IWOKRAMA INTERNATIONAL CENTRE FOR RAIN FOREST CONSERVATION & DEVELOPMENT

PUBLIC SUMMARY: FOREST MANAGEMENT & MONITORING

August 2025

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The Iwokrama Forest has been certified for Forest Management in accordance with the requirements of the Forest Stewardship Council™ A.C. using the Interim National Standard for Guyana (FSC-STD-GUY-01-2020 Guyana Natural Forests EN)

Public Summary: Forest Management and Monitoring

What is Iwokrama?

The Iwokrama International Centre for Rain Forest Conservation and Development (*Iwokrama*) is an organisation created through the Iwokrama International Centre for Rain Forest Conservation and Development Act, Act No 7 of 1996, and an Agreement between the Government of Guyana and the Commonwealth signed in November 1995.

The Government and people of Guyana made available the 371,000 hectare[1] Iwokrama Forest to the international community to show how tropical forests can be conserved and used wisely for ecological, social and economic benefits to local, national and international communities. The Iwokrama International Centre is responsible for the management and conservation of the Iwokrama Forest.

The Centre's main work programmes include community relations, conservation, research and science, monitoring, and business development – sustainable timber harvesting, eco-tourism and training.

The mission of *Iwokrama* is,

> *"To promote the conservation and the sustainable and equitable use of tropical rain forests 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."*

Governance

The International Board of Trustees (IBoT) has ultimate responsibility for the management of *Iwokrama*. It determines the policies and priorities of the Centre, appoints the Chief Executive Officer (CEO) and plays a substantial role in fund-raising. The IBoT also makes strategic decisions, sets operational administrative systems for the Centre's CEO and management team to use in managing the Iwokrama River Lodge and the Georgetown Office. These activities include donor and management reporting, budgeting, procurement, accounting and administrative support and production of annual audited accounts.

[1] GIS mapping shows the actual size of the Iwokrama Forest to be 371, 681 hectares.

Key Milestones in the History of the Iwokrama International Centre

Year	Milestone
1989	• President HE Hugh Desmond Hoyte's offer of 371,681 hectares of Guyana's intact rain forest to the international community for research accepted at the Commonwealth Heads of Government Meeting in Kuala Lumpur, Malaysia.
1993	• US$3M secured from Global Environment Facility for legal establishment, demarcation and research and institutional development
1994	• First Field Station built, led by Macushi leader, Robert Frederick Allicock who became Iwokrama's first Field Station Manager
1995	• Iwokrama Agreement signed by President of Guyana H.E. Dr Cheddi Jagan MP and the Commonwealth Secretary General H.E. Chief Emeka Anyaoku
1996	• Iwokrama Act passed unanimously by the Parliament of Guyana • Iwokrama supported the development of the North Rupununi District Development Board (NRDDB)
1997	• First Tourists visited the Iwokrama Field Station
1998	• US$10M secured from the International Tropical Timber Organization (ITTO), British Department for International Development (DFID), the Canadian International Development Agency (CIDA) and the European Commission to support the Centre • 11 Community based wildlife clubs formed in Apoteri, Fair View, Annai Central, Rewa, Yakarinta, Massara, Toka, Surama, Wowetta, Kwatamang, and Aranaputa in response to a community-led request to grow capacity in natural resource management.
2000	• HRH Prince Charles, Prince of Wales became Patron of Iwokrama
2001	• Forest zoned into Sustainable Utilization Area (SUA) and Wilderness Preserve (WP) after extensive consultations with Indigenous community representatives • International Wildlife Workshop hosted to address issues and lessons learnt impacting community members and resources, south to south and south to north. • First Wildlife Conservation Festival hosted in Annai. Two hundred and forty-five children from all over the country showed an appreciation for and celebrated Guyana's rich wildlife. • Initiation of Citizen Science monitoring project with 14 communities of the North Rupununi.
2002	• An Amerindian representative of the local North Rupununi communities appointed for the first time to Iwokrama's International Board of Trustees. • State of the art Canopy Walkway installed in the Iwokrama Forest • Supported development and programming of Radio Paiwomak: 97.1 FM, the first community radio station in Guyana.
2003	• Programme restructured to meet shortfall in global realignment in donor support focus, leading to 40% reduction in operational costs. • Iwokrama develops first draft manual on Intellectual Property Rights

	• Iwokrama completes first management level inventory of the Sustainable Use Area
2004	• Turtle Mountain Satellite Camp opened • A new entomopathogenic species discovered *Stilbella iwokramensis (Ascomycotina, Hypocreales*) - a new beetle pathogen species distinguished from other fungi of the genus Stilbella.
2005	• Collaborative Management Agreement signed with Local Communities for management of the Iwokrama Forest. • HRH Prince Charles, Prince of Wales renews patronage of Iwokrama International Centre
2006	• Fair View Village received land title to 21, 950 hectares of the Iwokrama Forest; chose to remain within the boundaries of the Forest. Special collaborative management and benefit-sharing agreements signed. • 111 persons from across Guyana trained as rangers, tour guides, protected area management and collaborative management. • Airstrip built in Fair View Village within the Iwokrama Forest
2007	• First phase of model low-impact sustainable timber harvesting operation started in the Iwokrama Forest
2008	• Iwokrama Forest received Forest Stewardship Council™ (FSC™) Certification for Forest Management • Innovative Ecosystem Service Agreement signed with private sector company of the United Kingdom – the first in Guyana • First in-land fisheries management system (the Arapaima Management Plan) developed with the communities of the North Rupununi for Guyana. Formally gazetted by the Ministry of Agriculture • Iwokrama launched innovative inclusive governance arrangement for its Canopy Walkway with shareholder participation by local communities and local and international private sector operators. • Iwokrama designated Regional Focal Point Organization as part of an EU-funded project to establish a forestry research network in 12 countries spanning the Africa Caribbean and Pacific region. • Iwokrama received funding from the Gordon and Betty Moore Foundation in the United States to support national initiatives and build awareness on climate change, REDD+ and natural resources management • Iwokrama establishes network of Permanent Sample Plots (PSPs)
2009	• Iwokrama Science Committee formed; International Resident Scientist recruited. • State of the art climate and hydrology monitoring equipment installed in the Iwokrama Forest and its environs. • Iwokrama produced the only known Volume and Decay study on tropical forests. • Iwokrama played major role in developing the community manual on Climate Change and the Role for Forests which includes the contributions from communities, NGOs and Government (accessible online and in 6 languages).

	• Groundbreaking agreement for climate and forest partnership between Government of Guyana and Kingdom of Norway signed by President H.E. Bharrat Jagdeo and Norwegian Minister of International Development and the Environment, Erik Solheim, in the Iwokrama Forest. • Iwokrama sponsored only non-governmental public forum on Guyana's Low Carbon Development Strategy (LCDS) as a 3-part series. • Iwokrama trained over 400 community, private and public sector representatives on climate change and the role of forests. • Iwokrama's brainchild, the Wildlife Festival included in the national calendar of tourism events. • Iwokrama sub-contracted by the Centre for International Forestry Research (CIFOR) to define the state of Forest Law, Enforcement and Governance including the role and level of illegal logging in Guyana • Visitor numbers surpassed 1,000 for the first time • Iwokrama International Centre presented its Sustainable Forest Management programme to the World Forestry Congress in Buenos Aires, Argentina • Two new species discovered – Crabwood: *Carapa akuri* –belonging to the family Meliaceae, considered endemic to Central Guyana – a new genus and species of lungless caecilian: *Microcaecilia Iwokramae* (Synonym *Caecilita Iwokramae*)
2010	• HRH Prince Charles, Prince of Wales renewed his patronage of the Centre for an additional five years. • First results of the Iwokrama climate monitoring programme presented at the Commonwealth Forestry Congress in Scotland
2011	• Iwokrama in partnership with the Global Canopy Programme and the NRDDB launched innovative community Monitoring, Reporting and Verification (MRV) system – the first in Guyana • 10th Wildlife Festival held- growth in conservation leadership seen as a measure of success and commitment
2012	• Iwokrama won the Community Benefit Award from the Caribbean Tourism Organisation/TravelMole Sustainable Tourism Awards • A new species of lizard was discovered - *Gonatodes timidus* • Comprehensive biodiversity level inventory completed in Wilderness Preserve.
2013	• Agreement signed with a development Bank to support the second phase of its low impact model timber operation in the Iwokrama Forest. • New species of poison dart frog discovered in the Iwokrama Forest: *Allobates amissibilis* (Latin for "*that may be lost*"). • Government of Guyana injected US$900,000 over the period July 2012 – July 2013.

	• Three indigenous persons complete Master's degrees in heritage education at Newcastle University supported under the "Encompass" heritage preservation project.
2014	• Agreement signed with a private sector company to conduct sawmilling operations in the Iwokrama Forest. • Iwokrama hosted Biodiversity Corridors Workshop in collaboration with United Nations Development Programme, World Wildlife Fund and Convention of Biological Diversity at the Iwokrama River Lodge • Government of Guyana injected an additional US$600,000 to support core activities. • Iwokrama launched new tourism dedicated website – www.Iwokramariverlodge.com • First Indigenous Film Festival held in Georgetown, Guyana, COBRA Project, partnership Iwokrama, NRDDB and Royal Holloway University, UK. • Travelling Exhibition in collaboration with Ministry of Culture, Encompass Project, partnership Iwokrama with NRDDB and Newcastle University, UK.
2015	• Iwokrama River Lodge awarded the TripAdvisor 2015 Certificate of Excellence • Commenced second Phase of its sustainable timber harvesting and sawmilling operations in partnership with Farfan and Mendes Ltd. • Iwokrama and Rupununi Communities rescued and relocated twenty-seven (27) Arapaima (*Arapaima gigas)*.
2016	• The 20th Anniversary of the passage of the Iwokrama Act celebrated. • Memorandum of Understanding and the Collaborative Management Agreement with the North Rupununi District Development Board reviewed and renewed. • Showcased model forestry operations in UK at Commonwealth Secretariat in February • His Excellency Brigadier David Granger, MSS. President of the Cooperative Republic of Guyana launched National Tree Day at Iwokrama River Lodge on October 1st • Iwokrama Forest achieves FSC™ Certification for Forest Management on October 14th with support from the German Government under GIZ implemented Caribbean Aqua-Terrestrial Solutions Programme. • FSC™ Certified timber accepted into the UK in accordance with the UK Environment Agency's procurement guidelines in October with shipment of Greenheart by from the Iwokrama Forest. • Iwokrama featured with 8 others as examples of good governance practices in the Amazon Region in a regional report titled "*Implementation of the Program of work on Protected Areas 2011-2015* Amazon *Biome Region"* presented at the 13th COP of the Convention on Biological Diversity, held in Cancun, Mexico in December. IV International Congress on Biodiversity of the Guiana Shield was held at the Arthur Chung Convention Centre, Georgetown, Guyana from August 8 - 12, 2016 with support from UNDP, Guiana Shield Facility, WWF, CI-Guyana, UG, GOG. Special session celebrating 20th Anniversary of Iwokrama held at this forum. • Key visits to the Iwokrama Forest:

	– His Excellency Brigadier David Granger, MSS. President of the Cooperative Republic of Guyana (June) – Hon. Moses V. Nagamootoo, MP, 1st Vice President and Prime Minister of the Cooperative Republic of Guyana (July) – Rt. Honourable Baroness Patricia Scotland QC. Secretary General of the Commonwealth of Nations (July) – HRH Prince Henry of Wales (December) • Iwokrama received – EPA's Green Award for Environmental Leadership (June). – Guyana Tourism Authority's Award People's Choice for Responsible Tourism (September). • Airstrip in the Iwokrama Forest extended to 4,200 feet and completely resurfaced. • Memorandum of Understanding forged with the Tropical managed Forests Observatory (TmFO), (an international network of institutions interested in assessing the consequences of logging and human impacts on the ecosystem services furnished by tropical forests).
2017	• Signed a new 5-year agreement with Farfan and Mendes Limited (FML) for sustainable timber production for period of 2019-2023. • Secured funding from ExxonMobil to revise and update the Centre's Science and Research Programme • ACP Secretary General Dr. Patrick. I Gomes visited Iwokrama office and interacted with the staff. • Led a MARCH FOR SCIENCE to celebrate Earth Day under the theme "*Environmental and Global Literacy*". • Celebrated World Science Day on November 8th by hosting a public lecture by Mr. Andrew Mitchell, Founder& Director of the innovative Global Canopy Programme in the United Kingdom. • Updated and reprinted the '*Guide to the Mammals of the Iwokrama Forest'*. • New species to science: a beetle found in Iwokrama – *Lycomorphon Iwokrama* sp. n. is proposed as new to science and the genus is recorded from Guyana for the first time.
2018	• New Science Committee formed – Inaugural meeting was held in February. • Funding received for construction of a Medical Centre from the Embassy of Japan, Trinidad • Updated and reprinted CATS of Iwokrama poster, previously done in Collaboration with NRDDB. • 'Guide to the Birds of the Iwokrama' developed, 2nd in series • Partnered with Fair View village to make the first three-dimensional (3D) map of a community in Guyana. The process was documented in a video and shared nationally

	• Partnered with Hon. Sandra Granger, First Lady of the Cooperative Republic of Guyana and ExxonMobil launch first STEM robotics programme in the North Rupununi
2019	• Thirty-year (30) anniversary of President HE Hugh Desmond Hoyte's offer of Guyana's intact rainforest for conservation celebrated. • 'Guide to the Plants of Iwokrama' developed, 3rd in series • 'A Makushi Song Book' celebrating 2019 as the United Nations Year of Indigenous Languages • Guyana's first 'Legal Field Guide for Natural Resource Practitioners' completed • Memorandum of Understanding with Guyana Tourism Authority signed • Hydrology and Biodiversity research started under the newest phase of the Iwokrama Science Programme • Memorandum of Cooperation for Monitoring signed with Apoteri and Rewa, renewed with Surama • Key visits to the Iwokrama Forest: – First Lady of the Cooperative Republic of Guyana Mrs Sandra Granger (May) launches her Robotics Training programme with Kurupukari Primary School (Fair View Village) students in collaboration with Iwokrama, Stem Guyana and ExxonMobil
2020	• Agreement signed with a new private sector company to conduct sawmilling operations in the Iwokrama Forest • Three staff members graduate with Master of Science Degrees under the ECCAM project implemented in collaboration with Fiji National University (FNU), the University of Guyana (UG) and the University of the West Indies (UWI) with funding from the European Commission • Collaborated with the Center for International Forestry Research (CIFOR) to publish a report on "The context of REDD+ in Guyana: Drivers, Agents and Institutions'. https://www.cifor.org/knowledge/publication/7627/ • Commenced population assessments of prioritized Amazonian species: yellow-footed tortoises (*Chelonoidis denticulatus*), three (3) species of caiman - the spectacled caiman (*Caiman crocodilus*), smooth-fronted caiman (*Paleosuchus trigonatus*), Cuvier's dwarf caiman (*Paleosuchus palpebrosus*); and the lowland tapir (*Tapirus terrestris*). This would inform the development of Management Plans to enable sustainable management. of these species • Memorandum of Understanding with Environmental Management Consultants signed • Memorandum of Understanding with the Hydrometeorological Service signed • First Iwokrama Webinar Science Series launched in collaboration with University of Guyana and NCN • New Medical Centre completed, with support from the Embassy of Japan, Trinidad.

2021	• Iwokrama celebrates 25 years since the passage of the Iwokrama Act of 1996 assented by President HE Dr Cheddi Jagan • Memorandum of Understanding and the Collaborative Management Agreement with the North Rupununi District Development Board renewed • Memorandum of Understanding signed with Guyana Wildlife Conservation and Management Commission • Memorandum of Understanding signed with Guyana Marine Conservation Society • Partnered with the Lyell Centre and Heriot-Watt University in the UK to develop an immersive Virtual Reality experience. • Partnered with Heriot-Watt University on the BOOGIE project to assess the carbon content of the Essequibo River. • Launch of Educational video project including videos on Protected Areas, Iwokrama and a Biodiversity Series. • Greenville Zoo Project grant to support birding and education in Fair View Village • Key visits to the Iwokrama Forest – HE Jane Miller, British High Commissioner
2022	• Iwokrama awarded "Best in Sustainable Tourism" by the Guyana Tourism Authority • Iwokrama River Lodge selected one of the Top 100 Green Destination Stories with the story "*Protection of the Natural and Scenic Views of the Iwokrama Forest*" • Iwokrama Forest retained FSC™ Certification for Forest Management after 5-year re-assessment audit. • Iwokrama and NRDDB Collaborative Management Agreement renewed • Long Service Awards presented to o Colin Jarvis for 25 years of Service o Tomica Bess for 20 years of Service
2023	• Collaborative Management Agreement with Fair View Village renewed. • Iwokrama Centre received the Good Travel Seal Certification for its tourism operations. • Agreement signed with a new private sector company to conduct sawmilling operations in the Iwokrama Forest • Memorandum of Understanding signed with Protected Areas Commission and National Toshaos Council • Iwokrama partnered with the NRDDB to host Wildlife Club Festival • Three new tours launched- Essequibo Rapids Cat Run-Fishing, Turtle Mountain and Turu Falls Hike, Yogic Meditation • Iwokrama partnered with the Guyana Tourism Authority and EMC Inc to host a tourism course – "An Introduction to Tour Guiding and Interpretation" at the Iwokrama River Lodge • Iwokrama provided media training for 7 individuals, including Radio Paiwomak Staff and NRDDB members, to improve local broadcast content

	• Iwokrama teamed up with the Guyana Forestry Commission to host The Gender and Forest Group workshop to reveal research results on the relationship between gender, forests and sustainable livelihoods • Iwokrama Forest retained its Forest Stewardship Council™ (FSC™) Certification for Forest Management • Key visits to the Iwokrama Forest – Letitia Wright, known for her starring roles in Black Panther and Black Panther: Wakanda Forever – CC Pounder, Guyanese born international actress known for roles in several movies and series including NCIS and The Shield – Hon. Vickram Bharrat, Minister of Natural Resources – Dr. Gonzalo Biribet, Director of Harvard's Museum of Comparative Zoology – HE Frans Timmermans, Executive Vice President of the European Commission. – European Commission's Deputy Director General of International Partnerships, Ms. Myram Ferran
2024	• HRH King Charles III re-engaged the Centre to continue as Patron. • Iwokrama partnered with Apoteri and other concerned stakeholders to rescue and relocate more than 60 Arapaima (*Arapaima gigas)*. • Key visits to the Iwokrama Forest – Prime Minister of Trinidad and Tobago, Hon. Dr. Keith Rowley – Minister of Natural Resources, Hon. Vickram Bharrat, – Minister of Tourism, Industry and Commerce, Hon. Oneidge Walrond – Minister of Amerindian Affairs, Hon. Pauline Sukhai – Former President of Colombia, Ivan Duque Marquez (with Concordia group) – Minister of Labour, Hon. Joseph Hamilton
2025	• MoUs Signed with BritCham (British Chamber of Commerce), Sophia Point Rainforest Research Centre and Woodlands Hospital • First in Guyana - FSC™ Certification for Ecosystem Services- Biodiversity Conservation and Recreational Services. • New Publications – Conservation Canvases: Hand-painted Banners from the North Rupununi Wildlife Club Festival 2023 – Board Game: Wildlife Wonders – Explore with the Giants of El Dorado

	• Wildlife Club Festival held in Rupertee Village, North Rupununi (Iwokrama/NRDDB) under the theme "*Innovate, Preserve, and Protect: The Future of Our Culture and Nature"* • Chair, Mr. Fareed Amin, and CEO, Mr. Dane Gobin met with Secretary-General of the Commonwealth, the Rt. Hon. Shirley Ayorkor Botchwey. • Key visits to the Iwokrama Forest – Chairman of the Board, Mr Fareed Amin – Prime Minister Hon. Brigadier (Ret'd) Mark Anthony Phillips, M.S.S. – Minister of Public Works, Hon Juan Edghill – Chief of Defence Staff, Brigadier Omar Khan, – Minister of Sustainable Development and Climate Change, Belize, Hon. Orlando Habet, – PAHO/WHO Representative to Guyana Dr. Kim Dixon – Permanent Representative of Rwanda to the UN H.E. Mr. Martin K. Ngoga – Guyana Ambassador to the European Union, Saisnarine Singh – French Ambassador to Guyana, H.E Nicolas de Lacoste

Site Location

The Iwokrama Forest is located at the centre of Guyana which is positioned in the Guiana Shield. To the west of the Forest is the Pakaraima Mountain Range that extends through western Guyana and eastern Venezuela and to the east are the inselberg and highland formations scattered through central-east Guyana, Suriname and French Guiana. The famous Rupununi Savannahs which become an important wetland ecosystem once a year during the rainy season, lie south of the Iwokrama Forest.

Figure 1: Site Location

Area Description and Land Use

The Iwokrama Forest Area is generally well drained by creeks which flow into two major river systems – the Essequibo and Siparuni Rivers. The flat to undulating terrain varies in elevation between 50 and 1000m and consists largely of small sand and loam plateaus, terraces and mildly inclined valleys dissected by a few waterways. The soils of the Kurupukari Sandy Plains and Terraces landform are composed principally of quartzite sand with varying amounts of clay and loam.

The Iwokrama Forest (371,681 hectares) has been zoned into two distinct areas: the Wilderness Preserve (WP- 187,175 ha) and the Sustainable Utilization Area (SUA- 184,506 ha). The WP has been set aside as a biodiversity reserve and control site, wherein all activity will be severely restricted. The SUA is available for multiple uses including Iwokrama's sustainable businesses:

- Sustainable Timber Harvesting,
- Sustainable Tourism,
- Learning Services (Research and Training)

The SUA has been further divided into five compartments for forest management planning purposes (Map 2). Fair View's titled area lies within the Essequibo compartment of which, approximately 15,400 hectares are dedicated for sustainable forest management (Map 3).

The Net Operable Area (NOA) is the area selected for timber harvesting purposes. The NOA is located in the sustainable use area and excludes non-commercial forest types, which are mostly located in two major land areas: the Pakatau Hills area in the north-west and the Maipa Mountains area in the far south. The other excluded areas are: special use reserves; river and stream buffers; road buffers; slopes greater than 40%; and small, isolated inaccessible areas. The NOA accounts for 29% of the entire Iwokrama Forest.

Biodiversity of Iwokrama and North Rupununi Area

The Iwokrama Forest and the neighbouring North Rupununi wetlands are extraordinary ecosystems which include a range of habitats - more than 200 lakes, 1,000-metre-tall mountains, lowland tropical rain forests, palm forests, seasonally flooded forests and savannahs. The area is reputed to have the highest species diversity relative to its size in the world.

The Iwokrama Forest and North Rupununi Wetlands also contain the largest number of fish and bat species in the world for an area of its size.

Faunal diversity of the Iwokrama Forest

- 476 species of birds
- 130 species of mammals
- 86 species of bats
- 140 species of reptiles and amphibians
- + 400 species of fish

Floral diversity: There are 9 distinct forest types in the Iwokrama Forest.

- The largest forest type covers 33% of the forest - mixed greenheart, black kakaralli and wamara forest.
- Around 20% of the forest is mixed greenheart, sand baromalli and soft wallaba forest
- About 16% of the forest is mora, manicole, crabwood and trysil forest
- 15% of the forest is mixed low stature forest
- 7% of the forest is manicole, kokerite and soft wallaba palm forest
- The remainder of the forest is less than 5% each of wallaba, dakama, muri scrub and liana forest.
- Botanical surveys of the Iwokrama Forest have found over 1,250 species of plants. However, the total number expected for the area is likely to exceed 2,000 species with additional work in highland areas.

Seven new species to science have been discovered in the Iwokrama Forest.

- 2004 - A new entomopathogenic fungi species discovered *Stilbella iwokramensis* ((Ascomycotina, Hypocreales).
- 2009 - Two new species discovered
    - Crabwood: *Carapa akuri* –belonging to the family Meliaceae, considered endemic to Central Guyana
    - a new genus and species of lungless caecilian: *Microcaecilia Iwokramae* (Synonym *Caecilita Iwokramae*)
- 2012 - A new species of lizard was discovered - *Gonatodes timidus*

- 2013 - New species of poison dart frog discovered in the Iwokrama Forest: *Allobates amissibilis* (in Latin "*that may be lost*").
- 2014 - A new species of broad-nosed bat *Platyrrhinus guianensis* is described based on molecular and morphological data. (Endemic to the Guiana Shield)
- 2017- New species to science: a beetle found in Iwokrama – *Lycomorphon Iwokrama* sp. n. is proposed as new to science and the genus is recorded from Guyana for the first time.

The People

Populations South of the Iwokrama Forest:

There are over 7,000 people in the 20 communities linked to the Iwokrama Forest. About 91% of this population is ethnic Amerindian: 77% Makushi, 11% Wapishana, and 3% Arawak. Five percent of households are self-described as 'Mixed,' (Head of Household is half Coastlander/half Amerindian) and 3% of households as 'Coastlander,' (African or East Indian descent).

Populations North West of the Iwokrama Forest:

Most Amerindian communities in Region 8 are Patamona, four communities Itabac, Chiung Mouth, Taruka and Kanapang are Makushi. These are located to the northwest of the Forest, in upland savannah areas, about a week's walk north from the Siparuni River, the north-western boundary of the Iwokrama Forest. The entire population of Region 8 is under 10,000 persons, (Ministry of Amerindian Affairs, 2019). About one-third of this total is located at distances of a week's walk to the Iwokrama border at the Siparuni River.

Socio-Economic Context

The Iwokrama Act of 1996 provides for the protection of indigenous rights, traditional access, and participation of associated communities in its activities. Iwokrama currently partners and works with the 21 communities within and south of the Iwokrama Forest through the umbrella organisation – the North Rupununi District Development Board (NRDDB)[2]. The relationship is cemented with a Memorandum of Understanding and a Collaborative Management Agreement between the two entities.

Fair View Village, the only village within the boundaries of the Iwokrama Forest, has legal ownership through title of 21,950 hectares of the Forest since 2006. The community has opted to remain as part of the Iwokrama Forest and a collaborative management agreement was signed with Iwokrama International Centre in 2006, most recently renewed in January 2023. The other communities lying south of the reserve (See Map 1) in the North Rupununi are located in the savannah area and maintain traditional access to the resources of the Iwokrama Forest. The population of the 20 communities is 6,000-8,000, with Fair View having 442 persons in 88 households (Iwokrama Annual

[2] The NRDDB is an umbrella organisation that represents the interest of the communities in the North Rupununi.

Social Monitoring Report 2024). In the North Rupununi, health care is limited; most of the villages are equipped with health centres and community health workers. There is also a doctor based at the Annai Health Centre.

Communities are governed and administered by Village Councils, District Councils, Regional Democratic Councils, and regional representatives of Ministries of Amerindian Affairs, Agriculture and Public Health.

Iwokrama's relationship with local communities is based on equal partnerships rather than the more traditional relationships–patron-client or senior partner-junior partner. Iwokrama benefits from the knowledge, skills, and support of local communities and in return, the communities are partners/shareholders in the management and conservation of the Iwokrama Forest.

While the Guyanese people, in general, are recognized as the legal owners of the Iwokrama Forest, the indigenous peoples who live in, and around, the Iwokrama Forest maintain a claim of ancestral domain and land rights.

Association with Iwokrama

Local people benefit from the Iwokrama Forest though legally maintained rights to use forest resources. The local people also represent a major human resource base from which the Iwokrama Centre draws for the management of the Iwokrama Forest.

Iwokrama has a strong partnership through the North Rupununi District Development Board (NRDDB) with the 21 communities and involves people in management planning and development activities. There is also a community representative on the Iwokrama International Board of Trustees (IIBOT) and on the Iwokrama Science Committee.

The innovative collaborative management agreement with the NRDDB sets out guidelines on how the Iwokrama Forest should be managed between the Iwokrama Centre and the communities; this was reviewed and renewed in 2016 and most recently renewed in October 2024. A separate collaborative management agreement was renewed with Fair View Village in January 2023. Fair View Village has a separate CMA due to their status as titled-land holders within the Iwokrama Forest.

Sustainable Business Development and Iwokrama

To fulfil its mission of ecosystem conservation, *Iwokrama* must address the issues that affect conservation and wise use of tropical rainforests. To do so, *Iwokrama* is developing model forest-based businesses that

- are sustainable and profit-making
- include private sector and local communities
- are compliant with national laws and regulations
- produce and market low-impact and high-value products and services
- use environmental best practice methods
- are repeatable

Iwokrama will have achieved its mission when investors and local people can work together to achieve a single set of objectives which guarantees long term enhancement of livelihoods of people through the conservation and sustainable development of natural resources.

Sustainable Tourism

Tourism is *Iwokrama's* oldest business, the first official tourist was welcomed in 1997 and as visitor numbers have continued to grow since then, the tourism plant has been expanded to include a range of accommodation types, a main administrative building, a boat dock, a canopy walkway (at Iwokrama's second tourism site- Atta Lodge) and several other amenities. A Forest Conservation User fee of US$15 per person (one-time charge) is paid by all visitors who over-night. A portion of this fee is given to the NRDDB for use in community development.

Activities include: Bird Watching, Canopy Walkway visits, Guided Nature Walks, River Tours, Hikes to Turtle Mountain, visits to Kurupukari Rapids and Petroglyphs, Fishing and Nocturnal Wildlife Spotting.

In 2024, 1,558 people visited the Iwokrama River Lodge. The most popular mode of arrival at the lodge was driving from Georgetown (1,016 visitors), followed by flying to Fair View airstrip from Georgetown (537 visitors), the remaining guests travelled from Surama or Lethem. The most popular tours were the Turtle Mountain Hike, the Kurupukari Rapids and Petroglyphs, nearby Nature trails and the Iwokrama Canopy Walkway.

Learning Services

Iwokrama continues to provide services for researchers as well as students, locally and internationally. Operation Wallacea Expeditions which commenced in 2011 but was discontinued in 2020 due to the Covid 19 pandemic. This program contributed to long term data collection under the Iwokrama's Monitoring Programme. Earth Expeditions, Miami University, Ohio expeditions on 'Local Wisdom and Conservation', which also commenced in 2011 continue to visit Iwokrama and

Surama Village annually, marking the 14th year of this partnership. New partnerships were developed with Purdue University for Fungi studies, a gap area for Iwokrama and Indiana University East which has interest in conservation and traditional livelihoods. In 2024 a new engagement with Drexel University which also partners with the Academy of Sciences of Philadelphia will produce research and training collaborations from 2025. Repeat students also include the Ministry of Natural Resources Apprentices who have been coming to Iwokrama annually since 2017 except 2020. Students from the University of Guyana continue to visit from the Forestry, Biology and Tourism faculties. Iwokrama also continues to host visits from North Rupununi schools, the North Rupununi Wildlife Clubs and the Bina Hill Training Institute.

Research

The third phase of the Iwokrama Science Programme commenced in May 2019 and has since supported (i) a hydrological study on *'invisible carbon'*, carbon in water, and (ii) research on the long-term impacts of reduced-impact logging on the biodiversity of bats and birds in the Iwokrama Forest by Arianne Harris, a PhD student from the University of Guyana. Ms. Harris has since completed her research and graduated with her Doctorate in 2025. (iii) The re-census of 18 Permanent Sample Plots (PSPs) and (iv) a biodiversity survey in part of the Wilderness Preserve. Drexel University is collaborating with Iwokrama on developing some proposal for future research.

Fungi Study (2021)

Purdue University colleagues returned in 2021 with assessment of fungi in the Iwokrama Forest. The 2019 visit produced a photographic (basic) guide. Additionally, Guyanese PhD student at Purdue, Dillon Husbands, has discovered a fungus that infects the highly prized, endemic and important timber species, Greenheart (*Chorocardium rodiei*). Dillon's field studies continued in 2021 and collected some specimen which are potentially new species. She has since graduated with her PhD and is currently with the University of Guyana.

Fisheries Study (2022)

This project '*Insights into the historical biogeography, population structure, and conservation genetics of Neotropical River systems'* was led by PhD candidate Thomas Morgan, University of Michigan in collaboration with University of Guyana and Iwokrama. The study is expected to lead to a better understanding of the drivers of freshwater fish diversity in the Guianas. Also, further, to research the historical connections between large rivers systems in the Guianas compared with neighbouring river systems in Northern South America.

Frog related Study (2022)

This Master's degree project *"Distribution and prevalence of chytrid fungus (Batrachochytrium dendrobatidis) on anurans at the Iwokrama Forest"* was led by Mark Bastian of the University of Guyana. The aim was to investigate the factors that affect the distribution and prevalence of chytrid fungus (*Batrachochytrium dendrobatidis*) on anurans at the Iwokrama Forest.

Hydrology Study (2022)

Iwokrama in collaboration with the Lyell Centre, Heriot Watt University commenced a study in 2022 to look at invisible carbon in the water ways within the Essequibo River at transect points within the Iwokrama Forest Reserve as part of a global project, The Boogie Project, led by PhD candidate Elizabeth Cowling. Collections continued through 2023 and 2024.

Arthropods Study (2023 and 2024)

Researchers associated with the American Museum of Natural History conducted Arthropod research along with Rangers in the Iwokrama Forest in September 2023 and May 2024. This overall project aims to conduct research on arthropod orders regarding the systematics of Arachnida, Hymenoptera, Odonata, Diptera and other insect groups with the aim of increasing the sampling body from Guyana.

Fisheries Study (2024)

Iwokrama supported this project titled *'Student Research in Freshwater Ecosystems at the Epicenter of Neotropical Biodiversity, Guiana* with Stephen F. Austin State University, Texas A&M University and University of Guyana.

This project builds on successful previous and ongoing collaborations that helped to identify gap areas for field research. Previous collaborations discovered and described new aquatic species, identified areas of conservation concern and documented impacts of mercury contamination in freshwater organisms.

Silicon Study (2024)

Iwokrama supported this project titled *'Is silicon a key player in the Wood Economics Spectrum?'* by Guyanese researcher Mahendra Doraisami, University of Toronto. The research sampled 26 wood species in the Iwokrama Forest across two forest types.

Biodiversity Study (2019-2024)

Dr. Arianne Harris, during her collaborative study with Iwokrama assessed the long-term impacts of Iwokrama's sustainable harvesting operation on faunal diversity, mainly birds and bats, of Iwokrama Forest. She published two journal papers from this research entitled '*Variable shifts in bird and bat assemblages as a result of reduced-impact logging revealed after 10 years'* and '*Use of logging roads by terrestrial mammals in a responsibly managed neotropical rainforest in Guyana'*.

Sustainable Forestry

On the 7th of July 2005, the International Board of Trustees (IBOT) of the Iwokrama International Centre for Rain Forest Conservation and Development (Iwokrama or the Centre),

> "*RESOLVED that the Centre's management will pursue timber operations within the Iwokrama Forest Sustainable Utilization Area to harvest not more than 20,000 cubic meters per annum through a business partnership involving local communities and the private sector*;".

The Board also resolved that the Centre pursue the principles of Forest Stewardship Council Certification and for the Iwokrama Forest to be FSC™ certified as follows.

> *"Decision 13.5. Trustees of the Board of the Iwokrama International Centre RESOLVED to adhere to the principles and criteria of the Forest Stewardship Council™ noting that they were consistent with the mission, objectives and core values of Iwokrama."*

Additionally, on the 11th of July 2013, the IBOT resolved to allow Iwokrama to harvest their Maximum Annual Cut (MAC) of 36,000 m^3/year, as mandated by the Guyana Forestry Commission (GFC).

In January 2014, the Iwokrama International Centre started Phase II of its sustainable timber harvesting operation. *Iwokrama* is using the results of the research and experience it acquired in Phase I of its operations in areas such as forest dynamics, inventories, community engagement and forest certification to improve operations and forest management in Phase II.

In 2018, Iwokrama renewed the existing agreement with then Private Sector Partners for five years, however, this agreement was terminated in April 2020 due to restrictions associated with the COVID-19 pandemic. Iwokrama subsequently advertised and a new partner, Evergreen Forest Products Inc. (EFP), was selected and signed an agreement in May 2020.

In December 2022, EFP chose not to renew their agreement with Iwokrama, and Hupkes Wijma BV—one of its major customers—acquired its assets and signed a new agreement with Iwokrama in February 2023. HW-BV has since registered a local company – GTI Wood Products to conduct harvesting and sawmilling on their behalf. GTI Wood Products also received their CoC Certification in March 2023. HW-BV has hired Deoraj Singh Sawmilling and Logging Ent to conduct harvesting activities in the forest.

Iwokrama and its partners, will harvest a maximum of 1,560 ha per year, in compliance with GFC regulations (less than 0.5% of the Iwokrama Forest) under a very selective harvesting system so only a few stems per ha will be removed and no large gaps are created in the forest canopy. The operation will employ best practices in forestry including a strict "**no-log export**" policy and the use of Reduced Impact Logging (RIL) and Directional Felling (DF) techniques.

An Environmental Impact Assessment (EIA) for the Sustainable Timber Operations was prepared in accordance with the Environmental Protection Act of 1996. The Environmental Protection Agency (EPA) of Guyana issued an Environmental Permit for Timber Harvesting and Sawmilling in 2007, which was renewed in 2008 and again in 2021. The Environmental Permit was amended in January 2024 to include several administrative revisions which provide clarification on the employment of third-party contractors/operators under the permit.

Guiding Policies and Procedures

- ***Bribery***

Iwokrama is committed to conducting all business in an ethical and honest manner and is committed to implementing and enforcing systems that ensure bribery is prevented. The Centre has zero-tolerance for bribery and corrupt activities and is committed to acting professionally, fairly, and with integrity in all business dealings and relationships, both at home and abroad.

It is prohibited for *Iwokrama*, its directors, officers, employees, consultants or contractors to:

- give, promise to give, or offer a payment or gift to a third party with the expectation that an advantage in business will be received, or to reward a business advantage already given.
- give, promise to give, or offer a payment or gift to a third party to "facilitate" or expedite a routine procedure.
- accept any payment or gift from a third party if it is suspected that it is offered or provided with an expectation that a business advantage will be provided in return.
- threaten or retaliate against another employee or worker who has refused to commit a bribery offence.

- ***Grievance Resolution***

Iwokrama has signed a collaborative management agreement with its community partners – the NRDDB, a separate CMA also exists between Iwokrama and Fair View Village. Each agreement includes a procedure for complaints and conflict and dispute resolution.

These procedures include:

- A complaints committee which includes a representative of each party (as nominated by the NRDDB and Fair View Village respectively) and a chairman who is jointly nominated from Civil Society.

- If the committees cannot resolve the issue, then in the case of Fair View, the NRDDB may be asked to mediate. If the NRDDB cannot satisfactorily resolve the dispute, then the Minister of Indigenous Peoples' Affairs and 2 civil society representatives will be asked to review the NRDDB's decision. If the dispute still cannot be resolved – both parties may seek to settle in a Court of Law.

- For the NRDDB, if no resolution can be made or a decision cannot be reached then the matter will be referred to arbitration.

A Grievance Procedure also exists for Iwokrama employees in an effort to prevent or resolve conflict in the workplace. The details of this procedure can be found in the Human Resource Policy Manual.

Management Objectives

The general objective of the timber operation is

> "*The Company will be a global sustainable model for timber harvesting and wood processing, demonstrating innovative governance models (including communities and the private & public sectors) and operations that are environmentally, socially, culturally and economically sustainable. The Project will aim to be certified by FSC™ Standards for sustainable forest management*."

The specific forest management objectives of the timber operation are to

1. Be economically viable whilst following sound environmental and social practices.
    a. Producing 15,000 m^3– 20,000m^3 annually of sustainably harvested, certified logs for sale in Guyana.

2. To maintain an environmentally sound and sustainable operation that complies with relevant local and international laws, regulations, guidelines, and policies.

3. Enhance the sustainable livelihoods and social well-being of Iwokrama's community partners, particularly Fair View Village and the NRDDB

Inventory Design

Iwokrama carried out a management level inventory of the NOA in April and May 2003, with the assistance and collaboration of the Guyana Forestry Commission. Pre-harvest inventories or 100% enumerations, are carried out on each annual cutting area to precisely determine the volumes by species and size classes that will be felled.

Management Regime

Iwokrama has opted for a 60-year felling cycle and an annual allowable cut of 20 m3/ha, as per the GFC's Code of Practice. With an annual allowable harvest area of about 1,560 ha, Iwokrama's maximum annual allowable cut (AAC) would be about 31,000 m3.

Iwokrama and Hupkes Wijma BV have agreed that, for the 3-year period 2023-25, harvesting will not exceed 15,000 m3 of logs per annum.

Silviculture System

The silviculture system applied on the Net Operable Area (NOA) of the Iwokrama Forest is a natural regeneration system. This is a simple system consisting of selecting only a few trees at a time for removal, allowing natural regeneration to fill in the gaps created, and maintaining standing volumes of all tree species. It may also be called "*selective cutting*" or "*selection system*". It falls within the "*polycyclic systems*" of forest management and regeneration, as it contains trees in different stages of their growth cycles.

Infrastructure Development

Iwokrama developed a permanent base camp off the Linden-Lethem Road about 8 km south of the Kurupukari Crossing. It provides housing, offices and equipment maintenance and storage facilities. The Linden-Lethem Road will serve as the primary logging road. Secondary and feeder road development into the forest could extend up to 13km/year.

Employment and Training

There are between 6000 and 8000 people living in 21 communities associated with Iwokrama, 20 of which lie south of the Iwokrama Forest in Region 9. Approximately 90% of them are Indigenous people. This potential labour base is readily accessible via the north-south road connector to Lethem. Preferential employment is given to residents of local communities.

The operation is practicing Reduced Impact Logging (RIL) and all personnel involved with the harvesting operation will receive adequate training in RIL procedures.

Some of the specific training opportunities already provided and/or planned for the near future by Iwokrama, are:

- Ranger training, with emphasis on patrolling/monitoring and research
- Tour Guide Training in the specific skills required for ecotourism development.
- Natural Resources Management
- Collaborative and Protected Area Management Training
- Forest inventory and surveying training
- Reduced Impact Logging Methods such as Directional Felling
- Biodiversity Training including Forest Botany and Entomology

Wood for Communities

Iwokrama maintains a wood supply policy with communities; this outlines the procedure for communities to procure sawn wood from Iwokrama. Information about the policy is always provided at statutory NRDDB meetings and application forms are made available. The NRDDB executive also has copies of the form and can provide them to communities upon request.

Iwokrama Monitoring

Iwokrama focuses on three main aspects as it relates to monitoring; these are climate, hydrology, and biodiversity. The goal of the monitoring programme is to measure and track changes in key physical and biological components in and around the Iwokrama Forest. Long-term monitoring of the environment is important in identifying and evaluating the impacts of human activities on the environment.

Iwokrama's Rangers and other staff conduct road and river patrols, collecting data which is analysed and compiled into quarterly and annual reports. *Iwokrama's* monitoring has benefited significantly from its relationships with international and local research organizations, and co-monitoring agreements with local indigenous communities. The results of these research partnerships include several peer reviewed journal articles and other publications all which contribute to the general understanding of the impacts of human activities and assessing the effectiveness of the monitoring efforts on Iwokrama Forest.

From last quarter of 2022, the Ministry of Public Works started work on replacing all the wooden bridges in Iwokrama with concrete structures; to do so the Ministry contracted several companies to execute these bridge works. This construction is being supervised by the Ministry of Public Works and is outside of the scope of the Centre and its corresponding permits. Due to the active infrastructural works and the heavy machinery used, there was a subsequent impact on the conditions of the existing bridges, a borrow site was disturbed and several creeks were impacted by increased sedimentation.

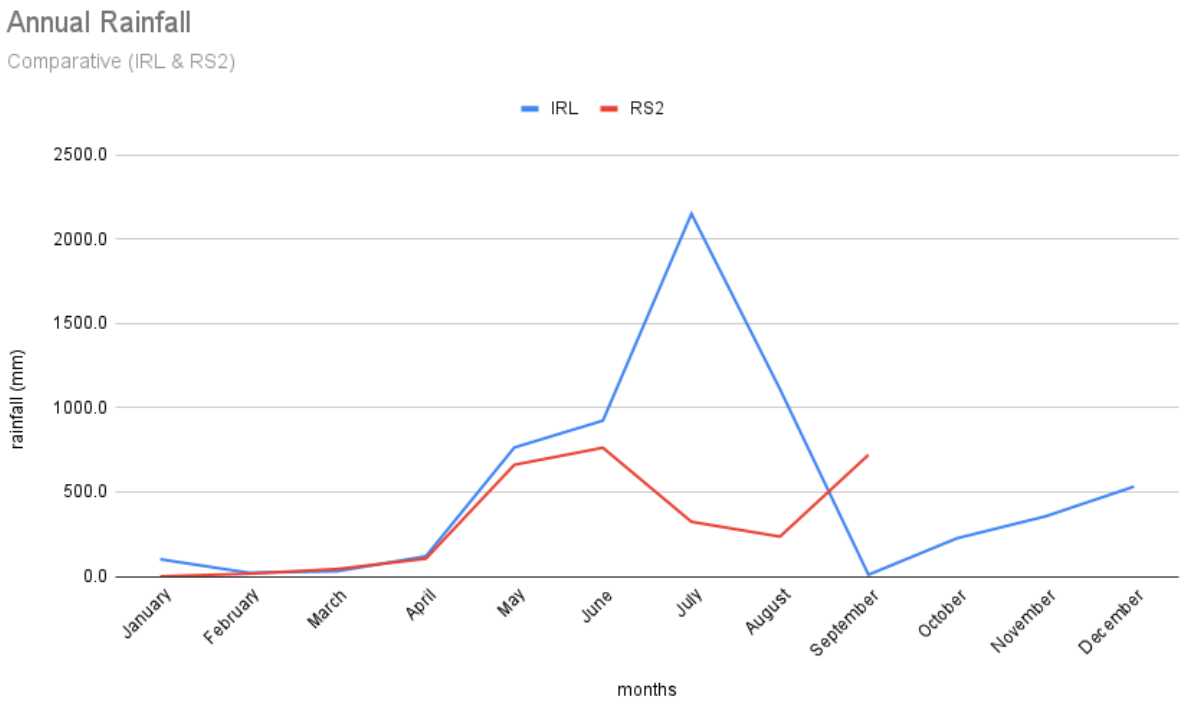
Construction of the bridges was finally completed in early 2025. however, during the construction process several of the creeks were diverted from their original path which has negatively impacted the creeks and adjacent forest

Summary of Biophysical Monitoring

Rainfall

In 2024, rainfall data was collected using manual rain gauges (MRG) at the Iwokrama River Lodge and Corkwood Ranger Station (Ranger Station 2)

Figure 2- Annual rainfall (mm) at the Iwokrama River Lodge and Corkwood (RS2) for 2024



During 2024, IRL recorded its highest precipitation levels between May and August, aligning with Guyana's primary wet season. Peak rainfall of 2,150.2 mm at IRL was recorded in July, while September had the lowest recording of 10.1mm. At RS2, rainfall was highest during May and June, with June recording the most rainfall (763 mm) and January the least. Overall, IRL experienced higher rainfall volumes and frequency compared to RS2 for most months, except in September. These patterns are consistent with Guyana's typical climatic cycle of two wet and two dry seasons. The IRL is located within a rainforest ecosystem and therefore experiences more days of rainfall compared to RS2. In contrast, RS2 is situated closer to the savannah and, due to the influence of the savannah climate, receives fewer days of precipitation than IRL.

Road Monitoring

Biodiversity Monitoring provides long-term datasets on key biodiversity taxa. This allows us to records trends in abundances of these different taxa over time, and to track environmental in response to anthropogenic activities, local weather phenomena and climate change.

- *Road wildlife*

Wildlife monitoring patrols start at the Kurupukari Ranger Station 1 (RS1) and end at Corkwood Ranger Station (RS2). The total distance covered during each patrol is 72 km. All wildlife species were considered target species, but to avoid recounting the same individuals, it is assumed that any species that were encountered after 1 km were new individuals and were independent of each other after each successive sighting.

Table 1. Wildlife sightings recorded along the Iwokrama road corridor in 2024.

Common Name	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Total	Relative sighting rate (ind/72 km)	Tot Sighting rate (ind/km)
Black Curassow	1	2	5			13							21	0.292	0.097
Duck													0	0	0
Giant river otter				4									4	0.056	0.019
Grey winged trumpeter													0	0	0
Jaguarundi													0	0	0
Red-rumped agouti				5	2	4			7				18	0.25	0.083
Red brocket deer				1	1		1						3	0.042	0.014
Tayra					1								1	0.014	0.005
Tapir							1						1	0.014	0.005
Total # of individuals	1	2	5	10	4	17	2	0	7	0	0	0	48		
Total # of different species	1	1	1	3	3	2	2	0	1	0	0	0	6		

Rangers recorded a total of 48 individual animals across six different species. The average relative sighting rate was 0.07 per 72 km patrolled, with the Black Curassow being the most frequently observed species. Variations in wildlife sightings may be influenced by local weather conditions, the availability and distribution of food resources, and increased human activity. Ongoing bridge construction by the Ministry of Public Works could have impacted wildlife sightings throughout the year.

- *Borrow pits*

Iwokrama Rangers carry out visual surveys for animal signs such as scat, tracks or prints in 6 old borrow pits adjacent to the road corridor. The selected borrow pits are greater than one hectare and are not commonly accessed by people.

Old borrow pits are well-suited for detecting wildlife presence, particularly species that prefer open habitats. They also serve as valuable sites for observing aquatic wildlife, as these pits can evolve into artificial wetlands that attract native species. Surveys are conducted once per month to minimize the risk of recounting the same individuals, which could lead to inflated population estimates.

Table 2. - Summary of Visual Observations in Borrow Pits 1- 6 2024.

Borrow Pit	1	2	3	4	5	6
No of Individuals	20	27	5	20	2	8
No of Species	8	7	4	6	1	4
Most Observed Species	Red Rumped Agouti	Red Rumped Agouti, Red Brocket Deer	Tapir	Red Rumped Agouti, Red Brocket Deer	Tapir	Tapir
Notes	Flooded May - July	Construction Crews present in 3rd Quarter	Flooded May - July		Flooded May - Sept	Flooded May- July

No wildlife presence was observed at Borrow Pit No. 7 throughout the year, likely due to frequent human presence, as the area was used as a campsite by workers involved in bridge construction and road maintenance.

The red-rumped agouti was the most abundant species overall, while the tapir had the widest distribution, being recorded in six of the seven borrow pits. Both species abundance and distribution can be influenced by factors such as food availability, predator activity, and human presence.

Bird

Audio-visual surveys are carried out along six permanent bird transects located along the main Linden-Lethem Road within the Iwokrama Forest. Each transect is positioned within a different forest type intersected by the road corridor, ensuring broad habitat coverage.

Table 3. Summary of the Data collected during Audio-Visual Surveys

Transect	1	2	3	4	5	6
No of Individuals	56	76	51	41	45	69
No of Species	17	25	18	11	15	13
Most Observed Species	Green trogan, White throated toucan	White throated toucan	Plumbeous Kite	Golden-winged Parakeet	Todd's Antwren	Screaming Piha

Transect 2 recorded the highest bird abundance and species diversity.

Bird activity is strongly influenced by local weather conditions as most species tend to be less active during the hottest parts of the day i.e. typically mid-morning and late afternoon to conserve energy and avoid overheating.

River Monitoring

- *Birds*

Visual surveys were conducted along 5 bird transects of 2 km each, which are distributed downstream along the Essequibo, Burro-Burro, and Siparuni Rivers. All species were considered target species.

Table 4. Summary of the Data collected during Audio-Visual Surveys

Common Name	Cow Head	Paddle Rock	Siparuni	Burro Burro	Korotucko	Pichum Pichum	Ladysmith
No of Individuals	53	31	16	19	31	29	11
No of Species	14	8	6	10	11	11	1
Most Observed Species	White banded swallow	White banded Swallow, Cocoi Heron	White Winged Swallow	White banded Swallow	Neotropic Cormorant	White banded Swallow	White Winged Swallow

The white winged swallow was the most abundant species followed by the white banded swallow.

Iwokrama's Rangers also do visual inspections for other key species including the giant river otter, neotropical river otter, the black caiman, giant river turtle, and arapaima along the full length of river patrols. These species depend on river ecosystems for survival, and their presence or absence serves as an indicator of water quality and the availability of food resources within the river system.

Table 5. Target Species

Taget Species	1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		Total
	# of Species	Location	# of Species	Location	# of Species	Location	# of Species	Location	
Anaconda									
Arapaima							2	Stanley Lake	2
Black caiman	1	Essequibo	1	Essequibo					2
Capybara									
Giant river otter	8	Siparuni river and Stanley lake	1	Stanley Lake					9
Neotropical otter	1	Essequibo							1

The giant river otter was the most observed species.

Water Quality Monitoring

Iwokrama's Monitoring Unit monitors the quality of 17 major creeks along the Linden-Lethem Road in the Iwokrama Forest. The parameters monitored are electrical conductivity, dissolved oxygen, pH, turbidity and temperature and these parameters are measured to assess the impacts of anthropogenic activities on major waterways in Iwokrama.

- *Electrical Conductivity*

All creeks tested were well within the permissible range for electrical conductivity. However, data could not be collected from several of the creeks because they were dry at the time of sampling. These dry conditions were most likely caused by creek diversions (due to bridge construction which commenced in 2022) and a prolonged dry season.

- *Dissolved Oxygen*

Data could not be collected from a number of creeks during the year, because they were dry at the time of sampling, conditions likely resulting from creek diversions and a prolonged dry season.

Several of the creeks tested recorded dissolved oxygen levels below the permissible range, which is often caused by rising temperatures, which can lead to algal blooms that consume available oxygen. Poor flow and stagnation, which reduce natural aeration, can further contribute to low oxygen levels.

- *pH*

The pH of most creeks was within the permissible level. Creeks of Guyana's rainforest tend to become slightly acidic due to the presence of tannins in the water, this is consistent with Amazonian freshwater ecosystems.

- *Turbidity*

Except for January, the turbidity meter was non-functional throughout the sampling period, and no turbidity readings could be recorded for the remaining months. All readings taken in January were high, likely due to ongoing bridge construction in the area, which may have disturbed sediment and increased turbidity levels.

- *Temperature*

The temperatures of the creeks were within the accepted range of freshwater systems. The temperature of a water body in a tropical rainforest vary throughout the year as temperatures in a tropical rainforest can fluctuate from 21°C -29°C.

Forest Impact Monitoring

Forest impact monitoring was established in 2009 with staff and international scientists. This monitoring was focused specifically on evaluating the impacts of timber harvesting on the ecosystem by tracking key bio-indicator species.

Wildlife Monitoring

Visual observations for animal signs such as scat, tracks or prints are conducted along four transects within post-logged and active- logging sites in the forestry operations areas. The total distance of wildlife transects range from 3.3 - 3.9 km, however, the actual distance monitored or sampled is one kilometre of the total distance. The starting point of each one kilometre transect may be systemic or random based on the condition of road infrastructure and accessibility to the sample points. All wildlife species are considered target species.

Table 5. Summary of Wildlife Diversity Recorded.

	K557-30	Burro Burro Bridge	Locust Hill	Turtle Hill
No of Individuals	105	129	147	85
No of Species	7	8	9	9
Most Observed Species	Peccaries	Peccaries	Peccaries	Peccaries

Differences in species observations between sites may be influenced by variations in habitat, particularly the presence or absence of waterbodies. Large mammal communities are valuable indicators of ecosystem health. Species such as tapirs, red brocket deer, and agoutis also function as ecosystem engineers by dispersing both large and small seeds. The presence of these key mammals may be a strong sign of a healthy and functioning forest ecosystem.

Water Quality[3]

The water quality of 4 major creeks is monitored to assess the impacts of the forestry operations on these waterways; 3 creeks are found along the Linden-Lethem Road while the remaining creeks are found within the forestry operations areas and may change as the operation moves. The five selected water quality parameters are biological oxygen demand, electrical conductivity, total suspended solids, total dissolved solids, turbidity, oil and grease, dissolved oxygen, pH, turbidity, and temperature.

- *Electrical Conductivity*

EC was within permissible levels for freshwater ecosystems for all the creeks tested, however several creeks were dry/stagnant likely due to on-going bridge constructions works.

[3] Several of the water quality tests were not conducted in the 4th Quarter due to the lab not having specific reagents.

- *Dissolved Oxygen*

DO was within the permissible range for all creeks tested. Dissolved oxygen concentrations are constantly affected by diffusion and aeration, photosynthesis, respiration and decomposition.

- *pH*

The pH of all creeks was within the permissible level. Average pH values for all selected creeks along the road and in the forest operation areas were consistent with Amazonian freshwater systems due to the presence of tannins in the water causing a slightly acidic pH

- *Turbidity*

Turbidity was not within the permissible range. High turbidity readings can be caused by increasing sedimentation and organic matter deposition which occurs because of precipitation washing soil particles into low-lying creeks. High concentration of particles affects light penetration and ecological productivity. Turbidity readings may have also been impacted by on-going bridge construction along the Linden-Lethem Road, specifically 5 and 8 Mile Creeks.

- *Temperature*

The temperatures of the creeks were within the accepted range for freshwater systems.

- *Biological Oxygen Demand*

Biological Oxygen Demand (BOD) is a key indicator of water quality in freshwater creeks. The BOD for three of the four creeks tested was within the permissible range. The other site was dry or not accessible.

- *Total Suspended Solids*

In freshwater ecosystems like Iwokrama, the TSS comes mainly from soil and sediment disturbed by road traffic, erosion, and runoff; high levels can cloud the creeks, limit plant growth, and affect fish and other aquatic species. All creeks tested were within the permissible range.

- *Oil and Grease*

In freshwater ecosystems like those in Iwokrama, oil and grease can enter creeks from vehicles, road runoff, and maintenance activities; even small amounts can impact water quality. All creeks tested were well within the acceptable EPA limits.

Social Monitoring

The Iwokrama Forest is historically and continues to be, a coupled human natural system, where people have always been forest resource users. As technology changes, impacts on forest use and users may also change. Social monitoring is designed to determine the impacts of activities in the forest on the social, natural, and economic environment. Data is collected from medical reports, Fair View Village records, human resource records, tourism and timber records and monitoring data.

Employment

At the end of 2024, 102 people were employed at the Iwokrama International Centre as outlined in the table below (Table 6). Of these, 17 people work out of the Georgetown office, seventy-two (72 individuals) of Iwokrama staff employed were from the North and South Rupununi communities with the highest number of employees 29 individuals originating from Fair View. One employee in the Georgetown office is from Surama, however, that person moved to IRL before the end of the year. All other community members are stationed at IRL and Mill Site are within the Iwokrama Forest (Table 7).

Table 6. Number of people employed by Iwokrama.

Description	M	F
Georgetown	5	12
IRL	40	19
Mill Site	18	3
Consultants	4	1
	67	**35**
Total	**102**	

Table 7. Number of NRDDB community members employed by Iwokrama in alphabetical order by community.

NRDDB community	of people employe	% of People employed by Iwokrama
Annai	5	5%
Apoteri	3	3%
Aranaputa	3	3%
Fair View	29	28%
Kwaimata	2	2%
Karasabai	1	1%
Massara	3	3%
Toka	1	1%
Rewa	6	6%
Rupurtee	3	3%
Surama	6	6%
Wowetta	3	3%
Yakarinta	1	1%
Yupukari	2	2%
Sub Total NRDDB Communities	68	67%
Karaudarnau	**1**	1%
Culvert City	**1**	1%
Sawariwau	**1**	1%
Meriwau	1	1%
Sub Total South Communities	**4**	4%
Total Communities	**72**	71%

Note: Karaudarnau, Sawariwau and Meriwau are not a part of NRDDB but are indigenous communities located in Region 9.

In 2024, GTI-Wood Products employed a total of 40 persons through GTI directly and Deoraj Singh (GTI's harvesting contractors). A total of 36 men and 4 in women were employed in 23 different jobs.

Table 8. Number of people employed by GTI-Wood Products in 2024 and their job descriptions.

	Logging/Sawmilling	
Function	**Deoraj**	**GTI**
All-Round Assistant		12
Chainsaw Operator		2
Cook		3
Edger Operator		1
Felling helper	1	
Felling operator	1	
Fuel Attendant		1
log Scaler		1
Log Scaler/lumber Grader		1
Manager	1	
Mechanic/weilder	1	
Mill Operator		3
Operation Manager		1
Road Builder	1	
Road helper	1	
Security		2
Skidder helper	1	
Skidder operator	1	
Supervisor		1
Supervisor/lumber grader		1
Truck Driver	1	
Truck helper	1	
Welder/Fabricator		1
Grand Total	**10**	**30**

Table 9. GTI-WP (including Harvesting Contractor) employees in Fair View and NRDDB communities

	Logging/Sawmilling		
Community	**Deoraj Singh**	**GTI**	**Grand Total**
Annai		1	1
Fair View	5	2	7
Massara		3	3
Rewa		2	2
Wowetta		5	5
Yakarinta		5	5
Yupukari		1	1
Total	5	19	24

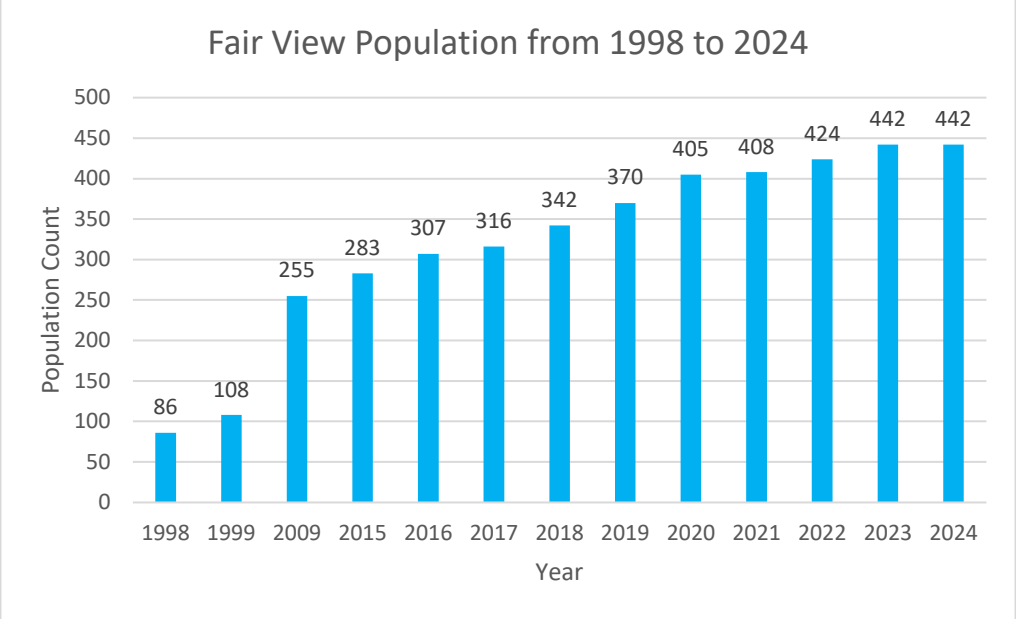
Fair View Village

Fair View is the only indigenous village within the Iwokrama Forest and the only location with permanent buildings aside from Iwokrama's infrastructure.

Population/Migration

The total population did not change from 2023, population count remained 442. However, there were 15 births, 1 death, 9 migrations into and 23 migrations out of the community, The number of households increased from 83 to 88 in 2024.

Figure 3. Population of Fair View over time



Dispute Resolution

There is a dispute resolution committee in the event that matters arising between partners cannot be resolved. The members of the committee include an Iwokrama representative, NRDDB executive or Fair View representative and Civil Society representative. No disputes were filed in 2021. See Procedures in **Guiding Policies and Procedures**

Health

The Iwokrama Medex provides service to all staff employed at the River Lodge and Mill Site and all members of Fair View village; treatment can involve dispensing of drugs or treating physical ailments. If this is above the station of the Medex, patients are referred to Annai Hospital. In 2024, a total of 557 visits were recorded by the Medex; visits to the Medex are separated in the table below.

Table 10. Number of visits made to the Medex in 2024

Origin of Visitor	# of visits
FV	109
IRL	321
Other	70
Mill Site	57
	557

"Other" refers to patients anywhere outside of IRL, Fair View and the Mill Site, and may include Georgetown staff, guests to Iwokrama, residents from Kurupukari or anyone else who was seeking medical attention.

The data collected identified the most common diagnoses as influenza, worm infestations, allergic rashes, attention deficit disorder, injuries/minor laceration, tension headaches, fungal rashes, abscess and muscle and joint pains.

Education and Outreach

- Fair View School

The Kurupukari Primary School is the only educational institution within Fair View and the Iwokrama Forest. At the end of 2024, there were 107 students enrolled in the Fair View primary school; 51 males and 56 females.

The Ministry of Education has discontinued Grades 7, 8, and 9 at Fair View School, with students now transferred to Annai Secondary School. According to the Headmaster at Fair View, a total of nine students—seven males and two females—are currently enrolled at Annai Secondary for their secondary education. No students from Fair View are attending St. Ignatius Secondary School.

- Outreach

Community Outreach activities continued in 2024. These activities include attendance at statutory meetings as well as engagement with individual communities. Information sharing and engagement is on-going via email communication, letters, through community meetings and participation in community activities.

Collaborations with Iwokrama

NRDDB

Two-day, statutory meetings of the North Rupununi District Development Board are held once a quarter; the first day is for communities and the second for partners to share information. Upon invitation, Iwokrama attends partners' day. Iwokrama also has regular meetings with the NRDDB Executive.

During 2024, Iwokrama attended four NRDDB meetings and one meeting (May 9th) was hosted at the Iwokrama River Lodge in October and two meetings with the NRDDB Executive in Georgetown in March and July.

Training and Information Sessions

Training and capacity building is an essential component in Iwokrama's activities as a business as well as to provide on-going skills development for staff. In 2024, there were 17 training and information sessions with at least 307 people registered; as many of these were opportunities for staff, they may have participated in more than one session and does not reflect the number of individuals participating in a training or information session.

There was Fire Safety and Boat Captain trainings, along with three training done by Forestry Training Centre In which included, Road Building, directional felling, skidding technology. Table 11 shows training by subject, facilitator and participants, of the awareness and training sessions, four were specifically forestry related.

Table 11. Training and Information Sessions

Date	Training	Timber related	Trainer	Location	# of Attendants
February 12 and 13 2024	MARAD Boat Captain Licensing Training	No	Romain Seurattan and Crisila Alphonso - MARAD	IRL	20
4/14/2024	Boat Captain Training	No	Seurattan - MARAD	IRL	10
4/24/2024	Fire Safety Training	Yes	Deon Dillon & Derek Hiles - Fire Service	IRL	20
5/10/2024	FSC -Principle 1- 4	Yes	Rohanie Roopnarine	Millsite	39
5/13/2024	FSC -Principle 5- 10	Yes	Rohanie Roopnarine	Millsite	25
5/24/2024	NIS Awareness	Yes	Martin Hookum - National Insurance Scheme	Millsite	34
5/24/2024	NIS Awareness	Yes	Martin Hookum - National Insurance Scheme	IRL	25
5/25/2024	NIS Awareness	Yes	Martin Hookum - National Insurance Scheme	Fair View	6
6/14/2024	FSC -Principle 1- 4	Yes	Rohanie Roopnarine	Fair View	7
6/14/2024	FSC -Principle 1- 4	Yes	Rohanie Roopnarine	IRL	19
6/18/2024	FSC -Principle 5- 10	Yes	Rohanie Roopnarine	Fair View	10
27-08-2024	Labour Laws Training	Yes	Jessica Somwaru - Ministry of Labour	IRL Upstairs	28
27-08-2024	Occupation Safety and Health Training	Yes	Ray Hosana - Ministry of Labour; Occupation Safety and Health Department	IRL Upstairs	28
28th Oct 2025	Occupation Safety and Health Training	Yes	Forestry Training Center Inc	Mill Site	26
29th and 30th Oct 2025	Skidding Technology	Yes	Forestry Training Center Inc	Mill Site	2
31-Oct-25	Road Building	Yes	Forestry Training Center Inc	Mill Site	2
31-Oct-25	Directional Felling	Yes	Forestry Training Center Inc	Mill Site	6

High Conservation Value Forests

A high conservation value (HCV) forest is one which contains biological, ecological, social or cultural values of outstanding significance or critical importance.

The Iwokrama Forest contains several qualities which can be considered indicators of high conservation value e.g.

- Rare, Threatened or Endangered Species[4]
- Possible Endemic Species,
- Key Ecosystems and Habitats,
- Critical Ecosystem Services
- Sites important to satisfying basic needs of communities and
- Sites of potential cultural, archaeological value or historical significance.

Many of these attributes can be found in areas of the forest set aside for conservation, either in the Wilderness Preserve (WP) or in reserve areas of the Sustainable Utilization Area (SUA). This is particularly relevant for the protection of species and ecosystems, since the most effective method of species protection and biodiversity conservation is the protection of habitats.

Iwokrama also utilizes forest resources while paying special attention to these unique characteristics; which are indicators of high conservation value; through regular forest monitoring. Monitoring activities include but are not limited to forest Inventories, forest impact monitoring, bio-physical and social monitoring and monitoring for illegal activities.

Table 12 below defines the High Conservation Values and the protection measures that Iwokrama employs to protect each value. For additional detail see HCVs in the Iwokrama Forest (August 2022).

[4] The Iwokrama Forest is home to several globally threatened and endangered faunal species (though none of them are recognized as being threatened or endangered in Guyana).

Table 12. High Conservation Values (HCV) and Associated Protection Measures.

HCV	Definition	Status in Forest	Protection Measures
HCV 1	Species diversity. Concentrations of biological diversity including endemic species, and rare, threatened or endangered species, that are significant at global, regional or national levels	Present	- Legislation - Iwokrama Forest protected Iwokrama Act, also mandates Zonation to WP (Protection Area) - Hunting prohibited except for subsistence by Community members - Monitoring Team and Rangers conduct biophysical monitoring to measure impacts of activities on the forest e.g. water quality, faunal, traffic and boundary monitoring for illegal or unauthorised activities e.g. mining - Co-Monitoring Agreements with Surama, Rewa and Apoteri
HCV 2	Landscape-level ecosystems and mosaics. Intact forest landscapes and large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance	Present	- Legislation - Iwokrama Forest Protected by Iwokrama Act, also mandates Zonation to WP (Protection Area) - Monitoring Team and Rangers conduct biophysical monitoring to measure impacts of activities on the forest e.g. water quality, faunal, traffic and boundary monitoring for illegal or unauthorised activities e.g. mining - Co-Monitoring Agreements with Surama, Rewa and Apoteri
HCV 3	Ecosystems and habitats. Rare, threatened, or endangered ecosystems, habitats or refugia.	Present	- Legislation - Iwokrama Forest protected by Iwokrama Act, Act also mandates Zonation of WP (Protection Area) - Monitoring Team and Rangers conduct biophysical monitoring to measure impacts of activities on the forest e.g. water quality, faunal, traffic and boundary monitoring for illegal or unauthorised activities - Co Monitoring Agreements with Surama, Rewa, Apoteri - Protection Measures in Harvesting areas include buffer zones, protection of key species and good road and skid trail management to protect environmentally sensitive areas - If site of ecological importance discovered during forest inventory - an appropriate buffer is established
HCV 4	Critical ecosystem services. Basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes.	Present	- Legislation - Iwokrama Act mandates Zonation of WP (Protection Area) and the definition of the NOA excludes 70.8% forest from commercial timber - Monitoring Team and Rangers conduct biophysical monitoring to measure impacts of activities on the forest e.g. water quality, faunal, traffic and boundary monitoring for illegal or unauthorised activities. - Co Monitoring Agreements with Surama, Rewa, Apoteri. - Compliance with GFC CoP to prevent or reduce damage to ecosystem services such as buffer zones and protection of key species; no harvesting on slopes greater than 40%; road construction and maintenance protocols to prevent or reduce erosion.
HCV 5	Community needs. Sites and resources fundamental for satisfying the basic necessities of local communities or Indigenous Peoples (for livelihoods, health, nutrition, water, etc.), identified through engagement with these communities or Indigenous Peoples.	Present	- Collaborative Management Agreements outline activities permitted in the forest - Buffer zone established between village and surrounding forest to protect village lands - Critical Waterways to village protected by signage and monitored by Iwokrama - Fishing and Hunting off-take by community members monitored
HCV 6	Cultural values. Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or of critical cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities or Indigenous Peoples, identified through engagement with these local communities or Indigenous Peoples.	Present in WP	- Legislation - Iwokrama Act protects "traditional rights of Indigenous Peoples" - Zoning Process placed significant cultural and/or historical sites in WP - Monitoring system in place for discovery of potential new sites in the NOA

Iwokrama's Forest Certification Process

To validate its use of best practice methods in its operations, *Iwokrama* has once again received certification for forest management from the Forest Stewardship Council™ (FSC™).

The Iwokrama Forest achieved certification for Forest Management in October 2016 for the second phase of its timber operations and continues to maintain this certification with annual surveillance audits. The Iwokrama Forest was recertified in 2023 for another five years. Iwokrama received similar recognition by the international auditors in 2008 and maintained these credentials throughout the first phase of its timber harvesting operations.

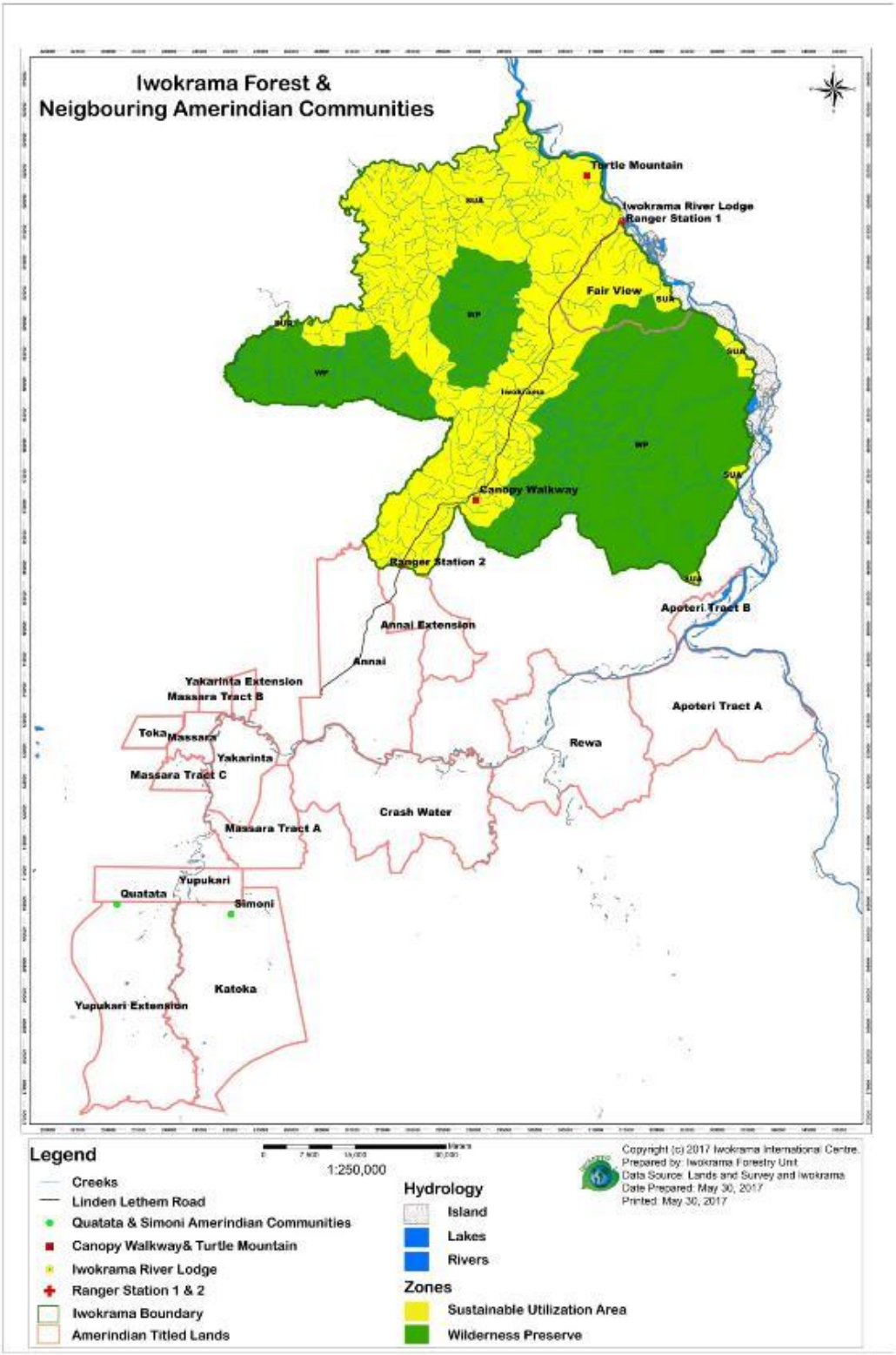
During the most recent surveillance audit, Iwokrama was also audited for two Ecosystem Services (ES) - Biodiversity Conservation and Recreational (tourism) Services. The Iwokrama Forest scored another first again as the only area in Guyana and the Caribbean to achieve this accolade. This verification of Ecosystem Services provides an additional opportunity to demonstrate positive outcomes and provides further third-party verification of Sustainable Forest Management best practices at the Centre. Verification of the ES means that there are no major corrective actions against any requirements of the FSC™ Ecosystem Services procedure.

Key to compliance with FSC™ guidelines is that forest managers must follow all national rules, laws and guidelines including the GFC's comprehensive Codes of Practice.

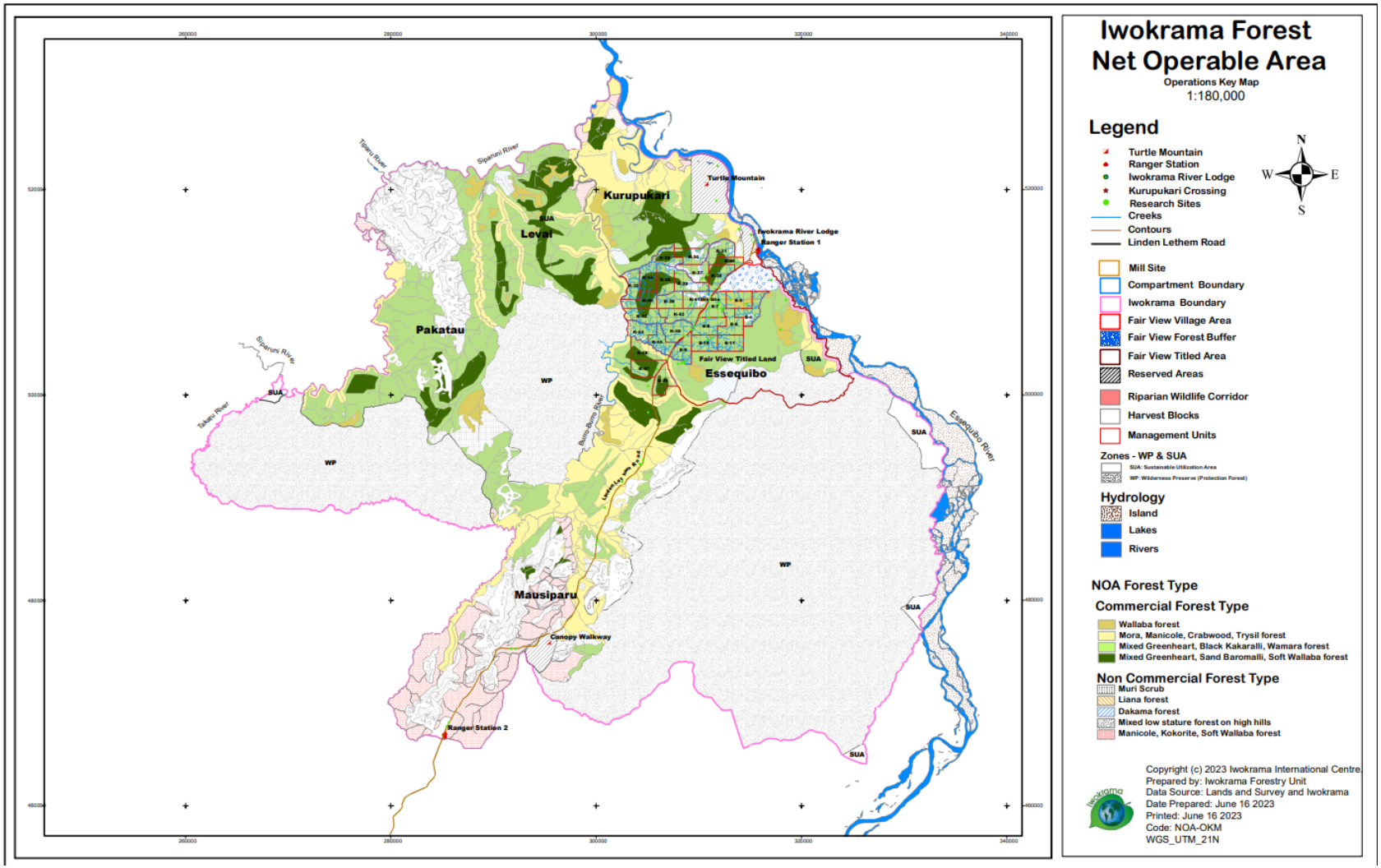
Maps attached

1. Iwokrama Forest and Neighbouring Communities
2. Iwokrama Forest Net Operable Area
3. Five Year Harvest Plan

MAP 1: IWOKRAMA FOREST AND NEIGHBOURING COMMUNITIES



MAP 2: IWOKRAMA FOREST NET OPERABLE AREA



MAP 3: IWOKRAMA 5 YEAR HARVEST PLAN