Ex-post Evaluation

Project PD 48/98 Rev.1 (F)

Reforestation of the Abutia Plains by Indigenous Communities in the Volta Basin (Ghana)

Juan E. Sève, Astrid Bergqvist and Marc J. Dourojeanni

39RFM-9
23 October 2006
Table of Contents

Acronyms used

Part I: Executive summary

Part II: Evaluation report

1. Project context
   1.1 Project background
   1.2 The ITTO project
   1.3 Geographic and socio-economic context of the project
   1.4 Strategy

2. Evaluation scope, focus and methodology

3. Evaluation results
   3.1 Evaluation of the original project document
      3.1.1 Basic proposal
      3.1.2 Structure and presentation of proposal
   3.2 Project execution
      3.2.1 Efficiency and effectiveness
      3.2.2 Techniques applied
      3.2.3 Project management, financial management, administration
      3.2.4 External factors – unexpected problems or circumstances
   3.3 Evaluation of project results
      3.3.1 Anticipated results
      3.3.2 Unanticipated issues or unexpected results
      3.3.3 Evaluation in terms of ecological and economic sustainability
      3.3.4 General achievements and expected future results
      3.3.5 Beneficiaries and evaluation of project and non-project effects on communities
      3.3.6 Technical and scientific quality of results and their dissemination
      3.3.7 Present community and authority participation in project activities
      3.3.8 Post project situation

4. Relationship to ITTO/ITTA goals and objectives

Part III. Conclusions and recommendations

1. Lessons learned

2. Conclusions

3. Recommendations
   3.1 Recommendations to the Government
   3.2 Recommendations for ITTO

Attachments

Attachment 1. Schedule of the Abutia Plains evaluation mission
## Acronyms Used

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACFMC</td>
<td>Abutia Community Forest Management Committee</td>
</tr>
<tr>
<td>AFERM</td>
<td>African Environmental Regeneration Movement</td>
</tr>
<tr>
<td>CFMC</td>
<td>Community Forest Management Committee</td>
</tr>
<tr>
<td>CRF</td>
<td>Committee on Reforestation and Forest Management</td>
</tr>
<tr>
<td>DSA</td>
<td>Daily sustenance allowance</td>
</tr>
<tr>
<td>FC</td>
<td>Forestry Commission</td>
</tr>
<tr>
<td>FD</td>
<td>Forestry Department</td>
</tr>
<tr>
<td>ITTC</td>
<td>International Tropical Timber Council</td>
</tr>
<tr>
<td>ITTO</td>
<td>International Tropical Timber Organization</td>
</tr>
<tr>
<td>MOFA</td>
<td>Ministry of Food and Agriculture</td>
</tr>
<tr>
<td>SFM</td>
<td>Sustainable forest management</td>
</tr>
<tr>
<td>PIC</td>
<td>Project Implementation Committee</td>
</tr>
<tr>
<td>PSC</td>
<td>Project Steering Committee</td>
</tr>
</tbody>
</table>
Part I: Executive summary

Background

Forest resources in Ghana have been affected by deforestation and degradation for over a century. The average annual rate of forest loss is currently estimated at 750 km², and about one third of Ghana’s forest area is believed to have disappeared between 1955 and 1972. To a significant extent, this phenomenon results from human activities such as agriculture, bushfires, logging, fuelwood gathering, mining, infrastructure and cattle raising. These effects have been aggravated by population growth, poverty, insufficient law enforcement, and lack of effective forest management.

In 1994 Ghana adopted a Forest and Wildlife Policy which emphasizes public involvement in forestry. Additionally, the Ministry of Lands and Forests has established a program for the reforestation of degraded forest areas with the participation of local communities, involving environmental NGOs in organizing and training local populations.

Motivated by this new policy context, the populations of the Abutia Plains approached in 1996 the African Environmental Regeneration Movement (AFERM), a local NGO, to assist them in reforestation efforts in the area where their communities are located.

On this basis, the Government of Ghana requested the support of ITTO for the implementation of Project PD 48/98 Rev. 1 (F) “Reforestation of the Abutia Plains by Indigenous Communities in the Volta Region”, approved at the XXV session of the ITTC. The project was implemented between December 1999 and December 2004.

The project’s development objective was “To support community-based tropical reforestation in order to arrest and reverse the deterioration of tropical forests in territories belonging to the indigenous communities in the Abutia Plains”.

Specific objectives were: a) “To develop and implement a reforestation plan to rehabilitate 1,360 ha of degraded forest lands using teak integrated with fruit trees”; and b) “To support the development of indigenous capacity to protect and manage community forest resources.”

Geographic and socio-economic context of the project

The Abutia Plains are located in the Ho District of the Volta Region. The project area shares boundaries with the Abutia Hills Forest Reserve and the Kalakpa Game Reserve. The land was devastated through overcropping by the State Farms Corporation of Ghana from the early 1960s to the 1970s, resulting in vast areas of denuded land, with adverse social implications owing to the loss of soil fertility.

The area earmarked for the project covers 1, 364 ha and has been released on leasehold by the traditional landowners for reforestation by villagers jointly with AFERM. The project was to be executed by the AFERM in collaboration with the Forestry Department and the Agro-forestry Unit of the Ministry of Food and Agriculture. The main intended beneficiaries of the project were the villagers living in and around the Abutia Plains.

Project strategy

The strategy is to recover the area through artificial regeneration, using fast growing commercial species. The executing agency, together with the Forestry Department and the local communities had decided to plant teak (Tectona grandis) in combination with Cassia siamea, nuts, mangoes, sweet berries and oil palm. Thus the project would also draw lessons from earlier teak plantations in the Volta Region.
The evaluation mission

The mission took place in Ghana from July 30 through August 4, 2006. An introductory meeting took place in Accra on Monday July 31. The team traveled to Ho on August 1, held meetings and conducted field visits in the project area on August 1 and 2, returned to Accra on August 3 and dedicated August 4 to additional consultations and report writing.

Lessons learned

1. The selection of local NGOs as executing agencies must follow a rigorous process to prevent problems during project execution. Demonstration of the necessary technical capabilities to carry on the project is essential.

2. Cost-benefit analysis of the investment proposed by the project must be conducted at the project design stage. Other design factors needing serious early consideration are processes and community participation in project design.

3. Good quantified baseline information (i.e., forest type areas, denuded areas, agricultural areas) is essential for project design and for ex post evaluation. This requires at least aerial photos or satellite images.

4. It is not advisable to plant large areas of forests over a short (two or three year) period. This leads to an unbalanced age class structure, elevates the yearly maintenance costs, and with such short periods there is no time to recover from mistakes.

5. Qualified technical advice is essential. Key aspects are soil/site/species compatibility, and plantation establishment, maintenance, and management.

6. In community reforestation projects, sequential planting (i.e., interventions providing yields at different points in time) must be stressed to ensure continuous income.

7. Plantation maintenance must be ensured by project design, including follow-on activities after project completion.

Conclusions

1. Despite the evident lack of success of the plantations, the villagers still keep some enthusiasm for the project and wish it to continue. Disappointment is, anyhow, quite evident.

2. The evaluation team could not confirm the totality of reported planting achievements of either teak full stands or agro-forestry plantations, and reported figures seem questionable. Additionally, most nurseries have been abandoned.

3. All plantations visited by the team have performed way below expectations and most may never be successful.

4. The project did not provide economic revenues either to farmers or for maintaining plantations. Anticipated revenues from thinnings and fuelwood/charcoal production did not materialize. Additionally, fruit tree plantations failed.

5. A Forest Fund intended for plantation maintenance was proposed, but never established.

6. The interest of populations in project activities is fading. Additionally, there is no follow-up proposal.
7. The project produced no dissemination materials.

8. A positive aspect of the project design is that it links two protected areas and has potential for buffering and as a corridor between the Abutia Hills Forest Reserve and the Kalakpa Game Reserve.

Recommendations

1. Recommendations to the Government

- In order to consolidate the accomplishments and ensure continuing participation of the local population, it is recommended that the FC propose a new operation to alternative donors, with proper management and a rigorous technical approach.

2. Recommendations for ITTO

- ITTO must carefully evaluate projects submitted for its approval. Many problems encountered in this project could have been easily avoided with an ex ante review in the field by experienced consultants and with appropriate early consultation with local people.

- It is recommended that ITTO assist the Government of Ghana to find international donors or other alternatives for the follow up of this operation. Attention must be paid to management, technical content, and legal arrangements.

- Prior to project approval, all legal matters, especially those regarding rights of use of land and other resources, must be settled; and support must not be granted until these matters are resolved.

Part II: Evaluation report

1. Project context

1.1 Project background

The background to the project can be seen in the context of the deforestation that since the turn of the last century has taken place in Ghana. The average annual rate has been estimated at 750 km² (World Bank, 1988). According to the project document, the rate has apparently been accelerating, as about a third of Ghana’s forest area was reported to have disappeared between 1955 and 1972 and much more since then. Outside the gazetted areas, forested land has been widely exploited and deforested leaving, an estimated area of 400,000 ha of forest cover from which the bulk of timber is extracted.¹

Human activities over the years have also been reported to contribute to the decline of the natural forests. Agriculture, bush fires, logging, fuelwood gathering, mining, infrastructure development and cattle grazing are also considered direct causes of the loss and degradation of the forest resource. This has been aggravated by a high rate of population growth, rural poverty, lack of proper enforcement of management rules, and inefficient management of the forests.

In 1994 Ghana adopted a new Forest and Wildlife Policy, which aims at the “conservation and sustainable development of the nation’s forest and wildlife resources for the maintenance of environmental quality and perpetual flow of optimum benefits to all segments of society.” The policy emphasizes the promotion and public involvement in forestry and wildlife conservation so as to maintain

¹ The project site is located in the vicinity of two protected areas but it is not a part of any gazetted area.
life-sustaining systems and the supply of industrial timber. Additionally, the Ministry of Lands and Forestry has established a program for the reforestation of degraded forest areas through the active participation of local communities. The program’s strategy was supposed to involve local communities in decision making on management of the resources and have them benefit from the products of the forests. It was also recognized by the Ministry that this strategy would be implemented with the active involvement of environmental NGOs in the training of local people as well as in the management of their forest resources.

It is stated in the project document that he chiefs and populations of the Abutia Plains approached the African Environmental Regeneration Movement (AFERM) in 1996 to assist them in reforester the Abutia Plains, having learnt of the track record of this organization.2

1.2 The ITTO project

Based on the above background, the Government of Ghana supported the AFERM request to obtain ITTO funding for the implementation of Project PD 48/98 Rev. 1 (F) “Reforestation of the Abutia Plains by Indigenous Communities in the Volta Region”, which was approved by the ITTC at its XXV session, to be implemented by AFERM over a four-year period with a budget of US$712,088, of which ITTO was to provide US$576,188 and the Government of Ghana would contribute the remaining US$135,900.

The project agreement was signed in October 1999 and operations started on 21 December 1999 with December 20th, 2003 as the intended completion date. An extension was granted until December 2004 without additional funds at the XXXIII session of the Committee on Reforestation and Forest Management (CRF) in November 2003.

As expressed in its development objective, the project was intended “To support community-based tropical reforestation in order to arrest and reverse the deterioration of tropical forests in territories belonging to the indigenous communities in the Abutia Plains”. A total of 1,360 ha of the Abutia Plains were to be reforested.

The specific objectives of the project were:

1. To develop and implement a reforestation plan to rehabilitate 1,360 ha of degraded forest lands using teak integrated with fruit trees; and

2. To support the development of indigenous capacity to protect and manage community forest resources.

In short, the project aimed at reforesting a major area in the Abutia Plains, through the effort of local communities, while enabling such communities to protect and manage their forest resources.

1.3 Geographic and socio-economic context of the project

The Abutia Plains, a vast stretch of land situated along some twenty km on the Sokodie-Abutia-Juapong road are located in the Ho District of the Volta Region. The Abutia Plains project area shares boundaries with the Abutia Hills Forest Reserve and the Kalakpa Game reserve. The land was reported to have been devastated through over cropping by the defunct State Farms Corporation of Ghana from the early 1960s up to the 1970s, which had led to a situation where vast areas of land had been denuded. The inhabitants of the area had become poorer owing to the loss of soil fertility.

2 The African Environmental Regeneration Movement is a local NGO involved in environmental and reforestation programs, particularly in arid or denuded lands.
The specific area earmarked for reforestation was reported to cover 1,364 ha. The land had been released on leasehold for 75 years by the landowners for reforestation by villagers with AFERM’s support. The project was designed to be executed by the AFERM with the active collaboration of the Forestry Department (FD)\(^3\) and the Agro-forestry Unit of the Ministry of Food and Agriculture (MOFA). The main intended beneficiaries of the project were the indigenous villagers living in and around the Abutia Plains.

1.4 Strategy

The reason for the selection of the project area was that the land had previously been covered by natural moist semi-evergreen forests on rich, well-drained soil. These forests had played an important role in the stabilization of the Volta basin. The project site had however been degraded by the activities of the extinct State Farms Corporation of Ghana, thus natural regeneration was not considered possible due to environmental factors\(^4\).

The strategy was thus to recover the area through artificial regeneration, that would include site preparation, nursery establishment with seeds of certified origin, planting with fast growing commercial species, and plantation maintenance. According to past experience, and based on environmental and ecological considerations of the area, the executing agency, together with the Forestry Department and the local communities had decided to plant teak and, in some areas, to integrate teak with *Cassia siamea*, nuts, mangoes, sweet berries and oil palm (*Elaeis guineensis*). The project would also draw lessons from earlier teak plantations in Ghana, particularly in the Volta Region.\(^5\) Part of the strategy would be that the project would benefit from the Forestry Department’s expertise in nursery establishment and plantation management, while involving the communities in these efforts, as well as in the construction of fire lines and the suppression of bushfires.

2. Evaluation, scope, focus and methodology

The primary purpose of the evaluation was to provide a concise diagnosis of the project so as to point out the successful and unsuccessful outcomes, the reason for successes and shortcomings, and the contribution of the projects towards ITTO’s Objective 2000 and the ITTO Yokohama Action Plan, and to draw lessons that can be used to improve similar projects in the future. The evaluation team was tasked to analyze and assess the following items:

1. The overall role and contribution of the project in the light of sector policies, development programs, priorities and requirements to achieve community participation in sustainable forest management (SFM);

2. The current status of community participation in sustainable forest management within the project’s area of influence, the effectiveness of the project’s implementation, and its effectiveness in promoting forest conservation and sustainable management practices.

3. The effectiveness of dissemination of project results, and the overall post-project situation in the project’s area of influence;

4. The unexpected effects and impacts, either harmful or beneficial, and the reason for their occurrence;

---

\(^3\) The Forestry Department was later replaced by the Forestry Commission.

\(^4\) Statements in project documents on soils and natural regeneration are not well justified: soils in the area are mostly poor, and natural regeneration is obviously feasible if bush fires are avoided.

\(^5\) Teak plantations in this region go back to the period of German colonization, in the late XIX and early XX Centuries.
5. The cost efficiency in the implementation of the project, including the technical, financial and managerial aspects;

6. Follow up actions in order to enhance the uptake of project results, and the project’s relative success or failure, including a summary of key lessons learnt, and the identification of any issues or problems that should be taken into account in the designing and implementing similar projects in the future.

The evaluation team was also required to analyze and assess the contribution of the specific studies, in various forestry-related disciplines, prepared by the project regarding the achievement of sustainable forest management in the project’s area of influence, the results and potential impact of applied research conducted by the project (if any), and its contribution to the overall knowledge on community participation in SFM in the region.

The evaluation consisted of a desk review of relevant documents related to the project’s design and implementation, including its final report. This desk review was followed by country level visits which included meetings with authorities as well as field surveys and contacts with beneficiary populations. Initially, a review meeting was held with national and local forestry sector authorities, resource persons, people formerly associated with the project, and other stakeholders, which gave the evaluation team an overview of the situation in the project area.

A field visit of two days was then undertaken in the project area to review the project’s achievements and to meet with representatives of government agencies and other cooperating partners, as well as representatives of local communities and other stakeholders. The focus was on the ex post situation and the more long term effects of the achievements, including their ecological and economic sustainability.

After the field visits a presentation of findings, lessons learned, conclusions and initial recommendations was delivered to representatives of the host country.

3. Evaluation results

3.1 Evaluation of the original project document

This section addresses a number of issues dealing with proposal content and secondly, structural aspects that could have been handled in a different way.

3.1.1. Basic proposal

The basic proposal was designed in accordance with ITTO requirements for project design. Although not very detailed, it seemed to encompass the necessary elements for a project document as approved by the ITTO governing bodies and the Council of the ITTA 1994. However, a number of issues arise in terms of proposal content:

- In retrospect, a major issue with the original proposal was its reliance on the experience and credentials of AFERM as the pivotal element of project execution, even though there was no solid evidence of credentials in timber plantation establishment and management. As discussed in other sections, the deficient performance of AFERM as a project management entity can partially be attributed to this lack of relevant experience.

- The land tenure situation brings up another major issue regarding proposal content. As will be discussed in later sections, while a land tenure agreement was signed by representatives of the traditional land holding family and AFERM, the rights and obligations of the parties were never properly established. This situation led to serious land conflicts that had a negative impact on project performance.
The suitability of soils for teak plantations brings up yet another issue dealing with proposal content. As will be discussed later, the evaluation team found that teak plantations performed by the project had been on the whole unsuccessful, largely owing to poor soil suitability for this particular species. The project design would clearly have benefited from a thorough soil survey at the planning stage.

3.1.2. Structure and presentation of proposal

The project proposal included in very general terms elements under the various headings and subheadings required by the ITTO project formulation manual. The initial part focused on the relevance to national policies and to sub-sectoral aims and programs, as well as on an institutional and legal framework focusing exclusively on a presentation of the executing agency – AFERM, a local NGO involved in environmental and reforestation programs.

Although AFERM had rather limited experience in timber plantations (some 25 acres of teak plantation), the key role it was given appeared justified, since the project was to be executed with the active collaboration of the Forestry Department and the Agro-forestry Unit of the Ministry of Food and Agriculture.

The fact that the institutional and legal framework in the project document was focused strictly on the proposed management organization brings up a major structural issue. It would have helped if the section had emphasized the rights, obligations, roles and responsibilities of all major stakeholders, including the FD, the different communities, decentralized local authorities, and other stakeholders, as well as major legal texts regulating such rights and obligations. For example, the land and tree tenure situation would have been covered more effectively under this section.

Part II of the project document describes the origin of the project, as well as its development and specific objectives. Additionally, it discusses the project’s justification and specificities of the project as to problems to be addressed, location and other aspects of the pre-project situation, referring in particular to projects previously undertaken by the AFERM.

The sequence of the items in this section raises another issue from a structural standpoint. While the objectives are properly focused on the project area, and seem realistic and attainable, they are stated before the problem to be addressed, when in fact they should guide the process of solving the problem. Additionally, the problem is stated with an extremely broad scope, while the problem statement would have improved the project approach if it concentrated on the project area.

Under project justification, the project document also describes the land and tenure situation, community involvement, beneficiaries, the intended situation after project completion and target beneficiaries.

Regarding land tenure, it is clearly indicated that the land in the project area belongs to the communities and that traditional chiefs (the Alifo Family) are the custodians of the land for the communities. The chiefs with the consent of the communities have agreed to establish a community plantation in the degraded Abutia Plains with the assistance of AFERM and the Forestry Department. This tenure agreement is for a period of 75 years (renewable). A land lease holding agreement signed by members of the Alifo Family and AFERM leaders is attached to the project document. The document also mentions the new Forest Policy and the Timber Resource Management Act (Act 547, 1997), by virtue of which planted trees are the property of the planter.

The project document further describes the community involvement, the intended situation after project completion, and target beneficiaries. It is emphasized that the communities in the project area have expressed their strong desire to participate actively in the project. The landowners/communities will receive one-third of the proceeds, while the remaining two-thirds of the proceeds will be put into a
community Forest Fund destined to finance other reforestation projects with other communities. The community Forest Fund will be managed by the Forestry Department, AFERM and representatives of the local communities involved.

The project strategy describes in general terms the reason for selection; lessons drawn from past experiences (particularly with teak plantations); and technical scientific, economic, environmental, social and management aspects. This part of the project proposal is weak, lacking the support of rigorous and detailed analytical work necessary to select the best strategic option among alternative solutions to the problem addressed. This is particularly important regarding economic and social aspects: the proposal does not present any analysis of future economic benefits and costs expected from investments driven by the project.

An important technical aspect deals with the suitability of soils in the project site for teak plantations. Based on the history of teak plantation in Ghana in general, and in the Volta region in particular, experience has shown that teak plantations could do very well if carried out on good drained sandy-clay soils, and the project document claims that this is the nature of the soil in the Abutia Plains. While the project area shares common boundaries with the Abutia Hills Forest Reserve, which contains a large stock of teak plantations, the same project document mentions land devastation, soil degradation and loss of soil fertility in the project area due to the activities of the defunct State Farm Corporation of Ghana.

Regarding the management of the plantations after project completion the document gives the impression that the main responsibility for maintenance would rest with AFERM, and not with the communities themselves, which would be the normal approach. Additionally, it would seem that too little attention has been given to the long term development of the plantations and their maintenance, even if the establishment of a community Forest Fund has been mentioned.

As to management aspects, the project would be implemented by AFERM in close collaboration with the Forestry Department and the Agroforestry Unit of the Ministry of Food and Agriculture, and the administration of project funds would be carried out by AFERM. This executing agency would operate under the guidance of the Project Steering Committee (PSC), composed of: AFERM, the Forestry Department, the Agroforestry Unit of MOFA, two representatives from the Abutia Communities, and the ITTO Secretariat. This management structure would be supported by a Project Implementation Committee (PIC), holding bi-monthly meetings at which project activities and constraints would be discussed. On the whole this appears as a sound management structure with an appropriate set of operating procedures.

The project document also gives information on reasons for ITTO support and risks associated with the project. The major risk associated with teak plantation is fire which has been taken into account at the project planning stage. Another risk factor mentioned is the sustainability of community interest in the project, since plantations have a long pay-back period. This issue is addressed through the planting of fast-growing *Cassia siamea* for fuelwood as well as of fruit trees yielding early benefits. A third risk factor mentioned was the provision of viable high quality provenance seeds, which would be addressed by testing all seeds purchased.

The project document also describes expected outputs under specific objectives as follows:

---

6 While a provision was made to include representatives of other donors in the Steering Committee there was no such participation in any of the Committee meetings.
Under Specific Objective 1:

- **Output 1.1**: 750 ha of teak plantation in pure stands established for the supply of timber to the communities, industry and export.

- **Output 1.2**: 600 ha of agroforestry plantation of teak integrated with fruit trees and *Cassia siamea* established.

Under Specific Objective 2:

- **Output 2.1**: Indigenous communities trained in agroforestry techniques, plantation establishment and management.

- **Output 2.2**: Institutional capacity of AFERM and Community Management Committees strengthened in nursery techniques, plantation establishment and management.

The remaining sections of Part II deal with operational planning procedures including activities and inputs as related to the four project outputs under the two specific objectives. Additionally, following the design structure for ITTO projects the document includes the logical framework in Annex 1 and the workplan in Annex 2. All these procedures are presented with appropriate logic and content, although the timing of some activities seems overly ambitious. A possible improvement in the work plan would be a sequencing of the activities and the specification of the linkages among them. While some activities can be carried out in parallel or independently from others, many will not be able to start before others are completed.

As to monitoring and evaluation (covered in Part III of the project document), a project proposal should contain a concrete plan of operational and financial reports, indicating the addressees and their responsibilities, and of control meetings indicating attendees and their roles. Additionally, for the reports as well as for the meetings, the plan should indicate the purpose, content and timing.

Part IV closes the project document with a complete and detailed budget, effectively presented both by standard budget line items over time, and by activity in each expenditure category.

While on the whole the proposal satisfies ITTO requirements, one of its shortcomings is the lack of a post-project perspective, above and beyond the intended situation after project completion. In this sense, two major options are possible: a) the project constitutes a first stage in a longer process needed to resolve the problems addressed; and b) externally supported activities end with the project. In the first case, the proposal should contain an overview of what a follow-up phase could be. In the second case, it should consider an “exit strategy” through which project activities are transferred to beneficiaries so that they can ensure the continuity of the structures and functions created by the project as factors of development and better well-being.

### 3.2. Project execution

#### 3.2.1. Efficiency and effectiveness

In this section, efficiency and effectiveness are evaluated under their conventional aspects, i.e., with respect to attainment of goals and outcomes; not in terms of the development objective.

---

7 The project was also designed to be carried out in two phases of two years each, with all planting activities (on 1,350 ha) to be carried out in the first two years, with the third and fourth years involving mainly the maintenance of the plantations.
The execution of project activities, under the responsibility of AFERM as executing agency, is documented in the progress reports, which normally cover periods of six months. The reports are fairly detailed and point out both successes and shortcomings in project implementation.

From a cost efficiency standpoint, the project has not been particularly successful. A number of changes in the budget were needed early on in order to meet increased costs. Specifically, the posts of Plantation Manager and Nursery Manager were abolished in order to release funds for the purchase of a pick-up truck. Purchases of a power tiller and five motor bikes were also deleted to accommodate the purchase of a farm tractor. The maintenance cost of the pick-up and the tractor have been considerable, and the tractor is no longer in operation.

While the project was designed for a four-year duration, numerous planting failures resulting from droughts and conflicts with landlords delayed performance. Additionally, due to reporting problems, the release of ITTO funds was often delayed, thus affecting project efficiency. As a result, a non-cost extension was authorized leading to total project duration of 5 years.

Another factor that adversely affected project performance was the frequent changes in project staff, as three out of the five original key personnel were reassigned to other government agencies in the first year of the project. These changes, combined with the Project Manager’s peculiar operating style (as discussed in a later section), led to continuing problems of project effectiveness. In order to correct these shortcomings, it was decided to appoint the Regional Manager of the Forest Services Division (Forestry Commission) as Assistant Project Manager. He also played the role of acting Project Manager in the final stages and saw the project to its completion.

While the Project Completion Report indicates a reasonable degree of achievement of anticipated outputs, in the opinion of the evaluating team, these results are questionable as reflected by the low quality of the plantations seen in the field, as well as the lack of practical application of the capabilities imparted through training workshops, as gathered from the discussions with the villagers.

3.2.2. Techniques applied

Based on discussions with technical personnel associated with the project, teak was the species of choice for several reasons, i.e., a long tradition of teak plantation in the region, strong local and international markets for poles and sawlogs, reasonably rapid growth and resistance to fire.

While the planting stock in the form of stumps follows standard practice for this species, a major factor adversely affecting the project teak plantations has been the choice of soils. Teak can be a very robust species as long as it is planted on appropriate sites. The literature on teak plantations is consistent regarding soils of at least moderate fertility, depth of 1 meter or even more, on flat ground or slight slopes, and well drained. Soils that are shallow, compact, or waterlogged are not suitable, and under such conditions, alternative species must be considered. Based on the field visits, many of the soils where teak was planted were shallow and of poor fertility, and some had extremely poor drainage, as teak plantations were attempted even on wetlands.

Regarding plantation density, the project consistently applied a spacing of 3m by 3m implying roughly 1,100 stem/ha. Such initial densities have been successful in high quality sites and with aggressive weeding programs, which are not at all the conditions prevailing in the project site. More frequent initial densities in teak plantations range between more than 2,500 to 2,000 stems/ha.

In connection with planting density, weeding is an essential consideration. Young teak plantations are susceptible to weeds, both from a competition standpoint and as a fire hazard. In consequence, frequent weeding is recommended in the literature (often more than once a year) until the third and sometimes the
fourth year. Based on the plantations inspected, such weeding operations were the exception rather than the rule, and large number of plantation hectares damaged by fire may have been a consequence of insufficient weed control. In addition, in the plantations visited, a large number of trees showed forked stems. Along with weeding, the early elimination of forks is a basic tending practice in order to attain a high quality adult stand.

In sum, most teak plantations visited on the site of this project, because of forked stems, small diameters and stunted trees will never be able to produce a quality timber crop at rotation. However, mixed plantation composed of other species showed somewhat better performance than teak.

A final consideration on this matter is that the project attempted to plant the whole project site in its initial two years. Although activities were delayed for several reasons discussed elsewhere in this report, this is poor planning. Apart from the fact that all plantations would be attaining rotation at roughly the same time, without being able to provide a steady product yield, this scheduling gives no time to learn from experience or recover from errors and, of course, imposes high maintenance costs.

From a social development standpoint, in order to motivate and train the local population a number of training workshops were organized. The project budget by activity gives information on three planned workshops: two training workshops on agro-forestry, plantation establishment and management, and one on nursery practices. Other project documents, i.e., the Socio-economic Survey and the project completion report indicate that eight local workshops were effectively organized. There is, however, no detailed documentation on these workshops or training sessions.

### 3.2.3. Project management, financial management, administration

The project in its implementation met with a number of difficulties, many of which, as reported to the evaluation team, can be attributed to the personality of the Project Manager. It is important to point out that the team did not have the opportunity to meet with the Project Manager. However, available documents, such as minutes from PIC and PSC meetings contain some information on this matter. For example, there were often unnecessary delays in the submission of bi-monthly project progress reports to the ITTO secretariat, which sometimes affected the transfer of funds for the project, stalling some of the activities. Additionally there was a lack of confidence in the Project Manager as the PSC recommended the Regional Forestry Officer at Ho to assist in project administration and to act as a deputy for the project manager until a good internal administration of the project could be put in place.

At the third meeting of the PSC on 16 December 2002, a number of issues indicating a crisis in project implementation and management came to the surface. Among the issues reported were the following:

- It was observed that activity 1.1.1 was to reforest an area of 750 ha with teak, but only 350,000 teak seedlings were produced as compared to the 794,400 seedlings required.
- The PSC noted weaknesses in the administration of the project, which had also affected the performance of the PIC. The PSC recommended the re-organization of the PIC to ensure good monitoring and responsibility.

---

8 Per discussions with Forestry Commission foresters, a rotation of 25 to 30 years will yield quality sawlogs. This appears way too ambitious based on similar plantations in Togo (near Kpalimé, right across the border from the Abutia Plains and Hills), where planned rotations are on the order of 40 years. This is confirmed by multiple experiences with teak plantations found in the technical literature.
The meeting also took decisions to a review the budget for 2003, to cater for exhausted funds in the budget, as the PSC observed that the project had spent excessively on the production of seedlings. Funds were also exhausted on consumables and DSA.

A number of issues arose with respect to the financial management of the project, particularly regarding compliance with ITTO rules on this matter. The management report and financial statement for the year ending 31 December 2004, points out a number of continuing shortcomings, such as:

i. Receipts were not issued in support of funds allocated to the project;
ii. Insufficient details were provided for payments;
iii. Weakness in the store controls (procurement issues); and
iv. No bank reconciliation statements were issued.

Additionally, receipts were not issued by project management in acknowledgement of funds received. It was also observed that the management of the project did not follow strictly the budgetary allocations. As a result, certain expenditure components far exceeded the budget. Finally, reports to ITTO were often not delivered on time. In consequence, ITTO at times withheld the transfer of funds because of missing reports, a fact that had implications not only for this particular project PD 48/98 but also for the Ghana project PD 49/98 implemented in the Worobong Forest Reserve. ITTO representatives at various meetings with the PSC have stressed the need for project management to strictly adhere to the ITTO rules.

The project also met with staff problems. It had difficulty in recruiting and retaining young technical foresters as plantation and nursery officers for the project. Initially recruited staff left the project after a very short time and considerable time was required to find replacements. The project completion report notes that the young officers found village life without electricity and pipe borne water unattractive. However, the old experienced retired foresters, who were later employed easily adjusted to the village life and project circumstances.

### 3.2.4. External factors - unexpected problems or circumstances

Important unexpected problems related to land use conflicts arose early in the project. At the end of 2002 land conflicts with the family holding the project site became critical. This conflict arose from the fact that since project inception there had never been an officially signed document signifying the transfer of land use rights from this family to the project. Additionally, the family insisted on a reassessment of land values and on an increase in the payments for the land that had already been released for the project. Other land conflicts between the project and the settler farming communities, particularly in the Abutia Kpota area had been brought up in progress reports since late 2001.

In order to solve these land conflicts, a sub-committee was put in place in December 2002. The team submitted an interim report at the PSC meeting of 17 November 2003. The report states that the sub-committee had resolved the conflict amicably and attended to the problems of both the landowners and the settler farmers. For the former a renegotiated payment on the lease had been settled and for the latter, 2.5 sq. miles had been agreed upon for their activities.

### 3.3. Evaluation of project results

#### 3.3.1. Anticipated results

Expected and achieved results are summarized in Table 1, including the opinion of the evaluators on these. These are presented in the same order as in the project document. It is worth mentioning that the
opinion of the evaluation team is not necessarily in agreement with what is indicated on this matter in the Project Completion Report.

Table 1 Expected and achieved results according to ex-post evaluation mission

<table>
<thead>
<tr>
<th>Anticipated results</th>
<th>Accomplished results according to ex post evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 750 ha of teak plantation in pure stands established for the supply of timber in the communities, industry and export</td>
<td>Partially achieved. Reportedly, 640 ha of teak were planted, along with 190 ha of other timber species. All plantations visited are in mediocre to very poor condition and there was no way to confirm that such areas had been reached.</td>
</tr>
<tr>
<td>1.2 600 ha of agro-forestry plantation of teak integrated with fruit trees and Cassia siamea established.</td>
<td>Partially achieved. According to one part of the completion report the area achieved was 510 ha, and 320 according to another. Again, plantations have performed poorly and there was no confirmation of the total area planted.</td>
</tr>
<tr>
<td>2.1 Indigenous communities trained in agro-forestry techniques, plantation establishment and management</td>
<td>Achieved. A total of 170 community personnel from 5 communities took part in eight training workshops. However, there is no documentation available on such workshops.</td>
</tr>
<tr>
<td>2.2 Institutional capacity of AFERM and Community Forest Management Committees strengthened in nursery techniques, plantation establishment and management</td>
<td>Partially achieved. Although training efforts were conducted and Community Forest Management Committees (CFMCs) were established, at the time of the ex post evaluation, the plantations established under the project were clearly not being managed, most of the nurseries had been abandoned, and there was no evidence of new plantation activities. As for AFERM, this organization was no longer a participant.</td>
</tr>
</tbody>
</table>

3.3.2. Unanticipated issues or unexpected results

The situation of mistrust and lack of confidence in the Project Manager and Executive Secretary of the AFERM, leading finally to the resignation of the Project Manager from his duties seem to have been among the unanticipated issues.

3.3.3. Evaluation in terms of ecological and economic sustainability

The project was lacking quantified technical baseline information (i.e., area of different vegetation types, area under agriculture, soil maps). This would require at least aerial photos or satellite images. During the visit, not even a map of the distribution of the plantation, including planting dates, was available. In the planning phase no soil surveys seem to have been undertaken, despite the fact that the land, as mentioned in the project document, was degraded.

Almost exclusive teak planting in the Abutia Plains was obviously a mistake. Other options were available, including planting of the species mentioned in the project proposal, such as Cassia. If the good idea of using the plantation as a biological corridor between the Abutia Hills Forest Reserve and the Kalakpa Game Reserve was to be seriously considered, other species were to be included in the mix. From an environmental point of view, another aspect that was not taken into account, especially for the worst soils and the wetlands, was the option of allowing natural regeneration to take over. Fire control would be largely enough to allow an excellent recuperation of natural vegetation.

Sequential planting, i.e., several plantation systems, with yields at different points in time to ensure continuous income, were mentioned in project document but were not effectively implemented. This is
essential to ensure the livelihood of participating communities. Most associations of teak with fruit trees were reported to have been destroyed by fire. Plantation maintenance must be ensured by project design due to its high cost and labor intensity. This is another reason to avoid reforestation programs over short periods (e.g. 2 to 3 years) with no follow-on activities planned.

From an economic point of view, a cost-benefit analysis of the investment venture proposed by the project should have been conducted as part of the design. If so done, it would have become evident that the poor “beneficiary” communities would not have been able to practice plantation maintenance over such a long period of time. As a matter of fact, the plantations were abandoned as soon as they were established, and fire either destroyed or seriously damaged most of them.

The social and economic information that would have signaled the local people’s capability to carry out the project was not available at project design, and also, there are serious questions on the extent to which the indigenous population were involved in the project design, and if their views on species selection were sought. It is essential that the intended beneficiaries be actively involved already at the stage of project design and their interests taken into account.

### 3.3.4. General achievements and expected future results

Under Specific Objective 1 and Output 1.1, the Project Completion Report indicates 640 ha of teak plantations achieved (as compared to the originally planned 750 ha) in pure stands established for future supply of timber to communities, industry and export. However the evaluation team was not able to confirm the existence of all these plantings. At the sites visited all block plantations and agro-forestry activities have performed way below expectations and hardly any maintenance activities such as tending or thinning have been undertaken. Thus there seem to be low probability of success for any of the project plantations, based on those that the team was invited to inspect.

Under Output 1.2, the Project Completion Report mentions 510 ha of agro-forestry plantations accomplished (as compared to the 600 ha originally planned). Their existence could not be confirmed either. Additionally, of the eight project nurseries established at Abutia Kpota, Abutia Teti and Sokode Gbogame most seem to have been abandoned; only one was operating. Finally, concerning the three dams constructed, the team could verify their existence.

The evaluation team also visited the old project office and seed laboratory at Sokode Gbogame. The office building was closed and no activities seemed to be taking place at the old office site.

Regarding the accomplishment of Specific Objective 2, information was sought at the meetings with the indigenous populations and also in the written documentation. The Project Completion Report indicates that this objective was achieved by numerous training workshops conducted on agro-forestry, plantation establishment and management. A total of 170 community personnel from 5 communities took part in the training workshops.

Additionally, four Community Forest Management Committees in the Abutia communities were established (Abutia- Kpota, Abutia Sokode, Abutia Togbve and Abutia-Agodeke). The Committee members were selected from among the workers on the plantation and among opinion leaders. Training workshops were organized for them on topics such as nursery practices and Community Forest Management. These training workshops were conducted by experienced forestry experts from the FD and the Agro-Forestry Unit of The Ministry of Food and Agriculture.

No written minutes from the training workshops or other training sessions have been made available to the evaluation team although the Socio-economic Survey also reports on these activities. Additionally, no dissemination materials seem to have been produced.
It is also reported that after completion of the project an Abutia Community Forest Management Committee (AFCEM) was set up with representatives from the various village Committees to manage the forests until maturity. The Chairman of this Committee participated in the meetings with the evaluation team.

3.3.5. Beneficiaries and evaluation of project and non-project effects on communities

The intended beneficiaries of the project were primarily the local populations of the communities in the Abutia Plains. There are, however, major questions on the extent to which these populations will benefit from the plantations. During the meetings held with the communities, the issue of the sharing of the proceeds from the plantations was raised, as well as the question of plantation maintenance. Since the workers were paid for the plantation activities during the project, they expected to be paid also for their continuing maintenance work. Their message was “real pay for real work”. The notion of working benevolently for future benefits did not seem attractive at all. Thinning activities may result in some revenue, but hardly any such activities seem to have taken place. Nor was there much evidence of Cassia plantations that could be used for fuelwood. The evaluation team saw, however, one charcoal mound at one of the sites in Abutia.

It is evident that project so far has failed in achieving its goal of providing economic benefits to communities, at least after the completion of the project. Regarding proceeds from fruit tree plantations, community members also had doubts as to future benefits although they still expressed a preference for teak. The main reasons for the teak preference seemed to be that it was more resistant to fire and that there was a local market for teak poles for electrification. However, this view, which is common among villagers of Ghana and Togo, seems to be essentially the product of a colonial tradition. Finally, there seemed to be a continued interest in the fight against bushfires and in maintaining the green belts established.

3.3.6. Technical and scientific quality of results and their dissemination

So far, all block plantations and agro-forestry activities have performed way below expectations. The only technical lessons that can be drawn from the results are negative in nature.

As to other achievements of the project it is worth mentioning the Socio-Economic Survey, which contains very useful information on relevant aspects of the socio-economic background of the communities of the Abutia Plains. In hindsight, this Survey might have been even more useful if it had been undertaken as part of the planning stage of the project. It contains a wealth of useful information, which would have led to a better understanding of the various interest groups and more precision on the perceptions and expectations of beneficiary communities.

3.3.7. Present community and authority participation in project activities

Almost no maintenance activities seem to be in progress at present. The evaluation team met with one group of villagers that had been asked by the Abutia Community Forest Management Chairman to conduct some maintenance work and meet with the evaluation team at a site in Abutia Kpota close to one of the dams constructed for the project. Some thinning activities seemed to have been undertaken, as piles of wood were visible at the site. The team had an exchange of views with the group, which also included some female workers. As soon as the exchange with the evaluation team was finished, everybody left the site and returned to the village.

Representatives from the Regional Forestry Commission Office at Ho indicated that they were expecting some funds from the Government for maintenance work, but were not quite sure when this would
materialize. The creation of a Forest Fund to support maintenance activities after project completion was envisaged, but no such Fund has been established.

3.3.8. Post project situation

The difference between pre and post project situation is that currently there are plantations in place and that high expectations were raised among villagers. However, all block plantations and agro-forestry activities have performed way below expectations and almost no maintenance activities have been put in place so far. There is at present low probability for success for the plantation efforts undertaken. Additionally, the expectations that the project has raised among the indigenous populations in the Abutia Plain have remained largely unsatisfied.

As discussed in the Project Completion Report, along with the establishment of the ACFMC that was supposed to take over the management of the plantations, a number of measures had been put in place to favor sustainability, namely:

- Fish farming in the constructed dams;
- Dry season vegetable farming along the dams;
- Cassava farming and processing;
- Grasscuter domestication, breeding an marketing;
- Beekeeping and mushroom production; and
- Production of improved timber seedlings for sale.

Reportedly, communities were also growing food crops alongside tree crops, thus maintaining the timber plantations along with their farming activities. It is worth pointing out, however, that the evaluation team was not able to witness any of these activities, and they were not brought up in the discussions the team had with the local populations.

4. Relationship to ITTO/ITTA goals and objectives

The project being evaluated has a high positive correlation with Ghana’s forestry sector policies. All project actions fall within the framework of the 1994 Forest and Wildlife Policy of Ghana, which emphasizes the promotion of forestry and wildlife conservation investments so as to maintain life sustaining systems and timber supply. In addition, the project has full compatibility with the program for the reforestation of degraded lands with the involvement of communities, under the Ministry of Lands and Forestry, and the national forest plantation program launched by the President in 2001.

In terms of ITTO goals and objectives, the project falls within the functions of the Committee on Reforestation and Forest Management in its three areas of responsibility, i.e., reforestation, forest rehabilitation, and forest management.

The project is related to the following ITTO objectives under Article I of the 1994 Agreement:

- Objective c): To contribute to the process of sustainable development.
- Objective j): To encourage members to support and develop industrial tropical timber reforestation and forest management activities as well as rehabilitation of degraded forest land, with due regard for the interests of local communities dependent on forest resources.
Objective 1): To encourage members to develop national policies aimed at sustainable utilization and conservation of timber producing forests and their genetic resources and at maintaining the ecological balance in the regions concerned, in the context of tropical timber trade.

The project also meets the following ITTO criteria:

- Production and use of industrial tropical timber through promoting reforestation of commercial species and its sustainable management for long term production.
- Yielding benefits to the tropical timber economy as a whole.
- Reasonable prospects for positive economic returns in relation to costs.

While the potential for net economic returns has not been realized to date, this can be met if a new operation is put in place as recommended below.

**Part III: Conclusions and recommendations**

1. Lessons learned

   1. The selection of an NGO as executing agency is a delicate matter and must follow a rigorous process to prevent major problems from arising during project implementation. NGOs participating in ITTO projects must also be able to demonstrate the necessary technical capabilities in forestry-related matters.

   2. When a project is aiming at the initiation of a long term for-profit venture, such as forest management or forest plantations, it is essential to carry out a serious cost-benefit analysis of the investment as part of its feasibility study during the project design stage. This analysis must not be carried out either after project approval, or not at all, as has been the case in the reviewed operation.

   3. Baseline information (i.e., forest type areas, denuded areas, agricultural areas) is of the essence for project design, and an important tool for evaluation of results. This requires at least aerial photos or satellite images.

   4. It is not advisable to plant large areas of forests over short periods (e.g., two or three years). This leads inevitably to the establishment of a forest with an unbalanced age class structure. Additionally, with such short periods, there is no time to recover from mistakes or make adjustments, and yearly costs of plantation maintenance are too high.

   5. The importance of qualified technical advice cannot be overemphasized. Key aspects in forest plantation projects are soil/site/species compatibility, plantation establishment, plantation maintenance, and plantation management.

   6. In community reforestation projects, the importance of sequential planting (i.e., several planting systems with yields at different points in time) must be stressed to ensure continuous income to villagers.

   7. Plantation maintenance must be ensured by project design. This is another reason to avoid reforestation programs over short periods (e.g., 2 to 3 years) with no follow-on activities planned.
2. Conclusions

1. Despite the evident lack of success of the plantations, the villagers still keep some enthusiasm for the project and wish it to continue. Disappointment is, anyhow, quite evident.

2. As to planting achievements of teak full stands and agro-forestry plantations, the evaluation team could not confirm their existence. Reported figures seem questionable. Additionally, most nurseries have been abandoned; only one is operating.

3. All block plantations and agro-forestry activities visited by the evaluation team have performed way below expectations and most may never be successful if their present conditions prevail.

4. The project did not provide economic revenues either directly to farmers or for maintaining plantations. Anticipated revenues from teak thinnings and fuelwood/charcoal production from *Cassia* did not materialize. Additionally, fruit tree plantations failed, and therefore there was no income in the short-run.

5. A Forest Fund intended for plantation maintenance was proposed, but never established.

6. The interest of populations in project activities is fading. Additionally, there is no follow-up proposal from the Forestry Commission at this time.

7. The project produced no dissemination materials.

8. The project area links two protected areas, and if plantations are improved, has the potential to assist in buffering and serve as a corridor between the Abutia Hills Forest Reserve and the Kalakpa Game Reserve.

3. Recommendations

3.1 Recommendations to the Government

- For the Forestry Commission: In order to consolidate the currently limited project’s results and to take advantage of the still existing interest of the local population in reforestation efforts, it is recommended that the FC submit to appropriate donors a new project, aiming at solving detected problems, and establish proper management and a rigorous technical approach.

3.1 Recommendations for ITTO

- It is essential for ITTO to conduct an even more careful evaluation of projects submitted for its approval. Many of the problems encountered during the implementation of this project could have been easily avoided if the proposal had been reviewed and checked in the field by experienced consultants, and benefited from early appropriate consultations with the local people.

- It is recommended that ITTO assist the Government of Ghana in finding alternative support for the follow-up of this operation. A follow-up operation must be addressed to various international donors so as to ensure financing. Such an operation must include proper management, a rigorous technical component, and well defined legal arrangements, particularly regarding rights and obligations on the use of land and other resources.
Prior to the approval of any new project, all legal matters regarding rights of use of land and other resources, as well as other legal conditions necessary for project success must be settled; and support must not be granted until these matters are resolved.
Attachments

Attachment 1. Schedule of the Abutia Plains evaluation mission

Sunday 30 July 2006
Mission arrives in Accra and holds preliminary meeting

Monday 31 July 2006
09:30  Meeting with Forestry Commission officials, community representatives and other project stakeholders
14:00  Afternoon dedicated to team meetings and review of documents

Tuesday 1 August 2006
08:00  Mission travels to Ho
10:00  Meeting with Regional Manager of Forest Services Division and other project stakeholders
10:30  Field visit to project plantations and nursery

Wednesday 2 August 2006
09:00  Morning dedicated to additional field visits and meetings with communities
13:00  Visit to Kalakpa Game Reserve

Thursday 3 August 2006
09:00  Wrap-up meeting with Regional Manager of Forest Services Division
10:00  Mission returns to Accra

Friday 4 August 2006
09:00  Day dedicated to additional consultations and report writing

*   *   *