IWOKRAMA

NEWS WIRE 2011

In this Issue:

C. E. O.'s Welcome:

Dear Reader,

We are pleased to present NewsWire – highlights of the Centre's activities for 2011. There was much progress during the period. Our science and monitoring programme continued to produce valuable information on changing weather patterns whilst tourism services maintained its good performance despite the still floundering international economy. We continued to support Guyana's Low Carbon Development Strategy through national workshops on climate change. We encourage our friends to get involved in our work and to continue to support us.

Sincerely yours,

Dane Gobin

Eco-Tourism

Every year, the number of international and local visitors at Iwokrama increases, so the potential for ecotourism continues to grow. During this past year, Iwokrama has seen a rise in visitors from the United States, a reflection of the addition of a direct flight service from New York to Georgetown. Improvements to the tourism product include more tourist activities to choose from, enhanced hospitality services and new marketing strategies. It is Iwokrama's aim to become the eco-tourism landmark in Guyana.

Iwokrama is unique in that it does not only cater to eco-tourism, but it is also home to a thriving Amerindian community, an active research institution and hosts a leading experimental sustainable timber operation. Where else can guests experience the pleasure of the rainforest and its biodiversity, meet the local Amerindian traditional forest guardians and find out about cutting-edge scientific research, conservation strategies and world-leading business models? Guests can also be assured that the income generated by tourism activities is helping Iwokrama build and share its unique 'model for the world' strategy for the conservation and sustainable use of tropical rainforests to the world.

Iwokrama River Lodge Site Improvements

The Iwokrama River Lodge caters for all types of eco-travellers. Guests can stay in one of the eight luxurious cabins or the brand new hammock accommodations currently being built. Three of the cabins have just been refurbished with new roofs and work is in progress to build new accommodations for researchers. The bar located in the Fred Allicock Roundhouse is also being revamped and currently offers a broad range of cold drinks to help tourists cool off from the tropical heat. The new developments will bring a new and warm approach to the tourism product at Iwokrama.

The Iwokrama Field Station and River Lodge

Iwokrama Tours

Although there are several tours already offered within Iwokrama's vast forest, we continue to explore and identify new destinations. We hope that offering a greater and more varied choice of activities will enhance guests' experiences and will encourage visitors to stay longer or return to visit us again.

View from the top of Turtle Mountain

Turtle Mountain continues to be one of our top tourist destinations and plans are being put in place to design a more catered experience for guests wishing to stay overnight at the well-equipped Turtle Mountain satellite camp.

With over 500 species of birds in the Iwokrama forest, bird watchers continue to be rewarded with sightings during their stay. Vibrant bird species are a highlight on our Indian Island sunrise river tour, boat cruises at dusk, lodge trail tours and walks around the compound.

Iwokrama's Canopy Walkway continues to be a popular day trip for Iwokrama guests. From its height of up to 30 meters, the walkway serves as an excellent viewing point for canopy birds and monkeys, best seen at dawn or dusk.

Turu Falls, at the foot of the Iwokrama Mountains in the middle of the reserve, is a small but spectacular waterfall nestled in an idyllic location. Visits to Turu Falls, currently only accessible during the dry season, are being re-designed to offer full day and overnight trips. Overnight trips for the more adventurous traveller will be offered in a simple tarpaulin hammock camp.

Turu Falls

The 'Cock of the Rock' trail, close to the Corkwood ranger station, offers budding birders the chance to see this spectacular bird in its home environment. Due to the fragility of the species we are, however, currently restricting visits to the site to a maximum of five guests at one time.

Kawe Amazonica Butterfly Farm - Conservation through Fluttering Jewels

In 2006 the first butterfly farm in Guyana - Kawe Amazonica Butterfly Farm - was established by the University of Warwick, Kew Gardens and the National History Museum in England, together with colleagues from the University of Guyana, the Environmental Protection Agency, the Ministry of Amerindian Affairs, the North Rupununi District Development Board (NRDDB) and Iwokrama in Guyana.

The Kawe Butterfly Farm

Kawe Amazonica is nestled on a 60 metre square plot in the Iwokrama forest on the titled Machus Amerindian land of Fair View Village. The site houses all of the essentials for farming butterflies, acts as a training facility and showcases some of the magnificent local butterflies.

The farm operates with a team of four local community members and one supervisor, all of whom are managed by a team of representatives from Fair View Village, the NRDDB, and Iwokrama in an effort to provide equity to all stakeholders involved.

Butterflies from *Lycaenidae*, *Ithomiidae*, *Pieridae*, *Brassolidae*, *Heliconidae*, *Morphidae*, *Nymphildae* and *Papilionidae* are on display in the butterfly house with representatives from the latter six families in commercial production - pupae are sold to butterfly exhibits in temperate countries.

Heraclides thoas

Kawe Amazonica will continue its efforts in conserving tropical rain forests and look forward to serving its customers in the 2011. For further information kindly contact: Dr. Raquel Thomas (rthomas@iwokrama.org).

Iwokrama Sustainable Forest Management Programme

Amazon Forest Inventory Network:
New Partnership in Monitoring the Impact of Climate Change on the Amazon

In 2010, the Iwokrama Forest became part of the RAINFOR project that partners with researchers and institutions across the nations of the Amazonian region in the establishment and maintenance of permanent forest sample plots. Started in 2000, RAINFOR has established a systematic framework for long-term monitoring of this region, which holds more biodiversity, water, and vegetation carbon than any other region on the planet.

A total of six plots (one ha each) out of Iwokrama's 13 permanent and experimental sample plots, which were established in 2008 with support from the International Tropical Timber Organisation (ITTO), are now part of the RAINFOR's system of plots throughout the Amazonian region. By compiling and comparing data and studies from these plots on a regional scale, a whole new level of information becomes available; information that provides vital insights into the mechanisms underlying the current responses of Amazonian ecosystems to climate and the possible future of Amazonia under global climate change scenarios.

Gymnastic feats to measure tree growth

This has especially become poignant as undisturbed tropical forests, remote from areas of deforestation or other significant human influences, have been undergoing unexpected changes. Long-term monitoring of tropical forest plots by international researchers indicates that tree populations experienced increased

rates of mortality and recruitment ("turnover") in the latter part of the last century. These plots also show for the tropical Americas that the basal area and biomass of mature forests increased over the same period, suggesting a sink for atmospheric CO_2 in Amazonia of 0.3 - 0.7 Pg C per year.

The aims of the RAINFOR project are to:

- Relate current and recent forest structure, biomass and dynamics to local climate and soil properties
- Understand the extent to which climate and soils will constrain future changes in forest dynamics and structure
- Understand the relationships between productivity, mortality, biomass, and biodiversity
- Explore how changes in climate may affect the biomass and productivity of the Amazon forest as a whole, and inform basin-scale carbon balance models
- Examine variability of tree biodiversity across Amazonia, and its relationship to soils and climate
- Train a set of young Amazonian scientists in methodologies for monitoring forest biomass, dynamics, and carbon processes

Experimental Plantations

Iwokrama's silvicultural system is based on a polycyclic system of forest management and regeneration, with only a few trees selectively cut every 60 years within a forest management unit. This mimics natural tree falls, leaving the forest stand intact with trees at different stages of their growth cycle. However, continuing its programme of research and development into sustainable forest management, the Centre has begun trials of replanting indigenous species in log markets after closure.

The species being replanted in these areas not exceeding 0.2 ha (40m X 50m) per log market are Kabukalli (Goupia glabra), Crabwood (Carapa guianensis) and Brazilian Cedar (Cedrelinga sp).

Kabukalli (Goupia glaba) two years after planting

Science News

Iwokrama Research Strategy

The world's remaining tropical forests are finally being recognised as giant eco-utilities that provide critical but undervalued ecosystem services on a global scale including rainfall generation, climate regulation, biodiversity maintenance and water storage. Areas most vulnerable to rapid and irreversible degradation are at the borders of tropical rainforests, such as forest-savannah boundaries and edges of agricultural, road or mining areas.

The Guyana Rainforest

Iwokrama has therefore launched a new integrated research framework (see box on next page) and is spearheading a new cross-disciplinary science agenda to help the world find new ways of using a rainforest without losing it. By researching the links between climate, vegetation, and ecosystems in the Iwokrama Forest and the bordering savannah region, Iwokrama hopes to be able to provide a better understanding of how such frontier rainforests may be impacted by environmental and climatic changes. Iwokrama plans to use its knowledge to design and implement new

The Rupununi Savannah

mitigation and adaptation strategies.

In an effort to help diversify local community economies to enhance and retain their economic, social and cultural capital, Iwokrama's new research program will also seek to promote alternative livelihoods while

evaluating the contribution of ecosystem services to the overall financial value of the forest.

April 2009 saw the launch of Iwokrama's new Science Committee, appointed to advice on Iwokrama's future research directions. It consists of experts and scientists from Guyana, the Caribbean, North and South America, and Europe and whose expertise spans community work, biodiversity, physical sciences, economics and political frameworks.

In March 2010, Iwokrama also appointed a new Resident Scientist, Dr. Isabella Bovolo, specialising in hydrology and climate change impact assessment, and launched an exciting new, state-of-the-art hydro-climate and geochemistry monitoring program with support from the Inter-American Development Bank in association with Newcastle University (UK).

Iwokrama Research Themes

Environmental Resilience

- How resilient are tropical environments, like Iwokrama, to local and global change?
- What impact will different land use practices have on biodiversity and ecosystem services?
- What are the likely consequences of environmental change for human livelihoods and their resilience?
- What are the linkages and feedbacks that contribute to resilience?

Ecosystem Service Values

- What are the values of Iwokrama's ecosystem services?
- Are these values changing, and if so, how and why and what are the consequences?
- What mechanisms might provide incentives to optimize the values of ecosystem services across a range of scales?

Human, Social and Cultural Capital

- What values can be derived from past cultural practices and expressions, and how can these values be best invested for current communities?
- What is needed to develop sustainable forest-based entrepreneurships drawing on ecosystem services, and how might communities contribute to and benefit from their development?
- How can local communities participate in the governance and economic benefits of ecosystem services?
- How can sustainable forest management build and shape human and social capital?

New Hydro-Climate Monitoring Program

One of the aims of the new hydro-climate monitoring program is to gather important new climate baseline datasets to help us to understand and quantify components of the water cycle and to characterise general and extreme weather patterns (including rainfall) at timescales ranging from a few minutes or hours to seasonal, inter-annual or annual levels. The Iwokrama forest happens to be strategically located between the two annual wet-seasons found along the Guyana coast (rainforest) and the one annual wet-season found inland (savannah).

Automatic weather station

State-of-the-art meteorological instruments, consisting of several rain gauges and two fully automatic weather stations, have therefore been positioned along a transect from the Iwokrama forest in the north through to the savannah in the south to enable us to monitor the climatic transition and to help us understand how climate change and environmental pressures may affect the climate, vegetation, ecosystem and people's livelihoods in the area.

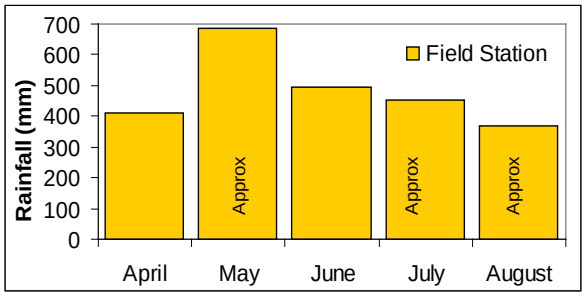
Stream water level monitoring and geochemical analysis

A program of hydrology and geochemistry monitoring in various streams will also help us to characterise the hydrological response of the landscape in different environments and to understand the impacts of sustainable forest management.

Monitoring stream velocity

Establishing a baseline understanding of the climate and water cycle is vital for sustainable forest management, assessments of forest ecosystem services in support of payment mechanisms, biodiversity, carbon capture and storage, ecology, and impacts on human populations. The research complements existing research programs on biodiversity and integrated tropical forest management whist creating new links with key issues such as tropical forest hydrology, carbon and nutrient cycling and climate change.

The first results of the program are already proving to be exciting.

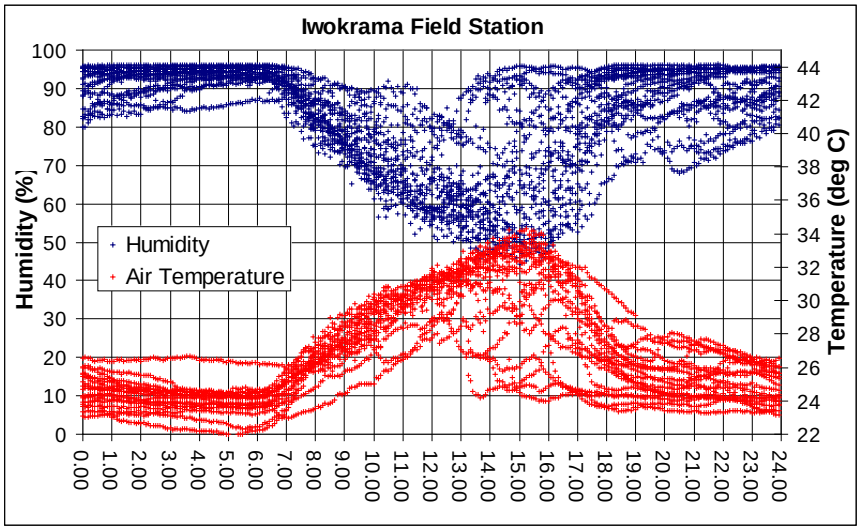


Rainfall at the Field Station, 2010

Recent strategic investments and achievements have positioned Iwokrama to consolidate and further develop its profile as an international leading centre of excellence in integrated tropical forest research and management.

Iwokrama invites the wider research community and potential funding bodies to engage in the new and emerging opportunities at Iwokrama.

For general information on Iwokrama, visit www.iwokrama.org. For specific questions regarding the new research framework and opportunities for engagement, please contact Dr. Isabella Bovolo (isabella.bovolo@ncl.ac.uk) or the Chair of the science committee, Professor Thomas Wagner at Newcastle University (Thomas.wagner@ncl.ac.uk).



Project Corner

Jaguar Conservation in the Iwokrama Forest

Wildlife conservation and management programmes are dependent on key information relating to population ecology, movements, habitat use, and increasing the impacts resulting from anthropogenic pressures on landscapes. Information of this type is essential if conservation objectives relating to species protection and reduction of human-species conflict are to be achieved.

The Jaguar is one species for which there is a lack of information relating

Jaguar

to relative abundance and ecology in comparison to other large felids around the world. To achieve effective conservation and management of biodiversity, resource owners, users and or managers need to be regularly informed on the status of targeted species, i.e. those species that are threatened or vulnerable to human induced factors, such as over-harvesting and/or habitat destruction, such as the Jaguar. Iwokrama with financial and technical support from WWF Guiana has begun a study to assess the effectiveness of the current conservation management strategy within the Iwokrama Forest using the Jaguar as the key indicator species.

The Iwokrama Forest, an area of 3,716.8 km^2, is an opportune site for controlled research into the ecology of Jaguars. It is an important protected area that forms part of the rainforest corridor surrounding Amazonian and Guiana Shield Forests. Jaguars are listed as rare and endangered (CITES). General consensus amongst biologists acknowledges the Jaguar as a landscape indicator species of healthy ecosystems due to its role as a top land predator. The Iwokrama's faunal impact monitoring programme currently focuses on understory birds and bats as the primary indicator species for mapping changes and anthropogenic impacts on the forest

ecosystem. The inclusion of the Jaguar and other observed terrestrial species by utilizing camera photo-traps and line transects will complement the current faunal impact assessment programme.

Overall, information from the study will feed into decisions for adopting good natural resource management practices for biodiversity conservation. By focusing conservation efforts on the Jaguar, many other species that share the same habitat and/or vulnerable to the same threats will also be protected.

The study will employ camera photo-traps, which have become an important tool for monitoring terrestrial rare and cryptic species such as Jaguars. This is a particularly useful technology which, in combination with appropriate mark-recapture experimental design and analysis, permits abundance and population density estimates for species that are individually identifiable, species richness and diversity, as well as providing information on ranging behaviour (home range estimate), activity patterns, and dispersal. With long term use, camera photo-traps enable monitoring of changes in populations over time and thus can serve as an early warning system to detect changes in number, composition and relative abundance beyond what is background noise.

The study will serve to enhance national and global Jaguar conservation efforts by providing data on populations and home range requirements of the species. The information on population and densities will also serve as the baseline data for future assessment of the health of the species which has become especially poignant due to the proposed upgrading of the Pan-American Highway that connects Guyana and Brazil, and bisects the Iwokrama Forest for approximately 73km. Additionally, in recognition that the Iwokrama Forest is nested within a bigger wetlands ecosystem of the North and South Rupununi wetlands, the research team will extend the study beyond the boundaries of the Iwokrama Forest into these wetlands, provided that sufficient funding becomes available. For additional information, please contact Hemchandranauth Sambhu (hsambhu@iwokrama.org) and Anand Roopsind aroopsind@iwokrama.org.

En-compass

Samantha Taylor, Kate Young, Nicola Black, Aron Mazel & Gerard Corsane

Newcastle University, UK

En-compass is a European Commission-funded project involving communities from four countries across four continents, including China, England, Guyana and Kenya, working together to identify and safeguard threatened heritage resources. Despite its global dimensions, the project is very much a 'grassroots' initiative which aims ultimately to improve "access to local culture and to protect and promote cultural diversity, especially cultural heritage in imminent danger".

The project aims to develop a series of international 'building-block' exchange and training opportunities that will benefit organisations and people from the participating countries and beyond. Furthermore, the action will have two important added values by supporting the development of sustainable heritage tourism and encouraging the fight against climate change.

Newcastle

The participants first met at the Newcastle (UK) workshops in October 2010 and this was a great opportunity for everyone to meet and exchange interests. During the workshop we spent an intensive week learning about the practice of "heritage", what it involves and the terminology used to describe certain elements and how these relate to each country. These discussions challenged us to look at different ways of working due to the different cultures within the group and therefore the different opinions and realise the sensitive nature of heritage that comes with it.

From discussions surrounding heritage, what the issues are in retaining it, how to record it and how to manage it, there seemed to be similarities across each of the countries. Multiculturalism, globalisation, the introduction of the internet allowing for easier access to things that were once out of reach, technological advances, economy, funding, lack of education, rural-urban migration, and politics are all reasons why heritage is starting to fade and can be evidenced in all countries.

The Newcastle workshop gave us a good starting block from which to begin our work in Kenya. So far, the team of 12 participants have travelled to and spent time researching in Mombasa, Kenya, alongside host

organisation Centre for Heritage Development in Africa, and Guyana, South America, with hosts Iwokrama International Centre for Rainforest Conservation and Development. The team is now due to spend time travelling around the island of Hainan Province, China.

Cassava processing in Kenya

During the research trip to Mombasa and Guyana the team has been privileged to spend time with the indigenous people of each country and to learn a little more about how they live their lives and how they manage to retain their traditions alongside the modern world. Through engaging in local music, dance, and art we have been able to understand local intangible heritage and see the similarities that are present within our own countries' cultural heritage and to find examples of endangered cultural heritage that needs preserving.

"This is great, I love to be among the elders and listen to them with great respect. I ask that they continue to do this great work. Your culture and language is your identity..... The things I see here like the cassava we have back home and many others, so coming here means a lot to me and I will remember this all my life."

Glendon Allicock, Guyana participant

We interacted with local communities and existing cultural heritage projects in a number of ways. Through discussion, video, talks from guests, field trips and even participation of the arts. I would say that each of us gained a unique and valuable insight into indigenous and modern Kenya and Guyana.

Research trip to the Kaya

Kenya

The high points for most participants were the visits to the Kaya (maybe not the climb up the hill in the midday sun perhaps...) the visit to the Bombolulu Centre and the time spent at the Little Theatre.

Visiting the Kaya and spending time talking with the elders of the Mijikenda people allowed us to understand how they live and gave a small insight into their rituals and beliefs. We joined in with their dancing and followed their rituals of entering the kaya - sitting down outside the kaya entrance with our thoughts before entering with bare feet ....did I mention the midday sun!! ;) Joking aside, this is a memory that I know will stay with the group for a long time.

"The most memorable impression that I got from the visits during the two weeks was the tour to Bombolulu Workshop. I witnessed people with handicaps organized together to produce many handcrafts, carvings, and cloths. I believe that it's the best way to help the disabled people to raise their confidence and capabilities to achieve hopes and focus in their lives. It is also the best way to magnify the strength and courage of the African people"

Lin Kai Yao, China participant

The Little Theatre gave us a much needed chance to interact with musicians, artists and dancers as we split into groups to discuss many issues relating to Mombasa and contemporary culture, how the Little Theatre is helping artists to realise their goals and how art and culture is viewed by the outside world. Many similarities came out of the discussions in terms of opportunities and problems but it gave a chance for all of us to pass on knowledge from our own countries and look at the similarities and differences that occur in a positive light.

The Little Theatre

"My best experience was in Bombolulu where people with disabilities, men and women have been empowered through training to earn a living instead of begging along the streets"

Jack Obonyo, Kenya participant

Local arts and crafts in Bombolulu

Guyana

The workshop in Guyana was invaluable in terms of gaining an insight into Surama and how the Makushi people are self managing their own tourism business, allowing them to conserve the rainforest and their land and traditions in the way only they know how. Makushi people describe the rainforest as their 'supermarket'

which perhaps will make us all think a little bit more about where we live and the choices we make. Spending time with Glendon and his family certainly made us feel like we were getting back to nature and it was a real privilege to be hosted by them.

"Making cassava bread was a key point of the trip for me – after triumphantly flipping the bread without breaking it (an art in itself, you could say, ha ha!) we were able to look back at the day's work and feel that we had contributed to the routines of the Makushi lifestyle and taken in a great deal of knowledge along the way"

Sam Taylor, UK participant

During the trip we were able to spend time with the Makushi people, alongside Benita learning and watching the hammock weaving whilst talking about the traditions that surround these practices. This felt an extremely beneficial way of working as we were able to gain information whilst also trying our hands at the craft - which had we not done so would not have allowed us to see the skill and technique that goes with it. Similarly, with the cassava bread making, we spent a whole day working with the three representatives from Surama and worked through the whole process from pulling out the plants from the cassava farms to actually cooking the cassava bread and farine....and eating it, of course!

Concluding comments

During these two workshops we gained an enormous amount of knowledge and feel that each country team has gone away with a more informed point from which to continue the research into identifying examples of endangered intangible cultural heritage. I think that the resulting exhibition will be one of diversity and interest to many people.

Of course I cannot end this piece without mentioning the En-compass team being stranded in the rainforest

Musicians at work

due to the bus breaking down ... by the way Kate saw it again on her way back, and guess what? It had broken down again! From Jack being frightened of the Jaguar (and pretty much everything else actually), to Kate serenading us with the violin.....oh yes and the delightful tunes from Nadia's phone...from The Lion King, wasn't it?....a peaceful night's sleep was had by all -- not! I think the welcome breakfast the next morning after we were saved will never be forgotten. Yum Yum! Thanks, Glendon!

Capacity Building in Regions 8 and 9. Communities on Climate Change, the Role of Forests and Sustainable Forest Management

Community Workshops - Capacity Building

Iwokrama and Conservation International Guyana (CIG) have been conducting a series of community workshops addressing climate change and the role of forests in Regions 8 and 9. The objectives of the workshops are to help build local capacity in understanding the causes of climate change, the role of forests in mitigating climate change, and supporting national initiatives on reducing deforestation and forest degradation in Guyana. These workshops are funded by the Gordon and Betty Moore Foundation (GBMF).

Participants at a community workshop

Iwokrama and CIG partnered with local communities, non-governmental organisations including the National Toshaos Council and government agencies including the Office of Climate Change, Guyana Forestry Commission, Guyana Geology and Mines Commission, Ministry of Amerindian Affairs, Guyana Lands and Surveys Commission, and the Regional Democratic Council of Regions 8 and 9, to deliver the workshops.

Twenty-four facilitators representing local communities, Amerindian Advocacy Groups, other NGOs and government agencies were trained (Training of Trainers Workshop, 2009) to complement the Iwokrama-CI team and have begun propagating workshops in additional communities. Training was aimed at helping to build capacity on issues related to the science of climate change, the role of forests, sustainable forest management, ecosystem services, and collaborative management. The local facilitators have assisted in the execution of sessions in Annai, Lethem and Maruranau (Region 9), and Mahdia and Kato (Region 8) along with small informal sessions at other locations. The Executive Committee of the National Toshaos Council was also trained in April, 2011. Many more

sessions are planned for participants which include representatives of village councils, women's groups, youth groups, environmental groups, farmers, teachers, businessmen, and other residents.

The workshops are delivered with the aid of a community manual authored by CIG and Iwokrama. Two thousand copies of this book titled, 'Climate Change & the Role of Forests: A Community Manual' were produced and are being distributed. A training manual, along with teaching aids such as posters and flash cards, have also been developed in the form of a toolkit to enhance the trainers' ability to deliver their material and facilitate learning.

Handing over of community manuals and other materials

Community Communication Assistance

Iwokrama, as part of the project, 'Capacity Building to Support National Initiatives in Reducing Emissions from Deforestation and Degradation in Guyana', distributed various communication equipment to communities. Communities received complete radio sets, batteries, solar controllers, and solar panels. Recipients of communication equipment included Shea, Aranaputa, Wowetta, Karanambu, Massara, Rupertee, Kwaimatta, Kwatamang, Yakarinta, Kwatata, Yupukari, Maruanaua and Kato Communities, and the Bina Hill Institute.

GIS Equipment Contribution

Through funding from GBMF, Iwokrama was able to donate GIS equipment to the University of Guyana Geographical Information Systems (GIS) Research and Teaching Laboratory.

This facility is to be used by researchers from the University of Guyana and its partner agencies and for the practical teaching component of the related courses offered by the School of Earth and Environmental Sciences and the Faculty of Agriculture and Forestry along with the Centre for the Study of Biological Diversity (CSBD) management and utilization of biodiversity related data.

Establishment of a Forestry Research Network for ACP Countries (FORENET)

FORENET is a project funded by the European Commission and the Secretariat of the African-Caribbean-Pacific (ACP) countries, aiming to undertake collaborative, applied forest-related research that will produce results directly applicable for the sustainable management of humid tropical forests.

The ACP states involved in the project include Cameroon, Central African Republic, Republic of the Congo, Democratic Republic of the Congo, Equatorial Guinea, and Gabon in Central Africa, Fiji, Papua New Guinea, the Solomon Islands, and Vanuatu in the Pacific and the republics of Guyana and Suriname in the Caribbean. Iwokrama is the central hub for the Guianas.

FORENET will help facilitate links between forest research organisations in the selected countries by supporting local research organisations and enabling them to collaborate effectively on common forest research domain and programs. The strengthened networking process will facilitate transfer of results between applied research initiatives and will contribute to building effective tools to monitor sustainable development and to test criteria and indicators of sustainable forest management under different socio-economic and ecological conditons.

Addressing Chainsaw Milling in Ghana and Guyana through Multi-stakeholder Dialogue

Chainsaw milling is the on-site conversion of logs into lumber using chainsaws. Signficant and increasing amounts of timber in the tropics for local markets are produced using this simple technology. For many local and indiginous forest-dependent communities, chainsaw milling is an important source of income.

This European Union-funded project (2007-2012), executed by Tropenbos International through local partners, the Forestry Training Centre

Incorporated, and Iwokrama, aims to find sustainable solutions to the problems associated with the production of lumber for local timber markets by involving all stakeholders in dialogue, information gathering, and the development of alternatives to unsustainable chainsaw milling practices.

The project's overall objectives are to reduce poverty and promote viable livelihoods in forest-dependent communities, reduce illegal logging, and promote the conservation and sustainable management of tropical forests in Ghana and Guyana.

Visiting Researcher News

Explorations of Amphibian Diversity in the Selectively Logged Iwokrama Forest

Monique Hölting & Raffael Ernst

University of TU Berlin and Seckenberg Museum, Germany

The predominant use of tropical forests as a source for timber is causing high pressure on these complex ecosystems.

Only little is known about the actual effect of logging and whether sustainable forestry can be an adequate strategy to mitigate possible negative impacts.

Our project aims to fill that gap by studying the impact of logging on amphibian communities.

Amphibians are suitable for such a study because they are very sensitive to environmental changes and most amphibians have much shorter reproductive cycles than large mammals or trees, for example. This results in faster detectable changes in population size and structure with changing environmental conditions.

Iwokrama's controlled timber harvesting scheme gives us the exceptionally rare opportunity to conduct a true pre- and post-impact study. Twenty-four transects are set up within three different areas, including sites that will not be harvested, sites that were harvested in 2007, and sites that have been assigned for harvesting within our study period. For three years all sites are being monitored for frogs at day and nighttime during the rainy season. So far, 49 different frog species have been found in the study area.

Ecosystem Services in Guyana: The Importance of Spatial and Temporal Scales in a Social-ecological Context

Lisa Ingwall-King

Royal Holloway University, UK

Hi, I am Lisa Ingwall-King from Sweden and I am here in the North Rupununi undertaking research on ecosystem services for my Ph.D. at Royal Holloway University of London. The research is being undertaken with the support of Iwokrama, Conservation International, the Guiana Shield Initiative, and the North Rupununi District Development Board, all of which have provided information and support for the research proposal.

Rewa Lodge

I arrived in the middle of October last year and have been working in Kwatamang, Annai, Yupukari, Toka, and Rewa in Region 9. I am interested in finding out the perceptions of people from different backgrounds on ecosystem services -- how they value them and what affect does scale have on this valuation? I have conducted interviews and focus groups with a wide range of people from these communities. Each has been undertaken with the aim of recording their opinions and learning more about the ecosystem services the communities use, where they are located, how they are connected and which areas are critical for these services to continue to be healthy.

In addition, I am undertaking field mapping with community members based on the outcomes of the interviews and focus groups. We have more to do here and I am looking forward to spending more time on the Rupununi river in the dry and wet seasons. A secondary aim of the research is to establish the status of the Ecosystem Services. To do this we will be undertaking water sampling and some fish studies, again with community help.

Community News

Samantha James

Iwokrama supports the development of conservation leaders though support to the wildlife clubs and primary schools of the North Rupununi. Two meetings are hosted annually for wildlife club members during which participants come together to learn about monitoring, environmental stewardship as well as hone their social and management skills over two days of dynamic and interactive mini workshops.

Giant River Otter at Karanambu Lodge

Training in monitoring Giant River Otters at Karanambu Ranch as well as birds at the Canopy Walkway were completed with wildlife club members. Another step in understanding and taking an active role in resource management, this is a fun and interactive opportunity for skills and capacity building with youth.

Wildlife club members are active in conservation and management and played a key role as community researchers monitoring and patrolling endangered giant river turtles in the Rupununi over the past two years.

Outreach and research assistants, Micah Davis and Russian Dorrick, are often in the field meeting club members and school children to follow up on lessons learned at the wildlife club meetings and to assisting clubs to preparing for future annual wildlife festivals.

Wildlife club members examining bats

The festival is a celebration of environment and culture. Over 250 youths from 16 communities usually attend. This year's theme was "Our Culture, Our Nature, Our Life". The wildlife festival was celebrated at Bina Hill from April 16 to 18, 2011.

Iwokrama Archiving Project

Penny Baker & Samatha Joseph

The Archiving Project started early in 2010 with the arrival of the Commonwealth archive specialist, Penny Baker.

Penny and the new laptop computer

Penny was responsible for writing the archive policies to set standards for management, access, and disposal of information.

An inventory of documents from the last 20 years of Iwokrama has been carried out and has uncovered a large amount of valuable historical information. Cataloguing and scanning of the early records has started and a large number of records were uncovered that were not needed for permanent preservation. Penny therefore set down some retention and disposal procedures.

An access database (HDMS - Heritage Document Management System) for archiving the documents of Iwokrama was acquired and information is presently being uploaded. A new scanner, useful for digitising hardcopy materials selected for inclusion in the archive has also been aquired.

Storage has improved tremendously as the Georgetown office radio room has now been converted into an archive room. The old, torn magazine boxes that once housed the files are now replaced with new enclosed storage boxes.

A small reading area is available at the Georgetown office and newly constructed shelving will accommodate a new research library at the field station.

Please contact Samatha Joseph (sjoseph@iwokrama.org) for further information.

Reading area

Wildlife Feature

Jabiru Stork

The Jabiru Stork (Jabiru mycteria) is the tallest (122 -140 cm) flying bird in South and Central America and belongs to the stork family, Ciconiidae.

Jabiru Stork

These stately white-bodied birds wear a black beak and neck and a bright red "collar" at the base of their necks. They can be seen on sandbanks of rivers and in swamps of the Iwokrama forest and North Rupununi, and are a common sight in flooded savannah lands in the wet season, picking their way with their long legs looking for fish, amphibians, frogs and molluscs. Ungainly on the ground, they rattle their beaks when alarmed and take off with great swooping strides. Once in the air, they are graceful flyers with a wingspan between 230 and 280 cm.

Males and females look alike and nesting takes place at the beginning of dry season, when ponds and wetlands are drying and food for young is abundant. Jabiru Storks build large nests of sticks in emergent trees on river banks or near wetlands, often in Silk Cotton (Ceiba) trees, and will often return to old nests year after year. Two or three fluffy heads of young storks can often be seen poking their heads from rough nests and then venturing out on to the limbs of the home tree. Once fledged, they will forage on their own, their red collars becoming darker and more vibrant as they reach maturity.

Jabiru nest

Meet the Staff

Interviews by Emma Burgess Webb

Iwokrama Volunteer Feb-Mar 2011

Russian Dorrick

Russian is a currently a trainee Ranger at Iwokrama and in charge of wildlife club activities run at the Bina Hill Research Institute in Annai. Before joining Iwokrama he was working as a librarian. He first became interested in nature and the environment through his local wildlife club in Yupukari region 9. He likes working at Iwokrama as he enjoys getting involved in the various activities and being in the forest. In the future, Russian would like to learn more about Iwokrama and travel.

Shannon Beaty

Shannon was a tourism intern at the Iwokrama field station (February to July, 2011). She lives in Vancouver, Canada and attended the University of Victoria where she studied geography and business. She enjoys various activities including kayaking, yoga, music, and painting. Whilst working in the tourism department she hopes to learn how eco-tourism is run from a management level and be part of a team that can help initiate positive development and change for Iwokrama.

The Iwokrama International Centre

The Iwokrama International Centre is an international not-for-profit organisation, governed by an International Board of Trustees and managed by a professional team of around 70 permanent staff in Georgetown and at the Iwokrama River Lodge and Research Centre at Kurupukari. Iwokrama's patron is HRH The Prince of Wales.

The Iwokrama International Centre was established in 1996 under a joint mandate from the Government of Guyana and the Commonwealth Secretariat to manage the Iwokrama forest, a unique reserve of 371,000 hectares of rainforest, "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 forest and its research centre are unique, providing a dedicated site in which to test the concept of a truly sustainable forest – where conservation, environmental balance and economic use can be mutually reinforcing.

Iwokrama intends to become the leading international authority on development of models for commercially sustainable, practical and community-inclusive conservation businesses based on tropical forests and their natural assets.

Iwokrama's mission is to promote conservation and the sustainable and equitable use of tropical rainforests in a manner that will lead to lasting ecological, economic and social benefits to the people of Guyana and to the world in general by undertaking research, training and the development and dissemination of technologies.

Contact Us

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