

FINAL REPORT
ON
MAIN GENDER ISSUES
RELATED TO BIODIVERSITY CONSERVATION
IN GUYANA



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Paulette Bynoe, Ph.D.

Acronyms and Abbreviations

ABS	Access and Benefit Sharing
APA	Amerindian Peoples Association
ARU	Amerindian Research Unit
BHI	Bina Hill Institute
CBD	Convention on Biological Diversity
CI-G	Conservation International – Guyana
COP	Conference of Parties
CPCE	Cyril Potter College of Education
EPA	Environmental Protection Agency
FAO	Food and Agriculture Organisation
GSF	Guyana Shield Facility
GoG	Government of Guyana
GOIP	Guyanese Organisation of Indigenous Peoples
GMTCS	Guyana Marine Turtle Conservation Society
IAST	Institute of Applied Science and Technology
IPR	Intellectual Property Rights
IUCN	International Union for the Conservation of Nature (now World Conservation Union)
LCDS	Low Carbon Development Strategy
NADF	National Amerindian Development Foundation
NAREI	National Agricultural Research and Extension Institute
NBAP	National Biodiversity Action Plan

NDS	National Development Strategy
NGO	Non-Governmental Organization
NTFPs	Non Timber Forest Products
OECD	Organisation for Economic Development
TAAMOG	The Amerindian Action Movement of Guyana
TCG	The Consultancy Group
UG	University of Guyana
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
USDA	United States Department of Agriculture
WWF	World Wildlife Fund

Executive Summary

1.0 The Context

Guyana shares the Guiana Shield Region –one of the world’s oldest geological landscapes and this fact accounts partly for the richness in terms of species diversity and abundance.

Currently, Guyana’s notable efforts at protecting biodiversity are being tested by the increasing level of economic development in areas with rich biodiversity. In the most recent National Report to the United Nations Convention on Biological Diversity (UNCBD) it clearly states that *“the threats described in the UNCBD 1999 country report still apply to the current situation in Guyana. Threats that face Guyana’s biodiversity can either be direct or indirect. Direct threats result from developmental or non-human induced activities that directly affect biodiversity and indirect threats can result as a consequence of some policy or legislative measures and/or institutional challenges”* (EPA, 2010).

The Consultancy, which has informed the structure of this Report, aimed to conduct a study on main gender issues related to biodiversity conservation in Guyana in order to generate detailed data to strengthen national level efforts to improve the strategic orientation of GSF activities. The output, which basically is this Report, is expected to provide sound and consistent guidance and substantive backstopping to the programme on gender related issues that will inform policy, planning and budgetary issues, as well as strengthen all aspects of the project activities in Guyana. A mixed methods approach (methodological pluralism) was adopted for the conduct of the study.

1.2 Main findings

- Despite the important role of women, they are still inadequately represented at the different levels of policy formulation and decision making in natural resources and environmental management, conservation and protection.
- Gender has not been formally mainstreamed in policies, strategies, action plans or programme related to biological diversity management in Guyana, though the general statements about community involvement etc. provide opportunities for initiatives to be developed and implemented. In fact, one can conclude that gender integration is implied, as in the case of the Guyana Constitution (2003), the Environmental Protection Act (1996), and National Biodiversity Action Plan II (2007-2011) Environmental Protection Act (1996); Code of Practice for the Utilisation of Mangroves; Access and Benefit Sharing (ABS) Policy (2008); and The Amerindian Act (2006).
- There are at least twenty organisations that represent government, non-governmental organisations, civil society and indigenous people in Guyana and whose programmes/activities related directly or indirectly to biodiversity conservation and management.
- Despite the fact that the majority of stakeholders agreed that gender is important to biodiversity conservation and management, none were able to identify any specific policies,

programmes or project activities that directly address gender and biodiversity. This is hardly surprising given that none of the named institutions have a clear gender policy statement.

- Responses from stakeholders suggest that there are several barriers to be overcome before gender can be integrated in environment and conservation issues in Guyana. However, based on information received from stakeholders, direct efforts have been made to provide opportunities for both men and women in areas of awareness, education and training, sustainable livelihoods, and general sustainable human development, though the involvement of men and women in programmes and activities as influenced by the cultural norms of communities, as supported by the case studies incorporated in this Report.
- There are very compelling reasons for mainstreaming gender into biodiversity policies, strategies, action plans and programmes in the Guyana context: for example, mainstreaming will improve the national and local governance framework, where women and men can be involved in monitoring and evaluation of biodiversity conservation projects. This becomes particularly relevant to Protected Areas.

3.0 Recommendations

Notably, Guyana's Constitution, the ABS policy etc. provide a reference point for gender integration in biodiversity conservation and use; for example, the national ABS policy is particularly concerned with the knowledge, innovations and practices of Amerindian and local communities in Guyana. Therefore, the 'stage' is set for action. Further, most stakeholders opined that gender integration is important. What follows is a list of recommendations on the objectives, principles and strategies of a more 'direct' policy (better regarded as a prototype) that will inform the process of integration of gender and biodiversity conservation in the Guyana context. It is envisaged that national stakeholders will be able to refine these recommendations based on consensus.

Developing a more direct policy to integrate gender and biodiversity

Proposed Objectives

- To integrate gender concerns and perspectives in national policies, strategies, plans and programmes;
- To promote the full participation of women at all levels of policy-making and implementation for biological diversity conservation;
- To promote culturally appropriate and gender specific ways in which to document and preserve women's knowledge of biological diversity;
- To safeguard the existing intellectual property rights of indigenous men and women as protected under national (Guyana's) and international law;

- To promote continuous awareness building, education and training on gender issues related to biodiversity conservation and use to heads of institutions, policy makers, community leaders, among others; and
- To promote and facilitate research to generate sex disaggregated data to support gender based programmatic planning for biodiversity conservation and use in Guyana.

Proposed Principles

1. There are gender-based differences in the roles, responsibilities and contributions of men and women to the conservation and use of biodiversity.
2. Gender equality in access to information, education and training with regard to biodiversity conservation and use is a pre-requisite to equal participation in biodiversity programme and projects.
3. Women's knowledge (as well as men's) can contribute to biodiversity conservation and sustainable use.
4. Full and equitable participation¹ of both men and women at all levels of policy-making and implementation for biological diversity conservation is critical to move gender-specific insights from the local level up to the policy level.
5. The traditional methods and the knowledge of indigenous people (particularly women), and their communities, relevant to the conservation of biological diversity and the sustainable use of biological resources, must be recognised and promoted.

Proposed Strategies

- Setting up of a national team to address the issue of mainstreaming gender and biodiversity in Guyana, setting of priorities and a work and implementation plan that will determine the material and financial resources. Notably, there is already an established National Biodiversity Committee (NBC). See sub-section 4.3.
- Documentation of the differential knowledge of women and men about biodiversity resources as well as women's traditional knowledge in sustainable management of local-level biodiversity resources
- Institutional capacity building for gender and biodiversity integration at the policy, strategy, plans, programme and project activities.
- Development of clear guidelines, tools and methodologies to mainstream gender into biodiversity use and conservation.

¹ The principles of equality and equity imply that all stakeholders independently of the social group they belong to should be consulted and involved under equal conditions in the various activities of conservation, and the full and active participation of those who are discriminated against, disadvantaged or oppressed Within a society should be guaranteed. Source: <http://www.cbd.int/doc/publications/cbd-ts-49-en.pdf>

- Promotion of research aimed at generating sex disaggregated data on the conservation and use of biodiversity in Guyana.
- Enhancing opportunities for women's participation in decision making related to biodiversity conservation.
- Integration of gender in biodiversity related courses taught at the University of Guyana (UG) and the Cyril Potter College of Education (CPCE).
- Participatory monitoring and evaluation of biodiversity projects for gender inclusion in terms of benefits, participation in decision-making regarding project design and deliver, implementation and outcomes.

Opportunities for Action

- A national stakeholder workshop on gender and sustainable development (which was recommended years ago after the Issue Report on Women, Environment and Sustainable Development) should be held to allow both men and women in communities and national institutions to express their views and help to identify measures to achieve the agreed goals.
- Identifying key areas for gender mainstreaming is critical to the achievement of the objectives of biodiversity conservation policies, a strategy etc., since a national perspective, rather than a sectoral perspective, is necessary. Gender must be mainstreamed in sustainable development as the overarching framework; then this will provide opportunities for direct interventions in biodiversity policies and strategies, climate change policies and strategies etc. the specific programmatic areas of the second National Biodiversity Action Plan (NBAP II) identified Table 7 in sub-section 3.4 of this Report can provide opportunities for the revision and amendment of existing biodiversity related policies to integrate gender issues.
- Ensure that there is the general involvement of women in the conceptualisation, design, implementation, monitoring and evaluation of biodiversity projects and programmes so that their knowledge, experiences and expertise could improve the project outcomes.
- Provide increased opportunities for women to be involved in biodiversity monitoring through ongoing training programmes in biodiversity research not only at the University level, but also at the level of the community.
- Educate heads of institutions (national and community and particularly men) on the need for gender balance in resource management and use.
- Both men and women should have equal access to both financial and other resources. **To this end, there should be consideration of the one third factor at all times when committees are formed (women must make up one third of the group-similar to that of Parliament).**

- Increase capacity building for Amerindian men and women through information, education and training, with the view to enhancing knowledge and know-how about managing biodiversity resources, especially about how to identify coping and adaptation mechanisms during crop failure, food shortages, and natural disasters.
- Increase women's access to the benefits of agro-biodiversity research and innovation given their vulnerability to floods and droughts, and longer term global climate change by ensuring sharing of knowledge, increased access to research findings, and agricultural extension services.
- Target more women (than currently practiced) as environmental monitors (in communities in Guyana where cultural norms support this intervention) as women can use their collective voice and actions can reduce activities such as illegal logging, mining, and wildlife trade over Guyana's borders.
- Establish a facility (for example, by expanding or strengthening the Makushi Research Unit (MRU), or the Amerindian Research Unit (ARU) at the UG) to promote documentation and transference of traditional knowledge (recognizing their intellectual property rights) in the local communities for conservation and biodiversity management. The differential knowledge of women and men about biodiversity resources should be given special attention.

Other specific actions that should be taken are detailed below.

- First, the UG/Centre for the Study of Biological Diversity (CSBD) programmes should encourage more females to be trained in the area of biodiversity conservation. The proposed Biodiversity Centre for Excellence, under the LCDS can be a good starting point.
- Second, biodiversity conservation could be further integrated in the school's curriculum at an early stage. Pupils and students should understand the gender roles the importance of involving men and women, boys and girls in biodiversity conservation.
- Third, the initiative by the Guyana Statistical Bureau to generate environmental statistics should facilitate the disaggregation of statistical data, reflecting women's and men's participation and changing roles in the various aspects of biodiversity conservation.
- Fourth, all UNDP programmes aimed at biodiversity conservation should ensure the participation of both men and women in matters pertaining to project design and implementation, monitoring and evaluation, benefit sharing and capacity building.
- Fifth, the National Biodiversity Committee can work in collaboration with the UNDP to prepare simple checklists and criteria to assess and screen biodiversity projects for how they mainstream gender.
- Sixth, programmes under NBAP II can ensure that both men and women are involved in specific activities in respect of training, monitoring, and research, among others. A good starting point is to be for all institutions involved in the implementation of NBAP II to commit to gender equality, even if this is not an overt expression in their institutional mandates. Further, it will be useful

for the Natural Resource and Environment Advisory Committee (NREAC) to establish a sub-Committee to address the issue of mainstreaming of gender in natural resources (including biodiversity) management.

- Seventh, as part of the Implementation of the National Capacity Self Assessment (NCSA) Reports, a number of gender-focused training and sensitization workshops should be held and should target project managers and coordinators, middle management professionals and researchers (including the Amerindian Research Unit of UG, the Iwokrama International Centre and the MRU).

SECTION 1 SETTING THE CONTEXT

1.1 Introduction²

The Guiana Shield is very rich in biological diversity, with 20,000 vascular plant species, of which approximately 35% (7000) are endemic; bird richness is estimated at 975 species with 150 endemics, and 25 near endemic; mammals are estimated at 282 species (27 endemics); reptiles at 280 species (76 endemics); amphibians at 272 species (127 endemics), and freshwater fish at 2200 species (700 endemics)³.

In recognition of the vital importance of building national ownership and forging regional cooperation for the conservation and sustainable development of the eco-region, the United Nations Development Programme (UNDP) and international partners have abolished a funding facility to support the institutionalisation of an eco-regional approach, to incentivise the long-term delivery of globally important ecosystem goods and services for the improvement of social well-being, and to conserve the

eco-region. Thus, the Guiana Shield Facility (GSF) is a multi-donor funding facility established by the UNDP Guyana country office to support the conservation and sustainable development of the ecosystems of the bio-diverse 2.5 million km² Guiana Shield eco-region⁴, through supporting activities needed to ensure the ecological integrity of the eco-region.

The GSF initiative gives recognition to the fact that in recent times, the Guiana Shield eco-region has been threatened by both legal and illegal activities, including: (i) deforestation; (ii) legal mining and its associated water pollution, social and health problems; and (iii) poaching of wildlife, poverty. Additionally, there are institutional threats such as weak institutional capacity and external debt, all of which other cause governments and local populations to choose



² Information sourced and amended slightly from the ToR.

³ <http://www.guianashield.org/site/en/gsi2/the-ecoregion>

⁴ The term "Guiana Shield eco-region", means in bio-geographical terms, the ecosystems of the eco-region and includes the large forested mountain systems that form the watersheds between the Amazon and Orinoco rivers, as well as savannahs and wetlands. Specifically, they cover mostly pristine rain forests, delineated by the Amazon River to the South, the Japari-Caqueta River to the Southwest, the Sierra de Chiriquete to the West, the Orinoco and Vichada Rivers to the Northwest and North and the Atlantic Ocean to the East.

activities that are 'quick fixes' to income generation. The fact is, however, such short term gains jeopardise a country's or region's efforts at achieving sustainability.

The **specific objectives** of the GFS are:

- to be a long-term forum and vehicle to address national and overarching regional, in particular, environmental issues related to management of the ecosystems of the Guiana Shield eco-region;
- to maintain the GSF as a sustainable financial vehicle for the conservation and sustainable development of the Guiana Shield eco-region; and
- to support the exchange of knowledge and capacity building to enhance the conservation and sustainable development of the Guiana Shield eco-region. In order to maximize global environmental benefits, it includes provisions of cross-cutting issues.

To achieve the above objectives, a number of operating principles are proposed for the design and structure of the GSF covering three broad domains: a) national and regional environmental priorities; b) sustainable financing; and c) exchange of knowledge and capacity building. The GSF recognizes that, for its project interventions to achieve their global environmental objectives, particular attention should be paid to gender equality and women's empowerment. It is based on the assumption that responsibility of any biodiversity conservation initiative relies on ensuring that the development and implementation of proposals, under national and international conservation policies, contribute to equality and equity, through the creation of possibilities for equitable opportunities and benefits for both women and men.

1.2 Objective of Consultancy and Structure of Report

Objective of Consultancy

The Consultancy, which has informed the structure of this Report, aimed to conduct a study on main gender issues related to biodiversity conservation in Guyana in order to generate detailed data to strengthen national level efforts to improve the strategic orientation of GSF activities. The output, which basically is this Report, is expected to provide sound and consistent guidance and substantive backstopping to the programme on gender related issues that will inform policy, planning and budgetary issues, as well as strengthen all aspects of the project activities in Guyana.

Structure of Report

This Report is divided into four inter-related sections, namely:

- Section 1 Setting the Context
- Section 2 Gender Equality and the Conservation of biological Diversity: A Synopsis of the Main Issues
- Section 3 An Analysis of Gender Integration in Biological Diversity Conservation in Guyana
- Section 4 Charting the Way Forward for Gender Mainstreaming into National Policies

1.3 Guyana: A Brief Introduction

Guyana, with a land area of 214,980 sq. km, is located in the north eastern corner South American continent at 1° and 10'; 8° 35' N and 56° 20' and 61° 23' W. of the. Guyana is bordered by Suriname to the East, Venezuela to the West, Brazil to the south, south west and the Atlantic Ocean to the north. See figure 1.

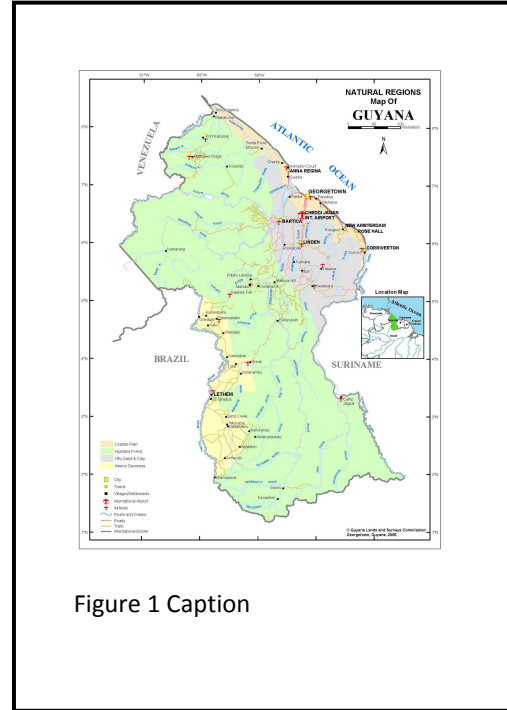


Figure 1 Caption

The country shares the Guiana Shield Region –one of the world’s oldest geological landscapes and this fact accounts partly for the richness in terms of species diversity and abundance. At present, Guyana’s biodiversity is not fully understood; nevertheless, the general view is that there are approximately 7,000 species of plants (Funk et al, 2007), 800 species of birds (Braun et al, 2000), 225 species of mammals (Engstrom and Lim, 2008), about 320 species of amphibian and reptiles (Hallowell and Reynolds, 2005) and about 700 species of fishes. Species such as *Panthera onca* (Mammalia), *Melanosuchus niger* and *Podocnemis expansa* (Reptilia), *Harpia harpyja* (Aves), *Arapaima gigas* (fishes) are still found in Guyana in good numbers under *in situ* conditions (EPA/OP, 1999). Limited studies have been conducted in the field of genetic diversity and related to the agriculture sector. Specifically, attention has been given to the introduction of plant species such as sugarcane (*Saccharum officinarum*) and rice (*Oryza sativa*), as well as staple crops like cassava (*Manihot esculenta*) and a number of “farmers’ varieties” or land races such as hot pepper (*Capsicum annum*). Additionally, a joint National Agriculture Research & Extension Institute (NAREI) and United States Department of Agriculture (USDA) project, which commenced in 2009, facilitated the collection and conservation of genetic resources of crop plants and related species (EPA, 2010).

The agricultural sector in Guyana is the major economic beneficiary of biodiversity: two of the top three sources of foreign exchange and employment in the country are agricultural crops (rice and sugar). Additionally, fisheries and forestry contribute approximately 6% and 5%, respectively to GDP (include year of reference), but there is potential for development in both these industries along with that of wildlife. The biological resources of the country are therefore vital to the future development of the economy and the population: Biodiversity is seen as a vehicle to reduce poverty through the development of Guyana's unique tourism product: its biological diversity and ecological and cultural landscape.

Currently, Guyana's notable efforts at protecting biodiversity are being tested by the increasing level of economic development in areas with rich biodiversity. In the most recent National Report to the United Nations Convention on Biological Diversity (UNCBD) it clearly states that *"the threats described in the UNCBD 1999 country report still apply to the current situation in Guyana. Threats that face Guyana's biodiversity can either be direct or indirect. Direct threats result from developmental or non-human induced activities that directly affect biodiversity and indirect threats can result as a consequence of some policy or legislative measures and/or institutional challenges"* (EPA, 2010). Direct threats are associated with over-fishing, and overhunting indiscriminate land use practices in the mining, forestry and agriculture sectors), introduction to invasive species and livelihoods activities related to the use of non timber forest products (NTFPs). On the other hand, indirect threats relate to climate change and climate variability events, institutional fragmentation, limited capacity for monitoring and enforcement, and increased accessibility to hinterland areas.

1.4 The National Vision for Biodiversity

Guyana was among the countries that signed the Convention on Biological Diversity during the United Nations Conference on Environment and Development in Rio de Janeiro in June 1992. Subsequently, on August 29, 1994, the government ratified the Convention. The government's policy position on the value of its biodiversity, as contained in the 1999 National Strategy for Biodiversity, provides guidance on how this resource is viewed:

Biological diversity and its components have value for agricultural, genetic, social, economic, scientific, ecological, cultural and aesthetic purposes.

Further, the following statement reflects the national perspective on the role and importance of the country's biodiversity, as described in the Strategy:

Biodiversity and its components provide a wide range of benefits to society, representing life support and existential value, in addition to those already articulated in the national strategy for biodiversity. The importance of biodiversity lies in its use and non-use values, known and unknown, tangible and intangible.

While it is acknowledged that some of these values are presently difficult to define fully in economic terms and that there is a severe paucity of information on some of these values of the country's biodiversity, these ought not to delay the use of policy, administrative and other measures to safeguard or maximise the retention of as many of the values as possible of biodiversity (the precautionary principle). For example, removal of incentive measures that have a negative impact on biodiversity can proceed, even in the absence of information on the economic value of biodiversity. (The provision of economic incentives for promoting conservation, on the other hand, will be aided by valuation of biodiversity and its components). (Government of Guyana, 1999).

1.5 Methodological Framework

A mixed methods approach (methodological pluralism) was adopted for the conduct of the study (See Terms of Reference in Appendix 1) and comprised mainly: (i) a desk review of available documentation (UNCBD, biodiversity reports, strategies, action plans, and international reports of gender issues); (ii) key informant interviews that targeted 17 key stakeholders representing government, private sector, academic, nongovernmental organisations and civil society to solicit views on the policy aspects of gender and biodiversity. Kindly see Appendix 2 and Appendix 3 for list of guiding questions and list of stakeholders; and (iii) social surveys of two communities in Region 9 (Upper Takutu-Upper Essequibo; see figure 2) were surveyed: 52 households in Aranaputa and 40 households in Wowetta, accounting for 56.5% and 43.5 % of sample population, respectively. The aim was to ensure a 95% Confidence Level in respect of the sample size. Heads of households were targeted and therefore 46 males and 46 females were interviewed. The questionnaire focused on demographic data and issues related to biodiversity knowledge, access and use, plus capacity building issues. Systematic sampling (every 2nd household) was applied to the selection of households. The survey data were analysed using the SPSS software to focus on responses provided by the different biological sexes to illustrate issues related to gender and biodiversity conservation.

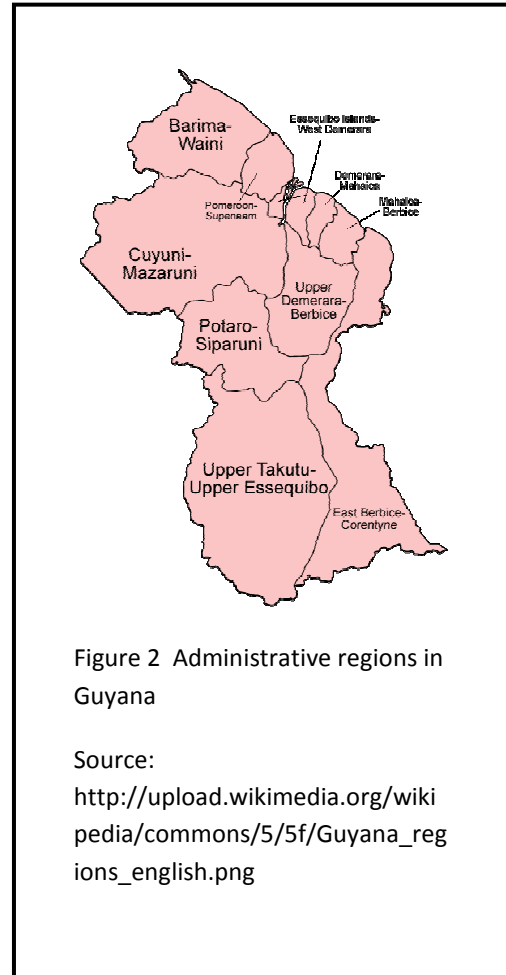


Figure 2 Administrative regions in Guyana

Source:
http://upload.wikimedia.org/wikipedia/commons/5/5f/Guyana_regions_english.png

SECTION 2 GENDER EQUALITY AND CONSERVATION OF BIOLOGICAL DIVERSITY: A SYNOPSIS OF THE MAIN ISSUES

Gender is not based on sex or the biological differences between men and women; however, gender is shaped by culture, social relations and natural environments.

Gender roles of men and women include different labour responsibilities, decision-making processes and knowledge.

2.1 Conceptual Framework on Gender, Conservation and Sustainable Development

Both men and women as producers and resource users have a stake in the preservation of the environment and in sustainable development. A lack of understanding and appreciation of women's and men's knowledge of conservation and sustainable management techniques, as well as a disregard for their priorities as resource users, can lead to the failure of development interventions; thus increasing recognition has been given by international agencies, governments and planners to the value of learning from women's and men's local knowledge in order to protect and sustain the environment, and to promote their full and equal participation in sustainable development⁵. An important caveat is that gender roles in resource management vary spatially and temporally. In fact, environmental change has, itself, changed gender roles.⁶ In most publications on gender and sustainable development, much attention is given to women, since the argument is that women's role and issues are often ignored or treated marginally⁷.

Gender equity is an essential building block in sustainable development. Indeed, none of the three "pillars" of sustainable development (environmental protection, economic well being and social equity) can be achieved without solving the prevailing problem of gender inequity (World Summit Paper, 2002)

In reality, women have an essential role to play in the environmental management and sustainable development. They have taken the lead in the promotion and development of an environmental ethic, reducing resource use, and reusing and recycling resources to minimise waste and excessive consumption. In many parts of the world, at the community level, women provide the main labour force for subsistence production, including production of seafood; as

⁵ <http://www.fao.org/docrep/005/j0086e/j0086e00.htm>

⁶ *ibid*

⁷ Sustainable development can only be achieved through long-term investments in economic, human and environmental capital. At present, the female half of the world's human capital is undervalued and underutilised the world over. As a group, women – and their potential contributions to economic advances, social progress and environmental protection – have been marginalised. <http://www.oecd.org/dataoecd/58/1/40881538.pdf>

such, their role is crucial to ensuring food security and nutrition, the enhancement of the subsistence and informal sectors and the preservation of the environment. In some communities, women are the ones who safeguard the natural environment and ensure adequate and sustainable resource allocation within the household and the community. In terms of resource impacts, women tend to leave a smaller ecological footprint than men due to their more sustainable consumption patterns, while men's lifestyles and consumer patterns, whether they are rich or poor, tend to be more resource-intensive and less sustainable than women's (Johnsson-Latham, 2006, seen in Organisation for Economic Cooperation and Social Development online document, n.d.).

Further, women's access and control of natural resources are crucial aspects of sustainable development (United Nations, 2002). For example, through their management of natural resources, women provide sustenance to their families; therefore, as consumers, producers, caretakers and educators, women play a critical and invaluable role in promoting conservation. A study conducted in Bangladesh showed that women who had inhabited very fragile lands were very particular about preserving the natural vegetation, which they considered to be a very valuable resource and necessary for soil stability. On the other hand, their access to open-water fish resources, which were essentially a livelihood source, was restricted as fishing was considered a male occupation or job of the a low caste (Source). In other cases, privatisation of land and other resources and the land tenure problems serve to undermine women's ability to use and conserve land and water resources, particularly where those resources are under large corporate control. The end result is further impoverishment of women and intensified food insecurity (United Nations, 2002).

However, despite the important role of women, they are still inadequately represented at the different levels of policy formulation and decision making in natural resources and environmental management, conservation and protection. Moreover, their experience and skills in advocacy for, and proper monitoring of natural resources are often marginalised in policy making and decision-making bodies, as well as educational institutions and environmental agencies at the managerial level.

In summary, the major issues to be considered with regards to women, environment and sustainable development are:

- Very few government institutions have truly integrated a gender dimension into their official environment and sustainable development policies. In cases where such efforts have been made, the result could best be described as ad hoc in character.
- Environmental and sustainable development related institutions are still dominated by male leadership.
- There is a paucity of gender specific information on sustainable development.
- At the local level in many countries, women are not in control of, or (are) rarely allowed to participate in governance structures.
- Women are still under-represented in governments, and in corporate decision making.

- Continuation of rapid depletion of natural resources and environmental degradation that affects all human lives, but has a more direct impact on women.
- Women are still denied access to natural resources (especially land) that are critical to their sustainable livelihoods.
- Women still account for the majority of those who live in absolute poverty and the increasing burden this has placed on them.
- Women still have unequal opportunities for the protection, promotion and maintenance of their health (for example, unequal access to basic health services, disproportionate responsibilities in the family and society, experiences of violence and environmentally related health problems).
- There is still a relatively low level of education, management and technical skills among rural women.

Appendix 4 provides details on major international events and issues related to gender and sustainable development, though heavily biased towards a discussion on women.

2.2 International Framework on Gender Equality and Conservation of Biological Biodiversity

Biodiversity is the basis for survival and progress of the present and future humankind. Therefore, all must strive to conserve, enhance and utilize it in a sustainable manner. Women have played and will continue to play a vital role in this resolve.

Biodiversity provides the basis for ecosystems and ecosystem services upon which all people depend. Biodiversity in agriculture, forestry, and fisheries underpins agricultural and bio-energy production (Food and Agricultural Organisation, 2007; MEA 2005). Sustainable use and management of biodiversity result in global food security, environmental conservation, and viable livelihoods for the rural poor. For poor rural households, in particular, biodiversity remains a key livelihood asset, because these households are the most reliant on local ecosystems and often live in places most vulnerable to ecosystem degradation. Current changes in biodiversity are the fastest in human history, with species becoming extinct 100 times as fast as the rate in the fossil record; 12 percent of birds, 23 percent of mammals, and 30 percent of amphibians are threatened with extinction.

The United Nations Convention on Biological Diversity (UNCBD) provides the overarching policy framework for gender equality in biodiversity conservation. **Decision V/16: Article 8(j) and related provisions states:** *“Recognizing the vital role that women play in the conservation and sustainable use of biodiversity, and emphasizing that greater attention should be given to*

strengthening this role and the participation of women of indigenous and local communities in the programme of work”.

Under the “General Principles” the programme of work on the implementation 8(j) CBD calls for: *“Full and effective participation of women of indigenous and local communities in all activities of the programme of work”.* **Task 4 of the programme of work calls on** Parties to develop, as appropriate, mechanisms for promoting the full and effective participation of indigenous and local communities with specific provisions for the full, active and effective participation of women in all elements of the programme of work, taking into account the need to: (a) Build on the basis of their knowledge, (b) Strengthen their access to biological diversity; (c) Strengthen their capacity on matters pertaining to the conservation, maintenance and protection of biological diversity; (d) Promote the exchange of experiences and knowledge; (e) Promote culturally appropriate and gender specific ways in which to document and preserve women’s knowledge of biological diversity.

In addition, paragraph 253 (c) under strategic objective K.1 of the Beijing Platform for Action adopted at the Fourth World Conference on Women, calls upon Governments, at all levels, including municipal authorities, as appropriate to take actions to be: “Encourage, subject to national legislation and consistent with the Convention on Biological Diversity, the effective protection and use of the knowledge, innovations and practices of women of indigenous and local communities, including practices relating to traditional medicines, biodiversity and indigenous technologies, and endeavour to ensure that these are respected, maintained, promoted and preserved in an ecologically sustainable manner, and promote their wider application with the approval and involvement of the holders of such knowledge”. In addition, governments are urged to safeguard the existing intellectual property rights of these women as protected under national and international law; work actively, and where necessary, to find additional ways and means for the effective protection and use of such knowledge, innovations and practices, subject to national legislation and consistent with the Convention on Biological Diversity and relevant international law, and encourage fair and equitable sharing of benefits arising from the utilization of such knowledge, innovation and practice.

Importantly, there is a CBD Gender Plan that is essentially the product of an analysis of the current performance of the UNCBD in the area of gender and biodiversity, as well as a review of the implementation of plans of action of similar institutions and international partners, including United Nations Environment Programme, the FAO of the United Nations, the International Labour Organization (ILO), the United Nations Development Fund for Women (UNIFEM), UNDP, the World Conservation Union (IUCN), among others. This Plan of Action defines the role of UNCBD Secretariat in terms of stimulating and facilitating efforts, both in-house and with partners at the national, regional and global levels, to overcome constraints and take advantage of opportunities to promote gender equality⁸.

⁸ <http://www.cbd.int/gender>

Research indicates that women play a critical role (just like men) in the conservation in biological diversity, though their role may be different. The statements below support the proposition.

- Women play a significant role in crop production and diversification, traditional seed management, and forest resource management such as the use of medicinal plants.
- Women are conservationists or biodiversity managers and their efforts and expertise need to be acknowledged; in the climate-change context, understanding and addressing different biodiversity needs of women and men will decrease their vulnerabilities and enhance their ability to cope and adapt.
- Recognizing women's roles as primary land and resource managers is central to the success of biodiversity policy. For example, women farmers currently account for 60-80% of all food production in developing countries, but gender often remains overlooked in decision-making on access to and the use of biodiversity resources.⁹
- There is increased recognition of the value of **indigenous knowledge**, as well as women's and men's roles as innovators regarding biodiversity conservation and farming techniques.
- Men and women play important, but often distinctive roles, in the management and conservation of agro-biodiversity. There is an obvious gender differentiation for labour division, roles and responsibilities in agriculture.
- Women are often in charge of the management and conservation of minor food crops. These are used for home consumption, rituals and medicinal properties. Often, these species are grown in home gardens, or they are intercropped in small areas of the main plots. Men are frequently in charge of the cultivation of staple crops and commercial crops, which take place in the fields¹⁰.

Women and men play important roles in biodiversity management, use, and conservation through their different tasks and responsibilities in food production and provision.

⁹ <http://www.cbd.int/iyb/doc/prints/factsheets/iyb-cbd-factsheet-gender-en.pdf>

¹⁰ <http://www.fao.org/docrep/005/ac795e/ac795e00.htm>

Consequently, they have different needs, priorities, and knowledge about diverse crops, plants, and animals. As natural resource managers, they influence the total amount of genetic diversity conserved and used. Women are typically involved in the selection, improvement, and adaptation of local plant varieties, as well as seed exchange, management, and saving. They often keep home gardens where they grow traditional varieties of vegetables, herbs, and spices selected for their nutritious, medicinal, and culinary advantages. Women, therefore, play an important role in maintaining biodiversity, working against the decrease in biodiversity caused in part by men favouring cash-oriented monocultures, as in the Mexican Yucatan (Lope Alzina 2007). Women are also the primary collectors of wild foods that provide important micronutrients in diets, are vital for survival of their households during food shortages, and may also provide income.

Gender-based differences in biodiversity management reflect the different livelihood strategies and outcomes adopted and pursued by men and women, and exemplify the different values obtained from doing so. Rural women's key role, as food providers and food producers, links them directly to the management of genetic resources to secure family food production. At the same time men's role, as income earners, links them more often to cash crops and improved species and varieties.

One particular provision of the Convention that is of special interest and relevance to Guyana (given the fact that there is greater interaction between indigenous and biological diversity) is Article 10(c), which obliges governments to: *"... protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation and sustainable use requirements"*.

2.3 Conditions for addressing Gender Equality in UNCBD Activities

The following conditions¹¹ may facilitate efforts to mainstream gender equality in activities of the Convention on Biological Diversity:

- (a) An institutional culture that is open to gender perspective and willing to undertake the self-assessment necessary to overcome obstacles to the mainstreaming of a gender perspective;
- (b) The presence of external and internal pressures to undertake gender mainstreaming and responsiveness to those pressures;

¹¹ 2/ Adapted from Seager & Hartmann, 2005. UNEP/CBD/COP/9/INF/12/Rev.1
<http://www.cbd.int/programmes/cross-cutting/gender/cop-09-inf-12-rev1-en.pdf>

- (c) Identification of gender-mainstreaming as a cross-cutting responsibility;
- (d) An understanding that gender mainstreaming is a continuous and evolving undertaking;
- (e) Careful and consistent use of available sex-differentiated data, indicators and analysis and deployment of adequate resources to support their collection;
- (f) Accountability (including real consequences) for failures to implement agreed gender mainstreaming policies and practices routinely;
- (g) Political commitment to the goal of securing gender equality at the highest levels.



Leaders and elders of the South and South Central District Tshaos Councils meet in January 2005

Bynoe (2007) notes that the barriers to the fullest involvement of Guyanese women in sustainable development must be viewed holistically, and could be summarised as follows:

- Failure to integrate in a direct manner a gender dimension into official environment and sustainable development policies;
- Socio-economic constraints, particularly poverty;
- Failure to implement fully legislation that promotes and defends women's rights as human rights;
- Lack of adequate and appropriate information (particularly gender specific data) which can inform good decision making;
- Lack of relevant education that promotes empowerment;
- Limited access to land and credit;
- Gender stereotyping which constrains women from acting in certain decision-making capacities;
- Political powerlessness that inhibits women (particularly, indigenous women) to modify policies that create havoc with their environment and threaten their livelihoods;

- Marginalisation due to poverty, low status and low level of participation; and
- Failure to mainstream (fully) women in the planning and policy making process.

SECTION 3 AN ANALYSIS OF GENDER INTEGRATION INTO BIOLOGICAL DIVERSITY CONSERVATION IN GUYANA

"There's no doubt that any society that does not bring into the centre the full participation of women, is a loser." UN Secretary General Kofi Annan, 5 June 2001

3.1 Incorporation of a Gender Perspective in existing National and Local Policies, Strategies and Action Plans

Prior to examining the extent to which gender is incorporated into national and local policies, strategies and action plans in Guyana, it is useful to cite some responses given by key stakeholders when asked whether gender is important to biodiversity conservation and management, and why? The following are the various responses that clearly draw attention to a number of reasons why gender integration is important.

- Amerindian women are engaged in more home-based subsistence farming and the production of non timber forest products (NTFPs).
- To ensure proper use there is a need to understand how the different genders affect the type, quality, quantity and of resources used and purpose for which they are used by the two sexes. The management plan will be inadequate if differences between the two genders are not considered.
- Because of the sporadic movement of the male population in search of employment. Most hinterland communities depend on the natural resources in and around their communities (forestry, mining, etc.) for their livelihoods. In many cases this is seasonal; therefore the male population of most communities is mostly absent in the communities for extended periods. This leaves the women and children with the responsibility for the conservation and management of the biodiversity resources available to them.



Source:<http://www.forestpeoples.org/sites/fpp/files/publication/2010/08/guyana10capr06eng.pdf>

- By mainstreaming there will be a more holistic and not biased approach to the management and conservation of our resources.
- Because men and women have different views and perspectives on uses and values of biodiversity. Men often exploit land for gold and often do not focus on ecosystem services and goods. Men are involved in hunting for meat and may not realize that animals may carry out important services in ecosystem. Women are involved in gathering and processing of forest based projects and (they) are more likely to be knowledgeable about resources.
- In the management and response to threats to biodiversity conservation and management-women have a role in monitoring and reporting of threats. Women depend more on biodiversity for livelihood and are therefore responsible for the utilization of biological resources. The structure of local communities shows that there is division of labour. Men are more engaged in hunting, fishing, tourism, while women focus on processing and utilization of resources.
- Women are more caring and it is therefore an asset to have women involved in management of resources. More females are involved in the current mangrove restoration project.
- In urban areas women insist on having (ornamental) plants, mostly ferns, around their house. Everyone must share responsibility for biodiversity.
- Women engage mainly in home-based subsistence farming and often possess fewer financial assets than men. This prevents women from making investments in innovative farming technologies and adopting effective means for local biodiversity management. However, in instances in which women have adopted alternative livelihood options linked to biodiversity conservation, such as ecotourism, the results are positive. These practices have alleviated the burden on the forests and other natural ecosystems.
- For indigenous communities in particular, where gender roles are very distinct, gender can significantly influence local perspectives on biodiversity conservation and management.



<http://www.forestpeoples.org/sites/pp/files/publication/2010/08/guyana10capr06eng.pdf>

Gender integration into biodiversity conservation in policies, strategies etc. in Guyana can be described as implied, since the Guyana Constitution (2003), the Environmental Protection Act (1996), and National Biodiversity Action Plan II (2007-2011) cater for both men and women, although it is not specifically written. The issue is therefore one of gender equality. Below are examples of implied gender incorporation.

Article 25 of Guyana's Constitution states that *"Every citizen has a duty to participate in activities designed to improve the environment and protect the health of the nation"*.

Moreover, the Government of Guyana reaffirmed its commitment to conservation of its rich natural resources and protection of biodiversity through the following policy documents:

- Environmental Protection Act (1996);
- National Biodiversity Action Plan II (2007-2011¹²);
- Code of Practice for the Utilisation of Mangroves;
- Access and Benefit Sharing (ABS) Policy (2008); and
- The Amerindian Act (2006).

The Environmental Protection Act (1996) is an act *"to provide for the management, conservation, protection and improvement of the environment, the prevention or control of pollution, the assessment of the impact of economic development on the environment and the sustainable use of natural resources"* (Environmental Protection Act, 1996). It is best described as the umbrella legislation that mandates the undertaking of a number of measures to safeguard the environment and its resources, including biodiversity. Examples of such measures are research; education, public awareness and training; environmental impact assessments, natural resource inventories; and monitoring.

The National Biodiversity Action Plan (1999) seeks to address gender issues through the overarching policy framework within which the National Biodiversity Action Plan II (2007-2011) will be implemented, shaped by the National Development Strategy 2001-2010 (NDS) and the Guyana Poverty Reduction Strategy Paper 2001-2005 (PRSP). The overall goal is to promote and achieve the conservation of Guyana's biodiversity, to use its components in a sustainable way, and to encourage the fair and equitable sharing of benefits arising out of the use of Guyana's biodiversity.

Another important document is the Draft Code of Practice for Utilisation of Mangroves (2005) that seeks broadly to: (i) protect the mangrove resource for maximum benefit to humans (involving preservation, sustainable product harvesting and restoration); and (ii) to reduce activities that may lead to destruction or depletion of the resource. The specific objectives are as follows:

¹² NBAP II was passed by Cabinet in 2008.

- To establish the administrative capacity of the management of mangroves in Guyana;
- To promote sustainable management of the mangrove forest;
- To solicit local community support in the management of mangroves;
- To support research and development of Guyana's mangrove forest; and
- To increase public awareness and education on benefits of the mangrove forests.

The ABS Policy (2008)¹³ indicates Government of Guyana's support to: (i) Amerindian and local communities as guardians of their knowledge and having the right to protect and control the dissemination of that knowledge; (ii) Amerindian and local communities in their right to create new knowledge based on cultural traditions; (iii) mechanisms for the protection of the knowledge of Amerindian and local communities; and (iv) **gender-specific rights to protect, control, and create traditional knowledge.**

The Amerindian Act (2006) refers to the protection of environment which includes the biodiversity conservation. However, it does not specifically state gender roles but traditionally Amerindian men and women have been involved in the preservation and conservation of their environment and biodiversity management.

In addition, there is also a Protected Areas legislation which speaks of biodiversity conservation or protection, and the Guyana Human Development Report (1996) states clearly that the status of human development in the country is best represented by the condition and position of women, and that sustainable human development would not be achieved without the contribution of women.

Clearly, it is reasonable to conclude that gender has not been formally mainstreamed in policies, strategies, action plans or programme related to biological diversity management in Guyana, though the general statements about community involvement etc. provide opportunities for initiatives to be developed and implemented.

3.2 Stakeholders of Biodiversity Conservation and Management

There are at least twenty organisations that represent government, non-governmental organisations, civil society and indigenous people in Guyana and whose programmes/activities related directly or indirectly to biodiversity conservation and management. Table 1 provides details.

¹³ One of the aims of the ABS Policy is to promote the fair and equitable sharing of the benefits arising from the use of genetic resources and indigenous / traditional knowledge between the IIC, indigenous and traditional communities, the Government of Guyana and other institutions and individuals.

Table 2 Stakeholders of Biodiversity Management

Stakeholders	Biodiversity Related Functions
Amerindian Peoples Association (APA)	Advocacy, research and information provision in relation Amerindian social, economic, political and cultural development, including the rights of Amerindians to access biodiversity resources.
Bina Hill Institute	Training in traditional knowledge systems, sustainable resource management, and life skills.
Conservation International Guyana (CIG)	Conservation and protection of biodiversity through data collection and analysis, involvement of indigenous communities, and public awareness and education.
Guyana Forestry Commission (GFC)	Sustainable utilization and protection of forest resources; policy development, enforcement and monitoring in forestry sector
Guyana Marine Turtle Conservation Society (GMTCS)	Turtle monitoring, research on sustainable livelihoods options, education and awareness.
Guyana Organization of Indigenous Peoples (GOIP)	Advocacy for the rights of Amerindians including access biodiversity resources.
Institute of Applied Science and Technology	Focal point for research, development and technology transfer; database development on research and technology innovations; facilitate training; provision of analytical services.
Iwokrama International Centre for Rain Forest Conservation and Development	Research and development relating to sustainable management of tropical forests. Specific programme areas in forest utilization; conservation of biodiversity; information and communications; sustainable human development.
Ministry of Agriculture /Fisheries Division	Fisheries policy, planning, regulation; extension; aquaculture; enforcement and regulation
Ministry of Amerindian Affairs/Community Development Councils	To develop and implement policies for Amerindians sustainable human development.
Ministry of Natural Resources and the Environment/Environmental Protection Agency	Establishment of protected areas, environmental public awareness and information; environmental regulation and monitoring, biodiversity protection and management
National Agriculture Research and Extension Institute (NAREI)	Germplasm collection and management.
National Amerindian Development Foundation (NADF)	Advocacy for Amerindian development and rights
Office of the President/Office of Climate Change	Implementation of Guyana’s Local Carbon Development Strategy; climate change adaptation and mitigation.
The Amerindian Action Movement of Guyana (TAAMOG)	Advocacy for the rights of Amerindians including access biodiversity resources.
Tropenbos Guyana	Research into methods for the sustainable management of tropical rain forests; non-timber forest products assessment.

University of Guyana/ Centre for the Study of Biological Diversity; Amerindian Research Unit, School of Earth and Environmental Sciences.	Maintenance of a national collection of biological specimens, database management, taxonomic research, collection and analysis of information for identifying areas for conservation; education, awareness and training in biodiversity conservation and management; research.
Walter Roth Museum of Anthropology	Conduct research with international institutions including Smithsonian Institute
Wildlife Unit	Regulation of wildlife trade, censuses
World Wildlife Fund-the Guianas	Sustainable forest management, protected areas, wildlife conservation, marine turtle conservation.

Despite the fact that the majority of stakeholders agreed that gender is important to biodiversity conservation and management, none were able to identify any specific policies, programmes or project activities that directly address gender and biodiversity. This is hardly surprising given that none of the named institutions have a clear gender policy statement. Moreover, responses from stakeholders suggest that there are several barriers to be overcome before gender can be integrated in environment and conservation issues in Guyana. Chief among these are:

- Currently, there is a lack of a proactive agenda on women and the environment by the UN agencies in Guyana. Although women are managers of resources there is not equitable allocation of resources, whether financial, education, training, access to ownership and timely decision making from conceptualization to implementation.
- In terms of education women in the hinterland are “limited” when compared to males in the same locality?.
- Nationally there are equal opportunities, there is no gender preference.
- Both men and women have equal opportunities to be involved in biodiversity management.
- Women’s groups may propose a number of projects, but require consent from Village Councils (which are predominantly men). Two thirds of the council must agree to the project. In many instances many projects suggested by women are not selected.
- Women are the main ‘caregivers’ and are often unable to participate fully in conservation activities. This relates to the burden that women have to bear in and outside of the home, and how this constrains their full involvement in conservation activities outside of the home.

Despite these barriers, (based on information received from stakeholders), direct efforts have been made to provide opportunities for both men and women in areas of awareness, education and training, sustainable livelihoods, and general sustainable human development, though the involvement of men and women in programmes and activities is influenced by the cultural norms of communities, as demonstrated by the case studies in Sub-section 3.3. This finding resonates with that of Bynoe (2009), which shows that Amerindian's women's role as housekeepers and child-bearers is reinforced by their culture and religion¹⁴.

3.3 Gender and Biological Diversity Conservation: The Case of Aranaputa and Wowetta in Guyana

The combination of the knowledge of women and men enables Amerindian communities to understand their environment, conservation practices and management of natural resources. For example, women are involved in the preserving and harvesting of certain forest products such as seeds, herbal medicines and they would have knowledge on when and how to harvest without causing (much) damage. Women and men equally play a significant role in crop production and traditional herbal medicines. It is the combined knowledge that has enabled Amerindians to maintain their practices and relationships/attachments to the environment over decades. This sub-section provides empirical evidence on the subject of discussion.

*Introduction to the Communities*¹⁵

Aranaputa is a mixed settlement comprising of 103 Amerindian (about 80% Makushi) and non-Amerindian (approximately 20%) households in an area of State land developed as lease holdings. Aranaputa has developed a mixed economy, based on cattle ranching, agriculture (e.g. peanut factory) and ecotourism. Subsistence farming and fishing are the main economic activities.

Wowetta has 67 Makushi households. Residents of the community depend, to a great extent, entirely on subsistent farming and the use of resources from their environment to sustain their livelihood. The men predominately go hunting, fishing, and gather non-timber forest products for their families on a seasonal basis. The village has a number of projects that contribute to income generation, some of which are ecotourism, farine production, a village shop, vegetable garden, a youth joinery project. These earn a small percentage of income generated from revenues paid for the use of resources, such as non-timber forest products and timber¹⁶.

¹⁴ Bynoe, P. (2009) *Climate Change Adaptation with a Gender Perspective in the Caribbean: A case Study of Surama, Guyana*. Caribbean Risk Management Initiative, UNDP, Barbados.

¹⁵ Both communities are located in the North Rupununi in the southwest Guyana. The sub-region is comprised of a mosaic of periodically flooded savannas, wetlands and forest ecosystems.

¹⁶ <http://en.wikipedia.org/wiki/Wowetta>

For both communities the main local crop is cassava which is used to produce farine, cassava bread, tapioca and various beverages.

Demographic Information of Communities

Respondents' mean age is 38 years; while the minimum and maximum age of respondents are 19 years and 75 years, respectively. The standard deviation¹⁷ of the age of respondents is 11.5. Table 3 shows that most respondents (both men and women) had acquired primary education, while more men than women had completed secondary, technical and university education. In fact, men accounted for 58.8 % of those who acquired secondary education. Further, 4 men and 2 women indicated that they do not have any formal education.

Table 3 Highest Education Attainment

		Highest Education Attainment					Total
		Primary	Secondary	Technical	University	None	
Sex	Male	27	10	3	2	4	46
	Female	36	7	1	0	2	46
	Total	63	17	4	2	6	92

Source: Survey data

While men and women are equally employed, more women than men are un-employed, and more men than women are self-employed. Of the 40 un-employed respondents, women account for 67.5 %. Equally important is the fact that men account for 73.3 % of those respondents who are self-employed. See figure 3 below.

¹⁷ The standard deviation shows the 'dispersion' from the mean.



Source: Survey data

More men than women are farmers, loggers and rangers, Makushi researchers, labourers. The survey data indicate that the women who are employed work mostly as civil servants (teachers, nurses), shop attendants and partners in the community's cassava project.

Knowledge of Biodiversity

Respondents were asked how much, if anything they know about biodiversity¹⁸. Table 4 indicates that 46.7% (43) respondents know very little, while 43.5% (40) never heard the term¹⁹ or have no knowledge of it.²⁰ Moreover, more male than female respondents seem to be familiar with the term. There seems to be a relationship (not necessarily causal) between the level of educational attainment and knowledge of the term biodiversity, the survey results indicate that of the 50 persons who knew indicated that they know very little or nothing about the term, 39 (72 %) had attained primary education, while 7 (70%) of the ten who opined that they know a lot had attained secondary, technical or university level education.

¹⁸ No local equivalence was referred to.

¹⁹ Households are used to terms like animals, plants, forests etc.

²⁰ It is possible that many respondents were unfamiliar with the term/language, but as other responses show, they could have identified specific examples.

Table 4 Knowledge about the term biodiversity

		Knowledge about the term biodiversity				Total
		Alot	Very Little	Nothing	Never heard the term	
Sex	Male	8	22	4	12	46
	Female	2	21	3	20	46
	Total	10	43	7	32	92

Source: Survey data

It is noteworthy that while more a third of the total number of respondents indicated their unfamiliarity with the term 'biodiversity, both men and women in the targeted communities identified local biodiversity species in their surroundings. As Table 5 shows respondents were able to identify local flora and fauna, as well as terrestrial (hill, mountain, forest, and savannah) and aquatic (lakes, creeks, ravine and rivers) ecosystems. Importantly, in 1996, the Makushi Research Unit managed to catalogue 86 of the trees, palms and lianas recognised by local residents during an ethno-botanical survey. Additionally, it is generally recognised and acknowledged that the Makushi have a keen interest in the birds of their environment that is often reflected in their parishara and tukui songs, myths and beliefs (Makushi Research Unit, 1996).

Table 5 Biodiversity Species observed in Communities

Plants (Common name)	Plants (Scientific name)	Animals (Common name)	Animals (Scientific name)	Ecosystems
Acacia/ Hitachi	<i>Samanea saman</i>	9-banded armadillo	<i>Dasyus novemcinctus</i>	Mountains
Aromata	<i>Clathrotropis spp</i>	Abouya	<i>Cavia aperea</i>	Terrestrial
Bolanger	<i>Solanum melongena</i>	Acouri	<i>Dasyprocta leporina</i>	Forest
Burada	<i>Parinari annamensis</i>	Agouti/ Spotted Paca	<i>Caniculus paca</i>	Wetlands
Cow wood	<i>Couma macrocarpa</i>	Giant Anteater	<i>Myrmecophaga tridactyla</i>	Hill in forest
Croton	<i>Codiaeum variegatum</i>	Bisa	<i>Chiropotes satanus</i>	Lakes
Donkey Ear	<i>Na</i>	Brown capuchin	<i>Cebus apella</i>	Rivers, creeks, ravine
Darina	<i>Hymenolobium flavum</i>	Wedge-capped Capuchin	<i>Cebus olivaceus</i>	Savannah

Downs	<i>Adansonia spp.</i>	Capybara	<i>Hydrochoerus hydrochaeris</i>	
Five finger	<i>Pseudopanax arboreus</i>	Cat	<i>Felis catus</i>	
		Chicken	<i>Gallus gallus domesticus</i>	
Genip	<i>Melicoecus bijugatus</i>	Cows	<i>Bos primigenius</i>	
Golden apple	<i>Spondias cytherea</i>	Dogs	<i>Canis lupis familiaris</i>	
Haki	<i>Vitex compressa</i>	Donkeys	<i>Equus africanus asinus</i>	
Hubabali	<i>Dalbergia sissoo</i>	Duck	<i>Anas platyrhynchos domesticus</i>	
Hubudi	<i>Ficus bengalensis</i>	Giant Armadillo	<i>Priodontes maximus</i>	
Iron Wood	<i>Carpinus caroliniana</i>	Giant Otter	<i>Pteronura brasiliensis</i>	
Kaditri	<i>Na</i>	Grey Brocket Deer	<i>Mazama gouazoupira</i>	
Kaiamibe	<i>Na</i>	Horse	<i>Equus caballus</i>	
Lemon	<i>Citrus limon</i>	Howler Monkey	<i>Alouatta seniculus</i>	
Lupelu	<i>Na</i>	Jaguar	<i>Panthera onca</i>	
Muneridian	<i>Qualea rosea</i>	Jaguarondi	<i>Puma yagouarondi</i>	
Mueru	<i>Setaria seriata</i>	Lukanani	<i>Cichla ocellaris</i>	
Mukru	<i>Ichnosiphon spp.</i>	Monkeys (Squirrel and white faced saki)	<i>Saimiri sciureus</i> <i>Pithecia pithecia</i> <i>Chiropotes chiropotes</i>	
Peanuts	<i>Arachis hypogea</i>	Collard peccary	<i>Pecari tajacu</i>	
Pawpaw	<i>Carica papaya</i>	Parrots	<i>Phaethontidae spp.</i>	
Avacado Pear	<i>Persea americana</i>	White lipped peccary	<i>Tayassu pecari</i>	
Pimpla cedar	<i>Cedrus atlantica</i>	Pigs	<i>Sus scrofa domesticus</i>	
Rambutan	<i>Nephelium lappaceum</i>	Powis	<i>Crax alector</i>	
Red cedar	<i>Juniperus virginiana</i>	Puma	<i>Puma concolor</i>	

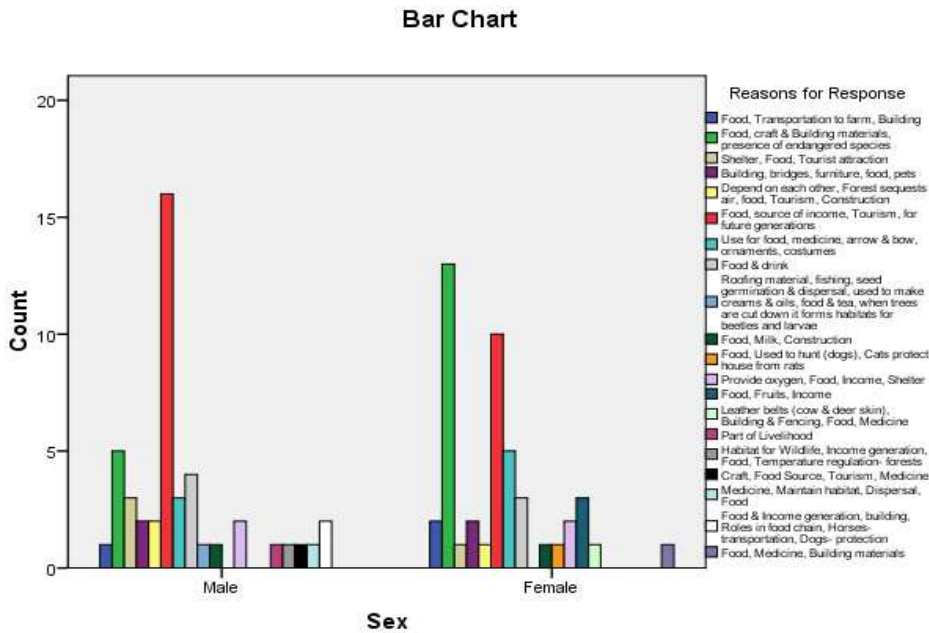
Sandpaper tree	<i>Curatella americana</i>	Red Brocket deer	<i>Mazama americana</i>	
Savannah Green heart	<i>Camellias spp.</i>	Rodents	<i>Rattus sp</i>	
Star apple	<i>Chrysophyllum cainito</i>	Savannah fox	<i>Cerdocyon thous</i>	
Surinam Cherry	<i>Eugenia uniflora</i>	Sheep	<i>Ovis aries</i>	
Tamarind	<i>Tamarindus indica</i>	Spider monkey	<i>Ateles paniscus</i>	
Tangerine	<i>Citrus reticulata</i>	Tapir	<i>Tapirus terrestris</i>	
Wild Cashew	<i>Anacardium excelsum</i>	Turtle	<i>Geocheleone spp</i>	
Wild fern	<i>Asplenium rhizophyllum</i>			
Grass	<i>Paoaceae</i>			
Soursop	<i>Annona muricata</i>			
Mora	<i>Mora excelsa</i>			
Mango	<i>Mangifera indica</i>			
Wild Guava (medicinal)	<i>Psidium guajava</i>			
Parakusan	<i>Swartzia jenmani</i>			
Frashiers	<i>Ocotea sp.</i>			
Turu	<i>Oenocarpus batua</i>			
Guava	<i>Psidium guajava</i>			
Lukina	<i>Leucaena leucocephala</i>			
Green Heart	<i>Chlorocardium rodiei</i>			
Ete Palm	<i>Maurita flexuosa</i>			
Cedar	<i>Cedrus libani</i>			
Jamoon	<i>Syzygium cumini</i>			
Loo	<i>Leucaena retusa</i>			
Whitee tree	<i>Inga spp.</i>			
Cherry	<i>Malphigia punicefolia</i>			
Crabwood	<i>Carapa guianensis</i>			
Wallaba	<i>Eperua falcata</i>			
Cassava	<i>Manihot esculenta</i>			
Swamp Cedar	<i>Chamaecyparis thyoides</i>			
Plum	<i>Spondias mombin</i>			
Coconut	<i>Cocos nucifera</i>			
Orange	<i>Citrus sinensis</i>			
Bullet Wood	<i>Manilkara bidentata</i>			

Locust	<i>Hymenaea courbaril</i>			
Lime	<i>Citrus aurantifolia</i>			
Kokerite	<i>Attalea regia</i>			
Banana	<i>Musa acuminata</i>			
Locorish	<i>Glycyrrhiza glabra</i>			
Cashew	<i>Anacardium occidentale</i>			
Haiari (fish poison)	<i>Lonchocarpus sp.</i>			
Awara	<i>Astrocaryum vulgare</i>			
Wamara	<i>Swartzia leiocalycina</i>			
Purple Heart	<i>Peltogyne venosa</i>			
Kiambi	<i>Unknown</i>			
Simarupa	<i>Simaruba amara</i>			
Kabukalli	<i>Groupia glabra</i>			
Wild potato	<i>Solanum jamesii</i>			
Yam	<i>Dioscorea alata</i>			
Yellow heart	<i>Euxylophora paraensis</i>			

Source: Survey data

Further, when asked if biodiversity is important to their communities and why, all respondents (both male and female) answered in the affirmative and cited several reasons, including food, shelter, income, craft, medicine, habitat, among others as indicated in Figure 4 below. Interestingly, income and livelihood were mostly cited by men, while food and building materials were mostly cited by women.

Figure 4 Reasons for Response



Source: Survey data

As documented in the 1996 Report on Makushi ethno-medicine, the barks, seeds and fruits of many trees are used for medicinal purposes by the Makushi.

Information provided by respondents indicates that 46.7 % (43) think that biodiversity is threatened in their communities. When disaggregated by sex, the data show that more men than women answered in the affirmative: 55.8% and 44.2 %, respectively.

Threats were identified as: fires; hunting; chain saw logging; noise; slash and burn agriculture; unsustainable harvesting of plants; droughts; diseases; wildlife trapping; and habitat loss; and road construction.

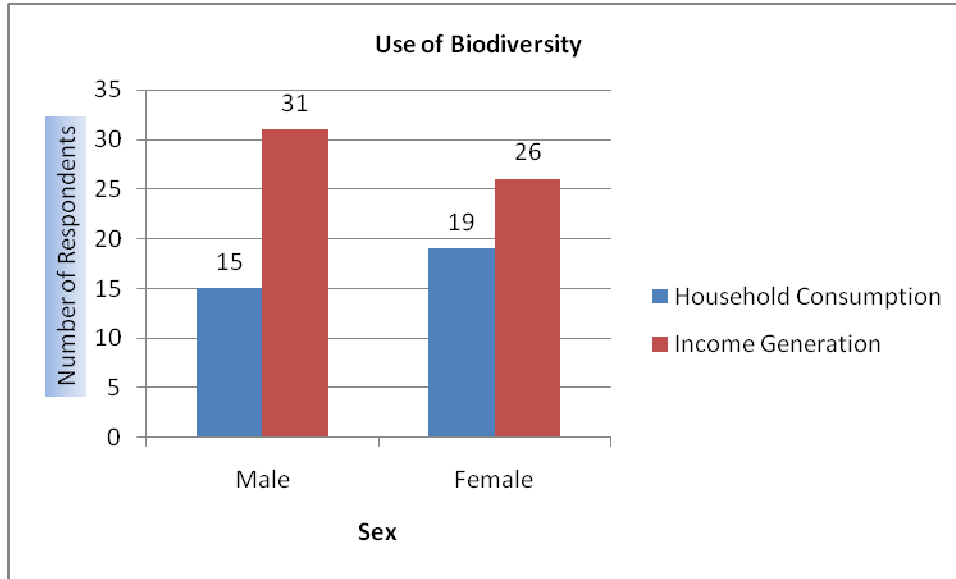
Access and Use of Biodiversity

The survey data reveal that ALL respondents and their households have access to biodiversity, which is used for purposes of household consumption and income generation purposes as highlighted in figure 5 below. Household purposes include livelihood (particularly food security), shelter and medicine²¹, while income generation includes logging, wildlife trade, sale

²¹ In many rural-based and indigenous communities, women play key roles in delivery of informal healthcare alternatives based on medicinal plants. See: <http://www.siyanda.org/docs/07-7.pdf>

of craft and tourism. Importantly, a higher percentage of men (67.4%) identified income generation, as compared to women (56.5%). Presumably, women make the consumer decisions as regards what biodiversity will be utilised as food.

Figure 5



Source: Survey data

It is interesting to note that most houses in the study area are located near forests, mountains and rivers to allow families to gather raw materials needed for house building. The choice of palm thatch and woods is determined by the availability of materials in the surrounding forests. Further, the roofs of houses are thatched with kokerite (*Attalea regia*) leaves and ite (*Mauritia flexuosa*) leaves²². Today, Village councils in the North Rupununi have made it illegal to cut down kokerite trees.

Both Makushi men and women are knowledgeable of barks of trees or vines that can be used medicinally. For example, to stop internal bleeding, the baromalli (*Catosemma commune*) bark is used; to cure asthma young leaves of the sandpaper tree are boiled and drunk three times daily; and to cure diarrhoea the gum or sap of the haiawa (*BURSERACCEAE:Protium decandrum*) is used.

Respondents were then asked: Do men and women have equal access to biodiversity resources in your community? 85.3 % (81) said 'yes', while 11.6% (11) said 'no'. 8 of the 11 respondents are males.

²² Makushi Research Unit, 1996.

Importantly, even though the majority of respondents expressed the view that men and women have equal access to biodiversity, the reasons cited suggest that their roles vary and this may affect 'access' in term of their use of the resource:

- They are no restrictions on hunting, fishing and gathering, but the men use arrow and bow; they are stronger and have more endurance. Households depend more on fishing than hunting for their supply of protein. Hunting is done mostly during the rainy season when fishing becomes difficult.
- Women are faced with a time constraint given their household chores. There is no time no hunt and fish, but they (women) can gather farm produce etc.

Notably, farming is a family activity, in which the male takes primary responsibility for choosing the farm spot, and for cutting and burning the forest vegetation to prepare the farm (slash and burn agriculture²³), which is a common practice among Amerindians. On the other hand, women decide on what crops to plant, and generally devote more time to weeding, reaping and transporting harvested produce back to their homes (Makushi Research unit, 1996). In a Case Study done by Bynoe (2009) in the Surama community, it was observed that generally men are responsible for choosing the soil (near to creeks or at the foot of hills or mountains since these locations yield fertile soils) and site preparation, while the women are responsible for keeping the farms clear of weeds, monitoring the crops and harvesting the produce.

²³ Slash and burn agriculture is critical to the survival of Amerindians.

Participation in Biodiversity Conservation

Table 6 below indicates that more respondents (83.5 % or 33) in Wowetta are aware of biodiversity projects in their community, when compared to Aranaputa (46.2% or 24).

Table 6 Biodiversity Projects in Community

		Has there been any biodiversity project in your community?		
		Yes	No	Total
Village	Aranaputa	24	28	52
	Wowetta	33	7	40
Total		57	35	92

Source: Survey data

Conservation projects include Ete palm (*Maurita flexuosa*) conservation, bird watching, workshops on sustainable logging and fishing, Cock of the Rock (*Rupicola rupicola*) Programme, wildlife clubs, wildlife festivals to raise awareness, resource mapping, bee keeping and the Iwokrama International Centre forest monitoring programme.

Approximately 50 % of the respondents have been involved in biodiversity conservation activities in their communities: 58.7% (27) males and 39.1 % (18) females. This suggests that more men than female are directly involved in 'planned' conservation activities within the communities. Additionally, stakeholders have drawn attention to the fact that women are a repository of knowledge more than men and that currently men are more involved in monitoring and enforcement than women. This resonates with the point made earlier concerning women's endurance.

Those respondents who have not been involved in conservation activities cited the following reasons:

Men:

- Not aware of any activity (3)
- Time constraint posed by job (4)
- Was never invited (7)
- Not interested in participating (5)

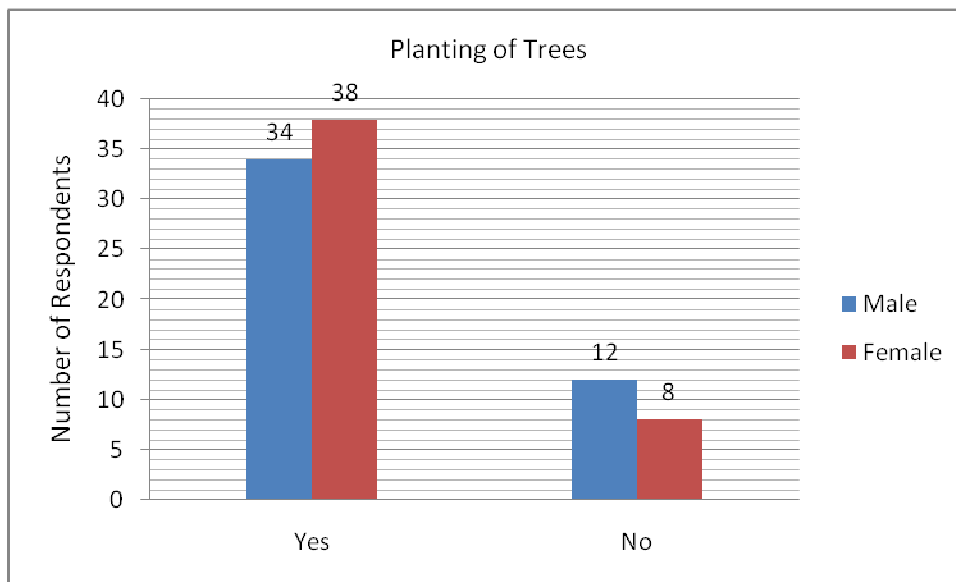
Women:

- Not aware of any (4)
- Time constraint due to family/household chores (4)
- Was never invited (16)
- Not interested (4)

Notably, more women than men were not invited to participate. This may be due to cultural norms in some Amerindian communities where the men would attend organised meetings or participate in planned activities for the community, while the women remained at home.

Of the 65 respondents who indicated that they would collect and store seeds, 50.8 % is accounted for by women, while the remaining 49.2% by men, which suggests that men and women have almost equal role in this conservation activity. Presumably, this result does not support the view that there is any gender specific division of labour with regard to conservation activities. The roles seem to be complementary. On the other hand, when respondents were asked: Do you plant trees in your community? Figure 6 below indicates that women (8.6%) than men plant trees. This finding may be explained partially by the general caring and nurturing attitudes of women, plus the symbolic and spiritual value of trees within the context of forest communities, and the need to beautify their immediate surroundings (Makushi Research Unit, 1996).

Figure 6



Source: Survey data

Capacity building issues

The survey data reveal that more men than women have participated in seminars on biodiversity: of the 31 respondents who have participated, men accounted for 20.7% while female accounted for 13.0%. According to respondents, those seminars were:

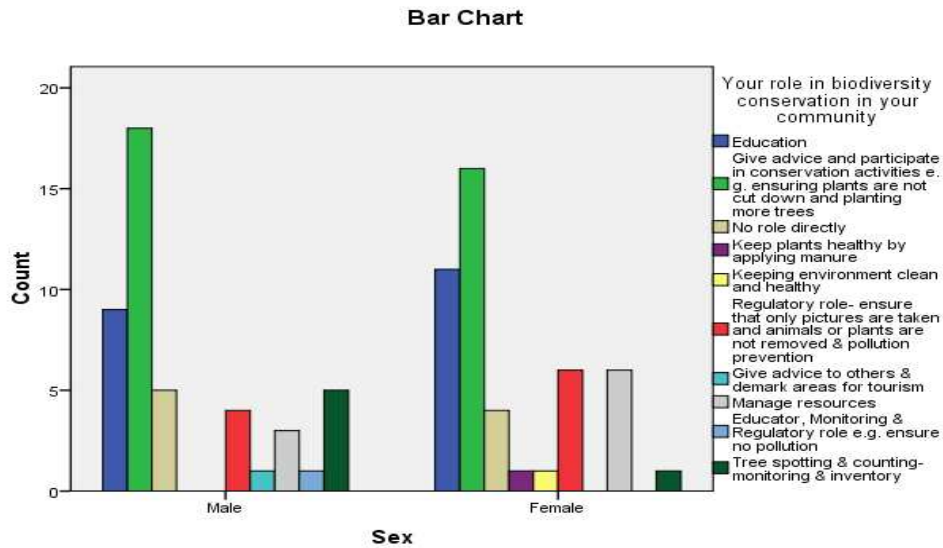
- Conservation of natural resources, especially wild life (Iwokrama International Centre);
- Bina Hill Institute School Yard Ecology and Wildlife Conservation Seminars;
- Ecotourism seminars; and
- Forestry resources and sustainable use seminars conducted by the Guyana forestry Commission.

Those men and women who did not participate were either absent from the village or were not invited. As mentioned in earlier paragraphs, more women than men are not invited to seminars.

Figure 7 below identifies the perceived roles of men and women in relation to biodiversity conservation. These include education, tree-planting, enforce regulations to prevent illegal removal of biodiversity, monitoring and inventory. Interestingly, more women than men see their role as education, managing resources and enforcing of regulations, while more men than women identified theirs as giving advice, tree spotting and monitoring. This underscores the culturally accepted norms of the two communities. Another interesting point raised by stakeholders related to women's endurance: in many instances women cannot be in the field for long periods and have difficulties in coping when compared to males. Females prefer short term task or short consultations. Additionally, women have less endurance to do long term monitoring.

Further, when asked to identify their needs to help fulfil the respondents have identified, both men and women have identified the following:

- Training in resource mapping and the use of computers;
- Information, education and training related to sustainable use and monitoring of biodiversity , especially wildlife;
- Equipment such as binoculars.



Source: Survey data

The empirical data presented and discussed above supports the view that in communities that interact with biodiversity in Guyana both men and women have defined roles with regards to biodiversity. Men are more involved in biodiversity use from the perspective of income generation, while for women, biodiversity is associated with provision of food, shelter and recreation (tourism). Both men and women have access to biodiversity (unlike local communities in other parts of the world); however more men than women are given opportunities for awareness building, training and participation in decision making. This is as a result of the cultural norms and traditions of Amerindian communities. The men go out to hunt and fish, while the women tend to house chores and are involved in activities such as farming closer to the home. Undoubtedly, both men and women have visions of the role each group should play in respect of biodiversity; therefore the capacity building issues are relevant to both groups. This should allow for the design of initiatives/interventions that will empower them to enforce national legislation and community by- laws, monitor activities that pose a threat to biodiversity, and educate future generations on biodiversity conservation.

3.4 Implications for National Policies and Legislation on Biodiversity

Given Article 25 of the Guyana Constitution: *“Every citizen has a duty to participate in activities designed to improve the environment and protect the health of the nation”*, plus the fact that knowledge empowers local communities to participate meaningfully, implies that both men and women should be targeted when public awareness and education programme on biodiversity are planned and implemented. Importantly, the survey results indicate that both men and women use biodiversity, while more men than women participate in these educational activities (consultations, awareness and training programmes etc.); therefore, it will be prudent on the part of the project executing agencies to promote gender balance (as practicable as possible) in attendance and participation, as well as equality in training programmes. This is particularly important in situations where the male head of the home is missing due to work related factors (for example, migration of the male to logging or mining areas or to neighbouring Brazil) or otherwise, and the woman is left to take care of the family.

The NBAP II, which provides an overarching framework for addressing gender issues, also outlines several programmes of activities which facilitate the participation of both men and women. The case studies revealed that men and women have both common and defined roles for biodiversity conservation and use in their communities. Direct strategic interventions could be made in the programmatic areas in Table 7 below, with the view to integrating a gender perspective, and in respect of the perceived roles of men and women relation to biodiversity conservation (cited as education, tree-planting, enforce regulations to prevent illegal removal of biodiversity, monitoring and inventory), plus the important role they play in meeting food and health needs using biodiversity resources.

Table 7 NBAP II Programme Areas and Projects that can facilitate Gender Integration

Programme Area	Project
Institutional Strengthening/Human Resources Capacity Building;	Fostering effective and sustainable management of the Guyana’s biological diversity through optimum human resources deployment and management.
Mainstreaming Biodiversity	Integrating biodiversity issues and activities into strategic and operational planning of key responsible agencies.
Awareness and Education.	Developing an Integrated Information, Communication (IEC) System for Biodiversity

	Conservation and the execution of an Awareness Programme to support the sustainable use, protection and management of Guyana's biological diversity.
Research and Data Collection, Information Sharing and Management.	Strengthening the framework for biodiversity research, data collection, information sharing and management in Guyana.
Monitoring	Improving biodiversity monitoring across sectors and to develop a feedback cycle to guide the implementation of biodiversity work programmes
Promoting Sustainable Initiatives in the Agriculture Sector.	Promote and support the development of sustainable initiatives in agriculture through the development of organic agriculture with focus on Region 1, Guyana.
Habitat Destruction and Associated Impacts on Coastal Resources.	Effective management of Guyana's coastal biodiversity to minimize and prevent the destruction of coastal habitats and protect Guyana's coastal biological diversity ²⁴ .

Source: NBAP II, 2007.

Additionally, the ABS Policy (2008) creates an opportunity to further document the traditional biodiversity knowledge of Amerindian men and women, thereby building on the recognised work of the Makushi Research Unit²⁵ in 1996. This documented knowledge (traditional medicine and other uses of plants etc.) can be transmitted to younger generations through the school curricula, the wildlife clubs, and the community radio station. At another level, the knowledge of indigenous men and women in Guyana must be protected by Intellectual Property Rights legislation. In the case of the latter, it is noteworthy that the ABS Policy (2008) Specifically states that the GoG supports: (i) Amerindian and local communities as guardians of their knowledge and having the right to protect and control the dissemination of that knowledge; (ii) Amerindian and local communities in their right to create new knowledge based on cultural traditions; (iii) mechanisms for the protection of the knowledge of Amerindian and local communities; and (iv) gender-specific rights to protect, control, and create traditional knowledge. Local communities (including men, women, boys and girls) will require education and training to strengthen their capacity to protect their rights and to safeguard the use of their traditional knowledge, within the national legal framework.

²⁴ Already the Mangrove Restoration Project promotes genuine participation of both men and women.

²⁵ The MRU resulted from a local community, North Rupununi District Development Board (NRDDB), Iwokrama and the Amerindian Research Unit research initiative in 1995 to study the ethnobiology of the North Rupununi.

Further, in keeping with one of the primary objectives of the NDS (2001-2010): to eliminate poverty, and given the fact that Amerindian communities are the poorest (at least from an income standpoint), then opportunities for sustainable livelihood alternatives (for both men and women) such as the use of non timber forest products (NTFPs), ecotourism, among other must be increased through research and development and poverty reduction programmes aimed at creating an enabling environment (local markets, etc), among others. The Iwokrama International Centre for Forests Conservation and Development and Conservation International have been involved in programmes that seek to address this issue, and the GSF also provides an excellent opportunity for strategic policy interventions.

SECTION 4 CHARTING THE WAY FORWARD FOR GENDER MAINSTREAMING INTO NATIONAL BIODIVERSITY POLICIES

4.1 Mainstreaming Gender in Biodiversity Policies

There are very compelling reasons for mainstreaming gender into biodiversity policies, strategies, action plans and programmes in the Guyana context. Chief among these are:

- **Stability and consistency:** women are more stable and more likely to remain in one place longer than men. In many Amerindian communities in Guyana, men are used migration as a livelihood strategy to seek income sources in logging and mining areas, as well as neighbouring Brazil. Thus, women can be considered as the ‘backbone’ of the communities, as they contribute an equal if not larger share towards the development of the community. This holds true for Amerindian and non-Amerindian communities where women are the heads of the households, while the men are notably absent.
- Unlike some other countries, women’s representation and decision making power in the Guyana context is significant, even if they represent a minority in the communities. They sit on council bodies, head communities and represent their communities on many different forums. Following this trend, the role of women in biodiversity conservation should be treated equally, unless the norms or traditions of a society disallow.
- The advantage of a gender mainstreaming approach is that it allows for the advancement of gender equality and equity (in Guyana) regardless of whether it is women or men who are disadvantaged and whose position needs to be addressed.²⁶ It may be recalled that a few stakeholders felt that the UN agencies can do more to address gender equality and equity in Guyana; therefore this project on gender and biodiversity conservation and use provides a good opportunity for establishment a best practice.
- Given the different, but complementary roles and the views of men and women, it will be beneficial to mainstream gender in biodiversity initiatives in Guyana. This will help to support sustainable livelihoods in communities, as both men and women will be able to articulate their needs and aspirations and in so doing, help to shape the decisions taken by policy makers.

²⁶ http://www.thecommonwealth.org/shared_asp_files/uploadedfiles/%7B6C0400D1-A306-4F06-9AA5-0343A81F4BB8%7D_AgriRuralDev.pdf

- Since all are citizens of Guyana, men and women have the right to determine how the resource that is their patrimony is utilized by the state and other actors. Mainstreaming gender will ensure that women have access to resources, capacity building and the decision-making process in all sectors (forestry, mining etc).
- Mainstreaming gender in biodiversity initiatives in Guyana would add value / bring different skills and knowledge that are complementary and necessary for the sustainability of biodiversity management, climate change mitigation measures, preservation and conservation. Such initiatives will add value, increase knowledge and innovation to the field of biodiversity management and conservation.
- Mainstreaming will help to identify list of resources that require attention. It will also help with resource use assessment. For example, in the Guyana context, the case studies point to the need for equal educational opportunities, equally access to training opportunities and a more visible role for women in decision-making.
- Mainstreaming will also help Guyana to access additional funding since women issues are now taken more seriously than before. Therefore opportunities for women based projects are increased given the fact that women project do not get the full support of Village Councils. Additionally, donors are prone to support project with greater gender balance, as is demonstrated by the GSF.
- Mainstreaming will improve the national and local governance framework, where women and men can be involved in monitoring and evaluation of biodiversity conservation projects. This becomes particularly relevant to Protected Areas.

4.2 Recommendations on the Way Forward in relation to Policy

Notably, Guyana's Constitution, the ABS policy, etc., provide a reference point for gender integration in biodiversity conservation and use; for example, the national ABS policy is particularly concerned with the knowledge, innovations and practices of Amerindian and local communities in Guyana. Therefore, the 'stage' is set for action. Further, most stakeholders opined that gender integration is important. What follows is a list of recommendations on the objectives, principles and strategies of a more 'direct' policy (better regarded as a prototype) that will inform the process of integration of gender and biodiversity conservation in the Guyana context. It is envisaged that national stakeholders will be able to refine these recommendations based on consensus.

Developing a more direct policy to integrate gender and biodiversity

Proposed Objectives

- To integrate gender concerns and perspectives in national policies, strategies, plans and programmes;
- To promote the full participation of women at all levels of policy-making and implementation for biological diversity conservation;
- To promote culturally appropriate and gender specific ways in which to document and preserve women's knowledge of biological diversity;
- To safeguard the existing intellectual property rights of indigenous men and women as protected under national (Guyana's) and international law;
- To promote continuous awareness building, education and training on gender issues related to biodiversity conservation and use to heads of institutions, policy makers, community leaders, among others; and
- To promote and facilitate research to generate sex disaggregated data to support gender based programmatic planning for biodiversity conservation and use in Guyana.

Proposed Principles

6. There are gender-based differences in the roles, responsibilities and contributions of men and women to the conservation and use of biodiversity.
7. Gender equality in access to information, education and training with regard to biodiversity conservation and use is a pre-requisite to equal participation in biodiversity programme and projects.
8. Women's knowledge (as well as men's) can contribute to biodiversity conservation and sustainable use.
9. Full and equitable participation²⁷ of both men and women at all levels of policy-making and implementation for biological diversity conservation is critical to move gender-specific insights from the local level up to the policy level.

²⁷ The principles of equality and equity imply that all stakeholders independently of the social group they

10. The traditional methods and the knowledge of indigenous people (particularly women), and their communities, relevant to the conservation of biological diversity and the sustainable use of biological resources, must be recognised and promoted.

Proposed Strategies

- Setting up of a national team to address the issue of mainstreaming gender and biodiversity in Guyana, setting of priorities and a work and implementation plan that will determine the material and financial resources. Notably, there is already an established National Biodiversity Committee. See sub-section 4.3.
- Documentation of the differential knowledge of women and men about biodiversity resources as well as women's traditional knowledge in sustainable management of local-level biodiversity resources
- Institutional capacity building for gender and biodiversity integration at the policy, strategy, plans, programme and project activities.
- Development of clear guidelines, tools and methodologies to mainstream gender into biodiversity use and conservation.
- Promotion of research aimed at generating sex disaggregated data on the conservation and use of biodiversity in Guyana.
- Enhancing opportunities for women's participation in decision making related to biodiversity conservation.
- Integration of gender in biodiversity related courses taught at the University of Guyana (UG) and the Cyril Potter College of Education (CPCE).
- Participatory monitoring and evaluation of biodiversity projects for gender inclusion in terms of benefits, participation in decision-making regarding project design and deliver, implementation and outcomes.

belong to should be consulted and involved under equal conditions in the various activities of conservation, and the full and active participation of those who are discriminated against, disadvantaged or oppressed within a society should be guaranteed. Source: <http://www.cbd.int/doc/publications/cbd-ts-49-en.pdf>

4.3 Opportunities for Action

This sub-section provides some practical guidance on some actions that may be included in the strategy and action plan based on the principles, objectives and strategies mentioned in the previous sub-section of this Report.

- A national stakeholder workshop on gender and sustainable development (which was recommended years ago after the Issue Report on Women, Environment and Sustainable Development) should be held to allow both men and women in communities and national institutions to express their views and help to identify measures to achieve the agreed goals.
- Identifying key areas for gender mainstreaming is critical to the achievement of the objectives of biodiversity conservation policies, a strategy etc., since a national perspective, rather than a sectoral perspective, is necessary. Gender must be mainstreamed in sustainable development as the overarching framework; then this will provide opportunities for direct interventions in biodiversity policies and strategies, climate change policies and strategies etc. the specific programmatic areas of NBAPII identified in Table 7 in sub-section 3.4 of this Report can provide opportunities for the revision and amendment of existing biodiversity related policies to integrate gender issues.
- Ensure that there is the general involvement of women in the conceptualisation, design, implementation, monitoring and evaluation of biodiversity projects and programmes so that their knowledge, experiences and expertise could improve the project outcomes.
- Provide increased opportunities for women to be involved in biodiversity monitoring through ongoing training programmes in biodiversity research not only at the University level, but also at the level of the community.
- Educate heads of institutions (national and community and particularly men) on the need for gender balance in resource management and use.
- Both men and women should have equal access to both financial and other resources. **To this end, there should be consideration of the one third factor at all times when committees are formed (women must make up one third of the group-similar to that of Parliament).**
- Increase capacity building for Amerindian men and women through information, education and training, with the view to enhancing knowledge and know-how about

managing biodiversity resources, especially about how to identify coping and adaptation mechanisms during crop failure, food shortages, and natural disasters.

- Increase women's access to the benefits of agro-biodiversity research and innovation given their vulnerability to floods and droughts, and longer term global climate change by ensuring sharing of knowledge, increased access to research findings, and agricultural extension services.
- Target more women (than currently practiced) as environmental monitors (in communities in Guyana where cultural norms support this intervention) as women can use their collective voice and actions can reduce activities such as illegal logging, mining, and wildlife trade over Guyana's borders.
- Establish a facility (for example, by expanding or strengthening the MRU, or the Amerindian Research Unit at the University of Guyana) to promote documentation and transference of traditional knowledge (recognizing their intellectual property rights) in the local communities for conservation and biodiversity management. The differential knowledge of women and men about biodiversity resources should be given special attention.

Other specific actions that should be taken are detailed below.

- First, the UG/CSBD programmes should encourage more females to be trained in the area of biodiversity conservation. The proposed Biodiversity Centre for Excellence, under the LCDS can be a good starting point.
- Second, biodiversity conservation could be further integrated in the school's curriculum at an early stage. Pupils and students should understand the gender roles the importance of involving men and women, boys and girls in biodiversity conservation.
- Third, the initiative by the Guyana Statistical Bureau to generate environmental statistics should facilitate the disaggregation of statistical data, reflecting women's and men's participation and changing roles in the various aspects of biodiversity conservation.
- Fourth, all UNDP programmes aimed at biodiversity conservation should ensure the participation²⁸ of both men and women in matters pertaining to project design and implementation, monitoring and evaluation, benefit sharing and capacity building.

²⁸ "Participation is a social process through which the various members of the population, on behalf of their own interests (class, group, gender, among others), participate either directly or through their representatives, in the implementation of the various aspects involved in community life".

- Fifth, the National Biodiversity Committee can work in collaboration with the UNDP to prepare simple checklists and criteria to assess and screen biodiversity projects for how they mainstream gender.
- Sixth, , programmes under NBAP II can ensure that both men and women are involved in specific activities in respect of training, monitoring, and research, among others. A good starting point is to be for all institutions involved in the implementation of NBAP II to commit to gender equality, even if this is not an overt expression in their institutional mandates. Further, it will be useful for the Natural Resource and Environment Advisory Committee (NREAC) to establish a sub-Committee to address the issue of mainstreaming of gender in natural resources (including biodiversity) management.
- Seventh, as part of the Implementation of the National Capacity Self Assessment Reports, a number of gender-focused training and sensitization workshops should be held and should target project managers and coordinators, middle management professionals and researchers (including the Amerindian Research Unit of UG, the Iwokrama International Centre and the Makushi Research Unit).

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UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP)
 GUIANA SHIELD FACILITY
 SHORT-TERM CONSULTANCY

I. Post Information

Title:	Consultant-Gender and Environment Specialist
Organizational Unit:	UNDP/ Guiana Shield Facility
Type of contract:	IC (Individual Contract)
Supervisor/ Grade:	Primary: GSF Leader, UNDP Guyana. Secondary: Gender Practice Area, RSCLAC- UNDP
Duration:	30 days
Location:	Home-based plus travel as needed

Organizational Context

The Guiana Shield Facility (GSF) is a multi-donor funding facility to be set up and operated by the United Nations Development Programme (UNDP) Guyana country office during the period 2010-2014. The aim of the GSF is to support the conservation and sustainable development of the ecosystems of the bio-diverse 250 km² Guiana Shield eco-region²⁹ through supporting activities needed to ensure the ecological integrity of the eco-region. The GSF is consistent with UNDP Human Development vision, values and objectives.

The Guiana Shield eco-region is reported to have the world's highest percentage of intact tropical rain forest, with some 80-90% still in pristine condition. There is a variety of unique ecosystems as well as a wealth of economically valuable goods and services and high human cultural diversity. In ecological terms, the Guiana Shield eco-region is of immense importance to the region and world. Furthermore,

²⁹ The term "Guiana Shield eco-region", means in biogeographical terms, the ecosystems of the eco-region and includes the large forested mountain systems that form the watersheds between the Amazon and Orinoco rivers, as well as savannahs and wetlands. Specifically, they cover mostly pristine rain forests, delineated by the Amazon River to the South, the Japari-Caqueta River to the Southwest, the Sierra de Chiribiquete to the West, the Orinoco and Vichada Rivers to the Northwest and North and the Atlantic Ocean to the East.

the region is endowed with natural resources such as oil, gold, diamond, bauxite and tropical hardwoods. The ecosystems of the eco-region have in recent times been increasingly threatened by many problems that are common to all countries of the Guiana Shield.

Threats to the ecological integrity of the Guiana Shield eco-region have been recognised as including (i) legal deforestation, (ii) legal mining, water pollution, social and health problems connected to mining, poaching of wildlife, poverty, weak institutional capacity and external debt, all of which other cause governments and local populations to choose economic activities which are quick, short-term income generators but may not be sustainable.

The UNDP, in collaboration with international partners, has developed a strategy for supporting the long-term conservation and sustainable development of the Guiana Shield eco-region. In recognition of the vital importance of building national ownership and forging regional cooperation for the conservation and sustainable development of the eco-region, the UNDP and partners have focused on setting up a funding facility to support the institutionalisation of an eco-regional approach, to incentivise the long-term delivery of globally important ecosystem goods and services for the improvement of social well-being, and to conserve the eco-region.

The UNDP and the European Union (EU) launched in August 2010, a Guiana Shield Facility for the Guiana Shield eco-region towards its conservation and sustainable development. While significant resources have been mobilised to date for this goal, they remain insufficient to address a number of extant and emerging national and regional which if not addressed urgently or in the near term, could undermine past and current efforts to consolidate the integrity of the last remaining frontier forests in the Americas and indeed the world.

In order to promote a more efficient approach and increase resource mobilisation for the conservation and sustainable development of the Guiana Shield eco-region, the UNDP and the EU have established a Joint Management and Multi-donor action that respond to these objectives.

The **overall objective** is to promote and support the conservation and sustainable development of the Guiana Shield eco-region

The **specific objectives** are as follows:

- The GSF to be a long-term forum and vehicle to address national and overarching regional, in particular, environmental issues related to management of the ecosystems of the Guiana Shield eco-region
- To maintain the GSF as a sustainable financial vehicle for the conservation and sustainable development of the Guiana Shield eco-region
- To support the exchange of knowledge and capacity building to enhance the conservation and sustainable development of the Guiana Shield eco-region. In order to maximize global environmental benefits, it includes provisions of cross-cutting issues.

To achieve the above objectives, a number of operating principles are proposed for the design and structure of the GSF covering three broad domains: a) national and regional environmental priorities; b) sustainable financing; and c) exchange of knowledge and capacity building. The GSF recognizes that, for its project interventions to achieve their global environmental objectives, particular attention should be

paid to gender equality and women's empowerment. It is based on the assumption that responsibility of any biodiversity conservation initiative relies on ensuring that the development and implementation of proposals, under national and international conservation policies, contribute to equality and equity, through the creation of possibilities for equitable opportunities and benefits for both women and men.

II. Key functions/Results expected

The main objective of this consultancy is to carry out a study on main gender issues related to biodiversity conservation in Guyana, in order generate detailed data to strengthen national level efforts to improve the strategic orientation of GSF activities. The work will build on available information, rapid surveys, and UNDP's national and regional reports on the issue.

The consultant will provide substantive backstopping to the GSF during the research process. S/he must be attuned to the relationship between the technical and policy aspects of gender, conservation and sustainable development, S/he will produce a report of no more than 50 pages including the following issues:

International framework on gender equality and conservation of biological biodiversity
Conceptual framework on gender, conservation and sustainable development based on the assumption that gender equality is a condition for success of conservation and that conservation of biological diversity is an opportunity to promote equality and equity.

Identify gender issues relevant for conservation highlighting the decisive socio-political, economic and cultural aspects of conservation: poverty, agro-diversity, water, markets, forests, etc.

Provide data disaggregated by sex on the use of biological resources, on access to biological resources and resource-use regimes; on control over biological resources and resource-use regimes; on management and distribution of benefits arising out of the use of biological resources and traditional knowledge, and on threats to biodiversity, on the anthropogenic causes behind such threats

Analyze from a gender perspective existing national and local policies, strategies and action plans and elaborate on the added value of gender mainstreaming into national conservation policies.

Mapping main stakeholders involved in biodiversity conservation on gender mainstreaming, including women's networks or groups, and analyze institutional structure and capacities for gender mainstreaming

Identify good practices of different actors at policy, programmes and projects level

Conclude with a number of recommendations on how to mainstream gender at policy and programmes level, and provide practical guidance on the issue.

III. Impact of results

As a result of the consultancy, it is expected sound and consistent guidance and substantive backstopping to the programme on gender related issues that will inform policy, planning and budgetary issues and strengthens all aspects of the project activities in the country.

IV. Competencies and Critical success factors

The consultant must have a solid understanding of key gender, conservation and sustainable development issues and methodological and technical knowledge, including:

- Strong analytical, writing and communication skills;
- Excellent knowledge of all thematic areas related to management of the ecosystems biodiversity particularly from the developing country perspective;
- Proven track record of work in the LAC region related gender and environmental activities;
- Strong knowledge of the methodological approach being implemented by the project;
- Excellent organizational skills;
- Strong interpersonal and communication skills; commitment to team work and to working across disciplines;
- Focuses on impact and result for the client and responds positively to critical feedback;
- Consistently approaches work with energy and a positive, constructive attitude;
- Able to work independently with no supervision

V. Regime of payments and fees

The professional, who submits an expression of interest to work in the above described capacity, should set their expectations at daily rate payment in dollars of the United States of America and their availability.

The contract signed as individual contract agreement does not involve any fees in advance at the beginning of the consultancy. Payment will be made on the satisfactory delivery of the results in Section III supported by a certification of payment and supervisor's approval.

Travel costs will be paid by the project.

Recruitment Qualifications

- Post-graduate degree in social sciences or another relevant field (e.g., labour economics, gender environment);

- Training in the field of gender and development – a good indication of whether or not the consultant has the relevant expertise;
- Normally 5–10 years’ experience of conducting gender studies, preferably also in relation to environmental issues;
- Publications or field reports on gender issues that credit the consultant;
- Ability to work in a team – this is essential for gender analysis work, as the consultant will have to liaise with many different groups at different levels, including policy makers, managers, field workers, technical experts;
- Ability to communicate non-verbally and to decipher hidden meanings in responses is important. Good observation techniques are advantageous;
- Experience in participatory appraisals from a gender equity perspective.

Additional Information

Qualified candidates who are interested in the above position are invited to submit their application, in English, along with a completed UN Personal History Form (P11), not later than 18 September 2011 to: jobs.guyana@undp.org, addressed to:

Resident Representative

United Nations Development Programme

42 Brickdam & UN Place

Stabroek, Georgetown

Subject: Vacancy Announcement. Consultant- Gender and Environment Specialist

Only short-listed qualified candidates will be contacted.

Appendix 2

List of Stakeholders

NAME	ORGANIZATION	DESIGNATION	DATE INTERVIEWED
1. Ms. Joslyn Dow	Liana Cane	Director	2012-02-22
2. Ms. Clydecia Spitzer	Ministry of Natural Resources and the Environment	Multilateral Agreement Specialist	2012-02-22
3. Mr. Damian Fernandes	Ministry of Natural Resources and the Environment	Natural Resource Specialist	2012-03-12
4. Mr. Navin Chandarpal	Office of the President	Advisor to the President on sustainable development, science and technology	2012-02-24
5. Mr. Sham Nokta	Office of the President	Advisor to the President of climate change	2012-02-22
6. Mr. George Simon	Amerindian Research Unit, University of Guyana	Head	2102-02-22
7. Mr. Eustace Alexander	Conservation International	Ecosystem services Coordinator	2012-03-14
8. Dr. Patrick Chesney	UNDP	Chief Technical Advisor, Guiana Shield Facility	2012-03-07
9. Dr. O. Homenauth	National Agriculture Research Institute	Director	2012-03-15
10. 11. Mr. Lawrence Lewis	Faculty of Agriculture, University of Guyana	Dean	2012-03-07
12. Mr. Phillip Da Silva	University of Guyana	Deputy Director	2012-03-08
13. Ms. Michelle 14. Kalamadeen	University of Guyana	Lecturer	2012-03-06
15. Ms. Jewel Liddell	University of Guyana	Lecturer	2012-03-02
16. Dr. Raquel Thomas	Iwokrama	Head, Research and Training	2012-03-12
17. Mr. Godfrey Marshall	Forestry Training Institute	Director	2012-03-09

18. Dr. Indarjit Ramdass	Environmental Protection Agency	Director	2012-02-24
19. Anna Mohase	Guyana Forestry Commission	Special Projects Officer	2012-02-27
20. Ms. Pauline Sukhai	Ministry of Amerindian Affairs	Minister of Amerindian Affairs	2012-03-11

Appendix 3 Guiding questions for key informants

Gender is a culturally-specific set characteristics that identifies the social behavior of women and men and the relationship between them. Gender refers to social differences, as opposed to biological ones, between women and men that have been learned, are changeable over time, and vary widely both within and between cultures.

1. Is gender an important issue in biodiversity conservation and management? Please give reason/s for your response.
2. How does gender shape opportunities and or constraints related to the management of biodiversity in Guyana?
3. Is there a national policy that addresses gender in biodiversity conservation? If yes, kindly provide details.
4. Do you think that there are benefits to be accrued from mainstreaming gender in biodiversity initiatives? Kindly provide reasons for your response.
5. What policy interventions can be made to mainstream gender in national policies, plans, projects and projects?

Appendix 4 Major Events and Gender Issues Related to Sustainable Development

Twenty years after the First Intergovernmental Conference on the Human Environment (referred to as the Rio or Earth Summit), over 100 Heads of State and 18,000 people gathered in Rio de Janeiro to address ways of addressing the rapid decline in the quality of the environment and its associated catastrophic ecological and socio-economic consequences. This international forum affirmed women's critical contributions to environmental management and sustainable development. A significant outcome of the meeting was the publication of Agenda 21, often described as the blueprint for actions to be taken globally in every area in which human activity impacts on the environment.

Chapter 24 of Agenda 21 focuses specifically on women, under the caption 'Global Action for Women towards Sustainable development and Equitable Development'. The action plan was immediately endorsed by the international community and provided other opportunities for consideration of women's participation in environmental protection and management. The Nairobi Forward Looking Strategies for the Advancement of Women, for example, emphasised women's participation in national and international ecosystem management and control of environmental degradation. Moreover, the Convention on the Elimination of ALL Forms of Discrimination against Women called for an end to gender based discrimination in order to ensure women's access to land and other resources, education and safe and equal employment.

The policy implications of Chapter 24 of Agenda for women's participation in sustainable development can be listed as:

- Review policies and establish plans to increase the proportion of women involved as decision makers, planners, managers, technical advisers in the design and implementation of policies and programmes for sustainable development;
- Strengthen and empower women's bureau, women's nongovernmental organisations and women's groups in enhancing capacity for sustainable development;
- Eliminate illiteracy among females and expand the enrolment of women and girls in educational institutions, and to increase educational and training opportunities for women and girls in sciences and technology, particularly at the post secondary level;
- Promote the reduction of heavy workload of women and girl children at home and outside through the establishment of more than nurseries and kindergartens by governments, local authorities, employers and other relevant organisations, and the sharing of household tasks by men and women on an equal basis, and the supply of adequate sanitation facilities;
- Establish rural banking systems with a view to facilitating and increasing rural women's access to credit and to agricultural inputs and implements;
- Develop consumer awareness and the active participation of women, emphasising their crucial role in achieving changes necessary to reduce or eliminate unsustainable patterns of consumption and production;
- Eliminate persistent negative images, stereotypes, attitudes and prejudices against women through change in socialization patterns portrayed through the media, advertising, and formal and non-formal education;

- Avert the ongoing rapid environmental and economic degradation that generally affects the lives of women and children in rural areas; and
- Promote research, data collection and dissemination of information on issues such as the impact of structural adjustment programmes on women, knowledge and experience on the part of women of the management of natural resources for incorporation in the databases and information systems for sustainable development, among others.

The United Nations Conference on Sustainable Development of SIDS

The May –June 1992 United Nations Conference on Small Island Developing States adopted a non-governmental organisation Action Plan, which represented the concerted efforts of Nongovernmental organisations of the Pacific, Atlantic, Mediterranean, Indian Ocean and the Caribbean and the various interest groups of SIDS, including youth, women and indigenous people. The recommended actions that have implications for women’s involvement in conservation and sustainable development are set out as:

- Putting people at the centre of development ;
- Quantifying and valuating women’s unwaged work in the home, on the land, and in the community;
- Educate communities, empowering them to manage their human and natural resources stressing the central role of women in this process;
- Facilitating access to adequate reproductive health for women; and
- Engaging in programmes that promote broad awareness of the role of women in development and cultivate relationships based upon equality of power between sexes.

The World Summit on Sustainable Development

The World Summit on Sustainable Development (WSSD), which was held in Johannesburg from 26th August to 4th September, 2002, emphasised international commitment to achieving sustainable development through:

- Assessing implementation of Agenda 21;
- Reviewing the challenges and opportunities to achieve sustainable development;
- Suggesting actions and required institutional and financial arrangements to achieve sustainable development;
- Identifying means to support institutional structures nationally and regionally.

The significance of the WSSD was the notable range of concrete commitments to action word leaders made to promote implementation of Agenda 21 and the Programme for the Further Implementation of Agenda 21. The Summit also generated a variety of other outcomes, including partnerships for sustainable development. There is now a solid repertoire of commitments and ideas to turn the Rio vision into reality (UN Secretary General, 2003). Moreover, there are some specific statements in the WSSD Plan of Implementation which are particularly relevant to women. These include:

- Develop national programmes for sustainable development and local and community development, where appropriate within country-owned poverty reduction strategies, to promote the empowerment of people living in poverty and their organizations. These programmes should reflect their priorities and enable them to increase access to productive resources, public services and institutions, in particular land, water, employment opportunities, credit, education and health;
- Promote women's equal access to and full participation, on the basis of equality with men, in decision-making at all levels, mainstreaming gender perspectives in all policies and strategies, eliminating all forms of violence and discrimination against women, and improving the status, health and economic welfare of women and girls through full and equal access to economic opportunity, land, credit, education and health-care services;
- The provision of clean drinking water and adequate sanitation is necessary to protect human health and the environment. In this respect, we agree to halve, by the year 2015, the proportion of people who are unable to reach or to afford safe drinking water (as outlined in the Millennium Declaration) and the proportion of people who do not have access to basic sanitation,
- Increase decent employment, credit and income for the urban poor, through appropriate national policies, promoting equal opportunities for women and men;
- Improve access to land and property, to adequate shelter and to basic services for the urban and rural poor, with special attention to female heads of household;
- Promote education to provide information for both men and women about available energy sources and technologies;
- Enhance the participation of women in all aspects and at all levels relating to sustainable agriculture and food security;
- Develop and implement, where appropriate, gender-sensitive policies and programmes, including public and private investments that help eliminate inequities facing mountain communities;
- Encourage and enable all stakeholders to contribute to the implementation of the objectives of the Biodiversity Convention, and in particular recognize the specific role of youth, women and indigenous and local communities in conserving and using biodiversity in a sustainable way;
- Enhance the participation of stakeholders, including local and indigenous communities and women, to play an active role in minerals, metals and mining development throughout the life cycles of mining operations, including after closure for rehabilitation purposes, in accordance with national regulations and taking into account significant transboundary impacts; and
- Ensure equal access of women to health-care services, giving particular attention to maternal and emergency obstetric care.

Notably, the Millennium Development Goals (MDGs)³⁰ were endorsed as the overarching objectives, which should direct efforts to implement existing commitments and were augmented with one notable new target for provision of sanitation and a number of subsidiary undertakings.

³⁰ The Millennium Development Goals (MDGs) are the world's time-bound and quantified targets for addressing extreme poverty in its many dimensions-income poverty, hunger, disease, lack of adequate shelter, and exclusion-

Generally, the *obstacles to women's full participation in sustainable development and in public life* can be grouped into three categories (Agenda 21, Chapter 24.2.c):

- Constitutional factors, including legal and administrative areas,
- Cultural, social, psychological and behavioural factors,
- Economic factors, including access to and ownership of resources.

The World Summit for Social Development and the Copenhagen Declaration and Programme of Action

The World Summit for Social Development, which was held in Copenhagen 6-12 March 1995—three years after the Earth Summit, identified as its most challenging task the need to fight poverty, create productive jobs and strengthen the social fabric. The major policy issues raised were:

- Eradicate absolute poverty by a target date to be set by each country;
- Achieve equality and equity between women and men;
- Ensure that structural adjustments include social development goals;
- Increase resources allocated to social development; and
- Attain universal and equitable access to education and primary health care.

Of interest is the fact that these five policy issues underscore the important of governments' commitment to the MDGs and to Agenda 21.

CARICOM/UNECLC/UNIFEM Post-Beijing Encounter: A Caribbean Sub regional Ministerial Conference

The Caribbean sub-regional meeting, which was a post Beijing Encounter, deliberated on three major policy issues critical to women and sustainable development:

- The urgent need for a methodological approach to poverty investigation, which would make the analysis and strategy inclusive.
- The data collected must inform and reshape regional policies and priorities for poverty eradication.
- Measures must be put in place so empower women as producers and consumers so that they can take effective environmental actions, along with men, in their communities and work places.

The Caribbean Community (CARICOM) has endorsed the 1995 Commonwealth Plan of Action on Gender and Development, which may be considered as the point of reference for the CARICOM Post-Beijing Regional Plan of Action to the Year 2000. One of the major aims of this plan of Action is to accelerate the achievement of women's empowerment by promoting women's role in sustainable development, poverty alleviation and the eradication of poverty, as well as the management of technology.

Some of the critical policy issues discussed in the document must not be overlooked are:

while promoting gender equality, education, and environmental sustainability. They are also basic human rights—the rights of each person on the planet to health, education, shelter, and security (<http://www.unmillenniumproject.org/goals/index.htm>).

- Develop national capacity in gender training, gender planning, gender policy appraisal and impact assessment, gender management and accounting systems;
- Integrate gender into all government agendas, policies and programmes and create a culture with government;
- Take positive action to provide equal opportunities in educational institutions and develop equal employment opportunity policies;
- Increase women's participation in decision making positions;
- Promote and defend women's rights as human rights; and
- Implement gender sensitive macro-economic policies and strategies, especially on the alleviation of poverty and the eradication of absolute poverty.

Appendix 5

The Guyana Mangrove Restoration Project³¹

The Guyana Mangrove Restoration Project is funded by a partnership between the Government of Guyana and the European Union. The project is implemented by the Ministry of Agriculture through the National Agriculture Research & Extension Institute (NAREI). The objective of the project is to seek the commitment of Guyanese towards the protection and development of sustainable mangrove forests. The project commenced activities in February 2010 and is working in the areas of administrative capacity development, research, community development and capacity building, mangrove restoration (replanting), monitoring and awareness and education.

The National Mangrove Management Action Plan covers a three-year period from 2010 to 2012. Alternative funding will be sought to continue the plan when the EU funds expires. The long-term sustainability of the project will depend on the alternative funding sources, and revision and modification of the mangrove action project. The momentum built through successful implementation of the projects of this action plan will contribute to long term sustainability. To this end, a well-conducted campaign of visibility and education is a vital part of the programme. The overall objective is to respond to climate change and to mitigate its effects through the protection, rehabilitation and wise use of Guyana's mangrove ecosystems through processes that maintain their protective function, values and biodiversity while meeting the socio-economic development and environmental protection needs in estuarine and coastal areas. The operational duration of the project is 48 months from the signature of the Financing Agreement (no 9732/GUA) in mid 2010.



The communities that are closest to the pilot sites are active participants in the replanting process and site development, and monitoring of the pilot sites. The Pilot Sites currently considered within the plan include Mon Repos, Hope Beach, and Ruimzeight in Region Three, where one of the most significant examples of natural regeneration can be found.

The success of the project will be determined by the level of involvement, support for and ownership of the process by local communities. Much of this is dependent on a strategic and sustained approach to community development and public awareness. Much therefore depends on the success of public awareness and education campaigns. The recognition of the vital roles that mangroves play; the extraordinary environment to which they have adapted and their vulnerability to external pressures, should become part of the Nation's consciousness. As this understanding grows, and a sense of shared national responsibility fostered, the work of restoration and protection will be made easy. The Project works along with various community groups and facilitates community discussions, youth group sessions and community events.

The project values community input and in 2010, during the initial stages of project implementation, several consultations were held with coastal communities from Region One to Region Six. Several major issues were identified by communities and these ranged from the general lack of awareness of the laws that relates to mangrove and seashore areas, citizens' responsibilities and alternatives to activities that affect mangroves.

³¹ Information taken from <http://www.mangrovesgy.org/>

Recommendations were made to deal with mangrove cutting, livestock grazing and hauling of boats in mangrove areas.

As a result of the region-wide community consultations, the Project conducts targeted discussion sessions with various community groups (fishermen, livestock owners, Beekeepers among others) to provide clarifications and to find potential solutions when they are directly affected by the project.

Importantly, the Project will assist few small-scale Beekeepers with marketing of their honey from areas which are to be identified from along the coast. Along with the Beekeeper Association, the Project will also assist with labels and bottling of the final product.

Project partners include the European Union, Ministry of Agriculture, and NAREI.

In April 2000, the Guyana Marine Turtle Conservation Society (GMTCS) was established as a Friendly Society and, among many other remarkable achievements in the area of monitoring, research, education and awareness, has been identified by the EPA, as the Lead Agency in the planning and establishment of Shell Beach Protected Area. Shell beach was declared a legally Protected Area in October 2011. GMTCS is organized into an executive decision making arm or Board and an Administrative arm which comprises the central core office. As a result of its strong on-the-ground activities, three satellite field stations have been established in Region 1 at Moruca, Shell Beach, and Mabaruma.



Appendix 6 Case Study taken from

<http://www.forestpeoples.org/sites/fpp/files/publication/2010/08/guyana10capr06eng.pdf>

Wapichan-Southwest Guyana

Wapichan men mostly use the more remote parts of their territory, which are generally more than 10 km away from the villages and consist mainly of good hunting and fishing grounds. They have extensive knowledge of these distant areas, for instance regarding the occurrence of different types of game and their abundance. Wapichan men also have a very deep understanding of this particular forest environment, knowing where they can find fruits, and useful trees and plants for construction and craft materials. Remote areas of their territory are also used by the *marunao* (the shaman) who visits key places to perform various rituals, such as far off mountains.

Areas closer to the Wapichan's villages are mostly used by women and include gathering grounds for craft materials, firewood, grubs and fruits, medicines, spirit charms, as well as water springs and sources. They also regularly use nearby areas to collect clay for pottery, and fishing grounds and washing areas along the creeks. Therefore women hold detailed knowledge of the health and nature of the ecosystems closer to the community.

Adult men and women in Wapichan society take individual and autonomous decisions about resource use according to their traditional roles and responsibilities as either a daiaro "wife" or daiaru "husband." However, where decisions may affect the resource rights of neighbouring families, according to custom a person must consult with each potentially affected household head and with the local headman, who is usually the head of his or her local settlement group (Box 3). Traditional leaders will, if necessary, consult with the heads of neighbouring settlement and farming groups. Decisions are reached by consensus through consultation with all affected rights holders, local leaders and tunarut pa'o nao "elders" – as well as community members who are especially knowledgeable about a relevant resource or task. Traditional decision-making processes are today articulated with elected Village Councils and District Tashaos Councils. The Tashao is thus often involved in internal consultations on resource use, especially where they involve decisions about the extraction of timber, craft materials or bush fruits needed for community work.