

ITTO PROJECT COMPLETION REPORT

Project Identification

Title: A Sustainable Management Model in the Iwokrama Rainforest

Serial Number: PD 10/97 rev.1 (F)

Executing Agency: Iwokrama International Centre

Host Government: Republic of Guyana

Starting Date: July 1999

Actual Duration (months): 57 (July 99 – April 04)

Actual Project Costs (US\$): US\$696,581

Part I: Executive Summary

1. Project Background

PD 10/97 Rev. 1 (F) was approved by the 22nd Session of the ITTC in May 1997 in Santa Cruz, Bolivia and the first disbursement was made in July 1999. However, a number of delays in project implementation resulted during the formative stages of development of the executing agency, the Iwokrama International Centre for Rainforest Conservation and Development. The project was prepared by staff of a national preparatory project implemented by the Guyana Natural Resources Agency (GNRA) and funded by the GEF and UNDP to help establish the Iwokrama International Centre and its programmes.

This GEF project began in 1993 and had three broad aims of: a.) conducting background research on the biological resources of the 370,000 ha Iwokrama Forest; b.) establishing the legal and institutional arrangements for the Iwokrama Centre to act as an autonomous institution responsible for the conduct of the Iwokrama International Rainforest Programme through the day to day management of the Iwokrama Forest; and c.) the development of a 5 year operational plan for the period 1998-2002 and a ten year business plan, beginning in 1998.

A key objective of the Centre's business plan is for the Centre to become financially self sufficient for core activities based in a large part on the endowment of the Iwokrama Forest provided to the Centre by the Government and the people of Guyana.

The problem (pre-project situation) can be looked at from two perspectives; firstly, the narrower perspective of how to sustainably utilize the Iwokrama Forest for commercial scale production in a manner consistent with the purposes of conservation, demonstration, research and training for which the Iwokrama Centre was created; and secondly, the broader perspective of trying to solve the multiple problems faced by Guyana and the forestry sectors of other tropical countries.

The development objective of the project is to optimize the sustainable supply of economic and environmental goods and services from Guyana's forests for the benefit of present and future generations and contribute to the international communities' understanding of the ecological, economic, social and institutional requirements for the sustainable management of tropical rainforest communities.

The specific objective of the project is to develop a demonstration model of sustainable, commercial scale management in the Iwokrama Forest to deliver multiple products and services through adaptive management which fully integrates action-research, training and education activities at all stages. Six key outputs were envisaged from the project as follows:

1. A forest management plan to guide the operational management of the 180,000 ha Sustainable Utilization Area in the Iwokrama Forest, and be used by the GFC and others as a model and training tool.
2. A feasibility study and business strategy for utilization of the Iwokrama Forest in accordance with ITTO guidelines and GFC Codes of Practice.
3. Commercial arrangements in place for sustainable utilization and management of the Iwokrama Forest as a demonstration.
4. Increased availability of sustainably produced tropical timber and other forest products and services for both the national and international markets.
5. Women and men trained in sustainable forest management and planning for multiple products.
6. Trials established and studies in place to gradually supply the information needed for adaptive management to refine national and regional guidelines for more sustainable management and harvesting regimes.

Many other institutions are involved in research and training on tropical forest management but Iwokrama is unique since it combines research, training and the commercial application of an ample scale project in the Iwokrama Forest. This is the basis of the project strategy which the programme employed. However, because Iwokrama is a centre for operational research and development in sustainable forest management rather than just a commercial entity, it incurs additional costs and must therefore meet those costs through external funding sources. The ITTO support was therefore to be used for the purpose of providing a sound basis for seeking the commercial partnerships in sustainable utilization needed to achieve substantive financial self sufficiency in accordance with the Centre's business plan and longer term goals as outlined in the Centre's Operational Plan.

ITTO needs to demonstrate to what extent the application of its guidelines can be operationalized in commercial forest operations. Guyana similarly needs to demonstrate how the recently adopted GFC Codes of Practice can be economically operationalized in industry practice. Traditionally, most of the planning for forest management is left to industry, with limited effective

government guidance and control. Industry has little incentive to invest in research and development for the long-term health of the forest. Iwokrama, however, intends to make a greater investment in forest management planning than is customary and will provide opportunities for both action research and training.

The project is in accordance with the National Forest Action Plan (1989) and the National Environmental Action Plan 1994) which set out the general policies. Over the years, the Guyana Forestry Commission (GFC) has built up substantial understanding of the natural forests and harvesting systems, however at project inception its' capacity had been hampered by inadequate financial and human resources. There are a relatively small number of qualified foresters living in Guyana and the only forest management plans are those provided by the concession holders.

The project's planned duration was 36 months with an overall budget of USD 1,213,626 of which ITTO contributed USD 780,626. The project duration was extended three times: to March 31 2003; to December 31 2003 and then to April 2004. No additional funding was requested.

2. Project Achievements

2.1 Outputs Achieved

Output 1 - A forest management plan to guide the operational management of the 180,000 ha Sustainable Utilization Area (SUA) in the Iwokrama Forest and be used by the GFC and others as a model and training tool.

A management level forest inventory was completed for the Net Operable Area (NOA) within the SUA. Revised forest type maps and other thematic maps using GIS were produced making use of the inventory results as well as other research activities. The inventory data was compiled and used to determine optimum cutting cycle and AAC scenarios. Estimations of the potential annual yield of timber by species groups and diameter classes were developed. Market assessments for three NTFPs were carried out and estimates of the potential annual yield were developed. Management planning software – IWOPLAN – was developed and tested. Finally, draft multi-use and draft forest management plans have been prepared. Consultative workshops have been carried out with members of the various stakeholder organizations such as the GFC, EPA, UG and Amerindian groups.

Output 2 - A feasibility study and business strategy for utilization of the Iwokrama Forest in accordance with ITTO guidelines and GFC Codes of Practice.

A full technical-economical feasibility study for timber operations has been completed in accordance with GFC and ITTO guidelines. It includes a wood supply study, forest products utilization and marketing study and financial analysis. This study assessed both small and medium scale harvesting and processing scenarios including a forest products marketing strategy.

Output 3 - Commercial arrangements in place for sustainable utilization and management of the Iwokrama Forest as a demonstration.

The International Business Development Advisor was advertised for and selected but hiring did not progress further as definitive clarity regarding Iwokrama's business development was not feasible at that time. This was further compounded by the structural changes taking place at Iwokrama. The National Business Advisor completed the report on "Business Development at Iwokrama", Economic Evaluation for the period 2000 – 2030 of the Iwokrama Forest was completed by consultant Peter van Beukering from Holland.

Output 4 - The increased availability of sustainably produced tropical timber and other forest products and services for both the national and international markets.

Sustainable production of aquarium fish, Crabwood oil and honey has begun. The ecotourism business is in operation. The groundwork is now in place to begin the sustainable production of tropical timber.

Output 5 - Women and men trained in sustainable forest management and planning for multiple products.

Local community planning workshops were conducted with a wide range of potential stakeholders to review results of the inventory and zoning work undertaken. A two week ecotourism training course in planning and management was conducted for 30 participants from 30 local communities. An instructor from the University of Virginia conducted a public seminar on ecotourism and another course for local tour operators was held at Iwokrama. A national ecotourism development fellow undertook a 3 week study tour in Australia. An Iwokrama staffer attended the ITTO Project Formulation Training Workshop.

Output 6 – Trials established and studies in place to gradually supply the information needed for adaptive management to refine national and regional guidelines for more sustainable management and harvesting regimes.

A final report "Impact Monitoring Protocols for the Iwokrama Forest" has been completed and is being utilized in the implementation of Permanent

Sample Plots. Three Permanent Sample Plots in the Iwokrama Forest have been established for monitoring timber growth.

2.2 Specific Objective Achieved

The specific objective was partially achieved in the following areas: ecotourism, aquarium fish, Candlewood oil and honey. The groundwork was laid for the timber operation which will carry on beyond the framework of this project.

2.3 Contribution to Achievement of the Development Objective

The project contributed to the optimization of the sustainable supply of goods and services from Guyana's forests through workshops and training programmes on ecotourism and on the management and processing of Crabwood Oil. The project also sponsored local community planning workshops to review the Iwokrama Forest zoning process and strategic forest inventory.

The project contributed to the international communities' understanding of the requirements for the sustainable management of tropical rainforest communities through the development of the Iwokrama zoning process, growth and yield data and the IWOPLAN Program forest management planning tool.

2.4 Situation at Project Completion

The multi-use potential of the Iwokrama Forest has now been adequately quantified in terms of product categories, sustainable yields and values, both for NTFPs and for timber production. Iwokrama personnel as well as people from the local indigenous communities have been trained in a number of key disciplines in forest management and planning. The groundwork has now been laid to proceed with sustainable production on a commercial scale and achieve financial self sufficiency.

3. Target Beneficiaries Involvement

The Iwokrama Centre and staff were the most immediate beneficiaries of the project as the results are, and will continue to be, applied directly to the Iwokrama Forest. Iwokrama staff participated directly in all project activities, attended workshops and training programmes and acted as counterparts to international consultants.

The project was designed in consultation with the GFC, which was also a major beneficiary. Collaboration continued with the GFC throughout the design and implementation of the forest inventory, for which the GFC provided on-the-job training to the inventory crews and quality control supervision. The inventory data compilation program was developed in consultation with the GFC and this

program is now being used by both Iwokrama and the GFC. It is expected that other local forest companies will also make use of this program.

The Amerindian communities in and around the Iwokrama Forest not only participated in decisions related to project activities, identification of potential economic benefits, training opportunities and potential impact, but also were beneficiaries of training in a number of key forest management disciplines. A large proportion of the permanent staff at the Field Station comes from these Amerindian communities.

Other beneficiaries include the EPA, University of Guyana, and the Ministries of Amerindian Affairs and Foreign Affairs, all of whom have participated in Project Steering Committee meetings as well as sub-committee meetings to deal with specific actions such as the critical analysis of project progress and project training objectives.

4. Lessons Learned

4.1 Development Lessons

Project Design –

The aspects of project design which most contributed to the successful completion or not of the development objective were embedded in the philosophy of Iwokrama itself. Although there was unqualified support for community involvement and community based programmes in ecotourism and NTFP production, there existed a perceived reluctance on the part of management to embrace timber production as a viable option for Iwokrama.

The successful implementation of a number of NTFP and ecotourism programmes, training activities and local community participation was due to the capabilities and dedication of a number of Iwokrama staff. These staff possessed the requisite training and experience to carry out the activities and produce the project outputs.

The failure to achieve the sustainable production of tropical timber on a commercial scale was due to a lack of personnel experienced in the operational aspects of production forestry. A full-time project manager, focused on the implementation of activities and the achievement of outputs, would have provided better planning and organization to ensure adequate consultant input in a timely manner.

However, it must be noted that the substantial social work which is prerequisite to the achievement of a sustainable timber operation has already been completed by Iwokrama through its significant engagement of the local communities through

the North Rupununi District Development Board (NRDDB).

Intersectoral Links –

The most relevant change in intersectoral links which affected the project's success was the unparalleled level of cooperation and collaboration between the GFC and Iwokrama. This was particularly evident during the planning and execution of the management level forest inventory (March-June/03).

Improved Cooperation –

Although there was cooperation between Iwokrama and other interested parties, such as the University of Guyana and the EPA, in specific areas of project development, particularly research and training, this needs to be expanded to include more hands-on involvement. A good example of this type of involvement was the collaborative effort between Iwokrama and the GFC for the execution of the management level forest inventory.

Project Sustainability –

The factors which will most likely affect project sustainability after completion are:

- Continued support from Iwokrama's International Board of Directors and senior staff;
- Continued donor support of Iwokrama's core programme;
- Ability to reach agreements with suitable joint venture partners for timber and NTFP operations;
- Successful product placement in both export and domestic markets.

4.2 Operational Lessons

Project Organization and Management –

Projects of this size and complexity require a full-time project manager, focused on the implementation of activities and the achievement of outputs. This would provide better planning and organization to ensure that activities are carried out in the proper sequence and that adequate specialist input is obtained in a timely manner. This would also reduce lost time and effort due to breaks in continuity caused by changes in personnel.

Project Documentation –

This also relates to the need for a full-time project manager who would have sole responsibility for ensuring that adequate records are maintained of all project activities and specialist's input. It is not sufficient to rely solely upon periodic

project progress reports for all relevant project information.

Monitoring and Evaluation –

The monitoring and evaluation of project planning and implementation must be an on-going process and not left solely to annual reviews and post-project evaluations. Early warning signs must be heeded and the flexibility must be inherent in the programme to permit changes if certain aspects of the project are found to be unrealistic or unworkable. Frank assessments must be made if a project is not performing to desired expectations and measures taken to determine the root cause of failure or delay and to take immediate corrective action.

Roles and Responsibilities of Institutions Involved –

Iwokrama maintained sole responsibility for project implementation, with the exception of the previously mentioned GFC participation in the forest inventory. Other institutions, such as the Ministries of Foreign Affairs and Amerindian Affairs, the University of Guyana and the EPA participated in Steering Committee Meetings and ad-hoc sub-committees, providing advisory input at those times.

Planned and Actual Implementation –

Actions that can be taken to avoid variations between planned and actual implementation (schedules, costs, etc.) are:

- Pragmatic research and planning prior to project formulation;
- Assignment of an experienced, full-time project manager;
- Maintain a clear focus on goals and allow no deviations;
- On-going monitoring and evaluation;
- Flexibility to revise unrealistic or unworkable project aims.

External Factors (Foreseen) –

One of the principal external factors that influenced project implementation, that should have been foreseen, was the difficulty in obtaining the required consultants' input within the optimum time frame. Due to the strict approval procedures, required by both Iwokrama and ITTO, a great deal of lead time must be allowed to ensure the timely recruitment and participation of consultants.

External Factors (Unforeseen) –

One of the principal external factors that influenced project implementation, that could not have been foreseen, was the complete reorganization of Iwokrama in March 2003 both in terms of financial and human resources management.

5. Recommendations

Project staff would make the following recommendations to improve the effectiveness and efficiency of future similar projects:

Pragmatic research and planning prior to project formulation:

Staff must be fully cognizant of the material and human resources required to carry out the project successfully. They must also ensure that the project goals are realistic and attainable.

Assignment of an experienced, full-time project manager:

Projects of this scope and complexity require a full-time project manager for the duration of the project, focused on the implementation of activities and the achievement of outputs, within project budget limitations. The project manager must have project management experience as well as experience in the principal disciplines involved. The project manager would provide the planning and organization necessary to ensure that activities are carried out in the proper sequence and that adequate specialist input is obtained in a timely manner. The project manager would also be responsible for project documentation and maintaining the project "history" and continuity, as well as ensuring on-going liaison with other institutions involved in project implementation.

On-going monitoring and evaluation:

Close, critical analysis of project progress must be an on-going process. This could be handled through internal bi-monthly reviews with all parties involved in project implementation. Frank assessments must be made if a project is not performing to desired expectations and measures taken to determine the root cause of delay or failure and to take immediate corrective action.

Strategic Co-funding

This has been particularly difficult in Iwokrama's situation. Since Iwokrama had many donors, delays in prerequisite project activities funded by other donors invariably caused delays in ITTO activities. Iwokrama must be able to, in the future, improve its planning process by making sure that its work plan activities are funded in a structured and coherent way.

Part II: The Project

1. Project Content

1.1 Origin

This project has its origin in the legislation which created the Iwokrama International Centre for Rain Forest Conservation and Development as an autonomous entity. It builds upon the strategy and the operational plan of the Centre. The Iwokrama Act requires that about half of the Iwokrama Forest be set aside as a Wilderness Preserve. This project addresses the other half which is destined for sustainable and equitable utilization.

1.2 Development Objective

The development objective of the project is to optimize the sustainable supply of economic and environmental goods and services from Guyana's forests for the benefit of present and future generations and contribute to the international communities' understanding of the ecological, economic, social and institutional requirements for the sustainable management of tropical rainforest communities.

1.3 Specific Objective

The specific objective of the project is to develop a demonstration model of sustainable, commercial scale management in the Iwokrama Forest to deliver multiple products and services through adaptive management which fully integrates action-research, training and education activities at all stages.

1.4 Project Rationale

The problems addressed by this project can be viewed from two perspectives. First, the narrower perspective focuses on how to sustainably utilize the Iwokrama Forest for commercial scale production in a manner consistent with the purposes of conservation, demonstration, research and training for which the Iwokrama Centre was created. The second is the broader perspective of trying to solve the multiple problems faced by Guyana and the forestry sectors of other tropical developing countries.

In fact, it was in response to these problems that the Government of Guyana identified the need for an integrated effort of demonstration, research and training in order to help improve the environmental, economic and social sustainability of forest practices and launched the idea of the Iwokrama Centre in 1989.

1.5 Project Location

The 371,000 ha Iwokrama Forest is located about 345 km south of Georgetown

in Guyana's central highland region and is part of the Guiana Shield geological formation. It is bounded roughly by the Siparuni and Essequibo Rivers in the north, north-west and north-east. To the south it is bounded by the Siparuparu and Burro-Burro Rivers as well as the Rupununi District. In accordance with its governing legislation and international best practices for sustainable forest management, the Iwokrama Forest has been zoned into two, roughly equal sized, management categories: the Wilderness Preserve (WP) and the Sustainable Utilization Area (SUA).

Access is provided by the public road from Georgetown to the Brazilian border, south of the Forest. This road has been recently upgraded so that the drive can be made from Georgetown to Kurupukari, on the northern limit of the Forest, in 5 or 6 hours. The new all-weather Kurupukari-Brazil road bisects the Forest for about 75 km.

1.6 Previous Preparatory Activities

Numerous studies and consultancies were carried out to help to better define the resources of the Iwokrama Forest and develop the Iwokrama work programme. Several other national efforts undertook similar problem analyses which were incorporated into Iwokrama's planning process, such as the National Tropical Forest Action Plan, the design of an ODA-funded project to support the GFC and the design of the Tropenbos-Guyana programme.

Prior to project start-up, the characterization of the Forest had been advanced through mapping of forest types, surveys of flora and fauna and entry of that data into a geographic information system.

A field station, which can accommodate up to 16 visitors, has been constructed near the Kurupukari river crossing.

1.7 Intended Situation after Project Completion

At the conclusion of the project, a model multiple-use management plan for the Iwokrama Forest SUA would be in place. The process of developing this plan would have served to operationalize and refine the ITTO Guidelines on Sustainable Tropical Forest Management, as well as the local guidelines of the GFC's Codes of Practice, into best practice for sustainable forest management under local conditions.

1.8 Target Beneficiaries and Others Affected

The Iwokrama Centre and staff will be the most immediate beneficiaries as the results will be applied directly to the Iwokrama Forest. However, the project was designed to provide benefits to a wide range of stakeholders, representatives of whom have been consulted in the development of Iwokrama's operational plan:

- Amerindian communities in and around the Iwokrama Forest, through participation in decisions related to programme activities, the identification of potential economic benefits and training opportunities;
- The Guyanese public, through information on the conservation and sustainable management of tropical rainforests, Iwokrama's programmes and their potential benefits;
- Political groups and government agencies in Guyana, through the sharing of research-based information and lessons relevant to the development of national forest policy and practice;
- Local and international NGOs, through information on the activities and results of the programme, as well as opportunities for collaboration;
- International development institutions, through information on the objectives of the programme and opportunities to contribute to their success, as well as the sharing of research-based information and operational lessons;
- The international scientific community, through information on potential research and development opportunities, institutional capacity building and opportunities for collaboration;
- Local and international forestry based industries, through information on planned developments that might benefit their areas of expertise, including product market innovation and development.

The project has been designed in consultation with the GFC, which will be one of the most direct beneficiaries through the application of practices developed and through training provided.

1.9 Project Strategy

Many other institutions are carrying out research and training on tropical forest management but Iwokrama is unique in that it can combine research, training and the commercial application of an ample scale project in its own forest, thereby increasing opportunities for learning and ensuring feedback into improved management practices. Iwokrama also has the advantage of a virtually undisturbed forest, ready to apply state of the art procedures.

This ITTO project was designed to assist Iwokrama through the early development phase by providing the basis for seeking the commercial partnerships in sustainable utilization required to achieve financial self-sufficiency. Specifically, it was intended to determine how to manage the forest sustainably, improve forest management planning practices, find new uses that will add value to the forest and train individuals so that the practices will be widely disseminated. Through the development of practices, products and services that go beyond normal commercial forest enterprises, this project increases the probability that Iwokrama and other tropical forests will be able to continue to produce benefits for future generations.

1.10 Risks

At the start of the project the principal risks envisaged were that the volume of commercial timber may be too low to be of financial interest to potential business partners; that the road through the Iwokrama Forest would not be completed to acceptable standards prior to start-up of harvesting activities; or that funding would not be forthcoming to maintain Iwokrama's core programme.

At project completion it appears that there is sufficient volume of commercial timber; the road has been adequately upgraded; and core funding is still available, although reduced.

1.11 Outputs

Output 1 - A forest management plan to guide the operational management of the 180,000 ha Sustainable Utilization Area in the Iwokrama Forest and be used by the GFC and others as a model and training tool.

1.1 Consulting services identified and contracted:

- Denis Alder – Biometrician/IWOPLAN (2001-2002)
- LTS International – Timber Feasibility Study (July/01)
- URS Ltd. – NTFP Market Study (Aug/01)
- Dane Gobin – Business Development Advisor (2002-2004)
- Andrew Johns – Biodiversity Specialist (Mar-Aug/02)
- David Hammond – Forest Ecologist (Aug/02-Feb/03)
- Kenneth Rodney – IBDA-Forestry (Oct/02-Oct/03)
- Carlos Pinillos – Data Analyst (Apr-Jul/03)
- Peter Drake – Marketing Specialist (Jun-Sept/03)
- Albert Moul – Sawmilling Specialist (July/03)
- CEA Environmental Consultants (Dec/03)

1.2 The International Business Development Advisor – Forestry produced a management level timber inventory report in August 2003 complete with stand and stocking tables and inventory map. The data analyst provided data compilation services for the forest inventory (April-July/03).

1.3 Production of improved forest type maps using GIS - extensive and detailed forest maps have been produced of Iwokrama forest and surrounding areas (July/99-October/00).

Iwokrama's GIS unit provided the technical input for the production of the SUA Net Operable Area maps as well as the inventory base maps.

Image processing desktop purchased and installed in GIS unit, system facilities improved use of Erdas Image 8 and Arc GIS 8 software with large remote sensing imagery files; order placed from USGS for LandSat 7 satellite imagery for Iwokrama and surrounding areas; completed study that mapped under-canopy seasonal flooding of the Iwokrama

Forest using satellite radar was submitted for publication (Aug/02-Feb/03).

David Hammond identified to develop the Zoning Process Guidelines. The product will be based on the experience that Iwokrama has had with zoning the Iwokrama Forest and will discuss the use of participatory approaches, spatial information systems and other considerations in a format accessible to decision makers, natural resource managers, planners and students (Aug/02-Feb/03).

- 1.4 No substantial work was done on identification of constraints to implement ITTO guidelines but Consultant Andrew Johns included recommendations on monitoring based on ITTO guidelines.
- 1.5 Preliminary work on compilation of best available information for use to determine species groupings, growth models, cutting cycles, AAC and annual harvest area was done by Denis Alder as part of development of the IWOPLAN Program (2001-2002). This work was refined by Ken Rodney and Carlos Pinillos following completion of the 2003 forest inventory.
- 1.6 URS Ltd. was contracted to carry out an NTFP market feasibility study for three selected NTFPs, commencing in August 2001. The NTFPs selected were: Kufa (*Clusia spp.*) and Nibbi (*Heteropsis spp.*) for cane furniture and handicrafts; Balata gum (*Manilkara bidentata*) for handicrafts; and Haiawa (*Protium/Tetragastris spp.*) for essential oils.
- 1.7 Preliminary maps of management units, timber and NTFP stocking rate distribution and 5-year timber harvesting coupes were produced in IWOPLAN.
- 1.8 Estimates of sustainable production using growth and yield assessments - zoning outputs, forest maps and field inventories used to estimate sustainable production levels for timber and NTFPs (Jul/99-Oct/00). Dennis Alder completed "Getting Started" guide to the IWOPLAN software package, to facilitate use by students, GFC and industry. GIS liaised with GFC and UG to finalize the product. Product formally launched during February 03 SCM (Aug/02 to Feb/03).
- 1.9 Committee formed to develop the draft SUA management plan – (Jul/99 to Oct/00). Draft multi-use plan for the SUA has been produced and continues to be developed (Aug/02-Feb/03). As of October 2003 the first draft of the Sustainable Forest Management Plan (SFMP) was completed and submitted to Iwokrama for review and comment.
- 1.10 Consultative Planning Workshops - Four Steering Committee Meetings included representatives of local communities, Amerindian groups, key

national agencies (GFC, EPA, UG, MoAA, MoFA, CI, US Embassy, Forestry Training Centre) (Jul/99-Oct/00). The draft SFMP was presented to the Project Steering Committee in Oct/03.

- 1.11 Final multi-use SUA Management Plan and SFMP still incomplete at project completion – March 2004. However, drafts which do not require substantial modification are available and the Commonwealth Secretariat has provided funding for a Forester from May 2004 to help complete these plans.

Output 2 - A feasibility study and business strategy for utilization of the Iwokrama Forest in accordance with ITTO guidelines and GFC Codes of Practice.

- 2.1 Timber market information for Guyana and abroad was compiled by LTS Ltd. in July 2001 and by Peter Drake in June and July, 2003.
- 2.2 Potential processing, marketing and investment arrangements with enterprises in Guyana and abroad were discussed during the course of the market studies carried out in 2001 and 2003.
- 2.3 A timber feasibility study, including market research, was carried out by LTS Ltd. in July 2001. This study was based on incomplete forest resource data resulting in an under-estimation of production potential. A second feasibility study, incorporating all of the previous studies, the management forest inventory and the GFC's forest management plan guidelines, was completed by the International Business Development Advisor – Forestry in December 2003. Mr. Rodney together with Carlos Pinillos, data compilation expert, also completed the Wood Supply study. Other inputs were provided from Marketing consultant, Mr. Peter Drake who completed the marketing/utilization study in September 2003, Al Moul sawmill specialist who completed the Proposed Sawmill Facility Report and Messer's. Bisheshwer and Company who completed the financial statements under the supervision of Dane Gobin, local Business Development Director.

This feasibility study covered two possible scenarios: a small-scale operation designed for use with mobile bandmills and a larger scale operation designed for use with a fixed bandmill, which would maximize the forest's sustainable resource potential.

- 2.4 The draft feasibility study was submitted to Iwokrama's International Board of Directors and the GFC for review and a decision on the scale of operation.

2.5 The final feasibility study was submitted in January 2004.

Output 3 - Commercial arrangements in place for sustainable utilization and management of the Iwokrama Forest as a demonstration.

- 3.1** The preparation of a package appropriate for attracting business partners continues beyond the confines of this project and should be in place in the latter half of 2004.
- 3.2** Exploratory meetings were held with 10 potential business partners and expressions of interest were received (March-July/02). Meetings were also held with members of the Private Sector Commission (PSC) and Forest Producers Association (FPA) at which presentations on business development at Iwokrama were made. In November 2002 the centre made a presentation to an Israeli investor group. Further development of these activities is programmed for 2004.
- 3.3** Visits were undertaken with potential ecotourism partners to manage the canopy walkway (July-Sept/03).
- 3.4** Bidding carried out for ecotourism partners to manage the canopy walkway (July-Sept/03).
- 3.5** Partner selected to manage walkway and a contract is currently being negotiated with this partner.(Oct-Dec/03).
- 3.6** An IBDA was advertised for and selected but hiring did not progress further as definitive clarity regarding Iwokrama's business development was not feasible at the time. This was further compounded by the structural changes taking place at IIC. The National Business Advisor completed the report on "Business Development at Iwokrama" and the Economic Evaluation for the period 2000 – 2030 of the Iwokrama Forest was completed by consultant Peter van Beukering from Holland. (Aug 02 – Feb 03).

Output 4 - The increased availability of sustainably produced tropical timber and other forest products and services for both the national and international markets.

- 4.1** The sustainable production of timber has been delayed until the first quarter of 2005.
- 4.2** The sustainable production of other goods and services from the Iwokrama Forest is proceeding as planned in the areas of ecotourism and NTFPs.

Output 5 - Women and men trained in sustainable forest management and planning for multiple products.

- 5.1** The SUA management planning team met in August 2001 to explore the broad timber, NTFP and tourism options within the SUA. The main components of the meeting/workshop consisted of:
- a presentation and discussion on the basics of forest management planning delivered by Dr. Denis Alder;
 - an overview of IWOPLAN, how it works and the type of information it generates in relation to timber and NTFP production;
 - discussions with the timber and NTFP marketing consultants;
 - a presentation of plans for the development of a canopy walkway;
 - a presentation on the possible role of carbon sequestration in commercial forest management;
 - a session focused on identifying broad land-use options for the SUA.

The IBDA-Forestry was hired to develop Iwokrama's business development thrust especially with regards to timber development. The final report was submitted and reviewed by local expert stakeholders (Aug 02 – Feb 03).

- 5.2** No formal training was provided for the preparation of requests for bids on concessions or for the evaluation of bids.
- 5.3** Following consultations with a wide range of potential stakeholders, a multi-stakeholder management planning team was formed to develop the management plan for the SUA in full partnership with Iwokrama staff. The first 5-day workshop took place in October 2000 to review results of the inventory and zoning work undertaken and produced a revised planning timetable and the revised TORs for consultancy services to be provided under the project.
- 5.4** A two-week ecotourism training course in planning and management was conducted for 30 participants from 30 local communities (26 from Iwokrama and surrounding areas and 4 from coastal areas). Instructor David Kestenbaum, University of Virginia, also conducted a public seminar at IIC, which was well attended by UG students. Another course for local tour operators was not well attended (Aug 02 – Feb 03).
- 5.5** A five day training workshop on Crabwood oil soap and candle making and packaging was cancelled mid-way due to logistical problems in getting one of the two Brazilian instructors to Guyana. Participants from several villages attended. Two follow up courses were planned – Mr. Chandrika Persaud, a local food technologist with relevant experience

was identified as an instructor (Aug 02 – Feb 03).

- 5.6** Dr. Denis Alder delivered a workshop to the SUA management planning team on an overview of IWOPLAN, how it works and the type of information it generates in relation to timber and NTFP coupe location and flow of production and revenue (August/01).
- 5.7** Training in the analysis of detailed radar based imagery in relation to Activity 1.2 is planned to take place in the USA for January 2001. Ecotourism is a key NTFP with potential for early income generation while timber and other NTFPs are developed. A National Development Fellow was recruited to develop this area and arranged to study rainforest ecotourism in Australia in conjunction with the annual conference of the Australian Ecotourism Society (July 99 – Oct 00).
- 5.8** The Ecotourism Development Fellow undertook a 3-week study tour in Australia, in October 2000, on sand-based rainforest ecosystems quite similar to systems in Guyana. The Centre's senior social scientist participated in the 2nd Latin American Forestry Congress (Mar-July/02). An Iwokrama staffer attended the ITTO Project Formulation Training Workshop (Aug/02-Feb/03).
- 5.9** Concluding workshop on training activities with local stakeholders and six leading practitioners from ITTO Producer Regions has not been held.

Output 6 – Trials established and studies in place to gradually supply the information needed for adaptive management to refine national and regional guidelines for more sustainable management and harvesting regimes.

- 6.1** Biodiversity Specialist, Dr. Andrew Johns carried out an assessment of the current state of knowledge and information needs related to the effects of harvesting for timber and selected NTFP species (Mar-Aug/02). Work on this activity is planned to continue beyond the limits of this project.
- 6.2** See activity 6.4
- 6.3** See activity 6.4
- 6.4** A final report "Impact Monitoring Protocols for the Iwokrama Forest" was completed by consultant Dr. Andrew Johns. The methodology for establishing PSPs has been reviewed and is being utilized in the Iwokrama Forest (Aug 02 – Feb 03).
- 6.5** Five sites have been chosen, representing various forest types, where data collection had previously been carried out. These are anticipated to

be especially useful for the monitoring of forest treatments and incidental taxa. In addition, the site where the canopy walkway was established will also have a monitoring PSP.

Three Permanent Sample Plots in the Iwokrama Forest have been established for monitoring purposes (Aug/02–Feb/03). A project vehicle was purchased to support these activities.

6.6 Due to the minimal level of activity in the Iwokrama Forest during the project period, no plot treatments have been prescribed.

6.7 Dr. Johns' report on monitoring protocols includes recommendations and suggestions for the design of a practical cost monitoring system. This system still requires development in conjunction with a computer data base and data analysis system.

1.12 Work Plan

The original project work plan and project extension work plan are included in Appendix I.

1.13 Project Inputs

Inputs applied are included in Appendix II.

1.14 ITTO Context

ITTO has a requirement to demonstrate to what extent the application of its guidelines can be operationalized in commercial forest operations. Guyana similarly needs to demonstrate how the recently adopted GFC Codes of Practice can be economically operationalized in industry practice. Traditionally, most of the planning for forest management is left to industry, with limited effective government guidance and control. Industry has little incentive to invest in research and development for the long-term health of the forest. Iwokrama, however, intends to make a greater investment in forest management planning than is customary and will provide opportunities for both action research and training. It is due to the higher costs associated with this operational research and training that assistance was requested from ITTO.

This project complies with two of the objectives of ITTO's International Tropical Timber Agreement:

- To help research and development which will improve forest management and wood use;
- To encourage tropical timber [reforestation and] management.

This project also complies with each of the five ITTO criteria, as set out in Article 23.6 of the Agreement, as well as with ITTO's Action Plan, specifically the strategy of the Committee on Reforestation and Forest Management. Among the Committee's main priorities addressed by this project are demonstration, creation of scientific foundations, management for multiple benefits, development of skills and formulation of guidelines.

2. Project Context - Relevance to National Policies

2.1 Relationship to Sectoral Policies Affecting Tropical Timber

The project is in accord with the National Forest Action Plan (1989) and the National Environmental Action Plan (1994) which set out the general policies. Forest policy and legislation in Guyana is currently under review.

The most specific policy statement to which this project responds is the Iwokrama International Rain Forest Conservation and Development Act (1996), passed with bipartisan support by the Parliament of Guyana in March 1996. This is *"an Act to provide for the sustainable management and utilization of approximately 360,000 hectares of Guyana's tropical rainforest dedicated by the Government of Guyana ... for the purposes of research by the Iwokrama International Centre to develop, demonstrate and make available to Guyana and the international community systems, methods and techniques for the sustainable management and utilization of the multiple resources of the tropical forest and the conservation of biological diversity ..."*

2.2 Relationship to Forest Management Policies

Commercial logging in Guyana's rainforests has remained selective and relatively non-destructive, although the commercial value of the forests has been reduced by the removal of the higher valued species. Logging is carried out on state forest land by private companies. Recently, foreign companies (Demerara Timbers, Barama and Unamco) have made large investments in the forest industry and are applying more intensive forest harvesting techniques, but with weak management plans and limited knowledge of the reaction of the forest to harvesting.

A FAO/UNDP reconnaissance survey covering 80% of the forest area was completed on 1970 and still provides the best estimate of the nature and extent of Guyana's forest resource.

The Guyana Forestry Commission (GFC) has built up a substantial understanding of the natural forests and forest management systems. However, the capacity of the GFC to monitor forest activities has been inadequate due to limited financial and human resources. The only existing forest management

plans are those prepared by concession holders. These plans are seldom informed by detailed knowledge of the resources to be harvested.

With the assistance of the Overseas Development Administration (ODA), the GFC has recently prepared a Code of Practice for forestry operations, as well as forest management plan guidelines which all concession holders are required to follow. At the present time, there are no working models of sustainable forest management in Guyana that fully conform to ITTO guidelines on sustainable management of tropical forests.

Iwokrama has also contributed significantly in this regard through its contribution to the development of the local forest certification process. Janette Forte and Sharon Ousman who were staffers at Iwokrama played a substantial role during the development process of this initiative. Dr. David Singh, currently employed at Iwokrama, continues to be a Board member of the Guyana National Initiative on Forest Certification (GNIFC).

Several initiatives are addressing the institutional strengthening needs of the GFC, as well as the national requirements for improved local information to guide management practices. The ODA funded GFC Support Project has compiled existing resource information available within the country and used this to update knowledge of the forest resource.

Tropenbos-Guyana research at Mabura Hill, largely on the fragile white sands formation, indicates that operations must be of low intensity and with a harvesting cycle much longer than the 25 years commonly specified on earlier concession agreements.

Another initiative is being carried out by the Edinburgh Centre for Tropical Forestry which has been contracted by Barama to do forest management research and to monitor their forestry operations. To date, research has concentrated on the establishment of permanent sample plots, measured before and after logging.

The ITTO supported Reduced Impact Logging (RIL) training project is currently providing support to the GFC and the local forest industry in developing techniques applicable to the sustainable management of Guyana's tropical forests. In 1999 Iwokrama initiated an international workshop on Reduced Impact Logging which was the main introduction to this type of activity in Guyana.

3. Project Design and Organization

3.1 Identification Phase of the Project

During the project identification phase, Iwokrama adequately identified and

defined the problems to be tackled. Project objectives and outputs are clearly stated and unambiguous. Iwokrama's understanding of the objectives appears to be sound, based on the following statement from the original project proposal:

"Iwokrama will use the limited information from early national research efforts and experience from other tropical producing countries to develop a commercial scale model of operational best practice in sustainable tropical forest management. This model will integrate the conservation of biodiversity with the sustainable production of both timber and non-timber forest goods and services. It will be implemented with the backing of a comprehensive internationally supported operational research program that will allow for an action-research based adaptive management approach to developing and refining sustainable forest management practices. Iwokrama will be well-placed to test and apply outputs at the operational level and provide demonstrations, research and training to forest management agencies and concessionaires in Guyana and other tropical rainforest countries."

Iwokrama's choice of ITTO as the most appropriate agency to fund the implementation of a sustainable forest management model in a tropical rainforest was a well-conceived and logical management decision.

3.2 Conceptual Foundation of the Project

Project rationale is sound and, for the most part, it correctly recognizes the problems to be addressed, as well as the required outputs to achieve the stated objectives. Planned activities are generally logical and their implementation is correctly sequenced.

However, although other inventories were undertaken Iwokrama did not immediately recognize the importance of an adequate management level forest inventory for proper forest management planning.

Potential external influences are adequately perceived and measures were put in place to maximize their positive, or minimize their negative, impacts. This is made clear in the following statement:

"In the worst case scenario where Iwokrama is unable to exist as a viable self-financing entity, there will be few negative impacts and a great deal of useful information that will provide the international community with significantly improved understanding of the operational requirements for sustainable tropical forest management."

3.3 Adequacy of Project Resources

The project's schedule, budget and planned human resources were adequate for successful implementation. However, due to poor time management, the project's duration had to be extended three times. The project did not have a full-time, dedicated project manager. Instead, there was a Director of Program Support who attempted to coordinate the activities of all donor projects. This position ended in September 2002 prior to the conclusion of the project.

3.4 Understanding of Roles and Responsibilities

The Iwokrama Centre understands their role as Executing Agency of this project, as well as their legal responsibility for the management, conservation and sustainable development of the Iwokrama Forest.

The role of ITTO as the funding agency and their responsibility for project monitoring and evaluation is also clearly understood.

However, the role and responsibility of the GFC was not always so clear. This is possibly due to the fact that the capacity of the GFC was in decline at the time of project inception, due to limited human and financial resources. Also, the GFC's new Code of Practice, Forest Inventory Guidelines and Forest Management Planning Guidelines were still not in place. It is worthy of note that the role and responsibility of the GFC, with regard to the implementation of this project, was fully recognized during the project's final year.

3.5 Beneficiary Involvement

The project design clearly considered the involvement of key beneficiary groups (aside from Iwokrama itself and the GFC), such as Amerindian Communities, local and international NGOs, local forest industries and the Guyanese public in general. This involvement was planned and implemented in the form of workshops and committees to determine strategies and to review progress.

4. Project Implementation

4.1 Critical Differences between Planned and Actual Implementation

The overall project budget was maintained, although there were significant differences in some of the Components and budget line items, specifically Component 10 – Project Personnel and Component 30 – Duty Travel. This was principally due to a decision made at the February 2003 Steering Committee Meeting to request a project extension and hire a team of consultants to carry out three key activities:

- A management level forest inventory of the net operable area of the SUA;
- A technical economical feasibility study for the sustainable forest management of the net operable area;
- A sustainable forest management plan for the net operable area.

This decision was based on a forestry consultant's in-depth evaluation report on Iwokrama's progress toward sustainable forest management, prepared and submitted in November 2002. This report highlighted the need for a proper management level forest inventory, following GFC guidelines, in order to proceed with other management planning activities.

Due to the delay in recognizing the lack of this most important planning tool, Iwokrama was unable to complete the Sustainable Forest Management Plan (SFMP) within the project timeframe; therefore, other scheduled activities and outputs, dependent on that output, could not be achieved, such as:

- Activity 1.4 – As there have been no timber production activities, there is no basis to build on experience and identify constraints to implementation of ITTO guidelines for sustainable forest management;
- Activity 1.11 – although a draft SFMP was prepared, the final plan was not submitted due to the “incomplete” status of a number of key inputs. It should be noted that many of these inputs were dependent on a decision by Iwokrama's Board of Directors as to the scale of the forestry operation to be implemented. This decision was not made until January 2004, at which time the project budget could not support the continuance of this activity. The incomplete inputs are:
 - Division of the operating area into management units, including proposed road layout and annual production schedules;
 - Design and implementation of pre-harvest inventories;
 - Management plans for fire, pests and diseases and use of chemicals/toxic substances;
 - Environmental Impact Assessment.
- Output 3 – This output has been achieved for Ecotourism and a select group of NTFPs only.
- Output 4 – Sustainable timber production has not been initiated, although most of the groundwork is in place and production is now planned for 2005. The sustainable production of other forest goods and services has been achieved.
- Activity 5.2 – Due to the delay in finalizing the SFMP, there has been no basis for providing training in the preparation and evaluation of bids on concessions.
- Activity 5.9 – The concluding workshop on training, with local stakeholders and ITTO Producer Regions, has not been held due to the incomplete status of a number of key forest management activities.
- Activity 6.6 - Due to the minimal level of activity in the Iwokrama Forest during the project period, no plot treatments have been prescribed.

4.2 Actions to Avoid Variations

All of the above mentioned variations between planned and actual project implementation could have been avoided through the implementation of one simple and cost-effective measure – the hiring of a full-time, experienced forester to act as project manager.

Projects of this scope and complexity require a full-time project manager, focused on the implementation of activities and the achievement of outputs, within project budget limitations. The project manager must have project management experience as well as experience in the principal disciplines involved. The project manager would provide the planning and organization necessary to ensure that activities are carried out in the proper sequence and that adequate specialist input is obtained in a timely manner. The project manager would also be responsible for project documentation and maintaining the project “history” and continuity, as well as ensuring on-going liaison with other institutions involved in project implementation.

4.3 Appropriateness of Assumptions

Iwokrama did not originally include the execution of a forest inventory in this project as it had been assumed that the prior strategic inventories were sufficient. This assumption was proven to be incorrect and was confirmed by the GFC at the February 2003 Steering Committee Meeting.

An important risk to project implementation, that was not identified, was the complexity of Iwokrama’s operations and the inherent difficulty in managing a multiple donor programme. The challenges included integrating the needs of specific donors with the long term goals of the Centre and acquiring project management support for the timely completion of some project activities. Programme development many times required the sequential execution of activities with certain activities being prerequisite to the completion of others. Project implementation was delayed when prerequisite activities funded by other donors were not completed.

4.4 Project Sustainability due to Implementation Conditions

The principal prevailing condition during project implementation, which ensures project sustainability after completion, is the fact that the Iwokrama Centre is established, by legislation, as a permanent institution with the mandate to sustainably manage the Iwokrama Forest. With the completion of this project, it was expected that Iwokrama would manage its commercial forest operations in partnership with private enterprise, so that the need for additional ITTO assistance with operational forest management and planning would not be required.

In recent years there has been an upsurge in the crime rate which may have a negative effect on the investment climate in Guyana both for international investors wary of investments in developing countries and local entrepreneurs who have no confidence in short term solutions to the political difficulties facing the country.

Like many other developing countries, Guyana is faced with a depressed economy where all the macroeconomic indicators are poor such as high inflation, low and poorly distributed GDP, depreciating exchange rates and poor infrastructure. Moreover, the financial effects on the world in the aftermath of the September 2001 terrorist attack on the US made many businesses financially vulnerable. These conditions will reduce the confidence levels and capital availability required for business investment.

4.5 Appropriateness of Project Inputs

The financial resources available to this project were adequate for its successful completion. With regard to human resources, the major shortcoming, as indicated elsewhere in this report, was the lack of a dedicated project manager to ensure continuity of the programmes' operations.

Also, a number of key contributors to the management and implementation of project activities including the former Director of Programme Support, the Accountant, the GIS Data Analyst and the Forest Manager ended their contracts at the Centre between November 2002 and March 2003. This significantly impacted the intended timeframe for a number of activities as workloads more than doubled on existing staff in order to complete and administer project activities.

Although it was always the general intention of Iwokrama to engage in business activities mainly through the sustainable development of multiple forest resources, the specific development strategy had never been charted. For example, the types of business partnerships needed or the size of the business operations were never well defined. The absence of a revised Business Plan for the Centre clearly made business development premature. However, a more detailed Business Plan for the Centre is currently being prepared by consultant Tim Critchley of the UK.

5. Project Results

5.1 Situation at Project Completion

Prior to the implementation of this project, neither Iwokrama nor the Government of Guyana had a clear understanding of the multi-use potential of the Iwokrama

Forest. There was also no clear concept of the way forward to achieve financial self-sufficiency through the sustainable management of forest-based goods and services. Finally, there was a definite shortage of qualified personnel available to carry out the many forest management planning activities required to meet their objectives.

Although some of the planned activities were not completed, resulting in only partial fulfillment of some of the outputs, the situation at project completion is vastly improved. The multi-use potential of the Iwokrama Forest has now been adequately quantified in terms of product categories, sustainable yields and values, both for NTFPs and for timber production. Iwokrama personnel as well as people from the local indigenous communities have been trained in a number of key disciplines in forest management and planning. The groundwork has now been laid to proceed with sustainable production on a commercial scale and achieve financial self sufficiency.

5.2 Achievement of the Project's Specific Objective

The specific objective of the project was to develop a demonstration model of sustainable, commercial scale management in the Iwokrama Forest to deliver multiple products and services through adaptive management which fully integrates action-research, training and education activities at all stages.

The specific objective was partially achieved in the following areas:

- Ecotourism – a partnership has been formed with a local tour operator for the management of the canopy walkway;
- Aquarium fish – a local partnership has been formed for the production and marketing of tropical aquarium fish;
- Crabwood oil and honey – now being produced in collaboration with the local indigenous communities for the domestic market;
- Timber – the groundwork has been laid for the timber operation which will carry on beyond the framework of this project;
- Training – a number of training programmes have been carried out, specifically in the areas of ecotourism, impact monitoring, and forest management planning;
- Research – impact monitoring protocols have been designed and partial implementation has begun.

5.3 Impact of Project Results

It is unlikely that the project has, at this stage, had any appreciable impact on other forestry sector programmes in Guyana. The impact, if any, will not be felt until such time as Iwokrama begins their timber operations. It will begin with the submission of the final SFMP and annual harvesting plans, which will serve as

models for the GFC to advise other industrial operations. Likewise, the sustainable forest management techniques employed by Iwokrama will demonstrate the proper employment of GFC and ITTO guidelines.

As there has been no physical activity, aside from forest measurements (inventory, PSPs), there is as yet no impact on the physical environment. However, the impact on the social environment is appreciable. The local indigenous communities, as well as the public in general, now possess an increased awareness of the potential of the Iwokrama Forest for training, employment and as a client for support services. The local forest industries will now recognize Iwokrama, not as a potential competitor for a share of the domestic and export timber markets, but rather as a pilot programme to help them to access new and expanding markets by perfecting the production of sustainably harvested timber.

The impact of the project on target beneficiaries can also be appreciated at this stage of development. The most obvious is the Iwokrama Centre and its staff who have developed a sense of ownership and commitment to the programme. The experience of carrying out a project of this scope has also taught them a great deal about the nature of forest management planning and provided them with skills in project execution. The GFC has benefited from the training and expertise passed on by international forestry consultants, particularly in the areas of biometrics, inventory data management and planning support software. Members of the Amerindian communities have received training as Rangers, to carry out patrolling and monitoring functions and as ecotourism guides. They have also received training and practice in forest measurements activities.

5.4 Project Sustainability

As indicated in previous sections of this report, the conceptual foundation of the project was sound and, although there were incorrect assumptions and poor identification of risks, these problems had been overcome by project completion.

In spite of those problems, the critical groundwork has been laid for the development of a demonstration model of sustainable, commercial-scale management in the Iwokrama Forest. Iwokrama is now in a good position to carry this objective forward, independently of this project.

Specific conditions at project completion that favor this are:

- management level forest inventory;
- forest type mapping of the Net Operable Area;
- IWOPLAN management planning software;
- feasibility and marketing studies;
- business development plan;
- impact monitoring protocols for the Iwokrama Forest;

- draft sustainable forest management plan;
- decision to hire a full-time, experienced Forest Manager to oversee the implementation of the forest management plan.

6. Synthesis of the Analysis

6 (a) Specific Objective(s) Achievement -	Partly Realized
6 (b) Outputs -	Partly Realized
6 (c) Schedule -	Seriously Delayed
6 (d) Actual Expenditures -	Below Planned
6 (e) Potential for Replication -	Significant Potential
6 (f) Potential for Scaling-up -	Significant Potential

Part III: Conclusions and Recommendations

1. Development Lessons

Project Design –

The aspects of project design which most contributed to the successful completion or not of the development objective were embedded in the philosophy of Iwokrama itself. Although there was unqualified support for community involvement and community based programmes in ecotourism and NTFP production, there existed a perceived reluctance on the part of management to embrace timber production as a viable option for Iwokrama.

The successful implementation of a number of NTFP and ecotourism programmes, training activities and local community participation was due to the capabilities and dedication of a number of Iwokrama staff. These staff possessed the requisite training and experience to carry out the activities and produce the project outputs.

The failure to achieve the sustainable production of tropical timber on a commercial scale was due to a lack of personnel experienced in the operational aspects of production forestry. A full-time project manager, focused on the implementation of activities and the achievement of outputs, would have provided better planning and organization to ensure adequate consultant input in a timely manner.

Intersectoral Links –

The most relevant change in intersectoral links which affected the project's success was the unparalleled level of cooperation and collaboration between the GFC and Iwokrama. This was particularly evident during the planning and execution of the management level forest inventory (March-June/03).

Improved Cooperation –

Although there was cooperation between Iwokrama and other interested parties, such as the University of Guyana and the EPA, in specific areas of project development, particularly research and training, this needs to be expanded to include more hands-on involvement. A good example of this type of involvement was the collaborative effort between Iwokrama and the GFC for the execution of the management level forest inventory.

Project Sustainability –

The factors which will most likely affect project sustainability after completion are:

- Continued support from Iwokrama's International Board of Directors and senior staff;
- Continued donor support of Iwokrama's core programme;
- Ability to reach agreements with suitable joint venture partners for timber and NTFP operations;
- Successful product placement in both export and domestic markets.

2. Operational Lessons

Project Organization and Management –

Projects of this size and complexity require a full-time project manager, focused on the implementation of activities and the achievement of outputs. This would provide better planning and organization to ensure that activities are carried out in the proper sequence and that adequate specialist input is obtained in a timely manner. This would also reduce lost time and effort due to breaks in continuity caused by changes in personnel.

Project Documentation –

This also relates to the need for a full-time project manager who would have sole responsibility for ensuring that adequate records are maintained of all project activities and specialist's input. It is not sufficient to rely solely upon periodic project progress reports for all relevant project information.

Monitoring and Evaluation –

The monitoring and evaluation of project planning and implementation must be an on-going process and not left solely to annual reviews and post-project evaluations. Early warning signs must be heeded and the flexibility must be inherent in the programme to permit changes if certain aspects of the project are found to be unrealistic or unworkable. Frank assessments must be made if a project is not performing to desired expectations and measures taken to determine the root cause of failure or delay and to take immediate corrective action.

Roles and Responsibilities of Institutions Involved –

Iwokrama maintained sole responsibility for project implementation, with the exception of the previously mentioned GFC participation in the forest inventory. Other institutions, such as the Ministries of Foreign Affairs and Amerindian Affairs, the University of Guyana and the EPA participated in Steering Committee Meetings and ad-hoc sub-committees, providing advisory input at those times.

Planned and Actual Implementation –

Actions that can be taken to avoid variations between planned and actual implementation (schedules, costs, etc.) are:

- Pragmatic research and planning prior to project formulation;
- Assignment of an experienced, full-time project manager;
- Maintain a clear focus on goals and allow no deviations;
- On-going monitoring and evaluation;
- Flexibility to revise unrealistic or unworkable project aims.

External Factors (Foreseen) –

One of the principal external factors that influenced project implementation, that should have been foreseen, was the difficulty in obtaining the required consultants' input within the optimum time frame. Due to the strict approval procedures, required by both Iwokrama and ITTO, a great deal of lead time must be allowed to ensure the timely participation of consultants.

External Factors (Unforeseen) –

One of the principal external factors that influenced project implementation, that could not have been foreseen, was the complete reorganization of Iwokrama, in terms of both financial and human resources management.

3. Recommendations for Future Projects

3.1 Identification

Pragmatic research and planning is required prior to project formulation. Staff must be fully cognizant of the material and human resources required to carry out the project successfully.

3.2 Design

Staff must ensure that the project goals are realistic and attainable. Care must be taken to ensure that the project does not become too ambitious in terms of the number and diversity of disciplines required. The Executing Agency must truly "buy-in" to the project's objectives and not merely accept them as a means for obtaining financing.

3.3 Implementation

Larger projects, over one year in duration and with a cost greater than \$500,000, require a highly focused effort on the implementation of activities and the achievement of outputs, within project time and budget limitations.

3.4 Organization

Large projects require levels of planning and organization necessary to ensure that activities are carried out in the proper sequence and that adequate specialist input is obtained in a timely manner.

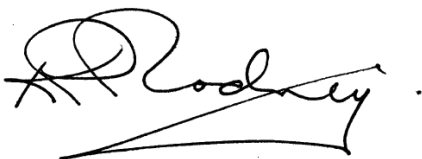
3.5 Management

The assignment of an experienced, full-time project manager is essential. The project manager must have project management experience as well as experience in the principal disciplines involved. The project manager would also be responsible for project documentation and maintaining the project "history" and continuity, as well as ensuring on-going liaison with other institutions involved in project implementation.

3.6 Monitoring and Evaluation

Close, critical analysis of project progress must be an on-going process. This could be handled through internal bi-monthly reviews with all parties involved in project implementation. Frank assessments must be made if a project is not performing to desired expectations and measures taken to determine the root cause of delay or failure and to take immediate corrective action. A certain degree of flexibility is required to revise outputs and activities, as well as budget components, if it is determined during the course of the project that these are unrealistic or unattainable.

Responsible for the Report

A handwritten signature in black ink, appearing to read 'K. P. Rodney', with a horizontal line underneath.

Kenneth P. Rodney
Business Development Advisor – Forestry

April 15, 2004

APPENDIX I
WORK PLANS

APPENDIX II
INPUTS APPLIED