# Guyana

## Traditional Knowledge Incorporation into Biodiversity-Assessment Report 2009

Prepared by
**The Consultancy Group (TCG)** for
**The Environmental Protection Agency (EPA)**
Lot 7 Broad & Charles Streets,
Charlestown, Georgetown
Tel.: (592)-225-2062 / 1218 / 0506 / 6917
http://www.epaguyana.org

# BIODIVERSITY ENABLING ACTIVITY PROJECT (BEA)

# Assessment of Capacity Building Needs – Traditional Knowledge Incorporation into Biodiversity Management


**Lead Writer:** **Esther McIntosh**

**Co-Writers:** **René Edwards**
**Christopher Chin**
**Alana Lancaster**

**Edited by:** **Roxana Kawall**

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**The Consultancy Group (TCG)**
theconsultancygroup.guyana@gmail.com
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# Acknowledgement

We wish to acknowledge and thank all of the individuals and institutions who supported the research and development of this assessment report. With so many people having contributed in some way or other, it would be impossible to list everyone by name, but the outstanding contributions of certain groups and individuals must be acknowledged, for without them this report might never have come to fruition.

The report would not have been possible without the logistical support and guidance received from the Honourable Minister Pauline Sukhai and the staff of the Ministry of Amerindian Affairs. We also wish to thank several notable individuals who provided support and invaluable insight during our field visits – Mr Ovid Williams (MoAA), Chris Dundan (Community Development Officer, MoAA), Mr Victor Boyer (Community Development Officer, MoAA), Mr Vivian Fredericks and Toshao Yvonne Pearson.

Several indigenous civil society organizations took time out to meet with the team and these include Mr Colin Klautky (GOIP), Mr Peter Persaud (TAAMOG), Mr Ashton Simon (NADF) and Ms Jean La Rose (APA). The assessment was deeply enriched by the technical expertise and enthusiasm of Dr George Simon (ARU) and Ms Jennifer Wishart (Walter Roth Museum) for the project.

Several communities in Region 1, 2 and 9 participated in the assessment report and took their valuable time to share their knowledge with the team. We wish to say thank you to all the community members who participated and those who helped to make our stay an enjoyable experience.

The report was greatly strengthened by the engagement and involvement of several organizations that agreed to participate in a Special Working Group (SWG) and made valuable contributions. Thank you. We also wish to thank the staff Environmental Protection Agency with whom we worked very closely over the life of the project. In particular we wish to acknowledge Ms Sharifah Razack, Ms Dominique Saheed and the UNDP focal point within the EPA, Mr Ronald Cumberbatch for their tireless support and contributions in developing this document.

This project was funded by Global Environment Facility (GEF), the project entitled, "Assessment of Capacity Building Needs, Preparation of Second and Third National Reports (CBD) and the Clearing House Mechanism in Guyana", is implemented by the United Nations Development Programme (UNDP) and executed by the Environmental Protection Agency of Guyana (EPA).

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# Acronyms & Abbreviations

| | |
|---|---|
| ABS | Access and Benefit Sharing |
| AMCAR | Amazon Caribbean Ltd. |
| APA | Amerindian People's Association |
| ARU | Amerindian Research Unit |
| ACT | Amazon Cooperation Treaty |
| BEA | Biodiversity Enabling Activity |
| BHI | Bina Hill Institute |
| CAT | Capacity Assessment Tool |
| CBD | Convention on Biological Diversity |
| CBO | Community Based Organization |
| CI-G | Conservation International - Guyana |
| COCA | Community Owned Conservation Area |
| EPA | Environmental Protection Agency |
| KfW | German Development Bank |
| MoAA | Ministry of Amerindian Affairs |
| GGMC | Guyana Geology and Mines Commission |
| GoG | Government of Guyana |
| GOIP | Guyanese Organisation of Indigenous Peoples |
| GMTCS | Guyana Marine Turtle Conservation Society |
| IAST | Institute of Applied Science and Technology |
| IKA | Indigenous Knowledge Advisors |
| INGO | International Non-Governmental Organization |
| IP | Intellectual Property |
| IPR | Intellectual Property Rights |
| LCDS | Low Carbon Development Strategy |
| MRU | Macushi Research Unit |
| NADF | National Amerindian Environmental Educational Development Foundation |
| NBAP | National Biodiversity Action Plan |
| NBC | National Biodiversity Committee |
| NEAP | National Environmental Action Plan |

| | |
|---|---|
| NGO | Non-Governmental Organization |
| NRDDB | North Rupununi District Development Board |
| NTC | National Toshaos Council |
| PA | Protected Areas |
| REDD | Reduced Emissions from Deforestation and Degradation |
| RDC | Regional Democratic Council |
| SWG | Special Working Group |
| TAAMOG | The Amerindian Action Movement of Guyana |
| TCG | The Consultancy Group |
| TK | Traditional Knowledge |
| TRIPS | Trade Related Intellectual Property Rights |
| TWG | Technical Working Group |
| UNDP | United Nations Development Programme |
| UG | University of Guyana |
| VC | Village Council |
| WWF | World Wildlife Fund |

# Executive Summary

The findings of this report are meant to inform the preparation of Guyana's Second and Third National Reports to the UN Convention on Biological Diversity (CBD) in fulfilment of Article 26. A salient feature of CBD is the recognition of the important relationship between indigenous peoples and their environment. Article 8 (j) of the CBD states that each contracting party shall, as far as possible and appropriate:

*"Subject to national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biodiversity; promote their wider application with the approval and involvement of holders of such knowledge innovations and practices and encourage the equitable sharing of benefits arising from the utilization of such knowledge."*
*(Source: http://www.cbd.int/traditional/).*

There is a greater understanding and appreciation of the relevance and potential for TK to address contemporary socio-economic and environmental problems, such as climate change and poverty. The assessment of capacity building needs presents Guyana's current status as it related to TK incorporation in biodiversity management. This report forms the basis for the *Traditional Knowledge Biodiversity Integration Strategy and Action Plan: Preserving Traditions, Driving Innovation and Growth.*

The report contains a contextual analysis which is informed by a cross-section of stakeholders – from the international, national and community levels. These stakeholders are either involved in issues related to the environment or to the Amerindians, or both. The Report presents information and analysis of three core components of the research: (a) an assessment of capacity and current preservation aspects at several levels (b) a review of the current legislation aimed at promoting and protecting traditional knowledge and (c) an inventory on TK and sustainable conservation. This is meant to allow for a more comprehensive understanding of opinions and issues of several stakeholders. The research for the Report was conducted in the form of a Rapid Assessment, the results of which are presented below.

Overall it was found that available literature, research and the practice of traditional knowledge being incorporated into biodiversity management in Guyana needs more focused attention and investment. It also found that, new innovations such as eco-tourism and agro-processing have played an important role in both knowledge preservation and conservation efforts. Language and cultural practices are noticeably declining. A weak legal structure for protecting traditional knowledge provides a further challenge. Poor investments in TK have ensured that the promotion of its wider application has largely been under achieved and such knowledge is generally seen as separate from conservation or national development efforts.

The broad-based assessment of stakeholders focused on four capacity areas – leadership, adaptive, management and operational capacities. The leadership

capacity of Village Councils is largely the strongest, whilst their operational and adaptive capacity is generally weak. One major finding is that overall the most important mechanism for preserving traditional knowledge - the language - is being eroded, particularly in Regions 1 and 2, but of equal concern to Region 9. The presence of environmental organizations such as GMTCS, Conservation International, Iwokrama and WWF, and protected areas or planned protected areas, has led to a noticeable increase in awareness, and in some instances resources and opportunities being made available in the form of grants, training etc. In and around conservation areas, there was also a greater likelihood of groups/structures formalizing or communities organizing themselves into bodies as evidenced in the creation of the North Rupununi District Development Board and the Kanuku Mountain Community Representative Group (KMPCRG). This has also contributed to participatory knowledge retention exercises such as in the case of the Macushi Research Unit (research and language preservation) and the Bina Hill Institute.

Integration of TK in biodiversity management is highest at the community level where traditional methods related to agriculture, fishing, hunting and logging remain strong, especially since they are an integral part of day-to-day activities. Poverty, low levels of capacity and lack of regulation and oversight at all levels have provided significant challenges for communities. More structured and holistic approaches to resource management and preservation of TK is largely lacking. Most communities rely heavily on Amerindian Heritage Month's cultural celebrations to maintain traditions including their language, song, stories and dances.

Supporting institutions, such as indigenous civil society organizations, are still relatively nascent.. Other supporting institutions such as the Amerindian Research Unit and the Walter Roth Museum of Anthropology have significantly contributed to the availability of a body of knowledge and research but much work remains to be done. A major constraint is the low levels of engagement between national-level institutions and communities. Moreover, information sharing and repatriation of knowledge to communities is highly under practiced.

# Introduction

*"Traditional Knowledge (TK) is a broad term referring to knowledge systems... These knowledge systems have significance and relevance not only to its holders but to the rest of humanity."*
*- IP Mall -*

In April to June 2009, a Rapid Assessment was conducted "to examine the preservation and maintenance of biodiversity-related knowledge, innovations and practices of indigenous and local communities employing traditional lifestyles in Guyana". The purpose of this Report is to present the findings of the research process. The process included: a review of existing legislation, the development of an inventory of Traditional Knowledge, and an assessment of a spectrum of stakeholders at the community, regional and national levels.

The purpose of the research was to assess the current status of documentation, capacity-building requirements and legal frameworks in relation to the preservation and maintenance of traditional biodiversity-related knowledge in Guyana. The report seeks to identify information and knowledge gaps and propose actions to fill them. In addition, the report also seeks to determine priorities for further documentation, research and action; and to provide a set of strategic recommendations. These recommendations form the basis of the *Traditional Knowledge Biodiversity Integration Strategy and Action Plan: Preserving Traditions, Driving Innovation and Growth.* The report forms part of a wider effort by the Environmental Protection Agency (EPA) of Guyana and its partners to assess capacity building needs in preparation for Guyana's Second and Third National Reports to the UN Convention on Biological Diversity[1].

The Assessment Report was researched and written at a very dynamic period in Guyana's history. In recent years Guyana has been actively involved in efforts to stem climate change, deforestation and degradation through pioneering national efforts that are closely linked to achieving international targets such as the National Protected Areas System (NPAS), the Reduced Emissions from Deforestation and Degradation (REDD) and, more recently, the Low Carbon Development Strategy (LCDS). Many of these frameworks imply and reassert a seminal role for indigenous related knowledge in Guyana.

Guyana is the largest country of the English speaking Caribbean, and the largest member of the CARICOM integration movement. According to Guyana's First National CBD Report, Guyana's possesses the largest national biological diversity for any country in Caribbean and as such "occupies an important position in maintaining regional biodiversity". Guyana is a signatory to the Treaty for Amazonian Cooperation which integrates the countries of the wider Amazon basin who collectively account for more that half of global terrestrial biodiversity.

[1] The Convention on Biological Diversity is dedicated to promoting sustainable development. Guyana signed the CBD in 1992. There are currently (2009) 191 parties to the Convention.

**Fig 1: Map showing Guyana's location - Source: www. wikepedia.org**

Biodiversity is of particular importance to Guyana, playing an integral role in maintaining the extensive forest cover of the country, the savannas, and the various aquatic habitats. Guyana's rainforest covers an area in excess of 15 million hectares (*Source: Guyana's Draft Low Carbon Development Strategy, 2009*). The agricultural sector is the major economic beneficiary of biodiversity and the industry contributes more than 35% of the GDP and about 43% of foreign exchange earnings. Two of the top three sources of foreign exchange and employment in the country are agricultural crops (rice and sugar). Fisheries and forestry contribute an additional 6% and 5%, respectively to GDP, but there is potential for development in both these industries along with that of wildlife. The biological resources of the country are therefore fundamentally important in the future development of the economy and the population (*Source – Guyana's First National CBD Report, 1999*).

## Amerindians of Guyana

Amerindians are widely considered to be the first peoples of Guyana, their presence dating back thousands of years. They enjoy a rich and diverse cultural heritage. According to the 2002 census, the Amerindian population is 68,675 or 9.2% of the population (which is 751,223). Between the 1991 and 2002 censuses the Amerindian population grew by 22,097, an increase of 47.3 percent or an annual growth rate of 3.5%. There are approximately 120 Amerindian communities with individual populations ranging from 120 to more than 6,000, often living in very remote dispersed settlement patterns. It is estimated that the majority of Amerindians in Guyana live below the poverty line[2].

[2] Source – www.gina.gov.gy

Guyana is home to nine indigenous Amerindian tribes who live in coastal or hinterland areas. The coastal tribes are the Carib, Arawak, and Warrau. There are seven tribes of Amerindians living in the interior of Guyana: Akawaio, Arecuna, Barima River Caribe, Macusi, Patamona, Waiwai, and Wapishana. The Wapishana and Macushi people live in the savannahs of the Rupununi (Region 9) and the Waiwai live in the southernmost point in an area known as Konashen. All tribes speak a language which is derived from either the Carib or the Arawak language. Most Amerindian communities are predominantly agrarian and engage in subsistence agriculture, planting crops such as cassava (manioc), ground provisions, corn, vegetables and pulses. This is subsidized with other traditional practices such as hunting, fishing and gathering.

**Fig 2: A traditional *corial* made from a single tree**

The Amerindian way of life is therefore inextricably linked with that of the environment. Given this long-standing relationship with the land, on which they have historically depended, Amerindians possess vast knowledge in areas, such as the properties of plants and animals, the functioning of eco-systems and adaptive measures to address environmental stresses. Most indigenous communities in Guyana have a wealth of traditional songs, stories, practices, rituals and beliefs which are used to transfer this knowledge. This is evidenced in such publications as *Wa Wizzi, Wa Kaduzu* (Our Territory, Our Custom: 2005) which highlights the relationship that the Wapishan tribe have with their land, This example is representative of other tribes across the country.

*"It is highlighted that the Wapichan people have occupied and used land and biological resources in the South Rupununi since time immemorial. Wapichan communities feel a strong attachment to this extensive area, which constitutes their ancestral wiizi "territory." A large seasonally flooded grassland-shrub ecosystem in the western and central parts of the territory and an extensive tropical forest ecosystem in the south and east, together support a rich mosaic of habitats and a high biodiversity. The whole area is drained by major and minor rivers associated with permanent and seasonal wetlands that support a large variety of fish and other aquatic life, including the endangered giant otter and arapaima, fish among others." (Our Territory, Our Custom: 2005)*

The TK on local indigenous populations in Guyana is:

- mainly of a practical nature, closely linked to the environment and heavily relied on for the survival of communities;
- though based on shared experiences TK is both collective and individually held especially since some aspects of TK lies with elders and single individuals and is not known generally by the community;

- holistic and incorporates several aspects of Amerindian culture including spiritual, health, agriculture, culture etc.
- passed down from individual to individual and mostly done orally through the local language;
- sophisticated in its makeup in that it has rules that govern for example resource use in local communities;
- central to Amerindian survival and identity.

**Fig 3: A community member and Production Manager in Region 2, provides insight into the processing of a traditional crop, *pineapple,* for export to France**

As such, TK has high potential for replication and application in other national sectors, including health and agriculture. Traditional knowledge is largely passed down orally, is both communal and oral (since there are "secrets" held within families and individuals) and is largely preserved through its use in everyday life. Women have traditionally played an important part of Amerindian societies ,reflected in their multiple roles - as central members of the household, educators, care givers and providers of food. Similar to the men in communities women also have very comprehensive awareness and knowledge of traditional knowledge related to farming, gathering, craft development and most importantly as birth attendants. The latter role is especially recognized in communities along with the knowledge of both women and men of traditional medicines which are used in local health care.

There is also every indication that this way of life is changing and is increasingly less dependent on traditional methods, largely through the incursion of the church, public schools, commercial activities and migration. In addition there are also indications that community members have also gained information on biological diversity and management from non-traditional sources, for example through their exposure to environmental agencies, participation on research projects etc.

One major premise of the Report is that in order for Amerindian traditions to be preserved in Guyana, there must be an understanding and appreciation for what traditional knowledge exists. Preservation must be coupled with the harnessing of TK and the use of innovation to realize its broader application to address pressing socio-economic and environmental problems. There is still need for greater recognition and meaningful involvement of Amerindians in shaping the futures of both their communities and the country.

During the research process, a Rapid Assessment methodology utilized three sources of information:

- A review of secondary data pertaining to biodiversity and Traditional knowledge in Guyana;
- Twenty-six (26) meetings with Village Councils, elders and local officials at the community level. The purpose of the rapid assessment was to ensure community-level participation in the process;
- Eighteen (18) surveys of research and learning institutions, Ministries, INGOs and indigenous civil society organizations, and
- A participatory workshop by members of a broad-based Special Working Group (SWG). The SWG comprised of environmentalists and indigenous experts. The meeting was held at the end of the study to validate the input obtained through interviews and literature and additionally, to build stakeholder consensus on future steps to preserve, maintain and apply TK.

To date, literature and research on biodiversity conservation and TK in Guyana is largely deficient and requires greater emphasis and investment. The connection between TK and biodiversity management is best understood in local communities even though it is largely un-documented. As a result, the potential for traditional biodiversity-related knowledge, as it relates to its use and wider application is as yet largely unrealized. However, there have been notable advances with the increase in international conservation organizations. Though conservation is largely viewed as a separate process even if communities participate in protected areas, it does not always translate to their traditional conservation practices being integrated.

Within communities there are real risks to the preservation of TK; such as the loss of language, erosion of local culture, poverty and migration. Recommendations for effectively preserving TK related to biodiversity include introduction of legislation and legal protection, documentation and dissemination of information, developing capacities and greater co-ordination.

A three-year Strategy and Action Plan to document and protect traditional knowledge related to biodiversity is proposed in the adjoining document: *Traditional Knowledge Biodiversity Integration Strategy and Action Plan: Preserving Traditions, Fuelling Innovation and Growth.*

## Structure of the Assessment Report

This Assessment Report is divided into four sections the Introduction being the first, that includes the Methodology, Definition of Key Terms and a Literature Review. The second section provides a Contextual Overview and includes a Science and Research section and a Legal Review. The penultimate part - section three, outlines the Capacity Assessment of three levels of stakeholders – national, civil society and the local or community level. The last section presents Conclusions and Key Recommendations.

# Methodology

The research methodology used in developing the report is summarized here including a brief outline of some of the key literature that was used. The assessment used to determine organizational capacity is also briefly discussed.

- ***Documentation Review***
- ***Staff Interviews and Discussions*** – discussions were had with various key positions within the EPA and UNDP.
- ***Meetings*** with NGOs, government agencies – see Annex A for complete listing.
- ***Field Visits*** – field visits were made to three regions (Region 1, 2, & 9)
- ***Firsthand Observations***

**Fig 4: Meeting at Arakumai Village Council, Region 1**

## Stakeholder Engagement


**Fig 5: Methodology**

A broad range of stakeholders were engaged to ensure that the integrity of the data, representation, and the scope of the project are broad-based and reflective of the perspective, input and feedback from several stakeholders. Stakeholder engagement is captured in the work plan in Annex D.

- **Method 1-** National meetings were held with key ministries and agencies at the start up of the project, including the MoAA, EPA, UNDP, Ministry of Local Government and Regional Development (MoLGRD) and the Amerindian Research Unit.

- **Method 2-** Community level engagement – this was done through one-on-one meetings with various stakeholders including Village Councils, District Councils, Community Groups, national Civil Society Organizations, and International NGOs.
  - Three (3) Indigenous Knowledge Advisors (IKAs) were contracted and engaged to support the successful collection of information. One IKA was recruited per region.

- **Method 3 -** Special Working Group (SWG). The SWG consists of all the members of the National Biodiversity Committee (NBC) plus other actors (individuals, research institutions, NGOs) and organizations considered to be knowledgeable on the subject.

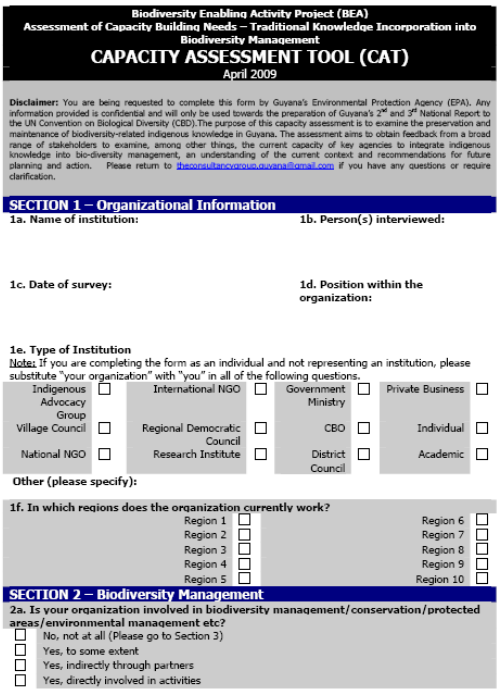
## Data Collection and Collation

The project was data driven and as such high emphasis was placed on quality data and a scientific, rational approach to the selection of stakeholders and data collection.

**Method 1- Development of a Database**.
The database was designed to record and maintain information and to collect data.

**Method 2- Data Collection Methods**
Tailored research on key issues and targeted at specific stakeholders. A **Capacity Assessment Tool (CAT)** was developed and used to gather both qualitative and quantitative data on the current state of indigenous knowledge integration into biodiversity management. The CAT was a key tool of the Assessment. Other tools/approaches were used for the assessment and action plan:

- A **Legal Review** to complement and triangulate the findings of the CAT. This component reviewed the existing legislation aimed at promoting and protecting the rights of the depositaries of indigenous knowledge. It was led by a qualified legal expert. The findings of the review are included below.



Biodiversity Enabling Activity Project (BEA)
Assessment of Capacity Building Needs – Traditional Knowledge Incorporation into Biodiversity Management

CAPACITY ASSESSMENT TOOL (CAT)

April 2009

**Disclaimer:** You are being requested to complete this form by Guyana's Environmental Protection Agency (EPA). Any information provided is confidential and will only be used towards the preparation of Guyana's 2nd and 3rd National Report to the UN Convention on Biological Diversity (CBD).The purpose of this capacity assessment is to examine the preservation and maintenance of biodiversity-related indigenous knowledge in Guyana. The assessment aims to obtain feedback from a broad range of stakeholders to examine, among other things, the current capacity of key agencies to integrate indigenous knowledge into bio-diversity management, an understanding of the current context and recommendations for future planning and action. Please return to theconsultancygroup.guyana@gmail.com if you have any questions or require clarification.

**SECTION 1 – Organizational Information**

1a. Name of institution: 1b. Person(s) interviewed:

1c. Date of survey: 1d. Position within the organization:

1e. Type of Institution
Note: If you are completing the form as an individual and not representing an institution, please substitute "your organization" with "you" in all of the following questions.

| | | | |
|---|---|---|---|
| Indigenous Advocacy Group ☐ | International NGO ☐ | Government Ministry ☐ | Private Business ☐ |
| Village Council ☐ | Regional Democratic Council ☐ | CBO ☐ | Individual ☐ |
| National NGO ☐ | Research Institute ☐ | District Council ☐ | Academic ☐ |

Other (please specify):

1f. In which regions does the organization currently work?

| | |
|---|---|
| Region 1 ☐ | Region 6 ☐ |
| Region 2 ☐ | Region 7 ☐ |
| Region 3 ☐ | Region 8 ☐ |
| Region 4 ☐ | Region 9 ☐ |
| Region 5 ☐ | Region 10 ☐ |

**SECTION 2 – Biodiversity Management**

2a. Is your organization involved in biodiversity management/conservation/protected areas/environmental management etc?

☐ No, not at all (Please go to Section 3)
☐ Yes, to some extent
☐ Yes, indirectly through partners
☐ Yes, directly involved in activities

**Fig 6: Capacity Assessment Tool**

- An **Inventory of Traditional Knowledge** of sustainable conservation and use of biodiversity among Amerindian populations. The inventory provided a comprehensive database of publications that exist, and how that information can be accessed. A cataloguing database (Endnote) was used. An analysis was done to identify core areas of studies and gaps that needed to be filled. The analysis was captured in the form of a review and consists of sections that include a narrative summary of key findings, traditional ecological knowledge, and current debates in relation to biodiversity management and conservation.

# Assessing Organizational Capacity

One core component of the CAT is a participatory self-assessment. The Tool was used for all stakeholders of the project and as such allows for comparison and analysis. The Capacity Assessment is a quantitative tool in which respondents rate their own capacity on a scale of 1 to 4 (1 – poor; 2 – fair; 3 – good; 4 – excellent). The Assessment allowed for diagnosing needs and general understanding of organizational capacity that exists, those which are not present and those which potentially hinder the ability of organizations to effectively participate in conservation or TK activities.

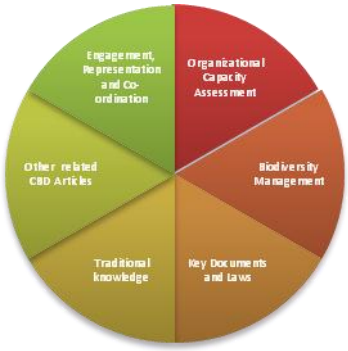



**Fig 7: Diagram showing components of the CAT**

The Assessment measured each organization's capacity in seven areas: strategic direction and governance, human resources, internal systems, technical capacity, infrastructure, finance and fundraising, monitoring and evaluation.

The data obtained from the CAT allowed for categorization into four core areas of organizational capacity: leadership, adaptive, management and operational capacity.

The results of this survey can serve in future as a baseline to measure improvement over time.

| LEADERSHIP CAPACITY | ADAPTIVE CAPACITY | MANAGEMENT CAPACITY | OPERATIONAL CAPACITY |
|---|---|---|---|
| •The capacity of organizational leaders to inspire, prioritize, make decisions, provide direction, and innovate | •The capacity to monitor, assess, and respond to internal and external changes | •The capacity to ensure the effective and efficient use of organizational resources | •The capacity of an organization to implement key organizational and programmatic functions |

## Key Terms

The CBD concerns conservation of biological diversity both in the wild and for domesticated or cultivated forms, conservation and sustainable utilization, as well as all activities and processes in society which even indirectly influence biological diversity. Hence the Convention influences several aspects of society and reflects obligations of different authorities. In addition, it embraces international obligations, pertaining to fair and equitable sharing of costs and benefits among parties. There are several key terms used in the research project which require definition. In general such terms were defined using official CBD definitions (Source www.cbd.int). As such, TK for the purpose of the research is thus defined:

*"**Traditional knowledge** refers to the knowledge, innovations and practices of indigenous and local communities around the world. Developed from experience gained over the centuries and adapted to the local culture and environment, traditional knowledge is transmitted orally from generation to generation. It tends to be collectively owned and takes the form of stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local language, and agricultural practices, including the development of plant species and animal breeds. Traditional knowledge is mainly of a practical nature, particularly in such fields as agriculture, fisheries, health, horticulture, and forestry."*

In the text of the CBD the term biological diversity is explained very generally, in a way that indeed covers all the variability of life. Since mankind relates to the biological world firsthand via utilisation, the Convention uses here another proper term, "biological resources".

**Article 2**
**"Biological diversity**" means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.
**"Biological resources"** includes genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity.

**Article 8(j)** of the CBD states that its Parties will, subject to national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biodiversity; promote their wider application with the approval and involvement of knowledge holders; and encourage the equitable sharing of benefits arising from the utilization of such knowledge. Related provisions address the customary use of biological resources in accordance with traditional cultural practice (Article 10(c), information exchange (Article 17.2) and co-operation in the development and use of technologies (Article 18.4). Access to genetic resources, including facilitating access, prior informed consent (PIC), mutually agreed terms (MAT) and benefit-sharing are addressed by Article 15, with related articles referring to technology access and transfer (Article 16.3), and handling and distribution of benefits of biotechnology (Article 19).

All other key terms such as community, Village Councils etc are taken from the Amerindian Act (2006).

# Literature Review

This review serves to provide a brief and concise overview of the guiding documents that will inform the Assessment and is by no means exhaustive. For the purposes of this review, attention will be focused on biodiversity and to what extent this has taken into account issues of traditional knowledge incorporation into biodiversity management.

**Summary of main findings:**

Environmental Protection Agency, (1999) ***Guyana - First National Report to the Conference of the Parties of the Convention on Biological Diversity (CBD)***

- There is no explicit mention of traditional knowledge and its relationship or incorporation into biodiversity management in various sections of the report or in the proposed programme. However, the activities in the programme areas will have implications for the way traditional knowledge is used and incorporated into national biodiversity management.
- In the principles to be adopted by the National Biodiversity Action Plan, it is stated that biodiversity considerations are to become integrated into the agenda at the local, regional, sectoral and national levels, which implies that some aspects of biodiversity management will be decentralised. The integration of biodiversity considerations at the local level, especially the Village and District Council levels (as outlined in the Amerindian Act, 2006), will influence the way traditional knowledge is incorporated into biodiversity and conservation management, which are explicit functions of the local governing bodies.

Environmental Protection Agency of Guyana (March 2007), ***National Capacity Self-Assessment Report and Strategy and Action Plan (NCSA)***

- National Protected Areas System (NPAS), the proposed National Land Use Policy and Legislation on Access and Benefit Sharing: the legislation and rules that govern the management of protected areas, land use and the mechanisms for accessing bio-resources such as genetic material, can potentially affect how Amerindian communities access, use, manage and conserve environmental resources.
- Environmental Impact Assessment: The Environmental Protection Act, 1996 provides legal requirements for the conduct of environmental impact assessments for development projects but it is not clear if this applies to areas close to Amerindian communities (outside the legal titles) that communities access for livelihood activities (customary use areas). There is no clear provision for protecting and conserving traditional knowledge.
- Ex situ conservation of biodiversity: While the National Agricultural Research Institute is identified as an organisation that can facilitate *ex-situ* conservation, through field gene banks, seed banks and in vitro collection. No organisation is identified as being responsible for *ex situ* conservation of environmental resources used by Amerindian communities in ecosystems management.

- Identification of flora and fauna: there is no mention of whether/how flora and fauna used by indigenous communities will be classified / categorised.
- Capacity Constraints Matrix: some of the constraints identified in the matrix, and methods for enhancing them, can be points of entry for building awareness and capacity on ways to preserve and maintain biodiversity-related knowledge, innovations and practices of indigenous and local communities employing traditional lifestyles.

Environmental Protection Agency of Guyana (May 2007) ***National Biodiversity Action Plan II -2007-2011 (NBAP)***

- The four key thematic natural resource areas identified by the NBAP (forests, agricultural, coastal resources, marine and freshwater resources), all contain important areas within which Amerindian communities are situated, and as have a direct impact on the functioning of these communities.
- Forests: while there is no mention of traditional biodiversity knowledge and practices within Amerindian communities, the policy and legislative framework are considered to be relatively good in the forestry sector. Weaknesses in human resources in the regulatory sector were identified, which can adversely affect communities.
- Agriculture: seen as important as 70 percent of Guyana's population (and by extension a significant percentage of the Amerindian population), live "in rural households" and are "primarily dependent on income generated from agriculture and related activities" (NBAP: 35). There is no policy position on agriculture and biodiversity, but some initiatives such as the promotion of agro-forestry and organic farming in Amerindian communities in Regions 1, 2 and 9, will have implications for the preservation of traditional knowledge and practices in this sector.
- Marine and Inland Water Resources: like the other areas, no explicit mention is made of traditional knowledge, innovations and practice as being incorporated into marine and inland water resources management. The Fisheries Act 2002 and the Draft Fisheries Management Plan will be important legislation/policy documents to guide the way indigenous knowledge related to traditional fisheries is preserved and incorporated into biodiversity management.

Guyana (March, 2006), ***Act No. 6 of 2006 - Amerindian Act***

- The act gives Amerindian communities/villages wide- ranging legal powers to manage and conserve their lands. The community controls the entry and access to its territory.
- All Amerindian lands are owned collectively by the village and administered through an elected Village Council which has the power to make its own rules which are legally binding to all, whether or not they are residents of the village.
- The Village Councils have several functions relating directly to indigenous/traditional knowledge, innovations and practices in biodiversity management and conservation. Some include: promote the sustainable use, protection and conservation of village lands and the resources on those lands; encourage the growth of Amerindian culture; ensure that sacred artefacts are protected and cared for; protect the village's intellectual property and traditional knowledge.

- In exercising its function a village can make rules that govern areas related to traditional knowledge such as: the management, preservation and conservation of village lands and resources; the protection and sustainable management of wildlife, development and regulation of agriculture, the access to intellectual property and traditional knowledge and the certification of products made by residents using traditional methods.
- At least three Village Councils can join together and make a District Council to develop programmes for environmental protection and management (among other functions). This allows for a larger area of management by the communities and can improve co-ordination of biodiversity management activities.

Guyana (2008) Forestry ***Bill – 2008*** *(*passed at the National Assembly - Parliament in January, 2009)

- Under the Sustainable Forest Management section of the Bill there is special provision for Amerindian Communities or Villages to carry out activities and community forest management under Amerindian custom/traditional customary right.
- In the Preliminary Section the interpretation of terms such as "Amerindian", "Amerindian Village" and "Amerindian Village Lands" are compatible with the Amerindian Act 2006. Moreover, Amerindian Village Lands, as defined by Section 2 of the Amerindian Act 2006, are exempt from Declaration as State Forest.

Environmental Protection Agency of Guyana, ***National Environmental Action Plan 2001 – 2005***

- The cross-sectoral programme on biological diversity – conservation and management identifies the National Biodiversity Advisory Committee as having oversight for the conservation of biological resources and co-ordinating activities to protect natural habitats and, "areas of specific endemism, and aesthetic, cultural and heritage values."(NEAP 2001-2005). This can be interpreted as including traditional knowledge.

# 2. Contextual Overview

*"Our Amerindian communities will have a particularly important role to play. Not only are they the stewards of large parts of Guyana's forests, they have been protecting them for centuries and will have extremely valuable insights for the rest of Guyana and the world."*

**President Bharat Jagdeo: Address to the Nation on Climate Change (2008)**

## Introduction

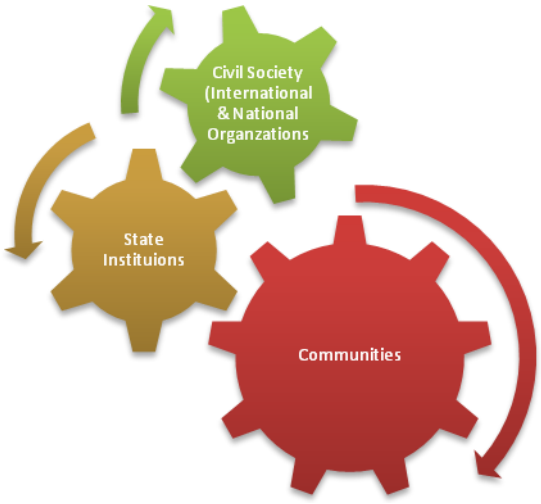



**Fig 8: Interrelation of various stakeholders**

This section provides a brief overview and analysis of traditional environment-related knowledge in Guyana including actors, policies, trends and processes at the macro-, meso- and micro-levels. The section examines the interrelationship of various actors. It provides insight into the context and the extent to which traditional biodiversity-related knowledge is being respected, preserved, maintained and promoted in the country. Many of these efforts, though seemingly independent, contribute to a broader national effort of conservation. This section seeks to determine the extent to which innovations and the promotion of traditional biodiversity-related knowledge is being mainstreamed. It centres on three key levels - Communities; the Government (national); Civil Society (this includes both national and international non-governmental organizations).

In general it was found that there is an **increase in involvement of actors at all levels in conservation efforts. There is also general awareness on issues related to the environment**. This is due to an increase in recent years of dialogue and information on environmental issues such as climate change. The presence of several institutions involved in conservation such as the EPA, CI, WWF, Iwokrama and GMTCS with a fairly broad spread of their activities has contributed to increased awareness both locally and nationally. In addition, Guyana has in recent years been active globally in its participation on environment-development related issues at various international fora. This is evidenced in pioneering **national efforts such as the REDD and the LCDS**.

There has also been an **increase in awareness and an appreciation of Amerindian culture** over the years, which can be attributed to the **presence of a Ministry of Amerindian Affairs**, the **creation of several indigenous civil society organizations** and greater prominence of Amerindian culture and way of life. There is also **improved access to Amerindian communities** through improved infrastructure and national events such as "Amerindian Heritage Month" and the "Rupununi Rodeo". Research efforts have also increased understanding and documentation of resource use such as work done by the Macushi Research Unit (MRU) in Region 9. The MRU has documented resources and stories and worked

towards revival of the Macushi language. Also in this Region, there were efforts by Conservation International to document resource use under the Community Resource Evaluation (CRE) process, and more recently in the south Rupununi, efforts by the South Rupununi based Wapishana people to document their resource use traditions in relation to Article 10 (c). This resultant document Wa Wiizi, Wa Kaduzu was published with funding from Hivos. This is strengthened by national and international efforts of researchers and other institutions to document resources and local languages.

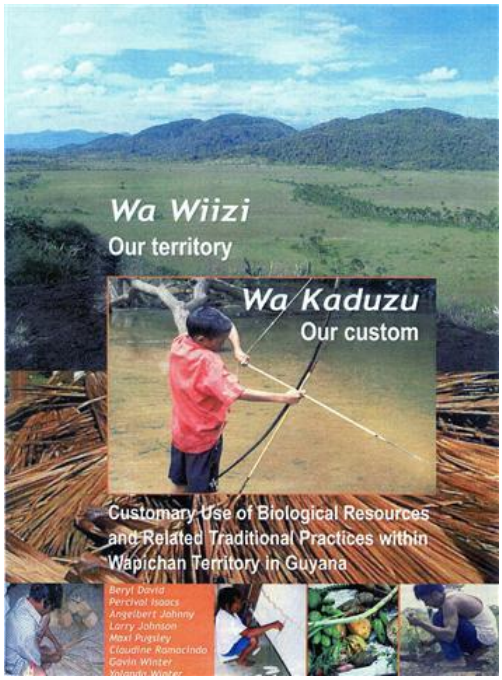



**Fig 9: This Wapishana publication is a significant achievement for local communities in the South Rupununi and for traditional knowledge preservation**

## The National Context

Since signing the CBD, the Government of Guyana has developed a National Biodiversity Action Plan (1 and 2), the main purpose of which is to operationalize the CBD. As noted earlier, one significant gap is the lack of reference or incorporation of TK and Article 8 (j) into the NBAP. Therefore, Guyana's commitment has not been transferred into deliberate, actionable steps to preserve or promote TK and its wider application. To some extent, preservation efforts have occurred in an *ad hoc* manner through the presence of research, national museums and civil society organizations.

Guyana has several bodies that either represent or seek to preserve traditional culture and knowledge. There is a Ministry of Amerindian Affairs (MoAA) which oversees the implementation of the Amerindian Act that gives Amerindian villages wide-ranging legal powers to manage and conserve their lands. The Village Council has several functions relating directly to indigenous/traditional knowledge, innovations and practices in biodiversity management and conservation. Some include: the promotion of the sustainable resource use, protection and conservation of village lands, and the resources on those lands; encouraging the growth of Amerindian culture and to ensure that sacred artefacts are protected and cared for. The Act also seeks to protect the village's intellectual property and TK. In total, Amerindians now have control over 1.7m hectares of land or 13.9 percent of the land (Source: LCDS, 2009). Guyana's total area is approximately 215,000 square kilometres (83,000 square miles),

There are also other state institutions such as the Amerindian Research Unit at the University of Guyana and the Walter Roth Museum of Anthropology, both of which are meant to preserve Amerindian culture through research. Amerindian Heritage Month was introduced in 1992 and is recognized as a national month of celebration. There are also several institutions such as NARI, the Forestry Commission, the Ministry of Health, and Geology and Mines present in the communities. However,

most of these institutions or documents, with the exception of the Amerindian Act, 2006 - seek only to a limited extent to preserve traditional use, and thereby practices.

TK is currently not mainstreamed or applied very broadly in other areas, such as agriculture, health and logging. There is little evidence to suggest that TK is being significantly preserved and replicated by government ministries despite closer ties and working relations with local communities. New innovations such as eco-tourism and agro-processing may play a great role in both knowledge- preservation and conservation efforts.

## Civil Society Context

Civil society organizations in Guyana have made a significant contribution to conservation efforts in Guyana and the preservation of Amerindian culture.

There have been several language projects, largely funded by church entities but also by the NRDDB's Macushi Research Unit, which have sought to preserve Amerindian languages. However these efforts are sporadic and cannot be seen as a comprehensive and wide-ranging national effort. Local organizations such as the Bina Hill Institute, the NRDDB, and the Guyana Marine Turtle Conservation Society have all sought to link livelihoods and traditional practices through the promotion of eco-tourism, language preservation projects or the marketing of local produce.

Civil Society, in some instances collaborating with the government, has supported conservation efforts mainly in the areas of awareness-raising, education and livelihood activities. The greatest focus has been on the establishment of proposed protected areas such as Shell Beach, the Kanuku Mountains etc. In the case of Iwokrama, a protected area has already been established and this has greatly contributed to preservation, as well as pioneering benefit sharing efforts, which is still in its nascent stages.

| ORGANIZATION | REGIONAL FOCUS | MANDATE/FOCUS |
|---|---|---|
| **Conservation International** | Region 9 | Protected Areas, conservation, awareness, livelihoods (tourism) |
| **Guyana Marine Turtle Conservation Society** | Region 1 | Protected Areas, conservation, livelihoods (crab oil production) |
| **World Wildlife Fund** | Regions 9,2,1,7,8 | Conservation, nature clubs, environmental awareness |
| **Iwokrama** | Regions 8, 9 | Protected Areas, conservation, training, research, livelihoods (tourism) |

**Table 1: Consevation organizations and where they work**

## Community Context

Amerindian communities remain the greatest custodians of TK in Guyana. They are usually involved in conservation activities related to their day-to-day life, which generally revolves around farming, fishing, hunting and gathering. Many communities acknowledge mal-adaptive practices such as poisoning of water sources and savannah burning which is largely uncontrolled and which has harmed the environment. A few communities have also introduced non-traditional practices such

as bee-keeping and eco-tourism but these remain in the minority. As documented in the assessment below, most communities recognize the erosion of their culture and the loss of their language, the latter being of great importance to them and a source of anguish.

In terms of formal and more structured efforts to preserve traditional knowledge, communities rely heavily on Amerindian Heritage Month celebrations, especially in communities where many traditional practices including the language are all but extinct. There are however some isolated efforts across the country in communities where efforts are being made to preserve traditional knowledge, such as the establishment of a culture committee in Maruranau village (Region 9), and the development of a Heritage Park at Mainstay (Region 2). Few communities are involved in the development of management plans for their communities due to the lack of resources and technical expertise.

# Science and Research

An assessment of types of publications indicates a focus on descriptive baseline information of the way of life for the various Amerindian tribes. The kinds of studies can best be described as Anthropological, Ethnographical, Ethnobotanical, and Ethnomedicinal in nature. Henfrey 2002 provided a concise literature review of these areas and the various Models of Social Organisation and Ecological Relations of Amerindians to their environment in his thesis entitled "Ethnoecology, Resource Use, Conservation and Development in a Wapishana Community in the South Rupununi, Guyana". Within the last thirty years, Walter Rodney, Janet Bulkan, Dennis Williams, Jennifer Wishart, George Mentore, the Amerindian Research Unit and the Makushi Research Unit have greatly contributed to the foundation of traditional knowledge and probed the underpinnings of their respective social systems, interaction and behaviour.

The better-known local examples of practical traditional knowledge include the general practice of shifting cultivation, TK associated with forest and wildlife ecology, Ethnobotany, Ethnomedicine, Shamanism, Astronomy and Climatology (Henfrey, 2002, Forte & Makushi Research Unit 1996, van Dongen 1994, Dagon 1967, Potter 1993, Butt 1954, Mentore 1988, Mentore 1995, Roth 1908-1909, Namba-Walter et. al 2004, Colson and de Armellada 2001). Species management using traditional ecological knowledge, a subset of TK, is already in practice in Guyana. Forest reclamation may be practiced via farming practices in the grassland ecosystems. The 'bush islands' throughout the South Rupununi of Guyana, and their use in agriculture, might be similar in nature (Henfrey 2002).

In addition, several working examples of programmes and communities exist where TK is integrated in land-use planning and resource-use management. The Waiwai community for instance, demonstrates it is possible for a community to be good land stewards with their Community-Owned Conservation Area (COCA). They still have a strong dependence on the forest and land for their subsistence livelihoods. Organizations which have initiated programmes include: Conservation International, Iwokrama International Centre, Guyana Marine Conservation Society, and KFW. There are several examples within government institutions of how TK has been incorporated in the management of natural resources.

Although, much traditional knowledge is poorly documented, modern-day standard anthropological studies have increased in the past twenty years. Still, more research on applied TK in relation to ecology and other areas are needed. The scope for expanding our understanding of human ecology from the perspective of a human-ecosystem framework is wide. One such instance would be studies to understand how Amerindians manage the 'good' and 'bad' in their transition from a modest lifestyle to greater access to today's technologies and forms of knowledge. Continuous assessments to track social vulnerabilities and social responses to the rapid changes in the respective Amerindian communities are important for

sustainable development. More research and policy papers are needed in the areas of fair trade mechanisms and ascribing practical ways of TK protection which ensure benefits to the communities who are the keepers of TK. Further documentation relating to the songs, dance, storytelling, and even subsistence practices which have evolved should be encouraged. Further, research on TK in other groups living in Guyana is also needed. The potential for the University of Guyana to conduct structured inquiries to test and refine this data is great.

Over 350 entries have been included in a working Endnote database entitled "National Traditional Knowledge Publications Inventory". In addition, where possible, photos of the cover and content page, introduction and/or abstract were attached. The inventory includes journal articles, books, reports, presentations, posters and documentaries.

The Inventory covers core categories that include: Ecological Knowledge and Natural Resource Management; Ethno-botanical and Ethno-medicinal Knowledge; Culture and Beliefs inclusive of descriptions of way of life, art and language; Traditional Farming, Hunting and Fishing Practices; and documents that may be Indigenous-related (for instance, description of geography and soil types, recent documents on demography and socio-economic reports).

Several libraries have been consulted: the Amerindian Research Unit, UG; the Caribbean Research Library, UG (CRL/UG); The Walter Roth Museum; and The Guyana Museum. In addition, information from several other works (Macsood Hoosein (1996); Forte 1995; Henfrey 2002) were consulted and expanded upon.

Finally, TK in Guyana needs better data management and networking; more trans-national partnerships and networks; repatriation and archiving of data; more funding for cataloguing and digitizing libraries and quality-control mechanisms.

# Legal Review

In Guyana today, specific references to Amerindians are largely in relation to their traditional lands, and the use of these areas, with a limited concept of self rule. For example Section 3 of the Amerindian Act (2006) makes provision for the establishment of Amerindian districts or villages, and Section 5 restricts the entry of non-Amerindians into these areas. Both custom and convention are potential sources of law, and although legally distinct concepts, they both arise out of the social *mores* and practices of a people. They both depend on an *additional* process before they can be appropriately viewed as legal sources.

The missing link is the judicial process, since the courts must declare customs and convention as law and not mere social practice. As such, custom and convention cannot be considered as entirely independent sources of law. Where common law exists, then custom is in abeyance, since the common law is the law that applies in Guyana. However, custom is potentially of particular importance in the areas of land law and property law. Custom has two (2) fundamental characteristics: (1) it must be an exception to the common law, and (2) it must be confined to a particular locality, such as a town, district or county. Given these two characteristics, local custom is not relied upon often. Additionally, unlike the rules of common law, customary rules of law are not judicially noticed until settled by judicial decision, usually by satisfying certain tests – (1) antiquity, (2) continuance, (3) peaceable enjoyment (4) mandatory, (5) certainty and clarity, (6) consistency, and (7) reasonableness. With these demanding requirements, claims to local custom are quite rare.

Today, it is perhaps more accurate to say that, rather than the law attempting to assimilate Amerindians fully, or, on the other hand acknowledge their customs, it adopts a detached stance. Although there is a *de jure* jurisdiction over Amerindians, accounts of oral history demonstrate that the law will not often intervene. Shahabudeen writes for example: "[s]o the existence of the jurisdiction did not itself settle the difficult and sometimes delicate question of its exercise."[3] The result is that Amerindians in Guyana have a certain amount of leeway under the law, maybe simply because of geographic circumstance, since they are found in the hinterland of the country.

[3] Mohammed Shahabudeen. The Legal System of Guyana ( Georgetown : Guyana Printers, 1973), 226

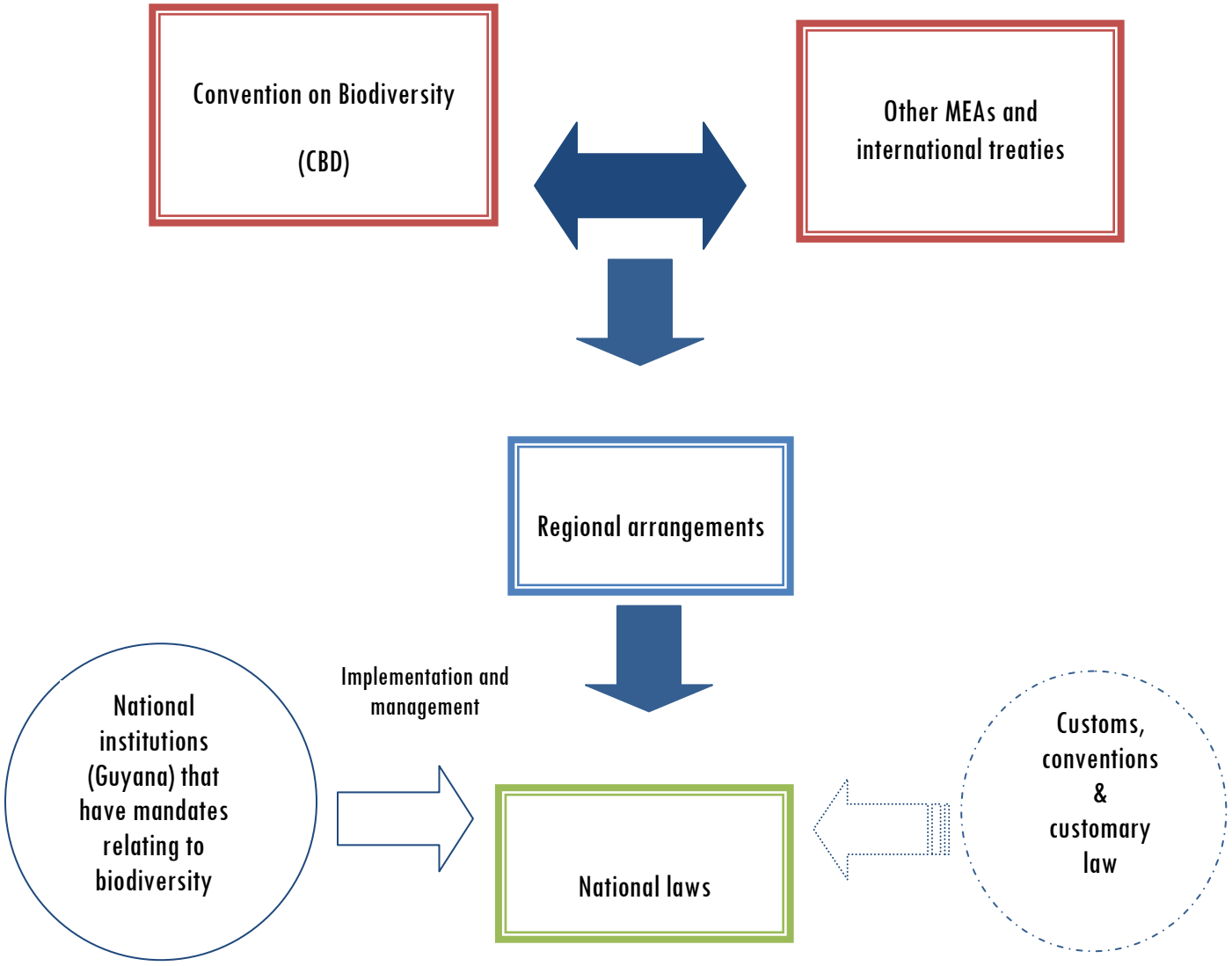



Fig 10.

A schematic of the relationship between the CBD, regional treaties and Guyana's national legislation

The current legislative framework for the incorporation of traditional knowledge into biodiversity management is out of date and therefore cannot support an adequate foundation for sovereign rights over natural resources. An analysis of the legal and policy framework yields that there was a dearth of laws apart from outdated copyright legislation dealing with ownership of subject matter, including resources. With respect to indigenous peoples, the main consideration is in the *Amerindian Act*, *2006* and references in other acts – primarily the Forestry and Mining Acts that deal with access to and use of State resources. Further, most of the recent legislation that could impact on TK, access and benefit sharing and sovereign rights over natural resources takes a more environmental perspective.

There has been notable progress in the introduction of legislation related to TK and indigenous peoples. The *Amerindian Act*, *2006 and* the development of several core document such as:

- National *Policy on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (2007)*

- *Guyana Protected Areas Legislation: Legal, Institutional and Management Issues – Analysis and Recommendations (2007)*

- *Report on Consultations for the drafting of the Proposed Protected Areas Legislation (2008)* - (there is a draft Protected Area bill currently before the National Cabinet)

Guyana is moving toward protected area legislation (currently being reviewed in Parliament), bio-prospecting, and securing greater rights for the Amerindian peoples in Guyana.

Currently the issue of intellectual property rights in Guyana, as it relates to traditional knowledge, centres around medicines, craft, images, music, plant and animal resources and processing techniques. Internationally, the protection of traditional knowledge has taken two approaches – (1) enacting specific legislation to establish minimum standards for the recognition and protection of traditional knowledge and (2) employing existing legal tools (e.g., contracts, licensing agreements) and intellectual property rights law to try to protect their traditional knowledge. As mentioned earlier, in Guyana effective domestic legislation that clearly protects indigenous traditional knowledge has not yet been adopted. Currently, it falls directly upon local communities, to ensure necessary measures are taken to protect their traditional knowledge.

It is worthy to note that in May 1998, the Amerindian peoples of the Caribbean region, particularly Dominica and Guyana, signed an important treaty in Barbados – the *Ichirouganaim (Barbados) Treaty, 1998*. The treaty's main objective was for self-governance by the year 2005, but to date there has been little progress in this regard. In the circumstances, the most effective route toward acknowledging

customary rights may be to ascertain them, and incorporate them as best a way as possible using legislative and policy devices.

At a regional level, two (2) things should be noted with respect to traditional knowledge and sovereign rights over natural resources. Firstly, within the CARICOM region, Guyana, Suriname, Belize,[4] St Vincent and the Grenadines,[5] Dominica[6] are the only countries that still have indigenous populations. This has direct implications for the priority that is attributed to it within regional planning. [7] Thus, while Articles 66 (c) (ii) and (iii) of the CSME allude to indigenous culture and traditional knowledge; it is not a widespread regional issue, but rather one for these individual governments to address. Secondly, the CSME Treaty is primarily an economic-based treaty, so it focuses on an intellectual property regime and does not adequately safeguard traditional knowledge. TRIPS Article 27 (3) (b) addresses traditional knowledge in relation to the biodiversity and patentability or non-patentability of plant and animal inventions, and the protection of plant varieties.

Globally, the difficulty experienced by indigenous peoples in trying to protect their traditional knowledge under intellectual property (IP) rights law stems mainly from its failure to satisfy the requirements for protection under existing IP law. For example, **intellectual property must be new, original, innovative or distinctive to qualify for protection**. These requirements make it difficult for traditional knowledge generally handed down from generation to generation to obtain IP protection. (Source: Library of Parliament, Canada)

One major concern is that western intellectual property rights regimes on individual proprietary rights do not address the **collective nature of traditional knowledge**. Because western IP law is based on individual property ownership, its aims are often incompatible with those of *traditional* communities.

Internationally, the preservation of traditional knowledge has been recognized in several international instruments, including the **Universal Declaration of Human Rights**, the **Convention on Biological Diversity**, the **United Nations Declaration on the Rights of Indigenous Peoples** (Guyana is not a signatory), the **International Labour Organization Convention No.** 168 and the **International Covenant on Economic, Social and Cultural Rights**.

A number of United Nations agencies are also involved in addressing the protection of traditional knowledge under the existing intellectual property rights system. The **World Intellectual Property Organization (WIPO**) is responsible for various activities promoting the protection of indigenous intellectual property worldwide. Specifically, WIPO has conducted a number of studies on the role of the intellectual property system in protecting traditional knowledge. Guyana became a signatory to WIPO in 1994. Currently, the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (the IGC), which met for the first time in 2001, is discussing draft provisions for the enhanced protection of TK and traditional cultural expressions against misappropriation and misuse. (Source: www.wipo.org)

[4] According to the West Indian Commission, 26,000
[5] According to the West Indian Commission, 6,000
[6] According to the West Indian Commission, 3,000
[7] Trinidad & Tobago also has acknowledged population of about 300 members

From this analysis it is concluded therefore that certain fundamental issues such as adequate legislation on governance structures that directly address the issue, are not currently addressed by Guyana's existing legislation. There are areas of concurrent jurisdiction, overlapping authority and possible institutional conflict, that will necessarily mean that under the present regime, traditional knowledge and sovereign rights over natural resources can only be addressed from an environmental standpoint, by 'slotting it in' until there is a better legal framework. Thus any serious attempt at effectively and efficiently managing traditional knowledge and sovereign rights over natural resources will need a streamlining of the most relevant current legislation, recognizing current traditional practice that can be viewed as custom, and consolidating these into a comprehensive piece of legislation that clearly outlines mandates and governance structures.

# National Level Analysis


**Fig 11: Stakeholder groups that were engaged during the assessment**

This assessment was done for organizations that are involved in the area of biodiversity management/conservation and indigenous issues in Guyana at the macro scale. Most of these are government organizations, except GFA Consulting Group, which is a private consulting firm that is helping to implement aspects of the Guyana Protected Areas System project funded by KfW - the German Development Bank. For the purpose of this analysis GFA has been studied together with the other organizations because of its national scope. This section also examines national organizations that are involved in national land use planning (Lands and Surveys Commission); science and technology (IAST); local and regional development (The Ministry of Local Government and Regional Development); Culture (Walter Roth Museum) and the National Parks Commission.

## Bio-diversity management

**All of the organizations/agencies** that completed the survey **are involved in biodiversity management** either directly, (GFA Consulting, MoLGRD and the National Parks Commission), or to some extent (the Walter Roth Museum and IAST), or indirectly through partners (Lands and Survey Commission). The organizations are mainly involved in livelihood activities, agriculture and culture. The Land and Surveys Commission, in addition to land use planning, conducts surveying and demarcation of land, mapping and land management.

The organizations see their work as contributing to mainly community development, service delivery and to a lesser extent, research (Walter Roth Museum). It was noted by the GFA consultancy that regarding indigenous knowledge incorporation into biodiversity management, many institutions (particularly local organizations such as the MRU) are dependent on external funding and as such move from project to project to stay alive. This results in projects not being locally owned or relevant to the biodiversity and indigenous context.

## Key Documents and Laws

All (100%) of the national organizations were aware of the Convention on Biological Diversity. 67% were aware of article 8 (j). 50% indicated that medium priority was given to implementing the content of 8 (j) within the activities/decisions of their organizations. Knowledge of the Amerindian Act and the MOAA was high (100%) among all of the organizations. The Amerindian Land Commission was also well known.

National level organizations had a **very high awareness** of the **key bodies involved in indigenous knowledge and biodiversity management.** With regards to **key documents and laws,** awareness of the NBAP and the environmental regulation was high among all larger organizations.

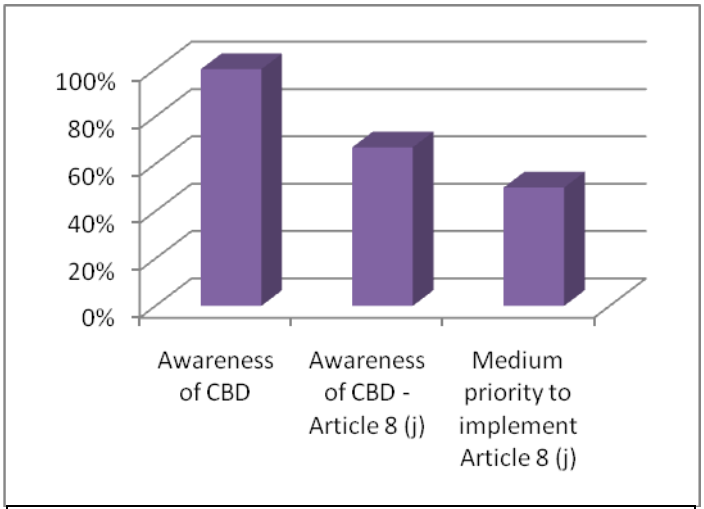



**Fig 12: Graph showing national level awareness on the CBD, Article 8 (j) and the priority given to the implementation of the article**

## Traditional Knowledge

All of the civil society organizations (100%) felt that traditional knowledge was important for biodiversity management and conservation in Guyana. Half, 50% of the organizations felt that yes there has been progress in Guyana in involving and recognizing traditional knowledge and 50% felt that to some extent there has been progress. 83% also indicated that to some extent it is seen as priority and getting the attention it deserved.

50% of the organizations stated that the aspect of indigenous knowledge being given the most priority is culture (language, values, beliefs, folklore, stories, and songs). Agriculture was also seen as the most prioritized activity (50%) followed by forestry and medicines. The least prioritized aspect of indigenous knowledge was community laws.

Some concrete examples of how national level organizations are using indigenous related biodiversity knowledge include: involvement of Amerindian communities in demarcation of village boundaries with local description of natural features (Lands and Surveys Commission); arapaima management plan, agriculture project development, language research, development of village by-laws under the Amerindian Act and research.

The majority (83%) of the national level organizations that completed the survey stated that the concrete measure that they have undertaken to ensure that traditional knowledge related to biodiversity management was preserved was through meetings, consultations and information sessions with communities. Some

(33%) indicated that they provided technical support in determining resource patterns to aid indigenous knowledge preservation.

50% of the organizations stated that they did not know / were not sure if there was equitable sharing of benefits arising from the utilization of indigenous knowledge, innovations and practice in Guyana. The majority (83%) of the organizations indicated that there were not sufficient incentives in place for indigenous knowledge to be applied more broadly in Guyana. Only one organization (MoLGRD) felt that there were sufficient incentives. In terms of innovation 50% felt that to an extent, knowledge was being applied more broadly mainly in the areas of: ecotourism, craft and agriculture, medicine, videos and books.

**83%**

of national level organizations felt that there are not **sufficient incentives** to encourage the broader application of TK

National level organizations identified the unmanaged burning of land, "slash and burn" agriculture and the excessive use of and poisoning of water bodies for fish as maladaptive practices (practices that are traditional but over time have become harmful to biodiversity management).

Unsustainable harvesting (agriculture, mining and forestry) at commercial levels was the factor identified by 50% of the organizations as primarily responsible for the degradation of the environment. Other factors included lack of regulation, poor capacities of local bodies, lack of awareness, loss of culture and language, unregulated land use practice, lack of waste management and infrastructure at water basins.

50% of the organizations indicated that they considered the distinct roles that women and men played in preserving indigenous knowledge and 50% indicated that they did not consider the distinct roles.

## Other Related CBD Articles

17% of the organizations indicated that yes, customary use was definitely being safe- guarded and protected (CBD – Article 10c). 33% of the other organizations felt that customary use was being protected and encouraged to some extent, but needs improvement. The remaining 50% of the organizations at the national level did not know if customary use was being protected.

50% of the organizations surveyed stated that the return or repatriation of information to communities (CBD - Article 17.2) has being done to some extent but needs improvement. The remaining 50% stated that they did not know if information was returned to communities.

50% of the civil society organizations responded that there was technical and scientific co-operation (CBD – Article 18.4) to some extent, but needed improvement. 50% stated that they did know if there was technical and scientific co-operation in pursuance of the objectives (conserving bio-diversity, sustainable use, benefit sharing etc.) of the Convention.

## Engagement, Representation and Co-ordination

The majority of organizations (83%) stated that they engaged communities and other actors involved in biodiversity management/conservation. The organizations that they engage most frequently with are village councils, RDC, NGOs, (local and international), MoAA, EPA, GMTCS, the Forestry Commission and the NRDDB.

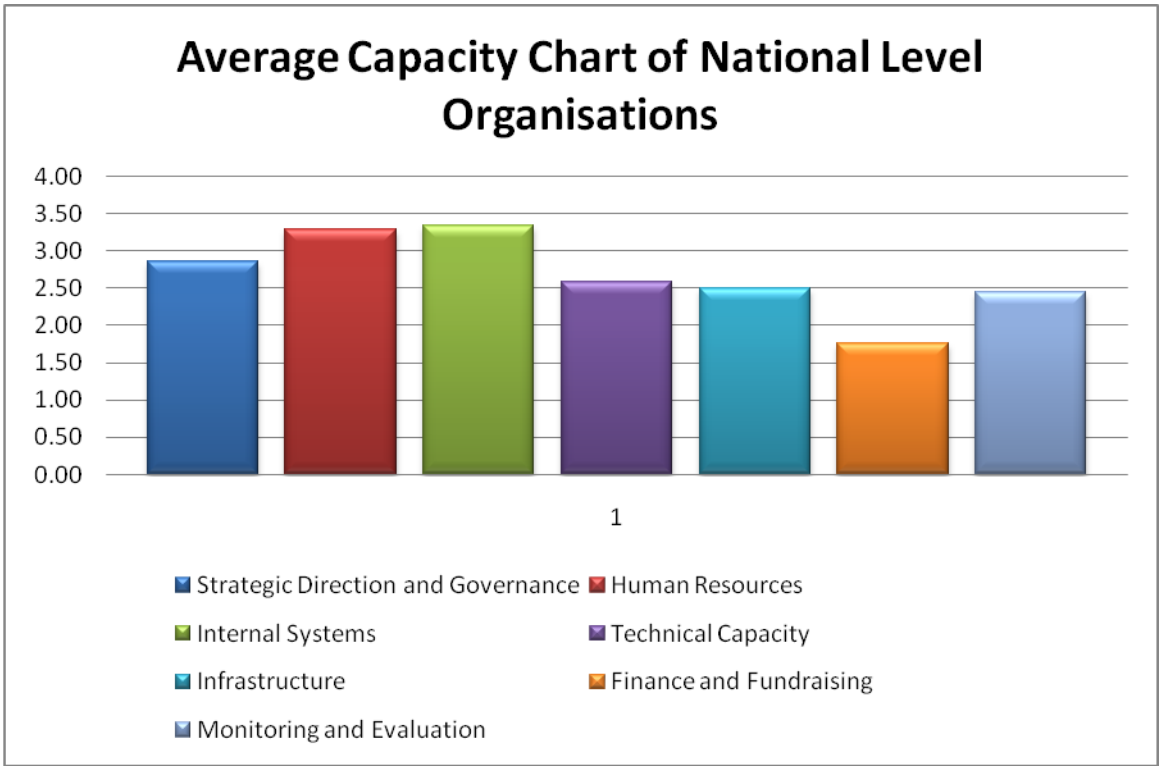
## Capacity Assessment

The capacity assessment is a participatory and quantitative tool in which respondents rate their own capacity on a scale of 1 to 4 (1 – poor; 2 – fair; 3 – good; 4 – excellent).

The national level organizations generally recorded higher scores in their capacity ratings than both the community and civil society levels. The national level organizations perceived their capacities to be in the areas of human resource and internal systems (both close to a maximum rating of excellent). On average most national level organizations felt they had good strategic direction and systems in place to monitor and evaluate traditional or biodiversity management/conservation activities. They rated their capacity in finance and fundraising, infrastructure and technical capacity as average.

These ratings suggest that management capacity is very good and the strongest, leadership capacity, is good and that the weakest areas would be in adaptive and operational capacities with an average rating.

**Fig 13**



# Civil Society Level Analysis

> ***"If there is an effort in Guyana to preserve traditional indigenous knowledge it is invisible. We need a more visible effort that reaches out to remote communities"***
> *Colin Klautky, GOIP Committee Member, discussing the lack of a concerted national effort to preserve traditional knowledge*

There are several organizations that are involved in the area of conservation in Guyana; most of these are international organizations, though there are a few national NGOs. For the purpose of this analysis, these conservation NGOs have been studied together. This section also examines national indigenous organizations. There are four main national indigenous organizations: the Guyana Organization for Indigenous Peoples (GOIP); The Action Movement of Guyana (TAMOG); the Amerindian People's Association (APA); and the National Amerindian Development Environmental Educational Development Foundation (NADF). In addition there are also local institutions such as the Bina Hill Institute, a research and training facility, which is based in Region 9. The shortcoming of this section is that many civil society organizations did not fill out and return the Capacity Assessment Tool and as such the analysis is limited by this.

## Bio-diversity management

**All of the organizations/agencies** that completed the survey **are involved in biodiversity management** either directly (Conservation International and Iwokrama), or to some extent (The Bina Hill Institute and the APA), or indirectly through partners (IICA, GOIP, NADF and TAAMOG). The larger international environmental NGOs were mainly involved in protected areas and work in forestry, tourism, craft, culture and livelihood activities. IICA's focus area is in agriculture and more recently agro- and eco-tourism. While there was some overlap between local indigenous NGOs, they generally had different areas of work and can be split into the larger groups, the Bina Hill Institute and the APA, which both had a broader mandate that involved biodiversity management, conservation and livelihood activities, and the smaller groups that did some work in biodiversity management (TAAMOG) but at a smaller scale and mostly in the area of advocacy.

## Key Documents and Laws

In general the level of awareness among civil society organizations was high; only one out of the seven organizations was not aware of the Convention on Biodiversity and Article 8 (j). The majority (six out of seven) indicated that a high priority was given to implementing the content of 8 (j) within the activities/decisions of their organizations. Knowledge of the Amerindian Act and the MoAA was high (100%) among all of the organizations. The Amerindian Land Commission was also well known.

With regards to **key documents and laws,** awareness of the NBAP I and II and the environmental regulations (Draft Wildlife Management and Conservation Regulations), and generally those enacted under the EPA Act) were high among the

larger organizations (Conservation International, Iwokrama and IICA) and the larger local indigenous NGOs (Bina Hill and APA), but low with the smaller indigenous NGOs (TAAMOG, NADF and GOIP). Awareness of the **key environmental and indigenous institutions** was high among all organizations that completed the survey.

## Traditional Knowledge

All of the civil society organizations (100%) felt that traditional knowledge was important for biodiversity management and conservation in Guyana. The vast majority, 88% of the organizations felt that to some extent there has been progress in Guyana in involving and recognizing traditional knowledge. 88% also indicated that to some extent it is seen as priority.

88%

of civil society organizations felt that there has been progress in Guyana in involving and recognizing traditional knowledge

All (100%) of the organization stated that the aspect of indigenous knowledge being given the most priority is culture (language, values, beliefs, folklore, stories, and songs). Agriculture was the second most prioritized activity, followed by forestry and medicines. The least prioritized aspect of indigenous knowledge was community laws.

Some concrete examples of how civil society is using indigenous-related biodiversity knowledge include: forestry, conservation management planning, business development, resource use planning and management, agriculture practices, agro-tourism and eco-tourism. 50% of the organizations have access to data on indigenous knowledge and 88% collected data or conducted research on indigenous knowledge. The larger organizations (Conservation International and Iwokrama) collected more extensive information which includes data and research for management planning, zoning and information on types, amounts, extent and methods of resource utilization by communities.

The majority (88%) of the civil society organizations that completed the survey stated that the concrete measure that they have undertaken to ensure that traditional knowledge related to biodiversity management was preserved was through meetings, consultations and information sessions with communities. The larger organizations (Conservation International, Iwokrama and IICA) indicated that they funded projects and funded local groups involved in preservation of indigenous knowledge. These were in the areas of natural resource management, landscape/territory, forestry, culture, community laws and language.

88% of the organizations stated that there was not equitable sharing of benefits arising from the utilization of indigenous knowledge, innovations and practice in Guyana. All (100%) of the organizations indicated that there were not sufficient incentives in place for indigenous knowledge to be applied more broadly in Guyana.
In terms of innovation the majority (75%) felt that to an extent, knowledge was being applied more broadly mainly in: ecotourism, craft and agriculture. Medicine was the area in which innovation has not been applied.

Civil society organizations identified the unmanaged burning of land, "slash and burn" agriculture and the excessive and indiscriminate poisoning of water bodies for

fish as maladaptive practices (practices that are traditional but over time have become harmful to biodiversity management).

Unsustainable harvesting (agriculture, mining and forestry) at commercial levels was the factor identified as primarily responsible for the degradation of the environment where all the organizations worked. Other factors included: lack of regulation, loss of control over land by communities and poor capacities of local bodies.

The majority of civil society organizations (84%) said that they consider the role of women and their importance in the preservation of traditional knowledge practices. For example, Iwokrama has done several analyses on gender issues within communities and related to traditional knowledge.

## Other Related CBD Articles

The two International environmental organizations (Conservation International and Iwokrama) indicated that yes, customary use was definitely being safeguarded and protected (CBD – Article 10c). The majority of the other organizations felt that customary use was being protected and encouraged to some extent, but needs improvement. One indigenous organization felt that customary use was not being protected.

63% of the organizations surveyed stated that the return or repatriation of information to communities (CBD - Article 17.2) has been done to some extent but needs improvement. 13% said that there was not repatriation of information, 13% felt that there was definitely repatriation and 11% stated that they did not know if information was returned to communities.

50% of the civil society organizations responded that there was technical and scientific co-operation (CBD – Article 18.4) to some extent but needed improvement. 26% said that there was no technical and scientific co-operation, 13% felt that there was definitely no co-operation and 11% stated that they did not know.

## Engagement, Representation and Co-ordination

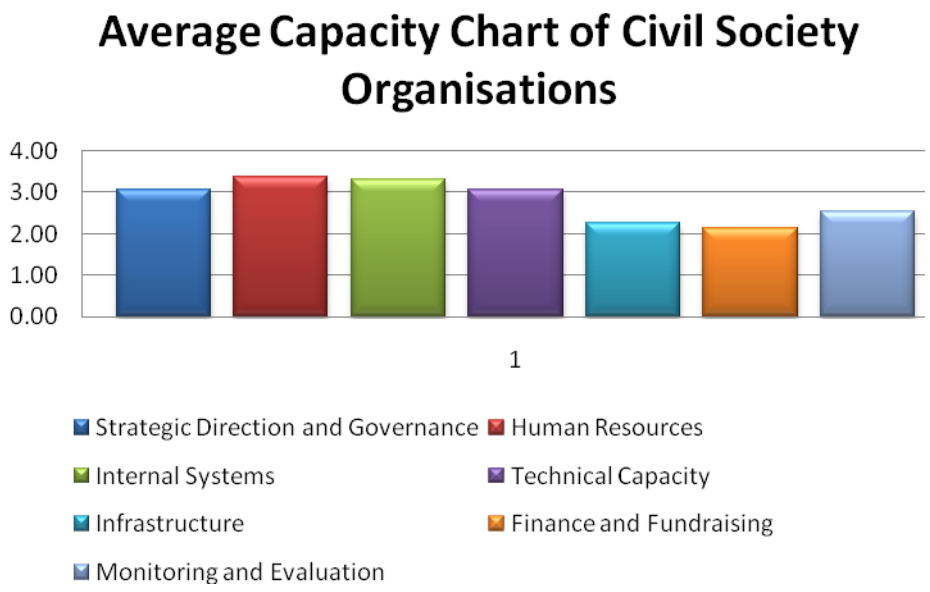
All of the larger civil society organizations (Conservation International, Iwokrama and IICA), and the Bina Hill Institute and the APA, stated that they engaged communities regularly, while the smaller indigenous organizations indicated that they engaged communities, but rarely.

## Capacity Assessment

The capacity assessment is a participatory and quantitative tool in which respondents rate their own capacity on a scale of 1 to 4 (1 – poor; 2 – fair; 3 – good; 4 – excellent).

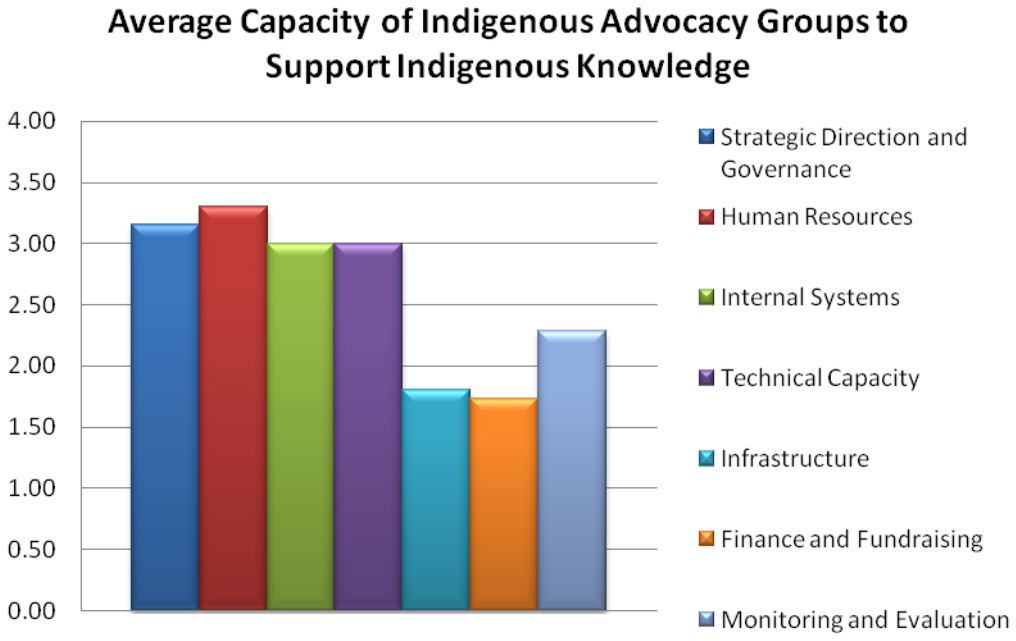
The greatest strengths perceived by Civil Society Organizations overall was their human resources and their internal systems, which they considered to be good. On average most Civil Society Organizations felt that they had access to technical expertise that would allow them to engage in traditional or conservation preservation efforts. They also felt that their strategic direction was good.

**Fig 14**




The organizations rated their financial, infrastructure and monitoring capacity the lowest. The rating suggests that the organizations have good management capacity and systems to engage in traditional or conservation efforts, but less strong capacities in adaptive and operational capacity.

**Fig 15**



# Community Level Analysis

*"When an elder dies, a library burns." Anonymous*


**Fig 16: Map showing communities that participated in the assessment in Regions 1, 2 and 9**

The survey was conducted in communities in three Regions of Guyana – Barima-Waini (Region 1), Pomeroon-Supenaam (Region 2) Upper Takutu-Upper Essequibo (Region 9) – (*See Figure 16*) The team gathered information from 26 Village Councils and met with 409 persons. Several non-Village Council members, and in particular, elders were also interviewed and included in the meetings.

The following section presents the results from the six sections of the Assessment with special emphasis placed on the capacity assessment of local community institutions – the Village Councils. Village Councils are locally elected bodies that represent communities in hinterland areas.

It should be noted that in the first half of 2009 Village Council elections were held throughout the country; as such most of the members of the Village Councils were relatively new. Council members therefore responded to the questions based on their general knowledge and also relied on those members of the council who had served in previous administrations.

## Biodiversity management

All of the Village Councils (100%) that were interviewed are involved in the managing of biological diversity in their communities and surrounding areas. This was largely seen as a responsibility of the Council to generally oversee and manage resources. In areas where there were significant commercial activities such as logging, processing or tourism, the level of involvement and management increased and was more formal. For example in Region 1, in both Tapacuma and Mainstay villages, logging and pineapple processing has led to more

***"Traditional practices represent the richness of Amerindian culture. Without it who are we?"***
*Priscilla Torres,*
*Councilor – Wowetta Village (Region 9)*

formal systems being developed to support these activities. However, Village Councils were largely involved in the general management of traditional, subsistence activities such as agriculture, fishing, logging and hunting. A few Village Councils also made reference to their involvement in Protected Areas - this was mainly around the Iwokrama reserve. Several Councils noted that they were interested in commencing eco-tourism activities in their villages.

## Key Documents and Laws

In general most communities (76%) were not aware of the Convention on Biological Diversity or the fact that Guyana was a signatory to it. Although the Councils were not aware of the Article 8 (j), when explained, the majority considered its content to be of "high importance". In instances where there was awareness, this was mainly due to research activity in Region 9 on Article 10 (c) and amongst senior and very experienced Toshaos. Knowledge of the Amerindian Land Commission was high and all (100%) were aware of the Amerindian Act (2006) and the MoAA.

With regard to key **documents and laws** - several Village Councils were aware of the NBAP and mentioned that they had received either training (the type of training was not specified) or a copy of the document which was in the possession of the Council. Almost half, 46% were knowledgeable of environmental regulations. However knowledge of the National Biodiversity Committee and the National Environmental Action Plan (NEAP) was generally very low. Overall the knowledge of Village Councils of both indigenous and environmental **institutions** was quite high including awareness of environmental NGOs and INGOs.

*The majority of Village Councils interviewed were most concerned about the loss of their **traditional languages,** which can be considered to be critical in Regions 1 and 2 where much has been lost. For example in the village of Kamwatta only one elder remains who speaks the language. This concern is not surprising since most traditional knowledge is passed down orally. Several communities highlighted that the church and state schools had contributed heavily to the loss of language since it was prohibited and looked down upon.*

## Traditional Knowledge

All of the councils interviewed (100%) felt that traditional biodiversity-related knowledge was important to conservation efforts in Guyana. The majority, 65%, felt that to some extent there had been progress in Guyana in involving and recognizing traditional knowledge and 77% felt that to some extent it is seen as a priority.

Within communities, traditional practices that related to the day-to-day living – agriculture, fishing and hunting were the most prioritized. However medicines (23%) and songs, stories, beliefs etc. (35%) were less prioritized. Most communities maintained traditional practices through daily use in their homes, though many acknowledged that this is changing.

The majority of communities do not collect data, with a few exceptions – several communities in the Rupununi through the Macushi Research Unit (MRU) have documented the language under the *Wa Wizi, Wa Kaduzu* (Our Territory, Our Culture) project. In the village of Maruranau (Region 9) there was a small culture committee on the Council which was very active in documenting stories, songs and

regularly hosting cultural shows. However, most communities relied on Amerindian Heritage celebrations in the month of September to temporarily revive traditional practices, songs, stories and language. Outside of Heritage Month, most Village Councils were not doing anything concrete to preserve their traditional knowledge, even though they saw it as important.

Many Village Councils (69%) felt that there was no access to updated information on traditional biodiversity-related knowledge. And most feel (84%) that there is not enough documentation in Guyana on traditional knowledge.

In terms of innovation, the majority (84%) felt that to an extent, knowledge was being applied more broadly mainly in the areas of eco-tourism, craft and agricultural produce (crab oil manufacturing etc.) The majority, 88%, felt that there was no benefit sharing, although a few acknowledged benefits through logging royalties. Most council members (92%) also felt that there were not sufficient incentives in place to share their knowledge.

Village Councils identified several factors which led to the destruction of the environment. The most cited cause was overharvesting of resources by mining, logging and fishing and this was often linked to an increase in commercial activities. Other factors included failure of central authorities to regulate and monitor activities. In addition, communities also identified migration, loss of language, loss of culture and poverty as important factors.

Communities cited poisoning and savannah burning to be examples of mal-adaptive practices and usually a very important cause of damage to the environment. Overall, communities felt that the knowledge of both men and women were being equally lost and no special attention was being placed on either.

Women were generally regarded as key knowledge holders in the community – birth practices, craft and agriculture were all cited as examples of this. However, several communities mentioned that there was also an overlap in knowledge because both women and men were holders of this knowledge. The majority of communities said that they recognized and observed the role of both men and women and felt that the knowledge of each gender was equally at risk.

**CUSTOMARY LAW CASE STUDY**

**The Village of Arau vs. Attorney General and the Guyana Geology and Mines Commission (GGMC):**

On 30 April 2009, the Chief Justice of Guyana, Mr Ian Chang ruled that the residents of the village of Arau in Region 7 (Cuyuni/Mazaruni) are entitled to an environment which is not harmful to their health and the regulatory body (GGMC) must take reasonable steps to ensure that mining does not reduce the value of land of the indigenous people in the community.

**Motion**

The constitutional motion was brought by the Toshao (elected village leader) on behalf of the residents and the Arau Village Council against the Attorney-General and the GGMC. The villagers said that they had occupied a tract of land since "time immemorial" and mineral properties had been given out to various private individuals and mining activities have destroyed the Arau land and waterways. They argued that by virtue of article 149C of the Constitution, they are entitled to participate in the management and decision processes of the state insofar as they relate to them and their indigenous lands.

**Ruling**

The Justice stated further that Article 149G confers on the Arau community as an indigenous people the constitutional right to protection and preservation of their way of life. But, regarding customary land tenure he stated: *"The truth is there is no evidence of the customary laws and practices of the Arau peoples in relation to land tenure. As such, this court is not prepared on the evidence to make a positive finding in favour of native land*

## Other Related CBD Articles

Many communities acknowledged that having titles to their lands gave them a sense that their customary use was being preserved (CBD - Article 10 c). However the majority (65%) responded that only to some extent did they feel that customary use was being safeguarded and protected. The reasons given varied from the presence of other communities, protected areas (Iwokrama) and the presence of state lands.

The majority (54%) felt that in relation to the return or repatriation of information (Article 17.2) to communities this was usually not done. A very high number of communities reported that at some point researchers or some external person had come to their communities and they had provided information on their traditional medicines. In one community traditional birthing methods were also documented. In a few cases copies of books or research papers were returned but they generally were not well aware of what more it was being used for and many communities said they were concerned and wary of being asked for information.

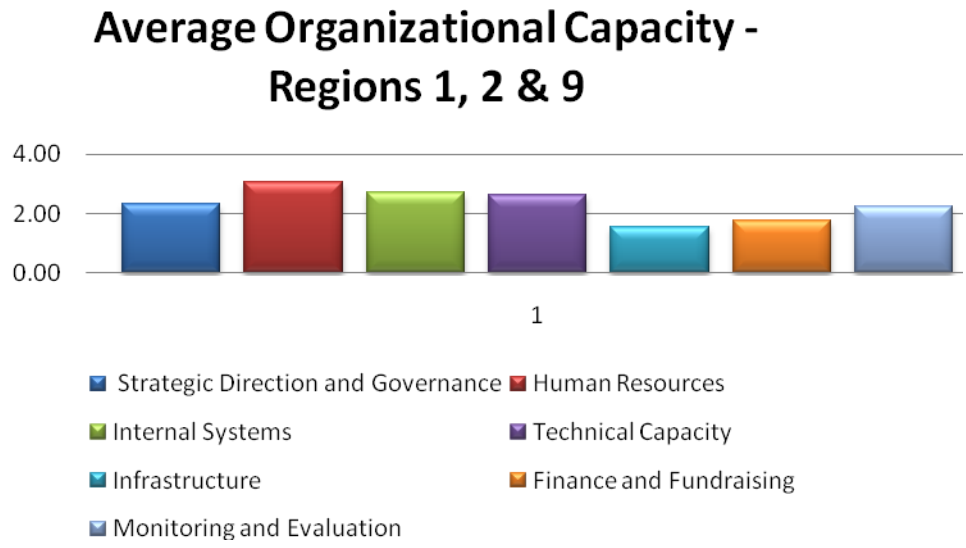
Fifty percent (50%) of Village Council members felt that there was no technical and scientific co-operation (Article 18.4), though some communities said that there had been some form of co-operation mostly with NARI or a private sector firm such as AMCAR, therefore 42% responded – 'to some extent'.

## Engagement, Representation and Co-ordination

Most Village Councils said that they engaged communities regularly, mostly every quarter as required under the Amerindian Act. Most council members said they either rarely or did not engage other actors. In instances where they did, this was mainly with other Village Councils, the MoAA, local Community Based Organizations, and to some extent, with International NGOs, indigenous NGOs and specialized agencies such as the Forestry Commission and the EPA.

## Capacity Assessment

**Fig 17**




The Capacity Assessment is a participatory and quantitative tool in which respondents rate their own capacity on a scale of 1 to 4 (1 – poor; 2 – fair; 3 – good; 4 – excellent).

The greatest strengths perceived by Village Councils overall were their human resource capacity (individuals, skills and knowledge) which they considered to be good. On average most Village Councils felt that they had access to resources and technical expertise that would allow them to engage in traditional or conservation preservation efforts. They also felt that their internal rules and management structures were good. This tends to suggest that the management capacity in Village Councils is generally perceived to be quite good.

Adaptive capacity was considered to be the weakest along with operational capacity. This would suggest that governance, planning, resources and partnerships are generally 'fair'. Infrastructure and finance and fundraising were generally the weakest areas with most Village Councils having limited exposure to other development actors such as donors, and very few skills in developing proposals or raising awareness on issues related to traditional knowledge and/or conservation. Strategic direction and governance were on average considered to be "fair".

# Conclusion & Recommendations

Guyana has made several advances as a nation towards the preservation and promotion of traditional knowledge. These include the establishment of institutions, the drafting of laws, local initiatives, increased environmental awareness and greater emphasis placed on indigenous peoples. These strengths also offer opportunities on which to build further.

However, as it relates to the preservation and incorporation of traditional biodiversity-related knowledge into biodiversity management there remains significant progress that needs to be made.

This section outlines some of the key recommendations. These recommendations also formed the basis for the development of the accompanying Strategy and Action Plan for Guyana which seeks to address some of the more pressing and priority issues.

Recommendations:
This section summarizes the recommendations from all three components of work of the consultancy, the capacity assessment, the legal review and the inventory. The recommendations presented in this section, as well as the information contained in this document form the basis for the Strategy and Action Plan which is contained in a separate document.

## CAPACITY ASSESSMENT RECOMMENDATIONS

1. There is need for national consensus on and recognition of traditional biodiversity-related knowledge in Guyana amongst key stakeholders so that it may be prioritized and preserved. Even at the community and regional levels work needs to be done to improve understanding of the value and use of traditional knowledge and the importance of its preservation.

2. Coordination of efforts between agencies is critical at all levels – micro, meso and macro. In addition, a mechanism for agencies to provide up-to-date information on their activities which contribute to Guyana's fulfilment of the CBD should be formalized. Information should be collected centrally and made available to the EPA for monitoring and reporting purposes.

3. Capacity building, institutional strengthening and technical support are needed at several levels (micro, meso and macro ) in order to realize the preservation, innovation and wider application of traditional knowledge in Guyana.

4. Globally, there has been significant progress in recent years in documenting and integrating TK into other mainstream sectors such as agriculture and health this can be achieved in Guyana as well. Of note is the use of traditional knowledge to address climate change issues through access to information as

well as research, governmental and non-governmental agencies can be supported to apply TK more broadly.

5. More partnerships between national level bodies and local communities should be forged and further supported to document and revive traditional knowledge through participatory processes. Where possible communities that have already made headway in this respect should be involved in supporting other communities. Existing initiatives such as the Bina Hill Institute or the South Rupununi District Development Council are examples such initiatives. Special attention should be provided to remote communities.

6. It is evident that the major vehicle for passing on information on traditional knowledge – local languages - is considered to be at risk of becoming obsolete. The EPA should inform and where possible, partner with the Ministry of Education to support the preservation of language in communities.

7. One important focus should be on improving access to information on traditional biodiversity-related knowledge as well as laws, documentation and agencies related to conservation. Several communities mentioned that they did not have access to updated information and knowledge of non-traditional conservation efforts. Similarly there are a wide range of documents available to support agencies to incorporate and use traditional knowledge and these should be made more readily available to conservation agencies and government ministries.

8. Wider participation in CBD conferences, workshops, meetings etc. related, but not limited to, traditional knowledge should also be financed by funding agencies to support greater level of participation by Guyanese agencies (including the EPA and civil society organizations) as well as dissemination of information, ideas and agreements reached at such forums.

## LEGAL RECOMMENDATIONS

9. There needs to be a re-drafting of the existing copyright, patent and trademark legislation, taking into consideration the following:
    - that the national regime is harmonized with Art. 66 of the Revised Treaty of Chaguaramas
    - that the national regime is harmonized with Art 27 (3) (b) of (TRIPS)
    - the economic situation of the country (vis-à-vis its status as a developing country)
    - that there needs to be harmonization between the (IP) and the Traditional Knowledge (TK) regime

10. A Traditional Knowledge (TK) regime that meets national objectives and international best practice standards including:
    - a concise definition of the concept of TK as it relates to Guyana
    - clear objectives
    - harmonizing existing institutional functions
    - management plans

- address shortcomings of the Amerindian Act, and in the proposed protected areas legislation, consider the recognition of Amerindian protected areas

11. Given the onerous requirements and unlikely recognition of customary rights at common law, in drafting a Traditional Knowledge legislation and framework policy, policymakers should as far as applicable incorporate customary practices into legislation so they can be duly recognized and protected.

12. Concurrent to the legal regime to protect TK, consideration should be given to *sui generis* systems effectively situated within broader policy and the legal environment. However the *sui generis* system established should not have to meet too many objectives for it can be too unwieldy, and while these systems may appear to be comprehensive and holistic, one issue is compatibility between TRIPS and the provisions of the CBD

13. While it would be ideal to make one authority responsible for the implementation of a TK regime, and remove concurrent jurisdiction from other line offices, the economic, environmental and social significance of the subject matter will necessitate input from all relevant stakeholders. A possible structure could be identifying the lead agency, with other relevant stakeholders comprising a scientific and technical committee on the matter

14. Cognizant of several emerging areas currently in progress in Guyana, it may be apposite to harmonise TK legislation with proposed legislation on protected areas, bio-prospecting, Access and Benefit Sharing and bio-safety.

15. In this manner the EPA could take a lead and co-ordinating role, since many of these current initiatives currently fall under their purview

**16.** Because the gains of benefit sharing would also be impaired or unjustly distributed if there are huge differences in the access fee or benefit sharing formulae in the legislation of countries possessing a particular plant or species, in formulating their ABS arrangements under legislation, Guyana should seek to liaise with both the Caribbean as well as Amazonian eco-regions. This would be in an effort to harmonize the ABS regime with countries in similar eco-regions, and the mechanism for achieving this would be through the Revised Treaty of Chaguaramas and the ACT respectively.

17. **Data Management and Networking.** Other countries over the past ten years have begun to document types of Traditional Knowledge (TK). Guyana needs to continue work on establishment of an Intellectual Property Regime (IPR) as regards to TK. However, while this debate continues, the country must take greater proactive roles to secure and systematise the various forms of TK.

## INVENTORY (Research) RECOMMENDATIONS

18. The potential exists to establish a National Database which can be managed by the Environmental Protection Agency along with the Ministry of Amerindian Affairs. Collaboration with the University of Guyana will be essential as they can work with academia to strengthen and to research the information

contained within the database. **Establishment of a Traditional Knowledge Centre should be considered.**

19. Greater effort is needed to connect to regional and international networks. There is a global network of indigenous knowledge resource centres whose memberships include academic institutions, NGOs, Community Based Organizations and individuals. Regional networks are also continuously emerging, such as PELUM, formed in some countries in East and Southern Africa, to share and combine experiences, skills and knowledge.

20. **Trans-National Partnerships and Networks -** Guyana should maximize the use its networks and partnerships. Guyana partners with several international research projects to understand and enhance biodiversity management and conservation. The Guyana Shield Initiative which currently tries to find mechanisms for payment for ecosystem services has pilot sites in Guyana, Brazil, Venezuela, and Suriname. Guyana can benefit significantly from such strategic partnerships to access technical expertise and resources to document and develop TK. Some of the other countries maximize the use of their Universities and encourage research.

21. **Repatriation of Data -** From the body of literature referenced, unfortunately, hard copy or electronic copies were not in the libraries. Attempts should be made to secure any kind of TK-related studies and information that may be housed in libraries of other Museums and from Research and other Institutions that were known to have visited and worked in Guyana.

22. **Funding for Cataloguing Libraries -** A network among key libraries is needed. Sources of funding for cataloguing information could be accessed from programmes like the Indigenous Knowledge Programme (IKP). IKP is an initiative of the Indigenous Peoples' Biodiversity Network and the Global Environment Facility (GEF) Small Grants Programme. The Indigenous Knowledge for Development Program of the World Bank also encourages more countries to formulate and implement strategies for TK integration and enhances the capacity of national and regional TK networks. For example, the Amerindian Research Unit has a small but important collection that needs to be electronically data based, catalogued and made more accessible to students. Photocopying and scanning of documents are important for the preservation and archiving of resources. This requires adequate staff and technological resources. The Walter Roth Museum of Anthropology has also started this process but like other libraries in Guyana they lack the adequate means to complete the task effectively.

23. **Research on Applied TK and other areas -** More research is needed to understand baseline aspects as they relate to the forms of art, songs, storytelling, and even subsistence practices which have evolved. As discussed previously, more detailed research is needed to document applied forms of TK that could be used for resource management. The type of TK publications that exist provide a fair description of the various indigenous cultures and lifestyles. The potential for the University of Guyana to conduct structured inquiries to test and refine this data is recommended. It would present excellent research opportunities for students to investigate practical TK.

**24.** TK definitely exists in other groups in Guyana as well. For instance, the fore parents of East Indian and Afro-Guyanese also brought with them a rich history and dependence on the land. Granted many of these experiences are lost, there are still some practices which remain in the more rural areas of the Coast. Beliefs like Obeah are still very much practiced and has nuances of Shamanism or shaman-like practices. In addition, farmers must have a range of TK which would have evolved through time which is useful for biodiversity management and coastal zone management along the coast. TK in these groups probably allows for greater resilience against Climate Change.

25. **Quality control mechanisms are needed -** Quality control is essential for the maintenance of the TK Database and this can easily be supported through the formation of a Technical Working Group (TWG). The feedback and the enthusiasm shown by consulted professionals for this project suggest that a TWG comprising these scholars and practitioners in the field will be welcomed. The TWG would take on an editorial review role and advise on the research scope needed to enhance the quality of the TK. The TWG would be responsible for regularly reviewing and updating the database. Perhaps the TWG could advise and host an annual Peer Review Conference to build interest and as a medium for dissemination of results. This could lead to the formation of a National TK Centre which could be integrated into an Institution such as the Walter Roth Museum of Anthropology.