is the recent establishment of a working group preparing the Federal Forest Program to be launched soon. This type of collective action can help to pressure decision makers and the forestry sector to act more responsible and efficiently.

5 Project Assessment and Analysis

5.1 Technical Assessment

An overall assessment of the project leads to the result that it has achieved the main goal to promote and encourage the adoption of good management practices in timber production in the Amazon region. As shown in chapter 3.2.6 and 4.2 this goal was not only achieved by the dissemination of SFM tools - as originally foreseen - but also by intensive activities to disseminate and discuss SFM and Forest Conservation itself.

A more detailed assessment reveals that, from the start, the Project's execution had to face significant challenges, and it was not possible to maintain all expected results in the same way as proposed. The Project coordination had to adopt, so to speak, an approach of "flexible response" over the years in face of a definitely unusual amount of adverse factors. This seems worthy of a closer analysis.

In the **first phase (2017 to 2019) of the project** two important decisions had to be made that influenced the ongoing project:

(1) Include Community Forest Entrepreneurs into the Projects target group.

Between project approval and implementation community driven forest management became an upcoming model with considerable potential for timber production in the Amazon region. This evidence could not be ignored by the Project coordination and CFM entrepreneurs had early been included into the Project target group. The decision to include CFM into Project activities has been widely welcomed by civil actors, politics and government, because - despite its recognized potential - a consistent strategy and programs to develop and foster CFM don't exist even until now. Hence, the EA with the Bom Manejo Project, financed by ITTO and the Japanese Government, suddenly moved into the center of a strategic issue discussed at present and with wide impact on environmental, economic and social dimensions for the Amazon region. Evidently, the positive effect of including CFM in the target group led to a considerable gain of visibility but also to increased demands for the Project. On the other hand, in consequence of this decision, especially the impact assessment planned to analyze the effects of introducing SFM tools in an enterprise (Output 6), turned out to be inviable because this type of study requires a controlled environment to isolate the impact of this type of Project activity, a precondition hardly to assure in the actual situation of CFM in the Amazon (compare chapter 3.2.6, Output 6). In compensation the Project team succeeded to develop a methodology for participatory forest management monitoring linked to the SFM tool MOP (Monitoring of Management Performance). This methodology was passed to community forest managers in training courses, developed and applied with the essential participation of IFT.

(2) Transcribe SFM tools to another software platform.

Central element of the Bom Manejo Project line is the implementation of computer-aided SFM tools as an approach to enhance good practice of forest management. Although these tools had been available for potential users since their creation in the first phase, it was evident that the software had to be passed to another computer language to assure two central requirements: (i) compatibility with operational IT systems and functionality on IT networks and (ii) software maintenance to be performed by the EA itself. After profound analysis it was decided to pass the tools to a Java platform. This decision influenced the foreseen projects Output 2 and 3 as commented in Chapter 3. To certain extent, this delayed and restricted the consolidation of SFM tools and the training of potential end users, but did not, categorically, impede the achievement of project goals.

Second Phase of Project Implementation (2020 to 2024):

The EA and ITTO had been definitely and categorically challenged in the second phase:

(3) Covid19 Pandemic 2020 to 2022.

In the first trimester of 2020 the WHO declared the Covid19 breakout a global Pandemic. The measures taken to control the outspread of the virus literally paralyzed central Project activities.

EA's personnel were prohibited to travel, areas inhabited by original or traditional population in the Amazon region have been isolated, including also the RESEX Verde para Sempre which by then has been the most important spot of Project implementation. On-site events and training courses had to be canceled or transformed to online events. These measures compromised and delayed principally the activities for Output 2 - training of SFM tool users (20 % less end users as foreseen had been trained), Output 5 - dissemination of tools, forest management and conservation (less events) and Output 6 which had been reformulated to train community forest managers in management monitoring (less field courses and assessment activities).

ITTO, in consultation with the EA and the Project's Steering Committee reacted to the Pandemic with various prolongations but maintained the original project budget amount. In the end the project duration had approximately doubled from 3 to more than 6 years. The additional time equals more or less the period of the Pandemic and its impacts.

The prolongations had been budget neutral, but unavoidably led to redistributions between the financial components (compare ANNEX II). The personnel component had been significantly increased to be able to maintain the project team and administration during the longer project period. In compensation major cuts could be made in subcontracts, originally foreseen for IT related tasks but which had been assumed by the EA's own staff, consumables and the subcomponent of on-site events like workshops and seminars. These events could not take place or had to be transformed into online activities.

(4) Federal Intervention in Community Forest Management Plans in 2023.

Already in 2021, at the peak of the Pandemic, a denouncement of irregularities in the context of CFM projects in the Resex Verde para Sempre had been filed to the Federal Prosecution Service (Ministério Público Federal). This process and implied investigations led to an intervention which temporarily paralyzed the execution of the management plans and - again delayed Project activities, principally regarding the Outputs 6 and 7 (compare chapter 3.2.6 and 3.2.7).

Resuming Assessment

The challenges and events described affected the Project's execution of mainly activities regarding the Outputs 2, 5 and 6 and it finally made it impossible to work out Output 7 because the activities foresaw a sequence of events (seminars and seminars) which could not take place.

Nevertheless, the overall and specific objectives to disseminate and stimulate good practices for Forest Management and Conservation had been widely achieved with the originally foreseen budget. Especially the promotion of dialogue in the Forest Sector had an impact and in consequence put the Bom Manejo Project and with it the EA and ITTO as reference regarding the discussion of Forest Management and Forest Conservation in the Brazilian Amazon.

An even surprising effect of Project's delay due to Pandemic seems to be that the long Project period led to a long-term construction of institutional relationships and partnerships on very different levels, on federal level between MMA and its agencies, local communities, civil society, and NGOs. These relationships are having effect beyond the duration of the project and facilitate the dialogue but also the construction of new initiatives and projects.

5.2 Assessment considering Sustainable Development Goals

The United Nations Sustainable Development Goals (SDG), adopted by all Member States in 2015 function as a blueprint to achieve global peace and prosperity. ITTO included the 17 goals in its assessment of project proposals and its outcomes. They part from the recognition that human wellbeing depending on health, education, equality and economic conditions are highly linked to the preservation of natural ecosystems and emphasize the importance of oceans and forests.

The present Project, conceived in 2007, was adopted to this years later agreed alignment of actions during its execution. As frequently cited in this document, one central point was to

include CFME in the Project target group. In this light the Projects relevance regarding the SDGs can be resumes as follows.

SDG 5 - Gender equality

Gender equality is in constant debate in the context of CFM. Gradually women's participation in several activities can be increased, due to the variability of tasks involving SFM. The experiences reveal that women principally favor activities which require some kind of documentation. It is also remarkable that the participation of women in the communities leadership under the partnering CFME was high.

SDG 08 - Decent work and economic growth

SFM activities provide additional income and work for a considerable amount of community members because timber, as its principal product, guarantees access to markets even for distant production sides. The wide range and variability of the tasks offer opportunities also for young people and women frequently lacking perspectives in distant located communities. One principal goal of CFM is the generation of working opportunities for community members.

SFM, as promoted by the current project, provide high quality work with high security standards and health assistance.

SDG 12: Responsible consumption and production

Sustainable timber production minimizes the negative environmental and social impacts and therefore increases considerably the consumption of responsible production.

SDG 13: Climate action

SFM reduces carbon emissions from forest harvesting while ensuring long-term carbon storage in wood products, thus contributing to climate action. Central point is that a forest under the rule of a Forest Management Plan is source of long-term income and therefore protected by the licensed actors detaining the Plan.

SDG 15: Life on land

SDG 15 is to "protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests [...], combat desertification, and halt and reverse land degradation and halt biodiversity loss."

To promote and enhance Sustainable Forest Management is the Project's object and objective.

SDG 17: Partnership for the goals

One of the Projects main priorities was to stimulate and foster multi-institutional approaches and to gather organizations on international, national and local level. The EA has, as a public scientific organization, a privileged access to multiple actors involved in the issues of SFM and Forest Conservation and the present ITTO financed Project functioned, last but not least, as a platform for interinstitutional dialogue. It succeeded to gather federal and state governments with traditional communities, NGOs, universities and enterprises. **These kind of arrangements and *momenti* are essential in the search for shared solutions to the challenges of tropical forest preservation.**

6 Lessons learned

General Reception of SFM tools

The Bom Manejo phase 2 project was conceived to stimulate good forest management practices focusing on medium and large-scale enterprises. Many of the enterprises which today legally produce timber in the Amazon Region are driving projects under federal or state concessions, with detailed rules and attentive control by governmental agencies. They are well structured enterprises and showed a reduced interest in adopting external tools into their administrative and production processes. Some exceptions, to a certain extent, is the BOManejo tool, designed for planning and accompanying the yearly timber harvest season and it allows a flexible and fast adoption of the yearly management plan, and the MFT tool, which

proved to be a flexible and extremely robust tool for acquiring and maintaining tree inventory data from permanent plots.

Community Forest Management requires interdisciplinary and interinstitutional approach

On the other hand CFM has surged with strong potential for social benefits but much higher demand for technical assistants and support. For these motives CFM had been included in the Project's agenda. Important has been the insight that, in case of community forest management an interdisciplinary and interinstitutional approach is necessary and promising and it leads to considerable results if the project initiatives are orientated by the capacities and needs of the communities. This lesson learned has been subject to various publications of the Project team (IURO Curitiba, 2019; World Forest Congress, Seoul, 2021; IUFRO Stockholm, 2024).

The methodology of enhancing forest management practices by introducing computer aided tools is confirmed

One lesson learned is that the approach to stimulate good practices in forest management has been confirmed. But the conclusion is that the key of success is not only the effective introduction of the tools but the process to get there. **The introduction process leads, in the first place, to the identification of potential deficits and needs which have to be addressed. Encouraging to adopt the managerial SFM tools, for example in community driven management initiatives, led, during the process of their introduction, naturally to training and capacitation not only of the tools application itself, but necessarily to the ground laying knowledge that permit their use and the interpretation of the results.** Although the introduction of SFM tools could not always been concluded as intended, the process turned evident that, for example, forest monitoring, inventory, correct botanical identification, financial management and other themes had to be involved in the Project activities. In this sense the introduction of tools works like a guiding line for measures to enhance forest management and, at the same time, offers the solution to put the issues of training and capacitation in practice.

Themes such as **correct tree identification (at forestry inventories) improving tree taxonomy, as well as their ecology of growth and reproduction characteristics, since different species have different characteristics of growth, flowering, pollination and reproduction that directly affect their replacement and participation in the future coming cutting cycle. This information, in addition to the condition of rarity or vulnerability risks, is very important to avoid changing the composition and structure of managed forests after several cutting cycles. The complexity of tropical forests requires very careful planning and conservation actions for sustainable use.** This information is very crucial decision-making when planning the logging operations. During the training sessions on how to use the tools, different discussions on the sustainability of forest management came up, and naturally issues such as the length of the cutting cycle and the logging intensity of the timber species were part of the debates. At the moment, we have computational tools to deal with different issues that help plan and carry out much more carefully SFM Plans and expect to meet the requirements of Conventions on Biological Diversity and Climate Change.

Importance of Communication and Outreach

Another lesson learned is the importance of professionals in Communication and Outreach, directly linked to the project manager and the technical teams to facilitate a fast and efficient circulation of results inside and outside the project environment. **The communication team made a huge difference also during the pandemic Covid-19 and along the whole project, preparing videos and social media. The Communication and Outreach activities, as shown in Section 3.3** have been of our concern to disseminate the project activities even having difficulties to carry out the field activities during the year of 2023. It turned evident that this brought important attention to the project in the environment of a broad spectrum of stakeholders. It facilitated participation in different meetings, forums of discussions, congresses on national and international levels. Additionally, it facilitated and promoted institutional arrangements related to Forest Use and Conservation.

7 Conclusions and Recommendations

General Conclusions and Recommendations

Sustainable forest management and conservation is key to a wider scope of challenges in which the Amazon Region is central, not only in a national but also on a global perspective: economic development, climate change, food security, social inclusion and livelihood for local population and, as it turned evident through the Covid19 Pandemic, health as a precondition for sustainable development.

To face these challenges, it is crucial to open and permanently maintain open a platform for dialogue involving stakeholders on all different levels to guarantee (i) broad participation and with-it relevance and political legitimization and acceptance, (ii) innovation through exchange of experience. With it humble means the Project team intended to contribute to this process.

An opportunity to promote these two simple but demanding approaches will be the COP 30 (30th Conference of the Parties to the UN Framework Convention on Climate Change, 2025 in Belém, Brazil).

The Covid19 Pandemic drew special attention to the issue of health, especially for local and distant communities in the region who suffered from the lack of access to health care. In this situation these communities rely on traditional remedies and use of medicinal plants collected in home gardens or forests nearby. **The good forest management practices are also very important to maintain biodiversity, a key point to allow the ecological processes adaptation and evolution, is also the responsible to prevent a spillover of zoonoses caused by arboviruses. Therefore, the Pandemic brought a new perspective to a One Health's approach, i.e. human, animal, plants and environmental health are inter-dependently linked.** Community Forest Management, focused on non-timber products, should have more incentives and investments in the future because of their potential for health but also income generation. Given this perspective, non-timber forest products should be more valued from now on, raising the real importance for the **forestry bioeconomy, as well as the sustainable management and conservation of natural tropical forests in the Amazon region.**

Specific Conclusions and Recommendations – Bom Manejo Phase 3 Proposal

The Project team has already transcribed it's specific experiences made in the first two phase of the Bom Manejo project line in a third proposal submitted to the Brazilian Government and ITTO in April this year. Under the Project Document - **PD 938 24 (F) entitled "Sustainable Management of Production Forests Driven by Traditional Communities in the Brazilian Amazon"**, a new proposal was submitted. It essentially reflects the experiences made and conclusions drawn in the form of a new project has been conceived.

As the title reveals it foresees concentrating on Community Forest Management because of its obvious potential for timber production, sustainable management, forest conservation, social inclusion and community livelihood (several times mentioned in the present report).

Central starting point in this proposal is the experience that community organization and administration has to be fortified to be more resilient against tendencies of institutional disarticulation and the pressure from external actors promoting their interests. Therefore, it is necessary to strengthen the organizational capacity of community legal entities and fortify communicational capacity in terms of means and skills. Additionally, it will be necessary to widen the communities participation especially of women and community youth in leadership and CFM activities.

In order to stabilize CFM communities who are starting forest management projects will need capacitation in RIL techniques and production and financial management.

Another line of support is to adequately equip all traditional communities with technical means and at the same time continuously adequate the Bom Manejo SFM tools to user-friendly versions including their functioning on portable equipment.

A fourth line of activities is foreseen to develop alternative forest management for traditional communities by studying alternative and innovative timber management methods considering traditional ways with special attention to skidding, timber processing, and pre-harvest forest inventory techniques for multiple use management (non-timber forest products and timber).

At least it is intended to develop a simplified forest growth and yield simulation model as a tool for communities to reflect about long term strategies for silvicultural forest treatments and to support decisions about the cutting intensity and cycle in their forests.

ANNEX I. Project financial statement

PROJECT FINANCIAL STATEMENT (Funds ITTO)								
Project No. PD 452/2017				PERIOD JULY 2017 TO MAIO 2024				
Project Title: GESTÃO SUSTENTAVEL DE FLORESTAS DE PRODUÇÃO NA ESCALA COMERCIAL NA AMAZÔNIA BRASILEIRA - FASE II								
Component (Dolar US\$)		Original Amount (A)	Modified APROVADA Amount (A''')	Modified PROPOSTA Amount (A''''')	Expenditures To-date (US\$)			Available Funds (E) { A''''' - D }
					Accrued (B)	Expended (C)	Total (D) { B + C }	
I.	Funds managed by Executing Agency							
10.	Project Personnel							
	11	National Experts						
	11,1	Project Coordinator	0,00		0,00	0,00	0,00	0,00
	11,2	Assistant for dissemination research	10.000,00	0,00	0,00	0,00	0,00	0,00
	11,3	Assistant for impact assessment	0,00		0,00	0,00	0,00	0,00
	11,4	Assistant for inst. Colaboration	0,00		0,00	0,00	0,00	0,00
	11,5	Expert in silviculture	0,00		0,00	0,00	0,00	0,00
	11,6	Expert in forest fauna	0,00		0,00	0,00	0,00	0,00
	11,7	Expert in economic monitoring	0,00		0,00	0,00	0,00	0,00
	11,8	Expert in forest regeneration	0,00		0,00	0,00	0,00	0,00
	11,9	Computer expert	0,00		0,00	0,00	0,00	0,00

PROJECT FINANCIAL STATEMENT (Funds ITTO)									
Project No. PD 452/2017				PERIOD JULY 2017 TO MAIO 2024					
Project Title: GESTÃO SUSTENTAVEL DE FLORESTAS DE PRODUÇÃO NA ESCALA COMERCIAL NA AMAZÔNIA BRASILEIRA - FASE II									
20	11,10	Assistant Coordinator (Fidesa 830,00 dólar mensal)	29.880,00	61.490,29	63.980,29		65.641,72	65.641,72	-1.661,43
	12	International Experts	0,00		0,00		0,00	0,00	0,00
	12,1	Coordinator of socioeconomic	50.000,00	0,00	0,00		0,00	0,00	0,00
	12,2	Expert in Reduced impact logging	0,00		0,00		0,00	0,00	0,00
	12,3	Expert in envim impact assessment	40.000,00	29.800,00	29.452,29		29.452,29	29.452,29	0,00
	13	Administrative Personal			0,00		0,00	0,00	0,00
	13.1	Project Administrator			0,00		0,00	0,00	0,00
	13.2	Project Secretary			0,00		0,00	0,00	0,00
	13.3	Drivers			0,00		0,00	0,00	0,00
	14	Other Labour			0,00		0,00	0,00	0,00
	14.1	Forest engineers			0,00		0,00	0,00	0,00
	14.2	Local labour	2.000,00	0,00	0,00		0,00	0,00	0,00
	15	Fellowships and training			0,00		0,00	0,00	0,00
	15.1	Fellowships (3 X 500 mensal)	54.000,00	107.917,18	108.490,45		109.792,69	109.792,69	-1.302,24
	15.2	Fellowships DCR (24 X 1433,12)		86.148,78	88.688,81		91.557,51	91.557,51	-2.868,70
	19	Component total	185.880,00	285.356,25	290.611,84	0,00	296.444,21	296.444,21	-5.832,37
	Sub-contracts						0,00		0,00
	20.1	Consolidations of computer tools	80.190,00	10.000,00	7.452,23		7.452,23	7.452,23	0,00
	20.2	Print and Distribution	11.560,00	20.000,00	21.499,18		22.800,08	22.800,08	-1.300,90
	20.3	English translation and text review	7.706,50	7.000,00	2.621,29		2.027,51	2.027,51	593,78

PROJECT FINANCIAL STATEMENT (Funds ITTO)									
Project No. PD 452/2017					PERIOD JULY 2017 TO MAIO 2024				
Project Title: GESTÃO SUSTENTAVEL DE FLORESTAS DE PRODUÇÃO NA ESCALA COMERCIAL NA AMAZÔNIA BRASILEIRA - FASE II									
31	29	Total component Sub-contracts	99.456,50	37.000,00	31.572,70	0,00	32.279,82	32.279,82	-707,12
	Duty Travel						0,00		0,00
	31	Daily Subsistence Allowance					0,00		0,00
	31.1	Daily for training \$25	11.126,00	6.365,27	1.883,50		1.883,50	1.883,50	0,00
	31.2	Daily for field activities \$20	14.446,00	8.000,00	12.404,84		13.324,93	13.324,93	-920,09
	31.3	Daily for field activities (Workshops and Seminar)	12.953,00	28.000,00	29.036,84		28.404,41	28.404,41	632,43
	32	Transport Costs			0,00		0,00		0,00
	32.1	Local per diem	18.538,00	4.000,00	2.029,20		2.029,20	2.029,20	0,00
	32.2	National per diem project	26.514,00	3.000,00	8.186,69		9.540,66	9.540,66	-1.353,97
	32.3	National per diem Workshops and Seminar	23.571,00	49.000,00	59.521,74		51.621,34	51.621,34	7.900,40
	32.4	International per diem project	0,00	2.648,79	2.036,54		2.036,54	2.036,54	0,00
	39	Total component Duty Travel	107.148,00	101.014,06	115.099,35	0,00	108.840,58	108.840,58	6.258,77
40	Capital Items						0,00		0,00
	41.	Offices, labs, etc.	0,00	0,00	0,00		0,00	0,00	0,00
	42.	Personal computer	13.460,00	10.000,00	8.579,65		8.167,83	8.167,83	411,82
	49	Component total	13.460,00	10.000,00	8.579,65	0,00	8.167,83	8.167,83	411,82
50	Consumable Items						0,00		0,00
	51	Utilities	1.168,00	0,00	0,00		0,00	0,00	0,00
	52	Office Supplies	3.365,00	1.000,00	680,36		1.329,50	1.329,50	-649,14
	53	Field Material	3.365,00	0,00	0,00		0,00	0,00	0,00

PROJECT FINANCIAL STATEMENT (Funds ITTO)									
Project No. PD 452/2017				PERIOD JULY 2017 TO MAIO 2024					
Project Title: GESTÃO SUSTENTAVEL DE FLORESTAS DE PRODUÇÃO NA ESCALA COMERCIAL NA AMAZÔNIA BRASILEIRA - FASE II									
60	54	Gasoline/ Diesel	5.047,00	1.000,00	0,00		0,00	0,00	0,00
	59	Component total	12.945,00	2.000,00	680,36	0,00	1.329,50	1.329,50	-649,14
	Miscellaneous						0,00		0,00
	61	Communication (Fax/ Modem)	1.682,00	0,00	0,00		0,00	0,00	0,00
	62	Mainternence capital items	6.224,00	0,00	0,00		0,00	0,00	0,00
	63	Sundry	3.841,00	7.889,69	9.087,22		12.284,16	12.284,16	-3.196,94
	64	Project Auditing	0,00	0,00	0,00		0,00	0,00	0,00
	65	Workshops and seminars	18.623,50	6.000,00	6.322,00		4.322,00	4.322,00	2.000,00
	69	Total component Miscellaneous	30.370,50	13.889,69	15.409,22	0,00	16.606,16	16.606,16	-1.196,94
SUB-TOTAL			449.260,00	449.260,0	461.953,12	0,00	463.668,10	463.668,10	-1.714,98
Funds retained by ITTO									
70	ITTO Monitoring, Evaluation and Administration								
	71	Monitoring and Evaluation	24.900,00						
	72	Mid Term/Ex- post Evaluation	12.450,00						
	79	Component total	37.350,00						
80	Program support								
	81	Administrative costs 12%	70.353,00						
	89	Component total	70.353,00						
SUB-TOTAL			107.703,00						
100.	GRAND TOTAL:		556.963,00						

12.693,12

£14.408,10

ANNEX II. Project cash flow statement

PROJECT CASH FLOW STATEMENT (Funds ITTO)

Project No. PD 452/2017

PERIOD JULHO/2017 A MAIO/2024

Project Title: GESTÃO SUSTENTAVEL DE FLORESTAS DE PRODUÇÃO NA ESCALA COMERCIAL NA AMAZÔNIA BRASILEIRA - FASE II

Component		Reference	Date	Amount	
				in US\$	Local Currency
A. Funds received from ITTO:					
1.	First instalment	3,1400	19/7/17	\$116.277,00	R\$ 365.109,78
2.	Second Instalment	3,6750	19/2/19	\$85.000,00	R\$ 312.375,00
3.	Third instalment	4,0550	19/1/20	\$85.000,00	R\$ 344.675,00
4.	Fourth instalment	5,2500	29/7/21	\$85.000,00	R\$ 446.250,00
5.	Fifth Installment	5,2410	20/3/23	\$77.983,00	R\$ 408.708,90
	Interest earned to date			\$14.408,12	R\$ 65.446,78
Total Funds Received:				\$463.668,12	\$1.942.565,46
10.	Project Personnel				
	11 National Experts				
	11,1 Project Coordinator				
	11,2 Assistant for dissemination research			\$0,00	R\$ 0,00
	11,3 Assistant for impact assessment				
	11,4 Assistant for inst. Colaboration				
	11,5 Expert in silviculture				
	11,6 Expert in forest fauna				
	11,7 Expert in economic monitoring				
	11,8 Expert in forest regeneration				
	11,9 Computer expert				
	11,10 Assistant Coordinator (Fidesa 830,00 dólar mensal)			\$65.641,72	R\$ 287.217,35
	12 International Experts				
	12,1 Coordinator of socioeconomic			\$0,00	R\$ 0,00
	12,2 Expert in Reduced impact logging				
	12,3 Expert in envim impact assessment			\$29.452,29	R\$ 92.480,27
	13 Administrative Personal				
	13,1 Project Administrator				
	13,2 Project Secretary				
	13,3 Drivers				
	14 Other Labour				
	14,1 Forest engineers				
	14,2 Local labour			\$0,00	R\$ 0,00

Component			Reference	Date	Amount	
					in US\$	Local Currency
20	15	Fellowships and training				
	15.1	Fellowships (3 X 500 mensal)			\$109.792,69	R\$ 473.402,50
	15.2	Fellowships DCR (24 X 1433,12)			\$91.557,51	\$414.975,88
	19	Component total			\$296.444,21	R\$ 1.268.076,00
	20	Sub-contracts				
	20.1	Consolidations of computer tools			\$7.452,23	R\$ 23.400,00
	20.2	Print and Distribution			\$22.800,08	R\$ 97.557,00
	20.3	English translation and text review			\$2.027,51	R\$ 2.283,25
	29	Total component Sub-contracts			\$32.279,82	\$123.240,25
	30	Duty Travel				
30	31	Daily Subsistence Allowance				
	31.1	Local per diem			\$1.883,50	R\$ 5.094,40
	31.2	National per diem project			\$13.324,93	R\$ 48.129,48
	31.3	National per diem Workshops and Seminar			\$28.404,41	R\$ 118.741,34
	32	Transport Costs				
	32.1	Local transport			\$2.029,20	R\$ 6.677,38
	32.2	National transport project			\$9.540,66	R\$ 50.079,45
	32.3	Workshops and seminars			\$51.621,34	R\$ 193.941,69
	32.4	International per diem project			\$2.036,54	R\$ 6.394,72
	39	Total component Duty Travel			\$108.840,58	R\$ 429.058,46
40	40	Capital Items				
	41	Offices, labs, etc.				
	42	Personal computer			\$8.167,83	R\$ 36.210,89
	49	Component total			\$8.167,83	R\$ 36.210,89
50	50	Consumable Items				
	51	Utilities			\$0,00	R\$ 0,00
	52	Office Supplies			\$1.329,50	R\$ 5.763,54
	53	Field Material			\$0,00	R\$ 0,00
	54	Gasoline/ Diesel			\$0,00	R\$ 0,00
	59	Total component Consumable			\$1.329,50	R\$ 5.763,54
60	60	Miscellaneous				
	61	Communication (Fax/ Modem)			\$0,00	R\$ 0,00
	62	Maintenance capital items			\$0,00	R\$ 0,00
	63	Sundry			\$12.284,16	R\$ 57.335,08
	64	Project Auditing			\$0,00	R\$ 0,00
	65	Workshops and seminars			\$4.322,00	R\$ 22.881,24
	69	Component total			\$16.606,16	R\$ 80.216,32
Total Expenditures To-date:					\$463.668,10	\$1.942.565,46
Remaining Balance of Funds (A-B):					\$0,02	R\$ 0,00

Notes: (1) Amounts in U.S. dollars are converted using the rate of exchange when funds were received by the Executing Agency.

Component	Reference	Date	Amount	
			in US\$	Local Currency
(2) Amount of expenditures in US dollar should be the same as amount shown in column (C) of the Financial Statement (exported with direct link from the Cash Flow Statement).				
(3) Submit bank reconciliation statement along with the bank statements to support the remaining balances/funds in the Cash Flow Statement.				
(4) The balance of <u>U\$ 0,00</u> presented in this cash flow include the income from the financial application in the project execution period.				
(5) Financial application income in the period <u>U\$ 14.408,12</u>				