

**FINAL REPORT  
ON  
IDRC PROJECT  
“TWOKRAMA INTERNATIONAL RAINFOREST  
PROGRAMME”**

**19 July 1999**

# **Introduction**

The Iwokrama International Centre for Rain Forest Conservation and Development had its origins at the 1989 Commonwealth Heads of Government Meeting in Kuala Lumpur, Malaysia. At this meeting, the then Government of Guyana offered to make a significant area of pristine tropical rain forest available to the international community if the international community would respond by establishing a research and development centre that could demonstrate how tropical rain forest ecosystems could be conserved and sustainably managed while, at the same time, making a significant contribution to local and national development.

A Commonwealth Group of Experts headed by Dr. M.S. Swaminathan, the then President of IUCN, subsequently joined an inter-agency team headed by the Guyana National Resources Agency (GNRA) to develop the basic concept for the programme, including the identification of the project site. The chosen site is almost entirely bounded by rivers and includes the Iwokrama Mountain Range after which the Centre is named. The report of this Group was presented in both Georgetown and London on World Environment Day, June 5, 1990.

Preliminary guidelines for the management of this large forest site which covered almost 1,000,000 acres were developed by the Natural Resources Institute (NRI) of the UK and other consultants. In 1993, the Global Environment Facility (GEF) signed an agreement to grant \$3 million as seed funding for the Centre under the UNDP/GEF Project "GEF Assistance to the Iwokrama Rain Forest Programme". This national preparatory project operated under the guidance of an Interim Board of Trustees, headed by Dr. Swaminathan. Over the next four years, it increased the level of scientific understanding about the Iwokrama Forest and its resources and established the basic institutional arrangements to govern the operation of the Centre. Legislation establishing the Centre as a legal entity reporting to an International Board of Trustees jointly selected by the Government of Guyana and the Commonwealth Secretariat came into effect in May 1996. The first meeting of the Centre's Board of Trustees took place in January 1997.

IDRC has been a key partner in the development of the Iwokrama International Centre and its programmes, both as a donor and as a contractor under the UNDP/GEF project. Beginning in 1994, IDRC committed some US \$430,000 to support the development of the information and communications programme of the Centre. For most of this period, these funds were directly administered by IDRC. However, in August 1997, IDRC committed the remainder of these funds (C\$178,740) to be administered by the Iwokrama Centre itself. It is these latter funds that form the focus for this project.

## **OBJECTIVES AND COMPONENTS OF THE PROJECT**

The overall objective of the project is to establish a framework for the Information and Communications Unit within the Iwokrama International Centre for Rain Forest Conservation and Development. Specific elements within this overall objective include:

1. Communications: to develop and implement a communications strategy and plan for the Iwokrama Centre and its programmes;

2. **Information Management and Services:** to set up-information management and networking services for collecting, storing, retrieving, analysing and repackaging biophysical and socio-economic data; and for establishing linkages with its partners and collaborators; and
3. **Dissemination and Training:** to produce promotional outputs and training packages, to develop public relations programs for the Guyanese public, and to disseminate information in appropriate format to its stakeholders.

Key project components to meet these objectives are as follows:

**Communications:** A general communications strategy had been developed earlier for IDRC by Mr. Carlton James of Development Communications Associates<sup>1</sup> and presented in December 1996. This programme was ambitious requiring budget resources of some US\$1.18 million for the four years 1997-2000. Nevertheless, its general strategy for development communication techniques and activities focused on community dialogue for public participation and environmental awareness; advocacy for partnership, joint scientific endeavour and a global exchange of knowledge on rain forest management and human development have guided the Centre's information and communications work. More detailed guidance for the operating of the Centre's Information and Communication Unit (ICU) and developing greater knowledge of the Centre and its programmes in the Caribbean Region were also provided by another IDRC consultant, Ms. Barbara Gumbs.<sup>2</sup>

Key elements of the programmes adopted by the Centre to implement these plans and strategies include:

1. Bringing the Centre's Information and Communications Unit into effective operation so that it provides easy access to information for staff and the Centre's various stakeholders;
2. Developing a more rigorous understanding of Iwokrama's stakeholders including an understanding of communication structures and power structures that might affect dialogue with the Centre and influence the outcomes of programme implementation;
3. Producing regular Iwokrama Bulletins to keep key stakeholders informed about developments at the Centre; and
4. Developing and maintaining a regularly updated and locally-sourced web page.

**Information Management and Services:** Iwokrama's information management and services programme is concerned with collating both externally available information and information being generated by Iwokrama and its collaborators. External information on rain forest ecology and management is important for Iwokrama and local decision-makers so that improved policy and management decisions can be taken, as Iwokrama's own research and development

programmes are implemented. Equally, the collation, analysis and dissemination of information and lessons learnt from the Centre's programmes are fundamentally important in terms of Centre's own mandate. Key elements of the Centre's information management and services implementation strategy include:

1. Gaining access to the major bibliographical data bases on forest conservation and management as well as gathering a strategically selected collection of technical papers and reprints to support the work of the Centre;
2. Synthesising known published information and technical reports for major work areas such as biodiversity conservation and carbon sequestration;
3. Maintaining the Centre's GIS systems as an up to date database of all biophysical and socio-economic data for the Iwokrama Forest, and
4. Creating complimentary databases on various other features of the Iwokrama environment such as plant and fauna checklists, compilations of local wildlife management laws and community-based resource mapping.

**Dissemination and Training:** Dissemination and training is fundamental to both Iwokrama's information management objectives and its sustainable human development objectives. Key elements of the implementation programme for this element include:

1. Production of regular Information Bulletins to keep key stakeholders informed of activities and developments at the Centre;
2. Maintenance of an updated web page for easy access for external stakeholders;
3. Maintenance of a media outreach programme;
4. Maintenance of an active outreach programme to schools and neighbouring communities;
5. Publication of posters, information leaflets and other information media; and
6. Regular conduct of training workshops and seminars and participation in key local and regional seminars conducted by other organizations.

## **PROJECT OUTPUTS**

The period of Project support has been a difficult transition period for the Centre. When the project was initiated in August 1997, the Centre's inaugural Director General had just assumed his position and the Centre faced major financial challenges. The Centre's fundraising efforts to then, including the fund raising efforts undertaken for the Centre by IDRC, had borne little or no fruit. The Centre had only sufficient financial resources remaining in the GEF supported

preparatory project to complete the first round of flora and fauna studies and to maintain the basic field and administrative support until the middle of 1998. The Centre's technical staff was also limited to the Director General; a Canadian forester on short term CFTC contract (ending November 1997) working on non-timber forest products; and three relatively inexperienced national professionals working on short term contracts as the information specialist, communication officer and GIS specialist respectively.

New funding to provide limited term salary support for the Director General was provided by the Government of Australia in April 1997 (US \$150,000). This was followed by the approval in May 1997 of a grant of some US\$800,000 from the ITTO for operational planning in the Iwokrama Forest. These were hopeful developments and, on appointment, the Director General immediately began a major fundraising effort with promotional seminars and meetings with potential donors in Europe, Asia, Japan, the United States, Canada, Australia and New Zealand. These efforts were greatly simplified by the ready availability of support materials produced earlier with the assistance of IDRC, including the promotional video on the Centre and its programmes, the Centre's Operational Plan 1998-2002, its Business Plan and the IDRC produced summary publication "Iwokrama - Meeting the Challenge of Sustainable Management of Forests and Biodiversity".

These efforts culminated with a Donors Round Table jointly convened by the Commonwealth Secretariat, the European Union and the World Bank in Brussels in January 1998. At this meeting, funding commitments of some US \$8.3 million were received including the commitments from the Government of Australia and the ITTO noted above. Notable new commitments included commitments from small island developing states (Mauritius, \$50,000; Maldives, \$5,000) and significant commitments by the Department for International Development (DFID) of the UK (US \$5.2 million) and the European Union (US \$1.3 million). However, the majority of commitments came in the form of specific project funding for elements of the Centre's Operational Plan and the Centre currently has little or no non-project core income. Towards the end of the Project the Centre recruited a core of key international professionals in ecology, wildlife biology, collaborative resource management, environmental economics, human resource development, training and GIS with DFID support. These staff have gradually come on board during the period September, 1998 through March, 1999.

In addition to this focus on communications and outreach for fund raising purposes at the international level, considerable progress has been made in communications and outreach at the national and community level in and near the Iwokrama Forest. Major achievements under the Project are reported below.

## **Communications**

Activities in this area have been focused on bringing the ICU into effective operation, developing a better understanding of the Centre's stakeholders, production of regular information bulletins and the creation of locally sourced web page. Achievements to date include:

**Information and Communications Unit (ICU).** One of the more significant achievements since the initiation of the Project has been bringing the ICU into effective operation, first at its temporary location at the Institute for Applied Science and Technology on the University of Guyana Campus and, subsequently, at Iwokrama's new headquarters in Bel Air.

The ICU has been in effective operation since late November 1997 and was officially opened by the Vice Chancellor of the University of Guyana on January 6, 1998. The operationalization of the ICU followed the plan developed by Ms. Gumbs during her August 1997 visit to Guyana. Temporary staffing for the Centre has been provided by a local consultant pending the appointment of a long-term Information Specialist under the European Union project funding support in 1999. This position has now been advertised and evaluation of applicants is currently underway. The appointee is expected to be in post by the end of this quarter. DFID funds have further strengthened the ICU by the appointment of a full-time Information and Communications Management Research Assistant. IDRC Project funding has also been used to maintain ICU subscriptions for key databases and urgently needed technical publications to support field surveys and training activities. The unit has also attracted donations of key publications relevant to the region from the organizations such as the IUCN Secretariat in Gland. Appendix 1 summarises the current holdings.

The ICU has been widely used by a core group of students from the Biology and Forestry Departments of the University and provides quality access to CD-ROM databases and Internet services that would not otherwise be accessible to students. The unit has also provided support for a new NGO, the Guyana Nature Foundation, which has been formed by these students to promote environmental awareness focusing, in particular, on Guyana's biodiversity. The small room available at the IAST quickly became inadequate for peak usage levels and has now been replaced by a facility in the Centre's new Headquarters building, which the Centre has occupied since the beginning of August. This facility now has the capacity to support workshops of up to 35 people and facilitates much easier integration of the information and communications programme with other aspects of the Centre's work. One of the criteria for selecting rental accommodation for the new Headquarters building was access to students and other key ICU user groups. The new building is readily accessible to mini bus routes from the city and the University. Under the Project the new ICU Conference Room has been equipped with furniture produced locally from non-timber forest products.

**Stakeholder Analysis and Participatory Processes.** The Carlton James Report and the Iwokrama Operational Plan identified a number of key stakeholder groups in general terms viz, Amerindians living in and around the Iwokrama Forest, the Guyanese public, political groups and government agencies in Guyana, local and international NGOs, international development institutions, the international scientific community, forest-based industries both local and international, Iwokrama's staff, the mass media in Guyana and the Centre's Donor Support Group. However, it has also long been recognized that a more rigorous stakeholder analysis would be necessary to allow effective programme implementation and to plan the Centre's development support communications programme - see Section 5.5.11 of the Iwokrama Operational Plan 1998-2002. In addition, while considerable efforts to achieve effective stakeholder consultation had taken place at various times during the development of the Centre

and its programmes, these processes had not been well documented and there was the risk of both duplication and potential misunderstanding with new staff being appointed to implement a heightened level of activity in all programme areas at the Centre.

To begin to address these problems, Dr. Lea Scherl, a Brazilian consultant with wide international experience in collaborative forest management and community based planning of natural resources was hired for a period of six weeks to document and critically review participatory processes and to make suggestions for future approaches to developing collaborative partnerships and active stakeholder involvement in the on-going development of the Centre and the development and implementation of its programmes. During her consultancy, Dr. Scherl also provided training for the Iwokrama Rangers in participatory resource mapping and facilitated a one day national stakeholders workshop. This workshop provided substantial input for her report which has been subsequently reviewed by the Iwokrama Board of Trustees, passed through a stakeholder review process and is currently published as the first in an *Iwokrama Report Series*.

**Information Bulletins.** Prior to the initiation of this project, Iwokrama had only managed to publish two information bulletins - one in June 1996 and one in June 1997. The first bulletin was produced by the Women's Development NGO Red Thread under contract to IDRC. The second was produced by the Centre's GEF supported Communication Specialist. Regular publication of Information Bulletins was specified as one of the major task of the Communications Specialist. However, while this staff member was a qualified journalist, her background and experience did not allow her to produce newsletters of publishable quality without substantial technical editing and rewriting by the Director General or other staff.

This lack of reporting was due to the publication ability of the staff rather than to any lack of material to report. Much was going on with the finalization of the first round of flora and fauna studies, development of GIS capability, Ranger training, outreach programmes and the initiation of community-based wildlife management. This limitation was over-come with substantial input, partially funded by this project, from Dr. Graham Watkins, the former manager of the Iwokrama Fauna Surveys which the National Sciences in Philadelphia executed under contract from the GEF project (The Royal Ontario Museum was a major sub-contractor to the Academy). This has resulted in the publication of four high quality newsletters in April, July, October of 1998 and February of 1999 which were received by more than 2,000 people in 42 countries. The Bulletin is also placed on the Centre's web page to be accessible to a wider audience. The Centre is confident that with the new infusion of experienced technical staff supported by national professional interns, it will be able to maintain quarterly production of a quality information bulletin. The next edition of the Bulletin is currently in press.

**Web Page:** The Iwokrama web page was reconstructed and placed on the local UNDP sponsored Social Development Network (<http://www.sdn.org.gy/iwokrama>) under support from this project. The page can now be accessed locally and is being updated regularly. The web page is a source of information for Iwokrama visitors, researchers and stakeholders, and is used as a means of recruiting new professionals. The success of the latter is demonstrated by the large response to the advertising of the DFID positions, the page received in excess of 5,000 hits in the first

week after the positions were advertised in *The Economist*. In an average week the main site receives approximately 3,000 hits. Peak usage was 10,500 hits in November 1998.

### **Information Management and Services**

The information and management services programmes has focused on creation of databases of holdings in the ICI, regular updating of the Iwokrama GIS, synthesis of thematic studies needed for forest planning, research, dissemination and training. Towards the end of the project, as more professional staff came on board under the DFID project, the need for information networking and resource-sharing become a priority and the Project has assisted in getting this initiative underway.

**Databases:** The bibliographic data bases and technical publications held by the ICU are summarised in Annex 1. Bibliographic data bases contain information on reports on or about Iwokrama (IWOKBI); the technical publications held by Iwokrama (TECDOC); information held by related institutions in Guyana. In addition, access is provided to various CD-ROM holdings such as TREE-CD. All data bases are being continually updated and efforts are being made to proactively extend CD-ROM coverage and define linkages to external bibliographic sources accessible via the Internet.

**GIS:** GIS work to date has been largely supported by other funding sources. Nevertheless, the GIS is an important element of the overall information management system that is increasingly being used for planning, management and training. Current coverage of the Iwokrama Forest area includes an index to air photo coverage of the forest, locations of known archeological sites, reserve boundaries, topography (250ft contour intervals), geology, land systems, land units, forest types, hydrology, faunal distribution, roads, location of forest inventory lines and other lines established for research access, existing and potential gravel pits, potential forest zonings and bridge locations. The GIS coverage is currently being strengthened with forest inventory data and information from the most recent flora and fauna surveys being incorporated into the data layers of the system.

**Research Synthesis.** Iwokrama has commissioned a number of research studies over the last six months to synthesise available information in areas such carbon sequestration and economic valuation (funded by UNDP). IDRC funds are currently being used to support a consultancy with Dr. Hans ter Steege, an ecologist with 15 years experience in Guyana and the former TROPENBOS team leader. In this study, Dr. Ter Steege is summarising known biodiversity data in both the Iwokrama Forest and the Guyana in general to define more clearly the biogeographic significance of the Iwokrama Forest. This information is needed to aid forest zoning and management planning and will be a major addition to the information base needed to support training in the forest. The paper will now be submitted for peer review for publishing in the *Iwokrama Research Series*.

**Information Networking.** Head Office staffing levels have increased dramatically in the last year and will continue to rise until a core of some 20-30 professional and technical staff and 10 support staff are on board. In order to more effectively share existing resources (such as printers)

and data files the Centre has embarked upon the development of a local area network. With DFID support a Research Assistant in Information and Communications has been hired, with experience in network management. With the human resources in place, the Centre has utilized Project funds to acquire the hardware and software necessary to implement LAN, which, in a modern research and policy centre, is a prerequisite for successful information management.

### **Dissemination and Training**

Dissemination materials produced by the ICU are listed in Annex 2. These materials were prepared around specific events such as the World Environment Day celebrations. However, they have also provided a focus for training outreach with packages being sent to all secondary schools and targeted primary schools in Guyana. These materials will support a national school essay competition on the role of Iwokrama currently being negotiated with the Ministry of Education. Following comments from local users, they will be upgrade for high quality reproduction and broad distribution.

The ICU has also supported Iwokrama training workshops funded by other sources with production of training materials from the publications produced and held by the Centre. The ICU also held a national training workshop on the use of CDS/ISIS under the leadership of Mr. Dale Alexander, the systems analyst for UNECLAC in Trinidad in September, 1997. Details of the outreach programme with communities living in or near the Iwokrama Forest are summarised in Annex 3.

Dissemination activities for the project aimed to capitalise on the information gathered over the last several years about the resources of the Iwokrama Forest to ensure that this information is readily available for outreach and training activities. Iwokrama is now the best-studied site in Guyana with early identification of herpetological specimens revealing 12 species new to science. To this end, Iwokrama contracted with Hopscotch Interactive Inc. of Toronto to produce guides to the flora and fauna of the Iwokrama Forest. These guides have been compiled from Iwokrama databases on flora and fauna using custom software which formats the content so that they can be published on the Web, printed in booklets, etc, and reproduced on cd-rom. The online guides incorporate colour images, text and sounds (where available). The printed guides are formatted as pocket-sized durable guidebooks that can be printed in low volumes at an economical unit price. They are modeled on previous work done by Hopscotch Interactive for the Royal Ontario Museum.

As mentioned in the interim report (October 1998), the ICU at Head Office and the Field station were still lacking key support materials and outreach aids needed to effectively support its outreach functions and to allow outreach activities to proceed smoothly as longer term staff funded by DFID come on line. During the last few months of the Project the following items were acquired to remedy this situation: (1) a portable TV/VCR unit and generator for improved outreach presentation in remote communities, (2) purchase of overhead projectors for the ICU and Field Station, an additional slide projector for the Field Station, 2 projection screens and sturdy flip chart holders for outreach work at the ICU and with the North Rupununi communities, (3) a second computer for public Internet access, (4) a plotter for use in printing GIS maps and

Development and the International Development Research Centre, Ottawa, Canada,  
September 1977, 12pp. Plus annexes.

## ANNEX 1

### HOLDINGS OF THE ICU

#### 1. Databases and CD-ROM Holdings

##### Bibliographic databases

- IWOKBI: contains 148 records of documents on or about Iwokrama;
- TECDOC: contains 509 records of technical books, journal articles and papers.  
(In addition, a further 120 books and papers have been catalogued for data entry. This is an on-going exercise).
- IWODAT: contains information about data held by 11 institutions in Guyana.
- PRJCT: designed to hold information about projects undertaken at Iwokrama.

CDS/ISIS software has been used for the development of these databases.

##### Electronic databases - CD-ROM

- TREE-CD: a comprehensive source of forestry information covering all aspects of forestry, agroforestry and the forest industry and its products. Its bibliographic and contains abstracts; covers the period 1939 to date.
- The Electronic Resource Inventory: a searchable resource for biodiversity data management. Produced by UNEP and WCMC.
- ELADA 21: Electronic Atlas for Agenda 21 Biodiversity Volume. Produced by IDRC and Geomatics Canada, Canada Centre for Remote Sensing.
- CIFOR CD-ROM Publications No. 1: Manual of forest fruits, seeds and seedlings. Version 1.0
- A Global View of Forest Conservation. WCMC and CIFOR, 1997.

#### 2. Summary of Technical Publications.

The Classification System of the Technical Library is based on "EnVoc Multilingual Thesaurus of Environmental Terms" (UNEP, 1997). The library now has over 600 books and publications over 500 of which have been formally catalogued.

##### Categories/Sub-categories/Terms

##### Nos. In each

10000      **ATMOSPHERE**

10200      **Atmospheric processes**

10250      **Evaporation**

1

10280	Solar Radiation	1
<b>10400</b>	<b>Climatic issues</b>	<b>1</b>
10415	Climate	2
<b>12000</b>	<b>TERRESTRIAL ECOSYSTEMS</b>	
<b>12100</b>	<b>Soils</b>	<b>1</b>
<b>12300</b>	<b>Forest ecosystems</b>	<b>2</b>
12321	Deforestation	1
12328	Forest conservation	4
12360	Reafforestation	2
12364	Silviculture	3
12377	Trees	3
12384	Tropical ecosystems	2
12391	Tropical forests	15
12392	Tropical forest ecosystems	5
12398	Woodland ecosystems	1
<b>12600</b>	<b>Wetlands ecosystems</b>	<b>1</b>
12685	Wetlands management	1
<b>12700</b>	<b>Biological diversity and protected areas</b>	
12704	Amphibians	6
12706	Animal behaviour	8
12715	Biological diversity	12
12722	Birds	27
12726	Conservation of genetic resources	2
12728	Ecological balance	27
12734	Fauna	20
12738	Flora	10
12748	Invertebrates	2
12749	Vertebrates	5
12750	Land mammals	1
12752	Mammals	9
12760	National parks	1
12768	Primates	1
12770	Protected areas	9
12772	Reptiles	15

12778	Vegetation	1
12784	Wildlife	5
12786	Wildlife conservation	4
<b>12900</b>	<b>Bioprospecting issues</b>	<b>2</b>
12905	Biodiversity prospecting	1
12910	Medicinal plants	2
12930	Traditional knowledge	1
<b>14000</b>	<b>MARINE ENVIRONMENTS</b>	
<b>14300</b>	<b>Living marine resources</b>	<b>2</b>
14330	Aquatic mammals	6
14360	Fish	1
14380	Molluscs	1
<b>15000</b>	<b>ENVIRONMENTAL MANAGEMENT</b>	<b>4</b>
<b>15100</b>	<b>Resources management</b>	<b>11</b>
15114	Forest Management	36
15121	Forest policy	18
15145	Nature conservation	11
15163	Resource appraisal	3
15170	Resource conservation	1
<b>15200</b>	<b>Environmental planning</b>	<b>3</b>
15207	Development cooperation	4
15228	Environmental auditing	1
15232	Environmental impact	1
15236	Environmental impact assessment	1
15242	Environmental indicators	1
15244	Environmental policy	4
15268	Regional planning	1
15284	Sustainable development	2
<b>16000</b>	<b>HUMAN SETTLEMENTS</b>	
<b>16400</b>	<b>Socio-economic aspects of human settlements</b>	<b>1</b>

16409	Cultural indicators	4
16417	Ecotourism	1
16428	Human population	2
16433	Lifestyles	3
16470	Tourism	5
16472	Travel	4
16484	Women status	1
<b>17000</b>	<b>AGRICULTURE</b>	
<b>17100</b>	<b>Agricultural practices</b>	
17133	Biological control of pests	1
<b>17200</b>	<b>Agro-industry</b>	
17280	Forest products	26
<b>23000</b>	<b>HUMAN HEALTH</b>	
<b>23200</b>	<b>Environmentally related diseases</b>	
23224	Human disease	1
<b>25000</b>	<b>MONITORING</b>	
<b>25100</b>	<b>Environmental monitoring</b>	2
25108	Biological indicators	2
<b>25200</b>	<b>Monitoring data</b>	
25230	Forest resource assessment	4
<b>25300</b>	<b>Monitoring techniques</b>	3
25366	Sampling techniques	1
<b>26000</b>	<b>ENVIRONMENTAL LAW</b>	3

<b>26100</b>	<b>National legislation</b>	
26104	Agricultural legislation	1
26136	Forestry legislation	1
<b>26200</b>	<b>International environmental relations</b>	1
26228	Global conventions	2
26232	International standardization	1
<b>27000</b>	<b>ENVIRONMENTAL INFORMATION</b>	2
<b>27100</b>	<b>Information infrastructure</b>	1
<b>27200</b>	<b>Environmental awareness</b>	
27240	Environmental training	1
<b>27300</b>	<b>Information systems</b>	
27366	Information services	1
27370	Data processing	1
27387	Database	1
<b>28000</b>	<b>SUBJECT DISCIPLINES</b>	
<b>28100</b>	<b>Subjects</b>	
28109	Animal husbandry	1
28110	Animal physiology	1
28117	Biology	50
28119	Botany	5
28129	Epidemiology	1
28133	Forestry	6
28136	Genetics	2
28137	Geology	2
28144	Human biology	6
28145	Human physiology	5
28155	Materials science	1
28162	Molecular biology	1
28177	Zoology	7
28181	Environmental science	5
28183	Geography	1

28184	Natural history	22
28188	Philosophy	2
28190	History	1
28192	Science	5
28194	Economics	2
28195	Mathematics	1

Total: 509

## **ANNEX 2**

### **PUBLICATIONS PRODUCED BY THE ICU**

**Modifications of Web Site <http://www.sdn.org.gy/iwokrama>**

**Production of Pamphlets and Posters for Environmental Protection Agency organised celebration of World Environment Day - 5th June 1998**

#### **Pamphlets**

“What is Iwokrama?”

“The Amazon Basin - A Sea”

“Oceans, rivers, sediments and the forest”

“The Seas, Carbon and the Forest”

#### **Posters**

“What is Iwokrama?”

“The Amazon Basin - A Sea”

“Oceans, rivers, sediments and the forest”

“The Seas, Carbon and the Forest”

Distribution of “What is Iwokrama” poster and all pamphlets to all schools in Guyana

#### **Posters for TAC Conference, Ocean View, Georgetown - May 1998**

“Wildlife - A Key Community Resource”

“Community Partnerships - A Basis for Action”

#### **Posters being developed through workshops with the NRDDB**

“Cats of Iwokrama”

“Monkeys of Iwokrama”

“Forest animals, plants and people”

“What do we get from the trees and plants of the forest?”

“Endangered Species of the Iwokrama Forest”

Art competitions in place in North Rupununi to produce images for some posters.

Contract in negotiation with Fiona Reid (Mammals of the Neotropics Volume I & Mammals of Central America and SouthEast Mexico) to obtain images of large mammals.

Potential agreements in place for a continuation process with San Diego Zoo for national production of similar but modified posters.

**General Iwokrama “Partnership” Poster (in draft)**

#### **Four 12 page Newsletters**

##### **Iwokrama Report Series**

Scherl, L.M., 1999. Stakeholder Involvement and Mechanisms for Participation in Iwokrama. *Iwokrama Report Series No.1* Georgetown: Iwokrama International Centre for Rain Forest Conservation and Development.

##### **Iwokrama Research Series**

ter Steege, Hans, In Review. The Biogeographical Significance of the Iwokrama Forest: Forest Ecological and Floristic Perspectives. *Iwokrama Research Series*. Georgetown: Iwokrama International Centre for Rain Forest Conservation and Development.

### ANNEX 3

## OUTREACH PROGRAMME- 1998/1999

26th April	-	YAKARINTA:	<p>Presentation on "What is Iwokrama?" and "Summary of Community Wildlife Management Workshop."</p> <p>NB This was done for the community members and school children. Group also spoke with village Councillors. Video presentations were made to the school children and community members.</p>
27th April	-	MASSARA:	<p>Presentation on "What is Iwokrama?" and "Summary of Wildlife Workshop" was conducted for the school children. Group spoke with village councillors on "Summary of Wildlife Workshop".</p> <p>NB Did not get to speak with community members. Video presentation to school children and community members. Visit Karanambo.</p>
28th April	-	TOKA:	<p>Talk to school children "What is Iwokrama?" and "Basic Wildlife Management" made presentation on "What is Iwokrama?" and "Summary of Community Wildlife Workshop" to community members. Video presentation to school children and community members.</p> <p>NB Group members included Graham Watkins, Colin Jacobus; Livingston Hamilton; Julian Fraser and Michael Patterson.</p>
25 <sup>th</sup> May	-	ARANAPUTA	<p>Talk by Director General and staff to school. Film presentations.</p>
26 <sup>th</sup> May	-	ANNAI	<p>Discussion with village councillors and community on wildlife management. Film presentations.</p>
27 <sup>th</sup> May	-	KWATAMANG	<p>Presentation and discussion with school, councillors and community on Iwokrama and Wildlife Management. Films.</p>
1st June	-	FAIR VIEW:	<p>Presentation on "What is Iwokrama?" and "Basic Wildlife Management" to school children and "What is</p>

			Iwokrama?" and "Summary of Community Wildlife Management Workshop" to community members.
2nd June	-	SURAMA:	Spoke to school children on "What is Iwokrama?" and "Basic Wildlife Management". Made presentation on "What is Iwokrama?" and "Summary of Wildlife Workshop" to community members. Video presentation to both school children and community members.
			NB Group members included Graham Watkins; M. Jameer; Ovid Allicock and Michael Patterson.
8th June	-	APOTERI:	Made presentation on "What is Iwokrama?"; "Introduction to Wildlife Management" and "Who is a Ranger?" to school children.
			Spoke to community members on "What is Iwokrama" and "Summary of Wildlife Workshop".
			Video presentations to both school children and community members.
9th June	-	REWA:	Made presentation on "What is Iwokrama" and "Who is a Ranger?" to school children. Spoke to community members on "What is Iwokrama?" and "Summary of Wildlife Workshop". Video presentations to community members and school children.
			NB Group members included Dr. Graham Watkins; Errol McBurnie; Collin Jacobus; Julian Fraser; and Michael Patterson.
9th and 10th June	-	WOWETTA:	Made presentation on "What is Iwokrama?" and "Summary of Wildlife Workshop" to community members.
			Spoke to school children on "Benefits and Threats of Wildlife" and "Who is a Ranger?"
			Video presentation to both school children and community members.
11th June	-	RUPERTEE:	Made presentation on "What is Iwokrama?" and "Summary of Wildlife Workshops" to community members. Video presentation also.

NB The presentation on "Summary of Wildlife Workshop" was done in both English and the Makushi dialect. Zacharias made such presentation.

Group members included Dr. Graham Watkins; Livingston Hamilton; Zacharias Norman; Julian Fraser and Michael Patterson.

1 May, July 3, Sept 4	ANNAI CENTRAL	Presentations to the North Rupununi District Development Board
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### **VISITS MADE BY SCHOOLS TO FIELD STATION**

April 24 - 26, 1998	Aranaputa Primary
May 15 - 17	Massara Primary
June 5 - 7	Annai Primary
June 26 - 28	Surama Primary
July 17 - 19	Wowetta Primary
August 7 - 9	Toka Primary
August 28 - 30	Apoteri/Rewa Primary
September 18 - 20, 1998	Kwatamang
January 29 - 31, 1999	Yakarinta Primary
April 14 - 17, 1999-08-16	St. Ignatius Secondary, Lethem

### **WILDLIFE PROGRAMME ACTIVITIES 1999**

January 8,	NRDDB Meeting at Annai
January 12 - 15	Interpretation for Joan Cambridge and Evergreen Nature Studies Club at Field Station

January 16 – 21	Lethem Regional Workshop at Lethem
January 22 – 24	CIDA orientation at field station
February 5	Presentation/slide show Friends of Iwokrama GT
February 12 – 19	Indigenous knowledge of mammals workshop at field station
March 5 – 6	NRDDB meeting and workshop on Community Environmental Workers at Annai
March 17	Media meeting with Jonathan Marslowe GT
April 16	National Biodiversity Action Plan Meeting GT
April 20	Contribute to GEMCAP workshop on effects of gold mining GT
April 24 – 30	Indigenous knowledge of fish workshop at field station
May 5 – 6	World Commission of Forests Field Tour at field station
May 20 – 28	Ranger Training in Wildlife – Fish in GT
May 28	Slide presentation to Burrowes School of Arts GT
June 6 – 11	Indigenous knowledge of birds workshop at field station
June 12 – 14	Rangers interviews at field station
June 27 – July 1	Community environmental Workers (CEW) visits to Surama, Wowetta and Rupertee
July 2 – 4	NRDDB meeting and discussions of CEW progress and Institutional Strengthening Grant
July 4 – 11	CEW visits to Annai, Aranaputa and Kwatamang
July 15	Brown Bag Presentation
July 18 – August 3	CEW visits to Toka, Massara, Yakarinta, Rewa, Apoteri and Fairview
August 15 – 20	Indigenous knowledge of Reptiles and Amphibians workshop
August 21 – 27	Ranger Training Reptiles and Amphibians

**ACTIVITIES OF THE PARTICIPATORY HUMAN-RESOURCE INTERACTIONS  
PROGRAMME 1998-1999-08-16**

1998

July 1 – 9	Ranger training in Resource Mapping, then practice in the field in Fairview and Surama
August 12 – 13	Apoteri Resource Mapping
August 14 – 16	Rewa Resource Mapping

1999

March 15 – 18	Kurupukari, PHRIA Training Workshop for Rangers and Makushi Research Unit
March 19 – 23	Massara PHRIA
March 24 – 25	Fairview PHRIA
April 17 – 20	Toka PHRIA
April 21 – 22	Surama PHTIA
May 15 – 17	Annai Central PHRIA
May 18 – 20	Kwatamang PHRIA
June 19 – 21	Rupertee PHRIA
June 22 – 24	Wowetta PHRIA
July 18 – 19	Apoteri PHRIA
July 20 – 21	Rewa PHRIA