





FINAL REPORT

of

Government of Guyana/IADB Agreement No. GRT/GF-13172-GY-2(GY-G1002)

"INSTITUTIONAL STRENGTHENING IN SUPPORT OF GUYANA'S LOW CARBON DEVELOPMENT STRATEGY (LCDS)".

(GFC Component)

Prepared and Submitted by

Guyana Forestry Commission (GFC)

Pradeepa Bholanath Project Coordinator

Nasheta Dewnath Project Manager

Date of Submission: July 31, 2014

Date of Contractual Submission: July 31, 2014

Date of Revision and Re-Submission: 18th September, 2014

Table of Contents

AC	CRONY	MS	3
1	PRO	DJECT DATA AND KEY DATES	4
2	PRO	DJECT SUMMARY	5
3	PRO	DJECT CONTEXT	7
4	RES	ULTS OF PROJECT IMPLEMENTATION	9
	4.1	OUTPUTS AND OUTCOMES	11
	4.2	APPROACH USED IN IMPLEMENTING PROJECT OUTPUTS	19
	4.3	LESSONS LEARNED	
	4.4	IMPACT OF PROJECT OUTPUTS	21
5	FIN	ANCIAL SUMMARY	22
6	IMF	PLEMENTATION CHALLENGES	23
7	ARE	EAS OF INNOVATION IN IMPLEMENTATION OF THE INSTITUTIONAL STRENGTHENING PROJECT	24
8	cor	NCLUSIONS	24
9	REC	COMMENDATIONS	25
10) IMF	PLICATIONS FOR THE FUTURE	26
11	L APF	PENDICES	28
	11.1	DELIVERABLES BY OUTPUT	28
	11.2	EFFECTS INDICATORS (OUTCOMES)	32

ACRONYMS

CI Conservation International

EPA Environmental Protection Agency

EU FLEGT European Union, Forest Law Enforcement Governance and

Trade

GFC Guyana Forestry Commission

GGMC Guyana Geology and Mines Commission

GoG Government of Guyana

GoN Government of Norway

GRIF Guyana REDD+ Investment Fund

IDB Inter-American Development Bank

LCDS Low Carbon Development Strategy

MSSC Multi Stakeholder Steering Committee

MRVS Monitoring, Reporting and Verification System

OCC Office of Climate Change

OP Office of the President

PMO Project Management Office

REDD Reduced Emissions from Deforestation and Forest

Degradation

UNFCCC United Nations Framework Convention on Climate Change

1 Project Data and Key Dates

Project Information:

Project Title:	Institutional Strengthening in Support of Guyana's Low Carbon Development Strategy (LCDS)
Project Number:	GRT/GF-13172-GY
Host Government:	Government of Guyana
Implementing Agency:	 Guyana Forestry Commission (GFC) Office of Climate Change (OCC) within the Office of the President Project Management Office (PMO) within the Office of the President
Starting Date:	 May 2012 – Signing of Agreement. 18th December, 2012 (indicated by receipt of first disbursement by GFC)
Duration (months):	24 months
Total Budget: (US\$):	US\$ 7,000,000 (IADB -US\$ 5,940,000 & CI US\$ 1,060,000)
GFC Budget: (US\$)	US\$ 3,910,096 (IADB -US\$ 2,866,096 & CI US\$ 1,060,000)
Submission date:	July, 31, 2014
Re Submission date:	September, 18, 2014

Financial Information

	Budget (US\$)	Expenditure (US\$)
IDB contribution	2,8666,096	2,866,096
Conservation International	1,060,000	1,060,000
GFC contribution	00	00
Total	3,926,096	3,926,096

2 Project Summary

The Government of Guyana has embarked on a national programme that aims to continue to protect and maintain its forest resources in an effort to reduce global carbon emissions and at the same time attract resources to foster growth and development along a low carbon emissions path. This programme is detailed in Guyana's Low Carbon Development Strategy (LCDS).

Under the LCDS, the Guyana Forestry Commission (GFC) has the responsibility of overseeing the national implementation of REDD+ activities and the readiness activities under Guyana's Readiness Preparation Proposal. Thus, the Government of Guyana received support from the Inter-American Development Bank (IADB), under an Agreement No. GRT/GF-13172-GY "Institutional Strengthening in Support of Guyana's Low Carbon Development Strategy (LCDS)" to achieve the following objectives:

- a) to strengthen the technical and administrative capacity of the principal institutions responsible for implementing Guyana's LCDS (the Office of Climate Change, the Project Management Office and the Guyana Forestry Commission); and
- b) to develop and implement a Monitoring, Reporting and Verification (MRV) system on a national level.

The project commenced on June 30, 2012 and was executed over a period of twenty-four months, however the actual implementation period also covered a reimbursement period which as August 2011 to July 2012 (Reimbursement period). The total cost is of the project is US\$ 2,866,096.00). This project targeted two components in: Component 1- Design and implementation of an MRV system and Component 2 - Institutional Strengthening of LCDS Institutions

Component One was aimed at strengthening the capacities of the GFC for implementing REDD+ activities, and in particular for implementing the MRV system and areas relating to comprehensive assessment of forest area change; development of forest carbon stock measurement and monitoring capacities and strengthen capacity for Independent Forest Monitoring in Guyana; assessing the drivers of deforestation and forest degradation, methods for reference level projection and studying the benefits of MRV and tools for decision-support in the context of integrated natural resources management; and workshops to inform about REDD+ and MRV, the development of communication plan and outreach materials, and workshops and consultation on REDD+, MRV and LCDS at national and local levels.

The activities of this component were planned and executed under the guidance of the MRVS Steering Committee and the following were achieved:

- Methodologies for determining the extent and scale of forest degradation were developed and digital database of archived satellite data and national spatial data sets was established. These were used to determine and report on forest area change assessment for the period January – December 2012.
- Historical and current drivers and processes affecting forest carbon levels were assessed and implementation plans for long term measurements and monitoring of national forest carbon stocks were developed. Carbon conversion and expansion factors for Guyana forest conditions were calculated.
- National experts trained in areas of methods and procedures for conducting forest annual national forest monitoring: namely REDD+ Forest Mapping and Change Detection, and Forest Change Assessment using Remote Sensing Processing & GIS Mapping.
- REDD demonstration activities were designed and implemented for a community demonstration site, targeting the piloting of MRV methodologies at the community level;, a mining area targeting

rehabilitation of mined out areas; and one forestry area, targeting the promotion of sustainable forest management.

- Participation and delivery of presentation on Guyana's work on MRVS at five (5) regional and international sessions and supported REDD+ MRVS Initiatives of Suriname's Office of Climate Change and Forest Service through a technical exchange mission.
- Development of a sustained communication mechanism capable of facilitating efficient and effective information dissemination and feedback in the areas of LCDS, REDD+, the MRVS and FCPF, at the sub-national, national, regional and international levels and the facilitation of ten (10) cluster workshop to increase awareness, targeting communities in regions 1, 2, 5, 7, 8 & 9.
- A national stratified baseline survey to measure the extent of stakeholders' awareness, comprehension and support for Guyana's Low Carbon Development Strategy (LCDS) within a sample population targeting geographic space of regions 2, 4, 9, and 10.
- Research into the identification and significance of Non-Carbon Ecosystem Services for integration into Guyana's national MRVS, and the development of a Long Term Measurement and Monitoring Plan for Guyana's REDD+ Forest Carbon Monitoring System and IPCC REDD+ MRV Reporting Structure for Guyana.
- Planning and execution of year 1 and 2 Independent Forest Monitoring (IFM) Audit for the specific scope of: Geographical boundary: Guyana - State Forest Lands including State Lands where monitoring of forest produce in transit is concerned and Organizational boundary: Guyana Forestry Commission (GFC).

Component Two was aimed at strengthening Institutional Capacity of the GFC, specifically the REDD Secretariat. The following positions have been hired under the project: 1 Program Coordinator, 3 - Project Officers 1, 2 - Project Officers 2, and 14 Field Data Collection & Support Staff. These persons were provided with the necessary classroom and practical training to enable them to effectively execute the mandate of the REDD Secretariat.

The experiences and knowledge that would have been acquired in the achievement of the outputs/deliverables of this project have been beneficial in: facilitating informed decision making by policy makers with regards to addressing the drivers of deforestation and forest degradation, allocation and reallocation of areas of forest resources; the implementation and management of Guyana's Monitoring Reporting & Verification System (MRVS) for REDD+ by the GFC; exploring options for engaging in non-carbon Payment for Ecosystem Services schemes; providing accurate and timely data and information to stakeholders, and instituting policies and programmes that will ensure that the Guyanese stakeholders obtain maximum benefits from utilization of forest resources.

There is also an enhanced capacity within the REDD+ Secretariat in developing and quantifying key technical elements of the Forest Carbon Monitoring System (FCMS), including the implementation of Phase of the FCMS, as well as increased effectiveness of the monitoring programmes in relation to the development of Guyana's MRVS.

Stakeholders have been more informed about sustainable management of forest resources, Guyana's LCDS, REDD+, the MRVS and FCPF and this has effected a better understanding as to why and what is required for them to conform to recommended practices and enable them to better monitor their operation and conform to recommended practices for forest management.

When taken as a whole the Project No. GRT/GF-13172-GY "Institutional Strengthening in Support of Guyana's Low Carbon Development Strategy (LCDS)", has resulted in an increased capacity at national, institutional and community level to develop and implement Guyana's REDD+ Strategy and support the execution of Guyana's Low Carbon Development Strategy (LCDS).

3 Project Context

The Guyana REDD+ Investment Fund (GRIF) is a fund established for the financing of activities identified under the Government of Guyana's Low Carbon Development Strategy (LCDS). The fund will receive up to US\$ 250 million from the Government of Norway (GoN) in performance-based payments for the period up until 2015, based on an independent verification of Guyana's deforestation and forest degradation rates and progress on REDD+ enabling activities. Pending the creation of an international REDD+ mechanism, the Guyana REDD+ Investment Fund (GRIF) represents an effort to create an innovative climate finance mechanism which balances national sovereignty over investment priorities with ensuring that REDD+ funds adhere to the Partner Entities' financial, environmental and social safeguards.

The overall objective of the Institutional Strengthening in Support of Guyana's Low Carbon Development Strategy Project is to enhance national institutional capacity in Guyana to address the impacts of Climate Change, ensure the effective implementation of the Low Carbon Development Strategy (LCDS), and meet its commitments under interim Reducing Emissions from Deforestation, Forest Degradation and Sustainable Forest Management (REDD+) partnerships. These commitments include avoided deforestation measures that translate into the avoidance of CO₂ emissions.

The specific objectives of the project are:

- I. to strengthen the technical and administrative capacity of the principal institutions responsible for implementing Guyana's LCDS (the Office of Climate Change, the Project Management Office and the Guyana Forestry Commission); and
- II. to develop and implement a Monitoring, Reporting and Verification (MRV) system on a national level.

The total project cost is US\$7 million, of which US\$ 5.94 million (85%) is being financed by the GRIF and executed with the IDB as partner entity. The remaining US\$1.06 million (15%) is for activities from the beginning of the reimbursement period, 9th August 2011 to 31st July 2012; that has already been financed through the Government funds of Norway and channelled through Conservation International (CI) to the GFC for initial work on the design and implementation of the MRVS.

The GFC (along with the OCC) has the overall administrative, fiduciary and technical supervision responsibility for the Project with the GFC being specifically responsible for the execution of Component 1 of the project and subcomponent 2.3 - the Institutional Strengthening activity of the REDD Secretariat under Component 2.

The two main components of the Project are:

Component 1: Design and implementation of an MRV system

This component aims to strengthen national institutional capacities of the GFC for implementing REDD+ activities, and in particular for implementing a MRV system. The component has finance the following activities: (i) a comprehensive assessment of forest area change and identification of areas affected by forest degradation, including reporting on REDD+ Interim Indicators set out in the Joint Concept Note; (ii) technical assistance to develop forest carbon stock measurement and monitoring capacities for REDD+ and strengthen the capacity for Independent Forest Monitoring in Guyana; (iii) three studies on: (a) assessing the drivers of deforestation and forest degradation, (b) methods for projection of forest area reference levels and studying the benefits of MRV, and (c) tools for decision-support in the context of integrated natural resources management; and (iv) a series of regional workshops to inform about REDD+ and MRV, the development of communication plan and outreach materials, and workshops and

consultation on REDD+, MRV and LCDS at national and local levels, in order to develop a sustained MRV coordination and communication mechanism.

Component 2: Institutional Strengthening of LCDS Institutions

This component aims to strengthen the institutional capacities of the OCC, PMO, REDD-Secretariat and GFC. In addition, institutional diagnostics of the Guyana Environmental Protection Agency (EPA) and the Guyana Geology and Mines Commission (GGMC) has been financed. The component includes the following activities: (i) recruitment and training of 33 specialized technical and 22 administrative personnel in order to assist OCC, PMO, REDD Secretariat and GFC in fulfilling their respective mandates; (ii) outreach activities with potential forest investors; (iii) training to assist junior staff of the PMO in project management skills; (iv) office equipment for the OCC, PMO and REDD Secretariat; and (v) a diagnostic to assess the institutional capacities of Government agencies other than OCC, PMO and GFC whose responsibilities are related to the LCDS and REDD+ activities and the needs for future institutional strengthening. Such agencies include the EPA and the GGMC.

The Guyana Forestry Commission (GFC)

The GFC is semi-autonomous government agency, governed by a Board of up to 12 Directors. Its mandate is forest policy enforcement and sustainable forest management and regulating State Forest Estate. The GFC develops and monitors standards for forest sector operations, develops and implements forest protection and conservations strategies, oversees forest research and provides support and guidance to forest education and training. Since GFC has been tasked with the responsibility of overseeing the process to develop and implement the national REDD+ Strategy, including the national MRV system, as well as readiness activities under the World Bank's Forest Carbon Partnership Facility (FCPF). A REDD Secretariat (RS) was established as a new operational unit of GFC, however the GFC is constrained by its human resources capacity in the areas of forestry and REDD+-related activities.

GFC's Components of the Institutional Strengthening Project

The GFC was responsible for the execution of Component 1 of the project and the Institutional Strengthening activity of the REDD-Secretariat under Component 2. The activities of these project components to be implemented by the GFC are related to the following components and subcomponents:

Component 1: Design and implementation of an MRVS

- 1.1: Develop and Implement a National MRV Coordination Mechanism.
- 1.2: Forest Area Assessment and Change Monitoring
- 1.3: Forest Carbon Stock Assessment and Change Monitoring
- 1.4: Develop MRV for a set of REDD demonstration activities
- 1.5: Engage with International Community
- 1.6. Develop a Sustained Communication Mechanism
- 1.7: Conduct and Support Research on Key Issues:
- 1.8: Strengthen Capacity for Independent Forest Monitoring in Guyana

Component 2: Institutional Strengthening of LCDS Institutions

• 2.3: Institutional Capacity of the REDD Secretariat and GFC Strengthened

4 Results of Project Implementation

The aim of the Project "Institutional Strengthening in Support of Guyana's Low Carbon Development Strategy" is to: enhance national institutional capacity in Guyana to address the impacts of Climate Change; ensure the effective implementation of Guyana's Low Carbon Development Strategy (LCDS); and meet its commitments under interim REDD+ partnerships. These commitments include avoided deforestation measures that translate into the avoidance of CO₂ emissions

The main outcomes in relation to Component 1 are; the implementation of a national level IPCC-compliant MRV system; and an increase in percentage of national stakeholders who are aware of, comprehend and support the LCDS. The beneficiaries has included indigenous people and residence of forest communities, who will have the opportunity to eventually benefit from the REDD+ activities.

The project has assisted the Government in developing its capacity to monitor forest cover change and forest biomass, and implement a low carbon development plan, and overcome cross sectorial challenges to keep its deforestation below the agreed threshold in the midst of economic development.

With regard to Component 2, the outcome is an increase in the institutional capacity of the three lead public sector institutions responsible for ensuring the effective implementation of the LCDS. And for the GFC, specifically the REDD Secretariat.

The activities of these project components to be implemented by the GFC are related to the following outputs and subcomponents:

Component 1: Design and implementation of an MRVS

- Output 1.1.1: National MRV coordination mechanisms established.
- Output 1.2.1: Methodologies developed for determining the extent and scale of forest degradation
- Output 1.2.2: Digital database of archived satellite data and national spatial data sets for use in forest area change assessment
- Output 1.2.3: Reports on forest area change assessment
- Output 1.2.4: Training and capacity building workshops of GFC staff
- Output 1.3.1: Implementation plan developed for long term measurements and monitoring plan
 of national forest carbon stocks
- Output 1.3.2: Report containing carbon conversion and expansion factors calculations for Guyana- These calculations are contained in the report:
- Output 1.3.3: Assessment reports completed describing historical and current drivers and processes affecting forest carbon levels
- Output 1.3.4: National experts trained in conducting forest carbon stocks and change assessments
- Output 1.4.1: MRV plans designed and implemented for REDD demonstration activities

- Output 1.5.1: Number of Engagements held with the International Community on REDD+
- Output 1.6.1: Mechanisms developed for achieving sustained communication on the national and international level
- Output 1.7.1: Research reports produced- the following reports have been completed:
- Output 1.8.1: Monitoring reports produced on approved monitoring methodology

Component 2: Institutional Strengthening of LCDS Institutions

 Output 2.3.1: Number of Personnel Hired (9 Technical personnel, 1 Secretary and 14 Field Data Collection & Support Staff).

Three (3) additional outputs to conduct specific studies were added based on identified need and availability of funds from budget reallocation. The new outputs are:

Output 1.2 - Forest Area Assessment and Change Monitoring

- i. Sample Design Framework for Accuracy Assessment to Address Uncertainty Assessment of Rate of Change in Deforestation - this Sample Design Framework was developed in response to a recommendation made by Det Norske Veritas (DNV), the firm contracted by the Government of Norway to conduct the third independent verification of Guyana's reporting on interim indicators as outlined in the Joint Concept Note. This third independent verification was conducted in November 2013.
- ii. **Technical Assessment of Degradation Impact from Infrastructure, including Mining Roads.** this aims to pilot the use of Rapid Eye and Landsat imagery for mapping, measurement and monitoring of forest degradation. This activity aims to further strengthen Guyana's MRV System and its annual reporting on deforestation and forest degradation under the Guyana Norway MoU.

Output 1.3 - Forest Carbon Stock Assessment and Change Monitoring

i. Developing a Framework for Modelling Reference Level for REDD+ based on Initial Outcomes of Forest Carbon Monitoring System- this work is intended to model the projected rate of deforestation in the absence of REDD Plus incentives. This will allow for Guyana to be in a more informed position as to which benchmark to utilize in its RL proposal for submission to the UNFCCC. This will support the development of Guyana's Reference Level Proposal for REDD+ for submission to the UNFCCC as stipulated in the Joint Concept Note between the Governments of Guyana and Norway.

4.1 Outputs and Outcomes

Output Number	Output Name	Unit of Measure	Description	Progress in Implementation	Status
	'	COMPON	IENT 1: DESIGN AND IMPLEMENTATION (OF AN MRVS	
1.1.1	Output 1.1.1: National MRV coordination mechanisms established	Mechanisms	MRVS Steering Committee meetings targeting eight (8) committee members	8 meetings held over the period January 2012 to June 2014, each meetings targeting eight (8) committee members. Summary of minutes of meetings available on GFC's website. Full meeting minutes are available at the GFC.	Completed
1.2.1	Output 1.2.1: Methodologies developed for determining the extent and scale of forest degradation	Methodologies	 Development of methodologies for: regrowth, shifting agriculture and old mining sites Reporting on five (5) REDD+ Interim indicators for forest degradation 	Methodologies for regrowth, shifting agriculture and old mining sites developed and addressed in: 2013 Measurement Reporting Verification Development of Methods for Determining the Extent and Scale of Forest Degradation System (MRVS) Chapter 9 of the MRVS Interim Measures Report for Year 3 (January 1- December 31, 2013), Version 1 details the reporting on 5 Interim Indicators in MRVS Interim Measures Report for Year 3 (January 1- December 31, 2013), Version 1.	Completed
1.2.2	Output 1.2.2: Digital database of archived satellite data and national spatial data sets for use in forest area change assessment	Datasets	 Processing and integration of one layer of national level high resolution imagery coverage. Processing and integration of seven datasets on natural resources and land management Collection, analysis and processing of accuracy assessment datasets, using airborne and high resolution satellite imagery 	Process and Methodology outlined in report: 2013 Measurement Reporting Verification System (MRVS) Data Consolidation Report Processing and integration of two (2) layers on Amerindian lands, two (2) layers on Agriculture & three (3) layers for Mining outlined in report: 2013 Measurement Reporting Verification System (MRVS) Data Consolidation Report Country level high resolution 5m RapidEye coverage obtained for the entire country.	Completed
1.2.3	Output 1.2.3: Reports on forest area change assessment	Reports	 Completion of reporting of forest area change assessment for period Jan 1-Dec 31,2012 Conducting of Accuracy Assessment reporting of the report of FAA 	Reporting of forest area change assessment for period Jan 1-Dec 31, 2012 completed and detailed in MRVS Interim Measures Report for Year 3 (January 1- December 31, 2013). This report is completed and available on GFC's website. http://www.forestry.gov.gy/Downloads/MRVS_Interim_Measures_Report_Year_3_Version_1.pdf Accuracy Assessment conducted by University of Durham. Findings of this Accuracy Assessment detailed in Chapter 8 of	Completed

				the MRVS Interim Measures Report for Year 3 (January 1-December 31, 2013).	
1.2.4	Output 1.2.4: Training and capacity building workshops of GFC staff	Sessions	Conducting of workshops on methods and procedures for conducting forest annual national forest monitoring	 A number of training sessions were conducted with the staff of the GFC involved in the GIS/ Remote Sensing aspect of work on the MRVS. Detailed in the report: 1. Trip Report, August 2013 Spatial Analysis Training, Water Modelling Kick-Off, Biomass Training 2. Capacity Building in Forest Area Assessment & Change Monitoring, (Jan 2014- June 2014), GFC, June 2014. 3. Spatial Analysis Training, Water Modelling Kick-Off, Biomass Training, August 2014 4. Guyana Forestry Commission, 2013 Capacity Development Report 5. Capacity Report on Forest Area Change Assessment & Monitoring, 2014. 	Completed
1.3.1	Output 1.3.1: Implementation plan developed for long term measurements and monitoring plan of national forest carbon stocks	Plans	Stratification and Sample Design for Guyana's FCIII, June 2013.		
		•	Data collection in plots identified in medium threat areas and data collection analysis	implementation plan detailed in Sampling Design and Implementation Plan for Guyana's REDD+ Forest Carbon Monitoring System (FCMS), June 2014 Data collection and findings contained in Revised Emissions Factor Report, June 2014	
1.3.2	Output 1.3.2: Report containing carbon conversion and expansion factors calculations for Guyana	Reports	Completion of one report of Conversion & Expansion Factor based on drivers of forest degradation	Detailed in technical report: Guyana FCMS Conversion Factor Handbook, December 2013	Completed
1.3.3	Output 1.3.3: Assessment reports completed describing historical and current drivers and	Reports - Assessment report in current drivers and processes affecting forest carbon		Report on Quick Assessment of Impacts of Mining on and Soil Carbon, December 2013 prepared. This report evaluates the impacts of the different scales of mining in Guyana on soil carbon.	Completed
	processes affecting forest carbon levels		- Assessment report on Shifting Agriculture	Report: Shifting Agriculture in Amerindian Communities in Guyana prepared.	

1.3.4	Output 1.3.4: National experts trained in conducting forest carbon stocks and change assessments	Training sessions	 Training of 8 technical staff of the REDD Secretariat Training of 14 field staff of the REDD Sec in FCMS Training of 6 GIS & RS forest operators. Workshops on FCMS 	 Training sessions were held for national experts, in the area forest carbon stocks and change assessments, targeting 8 technical staff of the REDD Secretariat, 14 field staff of the REDD Secretariat in FCMS and 6 GIS & RS forest operators. Reports have been prepared, detailing training in the following areas: Spatial Analysis training focused on IDRISI and the methods used for stratification. Data collection for conducting SWAT water modelling. Biomass training activities to follow up on previous trainings and assist with data analysis. Training on Reference Levels (RLs), including exploring RLs options that would be best suited for Guyana 	Completed
1.4.1	Output 1.4.1: MRV plans designed and implemented for REDD demonstration activities	Plans	- Further support establishment of one CMRV demonstration site in region 9	MoUs have been established to support 3 demonstration activities in a community, mining and forestry site. For the community demonstration activity, a MoU was signed with Annai to conduct the following: a. Build capacity for community-based monitoring in a community/village owned forest area in order to demonstrate an approach that could contribute to the National MRVS. b. Engage members of the community in the determination and measurement of drivers/processes of forest change c. Integrate Community MRV Demonstration within National Framework d. Document Lessons Learnt	Completed

			- Establishment of one REDD+ demonstration site in mining area	For the mining demonstration activity, a MoU was signed between the GFC and the Ministry of Natural Resources & the Environment to conduct the following: a. Selection of appropriate pilot sites for testing of rehabilitation options b. Explore support structures for implementation of rehabilitation activities c. Explore species that may be appropriate for use in rehabilitation activities d. Document Lessons Learnt	
			- Establishment of one in forestry area	For the forestry demonstration activity, a MoU was signed between the GFC and the Rockstone Loggers Association to: a. Build capacity within a forest dependent community to implement sustainable forest management practices in order to demonstrate an approach that this could contribute to implementation of REDD+ in Guyana b. Engage members of the community in implementation of SFM activities, including in conducting assessment of stocking data within the community concession c. Document Lessons Learnt	
1.5.1	Output 1.5.1: Engage International Community in Key REDD+ Initiatives	Sessions	- Participate in Upcoming Workshop, Seminars and presentations regionally and internationally.	The GFC participated in a range of workshops and seminars aimed at promoting Guyana work on REDD+ as well as attending training sessions on areas pertinent to Guyana's REDD+ programme. These sessions enabled Guyana to: - Share update and lessons learned on the MRVS development. - Learn more about ACTO regional amazon monitoring programme and how Guyana can be closer aligned with reporting as part of the Amazon region. - Strengthen collaboration with UN REDD in the area of advancing towards GhG reporting. - Further establish closer ties with the Guiana Shield eco region through collaboration and technical exchange on Reference Level and forest cover monitoring under an MRVS.	Completed

1.6.1	Output 1.6.1: Mechanisms	Mechanisms	- Presentation developed on MRVS &	Consultant Michelle Kalamandeen was contracted to	Completed
	developed for achieving		REDD+	undertake this activity.	
	sustained communication		- Stakeholder engagement sessions on	A series of ten (10) cluster workshop were hosted over the	
	on the national and		REDD+ & MRVS	period 29th May 2014 to 12th July 2014. Sessions targeted	
	international level			communities in regions 1, 2, 5, 7, 8 & 9.	
				Moraikobai, Mahdia, Lethem, Shulinab, Annai, Kamarang,	
				Mabaruma, Moruca (Santa Rosa), Charity and Mainstay.	
				Techniques and methods outlined in draft Communication &	
				Outreach Strategy were piloted in conjunction with building the	
				capacities of local communities and forest user-groups on	
				areas of REDD+, the MRVS and FCPF.	
				A sustained communication mechanism capable of facilitating	
				efficient and effective information dissemination and feedback	
				at the sub-national, national, regional and international levels	
				was developed and piloted during the outreach sessions.	
			- A national survey will be conducted to	Consultant Dr Paulette Bynoe was contracted by the GFC to	Completed
			measure the extent of stakeholder	undertake the survey.	
			awareness, comprehension and support	A baseline survey was conducted. This employed the use of a	
			of the Low Carbon Development	stratified baseline national Survey, with a sample size of 568	
			Strategy.*	respondents (238 urban and 238 rural) at a confidence level	
				of 95%, ± 5% of the mean to measure the extent of	
				Stakeholders' awareness, comprehension and support for	
				Guyana's Low Carbon Development Strategy (LCDS). A	
				questionnaire was developed, pilot tested and administered to	
				the sample population.	
				- From this, 576 questionnaires were completed.	
				- There was an equal urban-rural distribution (238 urban,	
				238 rural)	
				- The targeted geographic space for the survey was Regions 2, 4, 9, and 10.	
				A Post Evaluation Survey will be conducted over the period	
				September- October 2014. It was agreed for the GFC to	
				execute the first part of the survey with the OCC executing the	
				second part but under the same contract. This approach was	
				approved among GFC, OCC & IDB, and detailed in the Aide	
				Memoire dated April 8th-11th, 2014. To safeguard against	
				final evaluator citing incomplete fulfilment on GFC's part, the	
				GFC submitted a letter to the OCC stating the details of the	

				arrangement and requesting that OCC accept the obligations for the second survey, including making payment to the consultant. This letter was dated May 29, 2014. In its response to the GFC, dated June 2, 2014, the OCC accepted responsibility for undertaking this task. For the payment of this second survey, the GFC will not request this in the advance but will leave the necessary remaining funds available for OCC to request payment when required.	
1.7.1	Output 1.7.1: Research reports produced	Reports	- Report on identification of non-carbon schemes pertinent to REDD+	Report: Identification of Non-Carbon Ecosystem Services for Integration into Guyana's National MRVS, July 2013 completed	Completed
			- Report on assessment of requirements of a monitoring system for carbon as well as non-carbon variables	Long Term Measurement and Monitoring Plan for Guyana's REDD+ Forest Carbon Monitoring System completed.	
			Report on pilot IPCC reporting structure on forest carbon emissions and removals for Guyana	Detailed in report: Development of the IPCC REDD+ MRV Reporting Structure for Guyana	
1.7.1 Redirect ed funds:			 Sample Design Framework for Accuracy Assessment to Address Uncertainty Assessment of Rate of Change in Deforestation. Technical Assessment of Degradation Impact from Infrastructure, including Mining Roads. Developing a Framework for Modelling Reference Level for REDD+ based on Initial Outcomes of Forest Carbon Monitoring System 	It is proposed that the funds allocated to the position of Director and Project Officer 2 – Biomass Monitoring and Capacity Building –along with the Technical Coordinator and Secretary – be used to finance field and other technical work to completed three technical assessments to be led by the existing staff of the REDD Secretariat.	Completed

1.8.1	Output 1.8.1: Monitoring reports produced on approved monitoring methodology	Reports	 Development of one Year 1 audit report for IFM Conduct one Field Mission for Year 2 audit for IFM 	Report: Independent Forest Monitoring- Summary of First Independent Forest Monitoring, Oct 2013 for Year 1 Audit for IFM available on GFC's website. The second Independent Forest Monitoring (IFM) Audit took place from 31st October 2013 up to and including 8th November 2013. The reference period for audit sampling is restricted to: 1st August 2012 - 31st July 2013. The specific scope for the audit was: - Geographical boundary: Guyana - State Forest Lands, but also includes State Lands where monitoring of forest produce in transit is concerned. Private Lands are not covered. - Organisational boundary: Guyana Forestry Commission (GFC)	Completed
	Sub-	Component 2.3: In	nstitutional Capacity of the REDD Secreta	riat and GFC Strengthened	
2.3.1	Output 2.3.1: Personnel hired (REDD Secretariat & GFC)	staff (new and	, ,		
	Milestone: Technical personnel hired for REDD Secretariat	staff (new & extended)	 Program Coordinator and (2) Project Officers 1, hired before Aug 9,2011 (1) Project Officer 1 hired In 1 Director, 1 Technical Coordinator, 3 Project Officer and 14 Field Data Collection & Support Staff to be hired in 2013. 	TORs & contracts to be developed and drafted. The following positions have been hired under the project: - Program Coordinator, (1) - Project Officer 1, (3) - Project Officer 2, (2) - Field Data Collection & Support Staff, (14) These positions are as follows: 6 - Field assistants, 4 -	Completed
	Milestone Administrative and support staff hired for REDD Secretariat	staff	In 2013, a Secretary is planned to be hired for the REDD+ Secretariat.	Bookers, 2 – Drivers and 2 – Tree spotters. It was intended for the following positions to be filled: - Director - Technical Coordinator - 1 Project Officer 2- Biomass Monitoring and Capacity Building - Secretary	
				Following the development of Terms of References for a Technical Coordinator, the subsequent advertising, shortlisting and interviews, it was determined that none of the	

	two (2) shortlisted candidates were suitable for the job. This was relayed to the IDB in a correspondence dated May 29, 2014. A No Objection Letter was received from the IDB on June 2, 2014 noting that that since both candidates had failed to satisfactorily meet the Terms of Reference for the post, hence the recommendation to not fill the post of Technical Coordinator of the REDD Secretariat was approved. It is proposed that the funds allocated to the position of Director and Project Officer 2 — Biomass Monitoring and Capacity Building —, along with the Technical Coordinator and Secretary —be used to finance field and other technical work to completed three technical assessments to be led by the existing staff of the REDD Secretariat. GFC made request to Ministry of Finance for budget transfer on June 2, 2014. This is part of the formal process for requesting budget transfer as per IDB Agreement. On June 17, 2014 this request was approved by MoF. For positions where staff were not taken on, existing staff within the REDD Secretariat were assigned across existing resources to execute tasks assigned to these posts, thereby fulfilling the duties as required.
--	---

4.2 Approach Used in Implementing Project Outputs

The Project was managed by a Project Team that comprised a Project Coordinator, Project Manager, Finance Specialist and Procurement Specialist. Each member of the Project Team had specific responsibilities for oversight and implementation of the project, with set deadlines for each activity. The team was further supported, as necessary, from staff of the GFC.

The outputs/outcomes of this project were realized through the implementation of consultancy contracts awarded to three (3) international firms, three (3) forest communities/associations and two (2) individuals.

They are as follows:

- I. Firm to provide the service of Forest Carbon Stock Measurement and Change Monitoring (Winrock International consultancy, Contract #: 2788),
- II. Firm to provide the service of Forest Area Assessment and Change Monitoring (Indufor Asia Pacific consultancy, Contract #: GYA 2789)
- III. Firm to provide the service of Independent Forest Monitoring (GFA Consulting Group consultancy, Contract #: GYA 2790)
- IV. Individual Consultant to conduct LCDS Awareness Surveys. (Dr. Paulette Bynoe, Contract # GYA2803)
- V. Individual Consultant to REDD+ Communication activities. (Michelle Kalamandeen, Contract #: GYA 2805)
- VI. MOU REDD+ Demonstration (between GFC & Annai for Community MRV). (Contract #: GYA2802)
- VII. MOU REDD+ Demonstration (between GFC & GGMC for Exploration of activities relating to Rehabilitation of Mined out areas). (Contract #: GYA2795)
- VIII. MOU REDD+ Demonstration (between GFC & Rockstone Loggers Association for Forest harvest operations). (Contract #: GYA2796)

The consultancy firms, as part of their contract, were required to prepare a workplan detailing the activities and methodology for implementation that will realise the deliverables/outputs that were specified in their contract. These documentation were used to monitor the progress of project activities in a timely manner and effect payments for service.

The Individual consultants, as part of their contract, were required to detail their schedule of activities and methodology for implementation that will realise the deliverables/outputs that were specified in their contract. These documentation, as well as the involvement of GFC assigned staff facilitated effective monitoring and implementation of project activities in a practical manner.

Twenty (20) contracts were awarded for staff of the REDD Secretariat, who provided support in the execution of the other contracts for consultancy firms, consultants, MoU's and other activities of this project.

The Memorandum of Understandings (MOUs) established with the communities/associations were in relation to activities of Component 1. The GFC had Liaison Officers actively involved in the implementation of the MOUs to ensure timely implementation of activities and reporting on progress.

During the last quarter of implementation, the management of GFC sought the approval from the IDB for the re-allocation of funds to facilitate the implementation of new activities in relation to Forest Area Assessment and Change Monitoring and Forest Carbon Stock Assessment and Change Monitoring. Funds that were allocated and not utilized for contracting of personnel/consultants for the REDD Secretariat in relation to "Strengthening the REDD Secretariat" were transferred to facilitate these activities.

The GFC facilitated logistical activities where necessary because of the rugged terrain and remote location of forest area. This was very important for successful implementation of the activities within all of the consultancies.

Semi-annual reports and Status/Progress reports were prepared and submitted to the Bank according to the Project Agreement. This ensured effective monitoring and evaluation of project implementation activities and deliverables.

4.3 Lessons Learned

- During the design of the project, activities that were linked to previous work completed were instrumental in being able to provide clarity to the objectives, outputs and deliverables of the project.
- From the execution of activity for Forest Area Assessment it became quite apparent that to
 effectively monitor forest degradation and deforestation it would require for high resolution datasets
 to be acquired and used for the whole of Guyana to build an appropriate and usable time series.
 This was integrated into the plan of work.
- Despite the time constraint and delay at the initial phase of the project, the project outputs/deliverables were effectively and efficiently managed and achieved. The factors that would have contributed to this implementation success are:
 - the collaborative interaction and efficiency in responding to all queries and requests made by both GFC management and the Bank staff,
 - the very cooperative and collaborative nature of the interactions and support provided by both GFC staff, consulting firms, Individual Consultants and forest communities/associations, and
 - the efficiency in responding to all queries and requests made by both GFC management and the Consultants.
- In implementing activities in relation to Forest Carbon Stock Assessment, lessons learned and new stratification processes emerging from forest area assessment work were integrated the Phase 2 plots design for 2013 and 2014.
- Continued capacity building is vital for good governance and sustainable management of Guyana's
 forests. The dissemination of information (for example, manuals, brochures, pamphlets) should be
 supplemented at all times by stakeholder sessions where queries can be answered and
 misconceptions can be corrected. The interest and commitment generated by the workshops
 conducted by the REDD+ Communication Consultant must be sustained through on-going
 educational workshops to be executed by the GFC and its institutional partners.
- Competent and committed staff of REDD+ Secretariat and GFC are critical success factors for effective management of Guyana's forestry sector, against the background of Guyana's LCDS being promoted as the pathway for economic development.

• There were logistical challenges in carrying out the activities within the forestry sector because of the rugged terrain, remote locations and associated problems of accessibility.

4.4 Impact of Project Outputs

Based on the expected outcomes in relation to the workshops conducted by the REDD+ Communication Consultant, it is anticipated that stakeholders of the forest sector - associations/indigenous communities will have a better understanding as to why and what is required for them to conform to recommended practices and this new knowledge will enable them to better monitor their operation and conform to recommended practices. The comprehensive training materials that was issued to each participant will provide them with information to be used for reference and to train other members and employees.

An improved level of sustainable management of forest resources is predicated because of stakeholders' understanding of Government's policies relating to the vital role of the forests in providing various ecological, economic, social and cultural services to the Earth's ecosystems and to human well-being, strategic importance in national development and a better understanding of REDD+ and Guyana's LCDS programme.

Data acquired and analysed during the implementation of this project will support decision making framework of the GFC in respect of current state of the forests already allocated or under consideration for re-allocation. The GFC will be able to make these decision with greater accuracy and precision.

There has enhanced capacity within the Guyana REDD+ Secretariat in developing and quantifying many of the key elements of a Forest Carbon Monitoring System (FCMS) and increased effectiveness of the monitoring programmes in relation to the Development of Guyana's MRVS.

The execution of Independent Forest Monitoring Audits have concluded on several key recommendation that are being used to further strengthen the GFC's forest monitoring system, these recommendations, and the IFM audit as a whole, have placed Guyana on a solid platform in terms of preparedness to engage with the EU on a Forest Law Enforcement Governance and Trade Agreement – called Voluntary Partnership Agreement.

The conducting of key areas of research on forest degradation, shifting agriculture and mining has enabled the GFC to further develop its system of emissions reporting since there is now a more detailed assessment of these drivers with recommendations on how these can best be integrated within the national MRVS. This has allowed for the GFC to further strengthen the important aspect of forest degradation to the current deforestation reporting, an aspect that many tropical forest countries are still grappling with.

The execution of a national scale accuracy assessment has accomplished two main objectives for Guyana, firstly to develop the framework that is replicable and robust, for conducting accuracy assessment of forest area change; and secondly to establish in a statistical manner, accuracy and precision levels of reported rates of annual forest area change. This therefore functions as a validation of the GFC's reporting efforts and gives confidence via third party assessment, of methods and systems applied by the GFC in its core work on the MRVS.

The broad scope of work being conducted in the area of REDD+ by the GFC is required to follow IPCC and UNFCCC guidelines as the main authority for prescribing best practice in this area of work. The capacity build through this project as allowed the MRVS and related aspects to be closely aligned with these best practice standards. Evidence of this is presented through the independent verification done by an independent verifier (Det Norske Veritas) which conducts verification on various areas including in the area of compliance with and adherence to UNFCCC and IPCC standards.

5 Financial summary

					Е	xpenditure			
	Categories of Investment (COI)	Initial Budget	Reviewed budget*	Reimburseme nt	Advance 1	Advance 2	Advance 3	Total	Remaining balance
COI 1.0	COMPONENT 1: DESIGN AND	IMPLEME	NTATION O	F A MRVS					
COI 1.1	Develop and Implement a National MRV Coordination Mechanism	78,000	61,162	23,000		37,073.20	1,089.00	61,162.00	0
COI 1.2	Forest Area Assessment and Change Monitoring	385,000	437,000	00	90,000	295,000.00	52,000.00	437,000.0	0
COI 1.3	Forest Carbon Stock Assessment and Change Monitoring	400,000	502,200	175,000	52,500	92,370.70	182,329.00	502,200.0	0
COI 1.4	Develop MRV for a set of REDD demonstration activities	550,000	550,000	133,000		94,000.00	323,000.00	550,000.0	0
COI 1.5	Engage with International Community	110,000	110,000	20,600		31,356.99	58,043.00	110,000.0	0
COI 1.6	Develop a Sustained Communication Mechanism	405,000	405,000	56,500		106,495.69	222,004.00	385,000.0	20,000.0
COI 1.7	Conduct and Support Research on Key Issues	185,000	185,000	41,000		113,977.67	30,022.00	185,000.0	0
COI 1.8	Strengthen Capacity for Independent Forest Monitoring in Guyana	488,000	488,000	198,935		168,197.80	120,867.00	488,000.0	0
COI 2.0	.0 COMPONENT 2: INSTITUTIONAL STRENGTHENING OF LCDS INSTITUTIONS								
COI 2.3	Institutional Strengthening of the REDD Secretariat	249,096	111,734	27,734		63,000.00	21,000.00	111,734.0	0
	Audit and Evaluation	16,000	16,000						16,000
	TOTAL	2,866,096	2,866,096	675,759	142,500	1,001,472	1,010,354.00	2,830,096	36,000.00
			ADVANO	CE RECIEVED	142,500	1,223,945	787,882	2,154,327	36,000.00

Reviewed budget* - Based on reallocation of funds from COI 1.1 and COI 2.3 to COI 1.2 and COI 1.3

6 Implementation Challenges

A few challenges were encountered during implementation of the project as outlined below. The Project team (GFC), under the advisement of the Team Leader (IDB) were able to find solutions to all challenges faced:

I. Implementation by two Executing Agencies with different rates of implementation- the Executing Agencies of the Institutional Strengthening Project were the Office of the President (OCC and PMO) and the Guyana Forestry Commission. It was initially intended for project to be coordinated as one programme with the components and implemented over the same time frame: Component 1: Design and implementation of an MRV system and Component 2: Institutional Strengthening of LCDS Institutions implemented by the Executing Agencies in the same time frame. Instead, the project components of the PMO are currently being implemented over a longer time period than the components of the GFC due to PMO's request for a longer implementation period.

As a result of this, a few challenges have arisen, including:

- a. Final Evaluation Report: The final evaluation of the entire project will need to be conducted following completion of execution of the PMO's aspect. This therefore means that evaluation of the GFC's components will need to be done until that point.
- b. Shared component of execution of project: under the Project, the component Institutional Strengthening of LCDS Institutions was implemented with sections for both the GFC and PMO. This could not be brought to a full close by GFC as PMO's aspect is still in execution.
- c. Separate Technical & Financial reporting: due to the fact that the Executing Agencies were at different stages of implementation, each Agency prepared individual Technical & Financial Progress reports to the IDB, in keeping with the stipulated timelines.
- II. Design And Implementation of an MRVS- In the implementation of activities relating to the Forest Area Change Assessment (Components 1.2.1- 1.2.4) it is important to note that during project implementation was the first year that the GFC undertook to acquire full national scale coverage at 5m resolution coverage. This required much development work in terms of not only new data protocols to use this imagery, but also capacity building for staff to utilise and process the imagery. This was conducted and completed while fulfilling the required work of the project, in keeping with the project timelines.
- III. Under Component 1.3.3, relating to Assessment report on Shifting Agriculture, the mapping of shifting agriculture, using Remote Sensing was dependent on a longer time series of forest area coverage, as previously only half of country was mapped and southern part where shifting agriculture occurs was not mapped. As 2012 was first point of building this coverage of national level high resolution imagery, a second dataset of national coverage was required to provide the basis for comparison and measurement to provide a time series. As such, while the data protocols have been developed of measurement, more datasets of coverage is needed. This is already on track to be conducted in the 2013 assessment.
- IV. International guidance on areas of MRV which covers FAA, FCMS and RL still in development—modalities for both monitoring and reporting under the MRVS are still in discussion for a number of areas, including the technical guidance required for development and implementation of areas of the MRVS and the development of reference levels for REDD+. These are now evolving at the level of the Conference of Parties of the UNFCCC. In Warsaw (COP 19), some aspects have been developed, though many are still outstanding. To mitigate this, the GFC has kept abreast with developments both at SBSTA and COP, and has continually engaged with international community and experts such as Drs. Martin Herold & Sandra Brown to ensure that the national MRVS is updated and in keeping with new development.
- V. Institutional Capacity of the REDD Secretariat and GFC Strengthened (Component 2.3) under this component, a number of positions within the REDD Secretariat were to be filled including that of Director and Technical Coordinator. These positions were not filled during the project implementation period and the decision to not fill these positions were made in full consultation with the Project Team Leader. In the case of the Technical Coordinator, the GFC developed a TOR which was approved by the IDB. This was advertised and while applications were received, candidates did not meet qualifications and experience required to effectively execute the functions

of the post. In terms of the Director, it was recognised that the REDD Secretariat is still in the development phase, and as new projects and initiatives, inclusive of all REDD+ Readiness activities as well as the full MRVS comes on stream, the full capacity of the Secretariat will be required. In utilising this approach, it was realised that expertise can be phased in with the fill staff complement when all the elements of REDD+ are fully operational. This challenge meant that what was initially planned for was not met and adjustments had to be made to component 2.3. The GFC worked closely with the team leader to make necessary adjustments in this regard.

7 Areas of Innovation in Implementation of the Institutional Strengthening Project

The Institutional Strengthening Project sought to improve Guyana's capacity in the implementation of REDD+ and the Monitoring Reporting & Verification System (MRVS) for REDD+. Both REDD+ and MRVS are new and emerging areas arising from efforts to mitigate the effects of climate change and protocols for implementation are still being finalised at the level of the UNFCCC.

Guyana initiated work on REDD+ in 2008 through engagements with the Forest Carbon Partnership Facility (FCPF). Guyana was one of the first three (3) countries to have its Readiness Preparation Proposal (R-PP) approved by the FCPF. Further, in 2009 the Governments of Guyana and the Kingdom of Norway signed a Memorandum of Understanding which set out how the two countries will "work together to provide the world with a relevant, replicable model for how REDD-plus can align the development objectives of forest countries with the world's need to combat climate change." Norway committed to providing financial support of up to US\$250 million by 2015 for results achieved by Guyana under the agreed REDD+ cooperation. A Joint Concept Note (JCN) accompanies the MoU signed between Guyana & Norway and describes the mechanism through which financial contributions to Guyana will be delivered and are based on results achieved in keeping its deforestation and forest degradation rates below an agreed level.

Guyana subsequently commenced the development of its MRVS with the preparation of its MRVS Roadmap in 2009. The MRVS Road Map, which outlined the key steps to be taken over a three year period for the development of the MRVS, was built upon a capacity building approach to ensure the sustainability of the System. In March 2014, a review of Phase 1 of the MRVS Roadmap was conducted, as well as a stakeholder engagement into the inputs for Phase 1 of the MRVS.

To date, Guyana has made significant progress and has been on the forefront in the implementation of REDD+ and MRVS in areas of use of high resolution satellite imagery for assessing forest area change; development and piloting of methodologies for the measurement and monitoring of drivers of deforestation and forest degradation; the development of methods and approached for the measurement and monitoring of forest carbon stocks in Guyana's forests; the piloting of these activities at sub-national levels (demonstration sites); development of a national reference level for REDD: sharing of experiences and lessons learnt with at regional and international fora; and importantly, the focus and emphasis on the development of local capacities to manage and maintain these systems, while promoting national ownership.

With the completion of implementation of its component of the Institutional Strengthening Project, the GFC has been able to not only fulfil its reporting obligations under the Guyana Norway MoU, but to strengthen its technical and administrative capacities to implement REDD+ and further the development of the MRVS.

8 Conclusions

The project "Institutional Strengthening in Support of Guyana's Low Carbon Development Strategy (LCDS)" has resulted in an increased capacity at national level of Ministry of Natural Resources and Environment (MNRE), Office of Climate Change (OCC) and Guyana Forestry Commission (GFC), and

community/association level to develop and implement Guyana's REDD+ Strategy which forms the basis of Guyana LCDS.

This development is important for the effective management of Guyana's forestry sector because it will facilitate the best appropriate response to new and emerging issues as climate variability and climate change, payment for ecosystem services and avoided deforestation, which are critical elements of the Guyana's Low Carbon Development Strategy (LCDS).

Stakeholders, especially from Small Loggers Associations (SLAs) and Forest Communities are now more informed about the part they have to play to develop a sustainable and productive forest sector that is effectively integrated into the national economy. They have a better understanding of their roles and responsibilities in relation to sustainable utilization of forest resources so as to ensure that social, economic and environmental benefits are optimized and the needs and aspirations of all interest groups are considered.

Guyana was able to fulfil its reporting obligations under the Guyana Norway MoU, reporting on Interim Indicators for forest area change for the period January 1 to December 31, 2014. In doing so, Guyana was also able to further strengthen the methodologies currently being implemented for measuring and monitoring the drivers of forest area change, as well as the drivers of forest degradation, both spatially as well as through field data collection. Further, technical studies conducted on areas of accuracy assessment allowed for recommendations set out in the GOFC-GOLD guidelines to help identify and quantify uncertainty in the level and rate of deforestation and the amount of degraded forest area in Guyana over the period 1 January 2012 to 31 December 2012. The capacity of the GFC to continue to implement its MRVS has been significantly strengthened, while reducing its reliance on external consultants.

Stakeholders have been further sensitised to the implementation of REDD+ and the modalities and findings to date of the MRVS; and were able to share their views and concerns and receive clarifications on these initiatives. The execution of workshops for stakeholders serve to strengthen more responsible actions, whereby more aware stakeholders are reviewing their logging operations from a sustainable management perspective, and in some cases, have begun to put into practice their new knowledge and skills in SFM and governance.

At the institutional level, staff from the REDD Secretariat, GFC's Forest Resource Management (FRMD) and Forest Monitoring (FMD) department have benefitted from a number of capacity building initiatives through the duration of the project, and are now better equipped to contribute to the development of a forestry sector that is sustainably managed, an MRVS system that meets international requirements and the implementation of Guyana's LCDS. This has further strengthened the GFC's capability to conduct capacity building for stakeholders.

The outputs of this project are sustainable in the long term as they embrace the national priorities of Guyana and are in keeping with the LCDS objectives and goals. Further, the main areas of REDD+ developed by the GFC has been integrated into the core work of the Commission and therefore forms a permanent part of the work programme of the GFC. In so doing, REDD+ has been designed to contribute to the main area of mandate of the GFC which is sustainable management of forests for forest goods and services (in both carbon and non-carbon areas).

9 Recommendations

- Guyana should enhance its international profile by seeking every possible opportunity to show its
 efforts that demonstrate the strong leadership role Guyana has in the Sustainable Management of
 Tropical Forest, REDD+ initiative, Low Carbon Economy and climate change mitigation.
- There should be continuous outreach to provide updates on progress and promote new policies and programmes within the forestry sector, as well as to obtain feedback from stakeholders.

- Continuous capacity building for the staff of the GFC in technical areas of REDD+, Forest Carbon Stock measurement and Remote Sensing and GIS is needed to further strengthen forest monitoring capabilities.
- Guyana has an advanced system for IFM that lays a strong platform for the bilateral cooperation
 with the EU on a FLEGT Agreement. This should be further assessed by EU standards and
 developed as required for the Voluntary Partnership Agreement.
- Reporting on forest degradation should be specific to drivers of forest area change using the specific
 emission factor for each driver as the impact is quite varied based on the specific driver in
 consideration.
- Conducting a third party assessment on the reported accuracy levels of the MRVS assist in generating confidence in reported results and aids in transparency of methods and results generated. This is recommenced to be executed at least biennially for countries that are conducting annual reporting.
- Monitoring in close compliance to international best practice allows for greater synergies with bilateral (like in the case of Guyana/Norway cooperation) agreement since these also require compliance with international requirement.
- Monitoring forest cover for countries like Guyana with smaller impacts of deforestation, as concluded by the technical studies under this project, required high resolution satellite imagery over frequent coverage (recommended annually). This increases the probability of detecting smaller pockets of change defined as forest degradation as well as allow for more effectively defining the parameters of a deforestation event.

10 Implications for the future

- The results of this project will be used to support and propose follow-up activities in relation to the
 implementation of Guyana's REDD+ Investment Fund (GRIF), preparation for the Forest Carbon
 Partnership Facility (FCPF) and other activities that are being proposed and implemented in relation
 to forest management at the international level.
- The Bank and the GFC have established a very formidable relationship which has resulted in the successful execution of the project activities in a timely manner and developing the competency of staff involved in implementing activities. The GFC is now better equipped to operate as an executing agency.
- The knowledge that would have been acquired from research in Forest Carbon Stock and Forest Area Assessment will be beneficial in: facilitating informed decision making for policy makers to make strategic decisions regarding the allocation and reallocation of areas of forest resources; identifying areas to be earmarked for protection and biodiversity conservation; providing accurate and timely data and information to stakeholders and instituting policies and programmes that will ensure that the Guyanese stakeholders obtain maximum benefits from utilization of forest resources.
- As the MRVS is now well advanced (no in 4th year of operation), there may be some justification to
 move towards biennial reporting of forest area change in keeping with the decisions of the UNFCCC
 CoP 19 in Warsaw, in December 2013. This may also impact on future bilateral cooperation in
 climate change that Guyana engages in.
- The standards developed under IFM has the potential to advance and further develop into a national system for legal compliance accreditation. This may enable Guyana to engage in a locally developed initiative for legality assessment that can be of benefit to both private sector and international counterparts.

 With the advancement of Guyana's MRVS, Guyana now is able to contribute to the broader development of UNFCCC guidelines as an extensive amount of field work has been done in the area of MRVS. This may help to influence the international debate on climate change in areas including but not limited to the importance of incorporating forest degradation in emission reporting, the need to report by drivers to achieve a high level of detail in reporting, and the methods that can

11 Appendices

11.1 Deliverables by Output under Project No. GRT/GF-13172-GY "Institutional Strengthening in Support of Guyana's Low Carbon Development Strategy (LCDS)"

Output Number	Output Name		Deliverable
	COMPONENT 1: E	 ESI	GN AND IMPLEMENTATION OF AN MRVS
1.1.1	Output 1.1.1: National MRV coordination	1.	Summary of Meeting 11, July 12, 2012
	mechanisms established	2.	Summary of Meeting 12, September 20, 2012
		3.	
		4.	Summary of Meeting 14, August 12, 2013
		5.	Summary of Meeting 15 September 25, 2013
		6.	Special Meeting- Discussion on REDD+ Strategy November 28, 2013
		7.	Summary of Meeting 16, February 13, 2014
		8.	Summary of Meeting 17, May 14, 2014
1.2.1	Output 1.2.1: Methodologies developed for determining the extent and scale of forest	1.	2013 Measurement Reporting Verification Development of Methods for Determining the Extent and Scale of Forest Degradation System (MRVS)
	degradation	2.	MRVS Interim Measures Report for Year 3 (January 1- December 31, 2013)
		3.	
		4.	Sample Design Framework for Accuracy Assessment to Address Uncertainty Assessment
			of Rate of Change in Deforestation
		5.	Technical Assessment of Degradation Impact from Infrastructure, including Mining Roads
1.2.2	Output 1.2.2: Digital database of archived satellite data and national spatial data sets for use in forest area change assessment	1.	2013 Measurement Reporting Verification System (MRVS) Data Consolidation Report
1.2.3	Output 1.2.3: Reports on forest area change	1.	
	assessment	2	contains the Accuracy Assessment conducted by University of Durham. MBVS Interim Measures Report for Year 2, Version 2 (January 1, December 21, 2012)
		۷.	MRVS Interim Measures Report for Year 3, Version 3 (January 1- December 31, 2013)

1.2.4	Output 1.2.4: Training and capacity building	1.	Spatial Analysis Training, Water Modelling Kick-Off, Biomass Training, August 2014
	workshops of GFC staff	2.	Guyana Forestry Commission, 2013 Capacity Development Report
		3.	Capacity Report on Forest Area Change Assessment & Monitoring, 2014
1.3.1	Output 1.3.1: Implementation plan developed for	1.	Spatial Analysis for Forest Carbon Stratification and Sample Design for Guyana's FCMS:
	long term measurements and monitoring plan of		Phase II, June 2013.
	national forest carbon stocks	2.	Sampling Design and Implementation Plan for Guyana's REDD+ Forest Carbon Monitoring
			System (FCMS), June 2014
		3.	Revised Emissions Factor Report, June 2014
		4.	Long Term Monitoring Plan, June 2014
		5.	Developing a Framework for Modelling Reference Level for REDD+ based on Initial
			Outcomes of Forest Carbon Monitoring System
1.3.2	Output 1.3.2: Report containing carbon	1.	Guyana FCMS Conversion Factor Handbook, December 2013.
	conversion and expansion factors calculations for		
4.2.2	Guyana		
1.3.3	Output 1.3.3: Assessment reports completed	1.	Shifting Agriculture in Amerindian Communities in Guyana.
	describing historical and current drivers and processes affecting forest carbon levels	2.	Quick Assessment of Impacts of Mining on and Soil Carbon, December 2013.
1.3.4	Output 1.3.4: National experts trained in	1.	Capacity Building Schedule and Report, April 2013
	conducting forest carbon stocks and change	2.	Spatial Analysis training focused on IDRISI and the methods used for stratification.
	assessments		
		3.	Data collection for conducting SWAT water modelling.
		4.	Biomass training activities to follow up on previous trainings and assist with data analysis.
		5.	Training on Reference Levels (RLs), including exploring RLs options that would be best
			suited for Guyana
		6.	Capacity Report on Forest Area Change Assessment & Monitoring, 2014
1.4.1	Output 1.4.1: MRV plans designed and	1.	, , , , , , , , , , , , , , , , , , , ,
	implemented for REDD demonstration activities:	2.	Community Drivers of Deforestation & Forest Degradation, Preliminary Identification &
			Analysis by Annai District Council, the Community Demonstration Site for the National
	Community Demonstration activity		MRVS, & Introduction to CMRV Data Sharing Protocol
		3.	Report on methods for linking REDD+ demonstration activities into national approaches.
		4.	Report on capacity building exercises conducted throughout the process and on lessons
			learnt from the development of the pilot at demonstration site

	Mining Demonstration activity Forestry Demonstration activity	 MoU signed between GFC and the GGMC, in collaboration with MNRE Report On Selection Of Key Pilot Sites For Rehabilitation & Development Of A Framework For Support Structures For Reclamation Activities Report on findings of species exploration, with recommendations on species that are appropriate for use in rehabilitation of mined out sites. MoU signed between the GFC and the Rockstone Loggers Association
		 Report on Drivers of Deforestation and Forest Degradation at the Community Level, May 2014 Report on Training and Capacity Building for Sustainable Forest Management at the Community Level, June 2014 Report on Recommended REDD+ Strategy Options for Sustainable Forest Management at the Community Level, July 2014
1.5.1	Output 1.5.1: Engage International Community in Key REDD+ Initiatives Output 1.5.1: Engage International Community in Key REDD+ Initiatives	 Report from 1st Regional Technical Meeting to analyse the mechanisms leading to the formation of the Regional Amazon Observatory ,Manaus, September 11-12, 2012 GHG Workshop Report, Rome, Italy, November 5-9, 2012 Guyana's Progress in REDD+ Implementation, OSLO REDD EXCHANGE, October 2013 Report from 1st International Conference On The Impacts Of REDD+ For HFLD Countries, Paramaribo, Suriname, May 14-15, 2014 Mapping Deforestation, Training in the use of Terra Amazon Software, INPE/ ACTO, Para, Belem, Brazil, May 5-46, 2014 Report on the 57th Short Course: Urban Environmental Governance- Energy Management, October 8- November 2, 2012, Dresden, Germany
1.6.1	Output 1.6.1: Mechanisms developed for achieving sustained communication on the national and international level - Presentation developed on MRVS & REDD+ - Stakeholder engagement sessions on REDD+ & MRVS	 7. Summary Report of Outreach Sessions 2014 summarising 10 cluster sessions. 8. Stakeholder Engagement Plan
	A national survey will be conducted to measure the extent of stakeholder awareness,	 Baseline Survey Report on Stakeholders' awareness, comprehension and support of the Low Carbon Development Strategy (LCDS) Schedule of Survey Activities

	comprehension and support of the Low Carbon Development Strategy.*	3. 4.	Letter to OCC, May 29, 2014 (RE: Undertaking Obligations for Second Survey) Letter to GFC from OCC, June 2, 2014 (RE: Acceptance of Responsibility for Undertaking Obligations for Second Survey)
1.7.1	Output 1.7.1: Research reports produced	1. 2. 3.	Identification of Non-Carbon Ecosystem Services for Integration into Guyana's National MRVS Long Term Measurement and Monitoring Plan for Guyana's REDD+ Forest Carbon Monitoring System Development of the IPCC REDD+ MRV Reporting Structure for Guyana
1.8.1	Output 1.8.1: Monitoring reports produced on approved monitoring methodology	1. 2.	Independent Forest Monitoring- Summary of First Independent Forest Monitoring, Oct 2013 for Year 1 Audit for IFM Public Summary Report of Second Independent Forest Monitoring
Sub- Component 2.3:	Institutional Capacity of the REDD Secretariat and GFC Strengthened		1. List of Contracts

Web Link to reports outlined above, categorised by Component and Sub Component is available at: https://www.mediafire.com/folder/57ddssfjwml19/Institutional_Strengthening_Project_Reports

11.2 Effects Indicators (Outcomes)

		Unit of	Baseline	.,	End of project			
Indicator Description	Methodology and data source	measurement	amount	Year	Target	<u>Actual</u>		
Outcome Indicator 1: Increase in the execution capacity of the 2 executing agencies responsible for the implementation of the Program, and that are instrumental in the implementation of the LCDS.	Calculated as the difference between 2013 and 2011 in the execution capacity score of the OCC and GFC as measured using the methodology of the Institutional Capacity Assessment System.	%	GFC – 76%	2011	GFC 85% in 2013	GFC 90% in 2014		
Outcome Indicator 2: An Intergovernmental Panel on Climate Change-compliant MRVS is implemented on a national level.		Unit	0	2011	1 in 2013	1 in 2014		
Outcome Indicator 3: Increase in national stakeholder awareness, comprehension and support of the Low Carbon Development Strategy	Measured as the percentage of respondents in a national survey who indicate that they have heard of the LCDS; who respond correctly to five true or false statements about the activities and objectives of LCDS; and who indicate that they are in favor of the LCDS.	%	Baseline metrics to be obtained through a survey to be undertaken during the first quarter of Year 1	2013	- 90% of respondents have heard of the LCDS. - Respondents who have heard of LCDS correctly answer, on average, 75% of 5 true or false questions pertaining to the activities and objectives of the LCDS); - 70% of respondents indicate that they are in favor of the LCDS.	The Baseline Survey concluded on the following: - 86% of respondents indicated support to LCDS. - 65% of respondents indicated their knowledge of effects of deforestation in Guyana. - 86% of respondents are of the view that the LCDS is good for Guyana.		

			 84% of respondents indicated that they see themselves as having a role to play in the successful implementation of the LCDS. 83% of respondents expressed that all Guyanese will benefit for the LCDS.
			Guyanese will benefit for the LCDS.

11.3 Output Indicators

#	Output #	Output name	Unit of measure	Description	Target	2011	2012	2013	2014	End of project
Com	ponent Ti	tle: COMPONENT 1: D	ESIGN AND I	MPLEMENTATION OF AN MRVS						
1		MRVS Steering Committee meetings targeting	Planned		4	4		8		
	1.1.1	mechanisms established	mechanisms	eight (8) committee members	Actual		4	4		8
	Output 1.2.1: methodologies	Development of methodologies for regrowth,	Planned			3	1*	4		
2	1.2.1	Output 1.2.1: Methodologies developed for determining the extent	methodologies	shifting agriculture and old mining sites	Actual			3	1	4
	1.2.1	and scale of forest degradation	Reports	Reporting on five (5) REDD+ Interim indicators	Planned			1	1*	2
			Короно	for forest degradation	Actual			1	1	2
		Output 1.2.2: Digital database of archived satellite data and national spatial data sets for use in forest area change assessment	datasets	Processing and integration of one layer of national level high resolution imagery coverage.	Planned			7		7
3	1.2.2			Processing and integration of seven datasets on natural resources and land management Collection, analysis and processing of accuracy assessment datasets, using airborne and high resolution satellite imagery	Actual			7		7
			reports	Completion of report of forest area change	Planned	1	1	1		3
4	1.2.3	Output 1.2.3: Reports on forest area change	Теропъ	assessment for period Jan 1, Dec 31,	Actual	1	1	1		3
-	1.2.0	assessment		Conducting of Accuracy Assessment reporting of	Planned	1	1	1		3
			reports	the report of FAA	Actual	1	1	1		3
5	1.2.4	Output 1.2.4: Training and capacity building	sessions	Conducting of workshops on methods and procedures for conducting forest annual national	Planned		2	3		5
J	1.2.4	workshops of GFC staff	363310113	forest monitoring	Actual		2	3		5

		T	1		1		1		
		Output 1.3.1: Implementation plan developed for long term	plans	Stratification activity for Phase II of FCMS	Planned	1	1	1*	3
6	1.3.1		piano	Stratification activity for Finade if of Femile	Actual	1	1	1	3
8	1.3.1	measurements and monitoring plan of national forest carbon	detabasa	Data collection in plots identified in medium	Planned		1		1
		stocks	database	threat areas and data collection analysis	Actual		1		1
		Output 1.3.2: Report containing carbon		Completion of one report of Conversion &	Planned	1			1
7	1.3.2	conversion and expansion factors calculations for Guyana	reports	Expansion Factor based on drivers of forest degradation	Actual	1			1
		Output 1.3.3: Assessment reports			Planned	1	1		2
8	1.3.3	completed describing historical and current drivers and processes affecting forest carbon levels	reports	Assessment report in current drivers and processes affecting forest carbon Assessment report on Shifting Agriculture					
					Actual	1	1		2
	1.3.4	Output 1.3.4: National experts trained in conducting forest carbon stocks and change assessments	Sessions training sessions	- Training of 8 technical staff of the REDD Secretariat	Planned	1	2		3
9				- Training of 14 field staff of the REDD Sec in FCMS	Actual	1	2		3
9	1.5.4			- Training of 6 GIS & RS forest operators.					
				- Workshops on FCMS	Planned	1	1		2
					Actual	1	1		2
		Output 1.4.1: MRV plans	Plans/reports	- Further support establishment of one CMRV demonstration site in region 9	Planned		3		3
10	1.4.1	designed and implemented for REDD demonstration activities		Establishment of one REDD+ demonstration site in mining area	Actual		3		3
				- Establishment and one in forestry area	Actual				3
11	1.5.1	Output 1.5.1 Engage International Community	sessions	Participate in upcoming Workshops, Seminars &	Planned		4		4
	1.5.1	in key REDD+ Initiatives	569910119	presentations regionally and internationally	Actual		6		6

		T.	1	T	T		ı			
			Presentations/		Planned		1	9		10
		Output 1.6.1:	documents	- Presentations developed on MRVS & REDD+	Actual		1	9		10
40	4.0.4	Mechanisms developed for achieving sustained	0 .	- Stakeholder engagement sessions on REDD+	Planned		2	8		10
12	1.6.1	communication on the national and international	Sessions	& MRVS	Actual		2	8		10
		level	Surveys	- Conduct Start-up and End of Project	Planned			1	1	2
			Surveys	surveys to asses stakeholders knowledge of REDD+	Actual			1		1
				Report on identification of non-carbon schemes pertinent to REDD+	Planned			3		3
13	13 1.7.1 Output 1.7.1: Research reports produced reports	Report on assessment of requirements of a monitoring system for carbon as well as non- carbon variables	Actual			3		3		
				Report on pilot IPCC reporting structure on forest carbon emissions and removals for Guyana	, totaai			0		J
4.4		Output 1.8.1: Monitoring reports produced on		- Development of one Year 1 audit report for IFM	Planned		1	1		2
14	1.8.1	approved monitoring methodology	reports	Conduct one Field Mission for Year 2 audit for IFM	Actual		1	1		2
С	ompone	nt Title: COMPONENT	2: INSTITUTIO	ONAL STRENGTHENING OF LCDS INST	ITUTIONS					
		Output 2.3.1: Personnel hir	ed (REDD Secreta	ariat & GFC)						
				- Program Coordinator and (2) Project Officers 1,	Planned	3	1	19		23
		Milestone: Technical	staff (new &	hired before Aug 9,2011 - (1) Project Officer 1hired In 2012						
15	2.3.1	personnel hired for REDD Secretariat	extended)	- 1 Director, 1 Technical Coordinator, 3 Project Officer and 14 Field Data Collection & Support Staff to be hired in 2013.	Actual	3	1	14	2	20
		Milestone Administrative and support staff hired for	staff	In 2013, a Secretary is planned to be hired for the	Planned			1		1
		REDD Secretariat	Stail	REDD+ Secretariat.	Actual			0		0

^{1* -} New outputs to address budget transfer