PROJECT PROFILE

BELIZE

I. BASIC DATA

Project Name:	Solid Waste Management Project II		
Project Number:	BL-L1021		
Project Team:	María Julia Bocco, Keisuke Sasaki, Hubert Quille, Alfredo Rihm, and Irene Cartin (INE/WSA); Stefanie Brackmann (VPS/ESG); Taos Aliouat (LEG/SGO); Venetia Eck-Salazar and John Primo (CID/CBL); Andrés Suárez Sandoval (FMP/CCR); and Javier Grau (WSA/CPN), Team Leader		
Borrower:	Belize		
Executing Agency:	Solid Waste Management Authority (SWaMA)		
Financial Plan:	IDB:	US$	10,000,000.00
	Local:	US$	500,000.00
	Total:	US$	10,500,000.00
Safeguards:	Policies Triggered:	OP-703 (B.1, B.2. B.3, B.4, B.5, B.6, B.7, B.9, B.10, B.11, B.17), OP-102, OP-704, OP-761, OP-765, OP-710.	
	Classification:	B	

II. GENERAL JUSTIFICATION AND OBJECTIVES

2.1 **Sector Diagnosis**. In 2014, Belize's estimated population was 358,996 inhabitants, 55% of whom lived in rural areas. Belize is divided into six districts: Orange Walk and Corozal in the north, Belize and Cayo in the center and Stann Creek and Toledo in the south. According to the 2010 census, the northern and southern regions accounted for 48% of the total population while the two central districts and the northern islands, which includes Belize City, Belize's main urban area, accounted for the remaining 52%. Access to a proper solid waste collection and disposal service varies significantly between regions[1]. Belize's only regional sanitary landfill covers most areas in the central districts, while the northern and southern regions dispose of their Municipal Solid Waste (MSW) in open dumps with little or no environmental or health control.

2.2 Historically, Solid Waste Management (SWM) in Belize did not meet the needs of the country. Its poor performance became a risk for the environment, the health of the growing population and the tourism industry. At the same time, growing numbers of tourist arrivals have recently placed increased pressure on existing solid waste collection and disposal services. Until 2009, solid waste collected in cities and towns throughout the country was discharged in open or partially

[1] Studies conducted in 2011 show that solid waste generation in San Ignacio, Belize City, San Pedro and Caye Caulker varies between 0.99 and 1.24 kilogram per capita per day[1]. Assuming a generation of one kilogram per capita per day, he MSW generated in Belize is approximately 120,000 tons per year.

controlled dumps. These facilities used to lack the appropriate technical and environmental controls and operated without adequate equipment or sufficient cover material. In coastal areas, the inadequacy of waste disposal practices has been a matter of concern due to the environmental vulnerability of the islands, the occurrence of natural disasters, and the proximity of these islands to coral reefs.

2.3 **Solid Waste Management Program (SWMP)**. In 2009, the Bank approved the first SWMP (BL-L1006). This project, which is to conclude in June 2015, has resulted in the construction of the first sanitary landfill in Belize located at Mile 24 of the George Price Highway, the highway connecting Belize City, Belmopan and San Ignacio on the border with Guatemala. This new sanitary landfill, which began operations in August 2013, is already benefiting urban areas in the districts of Belize and Cayo, including Belize City. By June 2015, the landfill should also benefit San Pedro and Caye Caulker, two major tourism destinations in the northern islands. Dumpsites in the Western Corridor (Belize City and San Ignacio) and in the islands of Ambergris and Caye Caulker are being closed and replaced by transfer stations, from where solid waste is being safely transported to the Mile 24 Regional Sanitary Landfill[2]. Benefits of the project have also included the absence of fire incidents and the related environmental and health impacts since 2010 at the sites of the former dumpsites in Belize City and San Ignacio.

2.4 The SWM Authority Act of 2000 (SWMAA 2000) establishes the structure and functions of the Solid Waste Management Authority (SWaMA), a corporate body with an independent legal status responding to the authority of the Ministry of Natural Resources and Agriculture (MNRA). The creation of SWaMA has improved the institutional framework for the sector, allowing for improvements in waste collection and disposal, better coordination among key actors, and developing a strategy to address the challenges faced by the sector. The first SWMP contributed to the strengthening of SWaMA through training programs, development of guidelines for proper construction and operation of SWM facilities, the development of tariff studies and the preparation of the SWM Policy and Strategy. The new operation is to consolidate the SWaMA to allow it to cover the entire country with a focus on improving the management capabilities for all SWM collection and disposal activities.

2.5 **Remaining Sector Challenges**. Despite these improvements, there are still outstanding challenges that must be addressed to advance in the performance of the sector, including improving collection, transportation and final disposal in the southern (Stann Creek and Toledo districts) and northern (Corozal and Orange Walk districts) regions[4]. Furthermore, as regards the strategic development of the sector and its links with tourism, improving the management of special wastes

[2] As of April 2015, transfer stations were already in operation in Belize City and San Ignacio. Transfer stations in Caye Caulker and San Pedro will be completed by June 2015. An additional transfer station in Boomroad, covering urban areas north of Belize City, should be completed by the end of 2015.

[4] These four districts have the highest poverty levels in Belize. According to the 2009 Country Poverty Assessment, in that year, poverty affected 31% of the population in Belize. The highest incidence of poverty was in Toledo and Corozal, with 46.4% and 46.1% of the households being poor. The poverty rate was also higher than the average in Orange Walk, with 36.7%, and in Stann Creek with 31.7%.

such as cruise ship waste, hazardous, and medical waste, ensuring financial sustainability of the solid waste sector, and educating the public about the importance of reduction, recycling, and reuse are high on the agenda for an efficient and effective SWM.

2.6 According to the 2010 Census, in that year only 55% of the population disposed residential solid waste through municipal collection or private garbage trucks. Also, in 2010, all MSW was disposed in open dumps. Since 2010, the figures in the central districts of Belize and Cayo have improved and currently over 65% of the MSW in these districts is safely disposed in the regional sanitary landfill located in Mile 24. However, the southern and northern districts have not seen any major improvement in collection and disposal since 2010 and the situation remains critical. In these districts, the disposal of MSW in environmentally harmful ways including improper dumping of solid waste on land, burning waste, and throwing waste in rivers, seas, or ponds is prevalent. Of the various ways of improper disposal, burning is the most commonly used in the northern and southern regions, where burning waste is practiced by 36.5% of the households in Corozal, 39.4% in Orange Walk, and 52% in Toledo. None of the four districts in northern and southern Belize uses a sanitary landfill for final disposal, so even when there is municipal collection, final disposal still takes place in open dumpsites.

2.7 In relation to the tourism sector, SWM in the regions not covered by the first SWMP is having a negative impact on Belize's image. In the National Sustainable Tourism Master Plan (NSTMP) for Belize 2030, "insufficient waste disposal" was identified as a key constraint on tourism growth. In both the northern and southern regions, improper solid waste disposal and its related health and environmental impacts were identified as a common challenge of SWM.

2.8 The GOB has identified tourism as one of the key sectors to boost economic growth. Presently, key tourist destinations in Belize such as Ambergris Caye, Caye Caulker, Belize City and San Ignacio/Santa Elena are benefiting from the first SWMP. With prospects for tourism expansion in the Northern and Southern Corridors, finding lasting solutions for SWM in these areas becomes a priority to realize positive growth in tourism revenues.

2.9 **Country Strategy**. There is a clear consensus by the GOB that the solid waste sector must be strengthened and improved with a view to preserving the delicate balance of Belize's natural resources in an environmentally sustainable and efficient manner. As reflected in the GOB's medium and long term documents: Horizon 2030, National Development Framework for Belize 2010-30 and Belize Medium Term Development Strategy 2010/2013, the GOB has identified improving the management of the solid waste sector as one of its main priorities in its short and medium term development goals.

2.10 The GOB has requested the Bank a new operation to improve SWM in key emerging tourism destinations in Belize, areas that were not addressed under the first SWMP. These emerging areas include Belize's southern and northern

regions. The operation is also consistent with the Bank's Country Strategy with Belize (2013-17), which includes "improve SWM in and around emerging tourism areas" under the tourism priority area.

2.11 **Program Consistency with Bank Strategy**. The proposed operation is aligned with the Ninth General Increase in the Resources of the IDB (GCI-9) lending targets "Lending to support climate change initiatives, sustainable energy and environmental sustainability" and "Support development to small and vulnerable countries." Lastly, it is aligned with the second GCI-9 sector priority "Infrastructure for competitiveness and social welfare."

2.12 **Program's Objectives**. The objective of the program will be to improve SWM practices and reduce environmental pollution in Belize's emerging tourism destinations in northern and southern Belize. Component 1: Capital Investments will be aimed at constructing sanitary landfills and transfer stations, recycling, composting, and treatment facilities and closing of open dumpsites; and Component 2: Institutional Strengthening aimed at ensuring cost recovery mechanisms[6], social communication programs and improving the management of waste streams other than MSW. This new operation will address innovation in the solid waste sector in Belize by incorporating activities aimed at reducing the generation of MSW and incorporating waste separation at the point of generation. The Proposal for Operation Development (POD) will detail the specific activities within each component and the specific geographic scope of the program.

III. TECHNICAL ISSUES AND SECTOR KNOWLEDGE

3.1 The program is being designed based on the Bank's experience in the solid waste sector in Latin America and the Caribbean and the lessons learned from the first SWMP in Belize. A Technical Cooperation (TC)[7] is examining technical, environmental, institutional, and financial issues including: (i) current MSW generation and composition; (ii) environmental impacts of current solid waste disposal practices and of proposed interventions; (iii) analysis of alternatives for solid waste treatment and disposal; (iv) identification of proposed sites for transfer stations and sanitary landfills/treatment facilities; (v) designs for closure of existing dumpsites; and (vi) analysis of cost recovery mechanisms.

3.2 As part of the previous loan operation, studies to better understand critical issues related to SWM collection and disposal have been completed. These studies, which include: (i) a waste characterization and composition study in the central regions of Belize; (ii) the development of a SWM Plan, Policy and Strategy; and (iii) the development of a cost recovery mechanism, will facilitate the preparation of the proposed loan operation.

[6] As part of the first SWMP, a cabinet paper presenting different options for cost recovery was presented to the GOB Cabinet. These options include: (i) property tax for private persons and of the trade license for businesses, (ii) direct solid waste service fees, (iii) tipping fees collected from all vehicles arriving at the transfer stations, (iv) surcharge on utility fee such as electricity and water bills, (v) direct billing of users by a private sector operator, (vi) prepaid bags, and (vii) direct quantity based billing at the point of collection.

[7] BL-T1067 - Solid Waste Master Plan for Tourist Areas.

IV. SAFEGUARDS AND FIDUCIARY SCREENING

4.1 In general terms, the program will have a positive impact through proper collection, treatment and disposal of MSW, presently discharged in open or partially controlled dumps, and/or burned; and will increase public health and the overall quality of life of local residents.

4.2 Given that based on the currently available information, the project is likely to cause mostly local and short-term negative environmental and social impacts and for which effective mitigation measures are readily available, an environmental classification of Category B is proposed. Impacts and risks during construction, operation and closing of dumpsites could occur from inadequate health and safety management; inadequate management of hazardous materials and MSW; accidental spills, degradation of soil, flora and fauna, and impacts on water quality due to leachate discharge which do not meet effluent standards.

4.3 One key outcome of the BL-T1067 is the preparation of the environmental and social studies and environmental, social, health and safety (ESHS) management documents for the proposed project. For further information please refer to Annex III Environmental and Social Strategy (ESS).

V. OTHER ISSUES

5.1 The Country Program Evaluation for Belize covering the period 2008-2012 and prepared by the Office of Evaluation and Oversight (OVE) identified limited capacity in terms of human resources and institutions as a risk to Bank financed operations in Belize. A need has been identified to ensure that project design matches institutional capacities, avoiding overly ambitious and complex designs. In this operation, this risk is mitigated as the loan operation will be executed by SWaMA, which has ample experience in executing Bank projects and which has successfully implemented the first SWMP.

5.2 A common risk in this type of investment project is the lack of execution readiness at the time of eligibility. In projects that include civil works, this can be due to problems in the acquisition of land or other regulatory requirements including complex decision making and consultation processes. However, under the first SWMP, SWaMA avoided these risks by planning ahead of time all the requirements needed to procure the construction of the sanitary landfill and transfer stations. For the proposed new operation, SWaMA has already initiated the acquisition of land needed for future infrastructure works.

VI. RESOURCES AND TIMETABLE

6.1 An estimated budget of US$90,015 from the Bank's administrative budget will be needed in order to prepare this operation (consulting services and four missions). POD distribution to the QRR is expected on September 3, 2015; approval of the DLP by the OPC on October 09, 2015; and approval of the Loan Proposal by the Board of Executive Directors on November 18, 2015 (see Annex V).

SAFEGUARD POLICY FILTER REPORT

PROJECT DETAILS	
IDB Sector	WATER AND SANITATION-SOLID WASTE
Type of Operation	Investment Loan
Additional Operation Details	
Investment Checklist	Waste Disposal
Team Leader	Grau Benaiges, Javier (JAVIERGR@iadb.org)
Project Title	Solid Waste Management Project II
Project Number	BL-L1021
Safeguard Screening Assessor(s)	Brackmann, Stefanie U. S. (SBRACKMANN@iadb.org)
Assessment Date	2015-04-29

SAFEGUARD POLICY FILTER RESULTS		
Type of Operation	Loan Operation	
Safeguard Policy Items Identified (Yes)	Activities to be financed by the project are in a geographical area and sector exposed to natural hazards* (Type 1 Disaster Risk Scenario).	(B.01) Disaster Risk Management Policy– OP-704
	The Bank will make available to the public the relevant Project documents.	(B.01) Access to Information Policy– OP-102
	The operation (including associated facilities) is screened and classified according to their potential environmental impacts.	(B.03)
	The Borrower/Executing Agency exhibits weak institutional capacity for managing environmental and social issues.	(B.04)
	The operation may be of higher risk due to controversial environmental and associated social issues or liabilities.	(B.04)
	An Environmental Assessment is required.	(B.05)
	Consultations with affected parties will be performed equitably and inclusively with the views of all stakeholders taken into account, including in particular: (a) equal participation of women and men, (b) socio-culturally appropriate participation of indigenous peoples and (c) mechanisms for equitable participation by vulnerable groups.	(B.06)

	The Bank will monitor the executing agency/borrower's compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations.	(B.07)
	The operation has the potential to impact the environment and human health and safety from the production, procurement, use, and disposal of hazardous material, including organic and inorganic toxic substances, pesticides and Persistent Organic Pollutants (POPs).	(B.10)
	The operation has the potential to pollute the environment (e.g. air, soil, water, greenhouse gases...).	(B.11)
	Suitable safeguard provisions for procurement of goods and services in Bank financed projects may be incorporated into project-specific loan agreements, operating regulations and bidding documents, as appropriate, to ensure environmentally responsible procurement.	(B.17)
Potential Safeguard Policy Items(?)	Potential disruption to people's livelihoods living in the project's area of influence (not limited to involuntary displacement, also see Resettlement Policy.)	(B.01) Resettlement Policy– OP-710
	Potential to negatively affect Indigenous People (also see Indigenous Peoples Policy.).	(B.01) Indigenous People Policy– OP-765
	Is this project specifically designed to address indigenous peoples issues?	(B.01) Indigenous People Policy– OP-765
	Does this project offer opportunities for indigenous peoples through its project components?	(B.01) Indigenous People Policy– OP-765
	The operation itself has a potential to exacerbate hazard risk* to human life, property, the environment or the operation itself (Type 2 Disaster Risk Scenario).	(B.01) Disaster Risk Management Policy– OP-704
	Is this project specifically designed to address gender equality or women's empowerment issues?	(B.01) Gender Equality Policy– OP-761
	Does this project offer opportunities to promote gender equality or women's empowerment through its project components?	(B.01) Gender Equality Policy– OP-761
	The operation is in compliance with environmental, specific women's rights, gender, and indigenous laws and regulations of the country where the operation is being implemented (including national obligations established under ratified Multilateral Environmental Agreements).	(B.02)

	Other environmental and social sustainability issues that the Project Team considers to be a risk for this operation. (e.g. wood sourced from Amazon rainforest).	(B.04)
	Environmental or culturally sensitive areas, defined in the Policy as critical natural habitats or critical cultural sites in project area of influence.	(B.09)
	Conversion of Natural Habitats in project area of influence.	(B.09)
Recommended Action:	Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PP (or equivalent) and Safeguard Screening Form to ESR. The project triggered the Disaster Risk Management policy (OP-704). A Disaster Risk Assessment (DRA) may be required (see Directive A-2 of the DRM Policy OP-704) in case of high risk, a limited DRA in case of moderate risk. Next, please complete a Disaster Risk Classification along with Impact Classification.	
Additional Comments:		

ASSESSOR DETAILS

Name of person who completed screening:	Brackmann, Stefanie U. S. (SBRACKMANN@iadb.org)
Title:	
Date:	2015-04-29

COMMENTS
No Comments

SAFEGUARD SCREENING FORM

PROJECT DETAILS

IDB Sector	WATER AND SANITATION-SOLID WASTE
Type of Operation	Investment Loan
Additional Operation Details	
Country	BELIZE
Project Status	
Investment Checklist	Waste Disposal
Team Leader	Grau Benaiges, Javier (JAVIERGR@iadb.org)
Project Title	Solid Waste Management Project II
Project Number	BL-L1021
Safeguard Screening Assessor(s)	Brackmann, Stefanie U. S. (SBRACKMANN@iadb.org)
Assessment Date	2015-04-29

PROJECT CLASSIFICATION SUMMARY

Project Category: B	**Override Rating:**	**Override Justification:**
		Comments:
Conditions/ Recommendations	• Category "B" operations require an environmental analysis (see Environment Policy Guideline: Directive B.5 for Environmental Analysis requirements). • The Project Team must send to ESR the PP (or equivalent) containing the Environmental and Social Strategy (the requirements for an ESS are described in the Environment Policy Guideline: Directive B.3) as well as the Safeguard Policy Filter and Safeguard Screening Form Reports. • These operations will normally require an environmental and/or social impact analysis, according to, and focusing on, the specific issues identified in the screening process, and an environmental and social management plan (ESMP). However, these operations should also establish safeguard, or monitoring requirements to address environmental and other risks (social, disaster, cultural, health and safety etc.) where necessary.	

SUMMARY OF IMPACTS/RISKS AND POTENTIAL SOLUTIONS

Identified Impacts/Risks	Potential Solutions
The project will or may require involuntary resettlement and/or economic displacement of a minor to moderate nature (e.g. from informal waste collection and recycling by squatters and	**Develop Resettlement Plan (RP):**The borrower should be required to develop a simple RP that could be part of the ESMP and demonstrates the following attributes: (a) successful engagement with affected parties via a process of Community Participation; (b) mechanisms for delivery of compensation in a timely and efficient fashion; (c) budgeting and internal capacity (within borrower's organization) to monitor and manage resettlement activities as

others who may scavenge on landfill sites) and does not affect indigenous peoples or other vulnerable land based groups.	necessary over the course of the project; and (d) if needed, a grievance mechanism for resettled people. Depending on the financial product, the RP should be referenced in legal documentation (covenants, conditions of disbursement, project completion tests etc.), require regular (bi-annual or annual) reporting and independent review of implementation.
Minor or moderate conversion or degradation impacts to natural habitats (such as forests, wetlands or grasslands).	**Ensure Proper Management and Monitoring of the Impacts of Natural Habitat Loss:** A Biodiversity Management Plan (BMP) should be prepared that defines how impacts will be mitigated (roles and responsibilities, monitoring, budget, etc.) and could be incorporated in the ESMP. Depending on the financial product, the BMP should be referenced in appropriate legal documentation (covenants, conditions of disbursement, etc.). Confirmation should be obtained from competent experts that they are confident that the plan can mitigate impacts and also that the relevant authorities have approved the BMP.
The project is likely to negatively change the use of the land but the related negative impacts will be minor to moderate in nature.	**Land use:** A Plan should be prepared that defines how land use change will be mitigated (roles and responsibilities, monitoring, budget, etc.) and could be incorporated in the ESMP. Proper consultation should be foreseen. Confirmation should be obtained from experts that the plan can mitigate impacts and also that relevant authorities have approved the Plan. Examples of mitigation include reforestation, GHG offsetting, nutrient fixation in soils, conservation of biodiversity.
The negative impacts from production, procurement and disposal of hazardous materials (excluding POPs unacceptable under the Stockholm Convention or toxic pesticides) are minor and will comply with relevant national legislation, IDB requirements on hazardous material and international standards and guidelines such as the IFC Waste Management Guidelines (if applicable).	**Monitor hazardous materials use:** The borrower should document risks relating to use of hazardous materials and prepare a hazardous material management plan that indicates how hazardous materials will be managed (and community risks mitigated). This plan could be part of the ESMP.
Generation of solid waste is moderate in volume, does not include hazardous materials and follows standards recognized by multilateral development banks.	**Solid Waste Management:** The borrower should monitor and report on waste reduction, management and disposal and may also need to develop a Waste Management Plan (which could be included in the ESMP). Effort should be placed on reducing and re-cycling solid wastes. Specifically (if applicable) in the case that national legislations have no provisions for the disposal and destruction of hazardous materials, the applicable procedures established within the Rotterdam Convention, the Stockholm Convention, the Basel Convention, the WHO List on Banned Pesticides, and the Pollution Prevention and Abatement Handbook (PPAH), should be taken into consideration.
Likely to have minor to moderate emission or discharges that would negatively affect ambient environmental conditions (potentially from dust, odor, pest species, surface and groundwater pollution)..	**Management of Ambient Environmental Conditions:** The borrower should be required to prepare an action plan (and include it in the ESMP) that indicates how risks and impacts to ambient environmental conditions can be managed and mitigated consistent with relevant national requirements and international standards and guidelines such as the IFC Waste Management Guidelines (as appropriate). The borrower should (a) consider a number of factors, including the finite assimilative capacity of the environment, existing and future land use, existing ambient conditions, the project's proximity to ecologically sensitive or protected areas, and the potential for cumulative impacts with uncertain and irreversible consequences; and (b) promote strategies that avoid or, where avoidance is not feasible, minimize or reduce the release of pollutants, including strategies that contribute to the improvement of ambient conditions when the project has the potential to constitute a significant source of emissions in

	an already degraded area. The plan should be subject to review by qualified independent experts. Depending on the financial product, this information should be referenced in appropriate legal documentation (covenants, conditions of disbursement, etc.).
Safety issues associated with structural elements of the project (e.g. on-site plant and refuse collection vehicles, etc), or road transport activities (e.g. increases in heavy vehicle movements, etc.) exist which could result in moderate health and safety risks to local communities.	**Address Community Health Risks:** The borrower should be required to provide a plan for managing risks which could be part of the ESMP; (including details of grievances and any independent audits undertaken during the year). Compliance with the plan should be monitored and reported. Requirements for independent audits should be considered if there are questions over borrower commitment or potential outstanding community concerns.
Transport of hazardous materials (e.g. fuel) with minor to moderate potential to cause impacts on community health and safety.	**Hazardous Materials Management:** The borrower should be required develop a hazardous materials management plan; details of grievances and any independent health and safety audits undertaken during the year should also be provided. Compliance with the plan should be monitored and reported. Depending on the financial product, this information should be referenced in appropriate legal documentation (covenants, conditions of disbursement etc). Consider requirements for independent audits if there are concerns about commitment of borrower or potential outstanding community concerns.
The project will result in a minor to moderate increase in community risks from disease (e.g. from water borne diseases) or natural resources risks (e.g. landslides, erosion etc).	**Manage Increased Risk of Disease:**Where a project will generate environmental health risks (such as increased risk from disease and environmental hazards), the borrower should be required to develop a environmental health risk plan (this will require input from professionally competent advisers/ consultants). There should be engagement with affected communities and compliance with the plan should be monitored and reported. Where specific diseases are endemic in communities in the investment area of influence, the borrower is encouraged to explore opportunities to reduce their incidence.
Project construction activities are likely to lead to localized and temporary impacts (such as dust, noise, traffic etc) that will affect local communities and workers but these are minor to moderate in nature.	**Construction:** The borrower should demonstrate how the construction impacts will be mitigated. Appropriate management plans and procedures should be incorporated into the ESMP. Review of implementation as well as reporting on the plan should be part of the legal documentation (covenants, conditions of disbursement, etc).
The project has or will have minor negative impacts on Indigenous Peoples.	**Mitigation Framework:** Include specific mitigation measures as needed in consultation with affected IPs. Consult with Indigenous Peoples specialist. Incorporate measures in legal documentation (covenants, conditions of disbursement, etc.). Include mitigation measures as part of overall environmental and social management plans or provisions.

DISASTER RISK SUMMARY

Disaster Risk Category: High

	• The reports of the Safeguard Screening Form (i.e. of the Safeguards Policy and the Safeguard Classification Filters) constitute the Disaster Risk Profile to be summarized in and annexed to the Environmental and Social Strategy (ESS). The Project Team must send the PP (or equivalent) containing the ESS to the ESR. • The Borrower should consider including disaster risk expertise in the organization of project oversight, e.g. in the project's panel of experts. For the Bank's requirements, the Borrower addresses the screened disaster risks in a Disaster Risk Management

Disaster/ Recommendations	Summary reviewing disaster and climate change risks associated with the project on the basis of a Disaster Risk Assessment (DRA). Based on the specified hazards and the exposure of the project area, it demonstrates the potential impact of the rapid onset events and/or slow inset changes for the project and its area including exacerbated risks for people and environment, given local vulnerability levels and coping capacities. Furthermore the DRM Summary presents proposed measures to manage or mitigate these risks in a Disaster Risk Management Plan (DRMP). The DRA /DRMP to which the DRM Summary refers may be a stand-alone DRA document (see Directive A-2 of the DRM Policy OP-704) or included in other project documents, such as feasibility studies, engineering studies, environmental impact assessments, or specific natural disaster and climate change risk assessments, prepared for the project. These documents should be accessible for the Project Team. • The Project Team examines and adopts the DRM summary. The team remits the project risk reduction proposals from the DRMP to the engineering review by the sector expert or the independent engineer during project analysis or due diligence, and the financial protection proposals to the insurance review (if this is performed). The potential exacerbation of risks for the environment and population and the proposed risk preparedness or mitigation measures are included in the Environmental and Social Management Report (ESMR), and are reviewed by the ESG expert or environmental consultant. The results of these analyses are reflected in the general risk analysis for the project. Regarding the project implementation, monitoring and evaluation phases, the project team identifies and supervises the DRM approaches being applied by the project executing agency. • Climate change adaptation specialists in INE/CCS may be consulted for information regarding the influence of climate change on existing and new natural hazard risks. If the project requires modification or adjustments to increase its resilience to climate change, consider (i) the possibility of classification as an adaptation project and (ii) additional financing options for climate change, and consult the INE/CCS adaptation group for guidance.

SUMMARY OF DISASTER IMPACTS/RISKS AND POTENTIAL SOLUTIONS

Identified Impacts/Risks	Potential Solutions
Significant storm surge may occur in the project area and the likely severity of impacts is major or extreme.	The Disaster Risk Management Plan should secure a design for the project at an acceptable level of the coastal flood risks for the project and address potential exacerbated risks for people and the environment during construction and operation, as specified in the Disaster Risk Assessment, which must take into consideration changes in the frequency and intensity of extreme events that could occur with climate change. The DRMP includes risk reduction measures (siting and engineering options), disaster risk preparedness and response (contingency planning, etc.), as well as the financial protection (risk transfer, retention) of the project. The DRM Plan takes into account existing vulnerability levels and coping capacities, the country's disaster alert and prevention system, general design standards, coastal retreat and other land use regulations and civil defense recommendations in coastal areas. However, the options and solutions are sector- and even case-specific and are selected based on a cost analysis of equivalent alternatives. The amplified uncertainties due to climate change may be considered in hazard scenarios and an efficient combination of measures in the DRMP.
Storm surge, strong tidal waves or lesser tsunamis are prevalent in the project area and the likely severity of	The Disaster Risk Management Plan should secure a design for the project at an acceptable level of the various moderate coastal risks for the project and address potential exacerbated risks for people and the environment during construction and operation. Appropriate measures to reduce risks (predominantly engineering), prepare for impact (predominantly environmental

impacts is moderate.	and social safeguards) and to include financial protection will need to be included.
Significant hurricane and other winds may occur in the project area and the likely severity of impacts is major or extreme.	The Disaster Risk Management Plan should secure a design for the project at an acceptable level of the storm and flood risks for the project and address potential exacerbated risks for people and the environment during construction and operation, as specified in the Disaster Risk Assessment, which must take into consideration changes in the frequency and intensity of tropical storms that could occur with climate change. The DRMP includes risk reduction measures (siting and engineering options), disaster risk preparedness and response (contingency planning, etc.), as well as the financial protection (risk transfer, retention) of the project. The DRM Plan takes into account existing vulnerability levels and coping capacities, the country's disaster alert and prevention system, general design standards, coastal retreat and other land use regulations and civil defense recommendations in coastal areas. However, the options and solutions are sector- and even case-specific and are selected based on a cost analysis of equivalent alternatives. The amplified uncertainties due to climate change may be considered in hazard scenarios and an efficient combination of measures in the DRMP.
Tropical Storms are prevalent in the project area and the likely severity of impacts is moderate.	The Disaster Risk Management Plan should secure a design for the project at an acceptable level of storm risks for the project and address potential exacerbated risks for people and the environment during construction and operation, which must take into consideration changes in the frequency and intensity of tropical storms that could occur with climate change. Appropriate measures to reduce risks (predominantly engineering), prepare for impact (predominantly environmental and social safeguards) and to include financial protection will need to be included.
High winds tornados or blizzards are prevalent in the project area and the likely severity of impacts is moderate.	The Disaster Risk Management Plan should secure a design for the project at an acceptable level of storm risks for the project and address potential exacerbated risks for people and the environment during construction and operation which must take into consideration changes in the frequency and intensity of storms that could occur with climate change. Appropriate measures to reduce risks (predominantly engineering), prepare for impact (predominantly environmental and social safeguards) and to include financial protection will need to be included.
Significant riverine flooding from sustained rainfall and/or melting water and/or failing dam may occur in the project area and the likely severity of impacts is major or extreme.	The Disaster Risk Management Plan should secure a design for the project at an acceptable level of the flood risks for the project and address potential exacerbated risks for people and the environment during construction and operation, as specified in the Disaster Risk Assessment, which must take into consideration changes in the frequency and intensity of intensive rainfall and in the patterns of snowmelt that could occur with climate change. The DRMP includes risk reduction measures (siting and engineering options), disaster risk preparedness and response (contingency planning, etc.), as well as the financial protection (risk transfer, retention) of the project. The DRM Plan takes into account existing vulnerability levels and coping capacities, the area's disaster alert and prevention system, general design standards, land use regulations and civil defense recommendations in flood prone areas. However, the options and solutions are sector- and even case-specific and are selected based on a cost analysis of equivalent alternatives. The amplified uncertainties due to climate change may be considered in hazard scenarios and an efficient combination of measures in the DRMP.
Riverine flooding is prevalent in the project area and the likely severity of impacts is moderate.	The Disaster Risk Management Plan should secure a design for the project at an acceptable level of flood risks for the project which must take into consideration changes in the frequency and intensity of precipitations that could occur with climate change. Flood risks may be exacerbated by the project outside the project boundary by modifying flood plains and draining patterns during construction and operation, and increase risks for people and the environment. Appropriate measures to avoid and reduce risks (predominantly engineering), prepare for impact (predominantly environmental and social safeguards) and to include financial protection will need to be included. to include financial protection will need to included.
	The Disaster Risk Management Plan should secure a design for the project at an acceptable

Area flooding from sustained rainfall is prevalent in the project area and the likely severity of impacts is moderate.	level of areal flooding risks for the project which must take into consideration changes in the frequency and intensity of precipitations that could occur with climate change. Areal floods may be exacerbated by the project outside the project boundary by modifying draining patterns for heavy precipitations and increase risks for people and the environment during construction and operation. Appropriate measures to reduce risks (predominantly engineering), prepare for impact (predominantly environmental and social safeguards) and to include financial protection will need to be included.
Wild fires abetted by droughts and high winds are prevalent in the project area and the likely severity of impacts is moderate	The Disaster Risk Management Plan should secure a design for the project at an acceptable level of would fire risks for the project and address potential exacerbated risks for people and the environment during construction and operation, which must take into consideration changes in the frequency and intensity of wild fires that could occur with climate change. The DRMP includes risk reduction measures (siting and engineering options for water supply and heat protection), disaster risk preparedness and response (contingency planning, etc.), as well as the financial protection (risk transfer, retention) of the project. The DRM Plan takes into account existing vulnerability levels and coping capacities, the area's prevention system, general design standards, land use regulations and civil defense recommendations in drought prone areas. However, the options and solutions are sector- and case-specific.
Sea level rise combined with wave movement and storm surges may lead to erosion of coast line and coastal defenses in the project area and the likely severity of impacts is moderate.	The risk of accelerated coastal erosion should be addressed, and appropriate adaptation measures (predominantly alternative project design and engineering) will need to be examined, evaluated and selected

ASSESSOR DETAILS

Name of person who completed screening:	Brackmann, Stefanie U. S. (SBRACKMANN@iadb.org)
Title:	
Date:	2015-04-29

COMMENTS

No Comments

ENVIRONMENTAL AND SOCIAL STRATEGY (ESS)

Solid Waste Management Project II

I. PROJECT SUMMARY

Project Name:	Solid Waste Management Project II		
Project Number:	BL-L1021		
Executing Agency:	Solid Waste Management Authority (SWaMA)		
Financial Plan:	IDB:	US$	10,000,000.00
	Local:	US$	500,000.00
	Total:	US$	10,500,000.00
Safeguards:	OP-703 (B.1, B.2. B.3, B.4, B.5, B.6,B.7, B.9, B.10, B.11, B.17), OP-102, OP-704, OP-761; OP-765, OP-710		
Classification	B		

II. PROJECT DESCRIPTION AND ENVIRONMENTAL AND SOCIAL CONTEXT

A. Project Overview

2.1 Access to solid waste collection and disposal services varies significantly between regions in Belize. Belize's only regional sanitary landfill covers most areas in the central districts. Belize's northern and southern regions dispose of their solid waste in open dumps with little or no environmental or health control. Poor performance in solid waste management is a risk for the environment, the health of the growing population, and the tourism industry. At the same time, growing numbers of tourist arrivals have recently increased pressure on existing solid waste collection and disposal services.

2.2 **The Borrower** - Belize will be the borrower. The Executing Agency would be the Solid Waste Management Authority (SWaMA). The creation of the SWaMA has improved the institutional framework for solid waste management, allowing for improvements in solid waste collection and disposal throughout the country, better coordination among key actors and better strategic planning to address the challenges faced by the sector. The Solid Waste Management Authority Act of 2000 (SWaMA 2000) establishes the structure and functions of SWaMA, a corporate body with an independent legal status within the Ministry of Natural Resources and Agriculture (MNRA).

2.3 Objective of BL-L1021 - The Government of Belize (GOB) has requested Bank financing for a new operation to improve solid waste management in key emerging tourism destinations in Belize, areas that were not addressed under the first Solid Waste Management Project (SWMP) (BL-L1006) (see Sections 2.5 and 4.12). These emerging areas include Belize's southern (Stann Creek and Toledo districts) and northern (Corozal

and Orange Walk districts) regions, which suffer from key challenges in solid waste management. Waste disposal sites have so far not been identified, the analysis of which is included under an ongoing Technical Cooperation (TC) (BL-T1067). The objective of the program will be to improve SWM practices and reduce environmental pollution in Belize's emerging tourism destinations. Component 1: Capital Investments will be aimed at constructing regional sanitary landfills and transfer stations, recycling and composting facilities and closing of open dumpsites; and Component 2: Institutional Strengthening, aimed at ensuring cost recovery mechanisms, social communication programs and improving the management of waste streams other than municipal solid waste.

2.4 The TC is examining technical, environmental, institutional and financial issues including: (i) current solid waste generation and composition; (ii) environmental impacts of current solid waste disposal practices and proposed interventions; (iii) analysis of alternatives (technology, site selection, etc.) for solid waste treatment and disposal; (iv) healthcare and hazardous waste management; (v) identification of proposed sites for transfer stations and sanitary landfills and/or treatment facilities; (vi) designs for closure of existing dumpsites; (vii) financial analysis and cost recovery mechanisms; and (viii) ex ante economic analysis. One key output is the preparation of the environmental and socials studies and environmental, social, health and safety (ESHS) management documents for the proposed Project.

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B. Main Environmental and Social Aspects

2.5 **Solid Waste Management Project (BL-L1006)** - Until 2009, solid waste collected in cities and towns throughout the country was discharged in open or partially controlled dumps. Inadequate waste collection systems and improper discharge of wastes in open or partially controlled dumps lacking technical and environmental controls still persist in Belize. The Bank is currently financing a project (BL-L1006) to address solid waste management needs along the Western corridor and the islands of Ambergris and Caye Caulker, specifically: (i) the closure of the open dump site at Mile 3 and construction of a waste transfer station; (ii) the construction of a regional waste disposal facility at Mile 24; (iii) improvements and/or closure of open dump sites in San Pedro, Caye Caulker and San Ignacio; and (iv) institutional strengthening activities. Good experience within SWaMA in environmental and social management has been gained from this operation.

2.6 **Recyclers** – BL-L1006 also financed activities for recyclers and working conditions have been much improved with incomes remaining stable or increasing. The grievance mechanisms employed is largely informal, but this is appropriate given the small number of recyclers. Health and safety standards (cleanliness of the work space, measures to avoid contact between recyclers and machinery, personal protective equipment, showers and toilets, signage, fire extinguishers, etc.) have been assessed and overall are quite good.

2.7 **Synergies with other IDB Projects** - The possibility of drawing synergies between the activities contemplated under this proposed operation with the activities contemplated under the proposed Sustainable Tourism Program II (BL-L1020) will be further explored.

In particular, activities could include a pilot initiative for waste separation for the private sector (such as hoteliers), as well as the installation of waste bins as an activity to give the projects more visibility. As part of the communications and outreach strategy, especially for the Mennonite and Mayan Communities in the north and south of Belize, respectively, the need for adequate solid waste management activities will be assessed.

III. ENVIRONMENTAL AND SOCIAL COMPLIANCE REQUIREMENTS

A. National Requirements

3.1 The key central government entities concerned with environmental aspects of the project are MNRA, the entity responsible for ensuring land property ownership and conducting the land acquisition process and the Department of Environment (DOE). The main legal instrument in the environment sector in Belize, the Environmental Protection Act (1992), enabled legislation granting the DOE, the comprehensive environmental protection authority needed to address environmental management issues, as well as broad regulatory and enforcement authority for the prevention and control of environmental pollution, conservation and management of natural resources, and regulating environmental impact assessments (EIA). The Act Revised Edition (2003) also charges the DOE with the responsibility for formulating environmental codes of practice, specifying procedures, practices or release limits for pollution control relating to works, undertakings and activities during any phase of their development and operation, including the location, design, construction, start-up, closure, dismantling and clean-up phases and any subsequent monitoring activities.

3.2 In accordance with the EIA regulations under the Environmental Protection Act an EIA is to be prepared[1] for the proposed Project and submitted to the National Environmental Appraisal Committee (NEAC) for approval. The DOE will prepare and sign the Environmental Compliance Plan (ECP) with the SWaMA.

3.3 Another relevant regulatory instrument includes the Effluent Limitation Regulations (SI 94/1995 Revised Edition 2003), enforced by DOE, governing the control and monitoring of effluent discharge into any inland waters or the marine environment of Belize.

B. IDB and other international requirements

3.4 The following directives of the IDB Environment and Safeguards Compliance Policy (OP-703) are triggered: B.1 (Bank Policies), B.2 (Country Laws and Regulations); B.3 (Screening and Classification); B.4 (Other Risk Factors), B.5 (Environmental Assessment Requirements); B.6 (Consultation); B.7 (Supervision and Compliance); B.9 (Natural Habitats and Cultural Sites); B.10 (Hazardous Materials); B.11 (Pollution Prevention and Abatement) and B.17 (Procurement). The Bank will also review compliance with the Public Information and Disclosure Policy (OP-102), Disaster Risk Management Policy

[1] The Environmental and Social Impact Assessment (ESIA) preparation is part of the TC (BL-T1067) implementation.

(OP-704), as well as the Gender Equality in Development Policy (OP-761). It is not expected that the Project will trigger the Indigenous Peoples Policy (OP-765) or Resettlement Policy (OP-710) however this will be reviewed during the Environmental and Social Due Diligence (ESDD).

3.5 Given that based on the currently available information, the Project is likely to cause mostly local and short-term negative environmental and social impacts and for which effective mitigation measures are readily available, an environmental classification of Category B is proposed for the Project.

3.6 Under Directive B.5 of OP-703, an Environmental and Social Analysis (ESA) is required for a Category B project. Potential impacts and risks will be managed through the implementation of mitigation measures specifically designed for the project's construction, operation and closure. The Project is being considered as high risk due to the potential limited capacity of GOB to address all the potential impacts and risks.

IV. ENVIRONMENTAL AND SOCIAL IMPACTS AND MANAGEMENT APPROACH

4.1 In general terms, better solid waste management will have a positive impact to the surrounding environment in the respective areas of the project through the proper collection, recovery, treatment and disposal of solid waste, presently discharged in open or controlled dumps, and/or burned; and will improve public health and the overall quality of life of local residents.

4.2 The project is not expected to have significant and/or irreversible negative impacts on the social or biophysical environment; rather it is expected to have mostly local and short-term impacts that typically result from construction and operation of similar projects. Impacts and risks during construction, operation and decommissioning could occur from: inadequate health and safety management; inadequate management of hazardous materials and solid waste; accidental spills, degradation of soil, flora and fauna, and impacts on water quality due to leachate discharge which does not meet effluent standards. Key ESHS and labor potential impacts and risks include:

A. Environmental and Social Impacts and Risks during Construction and Decommission

4.3 Occupational and community health and safety: There is a risk of accidents that could result in injuries to workers during construction. Risks include those related to exposure to noise and dust, elevated temperatures and physical hazards.

4.4 Impacts are also expected due to disruption of traffic patterns from increased circulation of construction vehicles. Surface and groundwater may be contaminated by spills and leaks of hydrocarbons (fuels and lubricants) from construction equipment. Potential impacts to soils and terrain include erosion of existing bare earth slopes; and slope erosion in the post-closure phase of the sanitary landfill. Particulate matter may be carried off-site in surface runoff, with consequent effects on surface water quality.

4.5 The development of any sanitary landfill site entails clearing and re-contouring activities. This can result in loss of habitat for wildlife and natural vegetation. Also impacts on cultural sites have to be carefully assessed.

4.6 There are potential social impacts from a loss of livelihoods associated with land acquisition for selected sites, particularly if such land is currently, or was until recently, used for agricultural purposes by local communities, as well as potential impacts (odor, noise, visual impacts, change of land value) to nearby households. There is also the risk that recyclers are not well integrated in the project design with the risk of impacting their livelihoods, especially as dumpsites are closed.

B. Potential Environmental and Social Impacts and Risks during Operations

4.7 Potential environmental and health risks could be linked to inadequate soil, surface and groundwater, air and solid waste pollution control and prevention measures, noise and odors. These risks may be more significant in the event that the facilities are not well operated and/or maintained, resulting in the release of leachate and/or chemicals affecting surface and groundwater resources.

4.8 One potential impact is the possibility of leachate entering surface water runoff and contaminating adjacent waters, such as rivers and coastal waters or migrating into groundwater.

4.9 Potential air quality impacts could include: generation of landfill gas (methane, CO2, VOC's) from the sanitary landfill site; sanitary landfill odors reaching populated areas; and the activities of on-site machinery at the landfill site.

C. Potential Indirect and Cumulative Impacts and Other Risks

4.10 There is a risk associated with the capacity of SWaMA to manage and monitor the construction and operation of several construction projects concurrently.

4.11 **Disaster Risks** – The Belize Country Strategy (2013-2017) mentions that in all sector planning and infrastructural interventions, reduced vulnerability to natural disasters and greater resilience to the effects of climate change will constitute a primary objective. Natural disasters and climate change pose a threat to the sustainability of infrastructure investments. Tropical storms and hurricanes affect Belize on average once every two years. Between 2000 and 2011, seven extreme weather events (hurricanes, tropical storms and floods) affected Belize. Lack of enforcement of natural resource management and land use regulation, environmental degradation, uncontrolled development, construction standards and human settlements also contribute to the sector's increased vulnerability and low adaptive capacity.[2]

[2] Belize – Sustainable Tourism Sector Note. September 2013

D. Mitigation and Management of Impacts and Risks

4.12 During the course of the implementation of the first solid waste project, SWaMA has demonstrated the ability to effectively manage environmental and social impacts and risks through strong supervision and the application of internationally accepted practices to protect soil, water and air resources. SWaMA has hired a qualified operator for the Mile 24 sanitary landfill and developed a social inclusion program for recyclers. In the current operation, management of ESHS aspects are based on the project ESMP, the Environmental Compliance Plan (ECP) and ESHS management procedures of the operator of the Mile 24 sanitary landfill.

4.13 Preparatory activities for this project (financed under BL-T1067) include the development of: (i) the ESIAs and corresponding ESHS plans for construction, operation and closure / post-closure; and, (ii) a plan for social inclusion of recyclers. The key to this Project's success will be to choose the most appropriate sites for the sanitary landfills and transfer stations ensure the establishment of an adequate buffer zone and develop pollution prevention measures and monitoring plans.

V. STRATEGY FOR ENVIRONMENTAL AND SOCIAL DUE DILIGENCE

5.1 The focus of the ESDD will be on the potential environmental and social impacts and risks during all phases of the proposed project. The ESDD will especially focus on water and waste pollution control, compliance with effluent standards and noise standards, and SWaMA's capacity to identify, mitigate and manage these impacts and risks.

5.2 More specifically, the ESDD will look at the following aspects:

a) Evaluation to confirm that the program has sufficiently defined project design details and environmental and social baseline information to assess potential impacts, risks, and mitigation requirements. This will be done through assessment of the ESIAs and corresponding ESHS management plans to confirm that the Program's direct, indirect and cumulative negative environmental and social impacts have been properly identified and evaluated, and that proper mitigation and management measures will be implemented. This assessment will identify any gaps and requirements for further analysis;

b) Assessment of compliance with applicable IDB environmental and social policies, applicable international best practice ESHS and labor requirements such as the IFC Performance Standards and ESHS Guidelines;

c) Assessment of compliance status with the applicable ESHS and labor requirements in Belize (e.g., laws, regulations, standards, permits, authorizations, ECP, applicable international treaties/conventions, ratified by Belize);

d) Evaluation that impacts on critical cultural sites and natural habitats have been adequately assessed;

e) Determination of treatment (leachate, noise, etc.) standards applicable to the program, to ensure that any impacts on surface and ground water are sufficiently mitigated and managed throughout construction, operation and closure and in the case that they do not meet international standards, evaluation of the justification for the selected standards;

f) Assessment of the process in place for land acquisition with respect to relocation and/or displacement of agricultural lands, loss of livelihoods and inclusion of informal recyclers;

g) Confirmation that adequate health and safety and contingency plans and procedures will be established and implemented for construction, operation and closure (including sub-contractors) to address potential worker health and safety risks associated and project-related accidental events (e.g. spills, fires);

h) Confirmation that the natural disaster risks have been adequately identified, and that proper mitigation is implemented in the design of the facilities and into the operational plans of the facilities;

i) Assessment of SWaMA's capacity to mitigate and monitor ESHS aspects;

j) Evaluation of project-related information disclosure and public consultation activities that have been performed including confirmation that the participation processes of stakeholders has been adequately conducted and that the proposed future actions to provide adequate ongoing information disclosure and public consultation with the local population is in compliance with IDB policies and if a grievance mechanism has been designed; and assessment if and plans and programs in place for continued consultation; and

k) Evaluation of positive impacts and any additionality from IDB's involvement.

5.3 As a result of the ESDD, the IDB will prepare an Environmental and Social Management Report (ESMR) that will provide a synthesis of the relevant ESHS aspects and the proposed Bank recommendations in terms of specific ESHS requirements to be included in the Loan Agreement.

INDEX for completed sector work			
Issues	**Description**	**Date**	**References & hyperlinks to files**
Solid Waste Sector Note	Assessment of current status of solid waste management issues in Belize. Prepared as part of the Country Strategy 2013-17.	September 2013	
Water and Sanitation in Belize	Policy note on the current situation of water, sanitation and solid waste management in Belize.	May 2013	
Design of Cost Recovery Mechanism for the Solid Waste Management Project for the Western Corridor, Belize, C.A.	As part of the first phase of the Solid Waste Management Project, (SWMP) a consulting firm was hired to conduct a study to analyze the cost recovery mechanism for solid waste collection, transport and disposal in Belize's Western Corridor and Northern Islands. This study included the design and implementation of a Willingness to Pay survey as well as the assessment of possible cost recovery mechanisms	Nov. 2011	
Design of a Tariff Structure for Solid Waste Collection, Transfer and Disposal in the Western Corridor	Also as part of the first SWMP, a financial model for cost recovery of solid waste collection, transport and disposal was prepared. This was prepared by an individual consultant.	Jul 2013	
Waste Generation and Composition in the Western Corridor	During the first phase of the Solid Waste Management Project, an assessment with field measurements was carried out with the goal of estimating waste generation and waste composition in the Cayo and Belize Districts as well as in the Northern Islands of Ambergris and Caye Caulker.	May 2011	
Review of the Existing Legal/Regulatory and Institutional Framework for Solid Waste Management in Belize	With IDB resources, a consulting firm was hired to conduct a review of the current legal and institutional framework of solid waste management in Belize. This included a proposal to update the Solid Waste Management Act, proposal of technical guidelines for hazardous waste facilities, guidelines for managing special wastes, and sample contract for solid waste removal services, among others.	February 2011	

National Solid Waste Management Policy and Strategy and Update the National Solid Waste Management Plan (final draft version)	In 2013, the Solid Waste Management Authority (SwaMA) hired a consulting firm with the goal of: (i) Designing a National Solid Waste Management Policy that is consistent with the waste management hierarchy, resource recovery and conservation and integrated sustainable solid waste management, (ii) Designing a Solid Waste Management Strategy as part of the policy above in order to deploy the Policy over a twenty year time horizon, and (iii) Updating the National Solid Waste Management Plan.	Feb. 2015 (final draft version)	
Bid documents for construction of a transfer station and closure of a dumpsite in Belmopan, Cayo District.	Bid documents for the closure of the dumpsite in Belmopan and the construction of a transfer station at the same site have been prepared for SWaMA.	2014	
National Sustainable Tourism Master Plan for Belize 2030	This master plan for the tourism sector in Belize identifies insufficient waste disposal as a key constraint on tourism growth. For each major tourist destination, the Master Plan described the problems caused by improper waste disposal, such as environmental damage, health hazards, and visual pollution.	2011	
INDEX for proposed sector work			
Issues	**Description**	**Expected Dates**	**References & hyperlinks to files**
Technical options and design	Assessment of current status of solid waste collection and final disposal in the program areas to be carried out, along with the analysis of alternative solutions. Feasibility studies to be completed.	August 2015	
Analysis of project economic viability	Survey data required to analyze economic viability of the program Preliminary evaluation to be updated once the feasibility studies are completed.	July 2015	
Financial management/fiduciary issues and control	No special fiduciary issues are anticipated. Preparation/conclusion financial analysis of the SWaMA.	August 2015	
Institutional analysis/personnel, procedures other aspects of implementation capacity	Update the Institutional Capacity Assessment (ICAS) of SWaMA. Review of lessons learned of previous program will be included in the program.	August 2015	
Stakeholders and political environment	Maintain close communication with stakeholders within Government of Belize, local governments, SWaMA and project beneficiaries. Consultation meetings will be held.	April - August 2015	

Social and environmental safeguards	Preparation/conclusion of Environmental and Social Impact Assessment. Review of aspects specific to the operation, additional baseline evaluation, and budget.	August 2015	
Data collection and analysis for reporting on results	Identification of proposed indicators to measure impact of program.	May- August 2015	