UNITED NATIONS DEVELOPMENT PROGRAMME

Guyana and other Commonwealth Countries

GEF ASSISTANCE TO THE IWOKRAMA RAIN FOREST PROGRAMME

Project Number GUY/92/G31/A/1G/99

Report of the Final Project Evaluation Mission

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ACRONYMS

BOT Board of Trustees

CFTC Commonwealth Fund for Technical Cooperation
CIDA Canadian International Development Agency
DFID Department for International Development (U.K.)

DG Director General

GEF Global Environment Facility
GIS Geographic Information System
GNRA Guyana Natural Resources Agency

GOG Government of Guyana
GPS Global Positioning System
BOT Interim Board of Trustees
IDG Interim Director General

IDRISI A Geographic Information System produced by Clark University, USA

IDRC International Development Research Centre

NPM National Project Manager

NRDDB North Rupununi District Development Board

NRI National Research Institute (U.K.)

ODA Overseas Development Administration (U.K.)

PD Project Document

PIR Project Implementation Review

PPER Project Performance Evaluation Report
PSTF Programme for Sustainable Tropical Forestry
UNDP United Nations Development Programme

USAID United States Agency for International Development

I. EXECUTIVE SUMMARY

The Project's Development Objective was relevant, and its single immediate objective has been successfully achieved in that the Iwokrama International Rainforest Programme is an active reality, under the effective control of an International Board of Trustees. GEF funding is seen to have been a timely and strategic intervention.

Considering the extended early delays and uncertainties, and the sensitivities arising from a shift from national administration to international, the Project has achieved a remarkable level of success. While the training Output fell short of expectations, for only one of the other six Outputs were the stipulated Activities not completed – and in this case, only in a small detail. Though there are weaknesses of logic in the Project Design Document that could have frustrated success, Project implementers found sufficient explanation of intent in support text to be able to achieve what was expected.

The Project has brought about a major beneficial impact on communities associated with the Iwokrama forest, and tropical rainforest researchers have also benefited. The impact on the capacity of Guyanese government agencies has been less significant. No negative impacts have been identified. A notable outcome of the Project is the financial leverage achieved to ensure continued operation of the Centre established under the Project. The GEF investment of 3 million US dollars (plus about 800 thousand in parallel financing) has subsequently generated nine and a half million dollars in additional donor assistance.

Good progress has been made towards achieving sustainability, though this is not yet assured. While the research programme has reached a point at which substantial results are emerging and the Centre is earning its place on the international research stage, work on management for sustainable use is only at a beginning. A well-researched practical plan to achieve financial sustainability is in place, though it is anticipated that core-funding support from external donors will be needed for the short-term. A key element of sustainability is the enthusiastic support of Amerindian communities that are neighbours to the Iwokrama Programme. Integration into host country policies and programmes is less than hoped for, but a general "climate" of political support for Iwokrama (across both governing and opposition parties) augurs well in this respect.

Recommended follow-up actions include: enforcement measures, installation of river gauging equipment, a closer relationship with the Guyana Hydrometeorological Service, definition of the extent of flooded forest, further archaeological survey, and basic herbarium facilities. Other recommendations refer to a need for more attention to strengthening interactive linkages with agencies of the Government of Guyana, closer linkages with rainforest research institutions in the Guiana Shield, Caribbean, and Central America, and the documentation of the Iwokrama approach to guide and inspire others concerned with community based tropical rainforest sustainable use and protection.

Since the initial enthusiasm on the international stage, there has been growing support from donors for project activities undertaken by the Centre. Yet donors have not been prepared to support the Centre with un-earmarked core funding and, as a result, key aspects of the Centre's proposed management structures have not been developed. Indeed, even funding for the Centre's legislatively required Board of Trustees meetings has been difficult, and obtained on a meeting by meeting basis

from individual donors or by staff generating funds through consultancy work. No donor has shown interest in supporting the construction of the Centre's permanent headquarters on the campus of the University of Guyana and this is inhibiting both the Centre's national capacity building efforts and the confidence of the Government in the interest of the international community in Guyana's initiative.

The animal and plant biodiversity of the Iwokrama forest contributes substantially to the goal of biodiversity conservation in Guyana and across the region. The absence of a protected area system in Guyana makes even more important the role of protected Iwokrama rainforest in the context of a network of protected areas in Northeastern South America to adequately cover the range of ecosystems and biodiversity. Lowland forest and riverine ecosystems are particularly well represented in Iwokrama. On this basis, and on the grounds that the initial GEF support intervention has been a notable success and that the global biodiversity agenda has been advanced through Iwokrama Centre inputs on information and methodology, the Evaluation Mission recommends that consideration be given to phase II GEF funding. Possible areas for further engagement are indicated.

II. PROJECT CONCEPT AND DESIGN

This report has been prepared in accordance with UNDP format and checklist for project evaluation. It is seven years since the original project document was signed, in 1993, in anticipation of implementation over a period of three years. There is no question that the project concept and design was relevant at the time the project document was approved, and that it remains relevant.

A. Context of the project.

The Government of Guyana and the Governments of the other countries of the Commonwealth established the Iwokrama Rain Forest Programme. Under this Programme Guyana set aside 360,000 hectares of its tropical rain forest for an international programme to preserve unique biodiversity, and to study and develop methods and techniques for the conservation and utilization of tropical forests resources on a sustainable basis. Following the October 1989 offer by Guyana at the Commonwealth Heads of Government Meeting in Kuala Lumpur, Malaysia, a multi-disciplinary group of experts from the Commonwealth, jointly with a Guyana Inter-Agency Committee, subsequently prepared a Programme for Sustainable Tropical Forestry (PSTF), which was released simultaneously by Guyana and the Commonwealth Secretariat on World Environment Day, 5 June 1990. It was from ideas outlined in this document that the Iwokrama concept was developed.

This GEF Project was designed to support the preparation of a full-fledged Iwokrama Programme. This, it was envisaged, would position the Governments of the Commonwealth countries, and scientists and scholars in the international community to make strategic-level decisions on investments and support for continuing research and initiatives on sustainable utilization of the resources from tropical rain forests. The Project was of a unique nature in that it established the foundation for an international organization to test and promote rainforest biodiversity conservation and use in a way not before contemplated.

The Project concepts, and the institutional arrangements for implementation, were appropriate at the time of approval. Being of a unique international nature only little attention was given to project "fit" with national sectoral plans. However, the Project did match the policy prescriptions of Guyana's National Forestry Action Plan. While it was not inconsistent with other national policy on environment and natural resource use, the project was somewhat ahead of the practice of biodiversity conservation in the host country.

The project effectively built on earlier interventions funded by the United Kingdom designed to learn more about the site, the ecosystems and the species of the Iwokrama area. There were other sources of external assistance. While GEF funding supported the team leader position, the Commonwealth Fund for Technical Cooperation (CFTC) provided four support positions, while the International Development Research Centre (IDRC) undertook to fund a Communications, Information and Education Manager. Collectively, these positions made up an Interim Programme management Group as provided for in the Project design.

The project's fit to the "areas of concentration" of UNDP can be summarised as follows:

Poverty alleviation – While not specifically addressed by the project, this issue was addressed by a complementary UNDP project that emerged from, and in association with, the Project.

Grass-roots participation in development – Grass roots participation in the establishment of the base camp, in species inventory work and in training set a trend which has been pursued vigorously in activities which have built on the foundation laid by the Project.

Environmental problems and natural resources management – The primary focus of the Project was to establish an institutional and information base from which these matters could be innovatively addressed.

Management development – Specific attention to management was not a feature of the Project design.

Technical cooperation between developing countries – The Project established an institution geared for technical cooperation. This aspect of the Iwokrama Programme is as yet not well developed.

Transfer of technology – GIS based mapping technology was successfully established, and subsequently extended with other sources of funding. Species survey techniques and methodology for resource management planning were other successful instances of technology transfer welcomed in Guyana.

Women in development – While not specifically addressed in the Project design, in implementation some provision was made for women to contribute in a development role.

The Project Document (PD) lists a US\$1,000,000 contribution from the Government of Guyana. This was made up of less than \$20,000 derived from a USAID source (via PL480) plus "in kind" contributions of staff time. The latter was particularly important during the initiation of area surveys and selection of the site for the Base Camp. It seems that the total contribution was less than budgeted but it has not been possible to quantify this.

B. Project document.

1. The problem and the technical approach

The evidence suggests that there was close involvement by the host Government in drafting the PD. No alternative project approaches or modalities of execution were recorded. It is, however, the view of the Evaluation Mission that there were no viable alternatives. Capacity weaknesses in the Guyana Natural Resources Agency (GNRA), the implementing agency, were acknowledged in the PD, though no assessment of institutional capacity was conducted. Some provision was made for staff capacity building.

The intended users of Project Outputs were clearly identified, and were to some extent involved in the needs identification.

In summary, the problems addressed by the Project design were:

- the absence of an established legal entity and an institutional framework for the management and administration of the Programme;
- a lack of technical and scientific skills to undertake the tasks of research, collection, cataloguing and storage of data and information on the natural resource base in the designated programme area;
- the absence of a detailed technical and scientific inventory of the natural and physical resources of the Iwokrama Programme area as well as the lack of adequate computerised systems and software for the storage of appropriate data and information;

- the absence of field facilities in the designated area to facilitate work and study; and
- the need for the elaboration of a comprehensive Iwokrama Programme with supporting work plans, and a resource mobilization strategy.

This constituted a clear statement of the problem the Project was designed to solve.

The PD "expected end of project situation" presented a picture of the future, which can be summarised as:

- countries enabled to make decisions on investments and allocation of resources to further scientific work regarding sustainable use of tropical rainforests;
- an International Board of Trustees (BOT) fully functional;
- scholars sharing the results of Iwokrama research; and
- "international investment companies and private entrepreneurs" have access to "a tropical laboratory" from which to develop "productive enterprises based on sensible and harmonious natural resource exploitation".

Apart from the BOT, these were unrealistic expectations for a three-year Project period in a country with poorly developed infrastructure and very limited capacity for the conservation and management of natural resources.

2. Objectives, indicators and major assumptions

Though the concept and needs were clearly articulated in the project document, the <u>Development Objective</u> was not presented as a clear and unambiguous statement. On analysis, it can be seen to embrace these elements:

- seeks to demonstrate that the tropical rainforest can maintain biological diversity while supporting economic activity;
- places Governments in a better position to decide on investments and support for initiatives on sustainable utilisation and management of tropical rainforests; and
- assists in developing expertise and knowledge relating to sustainable forest management and preservation of biological diversity for Guyana.

The Immediate Objective was phrased as:

International Board of Trustees of the Iwokrama Rain Forest Programme capable and enabled to undertake total management of the International programme for the sustainable utilization of the resources from tropical rain forests and the conservation of biodiversity.

While the wording is well targeted, it is too ambitious for a Project of three years duration as it implies that the new institution is to be not only fully established, but also producing results, which by definition require many years of investigative research. In section IVD, below, the effort to achieve this Objective is judged according to a less ambitious target.

Provision was made for seven Outputs directed at achieving this Objective and all of these were appropriate. In some cases the Activities listed were not adequate to produce the Outputs (as, for example, Output 2 – a functional GIS system). Fortunately, the Project document was sufficiently descriptive that those responsible for its implementation were able to deduce what was required. Output 4 targets species and site information. Yet it also lists a draft zoning/management plan as an

Activity. Clearly, this Activity should have been listed as an Output. These faults in project design logic highlight the difficulties posed for evaluation by the absence of a logical framework¹.

Nevertheless, to assist in the evaluation of Outputs, from a close study of the PD the Evaluation Mission retrospectively identified a number of Success Criteria. These have been applied in an Outputs evaluation in Table 1, below (IVC).

The intended users of project Outputs were clearly identified and it is understood that they were involved in the needs identification. Of particular note is the close attention paid to consultations with the communities neighbouring on the Project site. The special concerns, needs and potential contributions of women were not specifically addressed. Despite this it is pleasing to note that, at least in implementation over the later years, and now as a standard practice, women's interests and needs are specifically addressed.

None of the assumptions on which the project design was based was listed in the Project document. A single risk was identified: the relatively weak capacity of local agencies to provide effective and timely support for the activities envisaged under the project.

In the report of a UNDP/GEF Project Implementation Review (PIR), 1998, four major assumptions were identified and a rating given of "the probability that the assumption may fail to hold or materialize" – according to a scale of High-Substantial-Modest-Low. With the benefit of having been able to assess the Iwokrama Programme two years beyond the PIR, the Evaluation Mission's comparative assessment is presented in parentheses alongside the original.

Assumption 1. That the international donor community will continue to support the programme beyond the life of the GEF-funded project. LOW (LOW)

Assumption 2. Excellent support staff are available for both the field station and headquarters. LOW (LOW)

Assumption 3. The Iwokrama Centre will achieve long-term financial self-sufficiency from the endowment of the rainforest provided by the Government of Guyana. LOW (MODEST)

Assumption 4. Continued support for the Iwokrama Programme by the Government and people of Guyana. LOW (MODEST)

The slightly higher risk rating given to Assumptions 3 and 4 does not relate to any change in circumstances since the PIR but to the Evaluation Mission's assessment that a "modest" rating is more realistic. Criteria such as these are very subjective. Let it be said that the Evaluation Mission is of the opinion that there are good prospects that all of the Assumptions will prove to be well founded.

3. Beneficiaries

An assessment has been made as to how the target beneficiaries, as identified in the project design document, were impacted:

International institutions:

¹ It may be that at this time UNDP project design guidelines did not require a logframe.

Commonwealth and other Governments and international scientific institutions, as the Project document envisaged, have been provided with an opportunity to investigate possibilities and develop methodologies for sustainable use of tropical rainforest – though it must be noted that the latter are at an early stage of development. Some, such as the United Kingdom's National Research Institute also had close involvement in Project definition and formulation

The general Guyanese population:

Guyanese have benefited through some employment opportunities arising from implementation of the programme, from information about Guyana's rainforests, and from material generated by the Project and made available for use in education and training. The presumed benefits of building professional and technical skills have been less notable in the general population, though they have been considerable among those actually employed at Iwokrama. The PD is judged to have exaggerated the expected benefits in regard to employment.

The population in the vicinity of the programme area:

As anticipated in the PD, the neighbouring communities (indigenous Amerindian) did become familiar with techniques and approaches that helped "improve their economic and social development through sensitive use of natural resources." Indeed, the success with which this set of beneficiaries was targeted and became actively involved was outstanding. It is among this group of beneficiaries that employment benefits from the Project were marked. The success of local community participation is highlighted by the fact that, at the outset, there was considerable skepticism and suspicion about the Iwokrama concept. Much credit is due to the Government of Guyana, UNDP and Project representatives who undertook the demanding task of engaging the communities in participatory exercises at the stage of Project formulation and, subsequently, at another critical stage - finalisation of the Iwokrama legislation.

Participating scientists:

The PD projected that beneficiary scientists would acquire knowledge through study of biodiversity, development of methods and transfer of techniques for sustainable use of tropical forests, the preservation of unique genetic and biological diversity, as well as the maintenance of the function of the tropical rain forest as a carbon sink. This group has benefited, both through direct participation and through information and understanding generated has contributed to the process of management planning for the area. Data and results from research conducted at the site are available on the Internet and are increasingly found in peer-reviewed literature. The subsequent work of the Centre has resulted in a special edition of the International Forestry Review being dedicated to papers from a international technical workshop held at the Iwokrama International Centre on reduced impact logging in tropical forest ecosystems. In the twelve months to May 2000, Centre staff were invited (and externally sponsored) to make presentations at ten international meetings and symposia in Europe, North America, Costa Rica, Mexico and Australia. In March 1999, the Director General accompanied the Commonwealth Secretary General to the 12 nation Heads of State Summit on Rainforest Conservation and Management in Western Africa and addressed the Ministerial Session of the summit on the organizational aspects of the Centre and its potential relevance to conservation initiatives in that Region.

4. Stakeholders.

Stakeholder participation has been judged to have been of variable success through the course of Project implementation. A review of stakeholder involvement and mechanisms for participation in

Iwokrama was reported in July, 1998². Among other findings of the review was one that few fully understand the breadth and scope of Iwokrama's programme. This is not unexpected, in the light of the unique international nature of the Programme in the host nation. With all the intellectual capacity to which they have access, even donors appear to have difficulty in fully appreciating the implications of the generous contribution that Guyana has made to the international community.

Other findings of the review included:

- From the perspective of many "actors" the initiation of Iwokrama was a political decision made with little public consultation before the offer was made to the international community;
- Post-announcement consultations, however, were judged to have been comprehensive and effective:
- Consultations with Amerindian communities directly impacted by the Project have been very good and they have become active partners;
- Consultations at national level have been "largely ad hoc and sporadic";
- There is no widespread sense of popular ownership of Iwokrama; and
- It is necessary to accept that there is a plurality of viewpoints amongst Amerindian and other stakeholders who live in the forested interior of Guyana.

Recommendations arising from the review were taken seriously and current provisions for stakeholder participation are very good. Of the various arrangements in place to facilitate this, attention is drawn to the fact that a public forum is held at the conclusion of each Board of Trustees meeting, there are regular meetings of "Friends of Iwokrama", a public seminar series reports on research results, bi-monthly meetings of the North Rupununi District Development Board (NRDDB) are held, and a National Stakeholder Group is being formed.

NGO involvement is less than desirable. Government agencies remain uncomfortable with the idea of active NGO participation and this has constrained Project management in fully embracing opportunities for greater NGO participation. NGO involvement has been ad hoc, and limited to specific issues. The absence of a specific budget line for NGO participation in the Project is noted. It is felt that this would have been useful. Even so, given the specific activities of the project and the weaknesses and paucity of relevant NGOs, there was limited scope for NGO participation.

5. Modalities of execution

The selection of the executing and implementing agencies is judged to have been appropriate, and the phasing of the project Activities and Inputs to have been realistic. However, the project document did not include an outline for a monitoring mechanism for the tracking of major project milestones and for recognition of any difficulties or constraints that would require management action. A budget line that supported inspection visits to the Iwokrama Forest eased this weakness. Also, sixmonthly work plans prepared by the DG identified specific targets and outputs were used to track performance, and were adjusted as needed in the ensuing planning period.

III. PROJECT IMPLEMENTATION

A. Activities

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² Stakeholder Involvement and Mechanisms for Participation in Iwokrama. Lea M.Scherl.

Initial implementation was undertaken in a context of high hopes but of persistent uncertainty over appropriate institutional arrangements. Protracted delays in the appointment of the interim Director-General and in the enactment of legislation under which the new institution operates added to delays in implementation.

It is necessary to offer the following explanation regarding terminology used for Project positions. Before the Iwokrama Act was passed in 1996, the Board of Trustees was referred to as the Interim Board of Trustees, and the position of Programme Development Manager was redesignated as the Interim Director General.³ Yet neither the position of DG nor of Interim Director General is provided for in the PD. The position was created by a decision of the Board of Trustees – after the Project was initiated. Titles and functions of some other senior positions were also changed. These changes make for a complicated description of the situation as it developed over time. In order to simplify this evaluation report, the current names for positions and officers are generally used throughout the report, regardless of the time concerned.

It is also very important to recognize that the Centre did not begin to operate as an autonomous organization until July 1998.

Output 1 – Establishment of legal and institutional framework.

Summary: Largely completed, though some components developed slowly and some issues of coordination with national programs are still being worked out. The Iwokrama Act describes the legal status of Iwokrama, including the international management structure. The institutional framework was largely described in a series of reports prepared in 1992 -1993 by the UK National Research Institute (funded by ODA), elements of which were incorporated into the UNDP/GEF PD. The first Director General was recruited 24 months after commencement and no "Acting" Director was named in the interim. The consequent lack of clear direction during the crucial early years of the project seriously constrained project implementation. Further, parts of the institutional framework provided for in the PD (such as the Guyana Interagency Committee, Counterpart Technical Team, and the Monitoring and Evaluation Unit) were not established. On a positive note, the concept for, and formation of, the Northern Rupununi District Development Board (NRDDB) emerged as a response to the Iwokrama Programme. The NRDDB provides the thirteen Amerindian communities adjacent to the Iwokrama forest with an institutional framework for the coordination of regional development and a forum for interaction between the Iworkrama Programme and these communities. The NRDDB has also provided a useful focal point for interaction between local communities, Government Agencies and other external donors.

Activity 1.1: Review and finalize draft legislation.

Completed. The Iwokrama International Centre for Rain Forest Conservation and Development Act of 1996 provides the legal basis for the international arrangements through which the Iwokrama Programme is managed. The Act provides for management authority over a 360,000 hectare rain forest reserve, and also makes provision for a research and training centre at the University of Guyana, in Georgetown. Both are under the custodianship of an international Board of Trustees. It is a unique arrangement; an international body with management responsibility for a substantial area of land, water and

³ The Evaluation Mission was informed that this, unfortunately, had a significant negative impact on the Project. It resulted in some local staff to feeling somewhat marginalized This impact on the Project and on the Centre appears to have persisted for some time.

biota within a sovereign nation. Under the Act, the Iwokrama programme has a substantial responsibility to balance global interests with those of national and local constituencies.

The legislation defines the reserve boundaries and also binds the Government of Guyana to provide a tract of land on the University Campus. A site has been identified, but no funds for building at the University have been obtained. Meanwhile, the Iwokrama Centre is located in rented space in Georgetown. The Act defines the international Board of Trustees and its powers, including control over the land-based resources, and associated legal powers. The Act makes some exception for traditional uses by Amerindians living in proximity to the reserve. The Act requires that the land be divided roughly 50/50 into wilderness preserve and sustainable utilization zones. Both categories are generally defined, with the details left to the BOT, but protection of the resource base is a common theme. The BOT is charged with managing the land "in a manner that will lead to lasting ecological, economic and social benefits to the people of Guyana and to the world in general."

The Iwokrama programme is charged under the Act with providing benefits to the people of Guyana. Initial efforts of the Iwokrama programme have focused on providing benefits to the Amerindian communities near the reserve, and the Evaluation Mission found the methods and results to be impressive, and worthy of replication elsewhere.

There is a widespread perception that Guyana should receive more benefits from the Iwokrama programme. Interviewees informed the Evaluation Mission of the need for more outreach to communities beyond the local Amerindian communities and Georgetown, more training, and better distribution of lessons learned. While initial efforts to reach out to Guyana at large appear to have been few, more recent programs under the subsequent externally funded project work being implemented by the Centre are quite successful, at least in the Georgetown area. Workshops regularly include participants from government agencies and the University. Seminars, and occasional public lectures are well attended. Training programs for University students and young professionals (described below) were frequently cited as positive products of the Iwokrama programme.

The Act as it is currently interpreted does not adequately address the important issue of law enforcement. The laws applying to Iwokrama are those of Guyana – though the Act also makes provision for the Minister to enact regulations specific to Iwokrama. Forest Rangers employed at Iwokrama are not trained in law enforcement, nor are they authorized to make arrests. Yet the military, police, wildlife officers, mining authority, and other officers authorized to enforce national laws are seldom in or near the reserve. Further, these national agencies are generally understaffed and poorly resourced for responding to the many needs across the country. As a result, a major concern is Iwokrama's lack of an enforcement capability. So long as the population density of Guyana's interior remains extremely low, pressure on Iwokrama is not overwhelming. However, there are incursions, and these have not been adequately challenged⁴. The unusual circumstances of the Iwokrama reserve may well require a special approach to law enforcement.

Uncertainties of definition between the Iwokrama Act and national legislation have created ambiguity regarding the Reserve boundaries, which for most of the reserve are defined in

⁴ The Mission is pleased to be able to record that, subsequent to its departure from Guyana, an instance of gold dredging which had illegally extended into the Iwokrama riverine forest was very promptly dealt with once the Centre had reported the incident to the Government.

the Act as the bank of the river. Guyana law allows river travellers access to areas 66 feet from the riverbank for camping and, presumably, to hunt, fish and gather forest resources. This could potentially be interpreted to include mining, and some are exploiting this uncertainty to dredge for alluvial gold. A further complication arises from the fact that, in many places, the riverbank is not well defined. Indeed; the rivers annually overflow their banks to flood thousands of hectares of Iwokrama forest for several months.

Activity 1.2: Submit to Attorney General for promulgation by legislature.

Completed. The Iwokrama Act was passed in 1996 with multiparty political support.

Activity 1.3: Establish international authority for management and administration of the Programme.

<u>Mostly completed</u>: The International authority for management is in place, but some issues remain regarding coordination with national cooperators.

The Iwokrama Act provides for a BOT of international composition; including four individuals selected by the Government of Guyana, two from the Commonwealth Secretariat, eight other individuals and a Chairman agreed jointly by the President of Guyana and the Commonwealth Secretary-General. The Director-General of Iwokrama is a non-voting member of the BOT. The BOT has operated with 10-11 Trustees which, bearing in mind the difficulties faced in obtaining financial support for the Board's meetings, is understandable. There remains an opportunity to broaden the Board's access to support through the appointment of another four or five.

The institutional framework described in the PD provided for 1) a Management Group answerable to the BOT, and 2) a national counterpart coordinated by the Guyana Natural Resources Agency (GNRA) – the national implementing agency.

The role of the National Project Manager (NPM) was not clearly defined in the PD. In one section of the PD the NPM is made responsible for the production of the Project Outputs and the overall management of the Project. However, this is inconsistent with the NPM job description as presented in the PD and presents a contradiction in terms of the authority and responsibility of the interim BOT and Project Management Group. A key task of the NPM was to act as liaison between the many players, engage government agencies in Iwokrama activities, and report on overall progress of the GEF project. The NPM was hired by GNRA with GEF funding. According to the PD, the NPM was to manage the Project Monitoring Unit and facilitate interaction between the National Technical Counterpart Team and Iwokrama. However, as described in the PD (page 29), the NPM had no responsibility for supervision of Iwokrama Programme Management staff and was not part of the Iwokrama Programme Management Group. Rather, his job specification required him to reach agreement with the Programme Development Manager on project elements including time and performance targets for activities of the Group and the timing of disbursements of financial and other resources required by the Interim Programme Management Group.

The Iwokrama Programme Management Group was to be headed by the Programme Development Manager (subsequently re-named Interim Director General) and was to include four other senior staff of the Iwokrama Programme. The Interim Director General

and one of the other senior staff were to be contracted through UNOPS, supported by GEF funds. The other three were to be hired with support from the Commonwealth Secretariat (CFTC), as specified in the PD.

What actually developed was quite different, and the absence of cleaar Project leadership in the early years was the likely cause. The NPM under GNRA, and the three senior managers under CFTC were hired during the first year, but the two positions under UNOPS were not filled in a timely manner. The Interim Director General was not on board until 24 months into the Project. There was a vigorous search to fill the Interim Director General position, but candidates were either considered by the Board not to be suitable or, in some cases, candidates were daunted by the prospect of starting such an ambitious project from scratch. The second GEF/UNOPS funded position - Communications Manager - was never filled, at least not as described in the PD. Following the advice of the Implementation Mission, the Communications position was changed to consulting contracts.

The absence of technical leadership in the first two years resulted in a Programme with three senior managers of the Iwokrama staff, and the National Program Manager working with considerable independence. The Interim BOT and the Tripartite Review Committee became involved with operational decisions more commonly addressed at a staff level.

The Evaluation Mission was advised that in the early years of project implementation decision-making on Iwokrama became highly centralized around a few individuals. Further, although the NPM and the support staff were originally designated as the PMU, this did not develop as intended. The then management of the GNRA played a critical role, and the NPM functioned under their instructions.

The Field Support Manager took responsibility for building the Base Camp, field stations, trails and other infrastructure, and largely took responsibility for managing the reserve, with minimal guidance from the Georgetown Office.

One result of this period of uncertainty was that key original objectives of the National Program Manager's position were not accomplished (specifically the Technical Counterpart Team and the Project Monitoring Unit). The changes effectively placed most of the Iwokrama Programme under direct supervision of the Government of Guyana, instead of the international BOT. When the Programme Development Manager was appointed as the Interim Director General, there resulted a period of uncertainty regarding lines of authority and responsibility. This was resolved when the BOT and the Government of Guyana agreed to place the National Project Manager under direct supervision of the Interim Director General. While this change resolved the question of authority, it also further diminished connections between the Iwokrama Programme and the government agencies. The difficulty in establishing effective communication and collaborative arrangements between national agencies and Iwokrama that is still apparent today may not have developed had the institutional arrangements provided for in the PD (such as, for instance, the Counterpart Technical Team) been initiated in the early years, and maintained.

Output 2 – GIS installed and operational.

Summary: <u>Completed</u>. An IDRISI GIS system was installed in 1995, upgraded with new hardware and converted to ArcInfo in subsequent years. Available base maps were identified and the need for

additional surveys defined. Data layers for topography, rivers, watersheds, and forest types were prepared and are being used in the analysis for dividing the reserve into wilderness and sustainable development zones. Though other donors funded most of the GIS capability now operational at the Iwokrama Centre, the GEF funded equipment provided the foundation on which these advances were made. Of the approximately US\$ 206,000 provided in the PD for GIS equipment, software and data acquisition, only about US\$ 34,000 were reported spent on these products and activities.⁵ This has, however, been explained on the basis that the under-spending on GIS equipment was a result of deliberate decisions to vire funds from that line to finance an Amerindian Sustainability project, which was added to the original project activities, and the resource surveys, which cost more than originally budgeted.

Activity 2.1: Determine availability of base maps.

<u>Completed</u>: The Programme staff found that existing base maps and associate data sets were available for soils, geology, minerals, and forest resources at a scale of 1:250,000 or smaller. Most of these data are not detailed enough (i.e., the scale too small) for the planning and monitoring needed for the Iwokrama Reserve. They also found SPOT, Landsat TM, and radar satellite images available for the Reserve. Aerial photos at a scale of 1:41,000 are available for making more detailed analyses and maps of the Reserve.

Activity 2.2: Define additional surveys as required.

<u>Initiated</u>: Related to the GIS task, the identified priority for additional surveys was to provide better data for forest typing, as this would be a principal biodiversity parameter used to delineate the wilderness reserve and sustainable development zones. With DFID and EU funding, the original NRI classification of forest types was refined in 1999 based, in part, on vegetation sampling designed to address this theme and particularly targeted to parts of the Reserve for which data was entirely lacking. More detailed soil surveys were also considered a priority, but these have not been undertaken due to lack of funding.

Activity 2.3: Digitalize topographic maps and identify appropriate software.

<u>Completed</u>: River systems and topography were produced as GIS layers early in the project. Under subsequently funded projects, a refined classification of forest types and watershed catchments was produced. These and other data were combined and evaluated for assignment of land areas to wilderness reserve or sustainable development zones. The initial GIS software platform was IDRISI. This was later changed to ESRI products. GPS units were purchased early in the project and have since been added to or replaced with more accurate and portable units. They have been of great value and are widely used.

Activity 2.4: Establish database structure and remote communication links.

<u>Completed</u>. Databases are used by Iwokrama to manage geo-referenced and other data. There is an effort to coordinate data procured through contracts, with guidelines for data to be provided to Iwokrama.

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⁵ 1999 budget review

Regarding communications links, the Base Camp and the Iwokrama Centre in Georgetown have been linked by radio. The option of establishing Internet connections from the Base Camp through either enhanced radio communications or via satellite phones is currently being assessed.

Activity 2.5: Collect and enter data.

Completed. A great deal of data has been collected and much of it has subsequently been entered in databases. The GIS datasets referred to above are the most obvious data produced by Iwokrama staff. Data from plots and transects were entered in database and used in various analyses related to describing the forest types. Research projects are producing individualized data sets. The early species inventory projects produced important data, though some of these data have not yet been entered into geo-referenced database structures.

Output 3 – Fully functional base camp.

Summary: <u>Largely completed.</u> The physical plant (i.e. buildings) of the Base Camp was completed, and to a higher standard then anticipated by the PD. This has been a major contribution of the Government, through GNRA and the enlightened initiative of the Project's Field Support Manager. However, there were substantial delays in the installation of weather stations, while river monitoring equipment purchased in 1994 is yet to be installed.

Activity 3.1: Carry out hydrographic, hydrologic, soil and other surveys.

<u>Partially completed</u>. Equipment for weather recording stations and river gauges (2 each) were ordered and received in 1994. The weather stations were installed in 1999. The river gauges are still in storage. This equipment will provide basic information about some of the physical parameters of Iwokrama Reserve. The delays with installation of the weather stations and river gauges result, in part, from problems of coordination with the national agencies responsible for gathering and reporting these data on a national basis. Systematic surveys of soils and other physical parameters of the Reserve were not budgeted for in the PD and it is not surprising that they were not conducted.

Activity 3.2: Determine locations for base camp and field stations.

<u>Completed</u>. In the PD it was proposed that a temporary camp first be established and, after further investigation from this base, a permanent Base Camp be built. An engineering consultant who in 1995 assessed the temporary Base Camp, determined it to be adequate as the permanent Base Camp, while noting some risk from flooding. He advised that a few buildings might need to be moved to higher ground. In two of the past four years the kitchen and one or more adjacent building have been flooded. These floods were considered extraordinary and perhaps the highest water in the Essequibo River in more than 60 years.

Five satellite field stations have been built at various locations in the Reserve. A further four or five field stations have been built in clearings adjacent to the road that traverses the Reserve. One of these is near to the southern entrance to the Reserve where it has potential as a cross-Reserve traffic monitoring post. These stations are frequently used by researchers and

are often occupied for months at a time. Two field stations with sturdier buildings have been built near Turtle Mountain and at Whitewater along the Burro Burro River. Researchers and ecotourists use these as camps.

It is not clear whether the locations of the field stations were "informed by site management and control concerns," as recommended in the PD. For example, there has been a clear need to monitor activities of gold miners working along the Siparuni River, yet there is no camp on that river where rangers or other officials might be periodically stationed to monitor the region.

Lookout sites are located on the top of Turtle Mountain and on the Iwokrama Mountains. The site at Turtle Mountain provides a panoramic view of part of the reserve and is a favourite destination for tourists.

Trails connect field stations and lookout sites to the road and to river access points. Other trails have been built for research projects and many have been maintained and improved over the years. A 1.6 km road connects the Base Camp to the main road. This access road is in serious disrepair and at the time of the Evaluation Mission had been out of use for more than six months.

Activity 3.3: Prepare specifications and construction plans and obtain approval.

<u>Completed</u>. The Evaluation Mission saw no specific construction plans nor is it clear from the PD who was to provide approval. However, the layout of the Base Camp was seen to be orderly and functional and the individual buildings are appropriately designed, with an effective use of local materials.

Activity 3.4: Undertake construction and commissioning of camp and field stations.

<u>Completed</u>. The Base Camp is comfortable and a pleasant place to stay. It includes dormitories with private rooms and shared bathrooms for rangers and other staff, a private home for the Camp Manager, cabins with private bathing facilities for guests, mess hall, kitchen, medical post, training centre, computer centre, store and storage buildings. A large new building under construction (not GEF funded) is to provide improved kitchen and dining facilities and to house office, laboratories and improved training facilities. There is a dock on the Essequibo River and boats with outboard motors.

Though the Base Camp has adequate water and sewer systems there is a drainage problem around newly built dormitories, where standing water poses some health risk.

A diesel-powered generator that operates from 0400-1100 and 1600-2300 supplies electricity for the Base Camp. An engineering consultant recommended that solar electric power be installed at the Base Camp. The national energy agency has made the same recommendation. However, financial considerations have prevented switching to this environmentally more friendly system.

The Field Stations along the road are pole frames that can be covered with tarpaulins and in which hammocks can be slung for sleeping. These structures have dirt floors. The road makes it easy to supply these camps. The Evaluation Mission visited two of these stations. Approximately 12 researchers had been living at one of these camps for a period of three months. A researcher who occupied the other site had been there for over one year. Two

sturdier Field Stations with plank floors and thatched roofs have been built near Turtle Mountain and at Whitewater along the Burro Burro River. Two researchers studying primates are in residence at the Turtle Mountain Field Station.

Establishment of the Base Camp, field stations and trails were major undertakings. The Reserve is remote, with little infrastructure or labour pool nearby and only fragile supply lines to the region were in place at the time of construction. Malaria was a serious problem in the early years. Both *Plasmodium vivax* and *P. falciparum* are present in the area, including a high percentage of the latter that is resistant to standard treatments. It took approximately three weeks for a blood smear of a suspected malaria victim to reach a laboratory for diagnosis and for the result to be returned to the camp. Today, malaria in the camps has been nearly eliminated, with most of the reported cases at the Centre believed to develop in staff returning from home visits. Despite the logistic hurdles and other hardships, the infrastructure of the reserve was built, and to a standard in excess of that stipulated by the PD. This major success can be directly attributed to the initiative and dogged persistence of those Project staff who were directly engaged in this Activity. The Evaluation Mission singles out their effort for commendation.

The main road through the Reserve is currently impassable at several points and the access road to the Base Camp is unusable. Construction of a major building at the Base Camp has been temporarily halted because the poor road conditions prevent the transport of building materials and fittings. The remoteness of the site continues to hinder operations. Access to the Base Camp now is by a 3 km walk from a point on the road which can be reached by four wheel drive, to a boat landing at Fairview village – followed by a 10-minute outboard powered boat trip down the river.

Support for field research in the Reserve is adequate for basic specimen collecting and for observational data. However, there is little to support the "working up" of material, for species identification, data analysis or the most basic laboratory analysis. The library consists of one short shelf of books and stacks of reports in no particular order. Although a plant identification course was being taught during the Evaluation Mission's visit to the Base Camp, a printed list of plants of Iwokrama was not available there – though one was available on the Web. The Smithsonian Institution, whose staff undertook GEF funded plant surveys at Iwokrama, has set aside a duplicate set of plants collected from the Reserve, with the intention that they be used at the Base Camp as a research and training herbarium. This gift cannot be accepted until adequate facilities are built and controls instituted to maintain the collection.

Output 4 – Detailed inventory of species and site characteristics.

Summary: Completed to the extent anticipated under the GEF project. The inventory of species went beyond what the Evaluation Mission anticipated, considering the modest investments made. A draft delimitation of the reserve into wilderness and sustainable development zones was prepared under the GEF project, though this was not adequately supported by field data. Centre staff have subsequently used EU funding to undertake an intensive strategic inventory to facilitate the final zoning, and this is now nearing completion. The site management procedures have been described in operations manuals and proactive management activities are described in operational plans.

Activity 4.1: Conduct baseline forest/floral and faunal surveys.

<u>Completed.</u> Botanists from the Smithsonian Institution made nearly 4,000 collections representing 1,075 plant species, and prepared a list of plants for the Reserve (available at http://www.mnh.si.edu/biodiversity/bdg/iwokspp.html). One article "in press" and another in preparation describe the flora of the Reserve in comparison to the floras of three other sites in the Guyana Shield. The analysis indicates that only about 65% of the plants expected to be in the Iwokrama Reserve are included in the current list.

Faunal surveys have been focused on vertebrate species. The Philadelphia Academy of Sciences undertook surveys of birds and fish. The Royal Ontario Museum and the University of Kansas conducted surveys of mammals. Florida International University and the American Museum of Natural History surveyed amphibians and reptiles. It is estimated that more than 90% of the vertebrate species in the reserve have been recorded. These include 88 species of bats, which Iwokrama staff understand is the highest recorded diversity of bats for a comparable area anywhere in the world. Faunal species lists are accessible on the Internet⁶. These are attractively complemented by picture guides to the common species of mammals. In addition, with assistance from other donors, a small guide to the common mammals has been printed and two posters produced, of the cats and of the primates found in or near the Reserve.

Basic forest cover types were prepared in 1992 during the initial NRI surveys to characterize the Reserve. This analysis was expanded with GEF funding, including analysis of additional data from transects and plots recorded from parts of the Reserve not previously visited by any scientist. They have been further refined using data from an EU funded strategic inventory undertaken in 1999.

Activity 4.2: Interpret site survey data.

<u>Completed</u>. The site survey data has been used in several peer-reviewed articles published, or "in press" by the contracted researchers or Iwokrama staff. The data are also being used in the analyses referred to in the discussion of Activity 4.3, below, and in reference to Activities of Output 2 (GIS), above.

Activity 4.3: Prepare draft zoning and management plan for the site.

<u>Completed</u>. As described in relation to Output 2 (GIS), above, delineation of wilderness and sustainable development zones in the Reserve has been described and revised once. The final report on the delineation is expected later this year. The BOT has approved principles and guidelines for the delineation and management of these zones.

Activity 4.4: Submit for approval and implementation preliminary site management activities.

Completed. See 4.3 above.

Output 5 – Draft biodiversity research strategy.

⁶ http://www.sdnp.org.gy/iwokrama/Publications/Publications.html

Summary: Completed. The overall research strategy is outlined in the Biodiversity Conservation and Utilization Programme in the Operational Plan developed under the GEF Project and subsequently fully funded by the EU. The research strategy is further elaborated in components of several documents, such as the faunal survey reports produced under subcontracts from the UNDP/GEF project. Several research projects have been completed or are being implemented. Other donors have invested in these research projects so that at any given time there are several active research programs in the Reserve.

Activity 5.1: Identify and list research issues.

<u>Completed</u>. Several of the reports from species surveys included recommendations for further research. Iwokrama staff scientists and other collaborators generated additional ideas. All combined, there is now a small but growing portfolio of research projects which targets issues and areas of knowledge consistent with PD intentions.

Activity 5.2: Develop research strategy and programme.

<u>Completed</u>. This was commenced as part of the GEF funded Project, was successful, and is continuing as a valuable component of the Programme. See discussion on Activity 5.4, below.

Activity 5.3: Determine scope and draft terms of reference for research work.

Completed. As for Activity 5.2. See discussion on Activity 5.4, below.

Activity 5.4: Submit for approval and implement research.

<u>Completed</u> to the extent anticipated in the PD. GEF funding was used to lay a good base for a research programme which is continuing to produce information and understanding needed for Iwokrama forest management. Most current research is financed by bilateral agencies. The wide range of research activities completed or underway includes:

- Ethno-biology of the Makushi, an Amerindian tribe living adjacent to the Reserve. This important work describes their use of plants and animals, and the data were collected by a Makushi Research Unit established under the auspices of the GEF funded Project, and staffed mostly by women. The rights to the data collected and to royalties from a publication (funded by CIDA) reside with the Amerindian community, as represented by the NRDDB.
- Comparison of point-count and mist netting methods for effectiveness in monitoring bird populations in Iwokrama forests. The results of this study are relevant to decisions on long-term monitoring of avifauna and management of game species.
- Reproductive success and mortality of the tree "balata" in response to tapping of its latex. ("Balata" is a rubber-like product used commercially in products such as high quality golf balls and in some Amerindian handicrafts.)
- Frog diversity along a north-south precipitation gradient in the Iwokrama forest. This is providing baseline data useful for measuring impacts of climate change, and for monitoring the impacts of development interventions in the sustainable use zone.

- Primate food choices relative to jaw morphology. The project is funded by outside sources and provides a modest income to Iwokrama in return for logistic support. The study is providing important baseline information about the primates of the Reserve.
- A Joint Iwokrama, TROPENBOS, IIED and GFC trial on the cost effectiveness of operational scale reduced impact logging under typical rain forest conditions in Guyana. The main source of funding for this project is the DFID funded Sustainable Human Development Project being implemented by Iwokrama.
- A joint Iwokrama/ UK Institute of Ecology and Hydrology study on the economics of non-timber forest products from the Crabwood tree, with funding from DFID's Forest Research Grants scheme.

Management plans are being prepared for two critical use areas closely associated with the reserve, though outside its boundaries. One is a Road Management Plan for the road that crosses the Iwokrama forest from north to south. The other is a River Management Plan. This encompasses the Essequibo River (which is outside, but adjacent to, the Reserve boundaries) and smaller rivers within the Reserve.

Output 6 – A long-term financing plan and resource mobilization strategy.

Summary: <u>Largely completed.</u> A 1998-2002 Operations Plan and a 1998-2007 Business Plan together constitute a strategy to make Iwokrama substantially self-sufficient, based on a range of income sources from biodiversity prospecting (including evaluation of the potential of natural products) to ecotourism.

Activity 6.1: Develop medium and long-term funding plan and prospects.

<u>Completed</u>. In 1997, under contract from Iwokrama, IDRC produced a fundraising plan with a list of prospective donors. This subsequently became a basis for an "Iwokrama 1998-2007 Business Plan". This includes low and high estimates for income from various sources, with a prediction that by 2003 – 2004 the Programme should produce income for about half the Centre's expenses. Income is anticipated from timber production, value added processing, biodiversity prospecting, ecotourism, carbon offset investments, project overhead, and endowments.

Iwokrama staff and its BOT have what appear to be realistic expectations regarding the prospects for income from these sources.

Activity 6.2: Define revenue to be applied to programme, discoveries/products, including intellectual property.

Largely completed, though details remain to be defined in specific agreements. General policy guidelines are in place and are being implemented. For example, in the case of the ethnobiology data collected from the Makushi, the Amerindians retain ownership of the data, including intellectual property rights. The Centre is currently working on the development of more comprehensive Intellectual Property Rights and Benefits Sharing protocols and has funding from DFID to monitor their effectiveness from the perspective of different stakeholders.

Activity 6.3: Indicate possible framework for capital fund and donor participation.

<u>Completed</u> with the production of the Iwokrama Centre Business Plan 1998-2007 and Operational Plan 1998-2002.

Activity 6.4: Prepare membership and subscriber lists.

<u>Completed</u>. Names and contact information are routinely gathered from visitors to the Reserve and the Georgetown Centre and, with the membership list of "the Friends of Iwokrama", used as a basis for maintaining contact with, and potentially drawing support from, a wide range of "partners".

Activity 6.5: Integrate funding possibilities and plans with programme activities.

<u>Completed</u>. Fundraising has largely focused on multilateral and bilateral organizations. The GEF funding has been instrumental in leveraging complementary funding of more than US\$ 10,000,000⁷. All of this funding is focused on specific projects, and in line with donor policies that restrict the amount of allowable overhead to levels that inevitably are lower than actual costs. A continuing problem for the Iwokrama Programme is the difficulty of obtaining discretionary funds for core management activities and indirect costs.

Output 7 – Training

Summary: Partially completed. The Project Implementation Mission had recommended delaying the development of training component of the project (Item 2.13, page 6 of its Report, April, 1993). Accordingly, even though the PD had identified this as an important part of the Project, training appeared to drop from the agenda for more than three years. Once initiated, it was mostly with funding from other donors. While the original budget in the PD provided for over US\$ 350,000 for fellowships, in-service training, and workshops, the May 1999 mandatory revision of the project budget reported that less than US\$ 20,000 had been spent on these training activities! Some training programs were initiated through subcontracts under the GEF project and were therefore reported elsewhere in the budget. The recorded low level of investment in training in the early years of the Programme is consistent with several reports to the Evaluation Mission that more training had been expected from the Iwokrama Programme, particularly for Guyanese outside the Amerindian communities. It should be noted that, having expressed this concern about the weak training record under GEF funding they were complimentary about Iwokrama's training programs developed over the past two years with other funds.

The Evaluation Mission understands that the decision early in the project not to proceed with training as envisaged, was made at the instance of the Government, and perhaps made sense at the time given the specific, contracted nature of the scientific/research work under the project. External training of local persons during that phase may not have had much impact on activities on the ground and, in any case, GEF training resources are intended to be used primarily in support of project activities. Further, one respondent reported that despite repeated attempts, it proved almost impossible to get University of Guyana students to take part in research activities in the forest. This would have been one way of building local research and scientific capacity through in situ transfer of knowledge and skills.

⁷ Much of this impressive achievement is attributable to the current DG's identification of opportunities and his skilful exploitation of leveraging potential.

Activity 7.1: Fellowships for professional and technical staff in the following fields: a) natural resources management b) environmental economics and natural resources development and c) environment and natural resources accounting.

Not implemented under the GEF project. More recently, however, with funds from other donors, the Iwokrama Programme has provided long-term internships to 3rd and 4th year students as part of a "Young Professionals" Program, and research assistantships to recent graduates from the University of Guyana to work on research projects and program development tasks. The major thrust of this programme has been to provide two-year post-Masters and post-Doctoral Fellowships to allow young Guyanese who have recently obtained post graduate qualifications to have the opportunity to work in a mentoring relationship with senior resource management specialists employed by the Centre.

Activity 7.2: Study tours and conferences to provide opportunities for project and other personnel to visit similar or related projects and programmes in comparable areas of the world.

<u>Partially completed</u>. The Interim Director General traveled a number of times to exchange views with staff of other rainforest research programs. There are records of other senior staff attending conferences and visiting related programs. For example, the GIS Manager visited the Smithsonian Tropical Research Institute in Panama, and upgraded his GIS skills through a three month professional placement with the NRI in the UK.

Activity 7.3: Provision of in-service training for middle level staff of counterpart agencies.

<u>Partially completed</u>. Though it is judged that funds for this Activity have been underspent, there were some achievements. Staff of the Guyana Forestry Commission, the Guyana Natural Resources Agency, and the University of Guyana benefited from participation in research projects and short training programs sponsored by Iwokrama.

It is of some interest to compare the assessments of this mission with those of the 1998 PIR. The range used is: Highly satisfactory-Satisfactory-Unsatisfactory-Highly unsatisfactory;

Output	Project Implementation Review	Final Project Evaluation
1	Highly satisfactory	Highly satisfactory
2	Satisfactory	Satisfactory
3	Satisfactory	Highly satisfactory
4	Satisfactory	Satisfactory
5	Satisfactory	Satisfactory
6	Satisfactory	Satisfactory
7	Unsatisfactory	Unsatisfactory

Additional Output – The PD made provisions for contracting and the Implementation Mission recommend further contracting of services. The International Development Research Centre (IDRC) was contracted to advise and assist Iwokrama on communications, fundraising, planning, administrative and organizational activities. IDRC was selected as the contractor without competition,

after a non-competitive waiver was granted. The Evaluation Mission viewed these activities as essentially an additional Output of the original project.

Partially completed. The draft long-range plan prepared by IDRC was reported not to have been entirely satisfactory and, so, was substantially rewritten by the Interim Director General and completed in 1996 as a five-year plan 1996-2000. IDRC prepared a communications plan for Iwokrama and subcontracted a fundraising expert who produced a report identifying prospective donors to Iwokrama. Neither plan was adequately implemented. A video was produced for presenting the Iwokrama site to the donor community. IDRC produced manuals for administration, personnel and financial management. These were reported as not suitable in their original form and were subsequently revised and updated to better suit the circumstances of the Iwokrama Programme.

B. Quality of monitoring and backstopping

For internal project monitoring and evaluation the project design provided for:

- Half yearly reports to the interim Board of Trustees;
- Annual review meetings convened by the GNRA;
- A formal mid-term review;
- A terminal report 3 months before the end of Project activities.

In addition, as standard UNDP practice, it was envisaged that Project Performance Evaluation Reports (PPER) and Tripartite Review reports would be submitted. It had been proposed that UNOPS contract an expert to establish a monitoring and evaluation system for the Project. This appears not to have been done.

Had Success Criteria been identified in the PD, internal monitoring would have been much easier to undertake. It would also have simplified the preparation of PPER (and their subsequent analysis) and so eased the burden of project management, and assisted terminal evaluation. The Evaluation Mission examined numerous UNDP files, studying reports to the BOT and, also, PPER and Tripartite Review Reports. No formal Mid-Term Review report was undertaken, and nor was a terminal report prepared. It could be argued that monitoring mechanisms in place during project implementation such as the six-monthly reports and work plans by the DG, regular and comprehensive reports to the BOT, and Tri Partite Reviews reduced the need for a formal Mid-Term Review. However, the PD did include a commitment to a formal Mid-Term Review and any decision not to proceed with this should have been specifically considered at a TPR meeting and the rationale for the decision recorded. In the context of this shortage of documentation, a 1998 Project Implementation Review, and a "terminal report" prepared by the first DG at the end of his tenure proved particularly useful.

No detailed evaluation of project finance was required of the Evaluation Team, but a general assessment offered is that, from the records examined it appears that adequate, independent accounting systems were managed by UNDP and the GOG and periodically reconciled. Some, but not all of the major changes to the budget were documented, including the contract to IDRC and some of the budget adjustments made by the Implementation Mission. However, it was not readily evident to the Evaluation Mission what process was used to determine where money saved on a budget line was to be spent. UNOPS financial management of subcontracts appears to have given rise

to some difficulties, in-country managers reportedly having received contradictory financial status reports. One consequence has been significant delays in payments to contractors

UNDP Guyana played a critical role in the successful implementation of the project. It undertook almost all of the local procurement of goods and services; and it maintained strict accountability on the part of the implementing agency for project expenditures. It is reported that UNDP went to "extraordinary lengths" to source experts and consultants; and it contributed substantially to project Outputs through guidance to the Directors-Generals, National Project Manager, and the Executing and Implementing agencies on various policy and operational matters. The role of UNDP in spearheading the thrust towards inclusion of the contiguous indigenous populations is also acknowledged. Importantly, UNDP remained an integral partner with Government and Project Management throughout all phases of implementation of the project.

IV. PROJECT RESULTS

A. Relevance

The purpose of the project was, and remains, relevant. It has contributed to capacity building, though more such assistance is needed. The approach adopted in the PD also was relevant to the circumstances.

B. Efficiency

The overall efficiency of the project is judged to have been satisfactory, despite implementation uncertainties in the early years.

In terms of leverage, the GEF funds were a sound investment, as indicated by the substantial (3x) funds leveraged from other donors. The international BOT, including substantial membership from the Government of Guyana, was able to work through and achieve consensus on some very difficult issues.

Project efficiency was, however, compromised by the delay in appointing the interim DG and in resolving the administrative confusion associated with this delay. Better coordination with national agencies would almost certainly exist today had the national agency counterpart team been established and sustained as required by the Project design and had the budgeted funds for training been allocated at an early stage.

C. Outputs

Some project Outputs, while having produced satisfactory results, are just short of completion. A summary of each Output is presented, above, in association with an evaluation of Activities. In Table 1, below, an alternative evaluation is presented, using Success Criteria. As no Success Criteria were included in the Project Design Document, the criteria used below were developed by the Evaluation Mission from the original design.

Table 1: An evaluation of Outputs according to Success Criteria

Outputs	Success Criteria	Comment
Output 1	 Board review of draft legislation completed. Draft bill accepted by Attorney General. Iwokrama Authority formally established. 	Satisfactorily completed Accepted, and passed by Parliament with strong bipartisan support Authority fully established, and functioning
Output 2	 Base maps acquired. Additional surveys conducted, if necessary. Maps digitized. Mapping software chosen. Data compiled and entered. (remote communication links established)⁸ 	Completed Surveys initiated Completed Completed Completed Completed
Output 3	 Surveys undertaken. Base camp and field station locations determined. Specifications and construction plans prepared. Specifications and construction plans approved. Base camp and field stations completed. 	Completed Completed Completed Completed Completed Completed

⁸ Though this criterion derives from Activity 4 of Output 2, it bears no relationship to the Output.

Output 4	 Baseline species surveys completed. Analysis of site survey data completed. 	Completed Partially completed but provided basis for subsequent work
	 Draft zoning and management plan prepared.⁹ Preliminary site management 	Partially completed but provided the basis for subsequent work Completed to a standard greater than
	prescriptions submitted for approval.	anticipated, and approved by Board of Trustees
	Preliminary site management prescriptions implemented.	In process of implementation
Output 5	Research issues	Completed
	identified.Research strategy and programme developed.	Completed
	 Scope and TOR for research prepared. Research implemented. 	Completed
	Research implemented.	Completed
Output 6	Financial sustainability	Completed
	parameters identified.Funding plan prepared.Estimates of revenue	Completed
	• Estimates of revenue from Iwokrama enterprises.	Completed
	 Framework developed for capital fund and donor participation. 	Completed
	Membership and subscriber lists prepared.	Completed
	Programme activities developed.	Completed

⁹ Though this criterion derives from Activity 3 of Output 4, it bears no relationship to the Output.

Output 7	 Training needs analysis completed. Training programme formulated. Staff fellowships completed. Study tours and conference visits undertaken. In-service training completed. 	Project Implementation Mission advised postponing this. Project Implementation Mission advised postponing this. Not undertaken Some visits made. A little training undertaken.

D. Immediate Objectives

There was a single Immediate Objective:

International Board of Trustees of the Iwokrama Rain Forest Programme capable and enabled to undertake total management of the International programme for the sustainable utilization of the resources from tropical rain forests and the conservation of biodiversity.

A broad statement can be made to the effect that, in the general terms in which this immediate objective was expressed it has been met, and the Project Outputs were instrumental in this success. A more detailed analysis is desirable but this cannot be done as the Success Criteria established were too general, and lacked any quantification in numbers or time.

E. Development Objective

As indicated in IIA, above, since the statement of Development Objective was not altogether clear, for this evaluation it has been interpreted in terms of its essential elements. These appear to be:

- Demonstrate that the tropical rainforest can maintain desired levels of biological diversity while supporting economic activity;
- Governments will be better placed to decide on investments and support for initiatives on sustainable utilization and management of tropical rainforest; and
- Assist in "staff development" and assist in generating knowledge and methodologies relating to sustainable forest management, preservation of biological diversity and conservation for the benefit of Guyana.

This wording captures the essence of the overall objective, for which this Project was to lay a firm foundation. The achievement of the Immediate Objective has brought the institution to a point from which it is well placed to address the grander targets of the Development Objective.

F. Effectiveness

Was the overall cost of used resources justified with regard to the results obtained? The Mission answers this question with an unequivocal "yes." However, better initial management would have led to more timely results and more targeted resource inventories and research. Such early progress would also have been likely to have better promoted the Centre to both donors and local stakeholders.

Some provision for capacity building in terms of administration and office management would have improved effectiveness. It became apparent once the Centre began to forge ahead 18 months ago that, though the Project had produced procedures and manuals the staff had not "internalized" these as they had had little or no training in their use. Centre staff feel that the absence of an efficient and cost effective administrative culture and programme support system has slowed progress.

G. Capacity building

In terms of capacity building in the following fields the results were:

• enabling environment: GOOD;

• institutional development: GOOD; and

• human resources development: INADEQUATE.

H. Impact

On a scale of "Highly satisfactory-Satisfactory-Unsatisfactory-Highly unsatisfactory", having offset the substantial successes of the Project by its shortcomings, the overall impact rating emerges as "Satisfactory".

The legislation and administrative structures through which the Iwokrama forest is managed are in place and functioning and this represents a positive impact. There is a potential for the management regime to be developed in Iwokrama to impact favourably on the rest of Guyana as an example to follow, and expression of this potential is beginning – through the development of GIS based reserve planning methodologies, collaborative approaches to wildlife management, forest planning and community development, and the road corridor and river management regimes being developed for areas adjacent to the Iwokrama forest.

The work done so far has set the stage for substantial research outputs and the development of innovative forest management methodologies. A considerable body of information has been accumulated and the data are being effectively managed.

There has been a major beneficial impact on communities associated with the Iwokrama forest. A very significant impact in this respect is the North Rupununi District Development Board an institution which emerged, with Project assistance, to represent local community interests. As an unintended impact it is notable that the NRDDB has since become a forum for discussion of regional development matters and for formulation of development proposals. Of great significance is that its role in this respect is recognised not only by donors but also by Government. The NRDDB is now being touted as a model for other areas of interior Guyana.

Impact on the capacity of Guyanese government agencies has not been significant and this can be explained in part through a decision early in implementation not to immediately proceed with training provided for in the PD. With the exception of the innovative work with the Makushi

Research Unit on local use of biodiversity, field work under the project did not extend much beyond the comprehensive first order flora and fauna surveys and some minor research projects. The subsequent work of the Centre over the last 18 months or so has seen substantial developments in areas such as collaborative planning, wildlife management, GIS applications and research, zoning management planning and reduced impact logging research. This is creating a practical basis for enhanced interaction between Centre staff on real resource conservation and management issues and practices rather than the vague promises of future programmes yet to be developed.

The positive impact could have been greater had Government taken other opportunities to benefit from Iwokrama results. A case in point is educational material that has been produced and made available by the Centre for Government to introduce into the national educational system, but which is yet to be utilised.

No negative impacts have been identified.

I. Sustainability

Sustainability is the ultimate test of a project at completion. "Are the positive results of the project likely to be sustained once assistance has terminated?" These evaluation results must be interpreted in light of the fact that the evaluation has taken place several years after the intended end of the Project, and that non-Project interventions are likely to have contributed to the findings.

Programme sustainability

In the terms of reference for the Evaluation Mission it was specifically asked whether the activities outlined in the project document were sufficient to result in "the sustainable establishment of the Iwokrama Programme". The short answer to this is "no". This was an unrealistic expectation. The correct expected result might have been worded as "the establishment of a firm foundation for a sustainable Iwokrama Programme". In these terms, a successful result has been achieved.

A notable outcome of the Project is the financial leverage achieved to ensure continued operation of the Centre established under the Project. The GEF investment has, as of September, 2000, generated some nine and a half million US dollars in donor assistance. This is a most pleasing result. However, this good news is mitigated by the fact that core funding remains a key area of difficulty for the Centre. Though Centre management is confident that income from business activities will soon begin to fill this gap in sustainability (management projects a low estimate of \$529,000, and a high of \$3.8m) further assistance in this area is required in the short term.

Integration with host country policies and programs

The research and scientific community of Guyana is now well linked with Iwokrama and is provided with research opportunities which make a significant contribution to the national research agenda. Further, through its "Young Professionals" Programme the Centre is helping to make a research career more attractive to Guyanese.

Iwokrama has much to offer Guyana in terms of resource management methodology and training and in exploring new opportunities for economic development through utilisation of non-timber forest products and bioprospecting. However, this potential has only really started to become a tangible reality in the last 12-18 months and it is probably not surprising to observe that the draft National

Development Strategy of June, 2000 does not recognise this. Iwokrama is mentioned – but only as a potential ecotourism site and, less positively, in terms of suspicions as to whether Guyana will gain equitable returns for bioprospecting undertaken under an international authority. This approach to Iwokrama in the draft Strategy is founded on a misunderstanding of what the Centre can do for Guyana. Unfortunately, it has the effect of creating a perceptual barrier to the development of collaborative partnerships.

Community support

The effects of the Project on indigenous communities in the vicinity of Iwokrama forest have been outstandingly beneficial. This is an important measure of sustainability.

The majority of the population of Guyana resides in a narrow coastal belt far removed in distance and thinking from the forests of the interior. It is difficult to gauge the extent to which this group understands and supports the Iwokrama Programme. The Evaluation Mission heard from well-informed Guyanese a range of points of view. Some were of the view that the coastal majority is too preoccupied with survival to even think about Iwokrama. Others felt that the urban public were proud of Iwokrama and were kept informed of its progress through local media coverage.

Linkages with other activities

A UNDP North Rupununi Poverty Eradication Project is in the final stages of implementation. This project has addressed shortcomings in villages and among communities, which are involved with the Iwokrama Programme, and this can be seen to have improved the capacity of local communities to maintain their support for Iwokrama.

International standing

The Project has developed an international partnership with researchers and research institutions and this has recently gained momentum. Graduate students of prestigious Universities have chosen to undertake their research at Iwokrama, and further evidence rests in the fact that there were several hundred applications and many more enquiries about the Centre's first round of eight DFID supported positions in 1998. The recent appointment of a natural products chemist as a basis for moving actively into bioprospecting under an EC funded project linking Iwokrama, local and regional universities and the UK-based CABI-Bioscience promises to further extend and enhance the Centre's international standing. The Centre has generated a special edition of an international refereed journal focused on best practices with regard to reduced impact logging in tropical forests. Staff are regularly invited to contribute to international scientific symposia and intergovernmental meetings. The Centre has been contracted by the International Tropical Timber Organization (ITTO) to review its international benchmark guidelines on all aspects of the conservation and sustainable management of tropical forests. ITTO has also asked the Centre to develop a systematic framework that will encourage the wide application of these guidelines by the Organization's Member Countries.

Capacity building

Training has been assessed as an area where achievement has not been high, due to major underspending on this item. In recent years, however, there has been a major and innovative move to introduce training activities, with the support of other donors.

The training enhancements will, of course, be sustained so long as those trained remain in Guyana – something that cannot be guaranteed. However, morale at the centre is assessed to be high,

particularly among the "Young Professionals" group of Guyanese who are so important for the Centre and for Guyana.

Dissemination of knowledge

There has been a considerable recent effort to compile and disseminate information arising through Iwokrama Programme activities. In addition to publications and public meetings an attractive World Wide Web site has been created. In the absence of audited data on numbers and origins of "hits" it has not been possible to establish the extent to which this site is used. However, its high quality of presentation and of contained data is such as to indicate that, once it is known, it is likely to become an important element of sustainability.

J. Follow-up

A number of follow-up actions specific to the Project are indicated:

- It is necessary to clarify Iwokrama forest reserve enforcement arrangements under the Iwokrama
 Act. This need is recognised by Programme management and has been actively debated by the
 Board of Trustees. The Evaluation Mission underlines the importance of early action on this
 crucial matter.
- An appropriate grouping of stakeholders should meet to consider and to define Iwokrama's place
 and role in contributing to social and economic in Guyana, with a view to the results being made
 available as a contribution to the further development of thinking on Guyana's development
 circumstances and ambitions.
- River gauging equipment should be installed, in consultation with the Guyana Hydrometeorological Service, without further delay.
- A closer relationship should be developed with the Guyana Hydrometeorological Service and this agency's needs for weather data from the two Iwokrama automatic weather stations addressed.
- The Evaluation Mission notes that the hydrological regime of the Iwokrama forest could be of
 primary significance in species and ecosystem distribution and, so, knowledge of this will be
 important for forest management. Accordingly, strong support is given for the stated intention of
 Iwokrama management to assess the extent of forest flooding.
- A high quality preliminary archaeological survey of the Iwokrama area funded under the Project produced very interesting findings. Indications are that there is a great deal more to be discovered. It is recommended that a follow-up survey be given priority. The results are needed as a basis for identifying cultural management measures that may need to be undertaken. The information will also serve to enhance future moves towards World Heritage status for the area.
- A simple but effective improvement to the research facilities at the Reserve would be a functional library, a simple reference herbarium and perhaps other reference collections, modest laboratories and, once adequate telecommunications are available, Internet access.

V. CONCLUSIONS

A. Findings

Significant conclusions arising from the project evaluation are:

The GEF funding is seen as having been a timely strategic intervention which has been crucial for the successful establishment of the Iwokrama International Rain Forest Programme and which has facilitated leverage of considerable additional funding from other sources.

Though there were weaknesses in the specification of Project Outputs and Activities, sufficient explanation was available in the supporting text of the Project document that, with guidance from the Iwokrama Board of Trustees, the vigorous and innovative leadership of both the Interim and the Inaugural Directors-General, and a good and supportive working relationship with the Government of Guyana and with local communities, almost all intended Activities were carried to completion.

An assessment of the current circumstances of the Programme reveals that:

Following the initial surge of enthusiasm among Commonwealth member countries and others, which gave recognition to the unique nature of Iwokrama as a "Programme for the world", there has been growing support from donors for project activities undertaken by the Centre. However donors have not been prepared to support the Centre with un-earmarked core funding. As a result, key aspects of the Centre's proposed management structures have not been developed. Indeed, even funding for the Centre's Board of Trustees meetings (a requirement under the legislation) has had to be raised on a meeting by meeting basis by persuading individual donors or by Centre staff undertaking consultancy work to earn money to support these meetings.

No donor has shown interest in supporting the construction of the Centre's permanent headquarters on the campus of the University of Guyana and this is inhibiting both the Centre's national capacity building efforts and the confidence of the Government in the interest of the international community in Guyana's initiative.

Considering the difficulty faced by Iwokrama management in balancing international and national interests the Mission feels that a fair balance has been achieved. This is, however, not the view of some in Guyana. This perception is important, and needs to be vigorously addressed.

This need is evident in the fact that in the draft National Development Strategy (June, 2000), the Iwokrama Programme is presented in social and economic development terms only as offering a prospect for ecotourism (20.IV.11.3). Its wider value as a source of experience, ideas and resources for Guyanese development is not given recognition. Rather, the only other reference in the NDS (5.II.6.1) is one of concern: "The Centre is now an autonomous international agency that is located in our country. The Centre is planning to embark on an extensive bio-prospecting exercise with an initial funding of US\$1.2m from the European Union. Under the Iwokrama legislation all discoveries belong to the Centre, although Guyana has the right to use such discoveries. However, the benefits to the people of Guyana from Iwokrama's bio-prospecting exercises in Guyana's forests are not sufficiently clear. In addition, the apparent absence of an adequate institutional and legal framework and the reliance on contractual mechanisms for a great proportion of its work, make it difficult to ensure that Iwokrama will itself be able to obtain full benefits from biological discoveries or to protect Guyana's biological resources against acts of bio-piracy."

These comments need to be placed in the context of the long gestation of the Iwokrama concept from the original offer by the President of Guyana in 1989 to the Centre beginning operations as an autonomous international Centre in July 1998. Most of the Centre's current technical staff have only been working with the Centre since January 1999, or later, and the impressive achievements in many areas of forest resource appraisal, evaluation and planning over the last 12-18 months are providing a much more solid and pragmatic basis for interactions with national agencies and research institutions and stakeholders beyond the communities living in or near the Iwokrama Forest.

A sense of the wide range of recent initiatives taken in this respect can be gained from this listing:

- A MOU on general cooperation with Guyana Forestry Commission signed in February 1998;
- fortnightly "Brown Bag Lunch" seminars started as soon as technical staff took up their posts in February 1999 (a specific commitment for Iwokrama in the MOU with the Commission);
- Collaborative wildlife management workshop with local communities and all relevant government agencies at the Iwokrama Field Station in July 1998;
- A two day workshop on cost effective forest inventories held at the Centre in August 1998 for GFC and local industry operatives in conjunction with the Commonwealth Forestry Association:
- Numerous multi-stakeholder selection committee meetings for first DFID professional staff appointments Sept - Dec 1998;
- A joint Iwokrama/ UWICED/Tourism Industry Stakeholder Workshop to review the Iwokrama Forest Ecotourism Development Strategy, September 1998;
- Regular participation in National Environmental Education Advisory Committee throughout 1998-present;
- First Multi-stakeholder Steering Committee for EC Funded Biodiversity Project March 1999;
- A joint Iwokrama/TROPENBOS/GFC International technical Workshop on Reduced Impact Logging April 1999 and subsequent joint Iwokrama/TROPENBOS/GFC/IIED cost benefit study of operational scale reduced impact logging study with majority of funding coming from the Iwokrama DFID Sustainable Human Development Project;
- First Multi-stakeholder Steering Committee Meeting ITTO Reserve Planning Project May 1999;
- Second Multi-stakeholder Steering Committee Meeting ITTO Reserve Planning Project July 1999;
- Second Multi-stakeholder Steering Committee for EC Funded Biodiversity Project July 1999;
- Iwokrama initiative to form joint GFC/Iwokrama Technical Working Group on Forest Resource Information and Management, August 1999;
- Multi-stakeholder evaluation team to select implementing partners for EC Biodiversity Project October 1999;
- EC Biodiversity Project Implementation Committee with Consortium partners UG/IAST/UWI/CABI-Bioscience January 2000;
- Multi-stakeholder staff selection panel for EC Biodiversity Project April 2000;
- Interagency consultation on methodology for the Iwokrama Forest Zoning Process, March 2000;
- Joint Iwokrama/NRMP GIS Training Workshop for national agency staff, June 2000;
- MOU re general cooperation with the EPA, July 2000;

- MOU re general cooperation with Guyana Marine Turtle Society, July, 2000;
- Provision of YP to act as an advisor and contact point for Centre input to the newly formed National Protected Area's Secretariat, July 2000;
- Multi-stakeholder Steering Committee Meeting to Review Progress with EC Funded Biodiversity Project August 2000;
- Provision of IT staff member to advise the National Elections Secretariat on database management issues, August 2000 present;
- Joint Iwokrama/EPA project work on stakeholder collaboration to develop new wildlife management regulations under the EPA, begun September 2000;
- Joint Iwokrama/EPA project on community-based wildlife surveys to help Guyana meet its obligations under CITIES, begun September 2000;
- Joint Iwokrama/EPA project to develop guides to mammals and other fauna groups for Guyana, begun September 2000;
- Iwokrama (free) consultancy to design a GIS system for GFC, October 2000;
- First meeting of the 15 person multi-stakeholder/interagency planning team for the developing management plan for the Iwokrama Forest, October 2000;
- Staff teaching at UG equivalent to 1 full semester course in 1998 lifting to the equivalent of more than 3 full semester courses per year in 2000, supervision of two local M.Sc students (1University of Guyana;1University of the West Indies) to completion 1998-2000.

B Assessment

In terms of project relevance, performance and success, it can be concluded from the evaluation that the project was relevant and timely and that performance, though at times weak was, despite some protracted delays in implementation, successful in achieving a high proportion of the planned Outputs.

An assessment of relevance is presented as a matrix in Table 2, and a matrix rating of performance is at Table 3.

Table 2: Matrix for rating project relevance

	High	Partial	Low
Purpose	Used the comparative advantages of UNDP and provided leverage to attract other donor funding.		
Approach	Suitable, aimed to establish an institution and place it on a sustainable footing.		
Modality of execution		Uncertainties regarding the role of the Implementing Agency vis-a-vis the emerging international programme were compounded by a long delay in appointing an interim Director-General.	
Recipient institution	GNRA was the appropriate choice		

Table 3: Matrix for rating project performance

			High	Partial	Low
Efficiency	Personnel	appropriateness	skilled, and generally able to transfer skills		
		use		Reasonably efficient use of experts, though more interaction with government counterparts anticipated.	
		composition	good mix		
	Training				Inadequate
Equipment		uipment		Appropriate, timely delivery, well maintained, but some items installed very late.	
	Management			Varied effectiveness; very good in later stage.	
	Government contribution		Allocation of land was major contribution; also human resources		
Outputs		All Outputs achieved, with minor incomplete Activities.			
Immediate objective		The objective of establishing legal foundation and institutional capability was achieved.			

VI. RECOMMENDATIONS

The Evaluation Mission, taking account of the Outputs specific to the GEF funded Project, and to the situation which has since developed, makes these recommendations:

- 1. With the development of the programme and the production of more tangible outputs, greater attention should now be given to strengthening interactive linkages between Iwokrama and agencies of the Government of Guyana with a view to facilitating the transfer to those agencies of skills, knowledge and understanding about rainforest and wildlife management and community participation in these areas.¹⁰
- 2. Closer linkages with rainforest research institutions in the Guiana Shield, Caribbean, Central America and elsewhere, are desirable.
- 3. There is a need to monitor research facility pricing, in light of "competition" from other institutions and locations. Since Iwokrama's lack of core funding inhibits its capacity to subsidise research which is consistent with, and a contribution to, its Programme, it should consider joint fund raising with outside institutions to facilitate such research.
- 4. The Government of Guyana to adopt management measures for areas adjacent to the Iwokrama forest which will ensure that these areas are used in ways which, while promoting appropriate forms of private sector development activity, will not undermine the integrity of the Iwokrama forest.
- 5. The Government of Guyana to seize opportunities to draw on the Iwokrama experience to support national objectives in natural resource management and planning, education, and to provide its professional officers with training and experience which will contribute to efforts to establish sustainable resource use for national development.
- 6. Noting that Iwokrama management has made an approach to the Government of Guyana regarding legal issues and enforcement uncertainties that hinder effective management of the Iwokrama rainforest, urgent joint action to address this matter is recommended.
- 7. Noting the exceptional achievements of Iwokrama in engaging neighbouring Amerindian communities in a range of resource management and cultural strengthening activities, it is recommended that this experience be offered as a basis for training for community development elsewhere in Guyana.
- 8. The Iwokrama approach and experience has widespread relevance. Its impact would be greater if it were to be "written up" and presented in a form which would serve to guide and inspire others concerned with community based tropical rainforest sustainable use and protection. To be effective, preparation of documentation must be under the guidance of a professional scientific editor. An excellent model exists in the documentation of the experience of a GEF funded project in Papua New Guinea's tropical rainforests:

Race for the Rainforest: evaluating lessons from an integrated conservation and development "Experiment" in New Ireland, Papua New Guinea – by Rob McCallum and Nikhil Sekhran.

Race for the Rainforest II: applying lessons learned from Lak to the Bismarck-Ramu integrated conservation and development initiative in Papua New Guinea – by Julie-Ann Ellis.

¹⁰ It is understood that Iwokrama has offered training and experience foresters, for instance, but that the offer is yet to be taken up.

A number of issues are yet to be addressed to consolidate the Iwokrama Programme. Consideration should be given to the formulation of a phase II GEF supported project to consolidate the achievements to date. This point is developed in section VII, below.

VII. LESSONS LEARNED

<u>Significant lessons</u> that can be drawn from the Project experience and from subsequent developments are:

- 1. The innovative concept of an international management regime within a national context is yet to be fully understood, or implemented. The lesson is that legislation and an international board of trustees is not in itself enough. Five years after its passing by the Guyanese Parliament the management provisions of the Act are yet to be used. Guyana has little capacity for or experience with the enforcement of natural resources legislation and this is exploited by unauthorised hunters and alluvial miners. To have realistically addressed the Programme's establishment needs the PD should have provided for capacity building and practical measures to translate the good intentions of the legislation into practice.
- 2. Good results can emerge from a PD with weaknesses of logic in the definition of Outputs and Activities but only with innovative leadership.
- 3. A logical framework in the Project document, or prepared by the Implementation Mission, would have greatly assisted evaluation.
- 4. A failure to appoint and empower an individual to assume the role intended for the interim Director-General during the 24 month delay in filling this position resulted in confusion and uncertainty which slowed implementation considerably and appears to have compromised the relationship between the Project and government agencies. The lesson learned is to act quickly to make alternative leadership arrangements, or even to suspend implementation, if there is to be a delay in the appointment of a Project leader.
- 5. The matter of capacity building needs, if not identified or identifiable at the time of Project formulation, should be "covered" in the PD by provision for a training needs assessment accompanied, of course, by an appropriate budget item. A particular concern with this Project has been that despite the preparation of administrative procedures and manuals, administrative staff did not effectively use these.
- 6. The effective communication of results to non-technical audiences requires that documentation be prepared with the specific needs of the particular audience in mind, and in a simple form of English. Project personnel have achieved a high level of success in this respect, particularly within Amerindian communities.
- 7. Though there have been effective NGO contributions to community based activities associated with the Iwokrama Programme (eg by Red Thread), NGO involvement in the Project was minimal. Even though the NGO community in Guyana is weak, its potential to contribute to the Project may not have been adequately tapped. The lesson is that even where an NGO community is not strong, specific provision for NGO involvement should still be considered and, if rejected, this decision fully justified. Particular attention should be paid to any need for capacity building for NGOs to engage in a project, for they are a key element in Project sustainability.

Best practices

The evaluators have been impressed with the range of "best practice" experience and material available, suitable for replication both in Guyana and elsewhere. There is a great deal of Iwokrama information and methodology yet to be compiled and published as lessons learned in forms suitable for education in Guyana, the Caribbean region and elsewhere, and so as to facilitate social and scientific research in other tropical rainforest areas.

Notable among these are:

Community based resource management: the experience and methodology arising from the Makushi Research Project (work carried out with UNDP-GEF funding, with the results published with IDRC funding); and from wildlife management.

Rainforest management planning: the practical GIS based approach to definition and establishment of sustainable use and wilderness protection zones.

Institution building: the emergence of a community based institution (North Rupununi District Development Board), which has become an agency recognised as representing the Amerindian communities and in matters of regional development.

VIII. RATIONALE FOR FURTHER GEF SUPPORT

The Evaluation Mission believes that the GEF Project that laid the foundation for the active and innovative tropical rainforest conservation and use programme currently in place at Iwokrama must rank among the most successful of all GEF projects. This is confidently stated despite the fact that it has taken more time than anticipated to establish that foundation and to develop the required research and management programmes. The fundamental issue of sustainable rainforest use remains as vitally important now as it was when the Iwokrama concept arose. Work on methodology and management practice for sustainable use is underway in a number of locations in the wet tropics. From Iwokrama's research programme, which is equal to the best, the results needed to move forward in the key area of management are now available. A range of donors has recognised this and joined in the challenge to demonstrate, at Iwokrama, sustainable use and management in a conservation context. The GEF Project has provided the fundamental basis for achieving this "critical mass".

Yet the task of translating research results into conservation practice at Iwokrama, and elsewhere, remains a major challenge. The Iwokrama Programme is now positioned to deliver results of local, regional and global significance. This is an ideal opportunity for a second GEF intervention, logically building on the achievements of the first.

The Evaluation Mission was not charged with developing a GEF project. It simply offers some thoughts and ideas. A central thrust of a follow up GEF intervention might be based on closing the gap between tropical rainforest research and management. While Iwokramabased, it might be interactively linked with other GEF tropical rainforest interventions, and with other tropical rainforest conservation initiatives in Guyana and the Guiana Shield. It would fall within the scope of two GEF Operational Programmes (2: Coastal, Marine and Freshwater Ecosystems¹¹; and 3: Forest Ecosystems). A GEF Iwokrama Forest Conservation and Sustainable Use project could, perhaps, involve co-funding from a donor already engaged in Iwokrama - for research and survey elements, with GEF funding focused on management.

¹¹ Iwokrama river and swamp ecosystems have received little attention, though they (and the associated hydrological processes) are key features of the area.

Among matters and subject areas to be considered in respect of a management focused intervention:

Management for conservation and for sustainable use

A Programme in which a key role would be a Forest Conservation Manager. In addition to the work within the Iwokrama reserve, this would also provide opportunities to extend sustainable management to areas contiguous with the Iwokrama reserve (including the Essequibo River), so improving protection for the "conservation core". The scope for addressing these "buffer areas" would be realised through designing this Forest Conservation Programme so that it also embraced wider Guyanese needs. In this way the Government of Guyana would be assisted in applying Iwokrama findings to other areas of the country. Key agencies would include the Guyana Department of Fisheries, and the Guyana Forestry Commission.

Such an approach could assist in bringing consistency to other forest conservation initiatives in Guyana. For instance, the Guyana Forestry Commission is giving consideration to a conservation method that is new to the country; namely an application by Conservation International to lease a large tract for conservation purposes. So long as a World Bank/GEF proposed project to establish a national system of protected areas remains stalled, an Iwokrama based activity of the type outlined above could assist in keeping national conservation objectives on track.

An integral part of this approach would be the further development and extension of the highly successful community based resource management methodology of Iwokrama.

Research in support of management

The emphasis would be on ecosystem definition and functioning. However, further work on basic biological inventories to improve the baseline information for planning and for monitoring of sustainable use practices, including invertebrates, is also needed.¹²,

Measures of the nature and quality of the ecological processes that maintain the integrity of the ecosystems are needed and, also, identification and establishment of biodiversity and environmental benchmarks against which change can be measured and reported (including key species and ecosystems, ecosystem structure and function, microclimate, soil characteristics and hydrological processes), and the beginning of long-term monitoring.

Other areas which might be considered for intervention include:

Institutional development and capacity building in wildlife and inland fisheries management, building on the Iwokrama experience with community based management and awareness.

Iwokrama forest as a centre for training for scientists, managers and community resource managers for a Guyana national protected areas system.

Development of a Guyanese monitoring and enforcement capacity for the Iwokrama Forest and other protected areas.

¹² The basic plant inventory is scarcely 65% complete – approximately one in three of the plant species present are not yet recorded for the reserve.

Development and implementation of management regimes for selected endangered species which are of commercial interest and whose conservation status could be enhanced through farming. Examples are River Turtle and the fish *Arapaima*.

Fostering international linkages through governance, including support for the Iwokrama International Board of Trustees and support for an international scientific advisory network operating primarily by electronic means.

Development of a Caribbean regional presence; extending training, research, and management applications through support for regional Young Professionals positions in biodiversity conservation and management at the Centre.

Annex 1: Terms of reference for the evaluation

TERMS OF REFERENCE FOR THE FINAL EVALUATION MISSION OF UNDP-GEF

FOR PROJECT: GUY/92/G31 – GEF SUPPORT TO THE IWOKRAMA INTERNATIONAL RAINFOREST PROGRAMME

1. BACKGROUND

The Iwokrama International Rain Forest Programme was initiated in 1989 when the then President of Guyana made the offer at the Kuala Lumpur, Malaysia Commonwealth Heads of Government Conference to donate some 360,000 hectares of Guyana's virgin rain forest to the International Community for the purpose of research and related activities towards developing methods for the conservation and sustainable utilisation of tropical rain forests.

In the period thereafter, the Programme benefited from several inputs from the Government, the Commonwealth Secretariat and the UK/ODA, namely: surveys and preliminary activities aimed at defining the boundaries of the programme site, preliminary resource surveys, scoping out the Programme and putting initial infrastructure in place.

The Iwokrama Programme received its first sizeable financial input when UNDP as implementing agency secured a GEF grant of US\$3 Million as seed money for establishing the programme. The project document for this GEF was signed in early 1993. The essential objectives of the UNDP/GEF project were inter alia, to provide support for the establishment of the Iwokrama International Centre for Rain Forest Conservation and Development as a legal entity; undertake baseline surveys and inventories, establish a base camp and other facilities at the Programme site, prepare a draft research strategy, develop an indicative programme and identify options of specific sustainability parameters of the Iwokrama Programme, articulate a long-term financing plan and resource mobilisation strategy, and prepare a training programme in fields related to the sustainable utilisation of natural resources.

To date, most of the immediate objectives of the UNDP/GEF project have been met. The programme was legally established as an International Centre with a permanent Board of Trustees by Act of Parliament and assent by the President of Guyana in May 1996; a base camp with adequate equipment and facilities has been set up in the Iwokrama Forest; the baseline resources surveys and inventories are being undertaken; a medium-term Operational Plan outlining a research programme and strategy, and a Strategic Plan have been prepared and approved by the Board, a financing plan has been prepared and resources mobilisation activities are being undertaken; personnel, administration and financial manuals have been approved by the Board; and an information and Communications Centre has been developed with financial support from the International Development and Research Centre (IDRC) of Canada. However, there are still some concerns with respect to the core resources needed to sustain the Iwokrama Centre over the medium-term while it seeks to develop programmes and activities aimed at bringing it to a self financing stage.

The proposed External Evaluation of the UNDP/GEF support project is to be undertaken in accordance with UNDP and GEF Rules and Regulations, as recommended at the June 24, 1999 Tripartite Review Meeting.

General Objective of the External Evaluation

The main objective of this external final evaluation is to analyze the results obtained and the processes initiated through the execution of the Project to support the Iwokrama International Rain Forest Programme during the period 1992-1999.

The evaluation should provide conclusions and recommendations with a two fold objective: a) contribute to strengthen and consolidate the implementation of the Programme as of the year 2000, and b) provide inputs for formulating and executing future similar GEF projects in Guyana and elsewhere.

To do so, the focus of the evaluation will be on a) identifying the problems or constraints which have hampered and continue to affect the smooth implementation of the project and establishment of the Iwokrama Center, to c) proposing possible corrective measures which ultimately may lead to the fuller realization of the objectives and outputs of the projects and c) proposing measures which need to be undertaken towards assuring the medium to long-term viability and sustainability of the Iwokrama Center and future like initiatives.

Purpose

The purpose of the mission is to carry out an objective evaluation, which will focus on:

- (a) appropriateness and relevance of the project concept and design;
- (b) achievement of project objectives and outputs;
- (c) achievement with regards to including and targeting the main stakeholders: the national and international scientific institutions, scientists and technicians, and the local population, esp. the indigenous peoples of the area.
- (d) problems and constraints encountered in project implementation;
- (e) additional measures needed to enhance the long-term impact of the project and the Iwokrama International Centre, which it helped establish, focusing on measures to enhance the sustainability of project achievements;
- (f) lessons derived from the experiences gained during project implementation.

3. ISSUES TO BE COVERED

3.1 **Project Concept and Design**

The mission will thoroughly review the design and concept of the project through consultations with project personnel as well as individuals and organisations involved in its formulation and management. The mission should consider:

(a) appropriateness of the problem conceptualisation

- (b) whether the project strategy adopted was likely to fully achieve the required outputs and objectives in a sustainable manner, and, if whether alternative solutions were considered and applied, and if so, the success of these;
- (c) whether the workplans were comprehensive and realistic;
- (d) whether the activities outlined in the project document were sufficient to result in the sustainable establishment of the Programme.

3.2. **Project Implementation**

The mission will report on the issues and difficulties that affected the implementation of the project. These will include:

- definition of tasks and responsibilities;
- effectiveness of UNDP, counterpart and project co-ordinating unit participation in selection, recruitment, assignment of experts, consultants and national counterpart staff members;
- quantity, quality and timeliness of the Government of Guyana inputs for the project with respect to execution responsibilities enactment of necessary legislation, and budgetary provisions, and extent to which these may have affected implementation and sustainability of the Project;
- quality and timeliness of monitoring of the Project by all parties concerned;
- quality and timeliness of inputs by UNDP, UNOPS, IDRC of Canada and other parties responsible for providing inputs to the project, and the extent to which this may have affected the smooth implementation of the project;
- quality and timeliness of the half-yearly reports from GNRA to the Board of Trustees and UNDP.

3.3 Results

The mission should identify what outputs were produced and how well they were produced, identity quantitative and qualitative indicators that could illustrate how well they were produced and collect such information as part of the evaluation exercise.

The mission will also review and report on:

- (a) effectiveness and efficiency of the project's output in terms of results in reaching implementation and impact goals.
- (b) effects of the project's outputs on the indigenous communities in the vicinity of the Iwokrama Forest, the research and scientific community in Guyana, and the public at large who are Iwokrama benefactors as well as clients.
- (c) the financial leverage that the project has helped to secure to ensure the ongoing operation of the Centre it established.
- (d) the materialisation of both contemplated and non contemplated risks

The mission should also specify if any unintended effects are being produced by the Project, on whom and with what consequences.

4. <u>LESSONS LEARNED</u>

The mission shall record significant lessons that can be drawn from the experience of the project and its results for consideration in other similar initiatives and, where possible, delineating best practices for future replication. These observances should not be limited to the assessment of project outputs with reference to the development objectives, but should also cover the development of national capacity for conservation and sustainable utilisation of natural resources, planning, and management of development. Also, any significant lesson (s) for the future development of the wider Iwokrama Centre and implementation of its programme should be highlighted. In particular, the evaluation should highlight additional measures that are needed to enhance the long-term impact of the project and the Iwokrama International Centre, which it helped establish, focusing on the measures needed to enhance the sustainability of the project.

5. COMPOSITION OF THE EXTERNAL EVALUATION MISSION

The mission is an external evaluation Mission; accordingly, it shall consist of a team of two external consultants appointed by UNDP/GEF. The Board of Trustees of Iwokrama and the Ministry of Foreign Affairs/Government of Guyana can each appoint counterparts to accompany the mission.

Team Leader – Institutional Expert

The Team Leader should have extensive working experience in institutional strengthening of organisations in developing countries. The Team Leader should also have experience from at least one evaluation mission. Furthermore, the candidate should be familiar with GEF priorities and procedures. The Team leader will be responsible for the preparation of the draft and final reports as well as the presentation of these reports.

Team Member – Biodiversity Expert

The Team Member should have significant working experience in biodiversity conservation and its sustainable use, with specific attention to tropical rain forests. Preferably, the candidate should have substantive research experience.

Both team members should be fluent in spoken and written English and be familiar with the United Nations System. No candidate should have worked for, or have had any previous or on-going association with, the Project or the Iwokrama Programme.

6. TIME TABLE AND ITINERARY OF THE EVALUATION

- a) The full mission shall assemble in Georgetown, Guyana, August 23, 2000, and shall stay in Guyana for four (4) weeks.
- b) The Resident Representative/UNDP-Guyana, the Government of Guyana, and Project Management at the Iwokrama Centre, will brief the Team Members within the first few days of the mission. The former Iwokrama focal point, Mr. Thomas Gittens, currently working with the Regional Surf Office in Port of Spain, Trinidad, will join the UNDP office for the initial 2 days of briefings.
- c) Extensive interviews with Iwokrama staff, local researchers (e.g. at University of Guyana), and representatives from relevant government agencies (e.g. EPA, Guyana Forestry Commission, the Office of the Advisor the President on environmental affairs, etc.) NGOs, and international organisations and consultants should be conducted in Georgetown. Research should be done via the web with regards to how much both local and foreign researchers use the Iwokrama site, and why.
- d) The team shall spend at least one week at the field station in Iwokrama Rain Forest, within which time frame they must consult with the full staff of the Field Station as well as the Amerindian Communities in Northern Rupununi affected by the establishment of the Iwokrama Rain Forest. Consultations with the Amerindians shall be based on participatory methodology and shall be gender and age sensitive.
- e) Towards the end of Week 3 of the mission, the team shall conduct a meeting at UNDP to discuss preliminary findings with stakeholders.
- f) The Team Leader and Members shall debrief all parties concerned including Local Iwokrama Board Members, on the findings and recommendations contained in the draft Evaluation Report. The Team Leader shall also debrief GEF/RBLAC/UNDP Officers in New York on their preliminary findings and recommendations.
- g) The Team Leader shall be responsible for submitting a Draft Evaluation Report within two weeks of the conclusion of the Mission and a Final Evaluation report within two weeks of receiving comments to the Draft Report from the UNDP Country Office.
- h) Comments to the Draft Report shall be submitted (by fax or electronically) to the Team Leader within two weeks of receiving the Report. Likewise, the Team Leader shall submit the Final Report to UNDP within two weeks of receiving comments on the draft Evaluation Report. An electronic copy of the report shall be submitted to UNDP-Guyana in Word97 or a compatible programme or edition.
- i) Administrative assistance will be provided to the Team. Using project funds, the CO will hire a temporary secretary/admin. assistant for a five week period to provide logistical support, type documents and other functions vital for the success of the evaluation. The CO will provide temporary office settings, incl. internet connection, for the Team.
- j) The UNDP PO responsible for the Project will oversee the evaluation process and participate in meetings and consultations when possible.

7. REPORT DISTRIBUTION

One electronic copy of Final Report shall be delivered to the UNDP Resident Representative in Guyana who will distribute copies to the Government of Guyana, the Iwokrama Board of Trustees, the Iwokrama International Centre for Rain Forest Conservation and Development; UNDP Head Quarters in New York, the UNDP Regional Bureau and UNDP/GEF.

8. **CONSULTATION IN THE FIELD**

The mission will maintain close liaison with the UNDP resident representative in Guyana, with the Government of Guyana, and project management of UNDP/GEF support project to the Iwokrama International Centre for Rain Forest Conservation and Development. The Team Members should feel free to discuss with the concerned authorities anything relevant to their assignment. However, the mission is not authorised to make any commitments on behalf of the UNDP, the Iwokrama Board of Trustees, the Iwokrama International Centre, or the Government of Guyana.

Annex 2: Individuals consulted

INDIVIDUALS CONSULTED IN THE COURSE OF THE PROJECT EVALUATION

Dr. David Cassells, Director-General, Iwokrama International Centre.

Professional Staff, Iwokrama Centre (Dr. David Hammond, Dr. David Hughell,
Dr. Gary Hunnisett, Dr. Graham Watkins, Dr. Janet Forte)

Mr. Felix Gerard, National Project Manager, UNDP Project - GUY/92/G31/A/iG/99

Ms. Vanda Radzik, Iwokrama Community Development Fellow (Hinterland Project Officer with Red Thread Women's Development Programme, 1992-96, among communities associated with Iwokrama)

All Iwokrama Rangers and some Field Centre support staff

Hon. Hugh Desmond Hoyte, former President of Guyana (formally offered to the International community the forest area encompassed by the Iwokrama Programme)

Hon. Samuel Hinds, Prime Minister of Guyana

Hon. Vibert DeSouza, Minister of Amerindian Affairs

Mr. Rashleigh Jackson, former Minister of Foreign Affairs (active in international arrangements for acceptance of, and funding for the establishment of Iwokrama)

Mr. Navin Chandarpal, Advisor to the President on Science, Technology & Environment & member of the Iwokrama Board of Trustees

Dr. Thomas Gittens, SURF/UNDP, Trinidad and Tobago (Previously UNDP/Georgetown Programme Officer involved in design of the Project and its implementation).

Ms. Allison Fung, Project Officer, Ministry of Foreign Affairs

Mr. Joseph O'Lall, former Chairman, Guyana Natural Resources Agency.

Mr. Patrick Fraser, former Accountant Guyana Natural Resources Agency

Mr. Dilip Jaigopaul, Chief Hydrometeorological Officer, Ministry of Agriculture

Mr. Sheik M. Khan, Project Coordinator, Hydrometeorological Service,

Mr. Kumar Datadin, Commissioner of Lands & Surveys

Mr. Doorga Persaud, former Chairman, Guyana Natural Resource Agency

Mr. Bal Persaud, Chairman, Wildlife Board

Mr. James Singh, Commissioner of Forests

Mr. Kemp Simon, Meteorologist, Hydrometeorological Service.

Mr. Sidney Allicock, Chairman, North Rupununi District Development Board

Ms. Sheila Holder, Representative, Working Peoples' Alliance, (Political Party)

Mr. Mansoor Nadir, Leader, The United Force (Political Party)

Mr. Lance Carberry, People's National Congress (Political Party) (former senior civil servant with key role in negotiating the Iwokrama project)

Members of the Makushi Research Unit

Fr. Malcolm Rodrigues, former Vice-Chancellor, University of Guyana, and member of Iwokrama Board of Trustees.

Mr. Clayton Hall, Chairman, Friends of Iwokrama, and former Commissioner of Forests

Mr. Gerry Gouveia, President, Guyana Tourism Association

Mr. John Willems, Managing Director, Willems Timbers Ltd

Mr. Lu Kui San, CEO, Demerara Timbers Ltd.

Mr. Ben ter Welle, Team Leader, GTZ Natural Resources Management Project

Mr. Roshan Habibullah, Director, Institute of Applied Science & Technology

Mr. Per Bertillson, Executive Director, Environmental Protection Agency

Ms. Denise Fraser, Operations Director, Environmental Protection Agency

Ms. Cynthia Watson, Scientific Officer, Centre for Study of Biological Diversity, University of Guyana.

Mr. John Ceasar, Dean, Faculty of Natural Sciences, University of Guyana

Mr. Doorjoohan Gopaul, Scientific Officer, University of Guyana

Mr. Michael Tamessar, Senior Scientific Officer, Centre for Study of Biological Diversity, University of Guyana.

Captains and members of the Amerindian communities of Toka, Fairview, Annai, Aromaputa, and Surama (Evaluation Mission members held meetings in all these villages)

Ms. Juliet Solomon, Community Development Facilitator, North Rupununi Poverty Eradication Project

Mr. Colin Edwards, Owner-Operator, Rock View Ecotourist Lodge, Annai

Mr. Fred Allicock, Former Iwokrama Field Support Manager

Mr. Lester Dookram, former District Development Officer (acting), Annai

Ms. Rabian Ali- Khan, former Minister of Labour and Social Services.

Mr. Hugh Chomondeley (Director of Caribbean Division, UNDP Regional Bureau at the time the project was formulated)

Mr. Hubert Wong

Ms. Lorna Hall, researcher at Iwokrama (University of Western England)

Mr. Barth Wright, researcher at Iwokrama (University of Illinois)

Ms. Kristin Wright, researcher at Iwokrama (Northwestern University)

Dr. Vicki Funk, Botanist/Curator, National Museum of Natural History, Smithsonian Institution

Dr.David Clark, University of North Carolina

Mr. Neville Waldron, Conservation International

Mr. K. Wachira - Canadian International Development Agency, Georgetown

 $Ms.\ Violet\ Speek-UNICEF\ Office,\ Georgetown$

Ms. Carol Becker - USAID Office, Georgetown

Mr. Dave Morgan – DFID Office, Georgetown

Annex 3: Sequence of events in the development of the Project concept, and its implementation

1989

President Desmond Hoyte offered the site for establishing the Programme.

1990

Appraisal mission by the Commonwealth Secretariat.

1991

Interim Board of Trustees Meeting (BOT)

Phase 1 series of studies initialed by NRI with funding from ODA.

1992

July BOT meeting

PD developed and agreed to, based largely on the NRI report.

1993

March BOT meeting

April UNDP/GEF Project Document Signed (start date 1 April)

April Implementation Mission (5-8 April)

June National Project Manager appointed.

September Fred Allicock hired as Field Support Manager.

Three long-term senior consultants hired by Commonwealth Secretariat.

1994

Field station constructed.

1995

March DG took up post.

IDRC contract approved

Species survey contracts approved

1996

National legislation approved by the Parliament of Guyana (May).

NRDDB formed

1997

January First full BOT meeting.

March DG resigned and left Guyana

April Fred Allicock retired.

July New DG began work.

July Second BOT meeting.

1998

March Third BOT meeting.

September Fourth BOT meeting.

1999

May Fifth BOT meeting.

2000

September - Final Evaluation Mission