

NATIONAL ENVIRONMENTAL SUMMARY (NES)

GUYANA



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Acknowledgement

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EXECUTIVE SUMMARY

The National Environmental Summary for Guyana was prepared using a combination of in-depth desk review of available national documents, and interviews of key environmental experts.

The environmental priorities for Guyana were identified as natural disasters, particularly floods; land and water pollution, increased pressure on biodiversity; noise pollution; air quality in Georgetown; land tenure security; and access to housing and basic social services. The general feedback from key informants was that Guyana has already developed adequate policies that provide useful overarching frameworks for dealing with current environmental issues, however, implementation and continuity are generally lacking. Many programs and plans originated from MEAs are perceived as ‘government led’; as such the public do not see their roles clearly and their relevance to the process. Three common issues that emanated from the study are: greater political will, funding and lack of public support.

The main gaps and opportunities identified as part of this study were clustered under three general headings: Policy and Legislative Framework; Organizational/Institutional Framework and Others. Hereafter is a synopsis of the major issues discussed.

Policy and Legislative Framework
<p>Gaps:</p> <ul style="list-style-type: none">• Need for timely implementation of existing policies, programs and plans by the Environmental Protection Agency, as well as the natural resource sector agencies• Need for harmonization of legislation to meet MEA obligations.• Weak enforcement of current legislation• Lack of incentives to encourage and facilitate Corporate Social Responsibility/Corporate Governance for Sustainability among private sector operations.• Climate change adaptation and mitigation measures are not captured in the environmental impact process in Guyana.
<p>Opportunities:</p> <ul style="list-style-type: none">• Rationalization of existing institutional structure and if possible merger of specific units.• Integration of sectoral programs through greater inter-agency collaboration and consolidation of policies programs and plans.• Development of a national policy framework that will link short term social development objectives with sustainability, and clearly identify fiscal measures that will support an ‘eco-friendly’ economy.• Guyana’s Low Carbon Development Strategy provides an opportunity for the establishment of this framework.• Consolidating of policies and legislation with respect to natural resource management and environmental protection. The reports of the National Capacity Self Assessments provide a useful point of reference for action.• Development and tailoring of standards to strengthen to existing environmental legislation and regulations• The issue if climate change provides an invaluable opportunity for Guyana to review and update the Environmental Protection Act , No. 11 of 1996 to include Strategic Environmental Assessments, as well as to make it mandatory for developers to consider climate risks and impacts as part of environmental impact assessment.

Organizational/Institutional Framework
<p>Gaps:</p> <ul style="list-style-type: none"> • Need to decentralize environmental monitoring and enforcement responsibilities from the Environmental Protection Agency • Absence of/limited baseline data that can inform good decision-making • Lack of planning instruments due to the non- existence of a Ministry of Environment • Absence of a Legal Unit within the EPA. • Greater involvement of civil society
<p>Opportunities:</p> <ul style="list-style-type: none"> • Decentralize environmental management functions of the EPA by establishing regional offices with adequate financial, human and material support within the Regional Democratic Councils (RDCs). • Empowering and encourage communities to monitor environmental change and provide feed-back to RDCs. • SEAs should be extended to the Poverty Reduction Strategy program, the National Development Strategy, and the current Low Carbon development Strategy • The EPA should re-establish its legal Unit. Importantly, the EPA should rationalize its current institutional structure, given the capacity constraints of the agency. • Expansion of current governance systems for natural resource and environmental management in Guyana by increasing the level of engagement of civil society at more strategic levels. • Now that Guyana has launched its Low Carbon Development Strategy, there is evidence of the channeling of resources for base-line studies, for example, through remote sensing.
Others
<p>Gaps:</p> <ul style="list-style-type: none"> • Environmental education, to a large extent, is an appendage to existing programs • Consistency of environmental messages on climate change to optimize impact on public ‘buy in’ and public behavior. • Mapping and monitoring of environmental changes in terms of natural resource use, climate change. • Absence of a national program to address hazardous waste management
<p>Opportunities:</p> <ul style="list-style-type: none"> • Review of National Education Policy with the view to addressing the issue of education for sustainability. • Development and implementation of sustained comprehensive public outreach programs with adequate resources to change social behavior towards the environment, using Information Communication Technology • The Monitoring, Review and Verification (MRV) system that is developed for Guyana’s Low Carbon Development Strategy (LCDC) creates the framework that can be expanded to sectors, other than forestry. • The passage of the 2000 Hazardous Waste Management Regulation under the Environmental Protection Act, No. 11 of 1996, provides an opportunity for Guyana to develop and implement a framework for the management of hazardous waste and associated pollution.

INTRODUCTION AND BACKGROUND

The National Environmental Summary (NES) for Guyana was prepared during the period August-November 2009 as an information tool to support the incorporation of environment in UN Common Country Assessments (CCA) and United Nations Development Assistance Framework (UNDAF). Essentially, this NES would provide a critical analysis of gaps in existing policy/program responses and in the national legislation in addressing environmental issues and their critical linkages to poverty reduction and development.

Basically, two principal data collection methods were employed to ensure reliability and validity of the NES:

- Desk review of existing literature including national assessments (UNEP, World Bank, European Commission and bilateral organizations, national State of the Environment reports, etc.), major national legislation and policy documents (national poverty reduction strategies, national environmental action plans, national environmental acts, major sectoral plans and programs, and MEAs obligations, among others).¹
- In-depth interviews with key informants, using a semi-structured interview guide. See Annex I and Annex II.

SECTION 1 STATE OF THE ENVIRONMENT AND ENVIRONMENTAL PRIORITIES

Guyana, a developing country situated in the northeastern coast of South America is faced with seven major environmental issues². In each case, the issue is described and drivers, pressures and impacts are analyzed.

- Natural Disasters and the effects of climate change, particularly floods³ due to: the geographic vulnerability of Guyana's low lying coast that is currently 1.5 meters below mean sea level; changing weather/climate patterns, extreme weather events (associated with climate change and manifested as increased frequency and intensity of rainfall as experienced in 2005 and 2008);

¹ See list of References.

² The seven environmental issues were identified after a review of the information provided by key informants and secondary data.

³ In 2005, a devastating flood occurred that resulted in damages equivalent to 60% of Gross Domestic Product (GDP) and studies indicate that the rains were not associated with the usual weather systems affecting Guyana.

More recently the prolonged and intense rainfall in 2008 has led to water accumulation in the agricultural areas. Given that the agricultural system contributes to approximately 32 percent of the country's GDP, the vulnerability to extreme weather patterns is highlighted.

inadequacy of and poor maintenance of existing infrastructure; capacity constraints of flood adaptation and mitigation; as well as removal of mangrove vegetation –the first line of defense against wave action and storms on the coast- for fuel wood and for use in construction and tanning. The consequences of climate change (for example, sea level rise and extreme weather events) pose other challenges to Guyana, namely: pollution of ground water resources and domestic water supply; health problems due to emerging diseases; and prevention and treatment; protection and possible relocation of human settlements; physical and social infrastructural damage; retarded economic growth and social development resulting in increased poverty.

- Land and water pollution: countrywide, there is not a single disposal site currently in operation⁴ in accordance with required technical and environmental standards of a sanitary landfill. The solid waste disposal problem is at its most critical level in the greater Georgetown⁵ area with approximately 137,000 inhabitants generating approximately 190 tons a day. According to Rogalla (2009) households are not engaged in proper waste management activities and, as a result, the daily per capita waste generation ranges from 0.43 kg (in low income areas) to 0.71 kg per capita (in high income areas). Many industrial and commercial enterprises make their own arrangements for collection and management of their waste.

Although 91.8 percent of the urban population and 80.4 percent of the rural population count with disposal services, there are no central sewage treatment facilities. 3.9 million estimated gallons of untreated sewage are discharged per day through an outfall into the mouth of the Demerara River.⁶ Currently, there are no significant companies or facilities in Georgetown to manage hazardous wastes though a Hydroclave⁷ has been installed at the Georgetown Public Hospital Corporation; however, this facility is not in full operation.

The problem of land and water pollution is a consequence of several factors: inadequate infrastructure, limited monitoring and irregular enforcement of legislation, insufficient financial resources, poor governance and the absence of organized solutions; unacceptable social and environmental behavior (for example, clogging of drains due to poor waste disposal practices), including from industry⁸ sector; lack of strong enforcement of the Environmental Protection (Hazardous Waste) Regulations, 2000; and lack of appropriate policy, including the absence of Regulations to address the import, export and in-transit shipments of hazardous waste.

In the interior of Guyana, degradation of rivers and streams and pollution of surface and ground waters result from all the mining activities. Two examples that heighten concern are: the release of mercury during the amalgamation process in small scale gold operations by itinerant miners (some of whom are operating illegally) and thereby threaten the livelihoods and health of

⁴ Haags Bosch Sanitary Landfill (HBSLF) facility is being developed with financial support from the intern-American Development Bank.

⁵ Georgetown is the capital city.

⁶ Source: Solid Waste Sector Analysis. Government of the Cooperative Republic of Guyana, PAHO/WHO 2004.

⁷ A Hydroclave is a cutting-edge technology that processes and sterilizes medical waste.

⁸ Industries have not acquired updated technology because of impact on production costs, unwillingness by some industries to invest in technology, lack of appropriate policy and to some extent enforcement of policy relating to standards for importation of cars/technology etc.

communities; and high turbidity of rivers and creeks as a result of land and river dredging operations. In this case, lack of institutional capacity, inadequate monitoring and enforcement, and stricter penalties are the main driver. Further, the licensing system for small scale gold and diamond mining activities does not impose any regulatory controls.

- Increased pressure on/threat to biodiversity due to illegal wildlife trade driven by need for local income source, high demand and lucrative market for species, poor monitoring and enforcement; very little legislative coverage of the domestic wildlife trade; and weak legislation governing the international wildlife trade; expansion in the mining and forestry industries, an associated increase in access (by infrastructural development, particularly roads) to previously undisturbed areas. Importantly, the local legislative, institutional and administrative solutions are relatively weak; plus current sustainable forestry practices fail to generate adequate income to be an incentive to preserving Guyana's biodiversity.
- Noise Pollution: there is a growing national concern about the public disregard for the impacts of noise pollution. The current problem is perpetuated by the absence of standards that are more reflective of the Guyana situation⁹ and the lack of enforcement of the existing Environmental Protection (Noise Management) Regulation, 2000, and Guyana's Standard Interim Guidelines for the emission of noise into the environment.
- Air Quality in Georgetown¹⁰: recent studies on air quality is a cause for concern due to burning of sugar cane fields (to the south of Georgetown); uncontrolled burning from the Mandela land fill site; burning of household wastes in yards; increase in waste generation; improper waste disposal at the landfill site; change in the composition of waste; increase in the number of vehicles and traffic congestion in the central Georgetown; and unauthorized small-scale industrial activities (e.g. paint shops). Another source is the combustion of fuels (and subsequent emission of air pollutants such as carbon monoxide and nitrous oxide) by Guyana Power Light for electricity generation. The Company uses approximately 887, 000 barrels of fuel per year (2008 figure) or 2430 barrels per day¹¹. This has implications for air quality in the city.
- Land use planning at the local/community level: inadequate policies to address land tenure and user rights issues, coupled with the incomplete processing of titles of new and extension of Amerindian lands, have led to ongoing conflicts between Amerindian communities, loggers and miners, whose activities continuously threaten the surface water resource that is still used by some households for domestic purposes.
- Access to housing and basic social services (potable water supply, health care, electricity, garbage and sewage disposal facilities) by vulnerable groups, including women, youth and Amerindians. The 2005 and 2008 floods highlighted the plight of these vulnerable groups who lived in sub-standard houses, with haphazardly built pit-latrines that increase their exposure to health risks.

⁹ Current standards were adopted from other countries. A revision of the existing standards is currently underway.

¹⁰ For more information see GEO Georgetown Draft Report. Chapter II.

¹¹ Personal Communication: CEO, Guyana Energy Authority.

The information gathered from the review of responses to questions posed to respondents (key informants) during the in-depth interviews, plus the review of secondary data on environmental issues in Guyana indicates that key drivers are the following:

- Poverty (general challenges of being a developing country);
- Lack of public awareness /education to change social behavior;
- Limited community programs and cooperation;
- Absence of strict land use control systems at the Neighborhood Democratic Council level;
- Institutional capacity issues;
- Lack of appropriate legislation and lack of enforcement of appropriate ones;
- Institutional bureaucracy and lack of synergies among sectoral programs;
- Environmental Protection Agency's current role and authority that is perceived as being overridden 'other' institutions and undermined by staffing, resources etc.; and
- General lack of long-term thinking along lines of sustainability given the social development challenges and the need to raise the living standards of the local population.

SECTION 2` NATIONAL POLICY RESPONSES

Section 2 basically outlines Guyana's responses that influenced the state of the environment, drivers, pressures and/or impacts.

Priority Environmental Issue	National Responses
Natural disasters, including floods	<p>Guyana is signatory to the UNFCCC. The Convention entered into force for Guyana on November 17, 1994 and aims to address the growing concern that human activities are changing global climate patterns. In 2002, Guyana prepared, its final National Communication and has recently completed the 2nd Communication.</p> <p>Guyana's <i>Climate Change Action Plan</i> is a supplement to the Initial Communication and seeks to address the commitments of Guyana to the UNFCCC. Also, the National <i>Climate Change Adaptation Policy and Implementation Plan</i> describes Guyana's needs as addressed by possible impacts from anticipated changes from Climate Change. The Policy should give effect to the formulation of Integrated Coastal Zone Management, the use of Environmental Impact Assessments, Disaster Contingency Planning Management, Economic Instruments, Building Codes and Standards and Environmental Management Regimes. For example, with the development of residential lots, much emphasis is being placed on residents desisting from concreting their entire lots to mitigate overland flow and alleviate additional stress on existing drainage systems.</p> <p>The EPA, on behalf of the Government of Guyana, entered into an agreement with the UNDP-GEF for the funding of a <i>National Capacity Self Assessment (NCSA)</i> Project whose objective was to identify and characterize critical capacity constraints relevant to effective environmental management in Guyana, and to develop a plan of action to address these constraints, in a coordinated manner to fulfill its obligations under the three UN Conventions. The NCSA implemented a second phase which saw the preparation of <i>Stock Taking and Thematic Assessments</i> of the areas of Biodiversity, Desertification/Land Degradation and Climate Change.</p> <p>There was no formal coastal zone management plan or strategy for the multiple uses for which coastal resources may have. Currently, there is a piecemeal approach to management responsibilities (GFC, Sea Defense, the Central Planning and Housing Department, to list a few). This approach manifested in the social, economic and ecological stresses that impact on the coastal zone. Consequently, in 1991 Government established a subcommittee on coastal zone management that was responsible for the preparation of an <i>Integrated Coastal Zone Management (ICZM) Action Plan (2002)</i>. The Committee is not functioning at present and due to capacity constraints the plan has not been fully implemented. To date, two achievements of the Plan are: public awareness on ICZM and related issues and mangrove management (limited).</p> <p>Guyana now has a Doppler Radar to build its capacity to provide meteorological data in real time and to issue early warning signals to its population to be better prepared for floods and in so doing, reduce the associated risks. This system is managed by the Hydrometeorological Service of the Ministry of Agriculture.</p> <p>The current institutional arrangement for disaster management (the Civil Defense Commission) is still preoccupied with disaster response and relief, and lacks the institutional capacity to be engaged in more adaptive and proactive disaster (flood) management.</p>

<p>Land and water pollution</p>	<p>Solid Waste Policy and Solid Waste management Regulations still in draft – not yet tabled in Parliament by Ministry of Local Government.</p> <p>Current penalties under Ministry of Local Government Act (outdated) are not a deterrent.</p> <p>Penalties for litter and some categories of solid waste under the Environmental Protection Act are substantial – but Environmental Protection Agency has not been enforcing.</p> <p>The development of an adequate landfill site has been on-going for many years. The new end-date of this project is end of 2010.</p> <p>The Georgetown Solid Waste Management Program is expected to encompass components such as separation of garbage; fees for door to door removal of garbage; removal of plastics from the waste destined for the landfill, communication awareness and participation, among other things.</p> <p>EPA has an Anti-Littering program which seeks to address solid waste management in partnership with the Neighborhood Democratic Councils (NDCs). This program has been challenged by the seeming lack of enthusiasm of NDC and reluctance to point out defaulters. Since its commencement in 2007 – no defaulter has been prosecuted.</p> <p>Water Quality Regulations and regulations exist; however, these have been based on WHO standards and need to be customized for the national situation. Also, they are not enforced due to human, technological and financial constraints.</p> <p>With regard to mining, the Government of Guyana has development the Mining (Amendment) Regulations, 2005. Recently officers employed by the Geology and Mines Commission, as well as miners in several locations across the country, have benefited from training in environmental management, and environmental management systems. Additionally, a draft framework for the development of Environmental Management Systems (EMS) for medium and small scale miners has been prepared.</p>
<p>Increased pressure on/threat to biodiversity</p>	<p>The National Forest Policy (currently being revised) , the Forest Bill 76.01, the National Forest Plan, the Code of Practice are key policies that addresses these issues. Sustainable forest management practices in Guyana are implemented and supported through the various sustainable forest management guidelines and documents, including the National Forest Policy (approved in 1997).</p> <p>The Forest Act of 1953 provided essentially for the following, which also signifies the purpose of Guyana’s forest law with regard to environmental issues: protection of State forests; the enforcement of law relating to State forests; and making of regulations concerning State forests. The new Forest Bill 2009 was promulgated in January 2009. The purpose of the Bill is elucidated in the many new areas, and in some cases modified areas. One of the key new areas within the Bill refers to such environmental concerns: a consolidated effort towards maintaining environmental integrity and social development in communities by using relevant sections of both the Amerindian Act and the Environmental Protection Act 1996. Specific provisions are made for community forest management agreement and extractive and primary processing forest operations. The Forest Bill 2009 specifically recognizes the importance of ensuring sustainability in forest resource utilization. Part 2 of the Bill deals with</p>

	<p>sustainable forest management recognizing that the Minister of Agriculture and Forestry has overall directive input on all activities associated with afforestation, occupational health and safety, forest conservation, maintenance of soil and water quality, and preserving biological diversity. The aspect of forest conservation is especially important and appropriate given that approximately 48% of the total State Forest is at present still unallocated and is largely untouched forest. The Bill also allows for the management of forestry activities through the use of Codes of Practice which will be drafted in a consultative manner and in keeping with international best practices. However, the Bill is to be assented to by the President of Guyana.</p> <p>The Draft National Forest Plan provides the framework and identifies programs and activities that need to be accomplished to ensure implementation of the policy. The NFP also identifies responsibilities for monitoring and providing feedback to the policy and planning process, while the Code of Practice for Timber Harvesting, will assist in minimizing negative impacts of timber harvesting, environmental impacts and operational costs.</p> <p>The Species Protection Regulations, 1999, govern the export trade but contain loopholes. Very little coverage is provided to the domestic trade by other legislation. Penalties for illegal trade in wildlife as stipulated by the SPR, 1999, are not effective. Wildlife Import and Export Regulations which resulted from a review of the Species Protection Regulations, 1999, is in draft. Enforcement and monitoring are a challenge since it has to be done by officers of the Enforcement Agencies, i.e. Police and Customs. In many cases, officers may not be aware of the Regulations.</p> <p>On a more positive note, on June 8th 2009, <i>Guyana's Low Carbon Development Strategy</i> was launched. This Strategy forms a new development path for the nation as it involves Guyana deploying its forests to mitigate global climate change and in return, receiving payments from the world for the carbon absorption service the forests provide. Already Guyana has signed a historic agreement with the government of Norway to pave the way for the latter to provide Guyana with an initial sum of \$250 million dollars that will generate reforms that will transform its economy by investing in low carbon opportunities. As this Strategy provides the framework for Guyana to protect and maintain its forests to combat climate change while simultaneously attract financial resources, it places Guyana as one of the countries in the forefront, and provides a working model for other countries. To support this strategy, Guyana will institute a number of new organizational units and systems, to include: the <i>Office of Climate Change</i>, which to date is functioning (to coordinate all climate-related activities for the nation).</p>
Noise Pollution	<p>There is need for greater enforcement of the existing Environmental Protection (Noise Management) Regulation, 2000, and Guyana's Standard Interim Guidelines for the emission of noise into the environment. This should be supported by a comprehensive public awareness campaign aimed at social behavioral change. Additionally, the Environmental Impact Assessment process empowers the EPA to rescind the environmental permits of operations that do not adhere to specific guidelines for noise control. This is done on rare occasions when a member of the public complains.</p>
Air quality in Georgetown	<p>Guyana has developed Air Water Regulations (2000) but there are no standards for effective implementation. Corporate social responsibility on the part of the private sector is not largely embraced and the principles are not followed. Importantly, the technology used by most industries is not always environmentally friendly due to absence of economic instruments and</p>

	<p>appropriate legislation that would support or prevent the ‘greening’ of operations. In most cases, there are penalties (for example, the polluter pays principle contained in the Environmental Protection Act (1996)), but no incentives. The Government of Guyana has in place a National Energy Policy that takes account of the role of renewable energy and the need for standards. This is significantly reducing Guyana’s dependence on and use of fossil fuels whose combustion contribute to reduced air quality.</p>
Land use planning	<p>Land tenure security must be considered a priority given the fact that some Amerindian communities lack legal titles to their lands. To this end, the Government of Guyana, through the collaborative efforts of the Guyana Lands and Surveys Commission and the Ministry of Agriculture have established systems to expedite the completion of process of issuing land titles to remaining communities. At a more strategic level, the Government of Guyana has established recently a National Land use Committee to address such issues.</p> <p>Importantly, the <i>Amerindian Act 2006</i> gives Amerindian communities legal powers to manage and conserve their lands. Communities can use the powers in this Act to create and enforce protected areas over their lands. Additionally, a community could prohibit or control entry and access to its territory and traditional knowledge, prohibit or control mining, zone its lands, protect sacred sites, regulate hunting, fishing, tourism, research, to list a few. For example, Fairview Village manages its land in collaboration with Iwokrama in order to meet both conservation and community needs. The Wai Wai community also manage their land as an <i>Indigenous and Community Conserved Area (ICCA)</i> and have in place a legal regime, which allows them to enforce the rules of this ICCA. However, the Amerindian Act 2006 does not impose an obligation on Amerindian communities to conserve their lands. Amerindian communities could therefore use their resources unsustainably or in ways that damage the environment. For example, some communities are considering applying for forestry concessions because their own timber resources are depleted. The <i>Environmental Protection Act (1996)</i> allows Amerindians to obtain injunctions to prevent harm to the environment. For instance, as outlined in Guyana’s National Development Strategy (NDS, 1996), all activities that could have impacts on natural resources in Amerindian areas should be subject to an <i>Environmental Impact Assessment (EIA)</i>.</p>
Access housing and basic social services	<p>In recognition of the cause effect relationship between the lack of social infrastructure in housing areas (particularly low income) and unregulated squatting areas, the Government of Guyana needs to articulate more clearly the current ‘implied policy’, which seeks to place environment as a critical component of national socio-economic development; hence environmental issues are addressed within the broader “poverty reduction framework”.</p> <p>The policy should clearly outline Guyana’s social development plan for the future within a sustainable development context. There are currently fragmented sectoral responses, for example, the Low Income Housing Program financed by the IADB and the EU; the Poverty Reduction Strategy Programs, line ministries and the Basic Needs Trust Fund and Social Impact Amelioration Program are implementing special intervention strategies with a focus on infrastructure development and access to basic health and education. The Ministry of Amerindian Affairs has also made significant strides not only in community development but also in supporting and facilitating the empowerment of Amerindian communities.</p>

Table 1 Environmental Priority and National Response

The general feedback from key informants was that Guyana has already developed adequate policies that provide useful overarching frameworks for dealing with current environmental issues, however, implementation and continuity are generally lacking. Many programs and, plans originated from MEAs or are perceived as ‘government led’; as such the public do not see their roles clearly and their relevance to the process. Three common issues are: political will, funding and lack of public support.

SECTION 3 INTERNATIONAL ASSISTANCE PROGRAMS

Section 3 presents an analysis of existing UN assistance programs and aid provided by other international organizations and bilateral donors related to environment and its critical linkages to poverty reduction and development:

International Institution	What has been/is currently done?	Future Programs	Major International Partners
UNDP	<p>Caribbean Renewable Energy Development Program aimed at reduction of policy barriers to developing renewable energy; innovative financing mechanisms for renewable energy products and projects; and increased human capacity</p> <p>GEF funded projects related to implementation of obligations of major MEAs: UNFCCC; UNCBD and UNCCD. This includes Sustainable Land Management Program; Preparation of National Biodiversity Action Plan II; and Guyana’s Second National Communication to UNFCCC Secretariat.</p> <p>Piloting for energy services (electricity, fuel for cooking, transportation in rural areas with very little or no access).</p> <p>National Capacity Self Assessments of the three major MEAs: separate studies were conducted, followed by cross cutting evaluations and the identification of gaps. However, the current focus is on climate change and Guyana Low carbon Development Strategy.</p> <p>Guiana Shield Initiative Phase II Project “Ecological and financial sustainable management of the Guiana Shield Eco-region” which aims to promote the sustainable development of the Guiana Shield by means of an integrated eco-regional (policy, institutional, financial) management framework, designed to enable the six countries (including Guyana) and their local communities</p>	<p>UNDP’s strategic objectives for environment for the past five years were aimed at</p> <ul style="list-style-type: none"> -factoring the value of biodiversity into national planning and to empower Government and local communities to better manage biodiversity and ecosystems. (e.g. through Green Commodity initiative) - developing national capacity to prepare policies and guidelines on access to resources and benefit sharing, strategic development plans, a land use plan and other instruments to guide and govern access to and use of Guyana’s natural resources. -enhancing capacity of indigenous communities and help empower them to develop plans to manage natural resources -empowering women to organize themselves to access other services (health, education, credit, for example) as well as opportunities (e.g. paid employment at equitable rates) that would contribute to improvements in their well-being and economic independence. Economic empowerment of women improves their access to clean water, health care systems, better nutrition, and sanitation facilities in the home, particularly in rural communities. 	CARICOM Secretariat

	to benefit from their natural resources.	<p>Supporting climate change adaptation efforts and the Low carbon Development Strategy based on Government Request.</p> <p>Setting the framework for the implementation of the Poverty-Environment Initiative (PEI)¹²</p> <p>Strengthening National and Local Capacities for Disaster Response and Risk Reduction through: community-based risk and vulnerability mapping; strengthening response capacities; capacity building for early warning systems and coordination support, awareness generation and communication strategy: improve information, coordination and communication capacities.</p>	<p>IADB</p> <p>UNEP/UNDP</p> <p>IADB</p>
UNFPA	<p>Provision of support for the 2010 Population Census through institutional strengthening, plus participation in international meetings;</p> <p>Population statistics provided will help inform the number of carrying capacity of facilities for sewage disposal system, etc</p>	Continuation of current programs.	
UNEP	Global Environment Outlook of Georgetown which assesses the main impacts, and responses, drivers etc. regarding the Georgetown environment.	On-going	

¹² Personal Communication: Ms Patsy Ross, Program Analyst, UNDP.

The Poverty and Environment Initiative – PEI, is a joint program established by the United Nations Development Program (UNDP) and the United Nations Environment Program (UNEP), as an effort to mainstream environment issues into national plans, sectoral strategies, environmental policies, and economic decision making - mainly budgetary allocations, in order to improve poor people’s livelihoods, countries economic growth, and to better achieve the Millennium Development Goals (MDG). PEI strengthens government institutions in order to mainstream poor people’s environmental concerns into countries national plans and budgetary processes.

Source: <http://www.unpei.org/PDF/Inception-Meeting-ReportPNUMA.pdf>

	<p>Review and assessment of existing mechanisms for harmonization of national bio-safety related legislation</p> <p>Preparation of national environmental summary (NES) that will help to consolidate efforts and promote increased collaboration between UNCTs.</p>		
UNICEF	<p>The Country Program of Cooperation supports three programmatic areas: strategic information, policy research and analyses as well as advocacy and dissemination of public information in relation to children and women; improved access to quality health and education services for all children under five years.</p> <p>Specific activities include: safe water harvesting; rehabilitation of water systems and provision of support for school clubs; vulnerability mapping and strategy formulation</p>	<p>Programs will be tailored to address climate change adaptation and mitigation and to ensure youth participation in the implementation of the Low Carbon Development Strategy</p> <p>Provision of on-the-job training at the Ministry of Education and curriculum reform</p> <p>Consolidating Water and Environmental Sanitation (WES) Nutrition Development Program focusing on safe kitchens, preparation of low cost nutrition</p>	World Bank
UNESCO	<p>The main program “Man and the Biosphere” focuses on the identification of heritage sites for protection/preservation; also the development of a national policy in relation to science and a management plan of action.</p>	<p>Cross cutting programs and projects that will focus on education, science, culture and communication. Climate change will be high on the agenda.</p>	
IADB	<p>Remedial operations of water in Georgetown. This includes water distribution, treatment and rehabilitation of systems.</p> <p>Rehabilitation of Georgetown Sewage System</p> <p>Support for the Georgetown Solid Waste Management Program is expected to encompass components such as: separation of garbage; fees for door to door removal of garbage; removal of plastics from the waste destined for the anticipated establishment of the Haags Bosch Landfill</p>	<p>On-going programs</p>	UNDP (specifically for disaster risk reduction)

	<p>Site set to open in 2010.</p> <p>Technical support to pesticides and Toxic Chemical Control Board</p> <p>Phase 2 of Low Income Settlements including affordable housing and establishment of new schemes.</p> <p>Disaster risk reduction focusing on early warning systems, training on disaster management etc.</p>	<p>Support national initiatives aimed at developing country risk indicators and risk evaluation, strengthening of national and local capacity for integrated disaster risk management, and an investment program for flood prevention and mitigation.</p>	
FAO	<p>Provision of technical assistance to Monitoring, Reporting and verification (MRV) associated with REDD initiative</p> <p>Sustainable Land Management initiatives related to capacity building, access to resources, technical expertise; water management.</p>	<p>Climate change adaptation strategies aimed at farm level and Amerindian communities.</p> <p>Training of young people in water management and waste management. Projects are demand driven.</p>	
USAID	<p>Provision of technical assistance to implement a legal verification system and attain Forest Stewardship Council Certification in Guyana wood product sub-sector. This is aligned to Guyana's Low carbon Development Strategy and international market requirements.</p> <p>Expanding market opportunities for sustainable ecotourism by promoting best practices in birding and nature tourism in order to minimize threats to biodiversity</p> <p>Pursuing environmental policy and best practices in the aquaculture sub-sector by improved permitting process and environmental standards.</p>	<p>Projects are on-going.</p>	<p>United States Forest Services</p> <p>Rainforest Alliance Smartwood</p> <p>World Wildlife Fund</p>
EU	<p>EC Project B7-6021/98-02/VIII/FOR – Guyana – Conservation and Sustainable Utilization of biodiversity in the Iwokrama.</p>	<p>EC assistance under the 10th European development Fund (EDF) will concentrate on macro-economic support as well as continued support to the Guyana sea defenses and coastal</p>	<p>IADB, World Bank</p>

	<p>Under 9th European Development Fund the focus was on the rehabilitation and maintenance of sea defenses.</p> <p>Strategic Environmental Assessment (SEA) of the Sea Defense Sector.</p>	<p>management.</p> <p>A specific target of the 10th EDF program will be capacity building within the sea defense administration to prepare for the final hand-over of responsibility for the maintenance of this crucial infrastructure from the EC to the national authorities.</p> <p>The EC's total allocation (2008-2013) foreseen for Guyana to address these priorities amounts to €55.4 million.</p>	
World Bank	<p>New Country Assistance Strategy for 2009-2012 Guyana will receive US\$8.2 million over three years to support the country's development agenda with a focus on strengthening environmental sustainability, and improving education quality and social safety nets.</p> <ul style="list-style-type: none"> • Strengthening environmental resilience and sustainability: the Bank supports the Government's efforts and leadership in this area by helping to establish pilot forest areas that are protected and sustainably managed by local communities, and helping to strengthen the Government's ability to reduce exposure to natural disasters and global climate risk. • Improving education quality and social safety nets: the Bank will help Guyana improve the quality of education through reform of teacher training and better service delivery, and help strengthen the capacity of Government to deliver an enhanced social protection program. 	<p>Projects are on-going.</p>	

Table II Analysis of existing UN assistance programs

SECTION 4 CRITICAL GAPS AND OPPORTUNITIES TO SUPPORT COUNTRY ENVIRONMENTAL PRIORITIES

Section 4 identifies gaps and opportunities with regard to existing policies/programs (both national and international) and in the national legislation for responding to identified environmental issues and their critical linkages to poverty reduction and development. It also highlights opportunities for strengthening the planning processes with support from the UNCT.

The main gaps and opportunities (in no particular order) are identified in the Table III below.

Main Gaps/Needs	Opportunities	Comment
Policy and Legislative Framework		
<p>The need for timely implementation of existing policies, programs and plans by the Environmental Protection Agency, as well as the natural resource sector agencies, due to a pervasive gap: in resource constraints. Current national budgetary allocations are inadequate to execute and/or sustain specific programs.</p>	<p>Rationalization of existing institutional structure, and thorough analysis contemplating possible merger of specific units.</p> <p>Integration of sectoral programs through greater inter-agency collaboration and consolidation of policies programs and plans.</p>	<p>In the case of the Environmental Protection Agency, it is a regulatory institution that requires significant amounts of financial resources to implement its programs that support national environmental policy and legislation.</p> <p>The Environmental Protection Act is the overarching environmental legislation that empowers the EPA to promote, facilitate and coordinate effective environmental management and protection; and the sustainable use of Guyana's natural resources.</p>
<p>Absence of a policy that establishes a framework within which Guyana will pursue specific objectives to support its national programs in the long term (for example, through taxation)</p>	<p>Development of a national policy framework that will link short term social development objectives with sustainability, and clearly identify fiscal measures that will support an 'eco-friendly' economy.</p> <p>Guyana's Low Carbon Development Strategy (2010) provides an opportunity for the establishment of this framework.</p>	<p>The National Development Strategy (2001-2010) should be reviewed to highlight lessons learnt and what new systems should be introduced for the implementation of Guyana Low Carbon Development Strategy (LCDS)</p>
<p>Need for harmonization of legislation to meet MEA obligations.</p> <p>Weak enforcement of current legislation</p>	<p>Consolidating of policies and legislation with respect to natural resource management and environmental protection. The reports of the National Capacity Self Assessments provide a useful point of reference for action.</p> <p>Development of standards and tailoring of standards to give effect to existing environmental legislation and regulations</p>	
<p>Lack of incentives to encourage and facilitate Corporate Social and Environmental Responsibility/Corporate Governance for Sustainability among private sector operations.</p>	<p>Guyana's fiscal policies should be reviewed to identify measures that incentivize or dis-incentivize the private sector's environmental performance.</p> <p>This initiative can be linked to the development of policy that</p>	<p>Climate Change and its risks, the need for mitigation and adaptation measures can be used as the platform to enhance private sector environmental performance</p>

	establishes a framework within which Guyana will pursue specific objectives to support its national programs in the long term.	
Climate change adaptation and mitigation measures are not captured in the environmental impact process in Guyana.	The issue if climate change provides an invaluable opportunity for Guyana to review and update the Environmental Protection Act , No. 11 of 1996 to include SEAs, as well as to make it mandatory for developers to consider climate risks and impacts as part of environmental impact assessment.	
Limited baseline data that can inform good decision-making	Now that Guyana has launched its Low Carbon Development Strategy, there is evidence of the channeling of resources for base-line studies, for example, through remote sensing.	
Organizational/Institutional Framework		
Need to decentralization of environmental monitoring and enforcement responsibilities	Decentralize environmental management functions of the EPA by establishing regional offices with adequate financial, human and material support within the Regional Democratic Councils (RDCs). Empowering and encourage communities to monitor environmental change and provide feed-back to RDCs.	Simple checklist can be developed and community members can be trained to conduct assessments.
Lack of planning instruments due to the non- existence of a Ministry of Environment (strategic level of institutional structure), and the fact that the current Environmental Protection Agency has a broad regulatory mandate to protect and conserve Guyana’s natural resources and environment.	To ensure effective planning, SEAs should be extended to the Poverty Reduction Strategy program, the National Development Strategy, and the current Low Carbon development Strategy.	Guyana EPA is not involved in strategic planning and policy development for sustainable development. To date, Strategic Environmental Assessments have been conducted for forestry, sea defense, mining and energy.
Absence of a Legal Unit within the EPA.	In the light of emerging environmental issues related to climate change impacts, the absence of regulations to support policies, and the need for proper land use planning, the EPA may need to re-establish its legal Unit. Importantly, the EPA may evaluate the convenience of rationalizing its current institutional structure, given the human and technological capacity constraints of the agency.	Total dependence on the Attorney General’s Office for the drafting of legislation puts undue pressure on this institution that is already operating with capacity constraints. This results in long delays. The legal unit of the EPA became defunct over five years ago.

Greater involvement of civil society; in particular, NGOs are not very active or vigilant in matters pertaining to sustainable development.	Expansion of current governance systems for natural resource and environmental management in Guyana by increasing the level of engagement of civil society at more strategic levels.	In most cases, NGOs have been reactive. Civil society engagement must transcend public consultations. There is need for their integral involvement in the design and implementation of policies
Others		
Environmental education, to a large extent, is an appendage to existing programs and needs to be integrated through intersectoral planning (Health Education etc.)	Review of National Education Policy with the view to addressing the issue of education for sustainability. Development and implementation of sustained comprehensive public outreach programs with adequate resources to change social behavior towards the environment, using Information Communication Technology; plus consolidation of efforts at infusing environmental topics in the formal curriculum of schools and the universities (both public and private).	There is need to revive the National Environmental Education Advisory Board. This Board was created in the early 1990's to advise the Environmental Division of the Guyana Agency for Health Science Education, Environment and Food Policy (GAHEF) that became defunct in 1992. Many of the senior officers found alternative employment and as a consequence, the National Environmental Education Advisory Board ceased to function.
Consistency of environmental messages on climate change to optimize impact on public 'buy in' and public behavior.	Consolidation of public education outreach on climate change. The recent development of the National Public Awareness Program and Implementation Strategy ¹³	In the absence of the National Environmental Education Advisory Committee, the current National Climate Committee can coordinate public awareness programs and activities, through its Education Sub-Committee.
Mapping and monitoring of environmental changes in terms of natural resource use, climate change.	The MRV system that is developed for Guyana LCDS creates the framework that can be expanded to sectors, other than forestry.	Research capacity at sectoral organizations is weak. The use of remote sensing and Geographic Information Systems (GIS) in the MRV system for the forestry sector is invaluable to mapping environmental change in other sectors.
Lack of a national water quality management system.	The recent launch of the National Water Council provides an opportunity (at the strategic level) for the development of a National water quality management system.	Present land use conflicts on the coast, coupled with projected impacts of climate change and current weak capacity for water resources management necessitates

¹³ The document was prepared as part of Guyana's preparation of its Second National Communication on the country's obligations to the UNFCCC.

		that urgent action be taken to address this issue.
Absence of a national program to address hazardous waste management	The passage of the 2000 Hazardous Waste Management Regulation under the Environmental Protection Act, No. 11 of 1996, provides an opportunity for Guyana to develop and implement a framework for the management of hazardous waste and associated pollution.	

Table III Main Gaps and the Opportunities to support Country Environmental Priorities

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Annex Ia List of key informants

Name	Position	Organization
Colleen Noble	Environmental Program Officer	USAID
Denise Simmons	Chairperson	Environmental Assessment Board
Dr. Indarjit Radmdass	Executive Director	Environmental Protection Agency
Dr. Lystra Fletcher	Country Representative	Country Representative
Dr. Roger Luncheon	Head of Presidential Secretariat	Office of the President
Gitanjali Chadarpal	Coordinator	National Climate Unit, Ministry of Agriculture
Gitanjali Chandarpal	Climate Change Expert	Office of Climate Change, Office of the President
Harold Davis	Agricultural Director	Guyana Sugar Corporation
Ian Jones	Water and Environmental Sanitation Officer	UNICEF
Inge Nathoo	Secretary General	UNESCO-Guyana Office
Janelle Leitch	Operations Specialist	IADB
Javier Grau	Water and sanitation Specialist	IADB
Marco Nicola	Country Representative	IADB
Marlon Bristol	Poverty Analyst	UNDP
Michelle Rodriguez	Education Officer	UNICEF
Patrice La Fleur	Assistant Representative	UNFPA
Patsy Ross	Program Specialist	UNDP
Pradeepa Bholanauth	Head of the Planning and Development Division	Guyana Forestry Commission
Pradeepa Bholanauth	Head of Planning and Development Division	Guyana Forestry Commission
Sandra Britton	Head, Energy & Energy Statistics Division	Guyana Energy Agency
Savitri Jettoo	Scientific Services Manager	Guyana Water Incorporated

Annex Ib Interview Schedule

1. What do you consider as the main environmental issues affecting Guyana?
2. Why do you consider as the drivers (root causes) of those issues?
3. Do you think that the current policies are effectively addressing the issues you have cited? What are the gaps?
4. Do you think that current programs (environment and development) are adequately addressing those issues you have cited? Kindly give reasons for your response.
5. Kindly identify and describe any current programs that your institution is executing as a direct response to the issues you have cited. Kindly give reasons for your responses.
6. Kindly identify and describe any future programs that your institution will implement in an effort to address those issues you have mentioned.
7. Do you have other comments? Please provide details

Annex II. Participation in Multilateral Environmental Agreements

Multilateral Environmental Agreements (MEAs)	Accession	
	Yes	No
Vienna Convention for the Protection of the Ozone Layer, the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer	X	
Cartagena Protocol on Biosafety		X
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	X	
Stockholm Convention on Persistent Organic Pollutants (POPs)	X	
International Convention for the Prevention of Pollution from Ships Basel Convention	X	X
UN Convention on the Law of the Sea (UNCLOS)	X	
Convention on the Prevention of Marine Pollution from Ships		X
Convention on Wetlands of International Importance especially as Waterfowl Habitat		X
Kyoto Protocol		
UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage	X	
United Nations Convention to Combat Desertification	X	
United Nations Conventions on Biological Diversity	X	
United Nations Framework Convention on Climate Change	X	

Annex IIIa. Analysis of environmental financial assistance by organization for the last 5 years (Note: There are gaps in data provided by agencies)

International project/International agency or Bilateral donor	Total Number of Projects in Country	Environment related Projects % of total	Total funds	% of total funds allocated to environmental related projects
IDB	14 (2005-2009)	US\$ 28, 6000,000	US\$ 182,062,322	12,9000,000
EU	NA	NA	€262 million ¹⁴	NA
UNDP	NA	9M (Current)	US\$3,338,630.09 + €2,243,943	NA
USAID Tourism (Ecotourism. Biodiversity)	7 (2009-2013)	US\$ 14, 3000,000	US\$ 82,600,000	16, 300,000
FAO	2 (2005 – 2009)	US\$ 618,489	US\$ 2,886,764	21%
UNICEF	7 (2006 – 2011)	US\$ 212,227	US\$ 6,500,000	3%

¹⁴ Since the Lomé I Convention to the Lomé IV bis Guyana has been allocated €262 million under the various funding mechanisms.

Annex IIIb. List of International Project implemented in 2005-2009 and planned for 2010-2015

Bilateral Donor	Project	Implementing agency (in Country)	Total Funds	Timeline	Note
IDB	Trade and Tourism (ecotourism, biodiversity) To provide support to enterprise, private sector and government to help Guyana become more competitive and exploit market opportunities.		US\$13,500,000	2009-2013	On-going
	Georgetown Solid Waste Management Program	Ministry of Local Government	US\$20,570,000	2006-2009	On-going
	Second Low income Settlement Programme	Ministry of Housing and Water	US\$27,132,755	2009 onwards	On-going
	Preparation of the Integrated Management Plan for Natural Disasters	Civil Defense Commission	US\$1,250,000	Current	On-going
	Supporting Guyana's Low Carbon Development Strategy	Office of Climate Change-Office of the President	US\$509,000	On-going	

	Preparation of the Integrated Management Plan for Natural Disasters	Office of the President	US\$1,250,000	Current	
	Measurement of Climate Change Impacts and Eco-system Services in Iwokrama	Iwokrama International centre for Rainforest Conservation and Development	US\$286,875	On-going	
EU ¹⁵	Sea Defenses: rebuilding of critically damaged and destroyed sections Transport infrastructure: developing trans-coastal communication in the form of rehabilitating roads, ferries and bridges. (some of the activities have been covered in the regional fund)	Government of Guyana: Ministry of Finance	€55.4 million	2008-2013	On-going

¹⁵ Information for EU projects has been taken from Guyana Country Environmental Profile funded by EC, 2006.

	<p>Social infrastructure: Improvement of water supply systems</p> <p>Use of SASP funds to give budgetary support to the Social Sector, mainly in Health and Education.</p>				
UNDP	<p>Capacity Building for the Management of Natural Resources and the Environment Project (particularly, biodiversity, pollution prevention)</p> <p>Public Awareness Project (I cannot find the official name of the project, but the GREEN FUND was developed from this project)</p> <p>Review and Assessment of Existing Mechanisms for Harmonization of Bio-safety related Legislation in Guyana (2005) using UNEP</p>				

	Funds				
	Caribbean Renewable Development Energy (Regional)	CARICOM/Guyana Energy Authority	US\$ 4,426,000	Current	On-going
	Capacity Building and Demonstration Projects for Electrification of Hinterland and Un-served Areas, Utilizing Renewable Energy	Office of the Prime Minister	US\$ 255,000	Current	Nearing completion
	Capacity Development and Mainstreaming for Sustainable Land Management	Guyana Lands and Surveys Commission	US\$ 515,630.09	Current	On-going
	Ecological and financial Sustainable Management of the Guiana Shield Eco-region - GSI Phase II Project	Environmental Protection Agency	€2,243,943	On-going	Nearing completion
	Assessment of Capacity Building Needs, Preparation of Second and Third National Reports (CBD) and the Clearing House Mechanism	Ministry of Agriculture	US\$ 272,000	On-going	Nearing completion

	UNFCCC Enabling Activities (SNC)	Ministry of Agriculture	US\$ 455,000	July 2007-June 2010	On-going
	Terminal Phase Out Management Plan: Investment Interventions & Technicians Training	Environmental Protection Agency	US\$ 215,000	May 2008-May 2009	On-going
	National Capacity Self Assessment	Environmental Protection Agency	US\$ 200,000	March 2008-June 2009	Completed
	Strengthening National and Local Capacities for Disaster Response and Risk Reduction Project	Office of the President	US\$ 140,000	Dec 2008 - Sep 2009	Ongoing
UNICEF	Initiation and development of partnership with UK National Committee for UNICEF and Government of Guyana (n.b. expected receipt of @US\$500,000 through fund raising events in UK for Climate Change initiatives)	Ministry of Foreign Affairs & Office of the President	US\$16,701	March 2009 to October 2009 and ongoing	Ongoing
	Facilitation for distribution of donation of 37,000 pairs of Crocs	Ministry of Education	US\$40,000	July 2009 to March 2010	Completed

	shoes to children in hinterland & riverain schools (part of support for environmental health programme through curriculum)				
	Support to Region 2 Education Department to undertake WASH focused School Improvement Plans	Ministry of Education	US\$120,000	July 2009 to December 2009	Completed
	Support for GWInc Hinterland Unit project: Community Solar water pump and supply system at St Denny's Mission	Ministry of Housing & Water (Guyana Water Inc)	US\$16,514	April 2010 to June 2010.	Nearing completion
	Climate change youth advocacy sessions	Ministry of Culture, Youth & Sport	US\$6,312	August 2009	Completed
	Support to Ministry of Education to infuse adaptation & mitigation to climate change within curriculum	Ministry of Education	US\$10,000	January 2010 to December 2010	Ongoing
	Provision of indicator H2S water quality testing kits to Ministry of Education, Ministry	Ministry of Education, Ministry of Health & Ministry of Housing & Water	US\$2,700	June 2009 to May 2011	Ongoing

	of Health & Ministry of Housing & Water				
FAO	Validation of 15 priority indicators of sustainability in the Amazon forests	Government of Guyana	US \$ 374, 562* * this is a regional project of which Guyana is one of nine beneficiary countries	2006 – 2011	On-going
	Assist in the development of a regional strategy of cooperation for the prevention, control and combat of forest fires	Government of Guyana	US \$ 243,927** ** this is a regional project of which Guyana is one of 34 beneficiary countries	Oct 2004 – Jun 2006	Completed
World Bank	Strengthening environmental resilience and sustainability Improving education quality and social safety nets	Government of Guyana: Ministry of Finance	US\$8.2 million	2009-2012	On-going