

ITTO PROJECT PD 12/99 REV.4(F)

MODEL FOREST MANAGEMENT AREA (MFMA) - PHASE III

PROJECT COMPLETION REPORT



Nursery



Bukit Kana Field Station



Training in Continuous Forest Inventory



INTERNATIONAL TROPICAL TIMBER ORGANIZATION
SARAWAK FOREST DEPARTMENT, MALAYSIA
SEPTEMBER 2007



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Project Completion Report

ITTO Project PD 12/99 Rev.4(F): Model Forest Management Area (MFMA) - Phase III
(2004-2007)

PROJECT COMPLETION REPORT

A. Project Identification

(a) Title	Model Forest Management Area (MFMA) - Phase III		
(b) Serial No.	PD 12/99 Rev.4(F)		
(c) Executing Agency	Sarawak Forest Department		
(d) Host Governments	Government of Malaysia State Government of Sarawak		
(e) Starting Date	March 2004		
(f) Project Duration	39 months		
(g) Actual Project Cost	ITTO Contribution	US\$	966,700
	Malaysian Contribution	US\$	1,734,500
	Timber Company	US\$	545,160
	Total Cost	US\$	3,246,360

PART I: Executive Summary

1. Background Information about the Project

(a) **Key problems**

The MFMA Project was established as a result of the report by the ITTO Mission to Sarawak in 1989-1990 entitled *The promotion of Sustainable Forest Management: A case study in Sarawak, Malaysia*. Phase I of the Project produced a range of baseline data and the *Ten-Year Development Plan* while Phase II addressed the issues of determining levels of sustainable log supply, reducing the environmental damage caused by harvesting operations and monitoring the progress and results of all uses of the forest. Phase III follows up the first two phases by focusing specifically on three key issues, namely the need for skills training, management control and local community participation.

(b) **Specific Objectives and Outputs**

Phase III Objectives were as follows:

Development Objective: The Project shall contribute to the implementation of sustainable management of mixed hill forests of Sarawak, aimed at sustained timber yields and the conservation of the genetic resources and the maintenance of the ecological balance of the State

Specific Objective 1: Skills Training. Train forestry staff and workers from both public and private sectors in work planning and implementation of sustainable management of forest resources, provide demonstration of new methodologies and techniques and monitor the performance in the model area.

Specific Objective 2: Management Control. Prepare comprehensive management plans for the model area, including tree planting with local communities, safeguarding of protection forests, timber harvesting and silvicultural measures of felling restrictions and enrichment planting, where required in natural forests, as well as the necessary monitoring control procedures leading to sustainable operations in the model area.

Specific Objective 3: Local Communities Participation. To improve the livelihood of the rural people through Sustainable Forest Management (SFM) system.

Planned Outputs for Phase III were as follows:

Inventory Training
Road Plan Training
Reduced Impact Logging Training
Road Construction Training
Skills Certification
Operational Zoning
Harvesting Code
Continuous Monitoring
Management Control
Community Development Projects, and
Tree Planting

(c) Project strategy

The results of Continuous Forest Inventory during Phase II had indicated the need for a reduction of the Annual Allowable Cut in second-cycle harvesting in the MFMA due to loss of productive area from road- and main skid-infrastructure, the exclusion from harvesting of protected forests in High Conservation Value Forest areas and projections of a decline in commercial timber yield in harvested forest stands. The high rate of loss of productive area associated with harvesting was seen to be exacerbated by inadequate work supervision on the ground. Skills training was therefore needed to reduce the impacts of infrastructure construction and tree harvesting on remaining growing stock in order to work towards Sustainable Forest Management.

Management control, in the form of a comprehensive management plan, was needed to guide the two licensees in sustainably managing not only harvesting in the MFMA but also its High Conservation Value Forest areas and also address rehabilitation of degraded areas.

The local communities living in and near the MFMA, primarily poor subsistence farmers who carry out shifting cultivation, hunt, fish and collect jungle produce for food, needed support in line with SFM and their participation was sought as an important mechanism to contribute towards the communities' livelihood as well as sustainability of forest management activities in the MFMA.

(d) Planned duration and costs

Phase III of the project was planned to last 36 months with the following budget allocations:

ITTO Contribution	US\$ 966,700
Malaysian Contribution	US\$ 1,734,500
Timber Company Contribution	US\$ 186,000

At the completion of Phase III a timber company had contributed RM 1,918,962 or US\$ 545,160 at current exchange rates.

(e) Intersectoral linkages

New intersectoral links may need to be established with the plantation forestry sector as Planted Forest areas become ever more widespread. Links with research organizations are also desirable as both sides can benefit from further investigations into model forest management.

2. Project Achievements

(a) Outputs

The Outputs for Phase III were:

- On-the-job training in Continuous Forest Inventory and Reduced Impact Logging at the MFMA for Sarawak Forest Department and company personnel.
- Modules produced by the logging company that contained materials that could be used in Road-plan Training, Road Construction Training and Work-skills Certification.
- Continuous Monitoring of the MFMA in the form re-measurements of 47 sample plots and one Research Plot with all the data collected entered into an Excel spreadsheet and handed over to ITTO for analysis.
- Management Documents in the form of *The 25-Year Management Plan for the Model Forest Management Area, Bintulu and Sibul Divisions, Sarawak* which contains, *inter alia*, background information on the site, prescriptions for harvesting management, prescriptions for management of the non-timber forest resources, sets of guidelines and digital maps.

- A Community Development Project Output that included establishment of a Trial Coupe, a report *Implementation of Community Development Projects to provide alternative livelihoods for the shifting cultivators in order to enhance Sustainable Forest Management systems* and a report *A study on the ecology and silviculture of logged-over forests in the Model Forest Management Area*, maintenance and clearing of an Engkabang (*Shorea macrophylla*) Plantation and dialogue sessions with the local communities on Sustainable Forest Management.

(b) Specific Objectives Achieved

Specific Objective 1: Skills Training

On-the-job training for staff of Sarawak Forestry Corporation (SFC) and a licensee, Zedtee Sdn Bhd, had included training of participants on Reduced Impact Logging and Continuous Forest Inventory. Zedtee Sdn Bhd had prepared Standard Operating Procedure manuals that can be used in Road-Plan Training, Road Construction Training and Skills Certification and had also constructed and equipped the Bukit Kana Field Station as a location for forestry training.

Specific Objective 2: Management Control

The 25-Year Management Plan for the Model Forest Management Area, Bintulu and Sibul Divisions, Sarawak was compiled and includes relevant background information about the MFMA and its environs, a comprehensive Forest Resource Assessment, prescriptions for the whole gamut of logging activities, management procedures for a range of components in the MFMA including Silviculture and Forest Rehabilitation, Wildlife Management, Protected Area Identification and Management etc. and digital map data that illustrate a range of MFMA attributes.

Specific Objective 3: Local Communities Participation

A 'Trial Coupe' was established in Coupes 7 and 8. Trials in Shifting Agriculture reached the stage of dialogues with local communities, a report on Ecological Studies included silviculture of the managed natural forest and a report of another study recommended Community Development Projects to provide alternative livelihoods for the shifting cultivators.

(c) Contribution to the achievement of the Development Objective

The Project contributed to the implementation of sustainable management of mixed hill forests of Sarawak by pursuing Continuous Forest Inventory through training and plot re-measurement and training in Reduced Impact Logging (aimed at sustained timber yields) and by providing management prescriptions and procedures in *The 25-Year Plan* (for the conservation of the genetic resources and the maintenance of the ecological balance of the State).

(d) Situation prevailing after Project completion

During Phases I and II of the Project primary forest was harvested according to standard procedures, few concessions were made for management of non-timber resources and local communities used part of the MFMA for their shifting cultivation. After a hiatus of three years, during which the switch-over to second-cycle harvesting occurred in part of the MFMA, Phase III commenced. After Phase III completion forest workers are in a better position to carry out Reduced Impact Logging as they have been trained in this, and management is in a better position to sustainably manage the MFMA, as Continuous Forest Inventory data are available from re-measured plots and *The 25-Year Management Plan* is now available. The local communities are more aware of Sustainable Forest Management, having participated in dialogues on this topic.

3. Target Beneficiaries' Involvement

Participation of project beneficiaries included involvement of Forest Department staff members in Reduced Impact Logging training and Continuous Forest Inventory training and implementation, involvement of Zedtee Sdn Bhd in preparation for FMU certification of an area in the MFMA for Sustainable Forest Management under MC&I (2002) (work directly related to the Project's efforts and actions) and dialogue sessions on Sustainable Forest Management with some local communities.

The results of training will continue to be used by those who underwent training, and experience with Continuous Forest Inventory will prepare workers to continue to gather this invaluable data needed to determine harvesting levels. The dialogue sessions have strengthened links between the management representative of the licensee and the local communities and also raised awareness in the local communities of Sustainable Forest Management.

4. Lessons Learned

(a) Development Lessons

(i) Design aspects

The Design aspects that most contributed to the success of Phase III in achieving its Development Objective Project were careful attention to the needs for many types of training for a wide range of participants, for comprehensive and definitive management documents and the inclusion of the role of local communities living in or near areas undergoing Sustainable Forest Management which has to be carefully considered so that local communities can both contribute to, and benefit from SFM in the area.

(ii) Changes in intersectoral links which affected Phase III's success

Phase III's success was undoubtedly partly due to the change in emphasis of one of the logging companies active in the area as the company began to pursue Sustainable Forest Management Certification under MC&I (2002).

(iii) Additional arrangement to improve co-operation between relevant parties

Stakeholder consultations need to be institutionalized to ensure all parties remain informed and can exchange information.

The local communities need to be brought further on board (to take up emerging job opportunities in the MFMA) and provided with training to upgrade their skills.

(iv) Factors that will most likely affect future Project sustainability

Built infrastructure (such as the Bukit Kana Field Station) can be extremely advantageous to the Project as it can facilitate on-going training of batches of participants at local, state, national and even international levels.

Comprehensive documentation on a Project area in electronic as well as hard copy format can be very useful to companies preparing an FMU for certification for Sustainable Forest Management (MC&I (2002)) and also to prepare publicity for various purposes.

Training modules developed by a Project or companies involved in a Project can be offered to a wider range of participants than just those for whom they were prepared.

A comprehensive Forest Management Plan provides a firm basis for Sustainable Forest Management of the MFMA. Efforts should be made to modify forest management plans included in signed timber licence agreements to reflect the prescriptions in the *25-Year Management Plan*.

LPF establishment will add a new dimension to issues of forest rehabilitation but its widespread establishment could also completely alter areas of forest regenerating after first-cycle harvesting and have impacts on biodiversity including wildlife.

With a Project of this magnitude (in terms of time, money and effort invested), there must be a guarantee that the site will be preserved for future related activities.

(b) Operational Lessons

(i) Project organization and management

Review of the Project Document before Project commencement is necessary when a significant period has elapsed between its approval and Project commencement or if significant external changes/sectoral developments have occurred in the interim period.

A full-time Project Counterpart should be made available.

(ii) Project documentation

Some information from earlier Project Phases was scattered in various internal and external reports (grey literature). All Project reports should be written in a standard format, numbered, catalogued and filed, with soft copies available for future reference. All reports should be published / made available on the web to ensure they reach the public domain.

(iii) Monitoring and evaluating

Project management needs to be alert to ensure that Specific Objectives are being met at all times.

(iv) Roles and responsibilities

The person in the best position to write the Project Completion Report is the Project Leader, and this should be part of his/her TOR.

(v) Actions taken to avoid variations

Effective communication of some decisions made during Project Steering Committee Meetings to ITTO.

Stricter adherence to the models provided in the *ITTO Manual for Project monitoring, review and evaluation* would have helped the issue of deleted activities to be picked up earlier.

No additional activities included once Project/Phase implementation has commenced.

(vi) Foreseen external factors that influenced Phase III implementation

None

(vii) Unforeseen external factors that influenced Phase III implementation

A management representative of a licensee operating within the MFMA became heavily involved in preparations to apply for certification of an FMU in the MFMA under MC&I (2002) in 2005. The licensee's additional role had positive effects on the Project as it resulted in the availability of a lot of additional materials and detailed documentation related to Sustainable Forest Management. The same company's establishment of Licence for Planted Forest had the potential to influence local community participation in the Project.

5. Recommendations for future projects

(a) Identification

A clear decision is needed on whether to cover both training / demonstration aspects and experimental/research aspects, or only one of these.

(b) Design

Local community participation should be clearly addressed to enable the local communities to have some say in how they might contribute and to ensure that they benefit from any project in their area by being providing with training and given priority in job opportunities. Project activities that will foster a 'handout' mentality need to be excluded.

Include studies on how local community members can participate in job opportunities that will arise from the establishment of Licence for Planted Forest areas.

Links may need to be established with the plantation forestry sector as Planted Forest areas become ever more widespread.

Links with institutions of higher learning and researchers need to be forged to the benefit of both parties.

(c) Implementation

Training of both institution and company personnel needs to be made an ongoing process. A guarantee that a Project site will be reserved beyond the lifetime of the Project is a *sine qua non*.

(d) Organization

A Project Leader's responsibilities shall be clearly defined and may include preparing the Work Plan and Yearly Plan of Operation, helping to identify consultants, writing TORs for consultancies, identifying local counterparts and support staff, all in consultation with the Project Coordinator, and managing the Project. The Project Leader's role makes him/her the most appropriate person to write the Final Project Report and Project Completion Report, but he/she can delegate editing of individual Technical Reports.

The TORs drawn up for consultancies should directly address items in Yearly Plans of Operation.

(e) Management

Information obtained during the Project needs to be carefully managed, preserved (e.g. stored in databases that can be accessed in years to come) and made available in the public domain. Provision needs to be made to update databases and management plans as new information becomes available.

PART II: Main Text

1. Project Content

(a) Background information

The Model Forest Management Area (MFMA) is located in Sarawak's Bintulu, Sibu and Kapit Divisions in central Sarawak, between latitudes 2°5' and 2°45' N and longitudes 112°30' and 113° E. The site is 166,507 ha in extent, inclusive of a 4,000 ha extension southeast of Bukit Kana approved in 2004.

Phase III of the MFMA Project builds on Phases I and II (PD 105/90 Rev.1 (F) and PD 14/95 Rev.2 (F) respectively) of the MFMA Project which focussed on producing a *Ten-Year Development Plan* for the MFMA (1996-2000) and carrying out work planned for the first four years in the *Ten-Year Development Plan* respectively. The proposal for Phase III of the Project was formulated based on the findings and recommendations of Phase II and focussed on skills training, management control and local community participation.

When Phase II ended (in 2000) only two license agreements were still operating in the MFMA, T/3393 (42,875 ha) in the western part and T/4317 (106,820 ha) in the eastern part. There was a hiatus of more than three years before Phase III commenced. In the interim, the MC&I (2002) had become available, Sarawak Forest Department had devolved its management and development activities to the newly formed Sarawak Forestry Corporation and second-cycle harvesting had begun in the T/4317 licensed area (in 2001/2002). Phase III started in March 2004 under a new Project leader.

An important development has been the initiative in 2005 of a management representative of one of the licensees in the MFMA to prepare for Sustainable Forest Management certification of a Forest Management Unit in the MFMA under the MC&I (2002). The management representative has also established a Licence for Planted Forest Area in the MFMA.

(b) Objectives, Outputs and Activities

(i) Objectives

Phase III Objectives were as follows:

Development Objective: The Project shall contribute to the implementation of sustainable management of mixed hill forests of Sarawak, aimed at sustained timber yields and the conservation of the genetic resources and the maintenance of the ecological balance of the State

Specific Objective 1: Skills Training. Train forestry staff and workers from both public and private sectors in work planning and implementation of sustainable

management of forest resources, provide demonstration of new methodologies and techniques and monitor the performance in the model area.

Specific Objective 2: Management Control. Prepare comprehensive management plans for the model area, including tree planting with local communities, safeguarding of protection forests, timber harvesting and silvicultural measures of felling restrictions and enrichment planting, where required in natural forests, as well as the necessary monitoring control procedures leading to sustainable operations in the model area.

Specific Objective 3: Local Communities Participation. To improve the livelihood of the rural people through Sustainable Forest Management (SFM) system.

(ii) Outputs

The Outputs for Phase III were:

Inventory Training

On-the-job training in Continuous Forest Inventory at the MFMA included a briefing at Zedtee Camp and field training for SFC and timber company staff during implementation of Reduced Impact Logging training at logged-over forest under Licence T/4317 in the MFMA.

Road-plan Training

The Forest Management Plan for Anap-Muput (Year 2006-2025), developed by Zedtee Sdn Bhd pursuant to the requirements for Sustainable Forest Management under MC&I contains material on this item. The company has also prepared Standard Operating Procedure modules that can be used in Road Plan Training

Reduced Impact Logging Training

Sarawak Forest Department, Sarawak Forestry Corporation and the timber company staff identified and marked trees for harvesting under the Reduced Impact Logging (RIL) system and also carried out skid trail alignment in six blocks under Licence T/4317 during two field trips to logged-over forest as on-the-job training on RIL.

Road Construction Training

The same situation pertains as in Road-plan Training (above).

Work-skills Certification

The same situation pertains as in Road-plan Training (above).

Forest Operational Zoning

The 25-Year Management Plan for the Model Forest Management Area, Bintulu and Sibul Divisions, Sarawak (a Phase III Output – Management Control) covers forest zoning; the Protection Zone, Production Zone and Community-use Zone are identified for each licensed area.

Harvesting Code of Practice

The 25-Year Management Plan for the Model Forest Management Area, Bintulu and Sibul Divisions, Sarawak contains comprehensive materials on this item, including Cutting Rules, Cutting Limits, Harvesting System, Harvesting Period and Yield Regulation.

Continuous Monitoring

SFD crews carried out five Continuous Forest Inventory field trips. Despite difficulties in accessing the plots and damage to some plots due to harvesting, altogether 47 sample plots and one Research Plot were re-measured between August 2004 and October 2005. All the data collected have been entered into an Excel spreadsheet and handed over to ITTO for analysis.

Management Documents

The 25-Year Management Plan for the Model Forest Management Area, Bintulu and Sibul Divisions, Sarawak draws from available data from reports arising from all three Project Phases and other sources to address management issues for both the licensed areas in the MFMA

Community Development Project

A report *Implementation of Community Development Projects to provide alternative livelihoods for the shifting cultivators in order to enhance Sustainable Forest Management systems* suggests Community Development Projects that could provide the longhouse communities living in the vicinity of MFMA with alternative livelihoods so they could contribute toward a SFM system in accordance with ITTO Guidelines. A report *A study on the ecology and silviculture of logged-over forests in the Model Forest Management Area* includes silviculture of the managed natural forest.

Tree Planting Silviculture

An Engkabang (*Shorea macrophylla*) Plantation (approx. 26 ha, established by SFD as the first ITTO Community Project) was maintained and cleared from October 25 to November 11 2006 and planting of rubber was discussed in a dialogue session with the local communities on Sustainable Forest Management.

(iii) Project strategy

The results of Continuous Forest Inventory during Phase II had indicated the need for a reduction of the Annual Allowable Cut in second-cycle harvesting in the MFMA due to loss of productive area from road- and main skid-infrastructure, the exclusion from harvesting of protected forests in High Conservation Value Forest areas and projections of a decline in commercial timber yield in harvested forest stands. The high rate of loss of productive area associated with harvesting was seen to be exacerbated by inadequate work supervision on the ground. Skills training was therefore needed to reduce the impacts of infrastructure construction and tree harvesting on remaining growing stock in order to work towards Sustainable Forest Management.

Management control, in the form of a comprehensive management plan, was needed to guide the two licensees in sustainably managing not only harvesting in the MFMA but also its High Conservation Value Forest areas and also address rehabilitation of degraded areas.

The local communities living in and near the MFMA are primarily poor subsistence farmers who carry out shifting cultivation, hunt, fish and collect jungle produce for food. The forest has long served as a valuable resource for all their needs. An important objective of the MFMA Project was therefore to support the local communities in line with SFM. Local community participation in the Project was an important mechanism to achieve this and contribute towards the communities' livelihood as well as sustainability of forest management activities in the MFMA.

Three key problems were thus to be addressed during Phase III of the Project as identified in the Project Document, namely:

- Skills Training
- Management Control
- Local Community Participation

(iv) Work Plan

Phase III of the MFMA Project began in March 2004. The 1st Project Steering Committee Meeting took place on 17 November 2004. The Minutes of 1st Project Steering Committee Meeting ITTO Project PD 12/99 Rev. 4(F) Model Forest Management Area – Phase III, November 17 2004) state that:

- “The 1st YPO as presented by the EA needs amendments to better reflect the Project Document ...”
- “Amended 1st YPO should be transmitted to the ITTO in due time”.
- “The Committee agreed to delete non-budgeted activities from the Workplan and YPO...”

Accordingly, Outputs 1.2 (Road-Plan Training), 1.4 (Road Construction Training), 1.5 (Skills Certification), 2.1 (Operational Zoning) and 2.2 (Harvesting Code) did not appear in Annex 5 of the Yearly Plan of Operation, (March 2004 – February 2005), Sarawak Forest Department, November 18 2004.

(v) Required inputs

ITTO and the Malaysian Government provided the inputs based on the approved activities or outputs in the Project Document. The total contribution was US\$ 3,246,360 with US\$ 966,700 provided by ITTO, US\$ 1,734,500 from the Malaysian Government and US\$ 545,160 (= RM 1,918,962) from a licensee

operating in the MFMA. The bulk of the ITTO contribution helped to pay salaries for the consultants while the Malaysian budget was disbursed for salaries of the counterparts and other officers involved, for transport and travelling, infrastructure, purchase of materials and equipment and field allowances etc. The bulk of the contribution by the licensee was used to construct and equip a training facility in the MFMA, the Bukit Kana Field Station.

The Project was extended for a three month period without additional funding by a decision of ITTO in November 2006.

(vi) Project rationale

The MFMA Project was established as a result of the report by the ITTO Mission to Sarawak in 1989-1990 entitled *The promotion of Sustainable Forest Management: A case study in Sarawak, Malaysia*. The Mission's overall assessment was that sustainable management of forests of Sarawak is being partly achieved, however, full achievement depends on immediate action in respect of:

- annual rate of harvesting – the Mission report recommended that the rate in the Permanent Forest Estate correspond to a calculated prospective sustainable yield per annum based on growth and yield studies; and
- strengthening of the Sarawak Forest Department in control and planning, supplemented by enhancements in research, education and training and public relations - The Mission recommended that a 'model logging concession' be established as one of the training facilities.

The MFMA programme was conceived to span a period of about 13 years, e.g. a set-up period (Phase I, 1993 – 1995), and a Ten-Year Development Plan period (1996 – 2006). The Sarawak State Government issued approval with the guarantee that the MFMA site 'will be reserved for the project for a minimum of ten (10) years'.

The broad purposes of the MFMA are:

- Training: of Forest Department personnel and logging company staff in all planning, operational and monitoring aspects of sustainable management of hill forests.
- Research and Development: in harvesting technologies and silvicultural systems appropriate for sustainable management of forest resources as well as research on socio-economic aspects of forestry sector impacts on nearby communities.
- Demonstration: of Sustainable Forest Management in real-life conditions to the public at large.

Phase III of the MFMA Project follows and builds on Phase I of the MFMA Project, during which the baseline data was gathered and a *Ten-Year Development Plan* prepared, and Phase II, which addressed the key problems of (i) determining levels of sustainable log supply from the forests to set outturn quotas for licensed company operations areas; (ii) reducing the environmental damage caused by harvesting operations and making these operations environmentally acceptable to society at large; and (iii) monitoring the progress and results of all uses of the forest and land by the various parties involved in exploiting these resources to ensure enforcement on the ground of the existing management regulations and harvesting guidelines. Phase III focuses specifically on skills training, management control and local community participation.

(vii) Relevance to ITTO

Phase III is relevant to ITTO in the following ways:

- Compliance with ITTO 1994 Objectives
Phase III of the Project is in compliance with ITTO objectives contained in Article 1 of the International Tropical Timber Agreement, 1994:
 - to contribute to the process of sustainable development (Outputs I, II and III);
 - to promote and support research and development with a view to improving forest management and efficiency of wood utilization as well as increasing the capacity to conserve and enhance other forest values in timber producing tropical forests (Outputs II and III);
 - to encourage members to support and develop industrial tropical timber reforestation and forest management activities as well as rehabilitation of degraded land, with due regard for the interests of local communities dependent on forest resources (Outputs II and III).
- Compliance with ITTO Criteria

Phase III of the MFMA Project relates to three areas, training of technical personnel, forest management and local community participation. As such, Phase III conforms to:

- ITTO Criteria 1.6 (Number of professional and technical personnel at all levels to perform and support forest management and 7.7 (Training, capacity-building and manpower development programmes for forest workers) (Output I);
- ITTO Criterion 1.11 (Existence of Forest Management Plans) (Output II – *The 25-Year Management Plan for the Model Forest Management*

Area, Bintulu and Sibu Divisions, Sarawak) and Criteria 5.1 (Protected areas containing forests) and 5.6 (Existence and implementation of procedures for the protection and monitoring of biodiversity in production forests ...) (Output II – relating to HCVF areas);

- ITTO Criterion 7.14 (Extent of involvement of indigenous peoples, local communities and other forest dwellers in forest management capacity building, consultation processes, decision-making and implementation).

- Relationships to ITTO Libreville Action Plan

Phase III of the Project is consistent with the following Action Plan Goals under the Committee on Reforestation and Forest Management:

- Goal 1: Support activities to secure the tropical timber resource base;
- Goal 2: Improve the tropical timber resource base;
- Goal 3: Enhance technical, financial and human capacities to manage the tropical timber resource base.

2. Project Context

In Malaysia forestry is a State matter and in the State of Sarawak the forestry sector has been and remains a major contributor to State Government revenues.

The Forest Policy of Sarawak, formulated and adopted in 1954, is still in force. Its main objectives are:

- To reserve permanently for the benefit of the present and future inhabitants of the country, forest land sufficient:
 - for the assurance of sound climatic and physical conditions of the country; the safeguarding of soil fertility and of supplies of water for domestic and industrial use, irrigation and general agricultural purposes; and the prevention of damage by flooding and erosion to rivers and to agricultural land;
 - for the supply in perpetuity and at moderate prices of all forms of forest produce that can be economically produced within the country, and that are required by the people for agricultural, domestic and industrial purposes under a fully developed national economy.
- To manage productive forests of the Permanent Forest Estate (PFE) with the object of obtaining the highest possible revenue compatible with the principle of sustainable yield and with the primary objectives set out above.

- To promote, as far as may be practicable, the thorough and economical utilization of forest products on land not included in the Permanent Forest Estate, prior to the alienation of such land.
- To foster, as far as may be compatible with the prior claims of local demands, a profitable export trade in forest produce.

Certification for Sustainable Forest Management under MC&I (2002) has significant economic ramifications and is thus a current issue for forestry in the State. Zedtee Sdn Bhd, the management representative of the licensee of one of the licensed areas in the MFMA, is one of the first companies in the State currently seeking such certification for their Forest Management Unit in the MFMA.

The creation of planted forests in Sarawak is a new approach towards attaining sustainable management of the State's forest resources. In the mid-1990s the Sarawak Government initiated programs aimed at increasing the productivity and economic returns of in-part idle agricultural lands and largely exploited forests outside the PFE through agricultural and tree plantation schemes. The State Legislative Assembly passed the Forests (Amendments) Ordinance 1996 and the Forests (Planted Forests) Rules 1997, which were adopted for this purpose. In addition, the Government is convinced that the 'State's timber industry will be better off if it embarks on re-forestation with fast-growing species to supplement timber production'.

3. Project Design and Organization

The design and organization of Phase III activities were based on the studies and recommendations made during Phase II. As first submitted, the Project Document for Phase III did not include the Local Community Participation aspect. This aspect is of great importance in the MFMA where local communities are located near, at and within its boundary and have had/are having considerable impacts on the MFMA, in particular through shifting cultivation activities. Specific Objective 3 on Local Community Participation (to improve the livelihood of the rural people through Sustainable Forest Management (SFM) system) was therefore added.

(a) Adequacy of results of the Identification Phase

The problems to be tackled under Specific Objective 1 (Skills Training) were adequately covered during the identification phase.

The problems to be tackled under Specific Objective 2 (Management Control) were adequately covered though not well-articulated in the Activities (which specified management plans for different components of the MFMA). Since Project development, with the availability of MC&I (2002), a forest management plan is now formulated as a single comprehensive document.

Specific Objective 3 (Local Communities Participation), designed to tackle problems of how to improve the livelihood of the rural people through Sustainable Forest Management (SFM) system, were adequately covered by the Activities.

(b) Conceptual framework of the Project

The project had a sound conceptual foundation in terms of project rationale. The changing role of one of the licensees (Zedtee Sdn Bhd), which is establishing a Licence for Planted Forest area in a heavily-degraded part of the MFMA, has ramifications for local community involvement that could not have been foreseen.

(c) Adequacy of time and other resources for project formulation

N/A

(d) Appropriateness of roles and responsibilities of institutions involved with Project implementation

The stakeholders involved with project implementation included ITTO (consultants), Sarawak Forest Department (SFD), Sarawak Forestry Corporation (SFC), Zedtee Sdn Bhd (a logging operator and management representative for a licensed area in the MFMA) and the local communities. The roles and responsibilities of the institutions appeared appropriate, noting that Phase III of the Project fell into the time period when SFD's responsibilities for forestry management and development were being devolved from SFD (Executing Agency) to Sarawak Forestry Corporation, leaving SFD to perform statutory and regulatory functions.

(e) Beneficiary involvement with Project's efforts and actions

The target beneficiaries of Phase III of the MFMA Project, as stated in the Project Document, are:

- Forest Department staff of management, engineering and silvicultural sections, mainly junior staff for training,
- Forest companies' camp managers, planning staff, surveyors, supervisors and foremen of work-units,
- Local communities in and around the MFMA (49 longhouses or approximately 6000 people) and local communities in Sarawak in the trial coupe, fruit-tree, enrichment planting and other agroforestry project.

Forest Department staff members, including junior staff members, were involved in Reduced Impact Logging training and Continuous Forest Inventory training and implementation.

Zedtee Sdn Bhd was heavily involved during Phase III in preparation for FMU certification of an area in the MFMA for Sustainable Forest Management under MC&I (2000). Zedtee's work was directly related to the Project's efforts and

actions and also benefited the Project in terms of additional documentation. Zedtee's construction and equipping of the Bukit Kana Field Station, a training facility, also complemented the Project's actions.

Local community involvement with Phase III's efforts and actions appears to have been somewhat limited. Dialogue sessions on Sustainable Forest Management were held with some local communities, and there was a session to clear an Engkabang jantung plantation.

4. Project Implementation

Project implementation proceeded smoothly. There were, however, some anomalies, which are mentioned below.

(a) Critical differences between planned and actual Project implementation

Activities deleted from the Yearly Plan of Operation

The Minutes of 1st Project Steering Committee Meeting ITTO Project PD 12/99 Rev. 4(F) Model Forest Management Area – Phase III, November 17 2004) state that:

- “The 1st YPO as presented by the EA needs amendments to better reflect the Project Document ...”
- “Amended 1st YPO should be transmitted to the ITTO in due time”.
- “The Committee agreed to delete non-budgeted activities from the Workplan and YPO...”

Accordingly, Outputs 1.2 (Road-Plan Training), 1.4 (Road Construction Training), 1.5 (Skills Certification), 2.1 (Operational Zoning) and 2.2 (Harvesting Code) did not appear in Annex 5 of the Yearly Plan of Operation, (March 2004 – February 2005), Sarawak Forest Department, November 18 2004 and were not implemented as such, though were addressed, in part, by Zedtee Sdn Bhd.

Introduced Activities not appearing in the Project Document

Additional Activities were introduced as follows:

- ‘Ecological Studies’ (under Specific Objective 3 (Local Community Participation) Community Development Projects Output), was added to Annex 5 (above).
- Biodiversity Studies (under the Management Documents Output), was introduced during the final year of Phase III.

(b) Measures and actions which could have avoided these variations

- Effective communication of a decision made during the 1st Project Steering Committee Meeting to ITTO would have helped avoid confusion over the deletion of Outputs 1.2, 1.4, 1.5, 2.1 and 2.2 from Annex 5 of the Yearly Plan of Operation, (March 2004 – February 2005), Sarawak Forest Department, November 18 2004.
- Stricter adherence to the models provided in the *ITTO Manual for Project monitoring, review and evaluation* would have helped the issue of deleted activities to be picked up earlier.
- No additional activities included once Project/Phase implementation has commenced.

(c) Appropriateness of the assumptions made and correct identification of the risks involved

The Assumptions, as stated in the Project Document, were appropriate.

The Risks, as stated in the Project Document, were correctly identified.

(d) Project sustainability after Project completion as a result of Project implementation conditions

The project is sustainable as:

- Many of its components (such as RIL and CFI training) are directly relevant to licensees' preparation for FMU certification for Sustainable Forest Management under MC&I (2000).
- Bukit Kana Forest School, constructed and equipped as a training facility, will function long after the Project has finished.
- *The 25-Year Management Plan for the Model Forest Management Area, Bintulu and Sibul Divisions, Sarawak*, which documents the current situation in the MFMA, explains how this has arisen and gives prescriptions for a wide range of forest management activities, is now available.
- Good partnerships built up between Phase III stakeholders and stakeholders' active co-operation with each other has helped to ensure project sustainability beyond the end of Phase III.

(e) Appropriateness of project inputs

The budget provided by ITTO and the EA was adequate.

Time allotted for Phase III was adequate with the approved three-month extension.

5. Project Results

(a) Situation existing at Project completion

Specific Objective 1: Skills Training

On-the-job training for staff of Sarawak Forestry Corporation (SFC) and the licensee had included training of about 30 participants on Reduced Impact Logging (skid trail alignment in six RIL blocks and marking of trees to be harvested as well as Potential Crop Trees) and training of a total of 35 participants in Continuous Forest Inventory.

Zedtee Sdn Bhd had been heavily involved in aspects of Phase III of the MFMA Project that relate to certification, particularly training and other aspects of Reduced Impact Logging and Continuous Forest Inventory. The company had prepared Standard Operating Procedure manuals that can be used in Road-Plan Training, Road Construction Training and Skills Certification.

In addition, Zedtee Sdn Bhd had constructed and equipped the Bukit Kana Field Station (a joint public-private sector Forest Operations Training Facility, the urgent need for which was identified as a key strategy of the *Ten-Year Development Plan* arising from Phase I of the MFMA Project) in the MFMA at a cost of RM 1,918,962, as a location for forestry training.

Zedtee Sdn Bhd became heavily involved in preparations to apply for certification of an FMU in the MFMA under MC&I (2002) in 2005. The licensee's additional role had positive effects on the Project as it resulted in a lot of additional materials and detailed documentation related to Sustainable Forest Management becoming available.

Zedtee's establishment of a License for Planted Forest area (14,970 ha) in a heavily-degraded part of the MFMA has ramifications for local community involvement that could not have been foreseen and need to be further explored (e.g. under a Phase IV of the Project).

Specific Objective 2: Management Control

The 25-Year Management Plan for the Model Forest Management Area, Bintulu and Sibul Divisions, Sarawak (a Phase III Output (Management Documents)) was compiled according to *Format for contents of Revised Forest Management Plan* (SFC) which directly relates to Indicators in the MC&I (2002).

The 25-Year Management Plan includes:

- A synthesis of all the relevant background information about the MFMA and its environs available from reports from Phases I and II and III as well as from other sources.

- A comprehensive Forest Resource Assessment that includes the area's wildlife resources and recreational potential as well as its timber resources.
- Prescriptions for the whole gamut of logging activities from the planning and pre-harvesting stage to the harvesting operation (using Reduced Impact Logging methods) and post-harvesting activities.
- Management procedures for a range of components in the MFMA including Environmental Impact considerations, Forest Research, Silviculture and Forest Rehabilitation, Wildlife Management, Protected Area Identification and Management, Community Development and Occupational Health and Safety.
- Digital map data obtained from sources that included Sarawak Forest Department's GIS Unit and the two main licensees operating in the MFMA. These data illustrate MFMA attributes ranging from location, topography and soils to land status, licensed areas, infrastructure and location of High Conservation Value Forest areas.
- Comprehensive appendices covering a range of Guidelines and Procedures and *A report on existing biodiversity studies in the MFMA*.

Specific Objective 3: Local Communities Participation

- A 'Trial Coupe' was established in Coupes 7 and 8 (almost no reporting was found on this Activity).
- As regards the 'Construction Project' (to formulate a master programme on road construction, fishpond construction and longhouse construction with maintenance to be implemented in Phase III), Zedtee Sdn Bhd presented a budget for Permanent cropland and agriculture infrastructure (maintenance, improvement and productive management of existing agricultural infrastructures like fishponds and planted cropland close to each kampong) in its Report to the 3rd Project Steering Committee Meeting (June 2006).
- The Activity 'Trials in Shifting Agriculture' (identify with the local community and timber company agreed areas previously affected by shifting agriculture presently considered available for crop tree planting, initiate with company a series of trial block site preparation and planting method studies, report results and costs, including employment of local community) could not proceed beyond a dialogue session during which the local community elected to plant rubber as it was decided that only indigenous species should be used in the Community Development Project.
- An introduced activity 'Ecological Studies' took place and was reported on: *A study on the ecology and silviculture of logged-over forests in the Model Forest Management Area*.

- A study yielded a report on *Implementation of Community Development Projects to provide alternative livelihoods for the shifting cultivators in order to enhance Sustainable Forest Management systems.*

(b) Extent to which Specific Objectives were achieved

Specific Objectives 1 (Skills Training) and 2 (Management Control) were realized. Specific Objective 3 (Local Communities Participation - To improve the livelihood of the rural people through Sustainable Forest Management (SFM) system) was partly realized as even though useful discussions were held with the local communities on Sustainable Forest Management, the Activity that might have done most to help improve the livelihood of the rural people (Trials in Shifting Agriculture) was not able to proceed to the implementation stage.

(c) Impact of the Project results on sectoral programmes, the physical environment, the social environment and on the target beneficiaries

- The Bukit Kana Field Station, a forestry training facility, will have a great impact on sectoral (forestry) programmes.
- The impact of the Skills Training on the environment will become apparent as harvesting in the MFMA proceeds in a more environmentally-friendly manner as trained staff carry out Reduced Impact Logging procedures, with better Management Control (with the availability of *The 25-Year Management Plan*).
- An impact on the social environment may be realized through greater awareness of Sustainable Forest Management arising from dialogue sessions held with the local communities.

(d) Project sustainability after Project completion

Project conceptualisation

Training in Reduced Impact Logging and Continuous Forest Inventory has provided members of Sarawak Forest Department and logging company staff useful experience to add to their 'institutional memory' as well as documentary reports.

Bukit Kana Forest School (BKFS) (the urgent need for which was identified as a key strategy of the *Ten-Year Development Plan* arising from Phase I of the MFMA Project) was constructed and equipped during Phase III of the Project and makes a valuable contribution to Project sustainability as it can facilitate Zedtee Sdn Bhd and other pioneers prepare for FMU certification for Sustainable Forest Management under MC&I (2000).

A comprehensive *25-Year Management Plan* for the MFMA now exists documenting the current situation in the MFMA, explaining how this has arisen and giving prescriptions for a wide range of forest management activities.

Good partnerships built up between Phase III stakeholders and stakeholders' active co-operation with each other has helped to ensure project sustainability beyond the end of Phase III.

Assumptions made

The assumptions made (Project Document) were appropriate to ensure Project sustainability after Project completion.

Conditions prevailing at completion of Phase III of the Project

The unforeseen situation whereby one management representative of a licensed area in the MFMA:

- is preparing for FMU certification under MC&I (2002)
- has established a Licence for Planted Forest (LPF) area (14,970 ha) in a heavily-degraded part of the MFMA,

help sustain the Project after completion as Project Outputs relating to Sustainable Forest Management and rehabilitation will be relevant.

6. Synthesis of the Analysis

(a) Specific Objectives:

Specific Objective 1	Realized
Specific Objective 2	Realized
Specific Objective 3	Partly realized

(b) Outputs: Partly realized

(c) Schedule Delayed, not seriously

(d) Actual expenditures As planned

(e) Potential for replication Significant potential

(f) Potential for scaling up Modest potential

PART III: Conclusions and Recommendations

(a) Development Lessons

(i) Design aspect

The Design aspects that most contributed to the success of Phase III in achieving its Development Objective (to contribute to the implementation of sustainable management of mixed hill forests of Sarawak, aimed at sustained timber yields and the conservation of the genetic resources and the maintenance of the ecological balance of the State) were careful attention to the needs for many types of training for a wide range of participants, and for comprehensive and definitive management documents. The inclusion of the role of local communities living in or near areas undergoing Sustainable Forest Management was also an important factor as this role has to be carefully considered so that local communities can both contribute to, and benefit from SFM in the area.

(ii) Changes in intersectoral links

Phase III's success was undoubtedly partly due to the change in emphasis of one of the logging companies active in the area as the company began to pursue Sustainable Forest Management Certification under MC&I (2002) in 2005.

(iii) Additional arrangement between relevant parties

Stakeholder consultations need to be institutionalized to ensure all parties remain informed and can exchange information.

The local communities need to be brought further on board to take up emerging job opportunities in the MFMA and need to be provided with training to upgrade their skills.

(iv) Factors that will most likely affect Project sustainability after completion

Built infrastructure (such as the Bukit Kana Field Station) can be extremely advantageous to the Project as it can facilitate training of participants at local, state, national and even international levels.

Comprehensive documentation on a Project area in electronic as well as hard copy format can be very useful to companies preparing an FMU for certification for Sustainable Forest Management (MC&I (2002)) and also to prepare publicity for various purposes.

Training modules developed by a Project or companies involved in a Project can be offered to a wider range of participants than just those for whom they were prepared.

A comprehensive Forest Management Plan provides a firm basis for Sustainable Forest Management of the MFMA. Efforts should be made to modify the forest management plans included in signed licence agreements to reflect the prescriptions in *The 25-Year Management Plan*.

LPF establishment will add a new dimension to issues of forest rehabilitation but its widespread establishment could also completely alter areas of forest regenerating after first-cycle harvesting and have impacts on biodiversity including wildlife.

With a Project of this magnitude (in terms of time, money and effort invested), there must be a guarantee that the site will be preserved for future related activities.

(b) Operational Lessons

(i) Project organization and management

- Review of the Project Document before Project commencement is necessary when a significant period has elapsed between its approval and Project commencement or if significant external changes/sectoral developments have occurred in the interim period.
- A full-time Project Counterpart should be made available.

(ii) Project documentation

Some information from earlier Project Phases is scattered in various internal and external reports (grey literature). All Project reports should be written in a standard format, numbered, catalogued and filed, with soft copies available for future reference. All reports should be published / made available on the web to ensure they reach the public domain.

(iii) Monitoring and evaluating

Project management needs to be alert to ensure that Specific Objectives are being met at all times.

(iv) Quality of project planning

Adequate.

(v) Roles and responsibilities

The person in the best position to write the Project Completion Report is the Project Leader, and this should be part of his/her TOR.

(c) Recommendations for future projects

(i) Identification

A clear decision is needed on whether to cover both training / demonstration aspects and experimental/research aspects, or only one of these.

(ii) Design

Local community participation should be clearly addressed to enable the local communities to have some say in how they might contribute and to ensure that they benefit from any project in their area by being provided with training and given priority in job opportunities. Activities that will foster a 'handout' mentality need to be excluded.

Include studies on how local community members can participate in job opportunities that will arise from the establishment of Licence for Planted Forest areas.

Links may need to be established with the plantation forestry sector as Planted Forest areas become ever more widespread.

Links with institutions of higher learning and researchers need to be forged to benefit both parties.

(iii) Implementation

Training of both institution and company personnel needs to be made an ongoing process. A guarantee is thus needed that a Project site will be reserved beyond the lifetime of the Project.

(iv) Organization

A Project Leader's responsibilities shall be clearly defined and may include preparing the Work Plan and Yearly Plan of Operation, helping to identify consultants, writing TORs for consultancies, identifying local counterparts and support staff, all in consultation with the Project Coordinator, and managing the Project. The Project Leader's role makes him/her the most appropriate person to write the Final Project Report and Project Completion Report, but he/she can delegate editing of individual Technical Reports.

The TORs drawn up for consultancies should directly address items in Yearly Plans of Operation.

