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Thematic Report on Access and Benefit-Sharing




Prepared by:
GENIVAR Trinidad and Tobago Limited

Prepared for:
The Environmental Protection Agency, Guyana;
The United Nations Development Programme, Guyana; &
Global Environment Facility

Submitted to:
The Executive Secretary
Secretariat of the Convention on Biological Diversity
World Trade Centre,
393 St. Jacques Street West,
Suite 300,
Montreal, Quebec
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Capacity Needs Assessment for Access and Benefit-Sharing of Genetic Resources, Guyana

Thematic Report on Access and Benefit-Sharing

TABLE OF CONTENTS

List of Abbreviations

ABS	Access and Benefit-Sharing
APA	Amerindian Peoples' Association
CBD	Convention on Biological Diversity
CI-G	Conservation International - Guyana
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COP	Conference of Parties
CSBD	Centre for the Study of Biological Diversity
EPA	Environmental Protection Agency
FSC	Forest Stewardship Council
GEF	Global Environment Facility
GFC	Guyana Forestry Commission
GGMC	Guyana Geology and Mines Commission
GIS	Geographical Information Systems
GLSC	Guyana Lands and Surveys Commission
GMTCS	Guyana Marine Turtle Conservation Society
GoG	Government of Guyana
GO-Invest	Guyana Office for Investment
GOIP	Guyana Organisation of Indigenous People
GRDB	Guyana Rice Development Board
GSA	Guyana School of Agriculture
GuySuCo	Guyana Sugar Corporation
IAST	Institute of Applied Science and Technology
IIC	Iwokrama International Centre
IICA	Inter-American Institute for Co-operation on Agriculture
IPR	Intellectual Property Rights
MOU	Memorandum of Understanding
NADF	National Amerindian Environmental Educational Development Foundation
NARI	National Agricultural Research Institute
NBAP	National Biodiversity Action Plan
NBC	National Biodiversity Committee
NCERD	National Centre for Education and Research Development
NRDDB	North Rupununi District Development Board
SUA	Sustainable Use Area
TAAMOG	The Amerindian Action Movement of Guyana
TGI	Tigerwood Guyana Inc.
UG	University of Guyana
WP	Wilderness Preserve

WWF	World Wildlife Fund for Nature – Guianas

1.0 National Focal Point and the Preparation of the Report

1.1 National Focal Point

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Date of submission:	

1.2 Report Preparation

Summary information on the process by which this report has been prepared, including information on the types of stakeholders who have been actively involved in its preparation and on material which was used as a basis for the report.

GENIVAR Trinidad and Tobago Limited was contracted by the Environmental Protection Agency (EPA) to assess the capacity-building needs for access and benefit-sharing (ABS) of genetic resources in Guyana.

Undertaking this assignment involved a combination of desk studies and field exercises that enabled the GENIVAR Team to fully assess the capacity building needs and priorities of the Government of Guyana (GoG) as it seeks to establish protocols and mechanisms for granting access to, and benefit-sharing of its genetic resources. The desk studies involved both electronic and physical literature searches and a review of locally generated documents[1]. Consultations with key stakeholders were an integral aspect of the report preparation. This involved the convening of interviews and the solicitation of responses via a structured questionnaire[2].

[1] Refer to Section Appendix II – List of Documents for Desktop Review
[2] Refer to Section Appendix I – List of Stakeholders

2.0 Intellectual Property and Traditional knowledge Related to Genetic Resources

The views of Guyana on the following issues are defined below:

(a) How to define relevant terms including subject matter of traditional knowledge and scope of existing rights;

Guyana, located on the South American continent, is a country rich in biodiversity and natural resources. About 78% of the country is covered by natural forest, while areas without forests form the coastal plains, savannas and highlands. There are more than 6,500 species of plants, while animal species are diverse among groups which include mammals, birds, reptiles, amphibians, insects, arthropods and fish. Guyana's rich biodiversity and high endemism is due to its location near the Amazon basin and within the Guiana Shield, low rate of habitat conversion and its position on the Atlantic seaboard of the South American continent.

Overall state of the country's biodiversity is well-preserved due to: the low population density and the lack of highly industrialised sectors. However, the country's biodiversity is being threatened by increasing levels of commercial activity within the field of exploitation of natural resources.

Unlike many countries worldwide, Guyana has active Indigenous communities which represent more than 6% of the country's population. The communities comprise most of the population of the Interior of the country, primarily Regions 1, 7, 8 and 9. Within the Interior, most of Guyana's genetic resources are located.

Worldwide, genetic research and bioprospecting has been increasing, as developed countries seek out new drugs, scientific discoveries and organisms in developing countries. Countries like Guyana, must find mechanisms to ensure that these discoveries benefit the people of Guyana and that ownership of these resources belong to Guyana. Furthermore, it is imperative that knowledge of both local and Indigenous communities or traditional knowledge is protected.

"Traditional knowledge" is understood differently by different stakeholders. Guyana's National ABS Policy (or National Policy on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation) has provided the following definition of "Traditional knowledge":

Traditional knowledge / Local Knowledge / Amerindian Knowledge / Ethno-biological Knowledge:

- Knowledge that has been distilled from experience over centuries and adapted to local culture and environment: it tends to be held collectively by local communities / Amerindian peoples, and some aspects of it are handed down orally from generation to generation. It captures many aspects of culture and is constantly interacting and evolving with new contexts and influences. It is defined as the practices or ideas generated locally, or imported from outside and transformed by the local people and incorporated into their way of life. Their dynamic and flexible nature and their adaptability to changing conditions are fundamental features of Traditional knowledge / Local Knowledge / Amerindian Knowledge / Ethno-biological Knowledge.

The National Policy also defines other key terms which forms part of this definition[3]. These terms are:

Amerindian:
- Any citizen of Guyana who belongs to any of the native or aboriginal peoples of Guyana, or is a descendant of any such person.

Amerindian Community:
- A group of Amerindians organised as a traditional community with a common culture and occupying or using State lands which they have traditionally occupied or used.

Amerindian community lands:
- Land owned communally by a community under title granted to the Village Council to hold for the benefit of the community.

Local community:
- A group of Guyanese people living in a community anywhere in Guyana.

Village Council:
- A village council established under the authority of the Amerindian Act [Cap 29.01, 2006], the Annai District Council, Konashen Village Council, Baramita Village Council and any Village Council established by order of the Minister under the Amerindian Act.

[3] Some of these definitions were taken from the Amerindian Act, 2006.

The Draft ABS Regulations, 2009 (herein referred to as the Draft ABS Regulations) have defined the words "Traditional Use" which would add to these.

Traditional Use

- The customary utilisation of genetic resources whether written or otherwise by Amerindian or local communities in accordance with traditional knowledge, usages, customs and practices observed, accepted and recognised by them.

Additionally, the Draft Regulations contains a wide range of definitions including:

- access to genetic resources;
- academic research;
- benefit- sharing;
- genetic resources;
- research agreement; and
- research permit.

At present, the EPA's system of provision of permits for research within Guyana provides the opportunity for the continued protection of genetic resources.

The permit system involves the submission of an application for research to the Applications Sub-Committee of the National Biodiversity Committee (NBC). The application must show how Guyana could benefit from the research and the prescribed application fee must be paid. Recommendations regarding the approval or denial of the request will made to the NBC. Upon approval, an Academic or Commercial Research Agreement will be entered into with the researcher.

One of the conditions of approval involves the use of a counter-part system whereby the researchers are accompanied by a Guyanese national throughout the research process. This ensures that the research proposed to be conducted is adhered to as outlined in the agreement. Additionally, the presence of a counterpart would ensure that related traditional knowledge is protected.

(b) Whether existing intellectual property rights regimes can be used to protect traditional knowledge;

The Iwokrama International Centre (IIC) has developed guidelines for the relationship between the IIC and the sixteen (16) Amerindian communities within the Iwokrama Forest. These guidelines do not have the force of law, nor are they of guidelines of national application. In addition, while the Amerindian Act (2006) allows recognised Amerindian communities to develop and gazette Village By-Laws, no such Village has undergone the process of gazetting By-Laws. In effect, while there is an emerging policy framework, there is yet no modern national legal Intellectual Property Rights (IPR) regime which can be used to protect traditional knowledge.

Guyana has an updated National Policy which addresses ABS, but the legal underpinnings for this policy are inadequate or absent. In part, there are antiquated Acts which require revision in order to address the complex issues surrounding ABS, Intellectual Property Rights (IPR) and traditional knowledge. The National Policy is accompanied by Draft Regulations which address ABS, however these Regulations have not yet been finalised.

The existing legal framework has one significant shortcoming: there are no comprehensive IPR measures. IPR exists as three types: patents, trademarks and copyrights. These three traditional forms of IPR do not apply to genetic resources or traditional knowledge. In order for traditional knowledge and genetic resources be provided with the required protection from exploitation, it is necessary to implement an IPR Act which specifically addresses these.

There are several separate pieces of legislature which impact on the effectiveness of the existing legislation with regards to both implementation and enforcement. Some of the existing laws, though outdated are:

- Patents and Design Act (1973);
- United Kingdom Copyright Act (1956, applied to Guyana); and
- Trade Marks Act Cap. 99:01 (1952).

The main Act that influences IPR in Guyana is the Patents and Designs Act, Cap. 90:03[4]. The core of the legislation is based on the Patents Act of 1949. The Patents and Designs Act is essentially an old legislation which deals with traditional patent issues, and it forms the current legal basis for

[4] This Act is a consolidation of several separate pieces of legislation including: Act 9 of 1937; Act 10 of 1938; Act 30 of 1949; Act 23 of 1956 and Act 29 of 1961.

patent applications in Guyana.

Part 1 of the Act, addresses the application for, and the grant of a Patent. It also covers the registration of UK Patents and Designs. The Act also deals with the operation of the Patent Office and patent proceedings, and documents such as national registers[5]. The Act also allows the Minister to make Regulations.

One objective of the CBD is the equitable sharing of benefits from the use of genetic resources. The CBD also contains important provisions for the protection of traditional knowledge. Holders of traditional knowledge have expressed concern that IPR, particularly patents, have either been exerted over genetic resources and traditional knowledge, or are granted on inventions that use genetic resources or traditional knowledge without complying with the CBD requirements on access and equitable benefit-sharing. One particular concern has been that developed countries have used the genetic resources and traditional knowledge of developing countries, and have filed patents in developed countries.

Without a link between CBD requirements and patent legislation, a patent could be granted based on traditional knowledge *without* compliance to the CBD. This debate has focused on a proposal that international patent standards be amended to require, patent authorities impose conditions on patent applicants. These conditions can have important implications for ABS. The proposal includes 'disclosure requirements' which focus on possible obligations for patent applicants to disclose information about the genetic resources or traditional knowledge used in a claimed invention. It would be required that patent applicants disclose where they obtained genetic resources or traditional knowledge they used in the invention. Others would be more rigorous, requiring full disclosure of the legal circumstances under which the resources were obtained, such as whether prior informed consent was granted, and whether arrangements had been concluded for equitable sharing of benefits. The legal ramifications vary from applicants being encouraged to make this information available regarding the source of genetic resources is made available to suspension or refusal of an application to invalidation of a patent or transfer of ownership of the patent. There has been no single model which has been used in other countries; however, some forms of these proposals have been applied to some countries' national laws.

In Guyana, the Patents and Designs Act should be amended to impose conditions on patent applicants that relate to access to genetic resources and traditional knowledge. This would then

[5] Section 83 to 89 of the Patents and Design Act

[6] A trademark is a distinctive sign or indicator used by an individual, business, organisation or other legal entity to identify that the product or services to consumers with which the trade mark appears originate from a unique source. It also serves to distinguish its products and services from other entities.

ensure that the Patents and Design Act is consistent with the draft ABS Regulations. The Patents and Design Act will therefore need amendment.

The Copyright Act of 1965 is UK legislation that is applied to Guyana. The main weakness is that Guyana needs to enact its own copyright legislation. Copyrights are relevant to publications only. It has limited application and is only relevant if a researcher collects information about Amerindian villages and traditional knowledge and publishes it locally, without their consent. Where it could be established that the publication used such information, a claim could be made for copyright protection. The Copyright legislation has a major shortcoming in that because it is an *applied* Act the text is not in the laws of Guyana and therefore not easily accessible. In addition, it is outdated and needs to be reformed.

The Trade Marks Act provides for local trade mark[6] applications with effect from the date of application. The Act also provides for local registration of marks registered in the UK. An action in Guyana for infringement of a UK registered trade mark can only occur after the date of registration in Guyana. Failure to use the trade mark within a period of five years following registration may subject the trademark to cancellation. Trade marks are part of intellectual property law, but may not be applicable to ABS.

The Customs Act is comprehensive and whilst it does not deal directly with intellectual property, it would be of critical importance to ensure that genetic material does not leave Guyana without proper authority or permission. Thus if a researcher collected genetic samples without permission and sought to take these samples outside of Guyana this could be prevented by customs officers using the provisions of the Customs Act.

Under Regulation 20(2) of the Draft ABS Regulations, a researcher shall obtain permission from the Agency or any other relevant body for exporting any specimens and shall comply with all national laws or regulations on exporting of specimens. This would therefore likely require the involvement of Customs Officers, and permits would be required under Regulations.

The ABS Regulations would need amendment in order to recognise the current patent law. When the draft of ABS Regulations are finalised and promulgated, and amendments are made to the patent law and the Customs Act, Guyana would have comprehensive legislation dealing with ABS.

The Amerindian Act (Cap. 29:01 of 2006) does afford some measure of protection of Amerindian rights as it prevents anyone from removing, selling or earning money from the "property" taken from an Amerindian. However, this "property" is not defined within the context to which it applies. The development of Village By-Laws under the Amerindian Act, would allow for the

definition of the term "property" but to date, no such laws have been gazetted.

(c) Options for the development of *sui generis* protection of traditional knowledge rights.

Sui generis IPR are unique new forms of protection of rights. In essence, they provide protection for "new subject" or "new categories" of things to be protected. S*ui generis* rights are needed to provide protection to creativity as this is not adequately addressed by established intellectual property forms.

In ABS, *sui generis* systems would provide for the for the protection of traditional knowledge, innovations and practices which would acknowledge the various aspects of a country's customary laws related to conservation, biological and genetic resources, sustainable use of biological diversity and traditional knowledge.

Conventional IPR system does not provide adequate protection for traditional knowledge and biological resources for several reasons. One example is that these regimes use fixed term market exclusivity to provide incentives for investors in innovations and the development of generic copies of an innovation. Once the term of protection has expired, innovators can invest in the development of generics. There is limited applicability of fixed term systems for biological resources because the conservation of genetic resources and traditional knowledge for only a 10- or 50-year term is not an optimal choice the policy-makers in resource conservation.

Consultation with stakeholders indicated that there was a general perception that traditional knowledge is dying and being eroded. Much of this has to do with the lure of western cultures particularly on young people. Poverty is also another concern which affects traditional knowledge, as members of communities often migrate from Villages and move to the coast and neighbouring counties, particularly Brazil to seek employment opportunities.

The issues regarding land rights were also raised as being important in the protection of traditional knowledge. The GoG has ensured that lands that were traditionally occupied by Amerindians are legally recognised as community titled lands.

The National ABS policy is an attempt at developing options for *sui generis* protection of traditional knowledge rights. The policy recognises that traditional knowledge of Amerindian communities has a right to be protected as much as scientific knowledge under a conventional IPR regime. It indicates that the Government of Guyana (GoG) supports:

1. Amerindian and local communities as guardians of their knowledge and having the right to protect and control the dissemination of that knowledge.
2. Amerindian and local communities in their right to create new knowledge based on cultural traditions.
3. Mechanisms for the protection of the knowledge of Amerindian and local communities.
4. Gender-specific rights to protect, control, and create traditional knowledge.

However, the policy does not purport any specific means by which traditional knowledge will be protected.

The Draft ABS Regulations offers some measure of protection for traditional knowledge in the form of the agreements with Bio-prospectors. The Draft Regulations when approved and gazetted will:

- Provide a comprehensive framework for access to genetic materials;
- Offer protection against illegal entry to Amerindian communities;
- Deem it an offence to remove without authorisation for collection or export and biological material; and
- Restrict researchers from accessing genetic material.

(d) The relationship between customary laws governing custodianship, use and transmission of traditional knowledge, on the one hand, and the formal intellectual property system, on the other;

Customary laws governing custodianship, use and transmission of traditional knowledge are not addressed through Guyana's IPR system or general legal framework.

Traditional knowledge and practices associated with genetic resources do not exist within a framework in which they would be applicable to copyright or trademarks. While there could be some application to patents, this may prove difficult given that the Patents and Design Act is structured on the basis of old legislation which needs to be modernised and adapted for the needs of traditional knowledge. This Trade Marks Act would be inapplicable as it deals with registered trademarks.

(e) Means by which holders of traditional knowledge, including indigenous peoples, may test means of protection of traditional knowledge based on existing intellectual property rights, *sui generis* possibilities, and customary laws;

Holders of traditional knowledge are protected by means of the provisions of the Amerindian Act and once finalised, the Draft ABS Regulations.

(f) How to ensure that granting intellectual property rights does not preclude continued customary use of genetic resources and related knowledge;

The granting of intellectual property rights would not preclude continued customary use of genetic resources and related traditional knowledge because of the protection afforded to the customary use of genetic materials by the Amerindian Act and also Draft ABS Regulations (when finalised in force).

2.1 Intellectual Property Rights and Access and Benefit-Sharing Agreements

(g) Ways to regulate the use of resources in order to take into account ethical concerns;

The Draft ABS Regulations seek to regulate the use of resources while taking into consideration ethical concerns. This would also be a matter falling within the purview of the Environmental Protection Act.

(h) Ways to ensure the continued customary use of genetic resources and related knowledge;

The continued customary use of genetic resources is protected by the Amerindian Act and will be protected by the Draft ABS Regulations when it finalised and enforced.

Entering into Memoranda of Understanding (MOUs) can provide a means by which customary use of genetic resources and traditional knowledge can persist. In 2002, the Government of Guyana (GoG) and the Amerindian Toshaos Area Council which represents fourteen (14) Amerindian communities, signed an MOU which recognised Amerindian rights. The MOU also recognised the customs and traditions. However, this MOU was restricted to the Kaieteur National Park. It provided the options for meaningful participation in protected areas management, with the full rights of the communities being recognised.

However, the MOU was not legally binding and has thus since been temporarily after the withdrawal of one the Toshaos.

(i) How to make provision for the exploitation and use of intellectual property rights to include joint research, obligation to work any right on inventions obtained or provide licenses;

Modernisation of the existing system of IPR and Trademarks is needed to protect customary uses of genetic resources and traditional knowledge.

(j) How to take into account the possibility of joint ownership of intellectual property rights.

This matter could be covered by the Village By-Laws once gazetted. The development of *sui generis* protection of IPR should be used to comprehensively cover issues relating to IPR and genetic resources.

3.0 Indicative Case Study – The Iwokrama International Centre (IIC) and the North Rupununi Communities

3.1 Overview

At the Commonwealth Heads of Government Meeting in Malaysia in 1989, a proposal was made for the development of the Iwokrama International Centre (IIC) by the President of Guyana at that time[7].

Guidelines for the management of a forested site within the Interior of Guyana were developed through funding from the United Nations Development Programme (UNDP) and the Global Environment Facility (GEF); seed money for the project allowed for a field station to be built in the established Iwokrama Forest for research and training[8].

At the following Commonwealth Heads of Government Meeting in 1995, President Cheddi Jagan, and Secretary-General of the Commonwealth, Chief Emeka Anyaoku, signed an Agreement which defined the objectives, functions, and organisation of Iwokrama[9].

It was this Agreement that formed part of the legislation laid in Parliament in late 1995. In 1996, the GoG passed the Iwokrama International Centre for Rain Forest Conservation and Development Act, Cap. 20:04.

Under this Act, the IIC has the responsibility for nearly one million acres (371,000 hectares) of forest, known as the Iwokrama Forest. The Forest and adjacent North Rupununi Wetlands combine making a highly diverse ecosystem which has more than 200 inland lakes, palm forests, rivers, 1000 metre high mountains, lowland rainforest and seasonally inundated savannas. There are over 475 species of birds, over 400 species of fish and over 90 species of bats. The ultimate aim of the Centre is to manage the forest in a sustainable manner maintaining all of its ecosystem services and functions, while at the same time securing opportunities for social and economic benefits to communities locally, regionally and internationally[10].

The IIC operates within the following spheres:

1. Research;

[7] www.iwokrama.org
[8] *Ibid.*
[9] *Ibid.*
[10] *Ibid.*

2. Development of non-timber forest products as follows:
   a. Genetic and biochemical assets which are the products of bioprospecting work;
   b. Honey;
   c. Fish and other fauna produced through managed, sustainable practices of harvesting;
   d. Plant products (seeds, resins, oils etc.); and
   e. Craft products;
3. Maintenance of ecosystem services like watershed management, soil stabilisation, habitat and biodiversity management and carbon sequestration;
4. Intellectual property services inclusive of consulting, research and branding; and
5. Geographical information systems (GIS) consulting[11].

The IIC has worked closely with the Amerindian communities as they are allowed to continue their traditional ways of life within the Iwokrama Forest. The Forest is divided into two areas: a Sustainable Utilisation Area (SUA) where sustainable activities are permitted in a managed, controlled way; and a Wilderness Preserve (WP) were activities are predominantly restricted with the exception of non-commercial traditional uses by local Amerindians[12].

The IIC operates by the Mission:

"Promoting the conservation and sustainable and equitable use of tropical rain forests in a manner that leads 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."

In a joint partnership with Tigerwood Guyana Inc. (TGI), the IIC has received the Forest Stewardship Council's (FSC) certification for the entire Iwokrama Forest. The FSC's certification, products can now enter any global market with a unique credential. The certification process ensures that forestry operations are conducted in accordance to best practice standards environmentally, socially and economically; and that local communities are fully integrated into the business process. At Iwokrama, the communities are shareholders in the sustainable timber operations[13]. Iwokrama is the only FSC certified organisation in Guyana and is the only FSC forest in the Guiana Shield of South America.

[11] www.iwokrama.org
[12] *Ibid.*
[13] www.indigenousportal.com

There is one permanent settlement in the Iwokrama Forest, which are the Arawak / Makushi / Wapishana of Fair View. This village comprises about 110 people in 21 households. Surama Village, comprises of about 120 people, forms part of the Annai District and is the closest village to the Iwokrama Forest. The Makushi-Arawak inhabitants of this village use areas within the Iwokrama Forest[14].

There are approximately 3,500 people living in thirteen (13) villages south of the Iwokrama Forest in Region 9. While there are 6,000 people living in fifteen villages west of the Iwokrama Forest in Region 8. The majority of these people are Amerindian (mainly Patamona with two Makushi Villages). About one third of these people are located within a week's walk of the Iwokrama Forest border along the Siparuni River[15].

The IIC has developed strong relationships with Amerindian communities of the North Rupununi and the Village of Fair View (within the Iwokrama Forest). These relationships occur with all of the members of these communities, and at all levels of management within the IIC even at the IIC's Board level. There has been an exchange of knowledge and skills with members of the communities in addition to the full participatory roles played by the communities.

Through work with the communities of the North Rupununi, the IIC has facilitated the development of the North Rupununi District Development Board. This Board functions as a representative body for the thirteen (13) North Rupununi communities. The IIC has also facilitated the development of the Community Environmental Worker programme, the Makushi Research Unit (MRU), and Wildlife Clubs[16].

There is a significant amount of research undertaken at the Iworkama Forest. The IIC has developed specific guidelines under which research may be conducted. Under these guidelines, researchers must enter into contract agreements with the IIC. The IIC has continued its support of Guyana's policies and guidelines, ensuring that research within the Forest follow the EPA's stipulated research guidelines and the applications for permits.

The IIC has also entered into written contractual agreements with communities which outline the benefits received from discoveries and sustainable revenue generating practices within the Iwokrama Forest. The exact details of these contracts remain confidential due to the nature of these agreements and possibility of these agreements being taken "out of context". However, the

[14] Iwokrama Forest Management Plan (Draft)
[15] *Ibid.*
[16] www.iwokrama.org

IIC has produced a well-thought out complex IPR and ABS Policy document which contains model agreements. These were used to develop the agreements entered into with researchers.

The IIC has maintained that it remains committed to supporting the principles of the CBD for sustainable use of resources and the fair and equitable sharing of benefits arising from the use of these resources. It has also indicated that it shall abide by the principles set out by the Bonn Guidelines as well as other International codes of practise relating to IPR. Prior informed consent is a major feature for research guidelines, especially where Amerindian communities are involved. Some of the policy objectives are:

- To establish conditions which ensure that the activities of the IIC are consistent with the provisions of CITES, the CBD and other international, regional and national laws and policies concerning biodiversity, access to genetic resources and benefit-sharing, and the protection of indigenous and traditional knowledge;
- To establish conditions which enable the IIC to access the genetic resources of others according to the same standards, whether found in *in situ* or *ex situ* conditions; and
- To promote the fair and equitable sharing of the benefits arising from the use of genetic resources and indigenous / traditional knowledge between the Iwokrama International Centre, indigenous and traditional communities, the GoG and other institutions and individuals[17].

There are many stakeholders involved in the IIC. The diagram (Figure 3.1) illustrates this.

[17] Iwokrama's IPR and ABS Policy

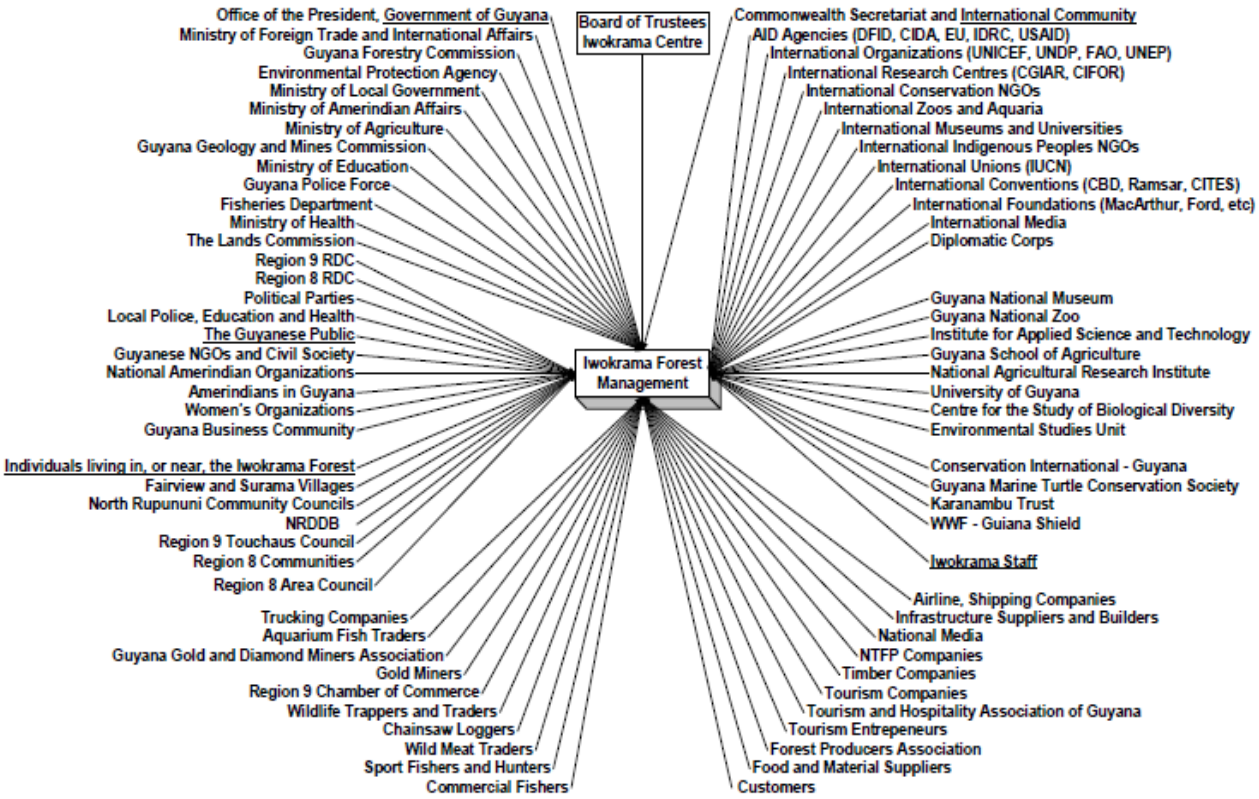

Figure 3.1 – Stakeholders of Iwokrama International Centre[18]

The benefits meted out to communities and Guyana has been both monetary and non-monetary. The IIC has raised US$10 million in the last decade to support forestry management and human resource development in Guyana. In addition to an unobstructed way of life, communities have benefitted from a variety of training programmes, support for university students either directly or indirectly with the IIC.

The relationships between Iwokrama and local communities are facilitative, open and include partnerships based on the exchange of knowledge and skills, mutual support, and shared decision making.

[18] Iwokrama Forest Management Plan (Draft)

3.2 Description of the Context

3.2.1 Tropical Forests

The Iwokrama Forest and the neighbouring areas are particularly diverse. About 75% of the area in the north of the reserve can be described as Tropical Moist Forest and 25% in the south as Tropical Dry Forest. Vegetation on mountains and hills in the region do not reach sufficient elevation, given the latitude, to be classified as tropical montane or cloud forests, though geology, steep slopes, mesa-like summits and thin soils have created conditions better suited to low-statured, epiphytic, xerophytic and rheophytic plants that characterise these formations[19].

The Iwokrama Forest is currently known to house more than 1,250 species of plants and it is expected that this will rise to over 2000 with continued cataloguing and collecting. The most common species tend to be Class I Timber including Mora (*Mora excelsa*), Wallaba (*Eperua falcate*), Crabwood (Carapa guianensis), Greenheart (*Chlorocardium rodiei*), Manicole (*Euterpe* oleraceae) *and* Turu (*Oenocarpus* sp.)[20].

A number of tree species not well known from northern Guyana have been collected in the area, mainly in the Tropical Dry / Seasonal Forest association. These include the commercially important Brazilian cedar (*Cedrelinga cataeniformis*), Brazil nut (*Bertholletia excelsa*) and Waramadan (*Dicorynia guianensis*)[21].

3.2.2 Aquatic Ecosystems

The area is traversed by fast-flowing waterways that are commonly inhabited by Rapatea or anansi-wawai (*Rapatea paludosa*). Steep waterfalls and spillways often have small plants specialising on low soil and high moisture locations. The aquatic ecosystem is very diverse and there are many different land form types which affect ecosystem types present[22].

Notably, there are localised ridges which separate the main dry season river from the surrounding floodplains. The ridges are well developed along the Essequibo and lower Burro-Burro Rivers[23].

[19] Iwokrama Forest Management Plan (Draft)
[20] *Ibid.*
[21] *Ibid.*
[22] *Ibid.*
[23] *Ibid.*

There are large tree species which dominate the floodplains including:

- Wadara (*Couratari riparia*);
- Sarabebe (*Macrolobium acaciifolium*);
- Clammy cherry (*Cordia tetrandra*);
- Common baromalli (*Catostemma commune*);
- Crabwood (*Carapa guianensis*);
- Swamp dalli (*Virola surinamensis*);
- Arapipi (*Astrocaryum jauari*);
- Supple jack (*Combretum laxum*);
- Couepia spp., (*Campsiandra comosa*);
- Silk cotton (*Ceiba pentandra*);
- Manicole (*Euterpe oleracea, Euterpe precatoria*);
- Hog plum (*Spondias mombin*);
- Fukadi (*Terminalia amazonica*); and
- Congo pump (*Cecropia obtusa*).[24]

3.2.3 Wetland Ecosystems

There are areas which are permanently inundated. In these areas, there are specialised mixes of plants, which can take advantage of these waterlogged conditions. In deep water, it would be possible to find: Ité (*Mauritia flexuosa*), Manicole (*Euterpe precatoria / oleracaea)* and Moco-moco (*Montrichardia arborescens)*. In shallow water swamps: Mukru (*Ichnosiphon* spp.), Manni (*Symphonia globulifera*), White Cedar (*Tabebuia insignis*), Kirakaua (*Iryanthera* spp.), Corkwood (*Pterocarpus officinalis*), *Clusia* spp., and others[25].

The Rupununi Wetlands, located southeast of the Iwokrama Forest, includes the Rupununi, Rewa, and Essequibo Rivers. The wetlands have highly diverse habitats and biota. They are the homes to 400 species of fish and Giant River Turtles (*Podocnemis* spp.), Black Caiman (*Melanosuchus niger)*, Arapaima fish (*Arapaima gigas)*, Giant Otters (*Pteronura brasiliensis*), Jaguars (*Puma concolor*)[26].

[24] Iwokrama Forest Management Plan (Draft)
[25] *Ibid.*
[26] *Ibid.*

3.2.4 The Local Communities

The system of governance remains highly decentralised. There are Village Captains or Toshaos (also called Chiefs) who function as leaders of an elected Village Council. The overarching responsibility for issues regarding Indigenous Peoples lie with the Ministry of Amerindian Affairs. The Ministry may set up a District Council that will include representatives from Village Councils in the area. The Village Councils are responsible for the overall affairs of the Villages, and under the Amerindian Act, the Councils have the right to make Rules which are legally binding and can be used to regulate the way in which lands are used, once they do not contravene existing laws.

3.3 Purpose and Objectives of the Benefit-Sharing Arrangements

The overarching Mission of the IIC is an excellent description for the objectives of the benefit-sharing between the IIC and the communities.

The IPR and ABS Policy developed by the IIC also provides two relevant objectives:

- To establish conditions which ensure that the activities of the IIC are consistent with the provisions of CITES, the CBD and other international, regional and national laws and policies concerning biodiversity, access to genetic resources and benefit-sharing, and the protection of indigenous and traditional knowledge.
- To promote the fair and equitable sharing of the benefits arising from the use of genetic resources and indigenous / traditional knowledge between the IIC, indigenous and traditional communities, the Government of Guyana and other institutions and individuals[27].

The ABS arrangements between the communities and the IIC provide for long-term benefits to be supplied to the communities. They stand to benefit from all potential discoveries and revenues earned from such discoveries. The IIC has included into all of their research agreements with individuals and institutions allocated proportions of royalties which will go to communities in the case of patents / innovations.

3.4 The Arrangements with Communities

As stated above, the Agreements with the Communities remain confidential. However, the overall types of benefits are known within the public domain (these have been discussed previously).

[27] Iwokrama's IPR and ABS Policy

3.5 Policy, Legislative and Administrative Context

Given that there are no existing IPR laws or ABS laws, except for the ABS Policy, the benefit-sharing arrangements between the IIC and the North Rupununi communities do not contravene any laws or policies. One helpful policy is the Iwokrama's IPR and ABS Policy, which can be used to assist the GoG in the development of their IPR regime.

One particular constraint that must be addressed is the Rule making power which has been entrusted to the Village Councils by the Amerindian Act. Given that the Councils have not exercised this power, it could be helpful in ensuring that equitable benefits are made available to communities from which genetic resources are derived. However, it must be ensured that these remain consistent with regard to ABS and does not contravene the Draft ABS Regulations once they have finalised. In addition to IPR the rules should also firmly establish what the rights the communities have with regard to the protection of traditional knowledge.

3.6 Impact on Conservation

In the project areas, there have been significantly positive impacts on conservation. The SUA and WP are revered as success stories for Guyana, as the IIC has clearly demonstrated that through sustainable management initiatives forests can be conserved and kept intact. There has been a legitimisation of traditional knowledge and sustainable harvesting and management of forest resources.

The Communities have further benefited through the collaborative development of human capacities through training. With this training, they have also been integral in the development of their own management plans. For example, these communities were involved in the implementation and development of a management plan for the Arapaima fish. Stocks of this giant fish were on the decline due to over fishing and the use of the plan has resulted in the recovery of fish populations.

3.7 Policy Relevant Conclusions: Lessons Learnt and Replicability

While the success of Iwokrama is not doubted, there still lie concerns with the following issues:

1. Even though the IIC has indicated that Guyana will derive benefits, it is not clear exactly how this will be achieved. For example, even though royalties will be paid to the GoG, the governing body to which these will be paid is not articulated, nor to which fund these royalties will be sent.

2. Though there is the general understanding that the relationships between Amerindian communities and other citizens of Guyana are generally viewed as being sensitive, the secrecy of the ABS agreements between communities and the IIC, makes replicability somewhat difficult.

Nonetheless, the arrangements and partners between the IIC and the communities of the North Rupununi appear to be effective. The positive aspects which should be replicated are:

1. Communities are not prevented from practising their traditions and customs.
2. Access to sacred areas are prohibited and respected.
3. The IIC has included Amerindian people at all levels of management within the organisation and have included them in the decision-making process.
4. The IIC has identified that while all discoveries are the property of the Centre, it has also made provision for ensuring that any royalties received from discoveries and invention will also trickle down to the communities.
5. Capacity-building of Amerindian people have been an important focus of the IIC.

The most significant constraints for the identification and adoption of economically, socially and culturally sound benefit-sharing arrangements to promote the conservation and sustainable use of biological diversity include:

1. Absence of finalised ABS Regulations;
2. Underdeveloped legislation for IPR;
3. Inadequate numbers of trained personnel at key organisations; and
4. Unexplored partnerships for funding, education and public awareness.

The Case study of the Iwokrama and the North Rupununi communities is an excellent example of a successful ABS arrangement within Guyana. It has aspects for replicability which can work within other communities. However, key capacity constraints must be addressed should these ABS arrangements be undertaken in other communities.

For the implementation of these types of arrangements, further research into the specific traditions of the communities must be undertaken. The use of Iwokrama's IPR and ABS Policy and its adaptation for the development of a national IPR regime will be a good starting point for the replication of these arrangements. The Iwokrama has spent a considerable amount of time and money acquired through funding for the development of the regime to ensure that traditional

knowledge is protected in their ABS arrangements. The organisation has even submitted this policy to the Ministry of Legal Affairs as a guide for the development of IPR.

For the Iwokrama Case Study, the key policy document was Iwokrama's IPR and ABS Policy. This set the framework for how intellectual property of local communities as well as the Iwokrama is protected.

4.0 Appendices

4.1 Appendix I – List of Stakeholders

The Stakeholders consulted during this process included:

- Amerindian Peoples' Association (APA)
- Centre for the Study of Biological Diversity (CSBD)
- Conservation International – Guyana (CI-G)
- Customs and Trade Administration
- Environmental Protection Agency (EPA)
- GFA Consulting Group
- Guyana Forest Products Association (GFPA)
- Guyana Forestry Commission (GFC)
- Guyana Lands and Survey Commission (GLSC)
- Guyana Marine Turtle Conservation Society (GMTCS)
- Guyana Organisation of Indigenous Peoples (GOIP)
- Guyana Rice Development Board (GRBD)
- Guyana Rice Producers Association (GRPA)
- Guyana School of Agriculture (GSA)
- Guyana Sugar Corporation (GuySuCo)
- Institute of Applied Science and Technology (IAST)
- Inter-American Institute for Co-operation on Agriculture (IICA)
- Iwokrama International Centre (IIC)
- Ministry of Agriculture – Fisheries Division
- Ministry of Amerindian Affairs
- Ministry of Foreign Affairs
- Ministry of Foreign Trade and International Co-Operation
- Ministry of Health – Food Policy Division
- Ministry of Legal Affairs
- National Agricultural Research Institute (NARI)
- National Amerindian Environmental Educational Development Foundation (NADF)
- National Centre for Educational Resource Development (NCERD)
- National Parks Commission
- Pesticide and Toxic Chemicals Board
- The Amerindian Action Movement of Guyana (TAAMOG)
- Tourism and Hospitality Association

- University of Guyana (UG) - Faculties of Earth Sciences and Agriculture and Forestry
- Wildlife Division
- World Wildlife Fund - Guianas (WWF)

4.2 Appendix II – List of Documents for Desktop Review

Key documents of the desktop review included:

Convention on Biological Diversity Secretariat. 1992. Text of the Convention on Biological Diversity.

Convention on Biological Diversity Secretariat / United Nations Environment Programme. 2002. Bonn Guidelines on Access to Genetic Resources and Fair Sharing of the Benefits Arising out of their Utilisation.

Convention on Biological Diversity Secretariat / United Nations Environment Programme. 2005. Handbook on the Convention on Biological Diversity including its Cartagena Protocol on Biosafety. 3rd Edition.

Convention on Biological Diversity Secretariat / United Nations Environment Programme. 2007. Conference of Parties Decision VII.

Convention on Biological Diversity Secretariat / United Nations Environment Programme. 2008. Conference of Parties Decision VIII.

Convention on Biological Diversity Secretariat / United Nations Environment Programme. 2009. Conference of Parties Decision IX.

Environmental Protection Agency. 1999. National Biodiversity Action Plan.

Environmental Protection Agency. 2001. Final Stocktaking and Thematic Assessment Report-United Nations Convention on Biological Diversity (UNCBD).

Environmental Protection Agency. 2007. Guyana National Capacity Self-Assessment Strategy (NCSA) and Action Plan for Synergistic Environmental Capacity Development for Biodiversity, Climate Change, and Land Degradation (2007-2011).

Environmental Protection Agency. 2007. National Biodiversity Action Plan II (2007-2011).

Environmental Protection Agency. 2008. National Policy on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation.

Government of Guyana. 1929. Kaieteur National Park Act.

Government of Guyana. 1973. Patents and Design Act.

Government of Guyana. 1996. Environmental Protection Act.

Government of Guyana. 1996. Iwokrama International Centre for Rainforest Conservation and Development Act.

Government of Guyana. 1999. Species Protection Regulations (Environmental Protection Act).

Government of Guyana. 2000. National Development Strategy (2001-2010). A Policy Framework, Eradicating Poverty and Unifying Guyana. A Civil Society Document. Ministry of Finance.

Government of Guyana. 2001. Forest Act.

Government of Guyana. 2001. National Environmental Action Plan (NEAP) 2001-2005.

Government of Guyana. 2002. Fisheries Act.

Government of Guyana. 2006. Amerindian Act.

Government of Guyana. 2009. Access and Benefit-sharing Regulations (Environmental Protection Act) Draft.

Government of Guyana. 2009. Seeds Regulation Bill (Draft).

Government of Guyana. Customs Act (Cap. 82:01).

Government of Guyana. Deeds Registry (Cap 5:01).

Government of Guyana. Trade Marks Act Cap. 99:01

Government of the United Kingdom. 1956. United Kingdom Copyright Act.

Iwokrama International Centre. 1996. Policy on Intellectual Property Rights and Access and Benefit-Sharing.

Iwokrama International Centre. 2001. Draft Iwokrama Forest Management Plan.

Iwokrama International Centre. 2009. URL: www.iwokrama.org. Last accessed September 11, 2009.

Office of the President. 1999. The First National Report to the Conference of Parties on the Convention on Biological Diversity.

Seiler, A. and G. Dutfield. 2001. Regulating Access and Benefit Sharing – Basic Issues, Legal Instruments, Policy Proposals.

United Nations Environment Programme. 2002. Background Paper on Capacity Building for Access and Benefit Sharing of Genetic Resources.