



INTERNATIONAL TROPICAL TIMBER ORGANIZATION

**EX-POST EVALUATION OF ITTO PROJECTS
IN THE FIELD OF SUSTAINABLE FOREST
MANAGEMENT IMPLEMENTED IN LATIN AMERICA**

**Evaluation Report of the ITTO Project PD 13/96 Rev. 1 (F) in Brazil:
Multiple-Use Management in the Macauã National Forest Based on Rubber
Plantations – Phase I:
Development of a Master Plan to Support Community Organization**

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PART I EXECUTIVE SUMMARY

1. BACKGROUND INFORMATION

The Multiple-Use Management in the Macauã National Forest Based on Rubber Plantations – Phase I: Development of a Master Plan to Support Community Organization Project was approved by the International Tropical Timber Council during its twentieth session in May 1996. The Project agreement was signed on November 18, 1996, and the Project implementation began on April 1, 1997. The Project was completed in August 2000.

The ITTA objectives and ITTO criteria apparently complied with the national and state level policies. The Project was designed to address key problems related to unsustainable use of resources and increasing rural poverty. The overall objective of the project was set to support the sustainable development and management of tropical forests ensuring the provision of the resources, goods and services required by the forest dwellers.

The specific objectives were (i) to develop a multiple-use forest resource management model for the Macauã National Forest with an effective mechanisms for community participation promoting increased family incomes and reducing the exodus to urban centers; (ii) to develop a participatory management model based on the training of individuals elected by the communities to act as forest management extension officers, and (iii) to develop community action plan facilitating the organization of local community groups with the capacity to implement the management plan.

The expected outputs were (i) community participation mechanism developed and established; (ii) Multiple-Use Management Plan for the Macauã National Forest developed and approved, (iii) Marketing and Transport Program developed and approved; (iv) Community Action Plan developed and approved, and (v) International Cooperation Project for the Macauã National Forest duly implemented.

The total funding for the Project was USD 1,093,493 of which the ITTO share was USD 824,493 and the Government of Brazil share USD 269,000.

The planned Project implementation period of the first phase was 24 months. The Project implementation was severely delayed due to flaws in Project design and the actual implementation period was 40 months.

The key implementing agency was the Amazon Workers' Center (CTA). The participation of IBAMA technicians and experts in the Project implementation was left pending according to availability and agreements. The Project was steered by a Committee comprising members of ABC, ITTO, MMA, IBAMA and CTA. In addition, the project received advice from a consultative committee comprising CTA, IBAMA, Sena Madureira Rural Workers' Union, Sena Madureira Extractivist Cooperative and Macauã Extractivist Association.

2. SCOPE OF THE EVALUATION

The evaluation of the Macauã Project is part of a wider evaluation of ITTO financed forest management projects in Latin America. The overall evaluation covers six projects in Brazil, Bolivia, Ecuador and Peru which implementation/funding has already been completed.

The evaluation assesses particularly the project design, efficiency, effectiveness, and impacts in a concise manner of the implemented first phase of the Macauã Project. The desk review took place during the first half of February 2002 and the field mission in Brasília and Acre took place from 25 February to 1 March 2002.

3. CONCLUSIONS

The **Project design** has been the most critical factor in the Project implementation causing delays, adjustments and misunderstandings. The design did not reflect the actual conditions in Macauã area. The interference from other surveys assumed that there are 432 families living in the area. When the project started and the first social surveys were carried out it appeared that only 10 to 20 families lived in the project area.

The design left IBAMA's role in Project implementation undefined assuming that the role regarding the participating experts would have been clarified later on. The Project's key outputs consist of several studies and plans. The Multiple-Use Forest Management Plan of Macauã National Forest was a core product of the Project. The approval of the Plan is still pending. If IBAMA had been involved from the beginning of the project implementation, the Plan would probably already fulfil the IBAMA criteria

Apparently the project design failed to consider key prerequisites for a successful planning process at community level aiming at producing a Forest Management Plan, i.e.(i) foreseen viability of different production options, (ii) foreseen conditions that the authorities will approve the Plan, and (iii) stakeholders commitment to implement the plan.

In any case the **Project implementation** was carried out in an efficient way combining good managerial knowledge and sensitivity to the local conditions. The work plans and respective budget was adjusted correctly to achieve the set Project results. Consequently the specific objectives and expected outputs were mostly achieved even the schedules were delayed.

The forest dwellers are extremely pleased with Projects outcomes. However, their interest is not related to implementing the Plan. Even many community members participated different steps in the planning process, they did not fully understand what is their role regarding the Forest Management Plan.

The Project produced a significant information base. Some of the information was published in scientific journals. The on-going economic and ecological zoning process carried out by the State authorities adopted key information concerning the Macauã area. However, many of the results were not sufficiently discussed with relevant entities promoting Sustainable Forest Management.

Apparently the Project did not create sufficient dissemination mechanisms. The dissemination and change of experiences and results could have helped to verify the key results. For example information related to viability of the Management Plan, particularly the part concerned with large-scale industrial forestry, remains debatable due to lack of adequate verification of these results.

No doubt, the Project did pioneer work in community development in the Macauã area. The Project succeeded to start a development process that will definitely continue in the future.

The forest dwellers are now organized, they are aware of their rights and possibilities and their common educational level has risen, they are able to produce and sell more products to the markets generating cash income which previously was extremely scarce. The community is now prepared to face new interventions, even outside invaders coming to exploit the resources.

The Project succeeded to attract resources from other sources, e.g. the State is making investments to infrastructure development and the Macauã Rubber Tappers' Association have received resources from other NGOs.

The Project has produced information and experiences related to the concept of National Forest in Acre and western Amazonas. IBAMA and the State Government have gained valuable knowledge related to surveys, inventories, community involvement and the overall planning processes related to FLONAs.

If the **ITTO objective**, increased production of tropical timber from sustainable sources and related priority actions are interpreted in a broad way the Project has had positive contribution.

The Macauã National Forest has gained a legal status that allows forest management planning for community purposes as well as for large-scale industrial purposes. The community is organized and the capacity of the forest dwellers related to timber production has gradually improved. The physical infrastructure has significantly improved, the community members have improved access to markets with a community boat and the Macauã Forest has well established field station that can serve many purposes.

Several constraints for sustainable and viable timber production still remain. The terrestrial access and overall logistical infrastructure for log transport is insufficient. The studies indicating promising viability of timber production still lack verification. The capacity related to implementation of the Plan is still low and definitely insufficient. All in all the Plan is not approved and there is also a lack of final partnership agreements of implementation between different actors.

The most severe discrepancy between the Project and ITTO objective is that timber production is not necessarily the best option for the forest dwellers to improve their livelihoods at least in the short and medium terms. The Sustainable Management of the Macauã Forest and development of the rather small population in the area appears to have an emphasis in agricultural and extractivist products. The change towards timber production definitely needs a longer time perspective.

4. RECOMMENDATIONS

The design of future ITTO projects should take into account the practical lessons learned carefully. The preparation process should include sufficient surveys and consultations with the stakeholders. The preparation process should also come up with clear outcomes indicating the viability of the Sustainable Forest Management in the target area, requirements for approval of the Forest Management Plans and roles and potential commitment of the stakeholders for the Project. The investments made to appropriate and sufficient preparation will ensure much more efficient and effective Project implementation.

The project design should guide the implementing agency to consider the idea that the project searches development models that could be replicated elsewhere. In this respect the project work should be more systematic when it comes to analyzing results and changing ideas with other similar entities. The Project design should already indicate and give guidance how to establish sufficient dissemination mechanisms. It is extremely important that findings and conclusions are verified with a wider professional audience. The key issues, e.g. viability of the SFM practices will then become more evident.

The Project design should also consider thoroughly the time perspective of the development interventions at different levels. It appears that the sustainable timber production can be viable and realistic for local stakeholders, e.g. forest dwellers and social enterprises, only after several steps have been taken in overall community development, involving services, education, health care and other productive development. Especially in the case like Macauã where there is no tradition in commercial timber production, the short and medium term production is still based on existing knowledge and market channels.

The concept of community development appears to be a fundamental part of any SFM related project in the Amazonas at least considering the experiences from the Macauã, even the population density is very low. The future projects should in this sense consider and negotiate with other partners who are more dedicated to finance overall community development. With such partnerships with Government and non-governmental organizations probably the time perspective and forestry focus would become more appropriate.

The Macauã Project started a development process, which is still continuing at different levels, particularly at local level with community actions and at IBAMA level where the FLONA concept is being evolved. Even the original project design was incorrect reflecting another reality and wrong expectations the Project turned out quite successful. The planning process in Macauã assumed that the Project would continue with a second phase with support to implement the Forest Management Plan. In the evaluators point of view it is highly recommended that the Project would have a second phase.

PART II MAIN TEXT

1. PROJECT CONTEXT

The Multiple-Use Management in the Macauã National Forest Based on Rubber Plantations – Phase I: Development of a Master Plan to Support Community Organization Project (herein referred as the Project) was approved by the International Tropical Timber Council (ITTC) during its twentieth session in May 1996. The Project agreement was signed on November 18, 1996, and the Project implementation began on April 1, 1997. The Project was completed in August 2000.

In the initial design the Project was considered consistent with the objectives defined in the International Tropical Timber Agreement (ITTA) as well as with the ITTO criteria.

ITTA objectives related to the Project:

- (i) To encourage increased and further processing of tropical timber in producing member countries;
- (ii) To encourage members to support and develop industrial tropical timber reforestation and forest management activities; and
- (iii) To encourage the development of national policies aimed at sustainable utilization and conservation of tropical forests and their genetic resources, and at maintaining the ecological balance in the regions concerned.

ITTO criteria related to the Project:

- (i) Production and utilization of industrial tropical timber;
- (ii) Benefit generation to the tropical timber economy;
- (iii) Maintenance and expansion of the international tropical timber trade;
- (iv) Prospects for positive economic returns against costs incurred; and
- (v) Involvement of existing research institutions avoiding overlapping efforts.

In addition, the Project was considered consistent with the priorities established by the ITTO Committee on Reforestation and Forest Management, which had emphasized the importance (i) to conduct studies on the economic and financial costs and benefits of forest management, and (ii) to identify field demonstration projects where sustainable production of timber and non-timber products may be combined.

The ITTA objectives and ITTO criteria apparently complied with the national and state level policies. The concepts of National Forests (FLONAs) and Extractive Reserves (RESEX) as well as other policies related to forest utilization at federal and state levels were perceived as positive responses promoting Sustainable Forest Management (SFM). The State of Acre had established a Technology Foundation (FUNTAC) to develop SFM concepts and an Environmental Institute to issue licenses for forest management projects. The State also started to prepare an economic and ecological zoning, which was completed during the Project period. The experiences from other projects in Acre such as Antimari National Forest and Chico Mendes Extractive Reserve were taken as encouraging efforts promoting SFM and offering useful lessons learned for the Macauã Project.

The Project was designed to address **key problems** related to unsustainable use of resources and increasing rural poverty. The introduction of extensive cattle raising and the clearing of forests for pasture land since the 1970's led to irrational timber exploitation resulting in deforestation which was estimated at 5% during a 20-year period in the State of Acre (from mid 1970's to mid-1990's). This development model left behind a social legacy of poverty

and total loss of community rights. The situation of the traditional forest dwellers was eventually worsened due to the 1970's development model.

The **overall objective** of the project was set to support the sustainable development and management of tropical forests ensuring the provision of the resources, goods and services required by the forest dwellers.

The specific objectives were

- (i) to develop a multiple-use forest resource management model for the Macauã National Forest with an effective mechanisms for community participation promoting increased family incomes and reducing the exodus to urban centers,
- (ii) to develop a participatory management model based on the training of individuals elected by the communities to act as forest management extension officers, and
- (iii) to develop community action plan facilitating the organization of local community groups with the capacity to implement the management plan.

The expected outputs were

- (i) community participation mechanism developed and established,
- (ii) Multiple-Use Management Plan for the Macauã National Forest developed and approved,
- (iii) Marketing and Transport Program developed and approved,
- (iv) Community Action Plan developed and approved, and
- (v) International Cooperation Project for the Macauã National Forest duly implemented.

The total funding for the Project was USD 1,093,493 of which the ITTO share was USD 824,493 and the Government of Brazil share USD 269,000.

The planned Project implementation period of the first phase was 24 months.

The key implementing agency was the Amazon Workers' Center (CTA). The participation of IBAMA technicians and experts in the Project implementation was left pending according to availability and agreements. The Project was steered by a Committee comprising members of ABC, ITTO, MMA, IBAMA and CTA. In addition, the project received advice from a consultative committee comprising CTA, IBAMA, Sena Madureira Rural Workers' Union, Sena Madureira Extractivist Cooperative and Macauã Extractivist Association.

2. EVALUATION SCOPE AND FOCUS

The evaluation of the Macauã Project is part of a wider evaluation of ITTO financed forest management projects in Latin America. The overall evaluation covers six projects in Brazil, Bolivia, Ecuador and Peru which implementation/funding has already been completed.

The evaluation assesses particularly the project design, efficiency, effectiveness, and impacts in a concise manner of the implemented first phase of the Macauã Project. Against these principal evaluation concepts the assessment focuses on the following points introduced in the TOR:

1. The overall role and contribution of the project in light of sectoral policies, development programs, priorities and requirements to achieve sustainable forest management in Brazil.
2. The current status of the forestry activities developed and implemented by the Project, such as the impact of the forest management plan; the training and extension programs geared to the rural communities; the levels of community participation and the success of community-based forest enterprises, and the effectiveness of the project's implementation and its contribution to the current forest management practices and the sustainable development of the rural communities in the Macauã Region.
3. The extent and contributions of the specific studies on various disciplines (inventory, ecology, socio-economy, community participation, forest engineering, forest industry, silviculture, etc.) prepared by the project to the development of sustainable forest management practices and the rural communities livelihoods in the Macauã Region.
4. The impact of the specific studies conducted by the project in the application of forest management practices in the Macauã Region and its contribution to the overall forestry-related knowledge in the region.
5. The impact of forestry and/or agroforestry activities on the livelihoods of target populations.
6. The effectiveness of dissemination of project results.
7. The overall post-project situation in the project's area of influence.
8. The unexpected effects and impacts, either harmful or beneficial, and the reasons for their occurrences.
9. The cost efficiency in the implementation of the projects, including the technical, financial and managerial aspects.
10. Follow-up actions in order to enhance uptake of project results.
11. The project's relative success or failure, including a summary of the key lessons learnt; and the identification of any issues or problems that should be taken into account in designing and implementing similar projects in future.

Finally the assessment summarizes the successful and unsuccessful outcomes, the reasons for successes and failures, and the contribution of the project toward the achievement of ITTO's objective 2000, and to draw lessons that can be used to improve similar projects in the future.

3. EVALUATION METHODOLOGY

The Project evaluation comprised

- (i) Desk review of the project related documents received from ITTO headquarters,
- (ii) Consultations with the stakeholders in Acre (Macauã, Sena Madureira, Rio Branco) and Brasília,
- (iii) Wrap-up meeting with Forest Dwellers' Association in Macauã,
- (iv) Wrap-up meeting with CTA/IBAMA in Rio Branco,
- (v) Analysis of the field mission results and additional material received from the project, and
- (vi) Drafting the report.

The desk review and consultations with key persons facilitated the Indufor/STCP team to make tentative findings of the main evaluation concepts during the field mission. The tentative findings were discussed first at the local level in Macauã among community members, and CTA and IBAMA representatives. Later on the findings were discussed in a

wrap-up meeting in Rio Branco with CTA and IBAMA. During the wrap-up meetings the Indufor/STCP team was able to verify and adjust the key findings.

The desk review took place during the first half of February 2002 and the field mission in Brasília and Acre took place from 25 February to 1 March 2002. The documents received from ITTO, IBAMA and CTA are listed in Annex 1. The institutions visited and persons met are listed in Annex 2.

4. FINDINGS AND LESSONS LEARNED

(a) Project Design

The project design was apparently built up on

- (i) assumed consistency with ITTA objectives and ITTO criteria, i.e. potential increase of tropical timber production from sustainable sources benefiting at the same time different stakeholders particularly the forest dwellers,
- (ii) assumed consistency with national and state level policies, and
- (iii) assumed correct addressing of the key problems faced by the forest dwellers, i.e. existing unsustainable production practices and remaining poverty.

When the project preparation started there was practically no information of the Macauã National Forest. The National Forest was established in 1988 and had ever since appeared only on paper until the start-up of the project. The assumptions made during the project preparation were drawn from other projects and surveys particularly Chico Mendes Extractive Reserve Survey (1988) and Antimari State Forest Survey (1989) as well as from the general statistical information from the State of Acre. The interference from other surveys assumed that there are 432 families living in the area. When the project started and the first social surveys were carried out it appeared that only 10 to 20 families lived in the project area. There were actually only 16 families living in the project area at the time of the evaluation.

Remote and thus expensive and difficult access to the Macauã National Forest limited the local surveys in the area during the project preparation. The Macauã National Forest is located 150 km from the nearest city Sena Madureira. In 1996 the area was accessible only by river during the rainy season from November to April when the rivers were navigable (or by foot). The Project assisted the improvement of the road infrastructure and the terrestrial access was extended up to 30 km from the National Forest.

The project design implicitly assumed that the key stakeholders will contribute to the defined overall objective: support the sustainable development and management of tropical forests ensuring the provision of the resources, goods and services required by the forest dwellers. However, the role of the key stakeholders remained pending in the original project design.

The forest dwellers appeared as true stakeholders only after the project had started thanks to the community development and organization activities. Their actual interest was understandably immediate benefits such as access to markets, improved infrastructure, services and education, i.e. not timber production as such.

The CTA was selected to be the implementing agency because it was well recognized NGO, which had been effective and successful in community development, organization and education work in the State of Acre. From CTA's perspective organization and development of the community in the project area were the most important functions of the project.

IBAMA's interest in the National Forests was linked with the overall development of the FLONAs at national level. The Macauã National Forest was the first federal intervention in the region and taken as a potential model to develop FLONAs elsewhere.

The overall objective of the project was not relevant to the first phase of the project. It definitely reflected a longer time perspective and was probably more directed to the proposed second phase. The original idea was that the Project would have a second phase focusing on support to implementation of the management plans prepared during the first phase. However, the second phase has not so far been approved.

It appears that the flaws in the project preparation caused a project design, which did not reflect the reality of the Macauã National Forest and did not clearly identify the roles of different stakeholders. In a way the project was prepared in a 'top-down' manner where the key concepts and assumptions were not drawn from the local level nor verified sufficiently with different stakeholders. The main reason for these flaws lies in the baseline, which definitely was difficult, i.e. starting from zero the first development intervention in logistically tough conditions. The project design and budget was later on adjusted and some activities, which normally are related to project preparation were shifted to actual project activities (e.g. social surveys and stakeholder consultations).

(b) Efficiency

The Project's expected and actual outputs are listed in Table 4.1.

Table 4.1 Expected and Actual Outputs of the Macauã Project

Expected outputs	Actual outputs
Community participation mechanism developed and established	<ul style="list-style-type: none"> • Socio-economic survey • Establishment of Rubber Tapper and Extractivist Association • Headquarters and Training Center built • 70 km four-wheel trail constructed to access Macauã • Field office constructed in Sena Madureira (later on demolished due to problems with land rent) • A community boat purchased for the association
Multiple-Use Management Plan for the Macauã National Forest developed and approved	<ul style="list-style-type: none"> • Forest inventory (and all related surveys) • Study on economic viability of production • Proposal for Multiple-use forest management plan
Marketing and Transport Program developed and approved	<ul style="list-style-type: none"> • Market study on potential non-timber forest products • Study on transport logistics (transport of forest products) • Infrastructure development: the Macauã National Forest
Community Action Plan developed and approved	<ul style="list-style-type: none"> • Community Action Plan prepared
International Cooperation Project for the Macauã National Forest duly implemented	<ul style="list-style-type: none"> • The first phase of the project implemented

The project budget, its adjustments and the actual state of expenditures at the end of the project is presented in Table 2.

Table 4.2 Original Project Budget, Adjustments and Final Expenditures

	Original budget	Adjusted budget 97	Adjusted budget 98	Expenditure Aug 1999	Expenditure by Aug 2000*
USD					
Project staff	147 000	170 500	237 843	204 196	
National Director	48 000	48 000	48 000	47 613	
Consultants	99 000	122 500	151 638	123 678	
Commune staff (labor inputs)	-	-	38 205	32 905	
Sub-contracts	222 200	96 300	158 101	118 911	
Accommodation	184 200	25 300	-	-	
Printing, translations	23 000	25 000	26 931	9 931	
Construction work	5 000	36 000	124 170	108 980	
Audit	10 000	10 000	7 000	-	
Duty travel	170 000	126 650	81 149	75 166	
Equipment (vehicles, inventory, computers...)	194 000	197 500	113 033	86 501	
Materials	21 910	134 160	138 964	124 869	
Office utensils	21 910	21 930	36 060	33 401	
Construction material	-	112 230	-	-	
Other materials	-	-	102 904	91 468	
Other costs	6 400	36 400	32 420	30 910	
Maintenance	-	30 000	22 800	22 674	
Purchased services	-	-	3 200	3 023	
Other	6 400	6 400	6 420	5 213	
Subtotal	761 510	761 510	761 510	640 554	761 510
ITTO administration	62 983	62 983	62 983		
Local contribution	269 000	269 000	269 000		
TOTAL	1 093 493	1 093 493	1 093 493		

*) Note: Expenditure information was received from CTA's last progress report covering a period until August 1999. CTA informed the evaluation team that after that all the remaining funds were utilized.

It appears that, in general terms, the expected outputs were mostly achieved and the budgeted resources used during the Project implementation.

The Amazon Worker's Center (Centro dos Trabalhadores da Amazônia – CTA) proved to be experienced project manager in the course of the Project implementation. Managerial routines were apparently well established and applied in practice. The CTA had an important role as a facilitator organizing and empowering the local forest dwellers in Macauã.

The representation of IBAMA in Acre is in charge of the Macauã National Forest administration and development. The administration is operated through two offices: Rio Branco and Sena Madureira. IBAMA did not have an active role in the Project implementation. IBAMA received information, followed the project and participated in the Steering Committee and Consultative Committee but was not involved directly in surveys or planning processes taking place in the Project area. The exact role of IBAMA was not defined sufficiently in the original design of the project. The Project document mentioned only the possible participation of the IBAMA staff or experts in the Project implementation.

An apparent consequence of IBAMA's insufficient role was reflected in the Project's results. The Project's key outputs consist of several studies and plans such as socio-economic studies, forest and fauna inventory, market studies, forest management plan and community action plan. The Multiple-Use Forest Management Plan of Macauã National Forest was a core product of the Project. However, the approval of the Plan is still pending. If IBAMA had been involved from the beginning of the project implementation, the Plan would probably already fulfil the IBAMA criteria¹.

The forest dwellers role has been evolved during the Project implementation. The establishment of the forest dwellers association is a necessary precondition for any future development activity in the area. Only now the community members have possibilities to be efficiently involved in any development processes. The forest dwellers role was crucial in carrying out the studies and preparing the plans. However, the low educational level has limited the commitments to the plans and adaptation of new knowledge.

The Project was officially completed in August 2000, i.e. 40 months after the project started. The work plan and budget was adjusted twice during the Project period, in 1997 and in 1998. The total budget remained the same. The adjustments concerned principally increased resource allocations to consultants and commune staff. The adjustments were justified and approved by the Project's Steering Committee.

It appeared that all the studies and planning was more timely than assumed in the original Project document. The much lower actual population density than originally assumed in the Project area² did not reduce the costs. Actually the fact that the Project was the first forest development intervention in Macauã increased the unexpected costs.

The magnitude of the Project against the small number of the actual beneficiaries - the forest dwellers – can be criticized. However, the project succeeded to produce experiences and information that were needed by the Government for development of the concept of National Forests (FLONAs).

The Project did not change the actual management status of the Macauã National Forest. The Project was implemented assuming at the same time that the second phase would continue immediately after the first phase. Some intended activities were not implemented. The Management Plan was not approved and subsequently the actual implementation of the plan has not started. Even though the forest dwellers continue their normal production activities which were included in the plan. In addition, the studies or other Project's results or experiences were not so far applied elsewhere in the State.

One aspect of efficiency is the quality of the studies and plans prepared by the Project. On one hand it can be appreciated that all this information is produced which did not exist before. The

¹ The major discrepancy between IBAMA and CTA regarding the Multiple-Use Forest Management Plan of Macauã National Forest was the large reserve areas. CTA's major emphasis was on community forest management and non-timber forest products. According to IBAMA the economic and ecological zoning should have been different giving more emphasis to the timber production purposes of the FLONAs. During the evaluation IBAMA representative assured that the Plan will be approved by June-July 2002. IBAMA was very active in promoting the second phase of the project. The role of IBAMA as well as the interaction with CTA had apparently developed in a positive way.

² Only 8 families live in the Macauã National Forest. Another 8 families live in São Francisco National Forests that was included to the Project area. In addition there are 18 families in the area of influence and thus participating Project/CTA activities.

Project staff and related personnel have worked in tough conditions facing constant problems with logistics. On the other hand the insufficient dissemination of the results and pending approval of the management plan indicate that the studies and prepared plans have not fulfilled the needed standards. The evaluation team points out two reasons which have jeopardized the quality (i) inactive role of IBAMA expertise in planning process, and (ii) lack of wider dissemination of the key results and thus insufficient verification of study results.

(c) Effectiveness

The actual outputs of the project listed in Table xx can be grouped to studies, plans, community organization and infrastructure development. The effectiveness of the Project indicates the immediate impacts and perceptions of these outputs by different stakeholders at different levels. It appears that the Project stakeholders have quite different perceptions of these outputs as well as towards the overall Project.

For the local forest dwellers the Project has meant a lot. The most important effects are (i) benefits of the association, (ii) increased capacity, (iii) improved services, and (iv) improved access to markets and thus increased income from selling products.

The establishment of the association has been a precondition for other benefits. The association enables effective and continuous capacity building, actions to develop any common matters, effective overall technical assistance and marketing of products. The association is a mean to attract other external resources to support development. Actually, the Macauã Association already succeeded to receive a seed fund of USD 5000 from a national education oriented NGO (FASE) for community development purposes. The association is also a legal mean to give formal status when negotiating and compromising with authorities (implementation of management plan).

The frequent presence of the CTA, training courses and involvement of the dwellers in studies and surveys have increased the capacity of the forest dwellers and at the same time improved the level of services such as general education, health care and technical assistance.

The Project purchased a community boat for the association and extended the roads to access the area. The existence of the proper boat has enabled effective and centralized marketing of local products such as rubber and agricultural products. The products produced remain the same as before, but sales volume has increased.

The association as such is not related to timber production as expected when the project was designed. However, if the Management Plan will be implemented and timber production started the association will have a crucial role.

The Project has strengthened CTA as a community development NGO. The CTA personnel are involved in several projects in the State of Acre. This way the experiences have been accumulated in the organization and among the staff members. CTA perceives the Macauã project as an effective community development project. The studies and plans carried out in Macauã are valued because they indicate new options for community development, e.g. eco-tourism and a variety of non-timber forest products. The Macauã resembles more the concept of Extractive Reserves than National Forest in the CTA point of view, i.e. at least in the short term timber production is not seen as a great development option.

The local IBAMA as the National Forest Administrator, perceives the Project as a model National Forest in the State of Acre. The IBAMA headquarters in Brasília shares this view. Before the Project the Macauã National Forest existed only on paper. The level of information was zero. Currently, thanks to the Project, there exists a wide set of studies and a Management Plan forming a valuable information base for any future action. The management status as such has not changed but many preconditions for sustainable timber production have been created such as logistical access, legal status³, baseline information, existing plans and community organization. However, many constraints still remain such as insufficient terrestrial access, insecure markets and insufficient capacity for implementation of management plan. The IBAMA would like to see commercial timber production come into reality once the infrastructure is improved and other constraints eliminated. According to IBAMA illegal extraction is taking place in remote location which are much more difficult to reach than Macauã.

The fact that the Management Plan was not so far approved has naturally jeopardized the overall effectiveness in a severe way. However, the approval is expected to be under way.

The preparation of Management Plan (Multiple-Use Forest Management Plan of Macauã national Forest) was completed in December 1998. Prior to that several studies and surveys were carried out. The first version was analyzed in a workshop among a group of specialist. Later on the comments were incorporated to the plan. The most difficult and discussed part of the plan were the concepts of community forestry and large scale industrial forestry. The improved version of the Management Plan was submitted to IBAMA in late 1999/ early 2000. Apparently IBAMA comments were then incorporated. The present version of the Plan which approval is pending was dated in March 2000.

The Plan consists of detailed analysis of the area, zoning of the area, and proposals for community forestry management and large-scale industrial production. The zoning divides the area to (i) intensive community use, (ii) extensive community use, (iii) industrial management, (iv) intangible area, and (v) ecological and scientific tourism area.

The Plan's emphasis is on Community Forest Management where timber production is limited to supply construction material and fuel wood for the local dwellers. The wood would be extracted principally when roads and areas for cultivation are cleared. The intensity of the planned extraction is 1,5 m³/ha/year for a 30-year period. The non-timber forest products are seen as a real opportunity for income generation and entrepreneurial development.

The proposal for large-scale industrial production was published as a separate document and formulated as a proposal for the second phase in the latest adjusted version. The viability study indicates that annual areas of 800 ha could be harvested, producing an average of 25 m³/ha/year. The respective annual operative profit was estimated at USD 250 000⁴. The information whether the logistics and markets would form viable conditions for the commercial operations remained debatable. The proposal introduces an idea of cooperatives or social enterprises that would be in charge of operations (empresa social).

³ E.g. In Antimari State National Forest the Management Plan implementation is pending due to problems in land ownership.

⁴ R\$ 564 949

An apparent shortcoming of the Project outcomes is related to the studies and surveys. It appears that the Project has not been able to disseminate the study results or any other experiences in the expected way. Some studies related to botany were published in scientific journals. However, other institutes/projects in the State of Acre, e.g. FUNTAC, did not receive any specific information of the project. The CTA is a representative of the Amazonian NGO network GTA (Grupo de Trabalho Amazonica). However, this network was not seen as a technical forum where the Project's results could be discussed and lessons disseminated. It appears that the Project did not have any functioning channel to disseminate the results. Subsequently the Project did not produce popular versions of the studies or other experiences of the project which would have been relatively easy to divulgate.

(d) Impact and Effects

The Brazilian Government, particularly the Ministry of Environment and IBAMA, considers the National Forests (FLONA) as sustainable timber reserves for the future. It is perceived that this is prominent way to satisfy the actual timber demand from sustainable sources within the Legal Amazon area. The legal basis for FLONAs was created already in 1965. The first FLONAs was established in Tapajos in the State of Pará in mid 1970's. Currently the FLONAs cover 80 000 km² in Legal Amazonas.

The most significant impact of the Macauã Project at national level is related to concept of National Forests. During the Project period policies promoting the development of FLONAs have become a key issue parallel to other conservation units such as RESEX. The National Forest Program takes the FLONAs as one cornerstone for the sustainable forest management particularly in Amazonas area. The Project has developed the first case of FLONAs in Acre and at the same time in the western part of Amazon region. In reality the criteria to define potential areas for the FLONAs have been defined and applied only in recent years⁵. The Project has created a baseline information of this FLONA, which previously was an unknown area in the map.

Considering the national importance of the projects related to developing the FLONAs it is controversial that the results were never disseminated further. It appears that there would have been a demand for this kind of information.

Even the project dissemination and application of the results elsewhere in the state of Acre, the Project has succeeded to raise the interest of local entities to develop Macauã area. The State Government with the support of the Federal Government has committed to invest almost USD 100 000⁶ per year in infrastructure development in Macauã area. The investments include development of terrestrial access to the National Forest Area. This commitment and the past investments indicate that the project has certain leverage value. The Project made also a significant contribution to state level economic and ecological zoning process.

The Project was the first forest related development intervention in the Macauã area as discussed earlier. The start-up of the planning process at the local level raised many expectations. The key expectation is that the Multiple-Use Forest Management Plan will be

⁵ MMA. Identificação de Áreas com Potencial para a Criação de Florestas nacionais na Amazônia Legal. Projeto UTF/BRA/047, Agenda Positiva para o Setor Florestal do Brasil, 2000. Five criteria were applied in defining the potential areas for FLONAs: protection status, vegetation cover, human occupation, potential of timber production and economic viability.

⁶ An estimate given by the IBAMA representative.

implemented and the implementation will generate more benefits in the form of marketable products and increased incomes. Normally, when a planning process is started, a principal implicit assumption is that the plan will be implemented.

The fact that the Macauã Forest Management Plan was not yet approved and there was no clear commitment to ensure that the plan will be implemented raises critical questions among the evaluators.

The most significant local level impacts are related to the development process that started within the Macauã communities. The Project impact is a catalyst effect that has enabled other development activities since the establishment of the association. The Macauã community is now able to attract other external sources for development and create partnerships with municipal, state level and even federal authorities.

The initiative to improve the infrastructure, particularly the access to the reserve area has started a development process that will continue without the Project. The community is more prepared to face new interventions. The new interventions might be also new migrants who come to seek for exploitable resources. With a developed community infrastructure the dwellers are aware of their legal rights and can defend the potential negative threats of outsiders.

PART III CONCLUSIONS AND RECOMMENDATIONS

1. CONCLUSIONS

The **Project design** has been the most critical factor in the Project implementation causing delays, adjustments and misunderstandings. The design did not reflect the actual conditions in Macauã area. In addition, the exact role of different stakeholders was not properly tapped during the preparation. The design left IBAMA's role in Project implementation undefined assuming that the role regarding the participating experts would have been clarified later on. The forest dwellers in Macauã learned about the whole project only after the implementation started. It can be also questioned whether the role and perceptions of the different stakeholders were consistent with the ITTO objective and criteria. Due to the inadequate design the Project's overall objective was not relevant for the first phase of the Project. The design also underestimated the time horizon needed for this kind of development intervention.

The key prerequisites for a successful planning process at community level aiming at producing a Forest Management Plan are (i) foreseen viability of different production options, (ii) foreseen conditions that the authorities will approve the Plan, and (iii) stakeholders commitment to implement the plan. There should be at least some kind of evidence that these prerequisites exist before starting a planning process.

Apparently the project design failed to consider the above preconditions due to flaws in consultations and incorrect interference of other information sources. Probably a feasibility study (pre-implementation) could have assured better indication of the actual situation.

In any case the **Project implementation** was carried out in an efficient way combining good managerial knowledge and sensitivity to the local conditions. The work plans and respective budget was adjusted correctly to achieve the set Project results. Consequently the specific objectives and expected outputs were mostly achieved even the schedules were delayed. The CTA approved to be a good project manager.

The insufficient involvement of IBAMA in actual Project activities caused discrepancies and inefficiencies which are evidenced by the pending approval process of the core output, the Management Plan. The quality of the Plan and related studies can be criticized at least in that respect that the standards for approval were not met.

The forest dwellers are extremely pleased with Projects outcomes. However, their interest is not related to implementing the Plan. Even many community members participated different steps in the planning process, e.g. different surveys, forest inventory and workshops, they probably did not fully understand what is their role regarding the Plan. The forest dwellers expected that they can continue and improve their present production related to rubber and agricultural products, not necessarily shifting to new production schemes. During the evaluation meeting in Macauã the unclear understanding of the Management Plan and its implementation was evidenced when the local farmers questioned the IBAMA representative about their rights and responsibilities.

Besides the Management Plan the Project produced a significant information base. Some of the information was published in scientific journals (related to botany). The on-going economic and ecological zoning process carried out by the State authorities adopted key

information concerning the Macauã area. However, many of the results were not sufficiently discussed with other entities such as FUNTAC or similar projects elsewhere in Brazil.

Apparently the Project did not create sufficient dissemination mechanisms. The dissemination and change of experiences and results could have helped to verify the key results. For example information related to viability of the Management Plan, particularly the part concerned with large-scale industrial forestry, remains debatable due to lack of adequate verification of these results.

No doubt, the Project did pioneer work in community development in the Macauã area. The Project succeeded to start a development process that will definitely continue in the future. The forest dwellers are now organized, they are aware of their rights and possibilities and their common educational level has risen, they are able to produce and sell more products to the markets generating cash income which previously was extremely scarce. The community will at least to some extent be prepared to face other interventions, which might have 'negative' purposes, i.e. outside invaders coming to exploit the resources.

The Project succeeded to attract resources from other sources, e.g. the State is making investments to infrastructure development and the Macauã Rubber Tappers' Association have received resources from other NGOs.

The Project has produced information and experiences related to the concept of National Forest in Acre and western Amazonas. Even the approval and implementation of the Forest Management Plan is pending, IBAMA and the State Government have gained valuable knowledge related to surveys, inventories, community involvement and the overall planning processes related to FLONAs.

If the **ITTO objective**, increased production of tropical timber from sustainable sources and related the priority actions are interpreted in a broad way the Project has had positive contribution.

The Project did not yet change the actual management status of Macauã. However, the Macauã has gained a legal status that allows forest management planning for community purposes as well as for large-scale industrial purposes. The community is organized and the capacity of the forest dwellers related to timber production has gradually improved. The physical infrastructure has significantly improved, the community members have improved access to markets with a community boat, terrestrial access has been improved even it is not sufficient, and the Macauã Forest has well established field station that can serve many purposes.

However, several constraints for sustainable and viable timber production still remain. The terrestrial access and overall logistical infrastructure for log transport is still insufficient. The studies indicating promising viability of timber production still lack verification. The key actors are debating of this issue. Some CTA experts do not see any viable possibilities for commercial timber production at least in the near future while the IBAMA representative would like to promote large-scale industrial production. IBAMA's main argument is that illegal timber production is taking place in more remote places with considerably more difficult logistics. The capacity related to implementation of the Plan is still quite low and definitely insufficient. All in all the Plan is not approved and there is also a lack of final

partnership agreements of implementation between different actors including forest dwellers association, CTA as assisting agency and the authorities particularly IBAMA.

Probably the most severe discrepancy between the Project and ITTO objective is that timber production is not necessarily the best option for the forest dwellers to improve their livelihoods at least in the short-medium term. The Sustainable Management of the Macauã Forest and development of the rather small population in the area appears to have an emphasis in agricultural and extractivist products. The change towards timber production definitely needs a longer time perspective.

The design would have better responded the ITTO 2000 Objective if a feasibility study had been carried out focusing clearly on the three pre-conditions mentioned above, i.e. viability of production options, favorable conditions for approval of the plan and stakeholders commitment to implement the plan. The ITTO 2000 objective is definitely still valid. However, the Macauã case has much longer time perspective than was foreseen in 1996 when the Project was launched. The long time perspective indicates that several other development priorities have to be overcome before the timber production will be relevant for the key stakeholders.

2. RECOMMENDATIONS

In this context the ITTO projects are assumed to aim at sustainable forest management and particularly sustainable timber production. In addition, the projects are assumed to aim to demonstrate viable SFM development models within the countries or regions, and thus have characteristic of testing new innovative approaches for SFM that are replicable elsewhere considering differing circumstances.

The design of future ITTO projects should take into account the practical lessons learned carefully. The preparation process should include sufficient surveys and consultations with the stakeholders. The preparation process should also come up with clear outcomes indicating the viability of the Sustainable Forest Management in the target area, requirements for approval of the Forest Management Plans and roles and potential commitment of the stakeholders for the Project. The investments made to appropriate and sufficient preparation will ensure much more efficient and effective Project implementation. A feasibility study or project pre-implementation is supported by the CTA as mentioned already in their final report.

The project design should guide the implementing agency to consider the idea that the project searches development models that could be replicated elsewhere. In this respect the project work should be more systematic when it comes to analyzing results and changing ideas with other similar entities. The Project design should already indicate and give guidance how to establish sufficient dissemination mechanisms. It is extremely important that important findings and conclusions are verified with a wider professional audience. The key issues, e.g. viability of the SFM practices will then become more evident.

The Project design should also consider thoroughly the time perspective of the development interventions at different levels. It appears that the sustainable timber production can be viable and realistic for local stakeholders, e.g. forest dwellers and social enterprises, only after several steps have been taken in overall community development, involving services,

education, health care and other productive development. Especially in the case like Macauã where there is no tradition in commercial timber production, the short and medium term production is still based on existing knowledge and market channels.

The concept of community development appears to be a fundamental part of any SFM related project in the Amazonas at least considering the experiences from the Macauã, even the population density is very low. The future projects should in this sense consider and negotiate with other partners who are more dedicated to finance overall community development. With such partnerships with Government and non-governmental organizations probably the time perspective and forestry focus would become more appropriate.

The Macauã Project started a development process, which is still continuing at different levels, particularly at local level with community actions and at IBAMA level where the FLONA concept is being evolved. Even the original project design was incorrect reflecting another reality and wrong expectations the Project turned out quite successful. The planning process in Macauã assumed that the Project will continue with a second phase with support to implement the Forest Management Plan. In the evaluators point of view it is highly recommended that the Project would have a second phase.

The second phase should first revisit the prerequisites of the Forest Management Plan and particularly the viability of different production options and emphasis. The Project should also clearly consider a synergic partnership with different entities, i.e. Macauã Association, CTA, IBAMA, the State Government and the municipalities.

The design of the second phase should clearly state the objectives related to actual timber production and particularly the realistic time perspective needed for that. The second phase should also consider in a different point of view the entrepreneurial development which definitely come crucial if the commercial production will be promoted.

LIST OF DOCUMENTS

Project Proposal

Acta de Reuniones

- 1a. Reuniao (Junho 1997)
- 2a. Reuniao (Marco 1998)
- 3a. Reuniao (Setembro 1998)

Protocolo de Intencoes: IBAMA-CTA

Ecoturismo – Uma Alternativa Valida

Justificativa para Readequacao das Atividades Propostas no Plano de Trabalho

Informe Final (September 2000)

Plan de Trabajo Detallado – Septiembre 1996

Plan de Trabajo Detallado – Marco 1997

Plan de Trabajo – Marco 1998

Plan de Trabajo Revisado – Marco 1998

Segundo Addendum al Documento de Proyecto – CRF (XXIII)/19 (Octubre, 1999); Extract from CRF (XXVIII)/3

Relatório Técnico de Evolução, Informe sobre la Marcha del Proyecto

- April - September 1997
- February – May 1998
- March – August 1998
- September 1998– February 1999
- February – August 1999

Plano de Manejo da Floresta Nacional do Macauã, CTA/IBAMA/ITTO, Rio Branco Março, 2000

Plano de Manejo Florestal Floresta Nacional de Macauã “Planejamento, Gestão e Projeto Industrial”, Brasília, Março 1999

Análise de Alternativas para o Aproveitamento da Madeira de Maneira Sustentavel na Flona de Macauã, Rio Branco, Dezembro 1998

Identificação de Áreas com Potencial para a Criação de Florestas Nacionais na Amazônia legal, Agenda Positiva para o Setor Florestal do Brasil, Brasília, Setembro 2000.

LIST OF INSTITUTIONS CONSULTED AND PERSONS MET

IBAMA, Brasília

Ana Luisa Fagundes Salomão, National Coordinator of FLONAS
Luis Augusto M. Azevedo
Adalberto da Costa Meira Filho
Cirineu Jorge Lorensi

IBAMA, Rio Branco

Ideleide Rodrigues Lima, Director of IBAMA/Acre Representation
Sebastião Santos da Silva, Director of Macauã National Forest

CTA, Rio Branco

Marcelo Argüelles de Souza, Coordinator
Pedro Bruzzi Lion
Rachel Lange
Djalcir Ferreira

FUNTAC, Rio Branco

Zenobio A.G.P. da Gama e Silva

Rubber Tappers Association/ Forest dwellers Association in Macauã

(Associação dos Seringeiros da FLONA do Macauã área de entorno – 48 socios)
(Meeting on 28 February in Colocação São Sebastião, and individual visits in some farms)

Admilson Ramalho de Oliveira, President of the Association
Manoel Cosme de Lima, Vice President of the Association
Raimundo Ribeiro da Silva
Antonio dos Santos da Silva
Valmir Ramalho de Oliveira
Olímpio Cosme de Oliveira
Renato Ramalho de Oliveira
Abraão Eduino da Rocha
Raimundo Ramalho de Oliveira
Osmar Lima de Oliveira
Rosileudo Lima de Oliveira
Diomar Ramalho de Oliveira
Raimundo Arina de Olivaira
Berenice Androde Ferreira
Abraim Duarte da Rocha
Jorge de Lima de Oliveira
Francisco Lima de Oliveira

In addition, in Sebastião Santos da Silva from IBAMA, Rachel Lange and Pedro Bruzzi from CTA and Bernard Delespinasse and Petri Lehtonen participated the meeting as well as visits in the area.