



Environment Sector Strengthening I & II

(GY-L1039 and GY-L1043 / 3106/BL-GY and 3422/BL-GY)

Project Completion Report

(PCR)

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Electronic Links

1. [Development Effectiveness Matrix \(DEM\)](#)
2. [Development Effectiveness Checklist](#)
3. Final version of the Progress Monitoring Report (PMR) (Not applicable)
4. [Detailed Results Achievement Analysis](#)
5. [Changes to the Results Matrix](#)
6. [Final Technical Evaluation](#) and [Ex post Economic Evaluation](#)
7. Impact Evaluation Report (Not available)
8. [ORR Results and Procedures Report](#)
9. Minutes of the project's Exit Workshop and/or written feedback from the Government (Pending)

Acronyms and Abbreviations

ABS	Access and Benefit Sharing mechanism
ASGM	Artisanal and Small-scale Gold Mining
EITI	Extractive Industry Transparency Initiative
EPA	Environmental Protection Agency
EPI	Environmental Performance Index
EU-FLEGT	European Union Forest Law Governance and Trade
FIP	Forest Investment Program
GDP	Gross Domestic Product
GFC	Guyana Forestry Commission
GGMC	Guyana Geology and Mines Commission
GLSC	Guyana Lands and Survey Commission
GMSTC	Guyana Mining School and Training Centre
GoG	Government of Guyana
GoN	Government of Norway
GRIF	Guyana REDD+ Investment Fund
HFLD	High Forest–Low Deforestation
IDB	Inter-American Development Bank
INDC	Intended Nationally Determined Contribution to UNFCCC
IPCC	Intergovernmental Panel on Climate Change
JCN	Joint Concept Note, Government of Norway & Government of Guyana
LCDS	Low Carbon Development Strategy
MFMDf	Mercury-free Mining Development Fund
MNR	Ministry of Natural Resources and former “Ministry of Natural Resources and Environment” (MNRE) or “Department of Natural Resources and Environment”
MOF	Ministry of Finance
MOU	Memorandum of Understanding
MRVS	Monitoring, Reporting, and Verification System
MSSC	Multi-Stakeholder Steering Committee
NAP	National Action Plan
PAC	Protected Areas Commission
PBP	Programmatic Policy Based Loan
PCR	Project Completion Report
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SLUC	Special Land Use Committee
UKCIF	United Kingdom Caribbean Infrastructure Fund
UNFCCC	United Nations Framework Convention on Climate Change
UNDP	United Nations Development Program

Basic Information (US\$ Amount)

PROJECT NUMBER (S):	GY-L1039 AND GY-L1043	
TITLE:	ENVIRONMENT SECTOR STRENGTHENING I AND II	
LENDING INSTRUMENT:	POLICY BASED LOAN (PBP)	
COUNTRY:	GUYANA	
BORROWER:	CO-OPERATIVE REPUBLIC OF GUYANA	
LOAN (S):	3106/BL-GY AND- 3422/BL-GY	
SECTOR/SUBSECTOR:	ENVIRONMENT AND NATURAL DISASTERS/ ENVIRONMENTAL MANAGEMENT AND GOVERNANCE	
DATE OF BOARD APPROVAL:	DEC 4, 2013 AND FEB 11, 2015	
DATE OF LOAN CONTRACT EFFECTIVENESS:	DEC 11, 2013 AND FEB 19, 2015 (SIGNATURE)	
DATE OF ELIGIBILITY FOR FIRST DISBURSEMENT:	JAN 15, 2014 AND FEB 24, 2015	
<u>LOAN AMOUNT (S)</u>		
ORIGINAL AMOUNT:	16.92 MILLION – 17.16 MILLION	TOTAL 34.08 MILLION
CURRENT AMOUNT:	16.92 MILLION – 17.16 MILLION	TOTAL 34.08 MILLION
PARI PASSU:	100% BID	
TOTAL PROJECT COST:	16.92 MILLION – 17.16 MILLION	TOTAL 34.08 MILLION
<u>MONTHS IN EXECUTION</u>		
FROM APPROVAL:	NA	
FROM CONTRACT EFFECTIVENESS:	NA	
<u>DISBURSEMENTS PERIODS</u>		
ORIGINAL DATE OF FINAL DISBURSEMENT:	JAN 15, 2014 AND FEB 24, 2015	
CURRENT DATE OF FINAL DISBURSEMENT:	JAN 15, 2014 AND FEB 24, 2015	
CUMULATIVE EXTENSION (MONTHS):	0	
SPECIAL EXTENSIONS (MONTHS):	0	
<u>DISBURSEMENTS</u>		
TOTAL AMOUNT OF DISBURSEMENTS TO DATE:	16.92 MILLION – 17.16 MILLION	TOTAL 34.08 MILLION
<u>REDIRECTIONING. HAS THIS PROJECT?:</u>		
RECEIVED FUNDS FROM ANOTHER PROJECT	[No]	
SENT FUNDS TO ANOTHER PROJECT	[No]	
EX POST ECONOMIC ANALYSIS METHODOLOGY: GENERAL ECONOMIC ANALYSIS /COST BENEFIT MINING & FORESTRY		
EX POST EVALUATION METHODOLOGY: REFLEXIVE.		
DEVELOPMENT EFFECTIVENESS CLASSIFICATION: EVALUABLE (SCORE 6.8)		

1 Introduction

Guyana's natural capital and its economic development model. Guyana harbors significant biodiversity and intact tropical forests, which offer a wide range of goods and environmental services including abundant wildlife important for subsistence and ecotourism; significant water resources; timber and non-timber forest products; and, most relevant at the global level, large carbon stocks. Furthermore, over time, Guyana has maintained one of the lowest deforestation rates on Earth; in fact, it belongs to a select group of countries known as High Forest - Low Deforestation (HFLD) countries.

As international carbon markets developed in the last decade, HFLD countries became of interest to industrialized countries wishing to offset their carbon footprint. Wanting to participate in such markets, in 2009 Guyana embarked on the world's first national-scale payment-for-performance forest conservation transaction. The Government of Norway (GoN) offered to transfer up to \$250 million over the period 2010-2015 in exchange for Guyana's adherence to a sustained low deforestation rate –between 0.056% and 0.1%-- and for it implementing a series of investments aimed at re-orienting its economy towards an environmentally-focused growth. For Guyana, the rationale of adopting this path was that the economic benefits that could be accrued from a “Green Economy” model would be superior to those obtainable from business-as-usual extractive economic activities. Cornerstone of this new pathway was the development of Guyana's Low Carbon Development Strategy (LCDS), issued by the Government of Guyana (GoG) in 2010.

IDB support in this context. In 2012 the GoG convened the Bank to a technical dialogue, expressing the high priority of the LCDS for the Government and the need to address comprehensively the challenges its implementation faced. It was agreed that the Bank would support the strengthening of Guyana's environment sector in congruence with the conceptual framework provided by the agreement with the GoN.

Bank's analysis of priority actions to satisfy the range of commitments acquired by the GoG in its agreement with the GoN pointed to the following logic of intervention: for the target deforestation rate to be achieved and sustained, the country needed to curb main deforestation drivers and provide incentives for forest conservation. In order to achieve that, the private sector must be given clear signals and rules, and the public sector must have a decisive strategy and adequate instruments, with leading environmental institutions capable of enforcing the law. For the country to learn whether it is progressing or lagging behind in this attempt, reliable measuring instruments are also needed.

Because the needed adjustments required government policy decisions and the processes to which those policy decisions would be applied would take some time to mature, and due to the fact that the changes sought had to follow a certain step sequence to keep pace with the Guyana/Norway agreement schedule, the GoG and the Bank decided that the Policy-Based Programmatic Loan (PBP) instrument was the most appropriate tool to address the needs of the country. It was agreed that IDB support would be focused on reducing GoG weaknesses in connection with the effectiveness of environmental regulations and public agencies, improving environmental behavior in main deforestation drivers (forest-based economic sectors forestry and mining) and corresponding monitoring and evaluation systems.

The PBP program consisted of a series of two loans: (i) Loan 3106/BL-GY, Project GY-L1039 for US\$16,920,000 approved on December 4, 2013; and (ii) Loan 3422/BL-GY, Project GY-L1043 for US\$17,160,000 approved on February 11, 2015.

2 Project Performance

2.1 Effectiveness

Statement of Program Objectives. The objective of this PBP series was to strengthen the governance and policy framework that supports the implementation of the Low Carbon Development Strategy (LCDS) and enhance the regulatory, institutional and monitoring structures to support the implementation of that

strategy. The PBP series was organized in 4 components: (i) macroeconomic stability; (ii) regulatory framework; (iii) institutional strengthening; and (iv) monitoring, reporting and verification system. Components 2, 3 and 4 focused on reinforcing institutional capacity to manage natural resources in a way that supports effective LCDS implementation and complies with international standards for ecological sustainability.

2.1.1 An analysis of the Vertical Logic

The PBP series was designed based upon the following diagnosis of the factors that have a bearing on the operation's ability to achieve its objectives:

- a. Weak policy framework to guide the implementation of the LCDS: The LCDS is a complex and broad strategy with a number of associated challenges. In order to implement it, the GoG needed to review and strengthen the existing regulatory and policy framework to embed the principles of environmental sustainability that are at the core of the LCDS.
- b. Insufficient environmental regulations for extractive industries: Forest-based sectors, mining and forestry, were identified as the two most important deforestation drivers; Without proper environmental considerations mining tends to have severe environmental consequences including forest and habitat loss, water body contamination by mercury, and river sedimentation; even though the mining sector tends to be increasingly regulated and formalized, enforcement and environmental management compliance had not kept consistent pace. Forestry-related deforestation is mostly attributed to road construction activities rather than the process of harvesting itself; signals of illegal logging and non-compliance with forestry regulations among small and large operators are associated with limitations of the legal framework, particularly issues of land allocation and deficiencies in land use planning. With extractive industries being the major drivers of deforestation, the main target of the LCDS and the agreement with the GoN was to improve the environmental practices of these sectors. The key challenges identified in this area included: (i) developing mechanisms to harmonize policies, laws, and regulations of all the agencies placed under the responsibility of MNRE; (ii) develop sector-specific regulations integrating environmental and sustainable management guidelines into the operation of forest-dependent sectors, namely forestry and mining; and (iii) guide land use to favor such environmental sustainability while at the same time supporting investment that would stimulate development. However, the regulatory framework to guide this process was not in place.
- c. Insufficient institutional capacity: Public sector capacity to guide the switch towards a green economy was weak. The main public sector institution was the Ministry of Natural Resources and Environment, MNRE¹, established in 2011 and designated as the national authority in charge of public policy making and statutory regulation in the fields of natural resources, conservation, hydrometeorology, environmental monitoring and pollution control, and was responsible for environmental policy making and implementation. The MNRE had a small staff allocation and limited clout to reign over the seven sector-agencies that were grouped under its purview, many of them financially autonomous: the Guyana Geology and Mines Commission (GGMC), Guyana Forestry Commission (GFC), Guyana Lands and Survey Commission (GLSC), the Environmental Protection Agency (EPA) and the Protected Areas Commission, among others. The main GoG challenge was to reach an optimal coordination of environmentally-sound and economically viable policies; to do that, capabilities had to be enhanced in GGMC and GFC to improve environmental enforcement and compliance in coordination with the other agencies under MNRE; those agencies also needed to open up to market-oriented incentives to promote a change in behavior in the private sector; this involved a change in institutional culture that was not to be taken for granted. The MNR covers both, productive sector agencies (GGMC and GFC)

¹ Here the acronyms MNRE and MNE are used to refer to the same Ministry.

as well as environmental management and conservation agencies (GLSC, EPA, PAC). The delicate and complex balance between productive sector and environmental planning and control agencies is a common issue in different countries in Latin America, where extractive industries are often in a stronger position than environmental agencies. This balance is a challenge inside the new structure of MNRE, as GGMC and GFC need to develop an environmentally sound legal and administrative framework that would affect their modus operandi, when they have enjoyed a large degree of autonomy in the past.

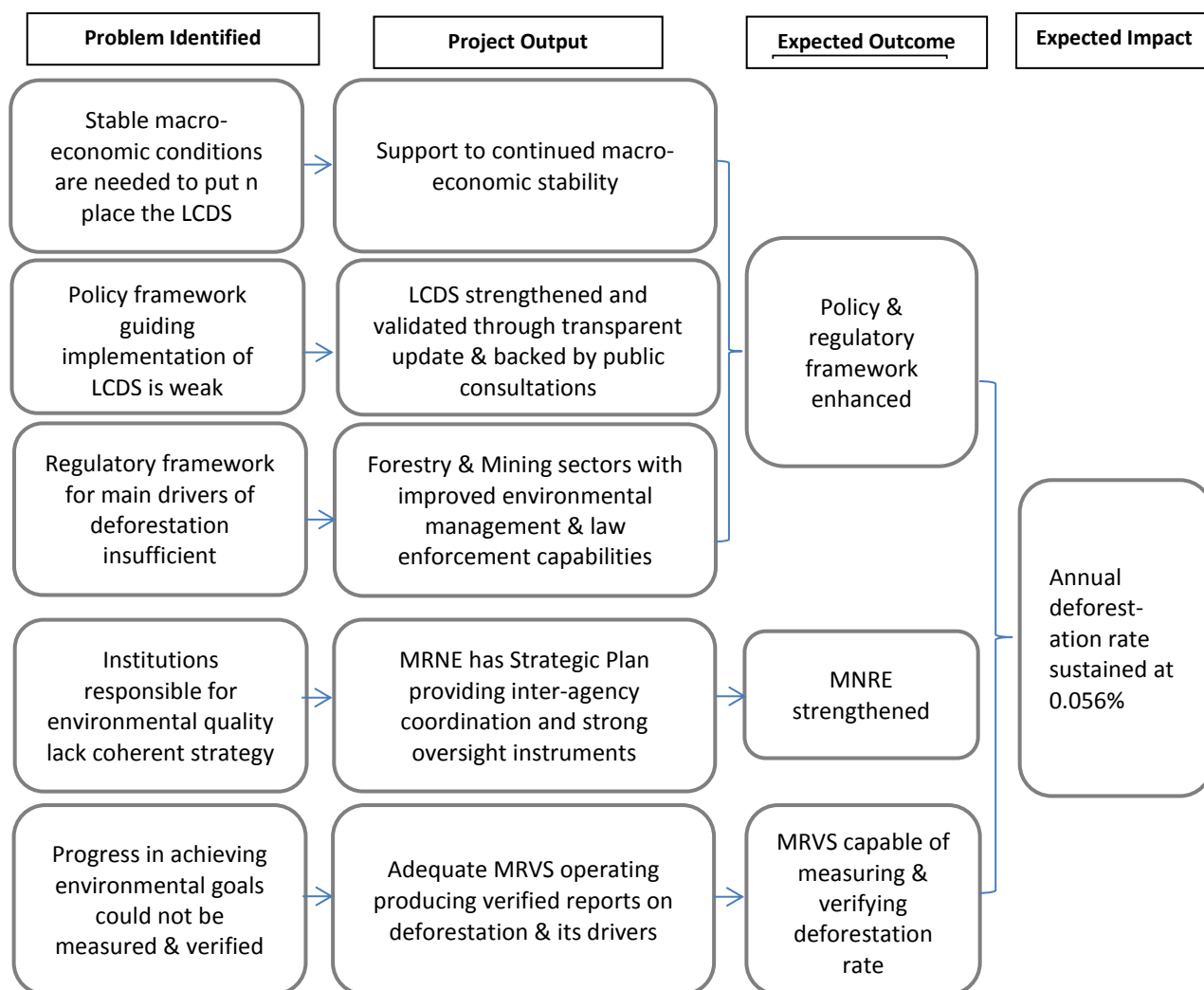
- d. Lack of an appropriate Monitoring, Reporting and Verification System. MRVS is a key tool to follow up trends in the deforestation rate of Guyana through time and to be able to attest to progress towards the goals agreed between the GoG, the GoN and the Bank. To this purpose, Guyana needed to build an appropriate and robust MRVS able to perform in this manner.

Relationship between identified problems and PBP Expected Outcomes. The PBP series was designed to tackle these problems by means of pursuing four desirable Outcomes:

- a. Macro-economic stability. The program required the Borrower maintained a sustainable macroeconomic policy framework compatible with the objectives of this program in order to maintain an enabling environment for the generation of investments and the inflow of capitals/financial agents to support the important commitments that LCDS required.
- b. Enhanced policy and regulatory framework. The analysis of situation and needs performed for the preparation of the program had signaled to significant weaknesses in the policy and regulatory framework that surrounded the implementation of a sustainable economy model. In consequence, the program required the GoG to act in two fronts: (i) consolidate the LCDS as the main policy body governing all economic activities, in particular those that were instrumental to maintaining a low deforestation level; and (ii) develop a solid regulatory framework to apply to the two main economic sectors identified as main deforestation drivers: forestry and mining.
- c. Institutional strengthening of the leading public sector environmental organization, the MNRE. The main public sector institution responsible for environmental policy in Guyana was and still is the Ministry of Natural Resources and Environment (MNRE). The MNRE had recently developed a Strategic Plan, based on a clear diagnostic of its weaknesses and strengths, which had been developed in cooperation with the United Nations Development Program (UNDP). The program was tailored to require the GoG to advance in the implementation of that plan, with emphasis on measures that would tackle the principal problems identified in the diagnosis.
- d. Operative MRVS. In order to be able to prove that advance was being achieved towards all these goals, an effective monitoring, reporting and verification system was needed. The program thus supported the continuing operation of a MRVS, and its utilization as a reliable instrument to monitor, report and verify forest carbon emissions resulting from deforestation and forest degradation in Guyana.

Relationship between PBP Results and Expected Impact. Program objectives were designed to contribute to the fulfillment of a single major impact: maintaining deforestation rate at or below 0.056%, a rate which had been agreed as the target under the agreement between GoG and GoN –with a threshold of 0.1%; deforestation rate is also at the center of the LCDS. The rate of deforestation is the one indicator that would signal success or failure in Guyana’s payment-for-performance forest conservation agreement with GoN, as payments for forests’ climate services are the financial basement to support a re-orienting of its economy towards a more sustainable yet economically viable model. All PBP expected results –at a policy level-- needed to contribute to achieving and sustaining that rate.

Figure 1. Vertical logic of the Program



Relationship between Outcomes and Outputs. The main outputs of the Program and their contributions to achieving the expected results were the following:

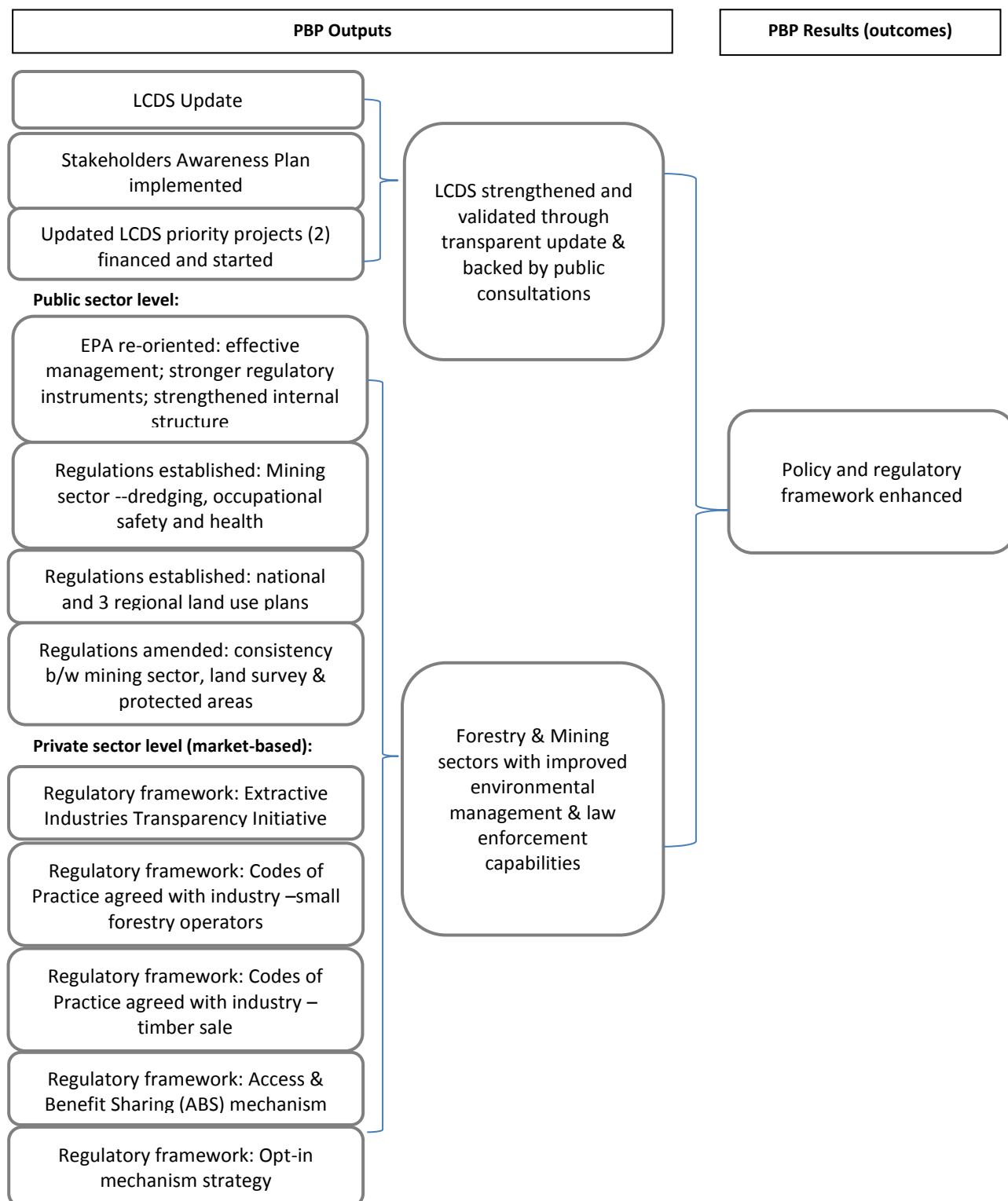
- a. Outputs associated to the enhancement of the policy and regulatory framework. Consolidation of the LCDS had to start with an update of the original document, which was mainly of a declaration of principles and needed to be complemented with priority actions, supporting strategies and coordination mechanisms. The original LCDS had been drafted in 2010 and required some updating, due to the changing conditions surrounding Guyana's negotiation with international donors, including the Bank itself. Additionally, to consolidate the LCDS, the Bank deemed fundamental that the document be known, discussed and adopted by all interest groups and the population at large as their own. Thus, the program required the GoG to "socialize" the document through country-wide consultation events, where the strategy in all its elements would gain the comments and recommendations from Guyana citizens through a civil society organization that involved representatives of indigenous groups, academia and local governments, the Multi-Sector Stakeholders Council (MSSC). The resulting updated version is a solid document, with greater chances of being a practical guide to the actions not only of the GoG but also of its citizens. To

further consolidate the usefulness of the LCDS as a practical guide to development, the PBP required the GoG to select two investment projects in critical sectors included in the strategy, and to advance towards their execution by securing financing and start implementation.

In order to advance towards a stronger environmental regulations structure, the program focused attention on the Guyana Environmental Protection Agency (EPA), which did not have the regulatory arsenal to orient the economic sectors towards more sustainable patterns; of the EPA, the program required that it be reoriented away from a simple environmental licensing agency to a full-fledged regulatory oversight function, strengthening it by the creation of a Compliance and Enforcement Unit capable of monitoring the economic sectors' compliance with main regulatory instruments. Only then did the program turn towards the two economic sectors targeted by the program (forestry and mining), based on an analysis of the specific regulations and norms needed to improve their track record; the program had different focuses for each of them. Mining needed amendments to the main sector policy document (Mining Act) as well as new regulations that were to be revised to ensure consistency with major environmental legislation pieces, such as legislation covering protected areas and land-use planning; in addition, specific regulations to avoid undesirable environmental effects from mining activities (i.e. dredging, occupational safety and health) were also needed and required. The forestry sector, in turn, had had a new Law developed and approved recently, which was in itself a well-balanced and modern text; in this case, the program focused its attention on law enforcement issues, aiming at strategies that would convince the private sector to comply with the law for their own benefit. For that purpose, the program required the GoG to work towards getting private forestry operators to comply with the law, with an emphasis on the small operator; thus, the program required the government to issue and promote "codes of practice" directed towards the small operator and/or to those involved in the sale of timber. With the same purpose, the program required the GoG to advance in the process of obtaining entry into an internationally validated control system, such as the "Extractive Industries Transparency Initiative" (EITI); acceptance into such initiative involves the Government's alignment with an agreed series of activities and processes that demonstrates its commitment to fiscal transparency and good governance. This commitment in turn, could open the door to further international investment in Guyana's extractive industries.

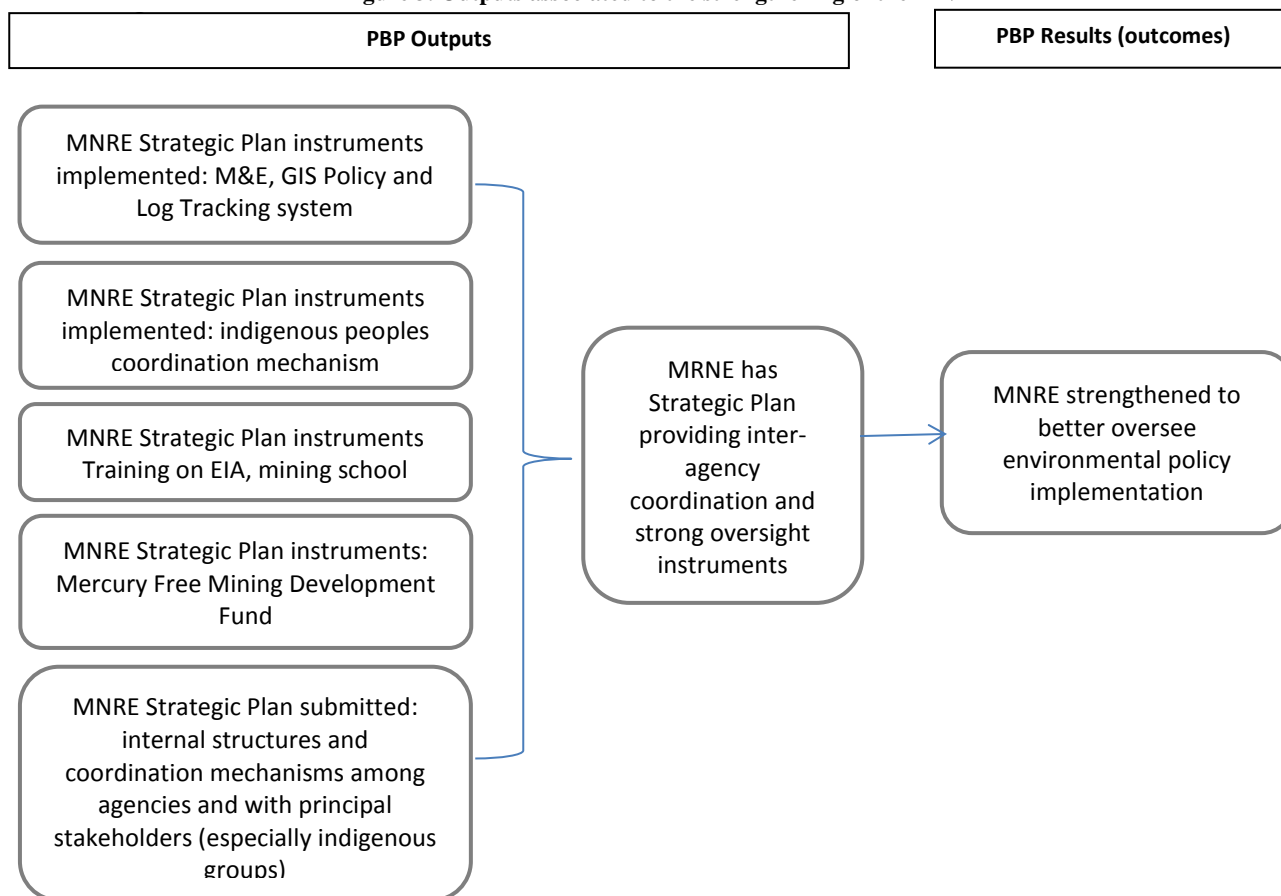
Finally, the program required the GoG to issue complementary regulations, in particular the rationalization of land-use planning, through the approval of one National Land Use Plan by the Special Land Use Committee (SLUC) and at least 3 Regional Land Use plans for those areas where the conflicts in use were more severe. In complement with this, the program required the GoG to advance in the application of an instrument to help put land-use regulations in practice with the agreement of those currently occupying the land; two mechanisms were designed to promote this: (i) the establishment of an Access and Benefit Sharing (ABS) mechanism; and (ii) an Opt-in system, an opportunity for titled villages with forests to voluntarily include their forests into the payments based on performance scheme and thus participate of its benefits.

Figure 2. Outputs Regulatory Framework

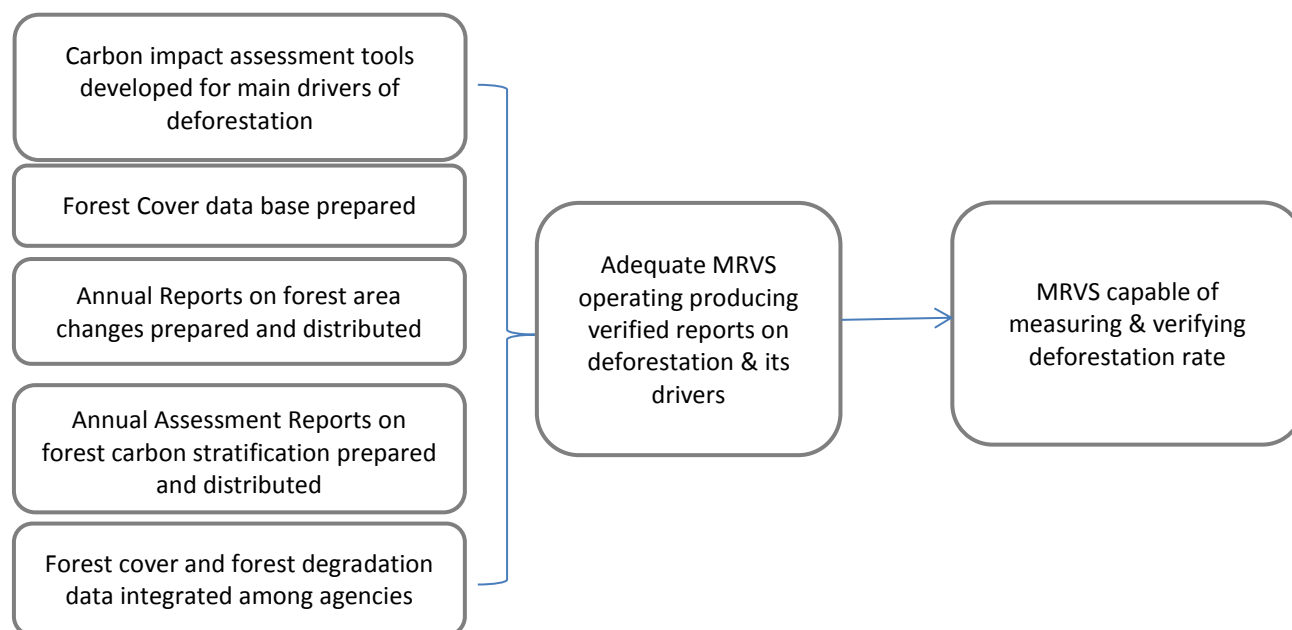


- b. Outputs associated with the strengthening of the MNR. The program required the GoG to build coordination structures to strengthen the MNR's ability to exert influence over the larger, better funded sector agencies –mostly GGMC and GFC; and data collection and dissemination instruments to promote a culture of transparency and oversight. Additionally, the MNR would be required to create institutional capacity to deal with indigenous issues directly and train its personnel in this and other aspects. Other measures representing significant improvements include: the signature of the Minimata Convention and the training in environmental practices provided to SME miners.

Figure 3. Outputs associated to the strengthening of the MNR



- c. Outputs associated to the operational MRVS. In particular, the program sought that carbon emissions and removals be reported consistently and with Intergovernmental Panel on Climate Change (IPCC) guidance. The program also required the GoG to integrate forest cover data from all MNR agencies; and integrate forest degradation information into the MRVS. With these conditions complied, the GoG would have a tool capable of generating country-wide verified reports on forest cover and on specific deforestation drivers, and would thus be capable of demonstrating its compliance with international commitments it had acquired.

Figure 4. Outputs associated to the MRVS

PBP outputs were the same as originally planned. The logic of intervention was confirmed..

2.1.2 Results Achieved

The PBP Series was organized to achieve the following results and targets at the program level:

Table 1. Outcome indicators and targets achieved

Objective Planned	Baseline condition	Objective achieved
Policy and regulatory framework enhanced	LCDS version 2010 Limited environmental regulations for extractive industries	LCDS 2013 updated Environment regulations for extractive industries reviewed/approved
MNRE Strengthened by implementing its strategic plan	MNRE does not have a strategic plan	MNR strategic plan approved and in implementation
MRVS Operative	MRVS in start-up phase	MRVS has issued carbon impact, carbon stratification & carbon expansion assessments

All targets have been met at the time of the preparation of this PCR (July 2016), although two of the targets are on-going efforts that will continue to evolve over time: environmental regulations and implementation of the MNRE strategic plan. In both cases, there has been significant progress, although there has been some delay associated mostly to a change in government administration that took place in 2015. However, regular activity has resumed in the MNRE; the political support and institutional structures are there to ensure the completion of those processes that are under way. Thus, it is expected that all expected results will be fulfilled by the closing of the target year of 2016.

The PBP Series generated 95 % of the results it was intended to accomplish under the Results Matrix (see Checking List) and achieved 100 % of the outputs specified in the Policy Matrix, as described in the Results Achieved Table 2 below.

Table 2. Results Achieved Matrix

Impact/Indicator	Unit of Measure	Baseline value	Baseline year	Means of verification	Targets and Actual Achievement		Date when target was achieved
Deforestation rate sustained							
Annual deforestation rate: 0.056% sustained	Percentage	0,056%	2009	MRVS	Original Target value	0,056%	2014
					Revised target value		
					Actual amount achieved	0,065%	
Results	Unit of Measure	Baseline value	Baseline year	Means of verification	Targets and Actual Achievement		Date when target was achieved
Result Governance and policy framework that support the implementation of the LCDS strengthened and its sustainability improved							
Results Indicator 1: Policy and regulatory framework enhanced	Number	0	2012	Press release Reports	Original Target value	1	2015
					Revised target value		
					Actual amount achieved	1	
Results Indicator 2: MNRE strengthened by implementing its strategic plan	Number	0	2012	Document of Strategic Plan Reports on progress	Original Target value	1	2015
					Revised target value		
					Actual amount achieved	1	
Results Indicator 3: MRVS operative	Number	0	2012	Reports of MRVS	Original Target value	1	2015
					Revised target value		
					Actual amount achieved	1	

Result-Product/Indicator	Unit of Measure	Baseline value	Base-line yr	Means of verification	Targets and Actual Achievement	Date achieved
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Result-Product/Indicator	Unit of Measure	Baseline value	Base-line yr	Means of verification	Targets and Actual Achievement		Date achieved
Component 1: MACRO-ECONOMIC STABILITY							
Result 1: CONTINUED MACRO-ECONOMIC STABILITY							
Product Indicator 1: Technical opinion IMA	Number	Stable macro-economic framework	2013	IMA annual report	Original Target value	1	2015
					Revised target value		
					Actual amount	1	
Component 2 Regulatory framework to support the application of the LCDS and to reform forest-based economic sectors							
Result 2: LCDS implemented							
Product Indicator 1: LCDS update process completion	Number	Draft	2013	Signed agreements	Original Target value	1	2015
					Revised target value		
					Actual amount achieved	1	
Product Indicator 2: Consultations on LCDS and reviews by MSSC	Number	0	2013	Minutes of MSSC meeting Report on awareness sessions	Original Target value	1	2015
					Revised target value		
					Actual amount	1	
Component 2 REGULATORY FRAMEWORK TO SUPPORT THE APPLICATION OF THE LCDS AND TO REFORM FOREST-BASED ECONOMIC SECTORS							
Result 3: FORESTRY & MINING SECTOR HAVE IMPROVED ENVIRONMENTAL MANAGEMENT AND LAW ENFORCEMENT							
Product Indicator 1: Review and application of environmental regulatory framework for extractive industries / Subtopic: EPA strengthening	Number	EPA has limited regulatory framework to assume overarching responsibilities for environmental compliance	2013	Reports by MNRE containing copies of approved regulations and other measures Copy of contracts with new staff	Original Target value	1	2015 Target 2015 met Target 2016: on schedule
					Revised target value		
					Actual amount	1	
Product Indicator 2: Review and application of environmental regulatory framework for extractive industries / Subtopic: regulations in mining sector	Number	Mining, Lands & Surveys, and Protected Areas Act unmodified after establishment of MNRE	2013	Reports by MNRE containing copies of approved regulations and other measures	Original Target value	1	2015 Target 2015 met Target 2016: on schedule
					Revised target value		
					Actual amount	1	

Result-Product/Indicator	Unit of Measure	Baseline value	Base-line yr	Means of verification	Targets and Actual Achievement		Date achieved
Product Indicator 3: Review and application of environmental regulatory framework for extractive industries / Subtopic: Codes of Practice forest sector	Number	Forestry Act is current; most forest regulations up to date	2013	Reports by GFC	Original Target value	1	2015 Target 2015 met Target 2016 met
					Revised target value		
					Actual amount	1	
Product Indicator 4: Review and application of environmental regulatory framework for extractive industries / Subtopic: EITI	Number	Initial approach to Extractive Industries Initiative (EITI)	2013	Press release setting up EITI Multi-Stakeholder group/ Signed consultancy contract to undertake EITI scoping study Copy of Inception Report for EITI Scoping Study	Original Target value	1	2015
					Revised target value		
					Actual amount	1	
Product Indicator 5: Review and application of environmental regulatory framework for extractive industries / Subtopic: Opt-In mechanism	Number	0	2013	Letter of submission to MSSC & TNC	Original Target value	1	2015 Target 2015 met Target 2016: on schedule
					Revised target value		
					Actual amount	1	
Product Indicator 6: Review and application of environmental regulatory framework for extractive industries / Subtopic: Land Use Plan	Number	0	2013	Copy of documents approving Plans	Original Target value	1	2015 Target 2015 met Target 2016 met
					Revised target value		
					Actual amount	1	
Component 3. INSTITUTIONAL STRENGTHENING							
Result 4: MNRE HAS A STRATEGIC PLAN THAT PROVIDES FOR ADEQUATE INTER-AGENCY COORDINATION AND OVERSIGHT TO ACCOMPLISH LCDS OBJECTIVES							
Product Indicator 1: Strategic Plan detailing adjustments to: (i) priority internal structures;	Number	Draft	2013	Record of formal submission of Strategic Plan to Minister of MNRE	Original Target value	1	2014
					Revised target value		
					Actual amount	1	
Product Indicator 2: Strategic Plan detailing adjustments to: (ii) coordination mechanisms for existing agencies under MNRE;	Number	0	2013	Technical reports	Original Target value	1	2015 Target 2015 met Target 2016 met
					Revised target value		
					Actual amount	1	
Product Indicator 3: Strategic Plan detailing adjustments to: (iii) mechanisms that promote effective coordination between extractive sector-related agencies and stakeholders, with particular attention to indigenous groups / Subtopic: Minamata Convention	Number	0	2013	Copy of the instrument of Ratification to the Minamata Convention on Mercury issued by the Minister of Foreign Affairs and deposited at the United Nations.	Original Target value	1	2015
					Revised target value		
					Actual amount	1	

Result-Product/Indicator	Unit of Measure	Baseline value	Base-line yr	Means of verification	Targets and Actual Achievement		Date achieved
Product Indicator 4: Strategic Plan detailing adjustments to: (iii) mechanisms that promote effective coordination between extractive sector-related agencies and stakeholders, with particular attention to indigenous groups / Subtopic: institutional capacity in Indigenous Relations	Number		2013	Documents detailing increased staff and reports on issues identified and dealt with	Original Target value	1	2015
					Revised target value		
					Actual amount	1	
Indicator 5: Adoption of knowledge-based mechanisms to improve environmental management of forest-based sector / Subtopic: training program on best-practices for mining	Number	0	2013	Copy of report issued by the Board of the Mining School on mining school training program and a list of participant	Original Target value	1	2013
					Revised target value		
					Actual amount	1	
Product Indicator 6: Adoption of knowledge-based mechanisms to improve environmental management of forest-based sector / Subtopic: Log Tracking System	Number	0	2013	Records from MNRE/GFC	Original Target value	1	2014
					Revised target value		
					Actual amount	1	
Product Indicator 7: Adoption of knowledge-based mechanisms to improve environmental management of forest-based sector / Subtopic: Mercury Free Mining Development Fund	Number	0	2013	Reports from MNRE/GGMC: Copy of the Mercury Distribution report, establishing assessment on the amount of mercury in the country. Letter from the MNRE approving the Mercury Free Development Fund	Original Target value	1	2014
					Revised target value		
					Actual amount	1	
Product Indicator 8: Adoption of knowledge-based mechanisms to improve environmental management of forest-based sector / Subtopic: training programs on mercury reduction	Number	0	2013	Copy of report issued by the Board of the Mining School on mining school training program	Original Target value	1	2015
					Revised target value		
					Actual amount	1	

Result-Product/Indicator	Unit of Measure	Baseline value	Base-line yr	Means of verification	Targets and Actual Achievement		Date achieved
Component 4. MRVS							
Result 5: MRVS CAPABLE OF GENERATING COUNTRY-WIDE, VERIFIED REPORTS ON FOREST COVER AND DEFORESTATION DRIVERS							
Indicator 1: Tools for Carbon Impact Assessment for main drivers developed, and Forest Cover database prepared / Subtopic: Carbon Impact Assessment tool	Number	0	2013	Record of decision of approvals by MNRE/GFC	Original Target value	1	2014
					Revised target value		
					Actual amount	1	
Indicator 2: Tools for Carbon Impact Assessment for main drivers developed, and Forest Cover database prepared / Subtopic: Forest carbon emissions and removals with IPCC guidance	Number	0	2013	Technical report	Original Target value	1	2015
					Revised target value		
					Actual amount	1	
Product Indicator 3: Tools for Carbon Impact Assessment for main drivers developed, and Forest Cover database prepared / Subtopic: GeoNode Server operational	Number	0	2013	Technical report	Original Target value	1	2016
					Revised target value		
					Actual amount	1	
Product Indicator 4: Tools for Carbon Impact Assessment for main drivers developed, and Forest Cover database prepared / Subtopic: Forest degradation information integrated within MRVS	Number	0	2013	Technical report	Original Target value	1	2016
					Revised target value		
					Actual amount	1	

Consolidation of the LCDS as guiding development policy for Guyana. LCDS was reviewed and updated in 2013 with numerous public participation events that enriched the process. Civil society participation was channeled through MSSC and community organizations. During the first two years, MSSC met regularly once a month. The current administration is evaluating a new composition of the Committee, although targets and functions would be similar.

The new GoG administration has publicly expressed its commitment to continuing along the path of a “green economy”, of which the LCDS is the main conceptual reference. The administration has also confirmed its intention to continue its partnership with GoN under the same policy tenants that were agreed at the time of signature of their agreement. The administration is focusing its efforts towards the achievement of such “green economy” on developing renewable energy sources and promoting the growth of the modern technologies sector, while sustainably exploiting the country’s natural resource base. One of the first policy instruments the new administration has developed and opened for consultation was included as part of the LCDS, the Climate Resilience Strategy and Action Plan.

Enhancements of the policy and regulatory framework. Despite the difficulties expected of the implementation of such a complex and all-encompassing policy framework as the one provided by the LCDS, significant progress is observed in the following areas: (i) EPA reviewed its regulations and guidelines, supporting Compliance and Enforcement Unit put in force; (ii) wildlife regulations to protect the country’s biodiversity capital by curbing illegal wildlife exports were approved; (iii) Code of Practice for State Forest Permission for small operators and Code of Practice for Timber Sale were approved; (iv) the National Land Use Plan as well as the 3 regional land use plans were approved by the GLSC; and (v) the Access and Benefit Sharing mechanism made significant progress.

After the election year 2015, the emission of further regulations and norms has shown some slowing down. In particular, the process of strengthening the regulatory framework for EPA has been slower than expected; at the time of writing of this report, a consultancy is underway to institute an improved cost-recovery mechanism for that agency. However, in February 2016, Minister of Natural Resources charged the newly inducted Chairman and Board members of the GGMC to tackle the demanding challenges and to develop a robust Mining Policy Framework to inform its long-term development². Impulse to these efforts has derived also from Guyana’s signature of the Minamata Convention on Mercury, as explained in the next section, which committed the country to an exacting path towards reducing and later eliminating pollution effects derived from the use of mercury in its gold mining. Thus, further regulative work in the extractive industries sector is scheduled to be resumed in 2016. In fact, the new administration has adopted and improved on the environmental agenda of the previous administration³.

As it concerns the international dimension, the EITI Scoping Study, initiated in 2014, was successfully completed in October 2015; it contains a roadmap for Guyana to apply for candidacy to become Party to that body, including details on how to adapt the EITI scheme, which is mostly designed for large-scale mining, to the conditions in Guyana, where a great deal of the pollution problem is derived from small and medium scale miners. The GoG is pursuing a similar purpose to be applied to Guyana’s timber and timber products by entering formal negotiations to become a voluntary member of the European Union Forest Law Governance and Trade (EU-FLEGT) to facilitate access to European markets. The first step in that process is the signature of a Voluntary Partnership Agreement and, under it, the Legal Assurance System to ensure the legal origins of those products. Since 2012, when negotiations started, the GoG has advanced in conducting a number of seminars with the various stakeholders, in particular, indigenous peoples. Negotiations have not concluded yet.

Strengthening and consolidation of the MNR. The Strategic Plan was approved as planned and had begun implementation when the election of 2015 happened. In December 2015, some six months after the

² <http://nre.gov.gy/2016/02/12/new-ggmc-chairman-board-charged-to-address-main-challenges-in-mining-sector>

³ http://parliament.gov.gy/documents/sittings/5439-natural_resources.pdf

change of government, the new administration made changes in the structure of Ministries; in particular, the former MNR had been demoted to the level of Department, placed under a Ministry of State, in turn in the Ministry of the Presidency. GFC and GGMC had been placed under the same Ministry. EPA, Wildlife Protection and Protected Areas had been placed under a different portfolio, the Ministry of Governance, also under the Ministry of the Presidency. That initial centralization of decision-making around the Ministry of the Presidency was gradually switched to give the natural resources sector its former hierarchy. By February 2016 the GoG had allocated a 4% budget increase for the MNR, whose budget allocation has grown by 80% from its inception (MNRE was created in late 2011), nearly doubling its share in the total Public Budget (0.20% to 0.38%) (see Table 3). In January 2016, the MNR had been reinstated to its former hierarchical level.

Table 3 Budget Allocations to MNR over time

Budget analysis	2011	2012	2013	2014	2015	2016
GoG Total Expenditure (US\$ MILLION)	756,3	942,7	858,3	866,5	834,0	1.050,9
MNR allocation (US\$ MILLION)	0,0	2,2	3,2	3,5	2,3	4,0
MNR allocation (% of total)	0,00%	0,20%	0,37%	0,41%	0,28%	0,38%
Source: Ministry of Finance. 2011 -2015 Actual figures / 2016 Annual Budget						

While these official changes were taking place, little had changed operationally inside de MNR; the technical and managerial staff remained in place and the new authorities undertook for the most part the same functions formerly attached to the MNR. The previously approved Strategic Plan has been under implementation achieving a number of significant benchmarks, in particular, the MNR has started to establish oversight instruments needed to ensure coherence in the implementation of policy in the sub-sector commissions (such as GGMC and GFC) including a new Compliance Unit.

However, MNR still faces significant challenges to improve coordination between mining and forestry activities and to improve their environmental behavior. The delicate and complex balance among agencies has been a key challenge inside the new structure of the MNR; in order to advance in that direction, the MNR put in place tools for bi-agency coordination like the Memoranda of Understanding that EPA signed with GFC and with GGMC and tools for multi-agency coordination such as the Geospatial Information Unit (GIMU) and the MRVS Steering Committee.

The signature of the Minamata Convention on Mercury has created an urgent need to exercise the level of coordination needed to implement environmental control throughout the MNR. The effort to reduce forest degradation –biomass stocks reduced by effect of mining activities-- and deforestation –reduction in the area required per unit of gold-- will require a number of new coordination mechanisms, which have been included in MNR's Strategic Plan; additionally, a number of technological improvements focused on the Artisanal and Small Gold Mining (ASGM) subsector have been developed which involve the participation of different sections and agencies of the MNR.. A Minamata Initial Assessment (MIA) and a National Action Plan (NAP) have already been conducted and the corresponding bureaucratic instruments put in place.

Adequate operation of the MRVS: The implementation of the MRVS shows significant progress in assessing forest area change and monitoring forest carbon trends in order to determine the historical and current patterns of deforestation and forest degradation, their drivers and the carbon stock present in the various pools. In fact, the MRVS is fully operative, having produced annual reports as planned, being 2015 the last one, whose production was, for the first time fully the responsibility of the GFC –previously they had been produced with significant input from consulting firms. The operation of the MRVS has been critical for domestic enforcement as well as for international verification processes. Accuracy of the process is being monitored by third parties from the Academia and the auditing private sector, and has

progressed steadily each year. A private company published a verification report⁴ establishing that indicators have been obtained applying methodologies in accordance with internationally accepted good practices and they were free from omissions and misrepresentations that could lead to material misstatements.

Progress towards achieving expected impact of the Program. In part because of the above-referenced delay, and in part because policy reforms tend to take a long time before they show results –particularly in this case, where the whole country’s development strategy is at stake-- the impacts of the Bank’s operation cannot be easily discerned this early in the process. An impact evaluation is planned to be performed at least after five years have passed since the disbursement of the second PBP operation; at the moment, only partial results can be discerned. Still, observations have been made concerning progress towards the achievement of the Program’s expected impact. According to the five MRVS reports issued so far, fluctuations on the rate of deforestation and degradation occurred in a range which does not show deep changes, as shown in figure Table 4 below.

Table 4. Data on progress in impact indicator

<i>Impact / Annual deforestation rate: 0.056% sustained</i>		
Objective Planned	Baseline condition and year	Objective achieved
Annual deforestation rate: 0.056% sustained	Between 0.01% and 0.06% on average (1990 and 2010) – according to JCN.	Target. Keep at 0.056%. Achievement. Deforestation rate of 0.065% in 2014, lower than the previous years (2012:0.079% and 2013: 0.069%) ⁵

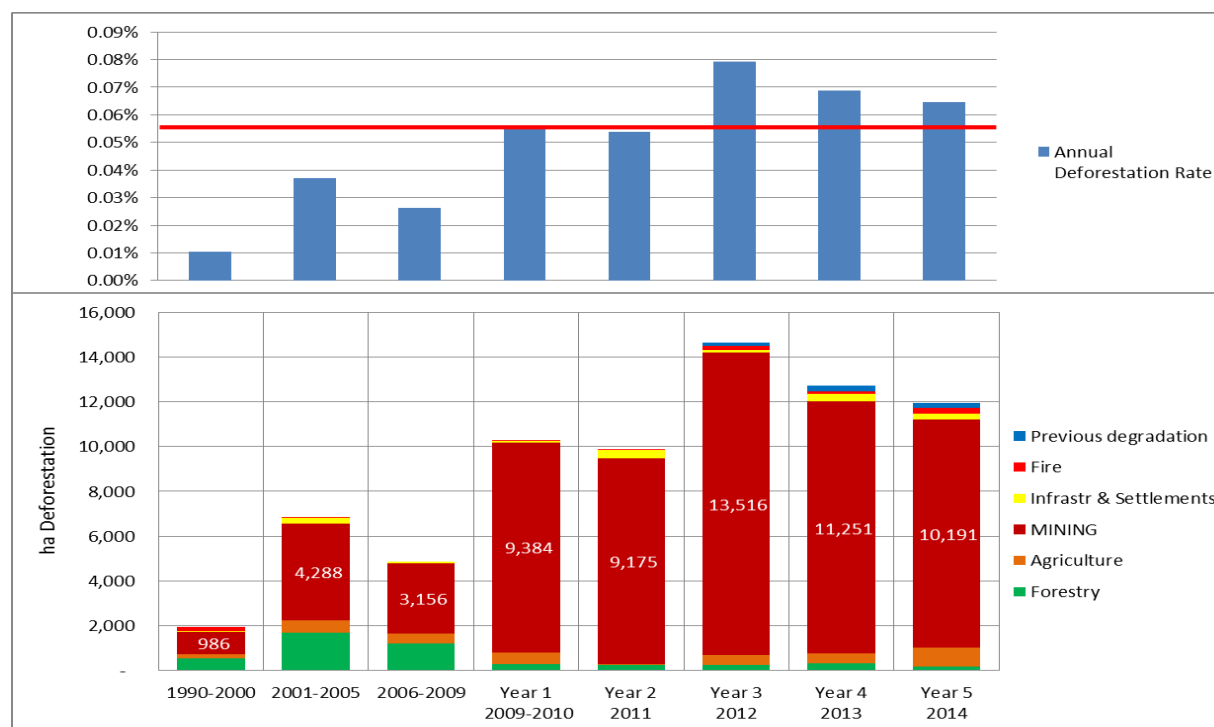
The MRVS reports on forest change, both deforestation and degradation, by change driver through the interpretation of a national coverage of high resolution 5 m imagery. Forest change of forest to non-forest excluding degradation between 1 January 2014 and 31 December 2014 (12 months) is estimated at 11,964 ha. Over the Year 5 reporting period (2014), this equates to a total deforestation rate of 0.065%. This rate of change is lower than the previous two years, perhaps signaling a downward trend. However deforestation rate needs to be assessed over long stretches of time, as single year variations may depend on transient factors which would even-out on the long term. In fact, for the past 23 years the rate has been between 0.002 % and 0.008%; over time, the resulting average rate is still within an acceptable range and certainly below the international rate of deforestation for tropical countries as reported by FAO which was 0,52% in 2009 and revised to be 0,44% in 2012.

The main deforestation driver is mining (sites and roads). It accounts for 85% of total deforestation in the most recent reporting period (MRVS 2014).⁶ With gold being the predominating commodity mined, the accelerated expansion of deforestation in 2012 shows a remarkable coincidence with the gold price record highs in 2011/2012. Subsequently declining gold prices appear to be reflected in the declining deforestation rates of the years 2013 and 2014.

⁴ http://www.forestry.gov.gy/wp-content/uploads/2016/04/MRVS_Year_5_Verification_Report_DNV_GL.pdf

⁵ GFC, “Guyana REDD+ MRVS 2014: Year 5 Interim Measures Report,” 2015

⁶ Ibid.

Figure 5: Deforestation as percentage of total forested area and absolute per aggregated driver⁷

Gold prices showed a sustained downwards trend from 2013 to 2015, which could be expected to bring about a significant reduction of gold rush incidents and in consequence a further decline of mining-induced and overall deforestation rate. While the mining deforestation rate was +0.007% (absolute percentage points) above prediction in 2012, it already dropped 0.003% (percentage points) below forecast in 2013 and 0.007% in 2014.⁸

The transgression of the Annual Deforestation Rate Target in 2012 must be seen as externally induced. The accelerated evolution of the gold price, peaking in 2011/12, could not be anticipated when the target of 0.056% was set in 2009. The decreasing Annual Deforestation Rates in 2013 and 2014 reflect that Guyana has begun to take appropriate measures to regulate the behavior of the private sector; in spite of upward fluctuations in more recent years, the national deforestation target remains within the 0.056 and 0.1 threshold agreed upon with the GoN.

Even though the intervening period of time is not optimal to establish a long-term trend, if the GoG policies to improve environmental management in forest-based sectors and strengthen environmental enforcement and compliance are sustained over time, the incentives are there to ensure that the PBP impact indicator (Annual Deforestation Rate Target 0.056% sustained) is accomplished.

Forest degradation, in turn, is defined for measurement purposes as “mercury contamination of biomass”. Over time several maps for forest degradation have been produced. The first year when forest degradation was assessed was Year 2, which showed a figure of 5,467 ha in Year 2; 1,963 ha in Year 3; 4,352 ha in Year 4; 4,231 ha in Year 5. These figures are compared with a 2011 benchmark value of 4,368 ha, showing that forest degradation has fluctuated, exhibiting a slight decrease; these fluctuations are attributed to a consolidation of mining operations around existing infrastructure.

⁷ Data Source: Ibid., Infrastructure, Amaila Falls project development and settlements aggregated as one single driver category for improved readability.

⁸ Ibid., p. 72.

2.1.3 Results Attribution

As stated earlier, the PBP Program was conceived in the context of a pre-existing pay-for-environmental performance agreement between the GoN and the GoG, aimed at orienting the country's development model towards an environmentally sustainable path, in exchange for the transfer of up to US\$250 million over a 5-year period. GoN's transfers were to be utilized to fund specific projects⁹ that fall within the investment lines expressed in a Joint Concept Note agreed upon by the two governments, and funneled through the Guyana REDD+ Investment Fund (GRIF). It was up to the GoG to ensure that the regulatory framework to implement this agreement was in place, to make the necessary institutional arrangements to facilitate project execution, and to provide reliable evidence that those and other investments were achieving the results that were expected of them. That is where Bank's support through the PBP Program came in, to foster GoG decision-making in the requisite areas: regulation, institutional capacity and monitoring, reporting and verification.

To the extent that results obtained in terms of enhanced regulatory framework, strengthened institutions and reliable monitoring system, and that clear relations can be constructed between advances in these areas and the achievement of sustained environmental behavior changes, it is possible to show a direct contribution of the PBP program to the fulfillment of GoG's obligations towards the agreement with the GoN and towards the country's long-term objectives in this area –and thus, to the fulfillment of its objectives. While an exclusive attribution of these outcomes to the PBP would be controversial, it would be reasonable to assume that the requirement of fulfilled conditions for the disbursement of the PBP helped focus the GoG on priority topics like EITI, Minamata implementation, capacity building, etc., which, in the absence of the Program, might not have gained such momentum or achieved completion.

However, acknowledging that direct attribution is challenging for policy-based loans, following PCR preparation guidelines, an attempt to assess PBP effectiveness with a counterfactual analysis follows, based on the information available at this time.

In order to compare the situation with and without project, a qualitative approach has been chosen, using the performance of policy and impact variables in similar countries that did not undertake PBP-supported reforms as a baseline comparator. The identification of a counterfactual used the following criteria in the selection of countries to include in that sample: (i) LAC countries possessing the highest forest cover, privileging those with a production profile similar to Guyana's (principally gold mining); and (ii) countries where artisanal mining sector prevails in that sector, to the extent possible, gold mining. Under the first criterion, FAO data indicates that the countries with greatest forests cover in LAC include Brasil (477.7 million has); Peru (68,7 million has); Mexico (64,3 million has); Colombia (60.7 million has) and Bolivia (58.7 million has), which total 730 million has, or 79% of LAC's forested area. To fulfill the second criterion countries in Africa and Asia/Oceania were included. Table 5 below shows the resulting selection of a comparable group to use as counterfactual; data was collected regarding the presence or absence of benchmark policy decisions that are central to the PBP series, in particular: deforestation rate; status of signature of the Minamata Convention; and status of acceptance in EITI. To this, Environmental Performance Index (EPI) scores were added, as well as information of whether or not they receive NORAD funding.

Table 5. Counterfactual selection criteria and comparable sample

⁹ Up to June 4 2016, projects approved and in implementation under GRIF amounted to US\$35,781,113; projects in advanced state of preparation amounted to US\$47,000,000. Total GRIF commitments amount to US\$82,781,113. In <http://www.guyanareddfund.org/images/Update%20on%20GRIF%20Projects%2006-04-16.pdf>

Country	Supported by NORAD	Artisanal Mining		Deforestation rate		Minamata Convention		EITI Status		EPI Score		
		Gold	miners '000	2000-2010	2010-2015	Signature	Ratification	2012	2015	2014	2016	Var
Region												
Brasil	yes	N/A	300-400	0,4	0,2	10/2013	Pending	Non	Non	52,97	78,90	49%
Guyana	yes	90%	18-20	0,0	0,1	10/2013	09/2014	Non	Candidate	38,07	71,14	87%
Peru	no	N/A	N/A	0,2	0,2	10/2013	01/2016	Compliant	Compliant	45,05	72,95	62%
ASM countries												
Papua Nueva Guinea	no	90%	50-60	0,0	0,0	NO	NO	Non	Candidate	41,09	48,02	17%
Indonesia	yes	55%	109	0,5	1,1	10/2013	Pending	Compliant	Compliant	44,36	65,85	48%
Sudan	yes	N/A	N/A	0,8	0,9	09/2014	Pending	Non	Non	24,64	42,25	71%
Tanzania	yes	5%	550	0,8	0,8	10/2013	Pending	Compliant	Compliant	36,19	58,34	61%
Zimbabwe	yes	S/D	350	1,9	2,1	10/2013	Pending	Non	Non	49,54	59,25	20%

Sources:

NORAD. Website www.norad.no

Proyecto Minería y Desarrollo Sustentable. Centro de Investigación y Planificación del Medio Ambiente (CIPMA).

FAO. Evolución de la cubierta Forestal. Año 2015.

Minamata website www.mercuryconvention.org

EITI Progress Report 2016 - EITI Country status 2007-2015.

EPI- Environmental Performance Index 2016 and 2014 Reports. Yale website

It is difficult to state that this group can act as a rigorous counterfactual to replicate Guyana's conditions without the project. However, the presence of NORAD in most of those countries supporting objectives similar to those it supports in Guyana, together with the fact that none of them has entered into any agreement (such as the PBP) by which environmental strengthening objectives would be pursued in a rigorous and persistent way, support the pertinence of the use of this group as a counterfactual.

The following observation can be derived from comparing the data on Table 5:

- Impact.** For the last five years, which could be accepted as reference period for the PBP series, the evolution in those countries' deforestation rate differs among the regions. In LAC, the largest countries show consistent rates that remain within parameters sustained for at least the previous decade. The Africa/Asia/Oceania block shows rates that have deteriorated constantly –with the exception of New Guinea. Compared to both. Guyana shows a low deforestation rate and a satisfactory tendency –noticeably, maintaining a very low deforestation rate implies a greater challenge than move from lower rates up.
- Commitment to environmental policies.** Taking Minamata as an indicator of commitment in this sense, Guyana stands out as an early subscriber of the Convention and the first to ratify it among that group –in fact, none except Peru has ratified it, in spite of the fact that all, again except Peru, do receive NORAD funding.
- Transparency in public sector management.** Taking EITI as an indicator of the commitment to transparency, Table 5 shows that at a point in time before the PBP (2012), one country in LAC – Peru—and two others –Indonesia and Tanzania—had already started the candidacy process. In the intervening period between 2012 and 2015 only two countries had changed status to candidate, including Guyana. Other countries supported by NORAD show no progress in this area.
- Environmental performance, in general.** The PBP series involved a group of initiatives which, together, were aimed at improving environmental management in Guyana. EPI measures country environmental conditions under a large set of variables, including several areas that are covered in the PBP, in particular: tree cover loss; change of trend in carbon intensity, protection of biodiversity and habitat. While all countries in the sample showed improvements under this criterion between 2014 and 2016, the score for Guyana had improved in 87%. Guyana shows by far the best evolution in this criterion; from showing levels comparable to the weaker

Africa/Asia/Oceania group in 2014, Guyana has moved to show an index that is similar to those of its LAC partners.

Based on these observations, Guyana's performance has been significantly better than that of the rest of the group in the sample. This analysis would validate the assertion that the presence of the PBP Series, with the pressure it created for the country to adopt well placed environmental policy decisions, has consolidated its trend towards greater environmental performance and a long-term sustainable "green development" model..

2.1.4 Unanticipated outcomes

Leveraging new sources of funding for development purposes. Successful implementation of the PBP has solidified international support to Guyana and enhanced its credibility in the complex world of payment-for-performance forest conservation. Innovative aspects of its strategy attracted other donors to provide financing in support of environmental objectives. Guyana received Forest Investment Program (FIP) resources to prepare its Forest Investment Plan. Guyana will also receive £53.2 million in grant resources from the United Kingdom under the newly established United Kingdom Caribbean Infrastructure Fund (UKCIF) which funds improvements in infrastructure to help drive economic growth and development in nine countries across the Caribbean region. For Guyana, UKCIF will finance improved road networks, bridges, waterfronts, rehabilitation of airstrips, potable water systems and reduced energy costs, as well as tackle the environmental and health risks associated with the improper disposal of waste. These non-programmed operations provide support to the long-term strategies of the country framed under the LCDS.

2.2 Efficiency

Not rated. PBP does not require ex post economic evaluation. However, an ex-post economic appraisal was prepared utilizing a cost-benefit approach to express the Program's results and potential impact on the mining and forestry sectors, analyzing future forestry exports increase¹⁰ and mining contamination reduction¹¹. The assessment, based on ex post performance information and simulations, concluded that, assuming the environmental sector continues to be strengthened and environmental regulations are indeed enforced, in the long run the PBP Series would make the following economic contributions: (i) improving environmental governance in the mining sector and establishing the bases for the adoption of new contamination prevention and abatement (Minamata Convention), which will reduce future environmental remediation costs; (ii) promoting efficiency in the mining sector by fostering better conditions for productivity (school of mining and training programs in forestry); (iii) establishing transparency rules in order to formalize main actors in the mining sector (EITI scoping, in process); (iv) supporting the reduction of illegal logging as a means to access new and more profitable export markets (EU FLEGT in process), and developing added value products; and (v) creating the conditions for the removal of economic constraints to sustainable development (renewable energy sources as key issue) through the proper implementation of LCDS. The results of the cost-benefit analysis for the two economic sectors indicate an estimated relation between *Expected benefits/PBP size* at a satisfactory level of 4.4 times (ex-

¹⁰ Forestry sector: In the Pessimistic Scenario, the benefits would reach US\$ 6.8 million per year, based in the fact that the commercial process will allow access to markets with greater demand and higher prices (FLEGT agreements and similar), reducing illegal logging. The Optimistic Scenario would add advances in the industrial restructuring of the sector, with greater incorporation of added value. Under this assumption, the benefits extend up to US\$10.2 million per year. See more detailed figures in Ex Post Economic Evaluation.

¹¹ Mining sector: Eliminating use of mercury implies a reduction in terms of Environmental liabilities. According to current production level and operational condition, remediation cost of environmental impact would represent an annual cost of US\$71.4 Million. These are costs that have not currently been incurred, because the remediation efforts are not being carried out. However, the negative effects on the environment are real and verifiable. Estimated initial investment in private sector for technological conversion is around US\$ 71 Million. See more detailed figures in Ex Post Economic Evaluation.

ante estimates were 5.4 times)¹². In terms of financial sustainability, budget allocated by the GoG to MNR has grown by 80% from the initial period (MNR was created in late 2011), nearly doubling its share in the total Public Budget (0.20% to 0.38%).

2.3 Relevance

PBP conditions expressed a clear alignment and consistency with environmental policy goals of Guyana. In spite of the change in Government after project closing, the operation remained significant for the achievement of country development objectives. The conditions that made the project relevant at the time of approval remain the same. The following facts bear testimony to the fact that the country is consistently pursuing the objectives heralded by the PBP series:

- a. Climate Change Orientation of country policy. Under the Paris agreement, Guyana will: (i) improve timber monitoring and reduce illegal logging; (ii) increase value-added activities in the forestry sectors; (iii) intensify sustainable management among indigenous communities; (iv) encourage more efficient mining and logging activities; and (v) invest in solar power, wind power and hydropower to reduce dependency on fossil fuels.
- b. LCDS as an initial step to a Green Economy. Building on the experience and results of the LCDS, the new administration is looking to advance to more ambitious targets, for example, reforestation of mined-out areas; coastal zone management; and solar energy generation and wind power. In moving towards a *Green Economy* model, the GoG would be moving towards the logical next steps in the implementation of instruments supported by PBO, in particular, adopting international standards such as the Extractive Industries Transparency Initiative (EITI) and Forest Law Enforcement Governance and Trade (FLEGT).
- c. Budget support to MNR. The MNR's Strategic Plan for the period 2015-2020 provided a reasonable guideline to reach objectives and associated goals to the financial support needed to implement them. Staff requirement for each specialization was determined based on the analysis of the Ministry's responsibilities and roles foreseen in the Strategic Plan (initial staff of 10 persons in 2012 will be increased to 58 in 2016). Thus, in spite of a climate of restrictive fiscal and monetary policy, the MNR was awarded the budgetary resources it sought (US\$4M); in fact, budget allocated by the GoG to MNR has grown by 80% from 2011 when it was established, nearly doubling its share in the total Public Budget (0.20% to 0.38%).
- d. Continuity of Bilateral agreement with GoN. The MoU between the GoN and the GoG expired on December 2015. The two governments are currently discussing the terms of a possible new agreement. Recently¹³, Ministers of the two countries announced that they will continue the current collaboration until Guyana has implemented all agreed key reforms in the forestry sector. According to NORAD, the bilateral agreement has demonstrated how HFLD countries like Guyana can be incentivized to keep their deforestation low, and using the proceeds to establish a completely clean and renewable energy sector as well as a broader green economy.

2.4 Sustainability

In spite of the fulfilment of all PBP products, there is some concern regarding the long-term viability of some of the processes fostered by the program, among them: (i) continued MSSC meetings, as those were suspended the second quarter of 2015; (ii) establishment of a more complete and comprehensive

¹² A relationship of 4.4 (Pessimistic Scenario) and 5.4 (Optimistic Scenario) has been re-estimated. It takes into account the funds disbursed in both operations of the PBP series (for a total of US\$34.1 Million) and the estimate of future benefits to be promoted by PBP intervention in a 20 year period (both values deducted at the Program's start date).¹² According to Ex ante Economic Evaluation, the values for this relationship were of 5.4 (Pessimistic Scenario) and 7.9 (Optimistic Scenario).

¹³ Source: www.regjeringen.no/en/aktuelt/norway-and-guyana-reconfirms-collaboration-on-climate-and-forests/id2504692/

regulatory framework for the Environmental Protection Agency (EPA); and (iii) final approval and coming into force of benefit-sharing and Opt-in mechanisms. The new administration authorities have reiterated their strong commitment to continue supporting these and the rest of conditions included in the PBP, in keeping with its policy of advancing towards a “green economy”.

However, progress in other areas bear well for the sustainability of PBP-supported changes, among them:

- PBP specific demands have contributed to improve local environmental management capacities; MNR personal has increased from 10 persons to 48 persons between 2011 and 2016, with a significant increase of professionals and specialists in its technical team.
- Improved inter-institutional coordination required by PBP became more publicly visible on collaborative data platforms such as the GeoNode server.
- Specific demands of PBP such as the signature of the Minamata Convention on Mercury, training of miners, significant advances in EU-FLEGT process of voluntary partnership, pre-candidature for EITI, have all played a significant role in solidifying general support to LCDS and helping the sector negotiate the difficulties common to government administration changes.
- The creation of the Mining School, and Training programs in the forestry segment (both requirements of PBP) have fostered dissemination of the technical aspects of the reform among special interest groups, which would not have taken place in the absence of the program.
- Continued and successful operation of the MRVS, which is being used (and financially supported) by the donor community and all public sector organizations working in the natural resources field.

In this context, a 10-year framework has been used to analyze risk elements that may affect the sustainability of policies supported by the program as shown in Table 6 below. None of the evaluated risks could per se cause a return to the country’s previous policy, institutional and budgetary framework. Furthermore, identified risks can and are being mitigated.

Table 6. Risk assessment and mitigation factors

Risk factors	Mitigation factors analysis
Significant changes in policy orientation regulatory matters.	Advances in regulatory matters are aligned to country-level strategic decisions with consensus of the political leadership (recent discussions were related to implementation tools rather than to fundamental concepts). Regulations supported by the PBP are in line with international best practices, particular as they refer to mining and forestry sectors. International treaties and associations entered by the GoG, as well as the renewal of an agreement with the Government or Norway will help cement PBP achievements and make them permanent.
Application of new and amended regulations related to environmental safeguards and improved natural resources management may encounter resistance from private sector and indigenous communities.	This risk, which accompanies every reform that aims at changing business-as-usual, will need to be mitigated by ensuring a participative project implementation strategy to foster concrete stakeholder commitment to the common-good environmental strategies. For this purpose GRIF projects, particularly those directed towards inclusive and sustainable development for indigenous communities, will be instrumental. Regular meetings of the MSSC must be reestablished and transparent discussion of pros and cons of each policy commitment must be included in those meetings.
Lack of an adequate institutional framework for the implementation of the regulatory framework.	As part of the PBP series, the MNR was provided with better tools to address the requirements of implementation of the regulatory framework and a coordinated effort to support those improvements. Tools such as MRVS system and GeoNode server are directly useful for that purpose. Active involvement of specialized agencies such as EPA, GFC and GGMC in the

Risk factors	Mitigation factors analysis
	utilization of those tools shows how coordination efforts are starting to produce results.
Fiscal space limitations could affect implementation of legislation/regulations and efficient use of planning tools.	This risk is being mitigated by GoG through commitments in its multi-year budget plan. Budget allocated by the GoG to MNR has grown by 80% from the initial period (MNR was created in late 2011), nearly doubling its share in the total Public Budget (0.20% to 0.38%). Complementary, GMMC and GFC will continue to be partially self-funded, contributing to the stability of the sector as a whole.

3 Non-Core Criteria

3.1 Contribution to the Bank's Strategic Development Objectives

The program has contributed to the lending program priorities of the Ninth General Increase in the Resources of the Inter-American Development Bank (AB-2764) (GCI-9): (i) through lending to Guyana, a small and vulnerable country; and (ii) through support to enhancing environmental sustainability of the country. It has also contributed to the regional development goal #5: protecting the environment, responding to climate change, promoting renewable energy, and enhancing food security, specifically to product 2.5.2 “countries with planning capacity in mitigation and adaptation of climate change”.

3.2 Contribution to the Country Strategy Development Objectives

This program has been consistently aligned with the IDB Country Strategy with the Cooperative Republic of Guyana 2012-2016 (GN-2690) through its contribution to the following targets: (i) strengthen environmental governance and institutional capacity for formulation of sound environmental policies, effective monitoring and verification; and better enforcement of environmental regulations so as to permit the implementation of LCDS (currently in transition process to Green economy model; (ii) promote the sustainable natural resource-based productive activities; and (iii) support the CS's cross-cutting issues associated to indigenous communities.

3.3 Monitoring and Evaluation

The implementation of the PBP series was monitored by the GoG through the MOF with technical support from the sector agencies (mainly MNR, GFC and GGMC), using the indicators contained in the Results and Policy Matrixes. The Borrower and the Bank held regular contact and semiannual meetings in order to review progress achieved on the fulfillment of the conditions defined in the loan documents.

The Borrower furnished the necessary documentation for these reviews; technical information provided by GoG was reviewed in order to check consistency with PBP commitments and targets. The evaluation plan was implemented as expected, with two Evaluation Missions carried out in 2016 involving the project team and technical consultants.

3.4 Use of Country Systems

Not applicable.

3.5 Environmental and Social Safeguards

Not applicable.

4 Findings and Recommendations

4.1 Vertical Logic

The vertical logic of the Program was confirmed. The three chosen elements: regulations, institutional strengthening and monitoring/verification are a solid triad proven to be the fundamental blocks of a change in policy in the environmental sector in LAC. Without exception, these three areas are consistently where greatest weakness for improved environmental management and where changes in government policy can have significant effect.

4.2 Execution and Budget

Not applicable.

4.3 Overall experience with project management

Not applicable.

4.4 Impact evaluation

No impact evaluation has been performed yet. An evaluation is planned 5 years after last disbursement.

Concerning the choice of impact indicators, the relevance of choosing deforestation rate as the impact indicator as it is directly related to the main policy instrument fostered by the PBP series (deforestation rate is the principal metric for the LCDS) and as it is central to the agreement with the GoN making both programs mutually reinforcing, is out of discussion. However, the actual impact of the program could have been better represented if that indicator would have been complemented with a second indicator: “reduction in carbon emissions”. The arguments for adopting this dual set of indicators is that deforestation alone may not do full justice to the effects environmental policies may have in this area, as: (i) deforestation is susceptible to external factors (such as market prices that cause intensification or decline of mining activity); and (ii) deforestation does not cover forest degradation, where the effects of government policy would be more clearly discernible and perhaps more important from the point of view of long-term viability of forest masses.

4.5 Unresolved issues

There are no unresolved issues.

Table 7. Findings and Recommendations

Findings	Recommendations
<p>Vertical Logic</p> <p>Vertical logic was confirmed</p> <p>Conditions associated to international commitments included in the PBP (for example Climate Agenda and REDD+, Minamata Convention, EITI, EU-FLEGT) leveraged its importance in the political agenda and fostered its continuity beyond the change of government administration.</p>	<p>Foster the inclusion of conditions associated to international commitments to strengthen PBL/PBP programs and improve the chances of their continuity.</p>
<p>Execution and Budget</p>	<p>NA</p>
<p>Overall experience with project management</p>	<p>NA</p>
<p>Impact evaluation</p> <p>The chosen impact indicator (deforestation rate) was entirely aligned with the agreement between the GoG and the GoN JCN, making both programs became mutually reinforcing, which was extremely effective. However, that one indicator does not represent the entire nature and significance of the PBP series' expected impact.</p>	<p>For establishing balanced policies/strategies in sectors competing by the same source of natural resources (such as mining and forestry), it is recommended to consider a set of indicators that would allow more comprehensive and integral assessment (e.g. Deforestation Level and Carbon Emissions).</p> <p>It is recommended that Bank funds be allocated to undertake such evaluation 5 years after last disbursement, and that the results of such evaluation are included as an addendum to the PCR when they become available.</p>



PROJECT COMPLETION REPORT

Development Effectiveness Summary

Operation Number: GY-L1039

Operation Name: Fortalecimiento de capacidades en materia de medio ambiente-I

Inter-American Development Bank - IDB
Checklist Validation Status: SPD Final Validation
Checklist Validation Date: 28/04/2017
Average Score: 0.97 - High Achievement

I. Strategic Contribution

1. IDB Strategic Development Objectives

Lending Program	1. Small and Vulnerable Countries: Guyana
Regional Development Goals	
Bank Output Contribution (as defined in Results Framework of IDB-9)	

2. Country Strategy Development Objectives

Country Strategy Objective	(i) strengthen environmental governance and institutional capacity for sustainable management of natural resource that supports the effective implementation of the LCDS; (ii) improve growth of natural resource-based productive activities with sustainability; and (iii) mitigate disaster risks by mainstreaming risk management into natural resource management. The Program also supports the CS's crosscutting issues associated to indigenous communities through support to consultation processes and community based disaster risk reduction and adaptation measures.
Relevance of this Program to Country Development Challenges (if not aligned to country strategy)	

II. Development Effectiveness - Other Core Criteria

	Score	Weight, %
Average Score	0.97 - High Achievement	
1. Effectiveness	0.95	57
Average attributable achievement of outcomes	0.92	60
Average achievement of outputs	1.00	40
2. Efficiency	1.00	29
3. Relevance	N/A	0
4. Sustainability	1.00	14

III. Development Effectiveness - Non Core Criteria

	Classification
Contribution to the Bank Corporate Development Objectives	Satisfactory
Contribution to the Country Development Objectives	Satisfactory
Compliance with the monitoring and evaluation plan	Satisfactory
Use of Country Systems	N/A
Environmental and Social Safeguards (implementation of mitigation measures)	N/A

Development Effectiveness Note:

This PCR reports on the achievements of a two tranche programmatic policy based loan (PBP) linked to creating a governance and policy framework that supports the Government of Guyana's Low Carbon Development Strategy (LCDS). The PCR identifies the reasons for developing this strategy, which are linked to the long term development of the country as well as more immediate financial benefits from funding via an MOU with the Norwegian government. Norway's financial support is conditional on Guyana's delivery of pre agreed results, including avoided deforestation and degradation. In this context, it was agreed that IDB support would be focused on reducing GoG weaknesses in connection with the effectiveness of environmental regulations and public agencies, improving environmental behavior in main deforestation drivers (forest-based economic sectors forestry and mining) and corresponding monitoring and evaluation systems.

The objectives of the PBP are linked to improving the regulatory, institutional and monitoring structures that will help pursue an LCDS strategy, and support compliance with the delivery of results that are part of its agreement with Norway. The vertical logic of the PBP appears sound and well justified based on the analysis of the drivers of deforestation and the regulatory, institutional and monitoring challenges. Despite some setbacks after the election year of 2015, the PBP was successful in achieving most of its outputs, and outcomes. In terms of the ultimate impact of the PBP related to deforestation, the analysis presented in the PCR seems appropriate and would indicate, without claiming attribution, that the deforestation rate is within the target and exhibiting a declining rate, although it appears quite sensitive to international gold price movements. Outcomes related to regulatory, institutional, and monitoring strengthening can reasonably be argued to be attributed to the PCR in the sense that it is unlikely that they would have been implemented in the sequence and time frame that they have without the presence of the PBP.

To the extent that the successful completion of the PBP has further signaled and enhanced Guyana's commitment to the LCDS, it has also likely served to garner further international support, creating a virtuous cycle towards fulfilling the promise of a LCDS. In this sense, the conditions that made the PBP relevant for the country continue to be present and reinforced. This also has bearing in the risks to sustainability of the PBP supported changes. It appears that one of the biggest risks was the change in the administration. The fact that, although with initial setbacks, the GOG continued pursuit of the agenda set out in the LCDS, supported by the PBP, gives some assurance the risks to sustainability are low and properly mitigated.

The Non-core criteria related to contribution to the Bank's Strategic Development Objectives, Country Strategy Development Objectives, and Monitoring and Evaluation appear to be satisfactorily addressed.