Report of Ex-post Evaluation

Project PD 195/03 Rev. 2 (F)

To establish a National Monitoring Information System for the Effective Conservation and Sustainable Management of Thailand's Forest Resources

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Acronyms and Abbreviations

C&I	Criteria and Indicators
DMC	Department of Marine and Coastal Resources
DNP	Department of National parks, Wildlife and Plant Conservation
ITTA	International Tropical Timber Agreement
ITTO	International Tropical Timber Organization
NGO	Non-government Organization
PFE	Permanent Forest Estate
PSC	Project Steering Committee
REDD	Reducing Emissions from Deforestation and Forest Degradation
RFD	Royal Forest Department
SFM	Sustainable Forest Management

Executive summary

This ex-post evaluation report relates to Project PD 195/03 Rev.2 (F): To establish a national monitoring information system for the effective conservation and sustainable management of Thailand's forest resources.

The project had a budget of US$ 1,060,420, of which the ITTO contributed US$ 677,743 and the Government of Thailand US$ 382,677. It had a three-year implementation period commencing on 8 June 2004.

Its purpose was to develop a system for collection and analysis of biophysical and socio-economic data to provide the basis for policy development and decision-making regarding the conservation and sustainable management of Thailand's natural forest resources.

The development objective of the project was 'to contribute to the effective conservation and management of Thailand's forest resources and the environment' whilst the specific objective was 'to establish a national forest resources monitoring information system to provide change and trend data on timber and non-timber forest resources.'

The ex-post evaluation was based on terms of reference of the consultants, which included an assessment of the role and contribution of the forest to SFM in Thailand taking into account specific studies and research undertaken as part of the project as well as its impact and effectiveness including relative success or failure.

With the dedication and commitment of the project staff and the assistance of the international consultant all activities within output 1, which included the establishment of a national network of monitoring plots, training and mentoring field crews in inventory work and the production of thematic maps and overlays indicating location of plots, have been achieved.

A large amount of biophysical data, on the state of the forest, and site conditions, in addition to some information on the impact of local communities, have also been collected and compiled. This component of the project has been highly successful and commendable.

But the outputs relating to linking forest resource monitoring data with socio-economic information, and the preparation of a baseline C&I report based on the data have not been achieved.

The project has been managed with cost efficiency as well as to expected technical, financial and managerial standards. It has been completed within three years after commencement on 8 June 2007 as scheduled, and within budget. A surplus of $ 13,595 had been reimbursed to the ITTO. The project accounts were audited by a certified public auditor in accordance with normal ITTO procedures with regards to income, expenditures and disbursements and found to be in order. Inputs and contributions by the Government of Thailand had also been provided in full as committed in the project document.

Although forest communities, industry and NGOs are major players in the forestry sector, and were listed as beneficiaries of the project, they were not meaningfully involved in the project design and implementation. The academia had a clear role to play in amalgamating the physical data with socioeconomic information but they were not included either. Fuller involvement and participation of these stakeholders would have strengthened the project and enhanced its credibility.

A factor that militates against implementing SFM in Thailand is the ambiguity on the extent and distribution of the legally constituted PFE due to inadequate demarcation on the ground, possibly also overlapping gazettement, clear delineation between conservation areas to be fully protected and production forests to be sustainably managed for timber production and compounded by illegal activities such as settlement, encroachment, cultivation and subsequent land alienation in some cases.

Climate change is emerging as a factor with major implications for SFM because of the role of forests in carbon absorption and issues related to REDD. It needs to be addressed within C&I for SFM in a comprehensive manner.

The issue of establishing a C&I process to implement SFM has been much discussed n Thailand. The process has been initiated but greater urgency and more resources would be necessary in order to achieve more rapid progress.. It deserves high priority to achieve the government's target of having 40 per cent of land area under forest and promoting sustainable forest management.

1 Introduction

1.1. Purpose of evaluation

ITTO is an intergovernmental commodity organization established in 1986 to administer the provisions and operation of the International Tropical Timber Agreement (ITTA), particularly in the promotion of international trade in tropical timber, the sustainable management of tropical forests and the development of tropical forest industries through international cooperation, policy work and project activities.

In pursuing its objectives the ITTO Committee on Reforestation and Forest Management, at its Forty-third Session, decided to conduct the ex-post evaluation of the following projects relating to Criteria and Indicators of Sustainable Forest Management

1. PD 225/03 Rev.1 (F) Adoption and implementation of an appropriate system of criteria and indicators for the Philippines.

2. PD 195/03 Rev.2 (F) To establish a national monitoring information system for the effective conservation and sustainable management of Thailand's forest resources.

3. PD 389/05 Rev.2 (F) Application of the internal monitoring of SFM performance at forest management unit level (Indonesia).

The primary purpose of the evaluation is to provide a concise diagnosis of the three projects related to criteria and indicators of sustainable forest management so as to point out the successful and unsuccessful outcomes, the reasons for successes and failures, 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.

1.2 Project details

This ex-post evaluation report relates to Project 2 above - PD 195/03 Rev.2 (F): To establish a national monitoring information system for the effective conservation and sustainable management of Thailand's forest resources.

The Kingdom of Thailand has a land area of 513,115 sq. km. with 28 per cent of it under forest[1]. It has been severely deforested and degraded due to uncontrolled logging, with population pressure and rural poverty resulting in forest encroachment, settlement, cultivation and excessive harvesting of timber and non-timber forest products. Eighty per cent of its population of 63 million is rural based and 5 million people are estimated to be forest-dependent.

To stem the persistent decline in forest area, in 1989, Thailand imposed a logging ban in natural forests. This was followed in 2002 by a major reform of the government forestry administration. The functions of the Royal Forest Department (RFD) were distributed among three separate Departments under the Ministry of the Environment and Natural Resources:

a) The Royal Forest Department (RFD), responsible for areas for timber production, including forest plantations.

[1] FAO, State of the World Forests, 2009

b) Department of National parks, Wildlife and Plant Conservation (DNP), responsible for areas designated for biodiversity conservation; and
c) Department of Marine and Coastal Resources (DMC) responsible for the management of coastal flora and fauna including mangroves.

Since then, it had also embraced a policy of sustainable forest management as the basis of managing its forest resource. To implement that Thailand has subscribed to the criteria and indicators for SFM developed by the ITTO. It was as a part of this approach that Project PD 195/03 Rev. 2 (F) was implemented.

Project PD 195/3 Rev.2 (F) met the objectives of the ITTA, 1994 and conformed to the Yokohama Action Plan (cross cutting Actions (a) and (b)). In addition, it was also in line with ITTO's Goal 2, Actions 1 and 10 of Reforestation and Forest Management, which is aimed at promoting C&I for SFM. The project was also in compliance with the ITTA, 2006, as it related to 'poverty alleviation' (objective c); 'rehabilitation and restoration of degraded forest land' (objective j); 'forest law enforcement and governance and address illegal logging' (objective n); 'promoting better understanding of the contribution of non-timber forest products' (objective q) and 'recognise the role of forest-dependent indigenous and local communities' (objective r).

2 Evaluation scope, focus and approach

The ex-post evaluation is based on the terms of reference, which included the following:

1. The overall role and contribution of the project in light of sectoral policies, development programmes, priorities and requirements to improve the criteria and indicators of sustainable forest management (SFM) in the countries concerned.
2. The current status of criteria and indicators (C&I) of SFM in the concerned countries, the effectiveness of the project's implementation and its effectiveness in promoting SFM.
3. The contributions of the specific studies in various C&I-related tools/manuals/guidelines prepared by the project as regards the monitoring of sustainable forest management in the concerned countries.
4. The results and potential impact of applied research conducted by the project (if any) and its contribution to the overall knowledge on criteria and indicators of sustainable forest management in the country.
5. The impact of project activities on the improvements of forest management monitoring.
6. The effectiveness of dissemination of project results.
7. The overall post-project situation in the concerned country.
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 project, 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 the future.

A team comprising Don Wijewardana and Dr B.C.Y.Freezailah undertook the expost evaluation. As part of the assessment, Dr Freezailah visited Thailand from 4 – 10 July 2010. Based on earlier communications with the ITTO Secretariat and DNP (the Implementing Agency of the project), a programme for meetings with relevant officials and agencies, which included a field visit, was developed for the visit. Details of the programme and officials met are shown in Annex 2. As indicated there, informal meetings were held not only with government officials, but also with local communities, NGOs and some academic staff from the Forestry Faculty of Kasetsart University.

Project documents and reports made available to the consultants included:

- The Project Document submitted to the ITTO.
- Minutes of the four Project Steering Committee Meetings held on 6 September 2004, 8 August 2005, 4 April 2006 and 24 April 2007.
- Technical Report No. 1: National Training Workshop Programme issued in August 2004.
- Technical Report No. 2: Sampling Design, Plant Establishment and Estimation Methods for Thailand's National Forest Resources Monitoring Information System issued June 2007.
- Technical Report No. 3: Conceptual Methods for Linking Biophysical Forest Monitoring Data with Socio-Economic Data issued June 2007.
- Technical Report No. 4: A Reporting Template for Thailand's National Criteria and Indicators of Sustainable Forest Management issued in June 2007.
- Proceedings of the Final National Workshop issued in June 2007.
- Project Completion Report 2004 – 2007 issued on 15 July 2007.

3. Project facts

The project had a budget of US$ 1,060,420, of which the ITTO contributed US$ 677,743 and the Government of Thailand US$ 382,677. It had a three-year implementation period commencing on 8 June 2004.

The project was to develop a system for collection and analyses of both biophysical and socio-economic data to provide the basis for policy development and decision-making regarding the conservation and sustainable management of Thailand's natural forest resources including:

- The state of forest resources: It is necessary to determine the quantity, quality and distribution of forest resources, social pressures and site conditions so that changes and trends overtime may be established. Such information is both necessary and important to inform and guide policy decision and develop management plans.

- Food security for local communities: Many local communities are forest-dependent to varying degrees. They collect non-timber forest products for food, medicine and other uses. Such products also supplement their income. Data on such forest products, their harvesting and changes in availability over time, are necessary to plan for their sustainable supply.

- Economic development: In Thailand, forests are also to be managed, restored and rehabilitated for timber production under the jurisdiction of RFD. As indicated earlier, the target is some 15 per cent of the country's total land area (7.7 million ha). These areas are to be sustainably managed. Hence the need to develop criteria and indicators for SFM in the project.

- Natural resources and other national policy reviews: Whilst national policy and goals are clear, systems to monitor implementation, capacity needs, and constraints need to be studied in order to facilitate policy review and development.

3.1 Objectives and Outputs

The development objective of the project was 'to contribute to the effective conservation and management of Thailand's forest resources and the environment' whilst the specific objective was 'to establish a national forest resources monitoring information system to provide change and trend data on timber and non-timber forest resources'.

The activities of the project were:

- Activity 1.1 – Establish a national network of monitoring points
- Activity 1.2 – Train and mentor field crews.

- Activity 1.3 – Collect baseline forest resources monitoring data
- Activity 2.1 – Upgrade existing database and GIS system.
- Activity 2.2 – Establish linkage with Institutions that collect socio-economic data
- Activity 2.3 – Link forest resources monitoring data with socio-economic data
- Activity 2.4 – Workshop to promote use of the monitoring information.
- Activity 3.1 – Develop template for C & I reports.
- Activity 3.2 – Prepare baseline C & I report based on template developed under 3.1.
- Activity 3.3 – A workshop to publicize use of C & I report among policy makers, NGOs, universities. This workshop would be combined with workshop under Activity 2.4.

As can be seen, the project was complex involving technical, policy and social issues, dependent on inter-agency cooperation and co-ordination.

4 Findings, lessons learned

4.1 Achievements, realized versus planned

The development objective of the project was 'to contribute to the effective conservation and management of Thailand's forest resources and the environment' whilst the specific objective was 'to establish a national forest resources monitoring information system to provide change and trend data on timber and non-timber forest resources'.

The development objective is a long-term goal and it is too early to measure the impact of the project towards its achievement. The project outcomes and achievements relating to the specific objectives may best be assessed based on the anticipated project outputs under each activity. There were altogether three major outputs with several activities within them.

With the dedication of the project staff and the assistance of the international consultant all activities within output 1 have been completed successfully. They include the establishment of a national network of monitoring plots, training and mentoring field crews in inventory work and the production of thematic maps and overlays indicating location of plots.

Activity 2.1 has been completed to a large extent with the data and information compiled and analysed. However, data on soil, human impact and wildlife have not been analysed.

Activities 2.2 and 2.3 related to linking forest resource monitoring data with socio-economic information and were a crucial part of the project. But these activities have not been performed successfully. The Technical Report No. 3 on 'Conceptual Methods for Linking Biophysical Forest Monitoring Data with Socio-Economic Data' prepared on project completion, was somewhat vague. Besides, at that stage it was too late to be discussing concepts as the report has done: it should have been reporting on results of implementation.

Activity 2.4 was to convene 'A Workshop to promote use of the monitoring information'. This was held in May 2007 but there was no participation by key stakeholders such as the Ministry of Natural Resources and the Environment, community representatives, NGOs or the industry.

Activity 3.1 was to 'Develop template for C & I Reporting has been achieved with the development of such a template based on the ITTO guidelines.

Activity 3.2 was to 'Prepare baseline C & I Report' based on the template. This report has not been prepared for the reason that the 'current national C & I were under review'. This is somewhat surprising in that the commitment in the project document was to prepare such a report. It is accepted that C & I is an evolving process and thus under constant review. However, it would have been most useful for the report to be prepared as planned to provide a baseline for reference, to be reviewed and improved with time.

Overall, the project achievements have been mixed, producing some useful basic information but not following up with marrying the biophysical data with socio-economic information as planned, as well as not producing the baseline C&I report.

4.2 Project sustainability

There are several factors that tend to support the sustainability of project results while many others militate against continuity. Factors that promote sustainability include:

- Commitment by the government, as evident from Thailand's 7th National Economic and Social Development Plan, targeting a permanent forest area of 40 percent of the country comprising 25 percent for biodiversity conservation and 15 percent for sustainable timber production.
- The establishment of a network of monitoring plots throughout the county to provide ongoing data on the state of the forest resource.
- Collection of baseline resource monitoring data
- A major follow-up component of this project is the re-measurement of the plots established. Existing staff of DNP with participation of RFD is undertaking this work. It is expected that the experience gained this crucial operation can be sustained through the budgetary resources of these two Departments.
- Built into the annual budget of DNP the ongoing cost of monitoring the plots and inventorying the data.
- Possible high demand for the information by planning agencies.

Factors that work against sustainability of the project results include:

- Some important elements of the project not being completed. This includes the analysis of wild life and human impact data, not producing a baseline report and not amalgamating the data gathered with socioeconomic information.
  -A central element of the project was to link the large amount of biophysical data collected, with socio-economic data. It had not been achieved on the conclusion of the project and no progress has been made since.
- Exclusion of key stakeholders from the designing and management of the project, in particular the community, NGOs and forest industry. It is estimated there are over five million forest dependent people and many more relying on the forest for timber and non-timber forest products that use the forest extensively.
- Absence of a strategy backed by a comprehensive action plan with the necessary resources and institutional arrangement
- Dearth of professional staff and expertise in key areas
- Continuous erosion of the forest land base and degradation of forest on account of shifting cultivation, government acquisitions, illegal occupation etc
- Weak emphasis and awareness on the linkage between C&I and SFM. Although there has been discussions on C&I a clear process for its development has yet to be charted.
- The need for more planning and greater priority in manpower development and training especially in the specialised areas of the project to ensure its sustainability upon completion.

Sustainability of the project results will depend on how effectively these negative elements were addressed.

4.3 Stakeholder involvement

The project document identifies the following target beneficiaries:

- “The DNP and other policy makers for whom the monitoring information will be useful for better formulation and evaluation of forest conservation and management policies at the national level and for national C & I reporting.

- Non-Governmental Organisations (NGO's) who will contribute to balanced public debate on forest conservation and sustainable forest management.
- Local communities: especially in relation to non-timber forest products which are crucial for the communities dependent on the forest for food security and survival".

NGOs and local communities could play a decisive role in determining the effectiveness of any measure put in place to achieve SFM. Besides, they could have even helped in organizing some of the project related tasks in addition to providing crucial information to contribute to policy discussions. Yet it does not appear they played any active role in the project planning and implementation.

Also, the lack of participation by local communities in the project is surprising as they are major users of the forest. An estimated five million people are directly dependent on the forest for their livelihood and it is reported by RFD that during the period 2000 – 2009, 6,858 projects involving 7,523 villages were implemented which covered a total area of 423,893 ha. The field visit clearly indicated the enterprise, knowledge and commitment of members of the local community on sustainable use of forest resources and agro-forestry[2].

Similarly, the forest industry and the timber sector were not involved in project activities. The industry is an important player in the sector. In 2006 Thailand produced some 8.7 million cu. m. of industrial round wood and exported a significant proportion and created 137,000 jobs in the forestry sector.

Another important stakeholder, excluded was the tourism sector. Eco-tourism is creating growing employment opportunities with training and some infrastructure to scenic forest areas.

These exclusions have been detrimental to the appropriate designing and effective implementation of the project and to sustain its results in the long term.

The active involvement of the academia, especially Kasetsart University, would have been very beneficial regarding the project component on linking the inventory data collected with socio-economic information. The DNP had neither the resources nor the expertise to undertake such a complex task.

4.4 The overall role and contribution of the project in light of sectoral policies, development programmes, priorities and requirements to improve the criteria and indicators of sustainable forest management (SFM) in Thailand.

Thailand's forest resources have been subjected to continual pressure through shifting cultivation, land resettlement, dam and road construction and conversion to agricultural use and other illegal activity. Demand for land for subsistence farming, commercial agriculture, physical infrastructure, tourism and other uses have all added to the strain. I response the government has banned all commercial logging in natural forests and has instituted supporting measures to protect the remaining forests and to promote private-sector involvement in forest management and plantations. Nevertheless, deforestation and forest degradation have continued, and efforts to combat forest loss remain a priority. In recent years sustainable management of forests using criteria and indicators has assumed significance as a means of addressing the problem.

A previous project funded by ITTO – PD 2/99 Rev.2 (F) - had enabled the country to develop a system for collecting, processing and displaying forest resource data. However, it had not addressed some of the issues such as setting up a baseline monitoring system, linking up biophysical data with socioeconomic information and linking the information gained in the process with national C&I. The main aim of the current project was to fill these gaps.

[2] See notes of field visit in Annex 2 for details.

The current project PD 195/03 Rev. 2 (F) has come a long way in meeting this need by generating valuable information through a network of monitoring plots throughout the county to provide on going data on the state of the forest resource. However, the expected project outputs to link this biophysical data with socioeconomic information as promised and to produce a baseline report, have not been realized. As a result the project's contribution to criteria and indicators of sustainable forest management (SFM) in Thailand has been limited.

Nevertheless, the inventory data collected and the maps developed, can provide basic information on the determination and delineation of areas for biodiversity conservation and sustainable timber production taking into account the national target of a permanent forest cover of 40 percent.

4.5 The current status of criteria and indicators of SFM in Thailand the effectiveness of the project's implementation and its effectiveness in promoting SFM.

There have been considerable discussions on the development of C&I for Thailand. Indeed the project has developed a template to this end as contained in Technical Report No. 4. But a formal process to develop C&I for Thailand is yet to be initiated.

But the project has already provided valuable baseline information on the forest resource as a basis to implement C&I. It has also developed a template for recording data as seen in technical report No. 4. These will allow the gathering of information on the resource on an ongoing basis. But the project's potential to make a major contribution to promoting SFM has been realised only partly. That includes the provision of valuable resource data and setting up the sample plots to provide the same information into the future.

The failure of the project was in amalgamating the resource information with socioeconomic data and failing to prepare the baseline report. These defects should be addressed at the earliest possible opportunity so that the project could provide the basis for a robust C&I system for implementation of SFM in Thailand.

4.6 The contributions of the specific studies in various C&I-related tools/manuals/guidelines prepared by the project as regards the monitoring of sustainable forest management in Thailand.

The project has produced a number of reports useful for the future implementation of actions to promote SFM. They include:

- Technical Report No. 2. Relating to the permanent sample plots, on a 20 km X 20 km grid, totaling 1,129 were established out of a planned total of 1,287. From these plot measurements, estimated areas of forest cover by forest types, their gross timber volumes, timber volume per unit area by forest types including forest plantations, are now available. Such statistics were not previously available for the entire country.
- Technical Report No. 1 which provides details for the training programme, successfully undertaken to train and mentor field crews in inventory work. There will be an ongoing need to train such staff.
- Technical Report No. 2 with thematic maps and overlays indicating location of plots, number of tress per ha, volume of tress per ha, diversity of trees, richness index and evenness of trees.
- Technical Report No. 3 on 'Conceptual Methods for Linking Biophysical Forest Monitoring Data with Socio-Economic Data' was prepared in June 2007. This was in preparation for Activity 2.2 - to 'Establish linkage with institutions that collect socio-economic data'. This was an essential step, which the project failed to take. But this technical report will facilitate the task when action is to be taken in the future.

- Technical report No.4 is a template for the C&I report which has been developed using ITTO guidelines. But its usefulness is diminished, as it has not taken into consideration the ground situation in the country.

Although a national C&I system is yet to be developed for Thailand, sufficient data and information has been collected through this project to prepare a draft report on the status of forest management. As an interim measure the template suggested in Technical Report No. 4 may be used to assess the status of SFM. Such a report would be useful as a baseline for comparison with subsequent reports. It will also contribute to planning and formulation of a much needed action plan to strengthen implementation and achievement of SFM.

4.7 The results and potential impact of applied research conducted by the project (if any) and its contribution to the overall knowledge on criteria and indicators of sustainable forest management in the country.

The main contribution of the project is the establishment of a network of permanent monitoring points and a set of 'hidden' permanent plots to cover the entire country on the basis of a 20X20 km grid. Data from them is to be stored, retrieved and updated within a GIS framework to derive resource data for analysis. This is a major contribution to provide a firm basis for C&I for the country.

The forest resource monitoring system implemented in the project has generated countrywide data and information not available before. Such information is most useful for planning and making policy decision, including delineation of area for conservation and sustainable timber production, in accordance with the declared national target. During the next phase in the re-measurement of the sample plots, a more intensive grid (20x20 km) will be used in order to get more detailed information in order to develop management plans.

In addition, the project also has produced a number of technical reports that could contribute to the overall knowledge relating to C&I in Thailand. They include, in particular, Technical Report No.2 relating to the establishment of permanent sample plots, with thematic maps and overlays indicating location of plots, number of tress per ha, volume of tress per ha, diversity of trees, richness index and evenness of trees, and Technical Report No. 3 on 'Conceptual Methods for Linking Biophysical Forest Monitoring Data with Socio-Economic Data' to help in producing the baseline C&I report.

4.8 The impact of project activities on the improvements of forest management monitoring.

The project has made a significant contribution to forest management monitoring by providing a wealth of resource data based on sample plots established throughout the country. These plots have the capacity to provide ongoing data to assist with this basic information. Analysis of the information so collected within a GIS environment will provide Thailand with very accurate and up to date resource information to help in forest management monitoring.

This information base will enhance further if the phase that was not completed- the linking of resource data with socioeconomic information- is implemented. Technical report No. 4 provides a suitable basis for a preliminary report.

There is considerable interest among officials to promote SFM using the criteria and indicators of ITTO. The project has provided critical basic material to help translate that enthusiasm into action to establish an effective system for forest management monitoring and implementing SFM.

4.9 The effectiveness of dissemination of project results.

This project has generated a great deal of information on the state of forest resources in Thailand. This was the first time that such a countrywide data gathering has taken place supported by modern technology. It would have been most useful if that information were widely disseminated to form the

baseline for analyses as well as to create awareness about the serious forest resources situation in the country.

One opportunity for dissemination of the information was the Final National Workshop held on 24 – 25 May 2007 at the completion of the project. But participation at this workshop was limited to 62, mostly from DNP and RFD. There were only three outsiders and they were from Kasetsart and Mahidol Universities. This was a missed opportunity to spread the message country wide, especially to the forest industry, community and the NGOs. This was in spite of the fact that the Project Document identified the following as the target beneficiaries:

> "The DNP and other policy makers: The monitoring information will be used for better formulation and evaluation of forest conservation and management policies at the national level and for national C & I reporting.
> Non-Governmental Organisations: The monitoring information will contribute to balanced public debate on forest conservation and sustainable forest management.
> Local communities: The monitoring information would result in better policies regarding non-timber forest products which are crucial for the communities dependent on the forest for food security and survival."

Sustainable forest management depends ultimately on the commitment and support from all stakeholders including the public. Creation of awareness and information on the forest situation is thus fundamental. In this project much information has been systematically collected to form the basis for an extensive national campaign. But the information remains dormant.

4.10 The overall post-project situation in the country

The project has already provided valuable baseline information on the forest resource countrywide. Monitoring the data overtime will help to identify resource changes and problem areas where intervention will be needed.

Amalgamation of the resource data with socioeconomic data also remains to be done.

Once these elements are successfully addressed the project will be a valuable resource for planning to address the problems envisaged. They include monitoring the quality and state of the forest resource and biodiversity, ensure a sustainable supply of non-timber forest products for the many communities dependent on the forest and support economic development based on forests. Encompassing all these would be the reporting on progress on SFM based on criteria and indicators.

For these reasons it is important that the implementation of the tasks undertaken in the project continues.

4.11 Unexpected effects and impacts, either harmful or beneficial, and the reasons for their occurrences

There were several unexpected developments that adversely affected project activities. The worst affected from these were the field operations. Conditions for the field crews turned out difficult with danger from illegal loggers, poachers and land encroachers as well as from fires, booby traps and poisonous snakes. Finding camping sites was also found difficult in some areas without water especially in the dry season. While most of these were unforeseen some factors, which should have been expected, also tended to complicate matters. They were the lack of good transportation in the field, adequate equipment and up-to-date maps in addition to changes in personnel positions of responsibilities. As a result there was a high turnover of field crews.

It was also found that the crews did not have adequate training in identifying fauna and flora since there were many unknown species. Similarly they had difficulty identifying non-tree vegetation and seedlings. There were similar problems with soil analysis. Some of these problems would have been foreseen if the project was properly planned. Others were unfortunate occurrences.

The project also experienced a high turnover of skilled staff especially computer programmers and GIS personnel. The reason given was their low salaries compared with elsewhere. This too can be adduced to ineffective planning.

4.12 The cost efficiency in the implementation of the project, including the technical, financial and managerial aspects

The project has been managed with cost efficiency and to meet the expected technical, financial and managerial standards. It has been completed within three years after commencement on 8 June 2007 as scheduled and within budget. A surplus of $ 13,595 had been reimbursed to the ITTO. The project accounts were audited by a certified public auditor in accordance with normal ITTO procedures with regards to income, expenditures and disbursements and found to be in order. Inputs and contributions by the Government of Thailand had also been provided in full as committed in the project document.

However, it has not been able to deliver on two segments – amalgamating the resource data with socioeconomic, and producing a baseline C&I report. It appears that in the design and implementation of this project, the complexity of the process to achieve this part of the project objective has been grossly underestimated.

A review of project implementation and constraints faced, indicated the lack of specialised skills to fully undertake some of the activities specified in the project document. These included expertise on social issues and wildlife. The project also planned to collect data on wildlife habitat use, and rare and endangered species. Difficulties were encountered in the collection of such data and eventually excluded from the fieldwork.

It was also found that the field crews did not have adequate training in identifying fauna and flora especially the many unknown species they came across. Similarly they had difficulty identifying non-tree vegetation and seedlings. There were also problems with soil analysis.

The appropriateness of the Department of National Parks, Wildlife and Plant Conservation (DNP) as the Executing Agency of this project needs to be considered. Its scope covers overlapping functions between the three agencies, DNP, RFD and DMC. Inventory data is needed for the work of all three departments involved in conservation and sustainable management as is the need for restoration and rehabilitation whether for conservation or production of timber and non-timber forest products. All three agencies are also required to undertake enforcement operations and also work with local communities. At the same time, the three Departments have varying levels of expertise in key areas, which were distributed amongst them with the splitting up of RFD. Under the circumstances, it would seem this project would have gained wider commitment if implemented by the umbrella organization, the Ministry of Natural Resources and Environment, with inputs and expertise from the three subsidiary agencies.

4.13 Follow-up actions in order to enhance uptake of project results.

A key aspect of the project – linking resource data with socioeconomic information - has not been achieved. This task is essential to derive meaningful information on the factors that impact on the resource. It needs to be undertaken as soon as possible.

Another undelivered output from the project – the baseline report on C&I – was of central importance in implementing SFM. It should be undertaken as soon as the opportunity arises for that baseline is the foundation to build and report on progress in application of C&I for SFM.

Carbon absorption and other climate related aspects of forests are gaining increasing importance globally. For instance bilateral negotiations are already going on in some of the neighbouring countries to gain support for REDD from developed countries. Sustainable management of Thailand forests can greatly benefit from such initiatives. In the circumstances, it is important that resource assessments of the type envisaged in this project incorporate these elements.

Some of the activities of the project required high levels of expertise, the absence of which affected the outcome. This is especially so in the case of socio-economic, social forestry, wildlife fauna and soil areas which proved to be the weakest links in the project. These should have been foreseen and addressed properly in preparation for implementation.

This was a very important project that was intended to provide valuable and ongoing resource information for all three departments under the Ministry of Natural Resources and Environment - DNP,RFD and DMC. In the circumstances it is worth considering whether the Ministry should be the executing agency and not the DNP especially since there will be ongoing work. That will help in gaining greater support from all three departments.

An estimated five million people depend on forests for their livelihood. Their role, unless properly guided, could adversely impact on sustainable forest management. To ensure their support and compliance it was critically important that they were involved in planning and implementing projects of this nature.

Similarly the forest industry and NGOs have played only a minor role in planning and implementing the project. The project could have benefited considerably from their greater involvement.

The government has expectations of a major role for the private sector to enhance forest cover and promote SFM. The most useful way to do this is through incentives than regulations. In this regard a likely major incentive for the sector will be removal of the logging ban with adequate safeguards to prevent exploitation of the natural forest resource but to encourage sustainable use. It will persuade the industry to be more efficient and internationally competitive thus contributing to the Thailand economy.

It would be advantageous to Thailand to link the development of C&I to certification. With a significant forest industry already in operation greater focus on certification could assist the sector to gain additional value from its exports through certification.
Another issue that surfaces with expanding export markets is the need to verify legality of the source of timber exported. As Indonesia has done if this could also be linked to C&I it will reduce the cost of undertaking a separate exercise on this aspect. They are both integral to accessing overseas markets. In any case, assurance for legality through credible system will be needed when the Due Diligence Regulations, which are currently being enacted, come into force.

There have been considerable discussions on the development of C&I for Thailand. Indeed the project has developed a template to this end as contained in Technical Report No. 4. It has also generated valuable baseline data. But a formal process to develop C&I for Thailand is yet to be initiated. Such a process needs to be accorded priority.

4.14 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 the future

As noted earlier, project's success has been mixed. It has successfully achieved output 1 in establishing a countrywide network of sample plots to provide comprehensive, resource information. This was an arduous task well accomplished to help the country derive critical baseline information for years to come.

But the project has failed to deliver on two other segments – amalgamating the resource data with socioeconomic data, and producing a baseline C&I report.

It appears that in the design and implementation of the project, the complexity of the process to achieve this part of the objective had not been fully appreciated. An important lesson in this for the future is the need for conceptualizing such large projects prior to making a proposal.

The discussions the consultant held with the project team and other stakeholders, as well as the perusal of project documentation suggest that there hasn't been adequate participation by stakeholders in the design and implementation of the project. An estimated five million people rely on the forest for livelihood. There is also a major involvement of the private sector in forest growing and processing. In addition, there is an active NGO community who too had played only a marginal role. They could all have made a major contribution to achieving the objectives of the project and ensuring its credibility.

This was a large and complex project and understandably the DNP and RFD did not have all the necessary expertise. Recruiting consultants from overseas was therefore necessary. However over-reliance on such consultants in the long-term is detrimental in terms of follow-up action. This is more the reason since the permanent sample plots were intended to continue to provide ongoing resource data. Serious efforts should have been made therefore to develop the necessary expertise in-house. In this regard closer collaboration with Kasetsart University, which has the expertise, would have been beneficial in training relevant personnel.

It is likely that difficulties in implementing some of the project activities surfaced during meetings of the Project Steering Committee e.g. linking the biophysical data with socio-economic information, collection of information on local communities and wildlife populations and the ability to compile the baseline report on C&I. Such issues should have been accorded priority and appropriate solutions sought without abandoning them eventually with no such consideration.

5 Conclusions and recommendations

5.1 Conclusions

The main conclusions that flow from the expost evaluation of project PD 195/03 Rev.2 (F) are:

i. The project was a path breaking initiative to gain valuable baseline data through a network of countrywide sample plots. Once established, they were to produce comparative data on an ongoing basis.
ii. An enormous amount of biophysical data, on the state of the forest, and site conditions, in addition to some information on the impact of local communities, have been collected and compiled. This component of the project has been highly successful and commendable.
iii. The project also has produced a number of useful technical reports including the establishment of permanent sample plots, thematic maps and overlays indicating location of plots, and on 'Conceptual Methods for Linking Biophysical Forest Monitoring Data with Socio-Economic Data' to help in producing the baseline C&I report.
iv. However, two key elements of the project plan have not been implemented: linking biophysical data collected with socio-economic information and producing a baseline C & I report.
v. The intricacies of the project should have been understood through appropriate conceptualisation if it had been undertaken prior to embarking on it. That would have helped to avoid many of the problems that were encountered in implementation.
vi. Although forest communities, industry and NGOs are major players in the sector, and were listed as beneficiaries of the project, they were not meaningfully involved in the project design and implementation. The academia had a clear role to play but they were not included either. Fuller involvement and participation of these stakeholders would have strengthened the project and enhanced its credibility.

vii. Some of the key elements of the project, such as the sample plots established, were to produce data on an ongoing basis, which were then required to be carefully manipulated to provide the relevant information for C&I. In such a situation it was beneficial to develop in-house expertise rather than relying on overseas consultants as in this instance.

viii. Unauthorised occupation, illegal logging, illegal mining and many other factors that impact on sustainable management need to be addressed.

ix. The private sector is expected to play a key role in forest establishment and wood processing, which are essential for SFM. However, a factor that tends to limit their ability to gain efficiency is the existing ban on log exports. This also appears to be a factor in Thailand's slow progress towards implementing C&I and pursuing options for voluntary certification. The issue needs to be addressed.

x. Climate change is emerging as a factor with major implications for SFM because of the role of forests in carbon absorption and issues related to REDD. It needs to be addressed alongside SFM to ensure that the sector derives the associated benefits.

xi. A similar issue that needs to be addressed is legal verification of timber production. It is important for gaining access to high value markets and needs to be incorporated when setting up systems to promote C&I.

xii. Another issue relating to C&I which other neighbouring countries are already grappling with, is the inclusion of macro level indicators (biodiversity, water and soil, carbon absorption etc) on which FMUs are obliged to provide the data. It is appropriate to include this as the country develops C&I.

5.2 Recommendations

5.2.1 Recommendations to ITTO

a) Difficulties with demarcating a PFE are a recurring problem with many member countries including Thailand. This is a critical indicator in ITTO C&I and will be useful to consider as a group how the matter could be addressed to ensure compliance.

b) When the project data is being processed for developing C&I Thailand will need to address the issue of whether it is essential for FMUs to report on macro level indicators such as biodiversity, water and soil aspects, and climate change related issues. This is an issue that needs to be addressed by ITTO for the benefit of all members.

c) The role of forests in carbon absorption and other REDD related issues has a major bearing on C&I and sustainable forest management. A common approach needs to be developed by the ITTO on this in future projects.

d) Problems in achieving some of the key outputs of the project would have become apparent at the project steering committee meetings. If action had been taken at that stage it would have been possible to find solutions without abandoning them eventually. It would be useful to put in place measures to prevent such occurrences in the future.

5.2.2 Recommendations to executing agency/Government

e) Two key essential elements of the project plan have not been implemented: linking biophysical data collected with socio-economic information and producing a baseline C & I report. They are pivotal for the success of C&I for SFM in Thailand and should be implemented as early as possible.

f) The issue of establishing a C&I process to implement SFM has been much discussed in Thailand. But so far no meaningful steps seem to have been taken to formally launch a criteria and indicator system. Criteria and indictors are essential to promote the sustainability of Thailand's forests. This should be undertaken as a matter of priority.
g) The project faced many problems in implementation since these had not been foreseen prior to launching. The intricacies of the project would have been better understood through appropriate conceptualisation if it had been undertaken prior to embarking on it. It is a lesson for similar projects in the future.
h) The rapid erosion of the forest area by illegal activities such as unauthorized occupation, illegal logging, government acquisitions, mining etc will continue to hamper efforts towards SFM and needs to be effectively addressed.
i) Although forest communities, industry and NGOs are major players in the sector, and were listed as beneficiaries of the project, they were not meaningfully involved in the project design and implementation. The academia had a clear role to play but they were not included either. Fuller involvement and participation of these stakeholders would have strengthened the project and enhanced its credibility. This is an important consideration for the future.
j) Climate change is emerging as a factor with major implications for SFM because of the role of forests in carbon absorption and issues related to REDD. It needs to be addressed alongside SFM to ensure that the sector derives the associated benefits.
k) A similar issue that needs to be addressed is legal verification of timber production. It is important for gaining access to high value markets and needs to be incorporated when setting up systems to promote C&I.
l) Another issue relating to C&I, which other neighbouring countries are already grappling with, is the inclusion of macro level indicators (biodiversity, water and soil, carbon absorption etc) on which FMUs are obliged to provide the data. Inclusion requires additional work for FMUs but without them the information provided will be incomplete. A decision needs to be made in consultation with ITTO.
m) This was a large and complex project and understandably the DNP and RFD did not have all the necessary expertise. Recruiting consultants from overseas was therefore necessary. However over-reliance on such consultants in the long-term is detrimental in terms of follow-up action. This is more the reason since the permanent sample plots were intended to continue to provide ongoing resource data. Serious efforts should have been made therefore to develop the necessary expertise in-house. In this regard closer collaboration with Kasetsart University, which has the expertise, would have been beneficial in training relevant staff.

6. Acknowledgements

The ex-post evaluation team is grateful to all those who have provided assistance and information during the visit of Dr B.C.Y. Freezailah to Thailand from 4 – 10 July 2010. Everyone interviewed was most cooperative and forthcoming with information with frankness and openness. We also wish to thank DNP for providing the necessary logistical support and making arrangements for all the meetings and the field visit which enabled the Consultant to gather the necessary information during the short period. Numerous persons helped as indicated in the Programme in Annex II but the team wishes to thank especially Ms. Khanita Meedej and Ms Auschada Chitechote from DNP, Mr. Suchart Kalyawongsa from RFD and Dr. A. Y. Omule, the International Consultant, for their valuable help.

The team also wishes to express its gratitude to the Executive Director of ITTO Mr Emmanuel Zemeka, and the staff - Mr Mansur. Dr. Ma and Ms Yang, for the opportunity to undertake the consultancy and the support extended.

ANNEX 1

THAILAND
COUNTRY DATA

Area (1,000 ha)		51,311
Population (1,000)		63,443
Per Capita GDP (USD) :		7,599
Estimated total forest area (m ha)		13.0-14.8
PFE (1,000 ha)	Natural closed forest	10,127
	Natural	0
	Planted Production	1,870
	Protection :	8,260
	Area/1,000 People :	229
	Annual change rate (%) :	-0.4
Production (1,000 m3)	Woodfuel :	19,736
	Industrial roundwood :	8,700
Import (1,000 m)	Industrial roundwood :	398
	Sawntimber :	1,890
Export (1,000 m3)	Industrial roundwood :	0
	Sawntimber :	1,314

Employment in forestry sector (1,000)		137
% contribution to GDP :		0.8

Sources:	FAO (2009) State of the World's Forests 2009	ITTO (2006) Status of Tropical Forest Management 2005

ANNEX 2

EX-POST EVALUATION PROGRAMME

OF PD 195/03 Rev. 2 (F); CONSULTANT'S VISIT TO THAILAND:4-10 July 2010

Sunday – 4 July 2010

- Arrival in Bangkok

Monday – 5 July 2010

- Discussion with Mr. Sawit Rattanamanee, Deputy Director – General, DNP
- Discussions with project staff, including;
  Ms. Khanita Meedej, Senior Project Co-ordinator (DNP)

  Dr. A. Y. Omule, International Consultant

  Mr. Suchart Kalaywangsa (RFD)

  Dr. Komol Pragtong, Specialist Socio-Economic (RFD)

  Mrs. Wilawan Wichiennopparat, Specialist Soil (RFD)

  Dr. Chaelit Niyomthum, Specialist Botany (GIS)

  Mr. Pairun Bhramhitadara, Specialist Inventory (DNP)

  Mr. Somyot Saengnin, Specialist Inventory (DNP)

  Mr. Kamron Sungsuan, Specialist Inventory (DNP)

  Miss Chompunuch Sodachan, Specialist Inventory (DNP)

  Mr. Butsarin Jindalad, Specialist Inventory (DNP)

  Mrs. Suthathip Chormali, Specialist Inventory (DNP)

  Mrs. Auschada Chitechote, Specialist Inventory (DNP)

Tuesday – 6 July 2010

- Continuation of discussions on 5 July
- Discussions with Senior Project Staff and representatives of other organizations including :
  Dr. Khwanchai Daungsathaporn, Forest Management Section, Kasetsart University

  Mr. Prasong Saguantam, Forest Management Section, Kasetsart University

  Mr. Chittiwat Silapat, Forest Industry Organisation

  Mr. Kitikon Marassitpa, Forest Industry Organisation

Miss Jureeporn Sirithuchayes, Forest Industry Organisation

Mr. Kamron Sungsuan, Specialist Inventory (DNP)

Mrs. Auschada Chitechote, Specialist Inventory (DNP)

Mr. Peter Cutter, WWF

Wednesday – 7 July 2010

- Field visit to Petchaburi Province including
- Meeting with Mr. Pangboon Pontong, Director, Provincial Office of Ministry of Natural Resources and Environment, Maung, Petchaburi Province.
- Meeting with local communities of Nhonghong Village at Village Hall with :
  Mr. Sombat, Village Chief

  Mr. Sawat

  Mr. Sawana

  Mrs. Subin

- Visit to Mr. Sawat's Farm
- Brief meeting with Director of Kraeng Kra Chau National Park,
- Visit Plot No. 697, located in forest plantation and demonstration of plot establishment procedures and measurements taken by local inventory team.

Thursday – 8 July 2010

- Compilation/review of data, information and observations for inclusion in ex-post evaluation report

Friday – 9 July 2010

- Final discussion with key project staff.

ANNEX 3

NOTES ON FIELD VISIT – 7 JULY 2010

Meeting with Mr. Pongboon Pontong. Director, Provincial Office of Ministry of Natural Resources and Environment, Maung, Petchaburi Province.

Petchaburi Province is located in South-Central Thailand, with 50 per cent forest cover it is relatively rich in forest resources when compared to the national average. Out of the 700 villages in the Province, 200 are located in and around forest areas and are dependent on forest resources to a varying degrees. About 1,000 families live below poverty line. Tourism is important in the Province. The work in the office focused on conservation and community development in cooperation with the Ministry of the Interior and the Government office.

Two villages are involved in two National Parks related to eco-tourism and produce/grow supplies to tourist resorts, such as vegetables, herbs and flowers. As the National Parks are also habitat for tigers, elephants and other wildlife, eco-tourism is also important.

It is noteworthy that in community development work, is undertaken in close cooperation with and support of local NGO's and volunteers. There are altogether some 100 community development for fuel wood and timber. These projects also create awareness on conservation and sustainable use of forest resources. Illegal logging and packing is under control through such campaigns and enforcement work.

Meeting with Nhonghong villagers

An interesting and useful meeting was held with some villagers. Nhonghong village comprises of 81 families who are mainly farmers. Water is often a problem for their crops. They collect various products from the community forest allocated to them including herbs, bamboo shoots, mushrooms, wild fruits and fuel wood. All these products are harvested for their own domestic consumption. There appears to be high level of aware of awareness amongst the villagers on sustainable harvesting of these forest produce.

The community forest and the surrounding forest areas are reportedly, rich in wildlife including wildfowl, civet cat, pangolin, tortoises, barking deer and pheasant. They seem to be aware of the list of protected animals but admit to hunting and trapping of wildfowl.

Visit to Mr. Sawat's Farm

Mr. Sawat's farm is located near the village hall where the meeting with members of the local community of Nhonghong, was held earlier. Mr. Sawat is a remarkable farmer without a formal training. Apart from producing fruits, vegetables, bamboo shoots and fish, he also does research to develop which he produced through fermentation. The pesticides produced are marketed. He also operates a small kiln producing charcoal and the wood distillate is also an ingredient in making pesticides. He also produces compost based on rice husk and forest litter. This compost is for his own use and the extra is sold to farmers in the area.

Apart from growing agricultural crops, Mr. Sawat also grows bamboo and tress for their timber. The farm is also used as a training centre. The work done at this farm is indeed remarkable in such an environment by a man who is without training in agriculture science. Such work and

enterprise at village level is most encouraging. With support, technical and financial, Mr. Sawat's farm can be a centre for better and more productive farming practices which is bound to lead to more sustainable use of forest resources.

Discussion with Director of Kraeng Kra Chau National Park

During this brief stop, the opportunity was taken to get some information about this National Park. The park covers 300,000 ha and is one of the well-managed parks in Thailand. It has a staff of only six officers but a labour force of 300 workers. The park is popular with yearly visitors of 50,000 people out of which 5 per cent are foreigners. In 2009 41 offences were recorder; 70 per cent on poaching for deer and some cases of illegal logging and encroachment.

Visit to Plot No. 697

During the field tour, opportunity was also taken to visit one of the of the permanent sample plots (Plot No. 697) established. The plot is located in a plantation of Lucana sp. Based on GPS reading the plot was located and the centre of the plot was found using a metal detector. During plot establishment a stout metal pin was placed at the centre of the plot. Thus using the GPS and metal detector, the plot was easily located.

A demonstration was made on how the plot was established using compass and measuring tape. All trees was above 15 cm girth at breast-height were enumerated and measured. This was particularly laborious for this plot with so many tress in the plot.