

Enhancing Biodiversity Protection through Strengthened Monitoring, Enforcement and Uptake of Environmental Regulations in Guyana's Gold Mining Sector

Terminal Evaluation

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Acronyms and Abbreviations

AOP	Annual Operational Plan		
APR	Annual Progress Review		
AWP	Annual Work Plan		
BD	Biodiversity		
CARICOM	Caribbean Community		
CIDA	Canadian International Development Agency		
CB	Capacity Building		
CO	Country Office		
CPD	Country Programme Document		
EA	Executing Agency		
EAB	Environmental Assessment Board		
EMA	Environmental Management Agreement		
EMC	Environmental Management Consultants		
EPA	Environmental Protection Agency		
FEES	Faculty of Earth and Environmental Sciences		
GEF	Global Environment Facility		
GFC	Guyana Forestry Commission		
GGDMA	Guyana Gold and Diamond Miners Association		
GGMC	Guyana Geology and Mines Commission		
GIM	Geospatial Information Management		
GoG	Government of Guyana		
GTZ	German Organization for Technical Cooperation		
GLSC	Guyana Lands and Surveys Commission		
GSDS	Green State Development Strategy		
GWMO	Guyana Women Miners Organization		
HACT	Harmonised Approach to Cash Transfer		
IA	Implementing Agency		
IDB	Inter-American Development Bank		
IDCE	Institute for Distance and Continuing Education		
ITTO	International Tropical Timber Organization		
IUCN	International Union for the Conservation of Nature		
IW	Inception Workshop		
LCDS	Low Carbon Development Strategy		
M&E	Monitoring and Evaluation		
MNR	Ministry of Natural Resources		
MNRE	Ministry of Natural Resources and the		
	Environment		
MOU	Memorandum of Understanding		
MSP	Medium-Sized Project		
NGOS	Non-Governmental Organizations		
NRAC	Natural Resource Advisory Committee		
PAC	Protected Areas Commission		
PD	Project Director		
PES	Payment for Ecosystem Services		

PSC	Project Steering Committee		
SDGs	Sustainable Development Goals		
UG	University of Guyana		
UNCBD	United Nations Convention on Biodiversity		
UNCCD	United Nations Convention to Combat Desertification		
UNDP	United Nations Development Programme		
UNFCCC	United Nations Framework Convention on Climate		
	Change		

Executive Summary

Project Summary Table

Project Enhancing Biodiversity Protection through Strengthened Monitoring, Enforcement and Uptake of Environmental Title: Regulations in Guyana's Gold Mining Sector				
GEF Project ID:	5846	0	at endorsement (<u>US\$)</u>	Million at completion (Million US\$)*
UNDP Project ID:	00088312	GEF financing:	USD 803,653	
Country:	Guyana	IA/EA own:	USD 88,000	
Region:	LAC	Government:	USD 3, 300, 617	
Focal Area:	Biodiversity	Other:	USD 150,000	
FA Objectives, (OP/SP):	Mainstream biodiversity conservation and sustainable use into production landscapes, seascapes and sectors.	Total co-financing:	USD3, 538, 617	
Executing Agency:	Environmental Protection Agency (EPA) of the Ministry of Natural Resources	Total Project Cost:	USD 4,342,270	
Other Partners		ProDoc Signature (date proje	ct began): 22/08/14	
involved:	Nil	(Operational) Closing Date:	Proposed: 21/08/2017	

* Not available at time of reporting

Project Description/Background

Gold mining is a key sector in Guyana's economy and plays an important role in the country's socio-economic development. However, at the same time it is the main driver of deforestation and forest degradation and associated biodiversity (BD) loss. Inadequate management of tailings, little reclamation of mined-out areas, and various other practices are posing increasing threats to the extremely high levels of BD and endemism found in Guyana. Various barriers currently hampering the mainstreaming of BD in the gold mining sector, include the following:

- Noncompliance with mining-related environmental regulations and illegal mining;
- Insufficient personnel and institutional capacity to enforce the regulatory framework;
- Insufficient capacity to implement the environmental regulations and codes of practices among miners.

A Medium-Sized Project (MSP) has been developed to address these three critical barriers. The project's objective was to strengthen monitoring and implementation of BD-friendly practices in Guyana's gold mining sector to reduce BD loss and maintain ecosystem functionality for the benefit of all Guyanese. This was to be achieved through two Outcomes: 1 strengthening the enabling environment for monitoring and enforcement of environmental regulations and codes of practice; and 2 targeted capacity building (CB) for uptake of mining practices that promote BD conservation.

These Outcomes would focus on strengthening the Environmental Protection Agency's (EPA) role in oversight of mining practices, enhancing inter-institutional cooperation, increasing satellite tracking of mining activities and building field officer capacity in monitoring and enforcement and BD issues. In addition, the project expected to integrate BD in the Guyana Mining School programmes and provide user-friendly material and seminars to enable miners to understand the regulatory framework in place and best practices to improve BD conservation in gold mining.

The MSP Project supported national <u>Strategic Objective 2:</u> Promote the conservation, sustainable use and value of biodiversity into key productive sectors used for growth, expansion and diversification of the economy; Strategic Objective 7: Improve substantially BD monitoring at the national level and within key productive sectors as well as the private sector of Guyana's National BD Strategy and Action Plan (2012–2020). The project brought into focus the

gold mining sector, which is the main driver of Guyana's deforestation and which is of critical importance as a sector that contributed significantly to the national economy and GDP but also one which has to be managed well to ensure Guyana can maximize its earnings from the avoided deforestation model with Norway. The project is also directly contributing to and in line with GEF and UNDP current corporate regional and national framework and strategies.

Finally, this MSP was to have contributed to GEF BD Focal Area for GEF 5, Objective 2: Mainstream BD conservation and sustainable use into production landscapes, seascapes and sectors, specifically Outcome 2.1: "Increase in sustainably managed landscapes and seascapes that integrate BD conservation."

SUMMARY OF FINDINGS

Evaluation Rating Table

Evaluation Ratings Below:			
1. Monitoring and Evaluation	Rating	2. IA & EA Execution	Rating
M&E design at entry	S	Quality of UNDP Implementation-Implementing Agency (IA)	S
M&E Plan Implementation	S	Quality of Execution-Executing Agency (EA)	S
Overall quality of M&E	S	Overall quality of Implementation/Execution	S
3. Assessment of Outcomes	Rating	4. Sustainability	Rating
Relevance	R	Financial resources	ML
Effectiveness	S	Socio-political	ML
Efficiency	S	Institutional framework and governance	ML
Overall Project Outcome Rating	S	Environmental	ML
		Overall likelihood of sustainability	ML

RATING SCALES

Ratings for Effectiveness, Efficiency, Overall Project Outcome Rating, M&E, IA & EA Execution	Sustainability ratings:	Relevance ratings
 6. Highly Satisfactory (HS): no shortcomings 5. Satisfactory (S): minor shortcomings 4. Moderately Satisfactory (MS): moderate shortcomings 3. Moderately Unsatisfactory (MU): significant shortcomings 2. Unsatisfactory (U): major shortcomings 1. Highly Unsatisfactory (HU): severe shortcomings 	 Likely (L): negligible risks to sustainability Moderately Likely (ML): moderate risks Moderately Unlikely (MU): significant risks Unlikely (U): severe risks 	 Relevant (R) Not relevant (NR)
Additional ratings where relevant: Not Applicable (N/A) Unable to Assess (U/A)		

RELEVANCE

A central question guiding the evaluation has been "Where does small and medium scale mining sit in the whole sustainable development framework? The greatest challenge for Government of Guyana (GOG) was confirmed to be the small and medium gold mining sector. This sector represents 35.2 % of the value of Guyana exports (2015)¹ and has the greatest potential for enhancing rural development practices, including a focus on productivity. The mining sector has had many positive benefits for Guyana however it is in need of improved environmental practices. Such changes incurred by the intervention point to transformative potential. The project fits into the Green State Development Strategy (GSDS).

The project was relevant as per the national development goals, i.e. green growth strategy and international goals around environmental monitoring and compliance for BD management. The focus on improving compliance between actors involved in the management of the gold sector was the appropriate entry point for mainstreaming BD and for scaling-up the learning to the other sectors and for BD policy setting. There were two expected outputs, (1) enabling environment, and (2) capacity strengthening and changing practices at the individual level. The project strategy and design, while found to be over-ambitious, were correct and timely. The project inputs helped to strengthen the EPA's and Guyana Geology and Mines Commission's (GGMC) joint ability for compliance with a focus on mainstreaming BD in the mining sector.

The design targets were ambitious in terms of the end of project expectations for sustained impacts/change in behaviors, i.e. baseline and data regarding hectares to be actively monitored by end date and for targets concerned with achieving a 30% increase in changes in behavior by miners and in terms of the numbers of miners reporting increased awareness post training. While this is true, the design was correct as a phased approach and with the commitment of government to take forward the key tools and deliverables including the restructuring plan for the mining school and the proposal for integrating biodiversity into its curricula, the deepening of the work with a multi-stakeholder group for joint compliance monitoring and training of the practitioners will lead to sustainable changes and transformation in terms of the project's contribution to development. The project focus on enabling environment was correct in its expectation to conduct close work with other government departments and non-state actors while building capacity for EPA to work with the GGMC included good cooperation with Guyana Forestry Commission (GFC), Non-governmental Organizations (NGOs), Protected Areas Commission (PAC) & Mining Associations.

A key assumption around data sharing with the REDD project did not materialize but also was found to not have impacted negatively on the results. While the project needed information on deforestation levels from the REDD satellite imagery, earlier expectation was that there would be partnership, data provided by the Norwegian funded REDD project would be built upon, the MRV data and satellite image data would be made available in 2017 and could be used to undertake continuous monitoring using the hotspots baseline produced by the project. The project engaged a consultant to develop a hotspots report with vulnerable areas for monitoring. This is confirmed to have been very useful and is to be used going forward for monitoring and updates. The project did provide training on satellite imagery interpretation in anticipation of having access to Monitoring, Reporting and Verification System (MRVS) data.

EFFECTIVENESS

Annex 13 provides a clear chronology of all project activities in story format. The project's strategy emphasized the reduction of barriers and bottlenecks in mainstreaming mining in the small and medium scale gold mining sector. It focused on putting in place concrete tools and mechanisms for promoting cross-department coordination and instilling systems for joint monitoring and compliance. The project in fact did focus on targeted capacity building and improving mining education—which carried with it the assumption that education was the key interlocutor to change. This has proven to be a solid strategy but does need follow up for sustainability and reinforced learning success.

This project has made significant contributions to the overall expected outcome. The most significant are the following:

1. Raising awareness of what mainstreaming BD in the gold sector is and how such actions can be transformative for the environmental and sustainable development goals.

2. Providing key support for the institutional capacity of the EPA on a specific area, the mining sector, through a very effective learning by doing approach, facilitating work with GGMC and other key agencies e.g. GFC, PAC, NGOs to demonstrate what joint monitoring in the sector means in practice.

3. Strengthening inter-sectoral coordination mechanisms for improving environmental monitoring, compliance and interagency compliance unit at MNR. The project established a joint compliance unit for small and medium

scale mining and a functioning Natural Resources Advisory Committee (NRAC), which has proven useful for its influence on a cabinet decision and initiating bridges for joint work on compliance with non-state actors.

4. Developing key tools including simplified codes of practice for GGMC staff and practitioners and environmental/biodiversity monitoring check lists for both EPA and GGMC. The project revised and simplified the mining codes of practice; produced learning materials; created Standard Operating Procedures (SOPs), and checklists for joint monitoring; implemented a legal review with EPA; undertook a mining school institutional review, produced a proposed curriculum and developed and disseminated simplified learning materials and public awareness tools, i.e. billboards and posters for mining sites.

5. Producing capacity development and public awareness programme for changing destructive practices, educating key institutions and strengthening a network concerned with BD and mining sector. The trainings and capacity development covered all stakeholders' groups, including institutional capacity building work with EPA and GGMC and learning by doing with the new MNR compliance unit and training of approximately 70 miners.

The overall implementation approach has facilitated inter-sector EPA - GGMC cooperation. The project implemented in general through adaptive management through an active steering committee, had many unintended and underreported results. For instance, the project undertook a legal review of the EPA for biodiversity mainstreaming and considered the legal ramifications. While policy reform was not the explicit intent, it has exposed the need for a more concrete biodiversity policy in Guyana. A strong monitoring framework was put in place at onset and even picked up momentum towards the end of the project. This was supported by the UNDP monitoring (see minutes of Project Steering Committee (PSC) meeting). The monitoring tools used included the close reporting mechanisms to the PSC and UNDP through quarterly reports.

The steering committee used adaptive management in order to identify the gaps as it went along, based on needs. While this approach was great, the time bound nature of a project's results reporting and monitoring against set targets is also valuable and does need compliance to a set of smart process level indicators, for example, for capacity building across the different stakeholder groups and levels of society. This aspect can be improved in the future.

UNDP's work added value to the project implementation. The project utilized the National Implementation Modality (NIM) with UNDP providing assistance with procurement and technical guidance.

The project facilitated cooperation between NGOs and government around enforcement. The experience of water quality monitoring with World Wild Life Fund (WWF) can be followed up through more stakeholder engagement facilitated by EPA. A multi-stakeholder compliance unit and network for compliance monitoring has been formed. It has met four times, according to the project management and has included, NGOs. The joint work on compliance needs strengthening with the NGO partners including more education and a research agenda which might be facilitated, perhaps, in coordination with the new enhanced role of EPA to work with non-state actors to support compliance, education and public awareness.

EFFICIENCY

Cost effectiveness

The project's capacity building effort was cost-effective as it focussed on training institutional personnel and trainers (including Mining School trainers, mines officers and community leaders), with the view that they can then promote replication of best practices and further disseminate the knowledge acquired. This will reduce the costs associated with scaling up the capacity building to those located in the hinterland.

SUSTAINABILITY

Institutional Sustainability

- Legislative. The MSP has done a comprehensive review of the legal framework needed to enable mainstreaming of BD and ecosystem protection in the gold mining sector, and there is opportunity to utilize existing legal mechanisms, laws and regulations. The project has supported strengthening of the Draft Mining Regulations in these areas (See list of project deliverables Annex 11). The next step is the enactment and implementation of these regulations, which will require stakeholder support and buy-in.
- **Institutional.** The role of the MNR is critical in the management of the mining sector and in pushing the implementation of actions identified in the MSP. Institutional support to the MNR along with key agencies such as the EPA and GGMC, will also be important for implementation. However, support, training and capacity development should be extended to non-state organizations, such as the Guyana Gold and Diamond

Miners Association (GGDMA), Women Miners Associations Amerindian NGOs and syndicates to ensure that the mining sector stakeholders also benefit from capacity development in order to implement actions.

Environmental Sustainability.

- The project's focus was primarily concerned with creating an enabling environment for improving the ability of EPA and GGMC for inter-sectoral monitoring and compliance aimed at having environmental benefits/impacts through targeting changes in behavior of small and medium scale miners. A training of trainers' approach to the learning materials has been useful for leveraging future courses with NGOs and partners. All the deliverables need follow-up for deepening and targeting, including the implementation of the legal review and the joint check list consolidation. Furthermore implementing the mining structure plan is key in addition to implementing the proposed curricula.
- Meeting Rio Convention Obligations. The project results, if deepened and deliverables implemented, i.e. mining school plan, legal review, checklist, coordination mechanisms will facilitate actions and initiatives which will support meeting obligations of the Rio Conventions UNFCCC, UNCCD and UNCBD.
- **Model Building.** Guyana has been able to pilot a successful REDD+ Model with the Kingdom of Norway and has demonstrated that forest countries could be paid for maintaining their forests. This project has the potential to take this a step further to examine the wider issue of Payment for Ecosystem Services (PES), to explore payments for BD and other ecosystem services which can build on the framework and systems established under the current REDD+ model.

Socio-political

- The project is linking key political activities that are of priority to the present government. The project can help support the further development and implementation of Guyana's GSDS, REDD Partnership with Norway and Guyana's Nationally Determined Contributions to the Paris Agreement on Climate Change. It can help establish the synergies that exist within these policy and strategic initiatives by supporting better forest and ecosystem management and contributing to maintaining low levels of deforestation. More importantly, it can help to mobilize and organize local stakeholders and communities involved in mining so that the social and economic benefits from mining can be sustained and in which there is empowerment of locals in the sector.
- Strategy and Planning. Mining within the context of national sustainable development and integrated land use planning and management is critical. While the MSP did not focus much on this, there is the potential for scaling up assistance to provide this level of support. It will also help to address some of the critical issues associated with multiple land use and coordination of land use. Also, the project can help in mainstreaming with other initiatives being pursued, such as the National REDD+ Strategy Development, the Forest Policy and Plan being prepared and ongoing efforts at completing the National Land Use Policy and Plan.

Financial resources

• The transformational potential of the project can be looked at also from the perspective of the rural development and diversification of the rural economy needs linked to the untapped BD market potential. The project might seek financing to fund a full-sized project to implement the policy action and to continue to upgrade the compliance unit's work. It can continue to implement the planned stakeholder learning and research network. It can also promote the legal framework for a standalone BD policy that can promote the mainstreaming of BD in other sectors and link formal and informal education. Bio-Finance project funding for Guyana could be identified in order to actively engage the finance and budget planning ministries and do BD accounting and budget planning. Work on the Sustainable Development Goals (SDGs) can help to provide proper guidance and a common ground, including with mining companies (especially now that their accountability towards large-scale mining is evolving and increasing) and civil society members. Mining related choices and actions can be promoted and be transparent such that they respect both nature and humans alike.

Risks to sustainability

• The greatest risk to this project's sustainability is follow up of the deliverables under each output. While some have already been integrated and proven their utility for example the satellite imagery and GIS work, others need to be taken forward including the restructuring report of the mining school and the learning programme. The project delivered many key products that are now ready to be taken forward by government departments (see list of deliverables in Annex 11). These deliverables include capacity building and mining school education which is now dependent on the implementation of the recommendations and the curriculum. The cross sector work also needs a champion to continue to implement and promote the collaboration started. This

risk is mitigated as the new compliance unit has been well established and is expected to promote collaboration through its mandate and especially joint compliance missions with the relevant partners. This is a major result.

SUMMARY OF CONCLUSIONS, RECOMMENDATIONS AND LESSONS LEARNED

Conclusion

The findings from the literature review, country visit and field observations, including all stakeholder consultations conducted show that through this project and UNDP/GEF support, Guyana has made notable progress (though not uniformed) in the project's key result areas, namely - enhance coordination capacity, compliance and enforcement actions, monitoring of biodiversity 'hotspots', integration of biodiversity considerations in the current Guyana Mining School and Training Centre (GMSTC) curricula, compliance with environmental regulations and Codes of Practice by miners, and enhanced awareness of biodiversity issues with respect to mining.

Since the GEF is going through major funding review, the project team must not count on resources from this donor for follow up as it is still not sure that the Project Identification Form will be approved. The project has delivered and its design adequately included an analysis of the different aspects of project sustainability which have been based on the assumption and agreement that the government would take forward these results. The project design was originally developed as an enabling contribution to a phased approach keeping in mind the time needed to ensure environmental, social, institutional and financial sustainability.

Lessons

The key lessons include:

- → The overall training activities sensitized stakeholders/officers, but structural and resourcing difficulties remain. There is a need for work with the officers to demonstrate in the field the BD/environmental-friendly practice-type content being imparted to miners through pilot and demonstration projects. Another need is to expand on the training and capacity development work.
- → Ecosystem services are being highlighted. There is a need to build on the capacity building work with EPA and GGMC to set the stage for more demonstration of ecosystem services, learning by doing and work with non-state actors.
- → The issue for advancement and further implementation (building on products/deliverables, lessons, gaps and trainings) is not perceived to be so much about political will as it is about resources. The need going forward is to maximize the GEF and other windows for a full scale project.
- → The transition period between the change of government resulted in delays to the project though there was timely collaboration between stakeholders. Additionally, as a result of the unavailability and cost of updated satellite imagery, the monitoring of mining operations was not done using satellite tracking.
- → Although the EPA was the lead agency on the Mainstreaming Biodiversity in the Mining Sector Project, the institution's focus has been on monitoring large scale mining and not medium and small scale; therefore, there was the need for the GGMC to take greater level ownership of the Project.
- \rightarrow A designated, full-time project coordinator, whose sole responsibility would have been for overseeing implementation of the project activities, should have been hired for the project.

The Evaluator agrees with the lessons contained in the Bynoe (2017) report including:

- → The project required independent resources, such as vehicles, equipment and satellite images, for the execution of the activities in a timely manner. The project relied significantly on the resources of the GGMC to execute some project activities, particularly for the joint monitoring exercise. In instances in which the agency had other priorities, planned activities in respect of the project could not been have been carried out.
- → All agencies involved were interested in collaboration (as signified by their ability to successfully implement the joint monitoring exercises over the period April 18-May 10, 2017) however there is need to find the correct mechanism to allow effective and efficient collaboration to occur for example, a preexisting MoU between the EPA and the GGMC may need to be reviewed, revised or updated to respond to specific needs of the project.
- → Communities are interested and willing to collaborate with the GGMC and the EPA to assist in monitoring mining activities; however, the scope and role of their participation will have to be negotiated and agreed upon by GGMC, EPA and the communities and the requisite training and financing would have to be provided to ensure successful community involvement.

- \rightarrow Project stakeholders should have been aware of the performance indicators and targets at the commencement of and throughout the Project; this would have ensured that the project outputs fitted the indicators. In fact, the operationalization of the indicators should have been agreed upon at the commencement of the project.
- \rightarrow The technical and equipment capacities of the EPA to conduct monitoring through satellite tracking and field inspections of medium and small scale mining operations have improved; on the other hand, the institutional capacity, in terms of the MoU, may require revision.
- → Currently, joint monitoring exercises between the GGMC and the EPA regarding medium and small scale mining are primarily reactive, that is, in response to complaints and for investigative purposes, as opposed to compliance. This Project has provided a reference point for the latter and should be sustained.

Recommendations

There is a need to consolidate the deliverables and tools developed for follow up by the respective departments and agencies. The evaluator recommends that an exit strategy is prepared for presentation and discussed before the end of December so that government handover is completed.

There is a need for follow-up taking into account the deliverables, the lesson learned and to implement the recommendations from the enabling work, including:

- → Taking forward the reorganization of the Mining School in line with the report: implementing the proposed Mining School curricula, undertaking teacher training, taking forward the training module, and report on training.
- → Taking forward the policy recommendations from the various project reports and consolidate the tools and learning to promote practices as a package of learning services that reduce the negative impact of gold mining on BD, such as improved handling of mercury and other poisonous substances, improved management of tailings, reclamation practices, and increased prospecting, in line with the environmental regulations and codes of practice in place. The project outputs, policy recommendations and tools and learning promote practices that reduce the negative impact of gold mining on BD, such as improved handling of mercury and other poisonous substances, and increased prospecting, in line with the environmental regulations and tools and learning promote practices that reduce the negative impact of gold mining on BD, such as improved handling of mercury and other poisonous substances, improved management of tailings, reclamation practices, and increased prospecting, in line with the environmental regulations and codes of practice in place.
- → Taking forward the operational and technical recommendations covering enhancing monitoring, reducing deforestation and BD loss, information, data and enforcement. Institutional, policy and strategic recommendations were made and cover interagency coordination, land reclamation, BD policy, legislation for BD and comprehensive strategic planning.
- \rightarrow Delegating the gaps in the following research areas for follow-up: water quality, invasive species, prospecting, impact on BD, etc.

To support sustainable mining and mainstreaming BD in small and medium gold mining, the following are concrete things that government can do to help the miners/sector be more sustainable:

(1) set up a financial mechanism to help miners change parties and develop more sustainable practices,

(2) offer miners needed help with prospecting - can make an investment in geology and prospecting since mining is still very ad hoc. In this regard there are opportunities for undertaking cooperation with countries in the region dealing with similar problems such as Chile

(3) invest in water guidance particularly for fresh water to preserve the small and medium mining

(4) Prioritize BD legislation, continue upgrading the current EPA and mining school; implement the recommendations of the mining school restructuring report and curricula through the GMCC network. Follow up work should be done on the tools and deliverables, including the legal review and public sector education, education delivery with budget and finance. More work can be done on strategic communications and outreach to neighbours for South-South Cooperation.

1. INTRODUCTION

1.1. Purpose of the evaluation

The purpose of this evaluation is to assess the effectiveness and contribution of the project "Enhancing Biodiversity Protection through Strengthened Monitoring, Enforcement and Uptake of Environmental Regulations in Guyana's Gold Mining Sector." The evaluation will consider the extent to which the main institutional actors involved in the project, that is the MNR, EPA, and the GGMC are better able to plan, coordinate and respond to BD conservation needs in gold mining as a result of UNDP support. Further, the study will explore the extent to which this project has contributed to the achievement of Country Programme 2012–2016 Outcome 3, "improved functional capacity of key natural resources and disaster risk management institutions." Considering that this evaluation comes at the beginning of the new UNDP County Programme, it will substantively contribute both retrospective and prospective analysis that can inform the programmatic linkages the UNDP Guyana Country Office can make in deciding on its involvement and support for this area of building national capacity to address the threats of mining to BD conservation. In this context, practical options will be presented based on this assessment of current national capacity and what future investments are needed to sustain and solidify investments made by UNDP and the GOG.²

1.2. Scope & Methodology

The evaluation was strictly external and independent in nature. The evaluation was conducted by one international consultant with no prior association with the project. It was conducted using a participatory and consultative approach ensuring methods for close engagement with government counterparts, GEF operational focal point, UNDP Country Office, project team, miners/mining groups, UNDP GEF Regional Technical Adviser and key stakeholders, including the GGMC, GFC, University of Guyana (UG), Environmental Management Consultants (EMC) and Conservation International (CI).

Review and assessment of secondary data Secondary data comprising reports of the targeted institutions, such as the EPA and the GGMC and the Consultants' reports, were used to obtain and assess data related to the indicators and targets to be assessed where possible. Where reports were not immediately available, the institutions were requested to provide specific data. All documents that were consulted are listed in Annex 15.

Face-to-face interviews Face-to-face interviews were conducted with key stakeholders August 15–28, 2017; the stakeholders interviewed included representatives from the institutions identified during the project design and verified for their role in the initial inception workshop and which were directly related to the targets and indicators. It was important to solicit stakeholders' views regarding the data collected, targets and indicators. The interview schedule is attached in Annex 10. The stakeholders from the EPA and the GGMC also participated in the field mission and were consulted more than once to respond to specific issues related to the secondary data collected and reviewed.

Skype calls were had with the UNDP-GEF Regional Technical Advisor and the UNDP programme officer responsible for the technical oversight concerning the global, regional and national capacity building approach.

Direct Observations

Field visits to selected high priority areas in Guyana were conducted between August 17–28, 2017, to collect qualitative and other data, using as the points of reference the expected outputs, the indicators and targets and the GGMC Checklist and the GFC Checklist developed by those agencies. Observations were made and documented in relation to the scope of the project with families and mining communities in areas including Northwest (Region 1) on August 24 and Mahdia (Region 8) on August 25 - 26. The actual project evaluation visit sites were selected as per hotspots and where the training was given. The areas visited in Mahdia included White Hole, St. Elizabeth, and Handrail Creek. Within the NorthWest District, all areas visited were in vicinity of Arakaka Creek. Localized names include 4 Miles Arakaka, Train Line, World Bank, 13 Miles Arakaka (across the river) and Purple Heart.

Survey Review Based on questionnaire with Miners/Beneficiaries

The terminal evaluator drew extensively on the survey executed for miners who had benefited from training seminars under the output 2.2, "Uptake of BD Friendly Practices by Miners" (Paulette Bynoe, "Report on Project Indicators," August 2017). The objective was to determine the percentage increase in awareness of mining-related regulations and BD issues among the target group. As shown by the report, 41.7% of the 70 miners who had received training on mining-related regulations and BD responded to the questionnaires; thus, yielding an overall response rate of about 42%. When compared among mining districts, 5 of the 19 miners trained in the Potaro district responded, all 9 miners trained in the Cuyuni district responded, 6 of the 13 miners trained in the

NorthWest District responded whilst no miner trained in the Rupununi responded. The Cuyuni district had the highest response rate while the Rupununi district had the lowest response rate.

Methodological Framework

An overall approach and method³ for conducting terminal evaluations of UNDP supported GEF-financed projects was developed over time. These evaluation methods have been guided in this case by the detailed terms of reference (ToR). The methods have employed the OECD criteria for programme evaluation: relevance, effectiveness, efficiency, sustainability, and impact.⁴ A guiding set of questions has been compiled using an evaluation matrix (see annex- evaluation matrix) in line with OECD/GEF/UNDP criteria and based on knowledge of the key technical "education, environmental governance and compliance" issues. These questions were validated and used for scrutiny during country and mining sites visits. Several questions stood out (issues for detailed scrutiny were developed during literature review). For instance, it was necessary to test the assumptions regarding the project biodiversity and capacity baseline values. Also, as the project intended to develop platform for multi stakeholder involvement in compliance, this strategy was also to be scrutinized as part of the inquiry into the overall sustained capacity development approach.

The methodology and evaluation framework was informed by a literature review, complemented by the consultant's knowledge and expertise in BD approaches and co-management and public policy/services delivery, plus the expectations and guidance provided in the ToR. A mixed methods approach was adopted to triangulate data with the view to enhancing validity in respect of the findings and conclusions. The methodological framework includes the OECD DAC criteria, but at the center of effectiveness was the results expected and planned as per the original Logical Framework. This document has been scrutinized against the planned indicators and is analyzed in the report section on results below and annex 4. Normally, an assessment of the project performance is guided by the original project log frame—expected outcome targets and indicators as critical elements of the process. This project conducted an external assessment of the project capacity development results and indicators in June, and as such is additional key information for vetting. That study has enabled the evaluator to focus more on obtaining lessons and strategic perspectives. For the actual log frame indicators, the assessment focus was on validations as follows:

- Validate the assessment of the level of capacity of GGMC and EPA to enforce mining-related environmental regulations and Codes of Practice for small and medium-scale gold mining.
- Validate the assessment of the areas (hectares) previously monitored by EPA and GGMC for compliance with existing mining-related environmental regulations through satellite tracking and field inspections, as well as the percentage (%) of the total area identified as high priority for monitoring and enforcement that is being monitored using satellite tracking. Assessment of secondary data to be provided by the EPA and the GGMC.
- Validate the assessment of the level of coordination capacity among institutions and non-state actors for enforcement of mining-related environmental practices.
- Validate the number of actions taken by EPA (such as issuance of enforcement notices, prohibition notices, laying of charges or mediation proceedings) in the areas identified through the project as high priority for monitoring and enforcement in small and medium-scale gold mining.
- Validate the number of courses or seminars implemented through the Mining School that integrate BD considerations and secondary data (reports on seminars conducted by FEES) and are complemented by face to face interviews with tutors of the Guyana Mining School and Training Centre, as well as the consultants.
- Validate the percentage (%) of miners observed by field officers who are complying with the environmental regulations and Codes of Practice in areas identified as high priority for monitoring and enforcement (based on checklist). Use of secondary data obtained from the GGMC and EPA field officers, and triangulated with a survey of a sample of miners selected from 2 or 3 high priority areas.
- Validate the percentage (%) of small and medium-scale gold miners participating in project seminars who report an increased awareness of mining-related regulations and BD issues.

The evaluator reviewed all project documents and related literature and the proposed strategies for implementation (inception meeting report, ProDoc) in advance and conducted in-country and field missions to speak with miner families and training beneficiaries directly. An identification of focus issues helped construct a theory of change

and plausible factors influencing results to be tested while on mission. Several issues were identified based document review for further exploration as follows:

- **Design.** Why capacity development baseline was or could be established. Scope and focus would also be considered, i.e. small-scale vs large scale.
- **Management/Monitoring.** The early steering committee decision, i.e. *NIM no PM* and adaptive management. How has this impacted on monitoring activities and results?
- **Capacity building approach.** The decision to do training and/or learning by doing, including purposeful inclusion of women, whether effective and had a view to long-term sustainability, and the idea of a learning network for all stakeholders.
- **Local environment governance.** The assumptions made around Amerindian indigenous land governance and their role in enforcement.
- **Cross-sector collaboration.** The assumption around cross-sectoral collaboration, i.e. for enforcement and results between EPA and other stakeholders.
- **Technical Support**. Whether the global and regional, national technical support to the project was sufficient as per the government request to UNDP/GEF for global good practices.
- **Policy decision-making.** The policy aspects of action for improving decision-making and providing support to enforcement.
- **Financing technology and systems for tracking environmental change.** The financing for all activities per timeline, i.e. satellite tracking and the expense of setting up a satellite tracking system.

1.3. Structure of the evaluation report

This report has six sections: 1. Introduction, 2. Project description and development context, 3. Findings, 4. Sustainability, 5. Impact, 6. Conclusions, Lesson Learned and Recommendations.

2. PROJECT DESCRIPTION AND DEVELOPMENT CONTEXT

2.1 Project start and duration

The project was signed and began implementation in September 2014 with appointments of the management focal points in MNR. The operational closure, is confirmed for December 2017. The inception meeting was held in September 2014 during which the project's logical framework and the first annual planning commenced and was endorsed by project steering committee.

2.2 Problems that the project sought to address

Gold mining is a key sector in Guyana's economy and plays an important role in the country's socio-economic development. Guyana has important potential to translate its natural wealth into a substantial driver of sustainable human development. However, at the same time, gold mining is the main driver of deforestation and forest degradation and associated BD loss. Inadequate management of tailings, little reclamation of mined-out areas, and various other practices are posing increasing threats to the extremely high levels of BD and endemism found in Guyana. Key barriers currently hamper the mainstreaming of BD in the gold mining sector, including (1) non-compliance with mining-related environmental regulations and illegal mining, (2) insufficient personnel and institutional capacity to enforce the regulatory framework, (3) insufficient capacity to implement the environmental regulations and codes of practices among miners. This medium-sized project (MSP) has been developed to address these three critical barriers.

2.3 Immediate and development objectives of the project

This project's specific objective and focus was developed under the UNDP Guyana country programme 2012-2016 and is linked to outcome 3. The project objective was to strengthen monitoring and implementation of BDfriendly practices in Guyana's gold mining sector to reduce BD loss and maintain ecosystem functionality for the benefit of all Guyanese. The project was designed to contribute to GEF BD Focal Area for GEF 5, Objective 2: Mainstream BD conservation and sustainable use into production landscapes, seascapes and sectors, specifically Outcome 2.1: "Increase in sustainably managed landscapes and seascapes that integrate BD conservation." Nationally, it fits into the new UNDP Guyana country programme partnership agreement 2017-2021 to support legal and policy frameworks to advance on integrated resource management. As per the design of the new country programme, the Government requested UNDP to provide international best-practice guidance on management of the extractive sector, given the prospects for a large increase in offshore oil extraction and to support contribution to strengthening the technical and operational capacities of the Environmental Protection Agency, the Ministry of Agriculture and other natural resource agencies for the management of chemicals, wastes and contaminants. It is clear that these hazardous substances affect Amerindian households disproportionately. Besides educating people about avoiding exposure, some of the interventions in the new country programme is expected to link to jobcreation opportunities for the safe handling and disposal of these substances so as to promote the agency of Amerindian communities in reducing those health risks.

2.4. Indicators, Main Stakeholders/Partners

During the Character and	
Project Strategy	Objectively verifiable indicators
Project Objective: Strengthen monitoring and implementation of BD-friendly practices in Guyana's gold	Level of capacity of GGMC and EPA to enforce mining-related environmental regulations and codes of practice for small and medium scale gold mining (as measured by UNDP
mining sector to reduce BD loss and maintain ecosystem functionality for the benefit of all Guyanese.	Capacity Scorecard - Indicator 10, existence of an adequate environmental policy and regulatory framework)
	Area in ha monitored for compliance with existing mining-related environmental regulations through satellite tracking and field inspections
Outcome 1:	Number of actions taken by EPA (such as issuance of enforcement notices, prohibition
Enabling environment for enforcement of mining-related environmental regulations strengthened	notices, laying of charges or mediation proceedings) in the areas identified through the project as high priority for monitoring and enforcement in small- and medium-scale gold mining.
	Level of coordination capacity among institutions and non-state actors for enforcement of mining-related environmental practices
	% of total area identified as high priority for monitoring and enforcement that is being monitored using satellite tracking
Outcome 2: Enhanced capacities for uptake of practices that promote BD	# of courses or seminars implemented through Mining School that integrate BD considerations.
conservation	% of miners observed by field officers who are complying with the environmental regulations and codes of practice in areas identified as high priority for monitoring and enforcement (based on checklist)
	% of small and medium scale gold miners participating in project seminars who report an increased awareness of mining related regulations and BD issues

A breakdown analysis of each stakeholder's anticipated expected roles against the actual role is provided in the section below on partnerships (Prodoc). The planned stakeholders included the following:

Stakeholder	Role in Project
EPA	Will act as the Project Executing Agency (EA)/ Implementing Partner and as such is responsible for managing the project, including the monitoring and evaluation of project interventions, achieving project outputs, and ensuring the effective use of UNDP/GEF resources. EPA will benefit from various project elements, such as institutional strengthening in monitoring and enforcement, training in satellite image interpretation, and improved inter-institutional coordination so that it can more effectively oversee the environmental impact of small and medium scale gold mining activities. EPA will be a member of the Project Steering Committee (PSC).
MNRE	The enhanced coordination mechanisms to be established among various agencies under the Ministry as part of this project will facilitate achievement of its overarching role of coordinating environmental and natural resource management. MNRE will Chair the PSC.
GGMC	As the agency responsible for mining in Guyana, GGMC will be a key stakeholder in providing guidance on project outputs and in making use of these outputs, such as the educational material for miners on the environmental regulations and codes of practices and the revised checklist. GGMC will also benefit from project interventions, such as training of mines officers and staff in the analysis of satellite images. GGMC will sit on the PSC.
UNDP Guyana C Office	ountry Will act as the project Implementing Agency (IA) and as such will be responsible for the provision of technical support to the Project Execution Unit (PEU) as required and for budget revisions, donor reporting, direct project payments on behalf of the EA and project monitoring and evaluation. The UNDP CO will also be a member of the PSC.
GFC	GFC will participate in the inter-institutional mechanisms to be established under Outcome 1 to facilitate collaboration among those agencies whose activities affect forested lands. The Commission will receive training to help GFC field officers identify mining infractions on the ground and report these to the appropriate authorities. Improved monitoring and enforcement of mining infractions and the exploration of

	ways to better coordinate activities in the field will positively benefit GFC by reducing the negative impacts of mining activities on forested lands. GFC will be a member of the PSC.
GLSC	GLSC will benefit from improved inter-institutional coordination and training on mining regulations and codes of practice so that it can play a role in reporting mining infractions. GLSC will be a member of the PSC.
GGDMA	Project outputs, such as user-friendly material on the environmental regulatory framework in place, will be shared with GGDMA for further dissemination to miners. The project will also offer to provide training to GGDMA's environmental officers on the mining regulations and codes of practice and on BD and mining.
Small and medium scale gold miners	Miners will receive easy-to-understand information on the regulations and codes of practice in place and on how to reduce the BD footprint of mining activities (while also reducing negative health impacts). This will be complemented by training on how to improve gold recovery rates through the Mining School so that they can also benefit economically. The project will facilitate integration of BD information in the Mining School curriculum, as well as provide seminars on the environmental regulatory framework, BD and mining.
Amerindian and other hinterland community members	Local leaders, including in Amerindian communities (Community Support Officers), will be trained on mining and BD conservation, to permit further dissemination of information on how to reduce the negative health and environmental impacts of mining practices and to enable them to play a role in monitoring infractions to the regulatory environment (through the multi-stakeholder monitoring network).
Guyana Women Miners Organisation	The project will liaise with this organization to facilitate the distribution of project material to its members (in particular the user-friendly summaries of the mining regulations and codes of practice) and to promote the participation of women miners in the project seminars on mining and BD. In addition, the project will offer training to members of the organization so that they may be part of the multi-stakeholder monitoring network.

2.5. Expected Results

The overall project objective is Strengthen monitoring and implementation of BD-friendly practices in Guyana's gold mining sector to reduce BD loss and maintain ecosystem functionality for the benefit of all Guyanese.

The project contribution is to two main outcomes: 1. to develop the enabling environment for monitoring and enforcement of environmental regulations and strengthen the codes of practice and 2. to enhance capacities for uptake of mining practices that promote BD conservation with targeted stakeholders (a mapping of stakeholders was confirmed completed during the inception meeting). These outcomes will be achieved by learning by doing and targeted training activities that strengthen EPA's role in oversight of mining practices, enhancing inter-institutional cooperation, increasing satellite tracking of mining activities and building field officer capacity in monitoring and enforcement and BD issues. The project targets integrating BD in the Mining School programmes and providing user-friendly material and seminars to enable miners to understand the regulatory framework in place and best practices to improve BD conservation in gold mining5

Outcome 1: Enabling environment for monitoring and enforcement of mining-related environmental regulations and codes of practice strengthened

Output 1.1: Strengthened EPA facilitates oversight of mining operations and increases BD protection through greater capacity of staff to carry out monitoring and enforcement and prioritize actions

Output 1.2: Inter-institutional coordination mechanisms and a multi-stakeholder monitoring network enhance collaboration in monitoring

Output 1.3: GGMC and GDMA officers support mainstreaming of BD in mining sector through increased enforcement of regulations and codes of practice and strengthened capacity on BD

Output 1.4: Satellite tracking of mining activities and analysis and reporting of findings from satellite images by GGMC and EPA increase oversight of noncompliance with regulations and illegal mining.

Outcome 2: Enhanced capacities for uptake of mining practices that promote BD conservation

Output 2.1: Mining School program integrates BD considerations

Output 2.2: User-friendly material and capacity building facilitate uptake of BD-friendly practices by miners.

3. FINDINGS

3.1. Design/Project Formulation

Country ownership

The project enjoys a high degree of government ownership. The project was to be implemented as a participatory exercise (Original ProDoc), involving all key agencies that formed a National Committee for the project's design, including EPA, MNRE, GGMC, GFC, and GLSC. The ownership has been expressed in consultation with stakeholders and high level officials at EPA, MNRE, GGMC, GFC, and GLSC. It is supporting synergistic government initiatives. For instance, Guyana had ratified the United Nations Convention on Biological Diversity (UNCBD) on August 29, 1994. The country has taken various steps to put in place a regulatory environment for the conservation and sustainable management of its BD and natural resources. Guyana has adopted the National Strategy for the Conservation and Sustainable Use of Guyana's BD, National Forest Plan and Policy and National BiodiversityBD Action Plan II, among other policies. This project will help Guyana meet its commitments as they relate to the UNCBD Ten-Year Strategy 2011–2020 and associated Aichi biodiversityBD targets (see Consistency with GEF Focal Areas and Strategies section).

Guyana has taken various actions to mitigate the negative environmental impacts of mining. The country's Mining Act was complemented in 2005 by the adoption of Mining Regulations, and these detail the practices to be employed in order to manage the environmental impacts of small, medium and large-scale mining. In addition, simplified mining codes of practice were developed to complement these regulations. Guyana signed on to the Minamata Convention on Mercury in 2013, signaling its willingness to support the reduction in mercury use by miners. In addition, the 2011 National Forest Plan indicates that "mining methods which damage the forest environment or which destroy water quality, aquatic life and ecotourism potential, and adversely affect the use of water courses, shall be discouraged and their negative impacts minimized."

Guyana's bilateral UN REDD agreement with Norway is key. It is to maintain forests in exchange for payments for carbon service, coupled with its adoption of a Low Carbon Development Strategy (LCDS), and as such demonstrates its commitment to reducing deforestation and forest degradation, which supports BD conservation. In addition, as a signatory to the United Nations Convention to Combat Desertification (UNCCD), Guyana commits to taking action to reduce the land degradation⁶. The UNCCD National Action Programme of 2006 proposes various actions to address the land degradation associated with sectors such as mining, including the rationalization of natural resources planning and management, rationalization of legislative overlaps, promotion of effective coordination and information exchange, establishment of institutional synergies, securing of financial resources and establishing financial mechanisms, promotion of public education and awareness and undertaking training and capacity building.

Linkages with UNDP and GEF Programme

The project has contributed to achievement of the Country Programme Document (CPD) for Guyana 2012–2016, Outcome 3: "Improved functional capacity of key natural resources and disaster risk management institutions," through the strengthening of EPA's role in monitoring and enforcement of environmental regulations within the mining sector and improved inter-institutional collaboration within MNRE in the management of natural resources. In addition, the project was consistent with UNDAF 2012–2016 Outcome 1: "National policies, strategies, and plans for disaster risk reduction, management of natural resources, and access to clean energy and services developed, implemented, monitored, and evaluated." Specifically, the project contributes to Output 2: "Strategies developed to manage natural resources, incorporating sustainability objectives as measured by global and national indices," as the project will work toward improved sustainability in the management of natural resources in the mining sector through various strategies, such as increased oversight by EPA, enhanced interinstitutional collaboration, increased use of satellite tracking, and overall institutional and individual capacity building in the sector.

This project has been fully consistent with the GEF BD Focal Area for GEF 5, Objective 2: Mainstream BD conservation and sustainable use into production landscapes, seascapes and sectors. The project focuses on the productive sector with the largest ecological footprint on the BD-rich forests of Guyana and one that plays a key role in the country's economic development, i.e. gold mining. The project has specifically contributed to GEF Outcome 2.1: "Increase in sustainably managed landscapes and seascapes that integrate BD conservation,"

through increased institutional capacity to monitor mining activities, increased capacity among small and medium scale gold miners to adopt appropriate environmental practices and strengthened enforcement of existing environmental regulations and codes of practice in the mining sector.

With regard to the main approaches of the UNDP CPD 2017 – 2021, (a) enhanced public health, (b) inclusive prosperity, (c) natural capital and (d) democratic governance, the focus of project is on the natural capital aspects. Nevertheless, these cross-cutting issues influence one another: the work is perceived as the basis for effective, evidence-based development action by public entities or the citizenry, and its contributions to gender mainstreaming helps to empower and promote the agency of women and girls systematically across the interventions, particularly for Amerindian women and female heads of household in rural and hinterland areas. In addition, the country programme 2012–2016 focus was aligned with outcomes 1, 2, 3 and 5 of the UNDP Strategic Plan 2014 - 2017: (a) inclusive, sustainable development, (b) open and participatory governance, (c) basic services and (d) disaster risk management. The country programme actions corresponded directly to Sustainable Development Goals SDGs 1, 3, 7, 10, 13, 15 and 16. SDG Goal 15 and its associated target speaks directly to halting biodiversity loss.

Additionally, through this project, UNDP has been supporting the Government with localization of the SDGs through the mainstreaming, acceleration and a policy support MAPS approach in conjunction with the United Nations Country Team (UNCT). The project is contributing to all these CPD objectives entirely!

The United Nations system, jointly with the Governments of the Caribbean, decided during 2015 to move from 6 United Nations Development Assistance Frameworks to a common United Nations Multi-country Sustainable Development Framework (MSDF). Recently, national consultations were conducted in 15 countries to ensure that the development challenges identified in the Common Multi-country Assessment are consistent with national development needs. Four key priority areas emerged that will inform the national and regional actions of the United Nations system and partners over the next five years: (1) a sustainable and resilient Caribbean, (2) a safe, cohesive and just Caribbean, (3) a healthy Caribbean and (4) an inclusive, equitable and prosperous Caribbean. These national and sub regional priorities were also validated with 18 Caribbean governments and are fully aligned with the Caribbean Community CARICOM Strategic Plan (2015–2019), the SIDS Accelerated Modalities of Action Pathway and the 2030 Agenda for Sustainable Development. This project and its objectives to mainstream BD for development are supporting these aims.

3.1.2. Strategy: LFA/Results Framework

The Evaluator learned that the original project focus shifted once the stakeholders understood the need for environmental compliance and that in order to mainstream BD first the project would aim at doing three things: (1) strengthen the role of EPA in compliance and monitoring of environmental issue as pertain to small and medium gold mining industries, (2) introduce the role of BD management in the gold mining sector and (3) strengthen multi-stakeholder and interagency collaboration for enhanced management of BD and sustainable development through mainstreaming (in particular BD and environmental education) in the small and medium gold mining sector. A principle barrier was that EPA and GGMC had signed a Memorandum of Understanding (MOU) in 1997, which specifies that the EPA may "delegate in writing from time to time some of its responsibilities under the Environmental Protection Act insofar as they relate to mining and petroleum exploration, exploitation and development projects to the Environment Unit of the GGMC." Within this MOU, GGMC agreed to ensure compliance with the requirements of the Environmental Protection Act before issuing GGMC licenses/permits for mining, and both parties agreed to develop strategies for the environmental control of small and medium scale mining. In practice, GGMC has taken on the primary role of monitoring and enforcing compliance in the small and medium scale mining sector. This situation was not optimal as GGMC would need capacity building and supportive tools to do it effectively. The strategy was built on this premise and on the premise that EPA needed to be more involved in monitoring and enforcement of Artisanal mining as well.

The project targets (institutional and learning/behavior changes) were ambitious for a medium-sized initiative. The project [reviewed in ProDoc and Inception report dated September 23, 2014, and verified with the Regional Technical Advisor (RTA)] had been originally conceived as a phased approach (interview with the GEF RTA) to deliver enabling contributions to the outcome by delivering a set of enabling activities, testing mechanisms and tools to improve monitoring and enforcement with key stakeholders. This was while targeting a broader capacity building agenda to change behaviors and practice, working to train the local community leaders and miners groups, etc. Follow-up and exit strategy are needed between now and end of operational closure in December 2017. The project was designed based on thorough situational analysis (ProDoc) with outlined barriers to the uptake of BD mainstreaming and broader environmental issues facing the mining sector. While the project outcomes were designed correctly, the targets imply a longer term implementation, e.g. changes in the policy/legal environment for integrating BD in the sector and mining school education delivery. The project has delivered

tools and policy recommendations for reinforcement and full scale implementation. The project deliverables need to be followed up (Annex 10). As a first phase, resources were spent efficiently, demonstrating the full scale of activities and actions needed for changes and sustainability impacts.

In the strategic results framework (see ProDoc), the UNDP capacity development scorecard was used to assess the level of capacity of GGMC and EPA to enforce mining-related environmental regulations and codes of practice for small and medium scale gold mining. Baseline was set at 1. The Bynoe (2017) report assessed achievement of the target as 2. The project might have benefited from a capacity development plan which is a lesson learned. The capacity building activities were a mixture of learning by doing and training. It was tailored rather to specific needs and groups but implemented by different partners and not linked or monitored for results to one overall capacity development strategy with targets, etc. For real impact in the mining sector (to upgrade the small and medium scale mining and to sustain it) the project needed a baseline established with EPA and GCMC for the BD education/learning and with an exit strategy built in.

Project implementation has demonstrated increasing country ownership and understanding of the role of BD management for development, linked to the mining sector. The work has proved to be contributing to and anchored in relevant political/policies, for which it is directly contributing. For example, such a strategy is in the interest of the Ministry for enhancing its compliance and monitoring role and managing natural resources, including new natural resource developments with oil. It fits within the new green state development strategy. Finally, in consideration of the recent oil developments, there is increasing need to enhance compliance in natural resource management.

3.1.3. Assumptions and Risks

The project strategies (ProDoc) included critical assumptions and risks. The following include the assumptions which were tested by the evaluation and some did not hold true.

- Political support for the strengthening of EPA's oversight role is demonstrated through the approval of monitoring and enforcement regulations for EPA: True;
- GGMC remains supportive of working together with EPA on joint oversight of the gold mining sector: True;
- Consequences for noncompliance among miners are enforced to facilitate uptake of good mining practices: True;
- Appropriate organizational structure, staffing and resources are in place within EPA to take on greater monitoring and enforcement role: Ongoing transformation;
- Different agencies under MNRE willing to collaborate on monitoring and enforcement in small and medium scale gold mining sector: True;
- Satellite images at appropriate scales to monitor small and medium scale gold mining activities continue to be available: 2014 and used to inform monitoring, it is expected that date would be available in 2017 and thereafter;
- Funding for Mining School short courses and/or full time programme is secured: this matter is engaging the attention of the GGMC Board;
- Legislation to mandate attendance of mining operating managers at Mining School is passed: Regulations have been drafted to capture this.
- Small and medium scale gold miners are sufficiently motivated to participate in the seminars on environmental regulations and codes of practice and on BD in gold mining. This is a long-term goal that requires further action on implementing tools and policy recommendation for the enabling environment and for action to improve the miners productivity and working conditions.

While the project assumptions were grounded in the situational analysis and barriers, as highlighted above some needed further contextual exploration and thought for future project design. Directly impacting the monitoring, evaluation and work on information management for decision-making was the assumption that the UN REDD Norwegian MRVS data would be forthcoming. This did not hold true nor did the expectation that legislation on mandating mining operating managers' participation in the mining school would be conditional on the changes in enabling environment, i.e. policies, institutional barriers and education and improving the conditions related to small and medium operations and productivity. The idea for the small and medium gold miners to be sufficiently motivated to participate in training needed more consideration. Their motivation for participation is actually conditional on their well-being and financial security, which was found through interviews to be very low. The miners need incentives to forgo their work and livelihoods and to assume travel costs for participating in training and also for complying with more expensive practices.

3.1.4. Lessons from relevant projects incorporated

The results framework incorporated key lessons from ongoing projects, programmes and government activities. For example, for inter sectoral coordination, the project design incorporates the knowledge of various committees that were in place to facilitate collaboration among sectors and institutions and to promote the incorporation of environmental issues in national planning. The project takes account of a Land Use Coordination Committee that was formed comprising the Commissioners of Forests, Lands and Mining, the Executive Director of the EPA and the Prime Minister as chair. This committee was tasked with preventing conflict and conflict resolution among the different land users and uses. A Special Land Use Committee (SLUC) was made up of MNRE, GGDMA, GGMC, GFC, EPA, GLSC and the Forest Products Association, to provide guidance on harmonizing mining and forestry operations and reducing conflicts. A Land Reclamation Committee was formed in 2012 and has carried out pilot studies and research. It had budgeted for 2014 to carry out reclamation projects. A National BD Advisory Committee was set up as an advisory committee and was involved in reviewing issues related to access to BD, mainly by researchers. It has not met in several years. For policy and legal aspects, the design incorporated knowledge of the various pieces of legislation, strategies, programmes and plans related to environmental and natural resource management. In general, the design considered the fact that the BD legislation is generally fragmented with relevant regulations found in different acts and various gaps. The mining legislation and codes of practice (voluntary) incorporate environmental considerations, although they do not comprehensively address BD issues. All this has been key to the planning and implementation based on respondent interviews.

3.1.5. Planned stakeholder participation

While participation of the intended stakeholders was good especially through the steering committee and the planned and approved annual activities, there was not always timely collaboration/involvement of stakeholders in the implementation of project activities. The transition period for government included the movement of EPA to the Office of the President for instance resulted in the early delays of the project. Momentum and scheduling improved dramatically in 2015 with the hiring of a project assistant at MNR.

The project implementation team consistently reported that when they executed an activity or consultancy there was timely collaboration between stakeholders. Nevertheless, the project dynamic was challenged by a restructuring and the slow implementation start. Despite this the project team delivered most activities by project end date. This is largely due to adaptive management, a strong steering committee and recruitment of a dedicated project assistant in 2015. In general, the stakeholder participation was garnered through the implementation of the outputs and also the mechanisms established for compliance and monitoring including the joint compliance unit, multi-stakeholder network meetings and the inter-sector natural resources committee.

The EPA was to act as the Project Executing Agency (EA)/implementing partner, and as such is responsible for managing the project, including the monitoring and evaluation of project interventions, achieving project outputs, and ensuring the effective use of UNDP/GEF resources. EPA has benefited from project elements, including institutional strengthening work for monitoring and enforcement, training in satellite image interpretation and capacity strengthening exercises for improved inter-institutional coordination, to more effectively oversee the environmental impact of small and medium scale gold mining activities. EPA was a core member of the PSC. It was a beneficiary of key training and implementing partner for joint monitoring and learning by doing.

The MNRE was a key beneficiary and lead implementation agency. MNRE chaired the PSC. The coordination mechanisms were established under the ministry to facilitate achievement of its overarching role of coordinating environmental and natural resource management. It had played a substantive role in leading this project to results. The PS was fully involved and supportive of decisions made in steering committee meetings.

The GGMC is the agency responsible for mining in Guyana. GGMC was a key stakeholder in providing guidance on project outputs and in making use of these outputs, including the educational material for miners on the environmental regulations and codes of practices and the revised checklist. GGMC benefited from the project interventions, including the training of mines officers and staff in the analysis of satellite images. GGMC also sat on the PSC. GGMC played a crucial role in implementation in terms of leading the joint monitoring efforts with EPA and as a beneficiary of the training, equipment and materials. The mining school was a core beneficiary of equipment and training, including a training of trainer's activity. The restructuring report and curriculum for the school needs to be implemented. A key recommendation is to establish a decision-making board for the school and to include research in its mandate.

The UNDP Guyana Country Office was the project IA and responsible for the provision of technical support to the PEU and for budget revisions, donor reporting, direct project payments on behalf of the EA and project monitoring and evaluation. The UNDP CO has been reported as a strong contributing member of the PSC. UNDP

provided key technical oversight through the programme specialist's involvement in all steering committees and as a key resource and guide to project management and daily decision-making on operational issues.

Improved monitoring and enforcement of mining infractions and the exploration of ways to better coordinate activities is confirmed to positively benefit GFC by reducing the negative impacts of mining activities on forested lands. The GFC reported participating in the inter-institutional mechanisms established under outcome 1, i.e. compliance unit activities including the joint monitoring mission in April 2017 and the Natural Resource Advisory Committee (NRAC) to facilitate collaboration among the agencies whose activities affect forested lands. The commission had training to help GFC field officers identify mining infractions and to report. GFC was a strong member of the PSC.

GLSC, the focal point for the UNCCD and a member of the PSC, reported to have benefited from improved interinstitutional coordination and training on mining regulations and codes of practice for reporting mining infractions. GLSC is confirmed to have benefited from data arising from hotspots work. They explained how this really contributed to their work on reporting on Rio Convention on land degradation.

Project outputs, such as user-friendly material on the environmental regulatory framework in place, were being shared with GGDMA for dissemination to stakeholders and miners during the evaluation. The project provided training to GGDMA's environmental officers on the mining regulations and simplified codes of practice and on BD and mining. The GGDMA was a powerful representation of the miners' voices and stake in the project's work. In conversation with GGDMA leaders during the in-country mission, the key requests were for stakeholders to continue with work on the evidence base for policy making and action planning. While the project led a demonstration of the importance of evidence-based compliance and policy making, they expressed that they wanted more government evidence-based research on trends and impacts of the current practice before enforcement, i.e. deforestation rates, mercury and water quality and forest degradation and invasive species, etc. GGDMA leaders expressed that the stakeholders can focus on research (evidence-based). While this was not the project focus it is a serious concern that has been unearthed for follow up action. In addition, it was indicated that disseminating materials in the absence of training and/or hands on demonstration with miners and GGDMA will have little effect. It must be accompanied by training and support services to increase their gold production and well-being in mining camps.

Small and medium scale gold miners were interviewed as beneficiaries of the training and for their general perspective on the state of small and medium scale mining in Guyana. Through the learning activities, some miners (see activities report on Capacity Building in Annex 3) received easy-to-understand information on the regulations and codes of practice and on how to reduce the BD footprint of mining activities and reducing negative health impacts. This was supported and complemented by training on how to improve gold recovery rates through the Mining School (enabling higher economic returns) and training on prospecting, as an example. Small scale miners interviewed stated that for changes in their practice using mercury, they first need services and financial support to help them change their practices and develop more sustainability. They reiterated that in general mining is still very ad hoc, and they need help with prospecting and perhaps government can make an investment in geology and prospecting. Finally, as mining leads to pollution and in order to therefore preserve small-scale mining, there needs to be an investment on water guidance, for fresh water in particular. The representatives of the miners association interviewed stated they would like to see more learning through a demonstration approach, beyond the dissemination of training and brochures, etc.

This is the plan, but the mining school has yet to implement the restructuring report findings. The project has considered a study on the integration of BD information in the Mining School curriculum, it has provided an expert proposal for integrating biodiversity into the mining curricula and conducted seminars on the environmental regulatory framework, BD and mining. Miners benefited from evidence-based regulation, monitoring and training and targeted for longer term project impacts i.e. learning and changed practices. The project trained a significant number of miners (70), and the impact and understanding of the gaps especially in the evidence base was significant and needs to be followed through for effect.

Local leaders, including in Amerindian communities (Community Support Officers), were included as trainees on mining and BD conservation, to permit further dissemination of information on how to reduce the negative health and environmental impacts of mining practices. However, the response was not very strong, and the group could have been more targeted, especially at the policy level to enable them to play a role in monitoring infractions (which is the mandate GGMC) to the regulatory environment through the multi-stakeholder monitoring network. Amerindians have been involved as beneficiaries of the code of practice training conducted by the University of Guyana. The project can do more to engage this interest group and bring them on board as land stewards and include them as high level stakeholders on the steering committee.

The project liaised with the Guyana Women Miners Organisation to facilitate the distribution of project material to its members in particular the user-friendly summaries of the mining regulations and codes of practice (which was observed during the in-country mission, and to promote the participation of women miners in the project seminars on mining and BD. In addition 138 women were trained at final count.

3.1.6. Management arrangements

Technical and administrative staff of the EPA were expected to provide support to the PEU. The Project Director (PD) would be the Executive Director of the EPA and work to ensure achievement of the project's results and objectives and adherence to the norms and procedures established in the ProDoc. The PD will be solely responsible for approving Requests for Direct Payments to the UNDP CO, made in accordance with the Annual Work Plans (AWPs).

The project management was not put in place at onset but rather focal points at MNR were established. The project management was interrupted during the restructuring of the EPA to the Office of President in 2015, causing a delay in implementation. The project document dictated that the project would have a PD, a Project Coordinator PC, and a Project Administrator/Finance Assistant. This was not how the project was managed; rather the project management was integrated into an existing mechanism and process at the Ministry of Natural Resources and the Environment (MNRE) now MNR. From 2014–2015 Mr. Mahendra Saywack of the MNRE, Stacy Lord and Diana Fernandes of the EPA were the Project Execution Unit. From early 2016 Mr. Imole McDonald of the MNR, Stacy Lord and Diana Fernandes were the Project Execution Unit. After the restructuring, Mr. Osbert Ellis was hired by MNR on June 27, 2016, as the primary project assistant. He worked closely with Stacy Lord and Diana Fernandes, and they were now the PEU. At UNDP, the team was supported by Dr. Patrick Chesney, Programme Specialist, and Ms. Akua Carberry, Programme Associate (up to July 2016). The decision to include a dedicated project staff member to oversee the implementation and coordination has proved to be a critical decision, contributing to the coordination and implementation of all the planned the activities on time in a coordinated manner.

The project had a strong steering committee (annex 18) made up of key sectors with a stake in mainstreaming BD including EPA; MNRE/MNR; GGMC; GFC; GLSC; GGDMA. The PSC which played a critical factor in implementation of adaptive management and securing success in delivering all outputs. The draft AWPs were duly reviewed and approved by the PSC.

3.1.7. Replication approach

The project was designed for scaling up learning and approaches. The sector would promote evidence-based monitoring and the replication of sustainable mining practices that reduce impacts on BD and promote the value of BD for its contribution to development, and as a source of sustainable livelihoods. Through project implementation, understanding and demonstration of institutional practices including the strengthening of capacity and inter-institutional cooperation, monitoring and enforcement of environmental regulations and codes of practice would be supported leading to a greater implementation of environmental practices. This has been largely achieved through trainings, learning by doing exercises and establishing inter-sectoral coordination i.e. creation of a stakeholders' network, instilling a joint MNR compliance unit and the NRAC.

The CB and training has been useful, but for longer term transformation and mind shift changes (transformative changes), the project CB needs to be sustained and continued with links to the formal education system. The project concept was to focus on strengthening the public sector services through emphasis on upgrading the mining school curriculum, seminars and the production and dissemination of user-friendly material to summarize the existing regulations, codes of practice and available measures to reduce mining impacts on BD to miners. For transformation, research was found to be important to stakeholders and to follow up the impact of mining on the BD/natural resources and human health. The mining school expressed its interest to help miners with prospecting and geosciences in order to reduce risks and enhance productivity.

More work can be done to promote the project work to other countries and help position Guyana as a BD steward and leader in the gold sector. Various countries in the Latin America and Caribbean (LAC) region are facing increasing threats on forests and BD as a result of mining activities. The project's approach and lessons learned from its implementation could be better leveraged to promote replication of similar initiatives in other countries. The UNDP CO, UNDP RCU and EPA should identify opportunities to enable this information sharing with other countries e.g. through Sustainable Development Solutions Network, the Guiana Shield Facility , UNDP's Mining Platform, CBD, UNCCD, CARICOM, etc.

3.1.8. UNDP comparative advantage

UNDP's comparative advantage compared to other agencies in implementing this type of project is strong. UNDP is supporting the government with national planning and will be involved in the support to the localization of the SDGs with UNEP as the lead agency. UNDP is experienced in setting up monitoring plans for the MDGs and is positioned to take on a day to day role in supporting the monitoring and reporting framework for the localization of the SDGs. UNDP is an agency that has rooted experiences on sustainable development, governance and planning and can bring global international experiences including promotion of south-south cooperation on these issues. The government respondents at MNR, departments and agencies are pleased with UNDPs strategic technical assistance concerning development and are open to recommendation for concrete support around the biodiversity and sustainable development goals. UNDP has a robust country presence, which facilitates project oversight.

3.1.9. Linkages between project and other interventions within the sector

The project is perceived broadly as a key interlocker for transformative change with regard to its contribution and linkages to ongoing initiatives. Gold mining has reserved a special place in the development landscape of Guyana as part of historic rural development work and as such is embedded in the "psyche of the people." For actual synergies, the project builds on previous projects, such as the CIDA GENCAD project, which developed mining environmental regulations and carried out capacity building, and WWF's extensive work focused on mercury and mining. Lessons learned have been incorporated so that GEF resources were targeted. The synergies are considered with respect to the contribution to the broader MNR mandate and its contributions to development planning and action (analyzed below).

The transformational potential of the project thus can be synergized from several levels:

At the policy level, the project can help support the further development and implementation of Guyana's GSDS, Partnership with Norway and Guyana's Nationally Determined Contributions to the Paris Agreement on Climate Change. It can help establish the synergies that exist within these policy and strategic initiatives by supporting better forests and ecosystem management and contributing to maintaining low levels of deforestation. More importantly, it can help to mobilize and organize local stakeholders and communities involved in mining so that the social and economic benefits from mining can be sustained and provide empowerment of locals in the sector.

At the strategy and planning level, mining within the context of national development and integrated land use planning and management is critical. While the MSP did not focus much on this, there is the potential for a Full Size Project to provide this level of support. It will also help to address some of the critical issues associated with multiple land use and coordination of land use. Also, the project can help in mainstreaming with other initiatives being pursued such as the National REDD+ Strategy Development, the Forest Policy and Plan being prepared and ongoing efforts for completing the National Land Use Policy and Plan. Through the REDD+ initiative, 187 Amerindian communities will have title to claims. UNDP is also a partner to UNEP and can be supportive with the GSDS as an operational and technical agency. Strategy level action includes whole of government legislative work on mining policy.

At the legislative level, the MSP has done a comprehensive review of the legal framework needed to enable mainstreaming of BD and ecosystem protection in the gold mining sector, and there is opportunity to utilize existing legal mechanisms: laws and regulations. In fact, the project has supported strengthening of the Draft Mining Regulations in these areas. The next step is the enactment and implementation of these regulations, which will require stakeholder support and buy-in.

At the institutional level, the role of the MNR is critical in the management of the mining sector and in pushing the implementation of actions identified in the MSP, support to the MNR along with key agencies, such as the EPA and GGMC, will also be important for implementation. However, support, training and capacity development should be extended to non-state organizations, such as the GGDMA, Women Miners Associations, Amerindian NGOs and syndicates to ensure that the mining sector stakeholders also benefit from capacity development in order to implement actions.

To meet Rio Convention obligations, the project has facilitated actions and initiatives which will support meeting obligations of several Rio Conventions and identified in the UNFCCC, UNCCD, and UNCBD.

For model building, Guyana has been able to pilot a successful REDD+ model with the Kingdom of Norway and demonstrate that forest countries could be paid for maintaining their forests. This project informs future work on the wider issue of PES which can build on the framework and systems established under the current REDD+ model.

For rural development and diversification of the rural economy, there are links to the untapped BD market potential and linked to model building mentioned above.

At the operational level, strategic action includes the whole of government legislative work on mining policy. This project has pointed to what policy is needed within GGMC and the Ministries and work on revising legislation has started.

3.2. PROJECT IMPLEMENTATION

3.2.1. Adaptive management

The project was implemented as an excellent example of adaptive management with close guidance and oversight through an engaged PSC. The project steering committee met eight times. It decided to closely implement the project through the MNR-EPA owned mechanism and systems and to designate focal points for implementation. In addition, the activities were implemented based on annual work plans as scheduled and changes to the logical framework were made only in the manner in which activities were implemented, i.e. choice of implementing partner or contract modality but never to the expected output or outcome. The project began its full operational implementation in 2015 and activities began to really go in 2016. A positive decision to hire a project assistant was central to timely delivery post government restructuring and its smooth implementation thereafter. This is a key lesson learned for any next phase. This project has had a strong/active steering committee meeting at least twice a year. The project implementation was guided by a senior UNDP programme officer, who has participated in all project board meetings when annual work plans were discussed, presented and approved.

3.2.2. Partnerships arrangements

There were many partnerships/stakeholders involved in implementation and as beneficiaries to the various trainings (see list of Project Consultancies in Annex 2). This was central to implementation and results. It is clear that the financial partnership comprised signatory partners, including the government, the GEF and UNDP. The project was effective in terms of its partnerships for implementation and results. The project had done a partner analysis in the design stage and the entire project was implemented through a partnership approach. The various partners had responsibilities for work on advocacy, implementation and financial partnerships as follows:

CIVIL SOCIETY ORGANIZATIONS/NGOS

Partnerships included the Guyana Women's Miners Organization, which- supported the mainstreaming of gender equality for the project and participated in project forums. Another partner was the GGDMA which provided the avenue for engagement with small and medium scale miners and fed voices into project planning and monitoring. This NGO represents the interest of all miners in Guyana and participated in key project forums. Iwokrama International Centre for Rain Forest Conservation and Development, Conservation International and WWF participated in Project forums. The NGOs provided an avenue for technical support and guidance since they have established relationships with miners in particular areas.

PRIVATE SECTOR

Environmental Management Consultants conducted the following activities: inter-institutional coordination mechanisms i.e., defining agencies' roles; developed collaboration protocol and mechanism for enhancing the operation of multi-stakeholder enforcement network to support mainstreaming of BD in mining through strengthened capacity on BD and increased monitoring and enforcement of regulations and codes of practice. They also conducted training of EPA Officers in environmental regulations and developed monitoring checklists. Development Policy and Management Consultants executed the consultancy prioritization of hotspots for monitoring and enforcement. Dapper Technology and Gizmos and Gadgets procured office and field equipment for EPA, GGMC and MNR to aid in satellite tracking and monitoring. Massy Technologies and Starr Computers procured office and field equipment for EPA, GGMC and MNR to aid in satellite tracking and installing billboards in the hotspot mining districts. Andrew Arts will also print and install billboards in the hotspot mining districts. IDEA Graphic Designs printed posters and booklet summaries to be distributed to the GGMC, GMSTC, EPA and PAC for use. The private sector companies listed above all provided services for the execution of the project consultancies and activities.

OTHER PARTNERS

Dr. Thomas Ballatore provided services for the execution of the project consultancy, i.e. Training of EPA and GGMC Officers in satellite tracking of mining activities and analysis and reporting of findings from satellite

images to increase oversight of noncompliance with regulations and illegal mining. GGMC provided technical and financial support towards project implementation. University of Guyana provided services for the execution of the project activities, such as mining school programmes to integrate BD considerations, user-friendly material and capacity building to facilitate uptake of BD-friendly practices by miners. Dr. Paulette Bynoe provided services for the execution of the project consultancy, i.e. Assessment of the Performance of the Mainstreaming BD in the Mining Sector Project.

As per the original design, the project employed an implementation through an informal partnerships and networking approach (working through government systems). The stakeholders and partners had been identified during design (see list and roles above) and recognized for their role in mainstreaming BD in the gold mining sector. The actual implementation approach of key activities working with groups of stakeholders promoted further sensitization and cooperation.

While originally slated as central stakeholders and partners for project implementation, the NGOs participated in implementation in a limited way (as per the ProDoc-NGO Stakeholders involvement). The evaluator learned that the non-state actors' role was key for supporting research and education with mining communities around education and awareness and conducting research for expanding the evidence base before policies can be instated for compliance. The engagement with NGOs is expected to continue during a follow-up stage and post implementation of the key enabling deliverables, including the implementation of the mining school curriculum and restructuring and a gold mining stakeholder's support knowledge network building on the meetings that were started under the project. CI was highlighted for its ability to contribute to monitoring, learning and research, as an example, in the original project document where it was stated as a key implementing partner.

A key finding was that per design, work on the enabling environment had to be prioritized before the non-state actors, and NGOs could be engaged effectively. The project created a multi-stakeholder compliance platform through the compliance unit that will support collaboration. The partnership with NGOs can be strengthened once the enabling environment is firm, including to develop a more formal stakeholder network, provide more environmental public education and research around the impact and value of mining sector on BD. The stakeholder's network needs to be fully explored in a full-sized scale-up phase.

3.2.3. Feedback from M&E activities used for adaptive management

The project steering committee, which met eight times, was the avenue for feedback/adaptive management and has been critical for guiding towards results. Decisions concerning the expected outcomes were constantly reviewed and the actual work plans and roadmap were guided by the members, including the PS, MNR, EPA as EA, GGMC, GFC and UNDP and approved in annual work plans. Some activities were metered and changed, e.g. the training plan for the mining school and the work on a restructuring plan. The engagement of the environmental management group as an institutional contractor was for support to EPA on training and policy review. These were important decisions helping to guide the project to the most sustainable results and viable activities.

3.2.4. Monitoring and evaluation

According to the project document, the M&E was to be conducted in accordance with the established UNDP and GEF procedures and carried out by the project team, the UNDP CO, with support from the UNDP/GEF RCU in Panama City. The Project Results Framework, part III of the original ProDoc, provided performance and impact indicators for project implementation along with their corresponding means of verification. The M&E plan included an inception report, project implementation reviews, quarterly and annual review reports, a final evaluation and audits. The specific targets for the first-year implementation progress indicators was developed and approved by the PSC. Targets and indicators for subsequent years were defined annually as part of the internal evaluation and planning processes undertaken by the project team through the project steering committee.

This project's focus was on improving monitoring and compliance around environmental committees and standards for BD and the targets. It employed an effective learning by doing approach to learning about joint monitoring, working with the key stakeholders involved in environmental/natural resources compliance and monitoring. A list of compliance monitoring is included Annex 6.

The project Inception Workshop (IW) was held on September 23, 2014, with the relevant Government of Guyana counterparts, co-financing partners, the UNDP CO and representation from the UNDP GEF. The objective was to help the stakeholders understand and take ownership of the project's goal and objectives, as well as to finalize preparation of the project's first AWP on the basis of the Project Results Framework and the BD Tracking Tool. This meeting is confirmed to have included review of the results framework (indicators, means of verification and assumptions), imparting additional detail as needed and on the basis of this exercise, finalizing the AWP with

precise and measurable performance indicators and in a manner consistent with the expected outcomes for the project. It is a key reference document and was shared with participants to formalize various agreements and plans decided during the meeting. While a schedule of project review meetings was to be developed by the project management in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report, this was not the case. In retrospect, such a schedule would include key support for effective monitoring, including tentative timeframes for Tripartite Committee Reviews, Steering Committee (or relevant advisory and/or coordination mechanisms) and project-related M&E activities. This project could have had a more systematic results monitoring schedule.

The environmental baseline data that the project thought it would have access to and which is linked to one of the Results Framework indicators was as follows. The expectation was to partner and build on data provided by the Norwegian funded REDD project to map out the hectares to be monitored with the MRV satellite imagery from the Norway project, as anticipated during the project design period. The MRV data and satellite image data will be available in 2017 and is anticipated to be used. The project did provide training on satellite imagery.

There was no Mid Term Evaluation (MTE). This was unfortunate as a MTE is useful for course correction at midstream and to revalue the results framework after some time of implementation. This is a lesson learned. The monitoring was guided rather day to day by UNDP and an end of project assessment was conducted. While the project document called for an MTE, this requirement is not mandatory for a medium sized project. The project team called for a review of the project indicators and capacity strengthening score card by an independent consultant (See Bynoe Report, August 2017). This report against the project targets is extensive. The consultant, Dr. Paulette Bynoe's contract was signed on June 5, 2017. The aim was to produce a detailed assessment of the performance and achievements of the project against the specified objectives, targets and baseline. Note that this did not constitute a check-in mid-way through the project as it was carried out near the end.

3.2.5. Project Finance

Co-Financing and Cost Effectiveness

Significant co-financing has been realized by the Government and the UNDP to support the objectives and increase the cost-effectiveness of the GEF investment. As discussed funding was dedicated to the major outputs including the development of monitoring and enforcement regulations, strengthening of the EPA and of the MNRE in general and improving coordination among the agencies under the MNRE, among other activities. At project end, it has delivered according to plan and the review conducted by the evaluation consultant. The study shows that the delivery was uneven and at times low and or delayed. This was explained as being due to the elections, change of government and a significant move of EPA to the Office of the President. This project really begun full implementation in the final year with the recruitment of a full time dedicated project assistant - a lesson learned. The adaptive management and the recruitment of a fulltime project assistant was a commendable risk mitigation measure and has proven to help ensure the delivery of planned outputs. The adaptive management proved too be an excellent work modality as many of the government employees including those receiving the trainings were involved in project implementation in a learning by doing approach crucial for improving decision making around environmental compliance in the sector. The steering committee was instrumental as a management tactic and for debating and approving work plans. These work plans have been the basis for the execution. The evaluation finds that the activities have largely been delivered and on time.

Evidence provided to the consultant for analysis

The evaluator was provided with the four annual work plans 2014-2017 and the combined delivery reports for 2014-2016.

Project Delivery by Year

Total Year 2014 193,375.00 109, 542.44 15, 540.00 131, 958.22 147, 498.22 0.00 45,876.78 76.3%

Total Year 2015 287,328.11 172,292.43 0.00 135,006.35 135,006.35 0.00 152,321.76 47.0%

Total Year 2016 475,590.10 43,150.00 43,150.00 162,946.04 206,096.04 0.00 269,494.06 43.3%

Disbursed Funds by Year based on approved AWPs.

AWP 2014 US\$ 145,634

AWP 2015 US \$ 292,387

AWP 2016 US\$ 452, 349

AWP 2017 US\$ 423,234.46

Government's Co-Financing Status Update (Validated by Evaluation consultant November 2017) Resources Allocated: EPA \$ 599,265 CCMC \$1 051 252

\$1,951,352
\$ 600,000
\$ 150,000
\$3,300,617

Resources Expended (EPA, MNRE, GGMC, GFC combined):Office Materials\$ 205,000Transportation\$1,108,500Facilities/Conferences\$ 675,600Office Space\$ 312,330Travel Allowances\$ 535, 550Staff Resources\$ 856,750Total\$3,693,730

Grants UNDP own financing (Planned) US\$803, 653

Grants UNDP own financing (Actual) US\$861, 255

3.2.6. Execution, implementation, coordination, and operational issues

The project was executed through NIM and according to the ProDoc to the standards and regulations of the UNDP, with implementation support and direct payments made by UNDP. (UNDP made disbursements directly to vendors through Requests for Direct Payments.) In its role as a GEF IA, UNDP provided project cycle management. In the next phase, UNDP might provide more project management type training i.e. PRINCE certification training in order to help with efforts towards full NIM implementation.

The EA was the EPA as the National Focal Point of the UNCBD. As EA, EPA was responsible and accountable for managing, including the monitoring and evaluation of project interventions, achieving project outputs, and for the effective use of UNDP/GEF resources. EPA was also responsible for ensuring coordination with other key agencies and stakeholders, including GGMC, GFC, GLSC, and Ministry of Amerindian Affairs/Ministry of Indigenous People's Affairs and others, to facilitate achievement of the project's desired objectives. In addition, EPA was expected to coordinate with other relevant projects involving BD protection, such as with the UNDP/GEF Small Grants Programme (SGP). This was not apparent, for example innovative education and or piloting community learning activities that might have been picked up by SGP, at final evaluation. The role was interrupted when project management in EPA was moved from MNR to the Office of the President but corrected with the hiring of a full time project assistant at MNR.

UNDP's contribution has been reported by stakeholders and partners as providing value to the implementation and results. UNDP is the designated implementing partner and was reported as having provided excellent technical results oversight and support during implementation. UNDP's value added and contributions to support are recognized by government and implementing partners. Not only is the project supporting a key area of UNDP expertise and ability to make synergies with ongoing exercises under the GEF portfolio with other development partners and UN agencies such as UNEP on development and inclusive green growth, but UNDP is also recognized for its development work and support of synergetic efforts, i.e. green state development with UNEP, SDG planning, etc. (interview with PS of MNR, EPA representatives, UG, EMC). UNDP/GEF is also recognized for design services and a global repository of international Technical Advisors/Specialists on BD, environmental and governance issues. Examples of UNDP support include technical recruitments, i.e. GIS consultancy, guidance through steering committee and day-to-day monitoring (accessibility of UNDP technical specialist to project assistant was noted as good); conducting a final assessment of the project training activities impact and the terminal strategic level evaluation. UNDP can do more to position the project with other agencies and to consider a sector-wide approach to BD mainstreaming, engaging donors on behalf of GOG in the future.

3.3. PROJECT RESULTS

3.3.1. Overall results

Results analysis

Overall Project Objective⁷: Strengthen monitoring and implementation of BD-friendly practices in Guyana's gold mining sector to reduce BD loss and maintain ecosystem functionality for the benefit of all Guyanese.

The project in general has delivered what it set out to do and has brought forward key results/deliverables that can be followed up: 1 intersectoral coordination mechanisms, including the joint compliance unit and NRAC that have been reinstated and were active; 2 development of many useful tools, including check lists for EPA and GGMC that were piloted during a joint monitoring visit in April, the hotspots report and maps, legal review, mining school review, learning materials and public awareness tools, such as billboards for mining sites; 3 capacity development activities covering all stakeholders groups, including institutional work with EPA and GGMC compliance unit.

Overall, this project's inputs were well managed by UNDP and the MNR-EPA, and full support was accorded to the implementing partners and consultants in terms of provision of information, facilitating access to stakeholders and providing timely feedback on deliverables. The project, in terms of its impact, has raised the level of interest and awareness of critical issues, in particular as it regards BD and ecosystem management in the gold mining sector, while at the same time it has strengthened capacity of key individuals and institutions (institutional stakeholders and capacity building outputs in Annex 3). The outputs supported actions at the policy, legislative, institutional and technical levels and facilitated engagements with a wide range of State and non-state actors in the process. This has led to a better understanding and appreciation of the overall objective, challenges and opportunities. The project has created an awareness and understanding of the critical issues, done the analyses and identified the key actions. The next step is essentially one of implementation.

Output 1 Enabling environment for enforcement of mining-related environmental regulations strengthened

This outcome was intended to establish a framework to enhance monitoring and enforcement in the mining sector. This was expected to include strengthening EPA's ability to oversee miners' adherence to the regulatory framework in place, prioritizing areas on which to concentrate efforts, establishing inter-institutional coordination and collaboration mechanisms for enhanced monitoring and enforcement, enhancing capacity within GGMC on environmental issues related to mining.

Significant work on the enabling environment was conducted to enhance the role of EPA and joint monitoring environment compliance with GGMC. It had many knock-on effects. For instance, the project has helped in the EPA decision to reactive the EPA Global Environmental Committee.

The project co-financing included:

- As it related to sustainability in mining sector, a review of the legislative framework, institutional mandates, roles and responsibilities of the GGMC, GFC and EPA and related agencies (sustainability monitoring and enforcement as it related to mining.) The review consultancy was executed November 2016–January 2017. Following the review, operational and technical recommendations were made which covered enhancing monitoring, reducing deforestation and BD loss, information and data and enforcement. Institutional, policy and strategic recommendations were also made and covered interagency coordination, land reclamation, BD policy, legislation for BD and comprehensive strategic planning. Based on the work, some of the recommended interventions are being implemented in the short term, while others may take longer (a year or two). The recommendation put forth has been that once the Government agrees on the range of initiatives to be taken on board, an implementation plan with detailed actions and time frames should be drawn up, and the requisite resources for implementation secured.
- A review of draft Mining Regulations. This consultancy was executed February to August 2017 and involved first examining the international mining and BD framework and the mining and BD legal framework in Guyana with particular emphasis placed on the draft Mining Regulations and the extent to which environmental provisions have been included. Following review by the MNR and EPA and discussions with the consultants, five priority areas were identified to be included in the draft regulations. The consultants reviewed the draft Mining Regulations with particular emphasis on the five priority areas. New provisions (text) were drafted to cover areas from the five priorities which were not adequately addressed.

Output 1.1: Strengthened EPA facilitates oversight of mining operations and increases BD protection through greater capacity of staff to carry out monitoring and enforcement and prioritize actions

Training was expected to be provided to all EPA officers on the provisions of the mining regulations, mining codes of practice and regulations under the Environmental Protection Act and the use of checklists to facilitate oversight. In order to enable the EPA to carry out independent monitoring of mining activities, equipment including satellite communication technology were to be purchased. In addition, the project would have funded an exercise to come to agreement on a series of criteria to prioritize the areas on which to focus monitoring and enforcement efforts.

The project has facilitated institutional inter-sectoral cooperation and enhanced EPA monitoring capacity. Before the project interventions the GGMC self-regulated, and it was clear that EPA had to be involved. The EPA monitoring of regulations is being conducted on the large scale mining but they work with GMCC to monitor environmental compliance in small and medium scale mining. GGMC has 80-100 inspectors, and EPA has 20 environment officers and both are in a fly in/out basis for monitoring and services delivery. Previously, GGMC monitoring practice was experiencing competing interest on issues related to production between mining and conservation, but through this project's work, this issue has started to be addressed. New understanding of the value of BD and language of development was used, including sustainable green growth.

A training and capacity building workshop was held to strengthen the capacity of EPA Field Officers to facilitate greater oversight and monitoring of gold mining operations. The training exercise was conducted over a period of three (3) days from April 28 to 30, 2016 to fulfill an overall goal and five (5) specific objectives in keeping with the Training Plan. A Participant's Manual, structured along the five (5) major modules of the training, was prepared prior to the workshop and shared with participants as useful reference material. This Manual can be used again and is a sustainability measure. The workshop involved presentations and work group exercises. A final Training Report was prepared which provided a summary of the module presentations along with checklists, key points made by participants during the discussions and working group sessions and the evaluation exercise. The training was reported useful by participants as per the evaluations. The checklists developed by the project were reported by respondents as particularly useful. However, the lack of field exercises to see mining operations and test the checklists was recognized as a limitation.

The legal work has been particularly important for understanding the gaps in current environmental policies and the mining sector. The project inputs and activities have helped EPA better understand its mandate for compliance and have helped to mainstream BD/environmental concerns in coordination with GGMC. The tools developed by the project were reported as being very useful, e.g. hotspots report and two concrete mechanisms for coordination, i.e. compliance unit and NRAC and setting baselines for joint monitoring work. Many ongoing initiatives, such as the ongoing land reclamation programme were synergistic and have gained recognition and promoted the need for more research on environmental issues affecting the sector. A list of possible research areas was provided in recommendations for follow-up including water quality, invasive species, prospecting, impact on BD, etc. Equipment and project training delivered to EPA was reported by respondents as having strengthened EPA's ability to do its work with confidence. More institutional support to EPA on an integrated data and information management and environmental education is needed.

Output 1.2: Inter-institutional coordination mechanisms and a multi-stakeholder monitoring network enhance collaboration in monitoring

The project was expected to support the establishment of an inter-institutional structure and mechanisms to facilitate coordination and collaboration among EPA, GGMC, GFC and GLSC and to maximize synergies. Increased inter-institutional cooperation and joint monitoring is in line with MNR's strategic priority "a high degree of coordination between different institutions within and beyond MNR, [which is] necessary to reach economies of scale that will make monitoring more efficient but also less costly to the GoG." As part of this Output, the roles and responsibilities of agencies in terms of monitoring and enforcement was reviewed, clarified and communicated so that there is greater understanding.

The project supported the development of the MNR joint compliance unit within the Ministry. Activities focused on piloting joint exercises on compliance and monitoring, equipment, strengthening the framework and the enabling environment to further its cooperation work, promoting moving beyond being responsive to complaints and promoting education, awareness and service delivery to reduce the number of complaints.

Stakeholder's network. A Forum for NGOs and CBOs on BD Monitoring in the Mining Sector was held on April 6, 2017. At the forum, the project provided an overview of the policy and regulatory and institutional framework for BD in Guyana and presented as well as discussed recommendations for BD mainstreaming in the mining

sector. The consultancy deliverables included a report on the Review of the Legislative Framework, Institutional Mandate and Roles and Responsibilities for BD Monitoring (first deliverable), which encompassed interinstitutional cooperation in monitoring, operational mechanism of a multi-stakeholder monitoring network and a simplified checklist.

To strengthen the stakeholder partnership network, a key expected result, the UG executed a stakeholder Engagement workshop on <u>Support to Uptake of BD Friendly Practices by Miners</u>. It was provided by UG on February 10, 2017. The objectives were to present the draft jingles, infomercials, posters, billboards and the summaries of the Codes of Practice to stakeholders and to provide a forum for discussion on the communication products and summaries of the Codes of Practice.

A multi-stakeholder network focused on monitoring was to be set up and include key state agencies and non-state actors. It was set up as a joint compliance unit based at MNR and as is an important institutional result. While the network mechanism is set up, it will also need to continue with resources for deepening the facilitated knowledge sharing, learning opportunities and information exchange, identifying opportunities for further collaboration and increasing joint monitoring in the field. A key element in the development of this network has been the training of local trainers, i.e. training for NGO to carry forward the results.

A NRAC was established and strengthened. It is reported as a key success and proven to work. A good example was the decision-making it has promoted around the Demerara River. A decision was needed at the Cabinet, and this project platform, language and evidence helped take it forward.

The BD joint compliance monitoring of hotspots - prioritized areas is ongoing. Officers from GGMC and EPA and the wardens from the Compliance Division of MNR conducted BD Joint Compliance Monitoring visits in areas considered hotspots, using the hotspot work under output 1.4, which was used for monitoring and enforcement of fines on infractions for small and medium scale gold mining on April 18 to May 10, 2017. These areas include Mahdia, Potaro, Mining District 2; Potaro Essequibo, Mining District 2; Upper Mazaruni, Mining District 3; Puruni, Mining District 3; Cuyuni, Mining District 4; and North West, Mining District 5.

Output 1.3: GGMC and GDMA officers support mainstreaming of BD in mining sector through increased enforcement of regulations and codes of practice and strengthened capacity on BD

Training was to be provided on the existing environmental and mining regulations and codes of practice, as well as on the topic of BD and ecosystem services and how these are impacted by mining. A checklist that is included within the standard operational procedure used by GGMC officers was reviewed to ensure that it serves as an effective tool to facilitate monitoring of the level of compliance with the mining regulations and codes of practice. The EMC and the UG supported this output.

Twelve training activities were employed as primary mechanism for increasing multi-stakeholder cooperation and broad sensitization concerning mainstreaming BD in the gold sector. This was an effective approach. The knowledge and awareness raised the attention on BD offsets (valuation) and promoted cooperation. It enabled the government to map the footprint. In terms of compliance, the focus on cooperation is valid as in the past GGMC was unable to monitor infractions in areas under protection. The joint monitoring work will enable this to happen.

Output 1.4: Satellite tracking of mining activities and analysis and reporting of findings from satellite images by GGMC and EPA increase oversight of noncompliance with regulations and illegal mining

To complement the work of field officers while providing another layer of oversight, the project was expected to support the establishment of a system of regular satellite tracking of mining activities. Satellite images made available to GGMC and EPA officers via a portal will provide physical evidence or hard data that can be verified on the ground and can support the laying of charges against miners committing infractions to the environmental regulations in place and illegal miners.

The project facilitated demonstration of GIS capabilities and spatial data for improving evidence base and decision-making. The project work on hotspots data was highly regarded by the stakeholders and proved to be very useful for supporting the environmental reporting across conventions, i.e. UNCBD, UNCCD, etc. The Norwegian REDD data 2014 provided a baseline. The hotspots report is now a basis for future monitoring and has shown that the former GIS was too high in resolution for ground trothing. The work on the hotspots report was reported as catapulting the initiatives across departments into monitoring. The GIM unit is made aware of the importance and is now reported as developing radar for real time monitoring. This is a superior result and has demonstrated learning by the Ministry and is being institutionalized into GIM for future monitoring and compliance work. The data is empowered with a spatial component, i.e. a holistic view of the data, e.g. areas

prone to tuberosity and high BD. The project mapped the need for inter-operability and data sharing agreements. The country is using a system for information management that is outdated.

The satellite imagery was to be provided based on the data from the Norwegian project MRVS. The MRVS managed by the GFC assesses and quantifies forest area change in general, and especially forest loss as a result of mining activities. This is done as part of Guyana MRVS Roadmap for REDD+ and performance reporting process, under the MoU between the Governments of the Cooperative Republic of Guyana and the Kingdom of Norway. It was anticipated that satellite images for the Mainstreaming BD in the Mining Sector Project would be made available from the GFC through the MRVS. However, the last satellite imagery obtained through the MRVS was in 2014. The two governments are currently renegotiating the agreement, which should lead to the availability of satellite imagery from 2017. Since the team was unable to purchase satellite imagery from the more recent years, the increased percentage could not be accomplished. In addition, through development of the hotspots report, the project work has confirmed the usefulness and need for work on data collection and information sharing "systems" for decision-making. While GIS Satellite imagery was important, the work on continuous collection of quality data and environmental information to improve decisions and planning related to compliance was highlighted. The hotspots report was a good case in point, with excellent deliverables that engaged cross-sectoral data collection as a once-off effort but showed the need to have continuous system for similar reporting. The process is what needs to be fully integrated into GIM and linked to a broader EMIS system at EPA/Department of Environment.

Outcome 2: Enhanced capacities for uptake of mining practices that promote BD conservation

This outcome included a targeted focus on strengthening the curriculum of Guyana's Mining School, which at the time was just beginning to be rolled out, by ensuring that BD aspects were integrated, training trainers on these issues and supporting relevant equipment purchases.

Output 2.1: Mining School programmes integrate BD considerations

The project will support the revision of the curriculum to integrate BD aspects, which may involve the incorporation of the topic of BD in the existing Environmental Management module and/or the development of a specific module on BD and mining for the full-time programme. The project training was expected to strengthen the capacity of at least six trainers for the Mining School on the environmental regulations and best practices and generally on environmental and BD considerations as they relate to mining.

The upgrading of the mining school is critical for sustainability and transformative change and mainstreaming BD in the gold mining communities. For the scale of the transformative effect needed, the school's role in research is critical for ongoing community and evidence-based policy and research on issues facing BD and the miners.

UG was an implementing partner (an MOU was signed with UG for project related work) that implemented a stakeholder engagement workshop on the GMSTC on February 1, 2017. The Stakeholder Engagement Workshop sought the presence of the various institutional stakeholders involved in the Mainstreaming BD in the Mining Sector Project. This workshop had the objectives to create an awareness of the current situation with regard to the GMSTC and present a reorganized structure; to present the findings of the curriculum audit and recommendations and to provide a forum that facilitates stakeholders' feedback on Objectives 1 and 2.

Targeted training at the mining school has thus been proven to have increased the mining school staff and the GGMC/EPA and stakeholders' ability to provide environmental/BD training and learning uptake (University of Guyana, Training of Trainers Workshop on the GMSTC March 27 and 28, 2017). The Training of Trainers Workshop was conducted over the course of two (2) days. Its goal was to design and deliver "Training of Trainers" programme to the Mining School on the environmental regulations and best practices and on environmental and BD considerations with regard to mining.

The targeting of training at the mining school was a strategic entry point for mainstreaming BD and BD friendly practices, especially in the sector, but also for the broader environmental management and development goals. While the project targeted curricula reforms, the steering committee decided the project needed to undertake a feasibility study which was done. The project rolled out training with five modules that can be further integrated into the new mining school curricula once the recommendations for the school are approved. The project created a study of the school's operations and functioning as per needs vis-à-vis the expectation to mainstream BD in its curriculum. The evidence of actual curriculum change was not forthcoming; however, the evaluator learned that a restructuring plan that included a proposed curricula was delivered and is currently with the GGMC management for approval (Interview with the Director of the Mining school).

The GMSTC programmes to integrate BD considerations included: procurement of equipment, a review of the Mining School curriculum (to integrate BD aspects)⁸ and a training of trainers (Consultant, UG).

The indicators delivered included reports on:

- Stakeholder Consultations;
- Curriculum Audit;
- Proposed Curriculum;
- Course Outlines for BD Mainstreaming into Mining;
- Re-structuring of the GMSTC Inc.;
- Final Sustainability Plan.

On February 01, 2017, the consultants (UG) held a stakeholder engagement workshop. The workshop provided a platform for recommendations and feedback from the project stakeholders on the restructuring plan. The consultants presented a re-organized structure and the findings of a curriculum audit. Furthermore on March 27 - 28, 2017, the consultants held a Training of Trainers Workshop and trained 11 trainers from GGMC, GGDMA and GMSTC.

Following up deliverables is necessary for mainstreaming BD. As per the project intent and design, the mining school was a key target for reforms in line with the objective to mainstream biodiversity and contribute evidence and learning for enhancing and sustaining the small and medium gold mining sector. The mining school can contribute much more to the sustainability and productivity of the sector and increase the effectiveness of the servicing to the sector by the GGMC, which will in effect spin a series of indirect benefits to the BD, including raising the evidence and the abilities to conserve and protect, to increase their quality of life and opportunities for the small and medium miners. Such activities will provide miners with better working conditions. A key recommendation arising from the evaluation consultation concerning the school is that the mining school board is operationalized. This action will in turn affect other decisions needed to grow its mandate and its staff.

Output 2.2: User-friendly material and capacity building facilitate uptake of BD-friendly practices by miners

The project was expected to fund the drafting of user-friendly summaries of the key aspects of the mining regulations and codes of practice so that the language is easy to understand and absorb by miners. Funding will cover user-friendly summaries and posters/billboards as well as the costs of a trainer to deliver the seminars to miners as well as translation, printing and travel costs.

Over 12 training activities took place over the course of project implementation. Over 180 men and 138 women were trained across all activities. Seventy of these were miners according to the capacity development assessment conducted by Dr. Paulette Bynoe. Training was focused on upgrading the small and medium scale miners' practices. The body of training has served to sensitize the sectors and key stakeholders involved in the mining and environment sector as to the importance of mainstreaming BD and what that entails, including training delivered to the miners involved in activities. The activities were formally assessed for quality and learning impacts by final assessment of uptake and also during activities themselves. Two seminars were delivered by UG. A training seminar for miners and mines officers in Mahdia, Potaro, and Mining District 2 took place on March 1, 2017 at GGMC, Mahdia Mines Station. The objectives of the workshop were to create awareness and enhance knowledge of mines officers and miners with respect to the impact of mining on BD and the need for BD conservation; to educate mines officers and miners on ways in which BD conservation may be integrated in sustainable mining; to increase the awareness of mines officers and miners of the mining regulations and the Draft Codes of Practice; to introduce mines officers and miners from Mahdia, Potaro, Mining District 2to the draft jingles, infomercials, posters, billboards and summaries of the Draft Codes of Practice. Another training seminar for miners and mines officers was held in Puruni, Mazaruni, Mining District 3, Puruni Mines Station, on March 11, 2017, by the GGMC. The objectives of the workshop were the same as the March 1 seminar for miners from Puruni, Mazaruni, and Mining District 3.

Project design would have benefited from having a capacity development and partnership strategy in terms of monitoring for sustaining process-level expected results and a focused demonstration community mining and government services site. The learning and capacity development work needs a systematic follow up plan for deepening impact on the mining sector. The implementation of a training of trainers was highlighted as good practice. The project has facilitated work with the PAC where they have developed a mining plan.

3.3.2. RELEVANCE (RELEVANT)

• How relevant was the project design in achieving the outputs.

The project design has been very relevant as per the national development goals i.e. green growth strategy and international goals around environmental monitoring and compliance for BD management. The work and its focus on improving compliance in the gold sector was the appropriate entry point for mainstreaming BD and for scaling up the learning to the other sectors and for BD policy setting. There were two expected outputs, 1 enabling environment and 2 capacity strengthening targeting the mining school and changing practices at the individual level. The project strategy and design, while over-ambitious were correct and timely. The project inputs helped to strengthen the EPA's and GGMC's joint ability for compliance with a focus on mainstreaming BD in the mining sector. The project targets were over-ambitious, e.g. achieving cross-sectoral coordination and behavior change will take time. An assumption was availability of MRVS data and the early establishment of a solid monitoring baseline for BD impacts vis-à-vis the mining sector, i.e. hectares. This assumption did not hold true.

Recent institutional reforms at EPA (move to Office of the President and internal restructuring since January 2015) were in support of strengthened joint work of EPA and GGMC. Strong focus went on putting in place the enabling environment and concrete mechanisms for promoting cross-department coordination on compliance and education—a key element in success. The mining training school was intended to be a vector for learning and transformative change.

• How does the project relate to the main objectives of the GEF focal area and to the environment and development priorities at the local, regional and national levels?

A key evaluation question has been: Where does mining sit in the whole sustainable development framework? The challenge reported in terms of environmental infractions and regulation has been the small- and medium-size gold mining. While the large-scale mining is important, the small and medium operations bring in substantive revenues and greater potential for increased productivity. The project has supported mining and EPA policy, legislation and many key operational activities (Annex list of project deliverables). It asked where to go from here as a country (with lessons, gaps and opportunities exposed). The deliverables are proven to have been used. Recent government developments on which the project was anchored in the mining sector were supportive: This project has pointed to what policy is needed within GGMC and the ministries. It supported the Minamata convention, which addressed the use of mercury and its recovery and technology percentage allowances. It backed capacity development (and potential research) efforts that the mining school is leading and introduction of new upgraded technologies for recovery and protection under the Minamata convention on safe use and mercury. Indirectly the project has supported and contributed to the discussion on syndicates through the annual conference which brought together thinking and good practices of community organizations from other countries and how they work. During the evaluation, the evaluator participated in the annual small and medium scale mining conference on August 27. The example of government support to syndicates was discussed and debated. A Canadian company was present and informed about starting syndicates from the grass roots.

• To what extent was the project focused on mining and biodiversity relevant to the national development priorities?

The project design is highly relevant. Gold mining (extractive sector) is an excellent entry point for demonstrating the value of better management of a natural resource for development. Gold is a nonrenewable resource and primary sector sustaining the rural and the poor and is a root of the economy. "Mining sustainably" was the mainstreaming learning focus, i.e. targeting miners and government staffers (EPA, GGMC and GFC) as learners while sustaining the mining sector for development. This also emerged as a key theme for which support in reducing risks for operators and enabling mobility, i.e. production likelihood prospecting, better technologies, access to credit, and services, i.e. credit, roads and schools were noted as key needs for small and medium operators. A focus on institutional cooperation and capacity strengthening for monitoring targeting EPA and GGMC was timely, correct and relevant. The environmental management department was reported as being weak and doing only water quality. The project is in line with the new Green State Plan. However, achieving a green economy will require coordinated policies, institutional arrangements and programmes to manage the environment and economy as a whole. This has commenced with the establishment of EPA, separating protection of Guyana's national patrimony from extraction, and strengthening institutions.

The project has contributed to the UNDAF 2012–2016 Outcome 1 national policies, strategies and plans for disaster risk reduction (DRR), management of natural resources and access to clean energy and services developed, implemented, monitored, and evaluated. It contributed to the CPD 2012-2016 Outcome 3 improved functional capacity of key natural resources and disaster risk management institutions; and in line with the new

MSDF is highly relevant to the natural resource management or improving protection and use of natural capital strategies and current and future contributions to the multi-country Regional Program. Guyana was first country to sign MSDF 2017-2021. Outcome 4, sustainable and resilient Guyana is relevant to GEF cross-cutting areas, i.e. education, information management and evidence-based policy, and climate change.

3.3.3. EFFECTIVENESS (SATISFACTORY)

1. To what extent have the expected outcomes and objectives of the project been achieved? What progress has been made toward intended outputs and what results were achieved? (See Annex 10, key deliverable per outputs)

This question is answered in detail above, and is supported by evidence provided in the annexes, i.e. see full review on the status of inputs and activities. As highlighted above and supported, this project has accomplished all its stated outputs per the logical framework. The project did not establish a full baseline as discussed which hinders the overall framework for monitoring results. The project was delayed due to changes in the political structures of the MNR-E in 2015, through which Environment was moved from MNR to the Office of the President. The project targets and indicators have been reviewed and commented on in Annex 4. The indicators are largely met, i.e. enforcement notices, etc. The evaluator's review of all indicators is attached in Annex 11.

Project Strategy	Objectively Verifiable Indicators	Targets (end of project)	Evaluator comments
Project Objective:	Level of capacity of GGMC and EPA to	A minimum score of 2 on	Met -Verified 2 Bynoe (2017)
Strengthen monitoring	enforce mining-related environmental	Indicator 10 of UNDP	
and implementation of	regulations and codes of practice for	Capacity Development	
BD-friendly practices	small and medium scale gold mining (as	Scorecard	
in Guyana's gold	measured by UNDP Capacity		
mining sector to	Scorecard- Indicator 10, existence of an		
reduce BD loss and	adequate environmental policy and		
maintain ecosystem	regulatory framework)		
functionality for the	Area in ha monitored for compliance	Area monitored for	The baseline was zero
benefit of all	with existing mining-related	compliance increased to at	Area monitored included:
Guyanese.	environmental regulations through	least 50% over the baseline	629,304 ha using EPA
	satellite tracking and field inspections	(number of ha to be confirmed	checklist and 755,693 ha using
		at project outset)	GGMC checklist. Check final
		1 5 /	version of the Bynoe report
			2017.
Outcome 1:	Number of actions taken by EPA (such	Increase in number of	This has been achieved and
Enabling environment	as issuance of enforcement notices,	compliance and enforcement	even gone beyond the target. It
for enforcement of	prohibition notices, laying of charges or	actions taken by EPA (such as	is also evident to be
mining-related	mediation proceedings) in the areas	issuance of enforcement	sustainable in line with the role
environmental	identified through the project as high	notices, prohibition notices,	of GIM given the context.
regulations	priority for monitoring and enforcement	laying of charges or mediation	C
strengthened	in small and mediumscale gold mining	proceedings) by at least 50%	
0		over 2013/2014 baseline	
		(target of at least 7 per year)	
	Level of coordination capacity among	Target will be defined in first 6	This is achieved with the
	institutions and non-state actors for	months of project	institution of mechanisms for
	enforcement of mining-related		inter-sector collaboration,
	environmental practices		including a stakeholder
			network, a compliance unit at
			MNR is set up and has
			conducted five joint case
			studies (also see Bynoe 2017
			commentary ⁹) and a NRAC.
			There was a joint compliance
			mission conducted in April
			2017.
	% of total area identified as high priority	At least 75% of total high	Verified -At least 75 % of
	for monitoring and enforcement10 that	priority area is being	total high priority areas is
	is being monitored using satellite	monitored using satellite	being monitored using satellite
	tracking	tracking	imagery. The project work on
			satellite imagery has been
			effective to train and to show

Outcome 2: Enhanced capacities for uptake of practices that promote BD conservation	# of courses or seminars implemented through Mining School that integrate BD considerations	At least 5 courses or seminars implemented through Mining School that integrate BD considerations (Codes of practice for small and medium scale miners; mine reclamation; environmental impact management; health and safety and placer mine sites; and introductory level training of prospectors for the	the value of the data in decision making. The process has shown the need for an updated information management system and technology. This is expected to continue to be updated each year with the release of the MRV data from the REDD project. Verified - Consultation with Director and Bynoe 2017 impact report. 5 courses were implemented through the mining school that integrated BD considerations (Codes of practice for small and medium scale miners; mine reclamation; environmental impact management; health and safety and placer mine
	% of miners observed by field officers who are complying with the environmental regulations and codes of practice in areas identified as high priority for monitoring and enforcement (based on checklist)	An increase of at least 30% over the baseline of small- and medium-scale miners in areas identified as high priority for monitoring and enforcement who comply with the environmental regulations and codes of practice (the baseline of high priority areas will be established at project outset and the target will be confirmed at project outset).	and safety and pracer finite sites; and introductory level training of prospectors for the extractive industry) ¹¹ . Baseline is 0. Increase was 36% over the baseline. (Bynoe Report 2017). Bynoe 2017- It was during the five (5) joint monitoring visits conducted by the GGMC, the EPA and MNR over the period April 18-May 10, 2017 that the checklist which was developed by Environmental Management Consultants (EMC) thorough this Project was first used in the field by the EPA. Additionally, the GGMC, for the first time, used a revised checklist which they developed (GGMC, Environmental Division, 2017). The EPA and GMCC new checklists still need to be further consolidated post
	% of small and medium scale gold miners participating in project seminars who report an increased awareness of mining-related regulations and BD issues	75% of small and medium scale gold miners who participated in project seminars reported an increased awareness of mining-related regulations and BD issues.	Bynoe Report on learning 2017. Confirmed All 20 miners (100%) who have benefitted from project seminars and have participated in the Bynoe survey reported that they were more aware of the Codes of Practice as a result of attending the training seminars. The evaluator noted small participation of actual miners due to mostly cost, logistical and head time according to the report.
2. Is UNDP's/EPA's partnership strategy appropriate, effective and viable for the achievement of the outputs?

To support EPA as focus of mainstreaming BD in the gold mining sector was a strategic move and decision for project design. The EPA mandate needed to be taken back as a key overseer of environmental management and regulation while at the same time a bridge between EPA and GGMC on environmental compliance needed to be built. The cross-sector work was an obvious need, given that EPA is building its capacity based on increasing demand for enforcement. It had an MOU with GGMC for monitoring. EPA is to be a watch dog in this sector. The project put in place key tools and mechanisms promoting cross-sector cooperation and joint monitoring. However, overall expected outcome change was to be achieved through mainstreaming in a key sector and changing/linking the language of BD value. A bottom-up cross-sectoral approach to BD mainstreaming was key to creating a sustainable enabling environment. The compliance mechanism established should be accompanied with sustainable mining and environment education and public awareness. The strategy was achieved with staff at GGMC, GFC, PAC and EPA, other stakeholders and, to a lesser extent, miners. The work on imparting BD environmental education more broadly may need a strategy, formal education and other sector mainstreaming efforts. The project, through the increased understanding of the value of gold mining to the country's sustainable development, is a starting point for a conversation on the value of natural resources, BD accounting and budgets linked to the national green growth strategy. This can continue with the work on localization of SDGs.

3. What is the extent to which this project output has contributed to the Country Programme outcome 3?

This project has contributed to outcome 3 and is a demonstration of BD valuation as a concrete input into how development planning can happen from the bottom-up with good data and monitoring officers with feet in the communities; and identify the bottlenecks to development, especially human capacity needs. There were many concrete linkages and synergies. The window of opportunity has opened. SDGs, Green State Planning, BD Action Plan Project synergies, i.e. BD finance and accounting should be explored and linked to national development green state planning and SDGs.

NIM

For 51 years UNDP has supported Guyana and has observed capacities being built for project management and fiduciary oversight. NIM in this case was supported by UNDP with procurement help and technical guidance. It may be time to consider experiments with full NIM to get full benefit of capacity building through government systems. This project might be followed up with an experiment in full NIM implementation under the condition that HACT assessment and project management is in place with normal UNDP control of financials, GEF oversight and full monitoring protocols in place. NIM will also need prerequisite training on project management.

4. What have been the UNDP/GEF practice policies and role (Value Added)

This is also partially answered in the section on execution and implementing agencies roles and in the section on UNDPs comparative value above. The value added of UNDPs technical support to the project was recognized in its technical support as a constant guide and in other ways, such as its support to administrative and financial reporting and support work related to implementation, including procurement support and contracting. UNDP was able to identify technical needs and to bring in international expertise when needed, e.g for GIS work. Respondents agreed that UNDP can continue to help the MNR, and EPA will do project management training, for example Prince 2 certification. The Ministry will be growing in its responsibilities to manage climate and BD finance.

5. What have been the main factors as per achievements?

Many factors contributed to successfully and timely implementation, including adaptive management and strong steering committee and support of UNDP. Monitoring included evaluation of indicators in August 2017. Paulette Bynoe's report and work on project management is in place.

UNDP helped with procurement and technical oversight. It was noted as a big brother. Excellent relations were recorded. Project implementation unit had back office support that was appropriate, including its technical, administrative, monitoring and leveraging advocacy and positioning Guyana on regional and international stages. This happened due to adaptive management and the active steering committee meetings. The dedicated project assistant who came on board at the end of 2016, was a key factor in this project's implementation success. Before this date, delivery was slow and labored, according to interviews.

3.3.4. EFFICIENCY (SATISFATORY)

1. Was the project implemented efficiently, in-line with international and national norms and standards?

The project was delayed in the first years of implementation. The implementation as mentioned above took off really in 2016 with the hiring of a project assistant. The project was implemented in a timely way, given the scope and scale of the activities expected to be implemented. It had over 12 formal training activities (Analysis of CB in Annex 3) on time and according to schedule despite political changes and reshuffling of departments. A factor for its success was the decision to hire an assistant in 2016 in order to have dedicated project coordination/management. The agencies were going through change and restructuring with EPA being moved from the MNR in 2015.

2. Has UNDP's/EPA's strategy in producing the outputs been efficient and cost-effective?

The removal of the EPA from under the purview of the MNR, together with the implementation of a revised operational structure at the agency, may have interfered with the effective execution of some project activities. A designated, full-time Project Coordinator, whose sole responsibility would have been for overseeing implementation of the project activities, should have been hired. The PSC required more frequent meetings with the possibility of the establishment of a second Committee, either an Operational Committee or an Advisory Committee to assess continually project activities in accordance with the indicators. Coordination of the Project was initially the responsibility of a full time Technical Officer of the MNRE. The absence of a designated, full time Project Coordinator resulted in the Officer assigned the duties needing to divide his time between his substantive duties and those of the Project. It was only in late 2016 that a project assistant was hired.

3. How efficient have been the roles, engagement and coordination among various stakeholders in implementing the project?

Co-Financing

Significant baseline and co-financing has been pulled from the government and UNDP to support its objectives and increase the cost-effectiveness of the GEF investment, as other funds were dedicated to the development of monitoring and enforcement regulations, strengthening of the EPA and of the MNR in general and improving coordination among the agencies under the MNR, among other activities (see baseline section and co-financing table).

3.3.5. MAINSTREAMING

Mainstreaming other UNDP priorities, including poverty alleviation, improved governance, the prevention and recovery from natural disasters, and women's empowerment. In terms of Women's empowerment, for instance over 138 Females have been trained in twelve capacity building activities. The project raised the visibility of women in mining through supporting indirectly women's involvement in the multi-stakeholders learning work including the annual conference that had been supported with financing form this project. The multi-stakeholder network developed under Output 1.2 included the GWMO. Targeted training on the mining regulations and codes of practice, biodiversity and ecosystem services was offered to members: they participated in information exchange and monitoring efforts. User-friendly summaries of the mining regulations and codes of practice drafted are to be disseminated to the GWMO to facilitate further distribution to their members. This is planned according to the interviews with the project associate and project stakeholders.

Mainstreaming of BD was carried out largely through training, learning by doing and activities that provided a concrete assessment of needs and gaps, including a hotspots report and work, legal review and mining school restructuring and a performance planning report. The capacity development approach of the project needed a plan and strategy, including an exit strategy linked to sustainability plans. While most activities have been delivered and on time, the impact results, without a continuous reinforcement through the action of the compliance officers to provide education to miners and staff, and the mining school to undertake research and targeted planning based on evidence around mining communities, will not be sustained.

4. SUSTAINABILITY

Environmental Sustainability (Moderately Likely)

- The project outputs, policy recommendations and tools and learning promote practices that reduce the negative impact of gold mining on BD, such as improved handling of mercury and other poisonous substances, improved management of tailings, reclamation practices, and increased prospecting, in line with the environmental regulations and codes of practice in place. Local trainers and mines officers have received training to enable replication of best environmental practices.
- Follow up to the training of miners and the deliverables to the mining school in terms of a restructuring analysis and the expert led proposal on the revision of the Mining School curriculum to integrate BD

aspects is central to sustainability (also refer to the evaluator's full analysis on the capacity building work and list of project deliverables in Annex 3). Deepening and implementing the recommendations of these reports for enhancing learning, evidence work, monitoring and enforcement of the regulatory environment will contribute to the environmental sustainability of the project.

Institutional Sustainability (Moderately Likely)

• Institutional sustainability was supported by building the capacity of the EPA to be better equipped to take on its role in the monitoring and enforcement of regulations with small and medium scale miners. The training and provision of necessary equipment has been useful as well as the training provided to EPA and GGMC personnel in the interpretation of satellite images to increase satellite tracking and the support provided to the production of training material. GGMC mines officers and GGDMA environmental officers have also received training on the environmental regulations and codes of practice and on the links between BD and mining. The project's work on establishing inter-institutional coordination mechanism for monitoring and enforcement through training of staff of other agencies, establishment of protocols for reporting on incidents and analysis of joint monitoring possibilities has contributed to the project's institutional sustainability.

Socio-Political (Moderately Likely)

• The project design included various elements to ensure social sustainability. Capacity building at the local level has been focussed on training local trainers to enhance uptake of messages. In addition, the project funded the production and dissemination of user-friendly material on the environmental regulations and codes of practice. This included translation of the simplified environment and mining codes of practice and learning materials into Portuguese to reach out to Brazilian migrant miners, who have thus far benefited less from institutional outreach efforts. The project has provided a proposed curricula for integrating BD in the Mining School curriculum. It also created and piloted modules/seminars so that new entrants in the mining sector who enter the full-time programme at the school and existing miners or members of the public who participate in seminars can have access to this information. This work needs further implementation and follow up in line with the schools restructuring. To increase participation, the project will strive to schedule training seminars to coincide with other mining-related training events, such as those related to increasing gold recovery rates.

Financial Sustainability (Moderately Likely)

• An important focus of the project was on creating an enabling environment for enhanced monitoring and enforcement that is financially sustainable and realistic. This has begun to be achieved through training of EPA, GGMC, GFC and GLSC officers to enable them to identify and report on any infractions they may see in the field that relate to mining. The MNR joint monitoring and other avenues developed for collaboration have been assessed for their feasibility and will be integrated into the normal budgets i.e. the joint compliance unit. A multi-stakeholder monitoring network has begun to be established and can be merged with the new work on environmental education and new three Rios project to assist in monitoring, sustainable development and reporting and education efforts in Guyana's hinterland.

5. IMPACT

The question of project impact is dependent on what was set out to be accomplished. This project has had a huge impact on the enabling environment for BD mainstreaming and as a demonstration of the value of environmental management as per development goals. It also had significant impact on the strengthened capacity for enforcement and increased uptake of better practices as per the capacity building targets and activities. The impact of the capacity building was assessed against the capacity development score card. The activities have proven to have made an impact on the capacity of miners and also practitioners for better informed practices per design targets. (Bynoe, August 2017). The work needs to be continued and the role of education cannot be understated. The project's actual impact on the environment per se is relatively small because it takes time to get the tools and policy recommendation institutionalized and for the GoG to take forward and implement the recommendations arising from the reports including the legal review, the stakeholder network and recommendation on the mining school assessment in particular. The implementation of the activities and deliverables under this project has enormous potential for effecting positive change in Guyana's public service and with regard to BD comanagement and valuation. This project's value added has been the work on enabling changes. It has nevertheless

served to undertake a broad sensitization and enabling of what is needed to have an impact on the environment and mainstream BD.

6. CONCLUSIONS, LESSONS AND RECOMMENDATIONS Conclusion

The findings from the literature review, country visit and field observations, including all stakeholder consultations conducted show that through this project's interventions and UNDP/GEF support, Guyana has made notable progress (though not uniformed) in the targeted intervention in the project's key result areas, namely, enhance coordination capacity, compliance and enforcement actions, monitoring of biodiversity 'hotspots', integration of biodiversity considerations in the current GMSTC curricula, compliance with environmental regulations and Codes of Practice by miners, and enhance awareness of biodiversity issues with respect to mining. To this end, the lessons learnt and the suggested recommendations below should be given full consideration by the EPA, the GGMC, as well as other key state and non-state actors with direct or indirect responsibility for biodiversity conservation and management in Guyana.

Since the GEF is going through major funding review, the project team must not count on resources from external donors for follow up as it is still not sure that the Project Identification Form will be approved. The project has delivered and the project design adequately included an analysis of the different aspects of project sustainability which has been based on the assumption and agreement that the government would take forward the results. The project design was originally developed as an enabling contribution to a phased approach keeping in mind the time needed to ensure environmental, social, institutional and financial sustainability. It is a good idea to develop a project exit strategy near project completion in order to outline the next steps for the deliverable and share these with stakeholders in more detail. The steering committee should meet again to be presented with the report and an exit strategy. It should detail the commitments of each key institution and how follow-up to the project deliverables be carried out.

Lessons

The key lessons include:

- → The overall training activities sensitized stakeholders/officers, but structural and resourcing difficulties remain. One cannot ask small and medium scale gold miners to comply if they are not receiving supportive services including technology, knowledge support, roads, schools and access with credit. There is need for work with the officers to demonstrate in the field through pilot and demonstration projects the BD/environmental-friendly practice-type content being imparted to miners. Another need is to expand on the training and capacity development work.
- → Ecosystem services are being highlighted. There is a need to build on the capacity building work with EPA and GGMC to set the stage for more demonstration of ecosystem services, learning by doing and work with the GGMC officers and inclusion of non-state actors.
- → The issue for advancement and further implementation (building on products/deliverables, lesson, gaps and trainings) is not perceived to be so much about political will as it is about resources. The need going forward is to maximize the GEF and other windows for a full scale project. Possible donors include Bio Fin, GEF BD, GCF, UNREDD, GRIF, Bi-laterals including Canada, etc.
- → The work has highlighted the role of ecosystem service and the natural capital valuation. The project can ensure more work on the cost of BD and freshwater or sustainable forests. It is highlighting the sources of production and changing the language of the ecosystem services.
- → The transition period between the changes of government resulted in delays to the project. There was timely collaboration between stakeholders. As a result of the unavailability and cost of updated satellite imagery, the monitoring of mining operations was not done using satellite tracking. The lesson is that the scheduling and timing of execution of projects is very critical.
- → Although the EPA was the lead agency on the Mainstreaming Biodiversity in the Mining Sector Project, the institution's focus has been on monitoring large scale mining and not medium and small scale; therefore, there was the need for the GGMC to take greater ownership of the Project.
- → A designated, full-time Project Coordinator, whose sole responsibility would have been for overseeing implementation of the Project activities, should have been hired for the Project.

 \rightarrow The PSC required more frequent meetings with the possibility of the establishment of a second Committee, either an Operational Committee or an Advisory Committee to assess continually project activities in accordance with the indicators.

The Evaluator agrees with the findings of lessons contained in the Bynoe (2017) report as follows:

- \rightarrow The Project required independent resources, such as vehicles, equipment and satellite images, for the execution of the activities in a timely manner. The Project relied significantly on the resources of the GGMC to execute some Project activities, particularly for the joint monitoring exercise. In instances in which the agency had other priorities, planned activities in respect of the project could not been have been carried out.
- → All agencies involved were interested in collaboration (as signified by their ability to successfully implement the joint monitoring exercises over the period April 18-May 10, 2017) however there is need to find the correct mechanism to allow effective and efficient collaboration to occur for example, a preexisting MoU between the EPA and the GGMC may need to be reviewed, revised or updated to respond to specific needs of the Project. In addition, the agencies may need Board level recognition of the importance of the Project to ensure that there is 'high-level' authority to dictate such collaboration. It may be prudent to consider the recently established Compliance Division of the MNR as that mechanism.
- → Communities are interested and willing to collaborate with the GGMC and the EPA to assist in monitoring mining activities. However, the scope and role of their participation will have to be negotiated and agreed upon by the GGMC and the EPA and the requisite training and financing would have to be provided to ensure successful community involvement.
- \rightarrow Project stakeholders should have been aware of the performance indicators and targets at the commencement of and throughout the Project; this would have ensured that the Project outputs fitted the indicators. In fact, the operationalization of the indicators should have been agreed upon at the commencement of the Project.
- → Specifically, as it relates to evaluating the level of compliance of mining operators, a weighted approach should have been used to determine the miners' compliance with different aspects of the environmental regulations and Codes of Practice. For example, categories such as not compliant at all, partial compliance, full compliance using numeric values of 0, 1 and 3, complemented by comments in each case could have been used. Such an approach will allow for the summation of values and a determination of the overall performance of miners.
- \rightarrow For a scaled up project, the revision of the indicators should be conducted with the necessary professional expertise and be based on the principle of impartiality and guided by the five (5) principles/norms/standards identified by Bynoe (2016).
- \rightarrow The technical and equipment capacities of the EPA to conduct monitoring through satellite tracking and field inspections of medium and small scale mining operations have improved; on the other hand, the institutional capacity, in terms of the MoU, may require revision.
- \rightarrow The technical capacity of GIM Unit for monitoring should be enhanced to allow for the application of satellite tracking.
- \rightarrow There is need for a more formalised collaborative mechanism that transcends a MoU.
- \rightarrow The establishment of the Ministry of Natural Resources and Environment in 2011 resulted in improved collaboration among the agencies; it is important to note, however, that the EPA is now under the purview of the Department of Environment, Ministry of the Presidency; therefore it will be prudent to review the institutional arrangements for collaboration as required by future, similar projects.
- \rightarrow Currently, joint monitoring exercises between the GGMC and the EPA regarding medium and small scale mining are primarily reactive, that is, in response to complaints and for investigative purposes, as opposed to compliance. This Project has provided a reference point for the latter and should be sustained.

Recommendations

The project activities have set in motion future work at four levels: 1 a policy level to continue the policy/legal enabling work with ministries and other stakeholders; 2 institutional support for the MNR at the policy and coordination level, including for taking forward the key recommendation for the mining school, i.e. activate a board to make decisions on the strategic direction of the school; 3 a pilot activity with EPA and GGMC working to introduce new technical and model technologies, education and proper planning and work with the agencies; 4. to develop financial mechanisms to ensure funds available for rehabilitation, increase fines for non-compliance. There is need for follow-up taking into account the useful tools and deliverables, the lesson learned and to implement the recommendations from the enabling work, including:

- → Taking forward the reorganization of the Mining School in line with the report: implementing the proposed Mining School curricula, undertaking teacher training, taking forward the training module, and report on training.
- → Taking forward the policy recommendations from the various project reports and consolidate the tools and learning to promote practices as a package of learning services that reduce the negative impact of gold mining on BD, such as improved handling of mercury and other poisonous substances, improved management of tailings, reclamation practices, and increased prospecting, in line with the environmental regulations and codes of practice in place. The project outputs, policy recommendations and tools and learning promote practices that reduce the negative impact of gold mining on BD, such as improved handling of mercury and other poisonous substances, and increased prospecting, in line with the environmental regulations and tools and learning promote practices that reduce the negative impact of gold mining on BD, such as improved handling of mercury and other poisonous substances, improved management of tailings, reclamation practices, and increased prospecting, in line with the environmental regulations and codes of practice in place.
- → Taking forward the operational and technical recommendations covering enhancing monitoring, reducing deforestation and BD loss, information and data and enforcement. Institutional, policy and strategic recommendations were made and cover interagency coordination, land reclamation, BD policy, legislation for BD and comprehensive strategic planning.
- → Delegating the highlighted gaps in the following research areas for follow-up: water quality, invasive species, prospecting, impact on BD, etc.

The positive impact and momentum created by activities and deliverables/key tools produced needs to be built upon with strengthening initiatives started and implementing and or supporting policy actions; strategic planning as it regards the small and medium mining sector. For instance, integrated planning with other sectors, such as forestry, agriculture and initiatives, such as REDD+ and PES; continued training and capacity building at the institutional level for both state and non-state entities; introduction of new methods, techniques and technologies in gold mining, especially at the small scale and perhaps with piloted exercises. Follow-up can help to establish the linkages with the overarching GSDS, the emerging oil and gas sector and the strategic plan of the MNR. This project's close follow up is pointing to a transformational impact on the gold mining sector and development. This is in particular with regards to small and medium scale mining industry sustainability and for its contribution as a alternative pathway for individuals to advance in their industry, and has the potential as a working model for HFLD and tropical forest countries with similar issues.

The project might be continued in the spirit of deepening inter sectoral cooperation with the EPA as it grows in its role as lead on environmental monitoring and compliance.

To support sustainable mining and mainstreaming BD in the small and medium gold mining, the following are concrete things that government can do to help the miners/sector be more sustainable:

(1) set up a financial mechanism to help miners change parties and develop more sustainable practices,

(2) offer miners needed help with prospecting through an investment in geology and prospecting since mining is still very ad hoc. In this regard there are opportunities for undertaking cooperation with countries in the region dealing with similar problems including Chile

(3) invest in on water guidance (fresh water in particular) to preserve the small and medium scale mining

(4) continue prioritization on BD legislation and upgrading the current EPA and mining school. The mining school board restructuring report should be implemented and the curricula be further implemented through the GMCC network. Follow up work should be done on the tools and deliverables including the legal review, public sector education, and education delivery with accompanying budget and finance. More work can be done on strategic communications and outreach to neighbours for South-South Cooperation.

Project management can consolidate the deliverables and tools developed for follow up by the respective departments and agencies. The evaluator recommends that an exit strategy is prepared for presentation and discussed before the end of December so that government handover is completed.

Annexes

ANNEX 1: TOR

UD

UNITED NATIONS DEVELOPMENT PROGRAMME Terms of Reference

I. Job Details and Scope of Work Job title: Consultant - Terminal Evaluation of the Enhancing Biodiversity Protection through Strengthened Monitoring, Enforcement and Uptake of Environmental Regulations in Guyana's Gold Mining Sector (PIMS 5384.)

Supervisor:Deputy Resident RepresentativeType of contract:ICDuration:22 daysDuty Station:Guyana

II. Introduction

In accordance with UNDP and GEF M&E policies and procedures, all full and medium-sized UNDP support GEF financed projects are required to undergo a terminal evaluation upon completion of implementation. These terms of reference (TOR) sets out the expectations for a Terminal Evaluation (TE) of the Enhancing Biodiversity Protection through Strengthened Monitoring, Enforcement and Uptake of Environmental Regulations in Guyana's Gold Mining Sector (PIMS 5384.)

The essentials of the project to be evaluated are as follows:

Project Summary Table

Project	Enhan	Enhancing Biodiversity Protection through Strengthened Monitoring, Enforcement and Uptake of							
Title:	Enviro	nmental Regulation	nental Regulations in Guyana's Gold Mining Sector						
GEF Project ID:		F946		<u>at endorsement</u>	at completion				
		5840		<u>(Million US\$)</u>	<u>(Million US\$)</u>				
UNDP Pro ID:	oject	00088312	GEF financing:	USD 803,653					
Country:		Guyana	IA/EA own:	USD 88,000					
Region:		LAC	Government:	3, 300, 617					
Focal Are	a:	Biodiversity	Other:	USD 150,000					
FA Object (OP/SP):	tives,	Mainstream biodiversity conservation and sustainable use into production landscapes, seascapes and sectors.	Total co-financing:	USD3, 538, 617					

Executing Agency:	Environmental Protection Agency (EPA) of the Ministry of Natural Resources	Total Project Cost:	USD 4	1,342,270	
Other Partners		ProDoc Signature (date project be):	22/08/2014
involved:	Nil	(Operational) Closing Date:	P 2	roposed: 1/08/2017	Actual: NA at this time

II. OBJECTIVE AND SCOPE

Gold mining is a key sector in Guyana's economy and plays an important role in the country's socio-economic development. However, at the same time it is the main driver of deforestation and forest degradation and associated biodiversity (BD) loss. Inadequate management of tailings, little reclamation of mined-out areas, and various other practices are posing increasing threats to the extremely high levels of biodiversity and endemism found in Guyana. Various barriers currently hamper the mainstreaming of BD in the gold mining sector, including 1) Non-compliance with mining-related environmental regulations and illegal mining; 2) Insufficient personnel and institutional capacity to enforce the regulatory framework; 3) Insufficient capacity to implement the environmental regulations and codes of practices among miners. This Medium-Sized Project (MSP) has been developed to address these three critical barriers. The project objective is to strengthen monitoring and implementation of biodiversity-friendly practices in Guyana's gold mining sector to reduce biodiversity loss and maintain ecosystem functionality for the benefit of all Guyanese. This will be achieved through the following two Outcomes: 1) Enabling environment for monitoring and enforcement of environmental regulations and codes of practice strengthened; and 2) Enhanced capacities for uptake of mining practices that promote biodiversity conservation. These Outcomes will be achieved by strengthening EPA's role in oversight of mining practices, enhancing inter-institutional cooperation, increasing satellite tracking of mining activities and building field officer capacity in monitoring and enforcement and BD issues. In addition, the project will integrate BD in the Mining School programmes and provide user-friendly material and seminars to enable miners to understand the regulatory framework in place and best practices to improve BD conservation in gold mining. The MSP will contribute to GEF Biodiversity Focal Area for GEF 5, Objective 2: Mainstream biodiversity conservation and sustainable use into production landscapes, seascapes and sectors, specifically Outcome 2.1: "Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation".

The purpose of this evaluation is to assess the effectiveness and contribution of the project to "Enhancing Biodiversity Protection through Strengthened Monitoring, Enforcement and Uptake of Environmental Regulations in Guyana's Gold Mining Sector". This evaluation is expected to pronounce on the extent to which the main institutional actors involved in the project, that is the Ministry of Natural Resources, Environmental Protection Agency, and the Guyana Geology and Mines Commission are now better able to plan, coordinate and respond to biodiversity conservation needs in gold mining as a result of the UNDP support. Further, it will explore the extent to which this project has contributed to the achievement of Country Programme 2012 – 2016 Outcome, that is, "improved functional capacity of key natural resources and disaster risk management institutions."

Considering that this evaluation comes at the beginning of the new UNDP County Programme, it is intended to substantively contribute both retrospective and prospective analysis that can inform the programmatic linkages the UNDP Guyana Country Office can make in deciding on its involvement and support for this area of building national capacity to address the threats of mining to biodiversity conservation. In this context, it is expected that practical options will be presented based on this assessment of current national capacity and what future investments are needed to sustain and solidify investments made by UNDP and the Government of Guyana.

The TE will be conducted according to the guidance, rules and procedures established by UNDP and GEF as reflected in the UNDP Evaluation Guidance for GEF Financed Projects.

The objectives of the evaluation are to assess the achievement of project results, and to draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming.

III. EVALUATION APPROACH AND METHOD

An overall approach and method¹ for conducting project terminal evaluations of UNDP supported GEF financed projects has developed over time. The evaluator is expected to frame the evaluation effort using the criteria of **relevance**, **effectiveness, efficiency, sustainability, and impact**, as defined and explained in the <u>UNDP Guidance for Conducting</u> Terminal Evaluations of UNDP-supported, GEF-financed Projects (2012) <u>http://web.undp.org/evaluation/documents/guidance/GEF/UNDP-GEF-TE-Guide.pdf</u> A set of questions covering each of these criteria have been drafted and are included with this TOR (see <u>Annex C</u>) The evaluator is expected to amend, complete and submit this matrix as part of an evaluation inception report, and shall include it as an annex to the final report.

The evaluation must provide evidence-based information that is credible, reliable and useful. The evaluator is expected to follow a participatory and consultative approach ensuring close engagement with government counterparts, in particular the GEF operational focal point, UNDP Country Office, project team, UNDP GEF Regional Technical Adviser based in the region and key stakeholders. The evaluator is expected to conduct a field mission to Regions 1, 7, 8, 9 including the following project sites Marudi, Mahdia, Puruni, Bartica and Port Kaituma. Interviews will be held with the following organizations and individuals at a minimum: Ministry of Natural Resources, Environmental Protection Agency, Guyana Geology and Mines Commission, Guyana Forestry Commission, Guyana Lands and Surveys Commission, Department of Environment, Protected Areas Commission, Ministry of Indigenous People's Affairs, WWF Guyana, Guyana Gold and Diamond Miners Association, Guyana Women Miners Organisation and UNDP.

The evaluator will review all relevant sources of information, such as the Project Document, project reports – including, project budget revisions, progress reports, GEF focal area tracking tools, project files, national strategic and legal documents, and any other materials that the evaluator considers useful for this evidence-based assessment. A list of documents that the project team will provide to the evaluator for review is included in <u>Annex B</u> of this Terms of Reference.

IV. EVALUATION CRITERIA & RATINGS

An assessment of project performance will be carried out, based against expectations set out in the Project Logical Framework/Results Framework (see <u>Annex A</u>), which provides performance and impact indicators for project implementation along with their corresponding means of verification. The evaluation will at a minimum cover the criteria of: **relevance, effectiveness, efficiency, sustainability and impact.** Ratings must be provided on the following performance criteria. The completed table must be included in the evaluation executive summary. The obligatory rating scales are included in <u>Annex D</u>.

Evaluation Ratings:					
1. Monitoring and Evaluation	rating	2. IA & EA Execution	rating		
M&E design at entry		Quality of UNDP Implementation – Implementing Agency (IA)			
M&E Plan Implementation		Quality of Execution - Executing Agency (EA)			
Overall quality of M&E		Overall quality of Implementation / Execution			

¹ For additional information on methods, see the <u>Handbook on Planning</u>, <u>Monitoring and Evaluating for</u> <u>Development Results</u>, Chapter 7, pg. 163

3. Assessment of Outcomes	rating	4. Sustainability	rating
Relevance		Financial resources	
Effectiveness		Socio-political	
Efficiency		Institutional framework and governance	
Overall Project Outcome Rating		Environmental	
		Overall likelihood of sustainability	

V. PROJECT FINANCE / COFINANCE

The Evaluation will assess the key financial aspects of the project, including the extent of co-financing planned and realized. Project cost and funding data will be required, including annual expenditures. Variances between planned and actual expenditures will need to be assessed and explained. Results from recent financial audits, as available, should be taken into consideration. The evaluator(s) will receive assistance from the Country Office (CO) and Project Team to obtain financial data in order to complete the co-financing table below, which will be included in the terminal evaluation report.

Co-financing (type/source)	UNDP own financing (mill, US\$)		Government (mill, US\$)		Partner Agency (mill_US\$)		Total (mill, US\$)	
(-,,-,,	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Grants								
Loans/Concessions								
 In-kind support 								
• Other								
Totals								

VI. MAINSTREAMING

UNDP supported GEF financed projects are key components in UNDP country programming, as well as regional and global programmes. The evaluation will assess the extent to which the project was successfully mainstreamed with other UNDP priorities, including poverty alleviation, improved governance, the prevention and recovery from natural disasters, and gender.

VII. IMPACT

The evaluator(s) will assess the extent to which the project is achieving impacts or progressing towards the achievement of impacts. Key findings that should be brought out in the evaluation include whether the project has demonstrated: a) verifiable improvements in ecological status, b) verifiable reductions in stress on ecological systems, and/or c) demonstrated progress towards these impact achievements.²

VII. CONCLUSIONS, RECOMMENDATIONS & LESSONS

The evaluation report must include a chapter providing a set of conclusions, recommendations and lessons.

² A useful tool for gauging progress to impact is the Review of Outcomes to Impacts (ROtI) method developed by the GEF Evaluation Office: <u>ROTI Handbook 2009</u>

VIII. IMPLEMENTATION ARRANGEMENTS

The principal responsibility for managing this evaluation resides with the Deputy Resident Representative, UNDP CO in Guyana. The UNDP CO will contract the evaluator and ensure the timely provision of per diems and travel arrangements within the country for the evaluator. The Project Team will be responsible for liaising with the Evaluator to set up stakeholder interviews, arrange field visits, coordinate with the Government, etc.

IX. EVALUATION TIMEFRAME

The total duration of the evaluation will be 22 working days over a time period of 10 weeks according to the following plan:

Activity	Timing	Completion Date
Preparation	5 days	July 3 – 7
Evaluation Mission	<i>10</i> days	July 24 – August 4
Draft Evaluation Report	5 days	August 7 – 11
Final Report	2 days	September 4 – 5

X. EVALUATION DELIVERABLES

The evaluator is expected to deliver the following:

Deliverable	Content	Timing	Responsibilities
1. Inception	Evaluator provides	No later than 2 weeks before	Evaluator submits to UNDP CO
Report	clarifications on timing and method	the evaluation mission: July 7	
2. Presentation	Initial Findings	End of evaluation mission: August 4	To project management, UNDP CO
3. Draft Final	Full report, (per annexed	Within 3 weeks of the	Sent to CO, reviewed by RTA, PCU,
Report	template) with annexes	evaluation mission: <i>August</i> 11	GEF OFPs
4. Final Report*	Revised report	Within 1 week of receiving UNDP comments on draft: September 5	Sent to CO for uploading to UNDP ERC.

*When submitting the final evaluation report, the evaluator is required also to provide an 'audit trail', detailing how all receiver comments have (and have not) been addressed in the final evaluation report. See <u>Annex H</u> for an audit trail template.

XI.	XI. Payment Schedule of Deliverables						
1. 2. 3.	Deliverable 1 Deliverable 2 Deliverable 3	Week 1 0% At submission and approval of inception report Week 5 0% At presentation of initial findings Week 6 50% Following submission and approval of the 1 st draft terminal evaluation					
4.	report Deliverable 4 of the final tern	Week 11 50% Following submission and approval (UNDP-CO and UNDP RTA) ninal evaluation report					

XII. TEAM COMPOSITION, QUALIFICATIONS, SKILLS AND EXPERIENCE

The evaluation team will be composed of 1 international evaluator. The consultant shall have prior experience in evaluating similar projects. Experience with GEF financed projects is an advantage. The evaluator selected should not have participated in the project preparation and/or implementation and should not have conflict of interest with project related activities.

The evaluator must present the following qualifications:

- 1. Minimum 7 years of relevant professional experience;
- 2. Knowledge of and/or experience with UNDP and/or GEF;
- 3. Previous experience with results-based monitoring and evaluation methodologies: at least 5 years' experience in conducting project level evaluations as sole evaluator or team leader in similar or related fields; or conducted at least 5 recent project evaluations as sole evaluator or team leader in similar or related fields.
- 4. Technical knowledge in the targeted focal area(s): sustainable development.
- 5. A minimum of a Master's degree in Biology, Natural Resources Management or related fields, Sustainable Development, Environmental Science or related fields
- 6. Experience and knowledge of biodiversity conservation and mining would be a strong asset

XIII. EVALUATOR ETHICS

Evaluation consultants will be held to the highest ethical standards and are required to sign a Code of Conduct (Annex E) upon acceptance of the assignment. UNDP evaluations are conducted in accordance with the principles outlined in the <u>UNEG 'Ethical Guidelines for Evaluations'.</u>

XIV. APPLICATION PROCESS

Applicants will be selected from rosters by June 30, 2017. Individual consultants are invited to submit applications together with their CV for this position. The application should contain a current and complete C.V. in English with indication of the e-mail and phone contact. Shortlisted candidates will be requested to submit a price offer indicating the total cost of the assignment (including daily fee, per diem and travel costs). Shortlisted candidates will also be subject to an interview.

UNDP applies a fair and transparent selection process that will take into account the competencies/skills of the applicants as well as their financial proposals - the combined scoring method will be applied. Qualified women and members of social minorities are encouraged to apply.

ANNEX A: PROJECT LOGICAL FRAMEWORK

Project Strategy		Objectively Verifiable Indicators					
	Indicator	Baseline	Target	Means of Verification	Risks and Assumptions		
Project Objective: Strengthen monitoring and implementation of biodiversity-friendly practices in Guyana's gold mining sector to reduce biodiversity loss and maintain ecosystem functionality for the benefit of all Guyanese.	Level of capacity of GGMC and EPA to enforce mining-related environmental regulations and codes of practice for small and medium- scale gold mining (as measured by UNDP Capacity Scorecard- Indicator 10- Existence of an adequate environmental policy and regulatory framework)	Score of 1 on Indicator 10 of UNDP Capacity Development Scorecard	A minimum score of 2 on Indicator 10 of UNDP Capacity Development Scorecard	Application of UNDP Capacity Development Scorecard (Indicator 10)	Political support for the strengthening of EPA's oversight role is demonstrated through the approval of monitoring and enforcement regulations for EPA GGMC remains supportive of working together with EPA on joint oversight of the gold mining sector		
	Area in ha monitored for compliance with existing mining-related environmental regulations through satellite tracking and field inspections	Less than 10% of area under small and medium- scale mining regularly monitored using satellite tracking and field inspections (number of ha to be confirmed at project outset)	Area monitored for compliance increased to at least 50% over the baseline (number of ha to be confirmed at project outset).	Satellite image interpretation by agencies, monitoring reports of agencies	Consequences for non- compliance among miners are enforced to facilitate uptake of good mining practices		
Outcome 1: Enabling environment for enforcement of mining- related environmental regulations strengthened	Number of actions taken by EPA (such as issuance of enforcement notices, prohibition notices, laying of charges or mediation proceedings) in the areas identified through the project as high priority for monitoring and enforcement in small and medium-scale gold mining	Number of enforcement and prohibition notices has almost nil for small and medium scale mining. Ad- hoc monitoring or compliance checks in response to complaints amount to approximately 4-5 per year.	Increase in number of compliance and enforcement actions taken by EPA (such as issuance of enforcement notices, prohibition notices, laying of charges or mediation proceedings) by at least 50% over 2013/2014 baseline (target of at least 7 per year)	EPA records	Appropriate organizational structure, staffing and resources are in place within EPA to take on greater monitoring and enforcement role Different agencies under MNRE willing to collaborate on monitoring and enforcement in small and medium-scale gold mining sector		

				Satellite images at appropriate scales to monitor small and medium-scale gold mining activities continue to be available
Level of coordination capacity among institutions and non-state actors for enforcement of mining- related environmental practices	Baseline will be determined through a survey administered in the first 6 months of project	Target will be defined in first 6 months of project	Surveys at project outset and completion to assess inter- institutional coordination capacity and to assess coordination with non-state actors such as NGOs and CBOs through enforcement network	
% of total area identified as high priority for monitoring and enforcement that is being monitored using satellite tracking ³	Baseline to be determined once high priority areas for monitoring and enforcement are established during first 6 months of project implementation	At least 75% of total high priority area is being monitored using satellite tracking	Reports from GIS Unit of MNRE and from EPA about their monitoring activities	

Outputs:

Output 1.1: Strengthened EPA facilitates oversight of mining operations and increases environmental protection through greater capacity of staff to carry out monitoring and enforcement and prioritize actions;

Output 1.2: Inter-institutional coordination mechanisms and an enforcement network enhance collaboration in monitoring and enforcement;

³ The high priority areas for monitoring and enforcement will be identified as part of Output 1.1.

Output 1.3: GGMC and GGDMA officers support mainstreaming of BD in mining sector through increased enforcement of regulations and codes of practice and strengthened capacity on BD;

Output 1.4: Satellite tracking of mining activities, and analysis and	l reporting of findings from satellite images l	<i>by GGMC and EPA increase oversight of non-compliance with</i>
regulations and illegal mining.		

Outcome 2:	# of courses or seminars	1 baseline course	At least 5 courses or seminars	Mining School annual	Funding for Mining School
Enhanced capacities for	implemented through Mining	adequately incorporates	implemented through Mining	reports	short courses and/or full time
uptake of practices that	School that integrate BD	the topic of BD (Codes	School that adequately		programme is secured.
promote biodiversity	considerations	of practice for small	incorporate BD considerations		Legislation to mandate
conservation		and medium-scale	(Codes of practice for small and		attendance of mining
		miners)	medium-scale miners; mine		operating managers at
			reclamation; environmental		Mining School is passed.
			impact management; health and		Small and medium-scale gold
			safety and placer mine sites; and		miners are sufficiently
			introductory level training of		motivated to participate in
			prospectors for the extractive		the seminars on
			industry).		environmental regulations
	% of miners observed by field	Baseline to be	An increase of at least 30% over	GGMC and EPA	and codes of practice and on
	officers who are complying with	determined once project	the baseline of small and	monitoring reports	biodiversity in gold mining
	the environmental regulations and	identifies high priority	medium scale miners in areas		and are receptive to the
	codes of practice in areas	areas for monitoring and	identified as high priority for		material produced.
	identified as high priority for	enforcement	monitoring and enforcement		
	monitoring and enforcement		comply with the environmental		
	(based on checklist)		regulations and codes of practice		
			(the baseline of high priority		
			areas will be established at		
			project outset and the target will		
			be confirmed at project outset).		
	% of small and medium-scale	Baseline 0	75% of small and medium-scale	Surveys/ evaluations	
	gold miners participating in		gold miners who participate in	after project seminars	
	project seminars who report an		project seminars report an	and UNDP Capacity	
	increased awareness of mining-		increased awareness of mining-	Development Scorecard	
	related regulations and		related regulations and	Indicator 4	
	biodiversity issues		biodiversity issues.		

Outputs: Output 2.1: Mining School programmes integrate biodiversity considerations; Output 2.2: User- friendly material and capacity building facilitate uptake of BD-friendly practices by miners.

ANNEX B: LIST OF DOCUMENTS TO BE REVIEWED BY THE EVALUATORS

- UNDP 2014-2017 Strategic Plan
- UNDAF 2012 2016
- UNMSDF 2017 2021
- UNDP Country Programme Document (2012 2016 and 2017 2021)
- Country Programme Action Plan (2012 2016)
- Project Document
- Annual Work Plans (AWPs)
- Annual and Quarterly Progress Reports
- Field Mission Reports
- List of mining areas and project sites
- List and contact details for project staff, key project stakeholders, including Project Boards, and other partners to be consulted
- GEF focal area strategic programme objectives
- Training materials and other products produced by the project.

ANNEX C: EVALUATION QUESTIONS

This Evaluation Criteria Matrix must be fully completed/amended by the consultant and included in the TE inception report and as an Annex to the TE report.

Evaluative Criteria Questions	Indicators	Sources	Methodology					
Relevance: How does the project relate to the main objectives of the GEF focal area, and to the environment and development priorities at the local, regional and national level What is the extent to which biodiversity is relevant to national development priorities? How relevant is the project design in addressing the outputs?								
•	•	•	•					
•	•	•	•					

•	•	•	•						
Effectiveness: To what extent have the expected outcomes and objectives of t Has there been progress made towards the achievement of the intended outp How have UNDP's practices, policies, decisions, constraints and capabilities af To what extent have project outputs contributed to achieving UNDP Country F Is UNDP's / EPA's partnership strategy appropriate, effective and viable for the	the project been achieved? outs? fected the achievement of the outputs? Programme (2012-2016) Outcome 3 e achievement of the outputs?								
•	• • •								
•	•	•	•						
•		•	•						
Efficiency: Was the project implemented efficiently, in-line with international and national norms and standards? Has UNDP's/EPA's strategy in producing the outputs been efficient and cost-effective? How efficient has been the roles, engagement and coordination among various stakeholders in implementing the project? Has there been any duplication of efforts among UNDP's interventions and interventions delivered by other organizations in contributing to the outputs? What is the assessment of the capacity and institutional arrangements for the implementation of the project?									
•	•	•	•						
•	•	•	•						
•	•	•	•						
Sustainability: To what extent are there financial, institutional, social-e	conomic, and/or environmental risks to susta	aining long-term project resu	ults?						
What are the underlying factors beyond UNDP's control that influence to outputs)?	the outputs (including the opportunities and	threats affecting the achieve	ement of the						
What is the extent to which UNDP/EPA established mechanisms ensur	re sustainability of the outputs?								
•	•	•	•						
•	•	•	•						
•	•	•	•						
Impact: Are there indications that the project has contributed to, or ena	bled progress toward, reduced environment	al stress and/or improved e	cological status?						
•	•	•	•						
•	•	•	•						

ANNEX D: RATING SCALES

Ratings for Effectiveness, Efficiency, Overall Project Outcome Rating, M&E, IA & EA Execution	Sustainability ratings:	Relevance ratings
 6. Highly Satisfactory (HS): no shortcomings 5. Satisfactory (S): minor shortcomings 4. Moderately Satisfactory (MS): moderate shortcomings 3. Moderately Unsatisfactory (MU): significant shortcomings 2. Unsatisfactory (U): major shortcomings 1. Highly Unsatisfactory (HU): severe shortcomings 	 4. Likely (L): negligible risks to sustainability 3. Moderately Likely (ML): moderate risks 2. Moderately Unlikely (MU): significant risks 1. Unlikely (U): severe risks 	2. Relevant (R) 1. Not relevant (NR)
Additional ratings where relevant: Not Applicable (N/A) Unable to Assess (U/A)		

Evaluators:

- 1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
- 2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
- 3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
- 4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
- 5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation

might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.

- 6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study imitations, findings and recommendations.
- 7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.

Evaluation Consultant Agreement Form ⁴						
Agreement to abide by the Code of Conduct for Evaluation in the UN System						
Name of Consultant:						
Name of Consultancy Organization (where relevant):						
I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.						
Signed at <i>place</i> on <i>date</i>						
Signature:						

ANNEX F: EVALUATION REPORT OUTLINE

i. Opening page:

- Title of UNDP supported GEF financed project
- UNDP and GEF project ID#s
- Evaluation time frame and date of evaluation report
- Region and countries included in the project
- GEF Operational Program/Strategic Program
- Implementing Partner and other project partners
- Evaluation team members
- Acknowledgements

⁴www.unevaluation.org/unegcodeofconduct

- ii. Executive Summary
 - Project Summary Table
 - Project Description (brief)
 - Evaluation Rating Table
 - Summary of conclusions, recommendations and lessons
- iii. Acronyms and Abbreviations
 - (See: UNDP Editorial Manual⁵)
- **1.** Introduction
 - Purpose of the evaluation
 - Scope & Methodology
 - Structure of the evaluation report
- 2. Project description and development context
 - Project start and duration
 - Problems that the project sought to address
 - Immediate and development objectives of the project
 - Baseline Indicators established
 - Main stakeholders
 - Expected Results
- 3. Findings
 - (In addition to a descriptive assessment, all criteria marked with (*) must be rated⁶)
- **3.1** Project Design / Formulation
 - Analysis of LFA/Results Framework (Project logic /strategy; Indicators)
 - Assumptions and Risks
 - Lessons from other relevant projects (e.g., same focal area) incorporated into project design
 - Planned stakeholder participation
 - Replication approach
 - UNDP comparative advantage
 - Linkages between project and other interventions within the sector
 - Management arrangements
- 3.2 Project Implementation
 - Adaptive management (changes to the project design and project outputs during implementation)

⁵ UNDP Style Manual, Office of Communications, Partnerships Bureau, updated November 2008 ⁶ See Annex D for rating scales.

- Partnership arrangements (with relevant stakeholders involved in the country/region)
- Feedback from M&E activities used for adaptive management
- Project Finance
- Monitoring and evaluation: design at entry (*), implementation (*), and overall assessment
 (*)
- Implementing Agency (UNDP) execution (*) and Executing Agency execution (*), overall project implementation/ execution (*), coordination, and operational issues
- 3.3 Project Results
 - Overall results (attainment of objectives) (*)
 - Relevance (*)
 - Effectiveness (*)
 - Efficiency (*)
 - Country ownership
 - Mainstreaming
 - Sustainability: financial resources (*), socio-economic (*), institutional framework and governance (*), environmental (*), and overall likelihood (*)
 - Impact
- 4. Conclusions, Recommendations & Lessons
 - Corrective actions for the design, implementation, monitoring and evaluation of the project
 - Actions to follow up or reinforce initial benefits from the project
 - Proposals for future directions underlining main objectives
 - Best and worst practices in addressing issues relating to relevance, performance and success
- 5. Annexes
 - ToR
 - Itinerary
 - List of persons interviewed
 - Summary of field visits
 - List of documents reviewed
 - Evaluation Question Matrix
 - Questionnaire used and summary of results
 - Evaluation Consultant Agreement Form
 - Report Clearance Form
 - Annexed in a separate file: TE audit trail
 - Annexed in a separate file: Terminal GEF Tracking Tool, if applicable

ANNEX G: EVALUATION REPORT CLEARANCE FORM

Evaluation Report Reviewed and Cleared by		
UNDP Country Office		
Name:		-
Signature:	Date:	

ANNEX H: TE REPORT AUDIT TRAIL

The following is a template for the evaluator to show how the received comments on the draft TE report have (or have not) been incorporated into the final TE report. This audit trail should be included as an annex in the final TE report.

To the comments received on (*date*) from the Terminal Evaluation of (*project name*) (UNDP *PIMS #*)

The following comments were provided in track changes to the draft Terminal Evaluation report; they are referenced by institution ("Author" column) and track change comment number ("#" column):

Author	#	Para No./ comment location	Comment/Feedback on the draft TE report	TE team response and actions taken

ANNEX 2: LIST OF PROJECT CONSULTANCIES

CONSULTANCIES

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- Satellite Image Interpretation for GGMC and EPA (Undertaken by Dr. Thomas Ballatore)
 - Deliverable 1. Report Outlining Capacity Building Activities
 - Deliverable 2. Report on GIS integration
 - Deliverable 3. Feasibility of Improving Remote Sensing Efforts
- Capacity Building of EPA Officers (Undertaken by Environmental Management Consultants)
 - Deliverable 1. Inception Report with finalized methodology and detailed work plan
 - Deliverable 2. Training Materials (PPT Presentations, Handouts, Participant's Manual, Monitoring Checklist, Evaluation Forms)
 - Deliverable 3. Training Report
- Prioritization of Hotspots for Monitoring & Enforcement of Gold Mining Activities in Guyana (Undertaken by Development Policy and Management Consultants)
 - Inception Report
 - Deliverable 1. Prioritization of Hotspots Report
 - Deliverable 2. Stakeholder Consultation Report
- Support to Strengthening of Monitoring & Enforcement of Mining Regulations (Undertaken by Environmental Management Consultants)
 - Inception Report Support to Strengthening of Monitoring & Enforcement Of Mining Regulations
 - Deliverable 1. Report on operational mechanism of the multi-stakeholder monitoring network
 - Deliverable 2. Report on Review of Legislative Framework, Institutional Mandate & Roles & Responsibilities for BD Monitoring
 - Deliverable 3. Report on Orientation & Information Session with GGMC, EPA & GFC
 - Deliverable 4. Report from Information Session with CBOs and NGOs
- Support to Uptake of BD Friendly Practices by Miners (Undertaken by the University of Guyana)
 - Inception Report
 - Deliverable 1. User-friendly Summaries of the Mining Codes of Practice in English and Portuguese languages.
 - Deliverable 2. 5 Jingles, 3 Infomercials, designs of 5 Posters and 3 Billboards.

- Deliverable 3. Reports of Seminars for Mines Officers and Miners.
- Support to Enhancing the Capacities of the Guyana Mining School & Training Centre Inc. (Undertaken by the University of Guyana)
 - Inception Report

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- Deliverable 1. Draft Analytical Report on the structure, function and effectiveness of the Mining School in keeping with its mandate and the policy directions of the MNR and needs of the Medium Size Project.
- Deliverable 2. Report on "Training of Trainers" programme of the Mining School on the environmental regulations in place, best practices, and more generally on environmental and BD considerations as they relate to mining.
- Deliverable 3. Final Reports with recommendations on the reorganization of the Mining School, updating of the Mining School curriculum, training module, and report on training.
- Legal Review to Support Monitoring and Enforcement of Mining Regulations (Undertaken by Environmental Management Consultants)
 - Deliverable 1. Report on Draft Regulations including areas in support of strengthening, monitoring and enforcement in the Mining Sector.
 - Deliverable 2. A Report on the review of the current legislative framework and institutional mandates of the GGMC and GFC including: (awaiting this deliverable)
 - The extent to which the agencies take on board BD as part of their monitoring and enforcement activities,
 - Recommendations for establishing, improving and enhancing existing mechanisms.
- Assessment of the Performance of the Mainstreaming BD in the Mining Sector Project (Undertaken by Dr. Paulette Bynoe)
- Deliverable 1. Inception Report
- Deliverable 2. Progress Report on Project Objectives, Indicators and Social Change.
- Deliverable 3. Final Assessment Report on Project Objectives, Indicators and Social Change.
- Terminal Evaluation of Mainstreaming BD in the Mining Sector Project (Undertaken by Ms. Stephanie Hodge)

ANNEX 3: ANALYSIS OF CAPACITY BUILDING AND PROJECT TRAINING ACTIVITIES

180 Males trained

138 Females trained

Supp	Support the Mining Learning									
	Description	Agency	Date/Duration	Place	Brief Description	Participants (M/F)	Participants Selection Criteria	Certification		
1	Training in Satellite Image Interpretation.	Environmental Protection Agency (EPA) Guyana Geology and Mines Commission (GGMC) Guyana Forestry Commission (GFC) Guyana Lands and Surveys Commission (GL&SC) Geospatial Information Management Unit (GIMU) United Nations Development Programmed (UNDP)	October 19 - 24, 2015. October 26 – 30, 2015.	Guyana Forestry Commission Multi-Centre	Training of Officers in satellite tracking of mining activities and analysis and reporting of findings from satellite images to increase oversight of non-compliance with regulations and illegal mining. The training was carried out by the Lake Basin Action Network (LBAN), contracted by the Lake Basin Action Network (LBAN), contracted by the United Nations Development Programme and led by the LBAN Director Dr. Thomas J. Ballatore with support from other LBAN Advisors including Ms. Sibel Villalobos, Dr. Shane Bradt, Dr. Lydia Olaka, Mr. John Diisi, and Mr. Samuel Chiasa.	10 Males 21 Females	Technical Officers from EPA, GGMC, GFC, GL&SC and GIMU	Yes.		
2	Capacity Building of EPA Field Officers.	Environmental Protection Agency (EPA)	April 28 – 30, 2016.	Grand Coastal Hotel	The principal objective of the capacity building training was to improve the officers' knowledge and understanding of the impacts of gold mining activities on the environment, the Mining and Environment	10 Males 14 Females	Field officers from the technical divisions of the EPA including the Education,	Yes.		

					Laws and Regulations and mining Codes of Practice to be better prepared in overseeing the gold mining sector and conducting monitoring exercises. Training was carried out by the Environmental Management Consultants (EMC).		Information & Training Division	
3	Orientation and Information Session for Officers in Support to Strengthening of Monitoring and Enforcement of Mining Regulations	Environmental Protection Agency (EPA) Guyana Geology and Mines Commission (GGMC) Guyana Forestry Commission (GFC) Ministry of Natural Resources (MNR)	March 24, 2017.	Grand Coastal Hotel	The principal objective of the forum is to present and discuss the findings of the review of the legislative and institutional mandates of the key Agencies (EPA, GGMC and GFC) and the extent to which BD is mainstreamed in monitoring and enforcement by these Agencies. Training was carried out by the Environmental Management Consultants (EMC).	18 Males 16 Females	Senior Officers from the EPA, GGMC and Compliance Division of MNR.	No.
4	Orientation and Information Session of Representatives of NGOs and CBOs	Iwokrama International Centre Conservation International Guyana University of Guyana	April 06, 2017.	GGMC Boardroom	The objective of the forum was to provide an overview of the policy, regulatory and institutional framework for BD in Guyana and to present and discuss recommendations for mainstreaming BD in the mining sector. Forum was executed by the Environmental Management Consultants (EMC).	4 Males 5 Females	Non-Governmental Organizations and Community Based Organizations as relating to BD.	No.

5	Stakeholder Engagement Workshop on the Guyana Mining School & Training Centre Inc. (GMSTC)	ConservationInternationalGuyanaGuyanaEnvironmentalProtectionAgencyGuyana Gold and DiamondGuyanaGology and MinesGuyanaGeology and MinesCommissionGuyana Mining School andGuyanaWomenMinistryofIndigenousAffairsMinistryofNaturalResourcesMinistry of Social ProtectionProtectedAreasCommissionUnitedNationsDevelopment ProgrammeUniversity of GuyanaWorld Wildlife Fund	February 01, 2017.	Ocean View International Hotel.	The Stakeholder Engagement Workshop sought the presence of the various institutional stakeholders involved in the Mainstreaming BD in the Mining Sector Project. This workshop had the following objectives: • To create an awareness of the current situation with regard to the Guyana Mining School and Training Centre Inc. and to present a re-organized structure. • To present the findings of the curriculum audit and present recommendations. • To provide a forum that facilitates stakeholders' feedback on Objectives 1 and 2. • Forum was executed by the Jniversity of Guyana (UG).	18 Males 15 Females	Various stakeholders involved in the capacity building of the Guyana Mining School and Training Centre Inc. project	No.
6	Stakeholder Engagement Workshop on Support to Uptake of BD Friendly Practices by Miners.	Conservation International Guyana Environmental Protection Agency Guyana Gold and Diamond Miners Association	February 10, 2017.	Ocean View International Hotel.	 The Stakeholder Engagement Workshop objectives were as follows: To present the draft jingles, infomercials, posters, billboards and the summaries of the Codes of Practice to stakeholders; 	10 Males 19 Females	Various stakeholders involved in the capacity building of the Guyana Mining School and Training Centre Inc. project.	No.

		Guyana Geology and Mines Commission Guyana Mining School and Training Centre Inc. Guyana Women Miners Organization Iwokrama International Centre Ministry of Natural Resources Ministry of the Presidency– Department of Environment Protected Areas Commission University of Guyana United Nations Development Programme			 To provide a forum for discussion on the communication products and summaries of the Codes of Practice. Forum was executed by the University of Guyana (UG). 			
7	Training of Trainers Workshop on the Guyana Mining School & Training Centre Inc. (GMSTC)	Guyana Gold and Diamond Miners Association Guyana Geology and Mines Commission Guyana Mining School and Training Centre Inc. Ministry of Natural Resources University of Guyana	March 27 and 28, 2017.	Ocean View International Hotel.	The Training of Trainers Workshop was conducted over the course of two (2) days. Its goal was to design and deliver "Training of Trainers" programme to the Mining School on the environmental regulations, best practices, and on environmental and BD considerations with regard to mining. Forum was executed by the University of Guyana (UG).	15 Males 7 Females	Trainers or prospective trainers from the Guyana Gold and Diamond Miners Association, Guyana Geology and Mines Commission, Guyana Mining School and Training Centre Inc., and Ministry of Natural Resources	No.

8	Training Seminar for miners and mines officers in Mahdia, Potaro, and Mining District 2.	Miners from Mahdia, Potaro, Mining District 2. Guyana Geology and Mines Commission	March 01, 2017.	Mahdia M Station.	lines	 The objectives of the workshop were: To create awareness and enhance knowledge of Mines Officers and miners with respect to the impact of mining on BD and the need for BD conservation. To educate Mines Officers and miners on ways in which BD conservation may be integrated in sustainable mining. To increase the awareness of Mines Officers and miners of the mining regulations and the Draft Codes of Practice. To introduce Mines Officers and miners to the draft jingles, infomercials, posters, billboards and the Summaries of the Draft Codes of Practice. Seminars were executed by the University of Guyana (UG). 	6 Males 5 Females	Gold Miners and Mines Officers from the Guyana Geology and Mines Commission.	No.
9	Training Seminar for miners and mines officers in Puruni, Mazaruni, and Mining District 3.	Miners from Puruni, Mazaruni, Mining District 3. Guyana Geology and Mines Commission	March 11, 2017.	Puruni M Station	lines	 The objectives of the workshop were: To create awareness and enhance knowledge of Mines Officers and miners with respect to the impact of mining on BD and the need for BD conservation. To educate Mines Officers and miners on ways in which BD conservation 	30 Males 9 Females	Gold Miners and Mines Officers from the Guyana Geology and Mines Commission.	No.

					 may be integrated in sustainable mining. To increase the awareness of Mines Officers and miners of the mining regulations and the Draft Codes of Practice. To introduce Mines Officers and miners to the draft jingles, infomercials, posters, billboards and the summaries of the Draft Codes of Practice. Seminars were executed by the University Of Guyana (UG). 			
10	Training Seminar for miners and mines officers in Bartica, Cuyuni, Mining District 4.	Miners from Bartica, Cuyuni, Mining District 4. Guyana Geology and Mines Commission	March 19, 2017.	Bartica Mines Station	 The objectives of the workshop were: To create awareness and enhance knowledge of Mines Officers and miners with respect to the impact of mining on BD and the need for BD conservation. To educate Mines Officers and miners on ways in which BD conservation may be integrated in sustainable mining. To increase the awareness of Mines Officers and miners of the mining regulations and the Draft Codes of Practice. To introduce Mines Officers and miners to the draft jingles, infomercials, posters, billboards and the summaries of the Draft Codes of Practice. 	10 Males 7 Females	Gold Miners and Mines Officers from the Guyana Geology and Mines Commission.	No.

					Seminars were executed by the University of Guyana (UG).			
11	Training Seminar for miners and mines officers in Port Kaituma, North West, Mining District 5.	Miners from Port Kaituma, North West, Mining District 5. Guyana Geology and Mines Commission	March 22, 2017.	Port Kaituma Mine Station	 The objectives of the workshop were: To create awareness and enhance knowledge of Mines Officers and miners with respect to the impact of mining on BD and the need for BD conservation. To educate Mines Officers and miners on ways in which BD conservation may be integrated in sustainable mining. To increase the awareness of Mines Officers and miners of the mining regulations and the Draft Codes of Practice. To introduce Mines Officers and miners to the draft jingles, infomercials, posters, billboards and the summaries of the Draft Codes of Practice. Seminars were executed by the University of Guyana (UG). 	15 Males 18 Females	Gold Miners and Mines Officers from the Guyana Geology and Mines Commission.	No.
12	Training Seminar for miners and mines officers in Marudi, Rupununi, Mining District 6.	Miners from Marudi, Rupununi, Mining District 6. Guyana Geology and Mines Commission	February 25, 2017.	Marudi Mine Station	 The objectives of the workshop were: To create awareness and enhance knowledge of Mines Officers and miners with respect to the impact of mining on BD and the need for BD conservation. 	34 Males 2 Females	Gold Miners and Mines Officers from the Guyana Geology and Mines Commission.	No.

		 To educate Mines Officers and miners on ways in which BD conservation may be integrated in sustainable mining. To increase the awareness of Mines Officers and miners of the mining regulations and the Draft Codes of Practice. To introduce Mines Officers and miners to the 		
		draft jingles, infomercials, posters, billboards and the summaries of the Draft Codes of Practice. Seminars were executed by the University of Guyana (UG).		

ANNEX 4: LOGFRAME INDICATORS REVIEW

Project Strategy				
	Indicator	Baseline	PM comments on assessment of the status of Activities - Any noteworthy or unintended results registered	Evaluator Comments
Project Objective:	Level of capacity of GGMC and EPA	Score of 1 on Indicator 10	The score is 2.	This project has been very effective for building
-------------------------------	--	----------------------------	---	--
Strengthen monitoring and	to enforce mining-related	of UNDP Capacity	,	capacity of key institutions involved in monitoring BD
implementation of BD-	environmental regulations and codes of	Development Scorecard	The Environmental Protection Act (No. 11 of	and the mining sector for environmental compliance.
friendly practices in	practice for small and medium-scale		1996) provides for the management,	
Guyana's gold mining	gold mining		conservation, protection and improvement of	In particular, work should be commended for the
sector to reduce BD loss			the environment, the prevention or control of	approach taken including the learning by doing i.e.
and maintain ecosystem	(as measured by UNDP Capacity		pollution, the assessment of the impact of	joint compliance between EPA and GGMC; the
functionality for the benefit	Scorecard- Indicator 10- Existence of		economic development on the environment,	establishment and support to the new cross sector joint
of all Guyanese.	an adequate environmental policy and		and the sustainable use of natural resources of	compliance unit at MNR((2016)), the new simplified and
	regulatory framework)		Guyana. The Environmental Protection Act	vetted codes of practice developed by GGMC, the
			has a number of accompanying regulations.	scoping of the cross sectoral legal ramifications for
			The legal framework for gold mining in	enhancing BD monitoring, the work on information
			Guyana is the Mining Act No. 20 of 1989 (The	management and notspots report using satellite
			Mining Act) together with its accompanying	imagery and the equipment support provided to mining
			regulations. Mining Regulations of 1973 and	monitoring
			Mining (Amendment) Regulations 2005.	monitoring.
			8	
			In 1997 the GGMC entered into a	
			Memorandum of Understanding (MoU) with	
			the EPA concerning cooperation and	
			collaboration between the two agencies.	
	Area in ha monitored for compliance	Less than 10% of area	Area (in ha) monitored for compliance with	This is varified however the baseline data was not
	with existing mining-related	under small and medium.	existing mining related environmental	accessed from the MRVS data since 2014. The baseline
	environmental regulations through	scale mining regularly	regulations through field inspections	for joint monitoring as is stated was zero (GGMC
	satellite tracking and field inspections	monitored using satellite	regulations unough neid inspections.	EPA GEC other stakeholders did not undertake joint
	saterine tracking and neid hispections	tracking and field	Grand total (Environmental Protection	monitoring)
		inspections (number of	Agency values) = $629,304.2428$ ha.	momoring).
		ha to be confirmed at		
		project outset)	Grand total (Guyana Geology and Mines	
		project datact)	Commission values) = $755,692.8889$ ha.	
			In 2015 the baseline for joint monitoring by	
			the two Agencies was zero	
			une two Ageneres was zero.	
		1		

Outcome 1: Enabling environment for enforcement of mining- related environmental regulations strengthened	Number of actions taken by EPA (such Num as issuance of enforcement notices, and prohibition notices, laying of charges has a or mediation proceedings) in the areas and identified through the project as high mini priority for monitoring and moni enforcement in small and medium- comp scale gold mining respo amou 4-5 p	nber of enforcement prohibition notices almost nil for small medium scale ing. Ad-hoc nitoring or apliance checks in ponse to complaints punt to approximately per year.	There was an increase in the number of compliance and enforcement actions taken by EPA (such as mediation proceedings) in 2017. The numbers were as follows: 2 in 2014 (baseline) 2 in 2015 2 in 2016 6 in 2017 (thus far) Progress shows a 200% increase over the 2014	This is verified. While evaluator was in country, project actions have demonstrated to show how to and to have encouraged joint monitoring and enforcements between GGMC and EPA. The increase in # of actions is verified as up 200% (Paulette Bynoe, 2017)
	Level of coordination capacity among Base institutions and non-state actors for deter enforcement of mining-related surve environmental practices the proje	eline will be ermined through a /ey administered in first 6 months of ject	There was an increase in the level of coordination capacity among institutions for enforcement of mining related environmental practices since project implementation (2014) to 2017. The numbers were as follows: 1 in 2014 (baseline) 3 in 2015 5 in 2016 6 in 2017	
	% of total area identified as highBase priority for monitoring and deter enforcement that is being monitored prior using satellite tracking ⁷ moni enfor estab	eline to be ermined once high ority areas for nitoring and orcement are blished during first 6	Progress shows a 500% increase over the 2014 baseline. The Monitoring, Reporting & Verification System (MRVS) managed by the Guyana Forestry Commission (GFC) assesses and quantifies forest area change in general, and especially forest loss as a result of mining activities. This is done as part of Guyana	This MRVS 2014 data was used to help develop the BD hotspots report. This consultancy was conducted by Mark Byrne end of September 2016. The project supplemented this work and provided training on the need and use of satellite imagery and also walked the GIM unit through the development of the hotspots

⁷ The high priority areas for monitoring and enforcement will be identified as part of Output 1.1.

		months of project implementation	MRVS Roadmap for REDD+, and performance reporting process, under the MoU between the Governments of the Cooperative Republic of Guyana and the Kingdom of Norway. It was anticipated tha satellite images for the Mainstreaming BD in the Mining Sector Project would have beer made available from the GFC through the MRVS. However, the last satellite imagery obtained through the MRVS was in 2014; the two governments are currently re-negotiating the agreement which should lead to the availability of satellite imagery from 2017. Since we were unable to purchase satellite imagery from the more recent years ar	report demonstrating the usefulness of these tools for decision making. NRTA- GIM unit takes responsibility for this going forward and a baseline is now established. As is stated the last satellite imagery obtained through the MRVS was in 2014; the two governments are currently re-negotiating the agreement which should lead to the availability of satellite imagery from 2017 and this will secure the data needed to update the hotspot report regularly for compliance monitoring.
Outcome 2:	# of courses or seminars implemented	1 baseline course	The Baseline is zero (0).	The project concept has been to develop curriculum set
Enhanced capacities for uptake of practices that promote BD conservation	# of courses of seminars implemented through Mining School that integrate BD considerations	adequately incorporates the topic of BD (Codes of practice for small and medium-scale miners)	Centre Inc., has implemented four (4) courses related to these topics, namely: Introductory Level Training of Prospectors for the Extractive Industry; Intermediate Level Training of Prospectors for the Extractive Industry; Advanced Level Training of Prospectors for the Extractive Industry; and	sa an explicit target. This has been to develop curriculum set sas an explicit target. This has been completed but it need implementation / follow up to the as a priority. The main recommendation arising from this evaluation for the mining school is for GGMC to establish a board for decision-making based on the schools plans to support demining community and to enact more education in support of sustainability in the sector.
			Health and Safety at Placer Mine Site/Codes of Practice. *It is important to note that the Guyana Mining School and Training Centre Inc. is currently being re-structured i.e. both the	s a s

		1	organizational structure and the curriculum of the school.	
	% of miners observed by field officers Bas	seline to be	58 (or 36%) out of 191 mining operations were	This indicator was measured and 68% OF 191 mining
,	who are complying with thedete	ermined once project	complying with the environmental regulations	operation are verified with codes of practice in areas
	environmental regulations and codes of ider	ntifies high priority	and Codes of Practice in areas identified as	as identified as high priority(Paulette Bynoe, 2017)
	practice in areas identified as higharea	as for monitoring and	high priority for monitoring and enforcement	
	priority for monitoring and enfo	orcement	using GGMC's checklist.	
	enforcement (based on checklist)			
				The notspots work was proven useful in the joint
				agency monitoring mission April 2017. In addition the
				process of data use for decision-making is being
				mainstreamed into the work of the GIM unit in GGMC.
				This work has potential synergies with the new work
				on supporting the three Rios work on establishing an
				information management system and clearing house
				mechanism for all three conventions
		1' 0	All 20 $\frac{1}{2}$ (1000/) $\frac{1}{2}$ $\frac{1}{2}$	20 minute have been tooling a sub-sub-sub-
	% of small and medium-scale gold Bas	senne 0	All 20 miners (100%) who have benefited	20 miners have been trained and self-reported learning
1	miners participating in project]	from project seminars and have participated in	based on trainings deliver by the UG.
	seminars who report an increased		the survey reported that they were more aware	
	awareness of mining-related		of the Codes of Practice as a result of attending	
1	regulations and BD issues	1	the training seminar.	
			See full analysis and disaggregation in the	
			annex analysis of capacity building. Annex 3.	
			and analysis of expanding building. Thinks St	

Type of M&E activity	Responsible Part	ies	Indicative Budg Excluding project	et US\$ et team staff time	Time frame		Verified by consultant
Inception Workshop	 Project Coordi EA (Executin EPA) UNDP CO, Coordinating U 	nator (PC) g Agency- i.e., UNDP Regional Jnit (RCU)	8,000		Within first two start up	months of project	yes
Inception Report	• PC • EA		0		Immediately afte	er workshop	yes
Field-based impact monitoring including oversight visits to sites	 PC and EA Steering Comm UNDP CO, U appropriate) 	iittee JNDP RCU (as	20,000		Ongoing		yes
Quarterly reports on project progr	ress	• PC		0	·	Quarterly	yes
APR/ PIRs with BD Tracking Tools	 PC and EA UNDP CO, U Technical Advi 	UNDP Regional ser (RTA)	0		Annual		yes
Steering Committee Meetings		PC and EAUNDP COAgency representation	entatives	2,000		Minimum two times per year	yes
Tripartite Committee Review Meetings	EAUNDP COUNDP GEF		0		Yearly		no
Technical Reports	• PC and EA		0		As necessary		yes
Financial audits	UNDP COPC and EAAuditors		0 (carried out by Guyana free of c	y Audit Office of harge)	Yearly		yes
Mid-term Review		 PC and EA UNDP CO UNDP RCU Evaluator(s) 		25,000		At the mid-point of project implementation.	no
Lessons Learned (with printing of	f document)	PC and EAUNDP CO		0		At least two months before end of project	
Final Evaluation		 PC and EA UNDP CO UNDP RCU Evaluator(s) 		25,000		At project closure	yes

ANNEX 5: MONITORING PLAN AT INCEPTION - PROJECT DOCUMENT

Type of M&E activity	Responsible Parties	Indicative Budget US\$	Time frame	Verified by consultant
		Excluding project team staff time		
Project Terminal Report	• PC and EA	0	At least one month before the end	yes
	UNDP CO		of the project	
TOTAL INDICATIVE COST		80,000		
(*Excluding project team staff				
time and UNDP staff and travel				
expenses)				

ANNEX 6: COMPLIANCE AND MONITORING ACTIVITIES CARRIED OUT BY PROJECT

- Officers from <u>GGMC</u>, <u>EPA and the Wardens from Compliance Division of MNR</u> conducted BD Joint Compliance Monitoring visits in Areas considered Hotspots for Monitoring and Enforcement of small and medium scaled gold mining on April 18 to May 10, 2017, and follow-up visits in August to September, 2017. These areas include: Mahdia, Potaro, Mining District 2
- On April 30, 2017, to May 12, 2017, a <u>six (6) Member Team (comprising of Officers from the Ministry of Natural Resources (MNR) the Environmental Protection Agency (EPA) and the Guyana Geology and Mines Commission (GGMC)) visited Mining District No. 2 Potaro, Mahdia Area to conduct compliance monitoring visits. (Official Monitoring Report was provided).</u>
- On August 16 21, 2017, the Environmental Protection Agency conducted follow-up visits to Mining District No. 2 Potaro, Mahdia Area to determine compliance with sanctions issued during the April-May, 2017 period. (Awaiting official Report on this monitoring visit). Potaro Essequibo, Mining District 2
- On April 12, 2017, to April 23, 2017, a <u>three (3) Member Team (comprising of Officers from the Ministry</u> of Natural Resources (MNR) the Environmental Protection Agency (EPA) and the Guyana Geology and <u>Mines Commission (GGMC)</u>) visited Mining District No. 2 Potaro, Essequibo Area to conduct compliance <u>monitoring visits</u>. (Official Monitoring Report was provided. Upper Mazaruni, Mining District 3.
- On April 20, 2017, to May 02, 2017, a <u>four (4) Member Team (comprising of Officers from the Ministry of Natural Resources (MNR) the Environmental Protection Agency (EPA) and the Guyana Geology and Mines Commission (GGMC)) visited Mining District No. 3 Upper Mazaruni Area to conduct compliance monitoring visits. (Official Monitoring Report was provided. Puruni, Mining District 3.</u>
- On April 21, 2017, to April 26, 2017, <u>a four (4) Member Team (comprising of Officers from the Ministry of Natural Resources (MNR) and the Guyana Geology and Mines Commission (GGMC)</u>) were mandated by the Minister of Natural Resources Hon. Raphael Trotmanto investigate media reports of severe river pollution occurring in the Puruni River Mining District No. 3 and the destruction of its buffer zone. (Official Monitoring Report was provided).
- On April 22, 2017, to March 02, 2017, <u>a five (5) Member Team (comprising of Officers from the Ministry</u> <u>of Natural Resources (MNR) the Environmental Protection Agency (EPA) and the Guyana Geology and</u> <u>Mines Commission (GGMC)</u>) visited Mining District No. 3 Puruni Area to conduct compliance monitoring visits in the area. (Official Monitoring Report was provided. Cuyuni, Mining District 4
- On April 24, 2017, to March 05, 2017, a <u>four (4) Member Team (comprising of Officers from the Ministry</u> of Natural Resources (MNR) the Environmental Protection Agency (EPA) and the Guyana Geology and <u>Mines Commission (GGMC)</u>) visited Mining District No. 4 Cuyuni Area to conduct compliance monitoring visits in the area. (Official Monitoring Report was provided.
- On August 23 27, 2017, the <u>Environmental Protection Agency conducted follow-up visits to Mining District</u> <u>No. 4 Cuyuni Area to determine compliance with sanctions issued during the April-May, 2017</u> period. (Awaiting official Report on this monitoring visit).North West, Mining District 5
- On April 24, 2017, to May 10, 2017, a two (2) Member Team (comprising of an officer from the Ministry of Natural Resources (MNR) and the Guyana Geology and Mines Commission (GGMC)) visited Mining District No. 5 North West Area to conduct compliance monitoring visits. (Official Monitoring Report was provided.).

ANNEX 7: PARTNERSHIPS

ENHANCING BD PROTECTION THROUGH STRENGTHENED MONITORING, ENFORCEMENT AND UPTAKE OF ENVIRONMENTAL REGULATIONS IN GUYANA'S GOLD MINING SECTOR PROJECT OR MAINSTREAMING BD IN THE MINING SECTOR PROJECT

CIVIL SOCIETY ORGANIZATIONS/NGOS

- Guyana Women's Miners Organization supported the mainstreaming of gender equality for the project and participated in a number of Project forums.
- Guyana Gold and Diamond Miners Association provided the avenue for engagement with small and medium scale miners on the ground. This NGO represents the interest of all miners in Guyana and participated in a number of Project forums.
- Iwokrama Participated in Project forums.
- Conservation International Participated in Project forums.
- World Wildlife Fund Participated in Project forums.
- The NGOs provided an avenue for technical support and guidance since they have established relationships with miners in particular areas.

PRIVATE SECTOR

- Environmental Management Consultants conducted the following activities:
- Inter-institutional coordination mechanisms i.e., define agencies' roles; developed collaboration protocol and mechanism of operation of multi-stakeholder enforcement network enhanced to support mainstreaming of BD in mining through strengthened capacity on BD and increased monitoring and enforcement of regulations and codes of practice.
- Training of EPA Officers in Environmental Regulations and develop monitoring checklist.
- Development Policy and Management Consultants Executed the consultancy Prioritization of hotspots for monitoring and enforcement.
- Dapper Technology Procurement of office and field equipment for EPA, GGMC and MNR to aid in satellite tracking and monitoring.
- Gizmos and Gadgets Procurement of office and field equipment for EPA, GGMC and MNR to aid in satellite tracking and monitoring.
- Massy Technologies Procurement of office and field equipment for EPA, GGMC and MNR to aid in satellite tracking and monitoring.
- Starr Computers Procurement of office and field equipment for EPA, GGMC and MNR to aid in satellite tracking and monitoring.
- Impressions Branding Guyana This Service Provider will print and install Billboards in the Hotspot Mining Districts.
- Andrew Arts This Service Provider will print and install Billboards in the Hotspot Mining Districts.
- IDEA Graphic Designs This Service Provider printed Posters and booklet summaries to be distributed to the GGMC, GMSTC, EPA and PAC for use.
- The private sector companies listed above all provided services for the execution of the Project consultancies and activities.

OTHER PARTNERS

• Dr. Thomas Ballatore - provided services for the execution of the Project consultancy i.e. Training of EPA and GGMC Officers in satellite tracking of mining activities and analysis and reporting of findings from satellite images to increase oversight of non-compliance with regulations and illegal mining.

- Guyana Geology and Mines Commission provided technical and financial support towards project implementation.
- University of Guyana provided services for the execution of the Project consultancies and activities such as:
- Mining School programmes to integrate BD considerations.
- User-friendly material and capacity building to facilitate uptake of BD- friendly practices by miners.
- Dr. Paulette Bynoe provided services for the execution of the Project consultancy i.e. Assessment of the Performance of the Mainstreaming BD in the Mining Sector Project.

CONSULTANCIES

- Satellite Image Interpretation for GGMC and EPA (Undertaken by Dr. Thomas Ballatore)
 - Deliverable 1. Report Outlining Capacity Building Activities
 - Deliverable 2. Report on GIS integration
 - Deliverable 3. Feasibility of Improving Remote Sensing Efforts
- Capacity Building of EPA Officers (Undertaken by Environmental Management Consultants)
 - Deliverable 1. Inception Report with finalized methodology and detailed work plan
 - Deliverable 2. Training Materials (PPT Presentations, Handouts, Participant's Manual, Monitoring Checklist, Evaluation Forms)
 - Deliverable 3. Training Report
- Prioritization of Hotspots for Monitoring & Enforcement of Gold Mining Activities in Guyana (Undertaken by Development Policy and Management Consultants)
 - Inception Report
 - Deliverable 1. Prioritization of Hotspots Report
 - Deliverable 2. Stakeholder Consultation Report
- Support to Strengthening of Monitoring & Enforcement of Mining Regulations (Undertaken by Environmental Management Consultants)
 - Inception Report Support to Strengthening of Monitoring & Enforcement Of Mining Regulations
 - Deliverable 1. Report on operational mechanism of the multi-stakeholder monitoring network
 - Deliverable 2. Report on Review of Legislative Framework, Institutional Mandate & Roles & Responsibilities for BD Monitoring
 - Deliverable 3. Report on Orientation & Information Session with GGMC, EPA & GFC
 - Deliverable 4. Report from Information Session with CBOs and NGOs
- Support to Uptake of BD Friendly Practices by Miners (Undertaken by the University of Guyana)
 - Inception Report
 - Deliverable 1. User-friendly Summaries of the Mining Codes of Practice in English and Portuguese languages.
 - Deliverable 2. 5 Jingles, 3 Infomercials, designs of 5 Posters and 3 Billboards.
 - Deliverable 3. Reports of Seminars for Mines Officers and Miners.
- Support to Enhancing the Capacities of the Guyana Mining School & Training Centre Inc. (Undertaken by the University of Guyana)
 - Inception Report

- Deliverable 1. Draft Analytical Report on the structure, function and effectiveness of the Mining School in keeping with its mandate and the policy directions of the MNR and needs of the Medium Size Project.
- Deliverable 2. Report on "Training of Trainers" programme of the Mining School on the environmental regulations in place, best practices, and more generally on environmental and BD considerations as they relate to mining.
- Deliverable 3. Final Reports with recommendations on the reorganization of the Mining School, updating of the Mining School curriculum, training module, and report on training.
- Legal Review to Support Monitoring and Enforcement of Mining Regulations (Undertaken by Environmental Management Consultants)
 - Deliverable 1. Report on Draft Regulations including areas in support of strengthening, monitoring and enforcement in the Mining Sector.
 - Deliverable 2. A Report on the review of the current legislative framework and institutional mandates of the GGMC and GFC including: (awaiting this deliverable)
 - The extent to which the agencies take on board BD as part of their monitoring and enforcement activities,
 - Recommendations for establishing, improving and enhancing existing mechanisms.
- Assessment of the Performance of the Mainstreaming BD in the Mining Sector Project (Undertaken by Dr. Paulette Bynoe)
- Deliverable 1. Inception Report
- Deliverable 2. Progress Report on Project Objectives, Indicators and Social Change.
- Deliverable 3. Final Assessment Report on Project Objectives, Indicators and Social Change.
- Terminal Evaluation of Mainstreaming BD in the Mining Sector Project (Undertaken by Ms. Stephanie Hodge)

ANNEX 8: JOINT PROJECT MONITORING ACTIVITIES KEY RESULT

- Officers from <u>GGMC, EPA and the Wardens from Compliance Division of MNR</u> conducted BD Joint Compliance Monitoring visits in Areas considered Hotspots for Monitoring and Enforcement of small and medium scaled gold mining on April 18 to May 10, 2017, and follow-up visits in August to September, 2017. These areas include:
 - Mahdia, Potaro, Mining District 2
- On April 30, 2017, to May 12, 2017, a six (6) Member Team (comprising of Officers from the Ministry of Natural Resources (MNR) the Environmental Protection Agency (EPA) and the Guyana Geology and Mines Commission (GGMC)) visited Mining District No. 2 Potaro, Mahdia Area to conduct compliance monitoring visits. (Official Monitoring Report was provided. Please see Report for further details).
- On August 16 21, 2017, <u>the Environmental Protection Agency conducted follow-up visits to Mining</u> <u>District No. 2 Potaro, Mahdia Area to determine compliance with sanctions issued during the April-May, 2017 period</u>. (Awaiting official Report on this monitoring visit).
 - Potaro Essequibo, Mining District 2
- On April 12, 2017, to April 23, 2017, a <u>three (3) Member Team (comprising of Officers from the Ministry of Natural Resources (MNR) the Environmental Protection Agency (EPA) and the Guyana Geology and Mines Commission (GGMC)) visited Mining District No. 2 Potaro, Essequibo Area to conduct <u>compliance monitoring visits</u>. (Official Monitoring Report was provided. Please see Report for further details).
 </u>
 - Upper Mazaruni, Mining District 3

- On April 20, 2017, to May 02, 2017, a <u>four (4) Member Team (comprising of Officers from the Ministry</u> of Natural Resources (MNR) the Environmental Protection Agency (EPA) and the Guyana Geology and <u>Mines Commission (GGMC</u>)) visited Mining District No. 3 Upper Mazaruni Area to conduct compliance monitoring visits. (Official Monitoring Report was provided. Please see Report for further details).
 - Puruni, Mining District 3
- On April 21, 2017, to April 26, 2017, a four (4) Member Team (comprising of Officers from the Ministry of Natural Resources (MNR) and the Guyana Geology and Mines Commission (GGMC)) were mandated by the Minister of Natural Resources Hon. Raphael Trotmanto investigate media reports of severe river pollution occurring in the Puruni River Mining District No. 3 and the destruction of its buffer zone. (Official Monitoring Report was provided. Please see Report for further details).
- On April 22, 2017, to March 02, 2017, <u>a five (5) Member Team (comprising of Officers from the Ministry</u> of Natural Resources (MNR) the Environmental Protection Agency (EPA) and the Guyana Geology and Mines Commission (GGMC)) visited Mining District No. 3 Puruni Area to conduct compliance monitoring visits in the area. (Official Monitoring Report was provided. Please see Report for further details).
 - Cuyuni, Mining District 4
- On April 24, 2017, to March 05, 2017, a <u>four (4) Member Team (comprising of Officers from the</u> <u>Ministry of Natural Resources (MNR) the Environmental Protection Agency (EPA) and the Guyana</u> <u>Geology and Mines Commission (GGMC))</u> visited Mining District No. 4 Cuyuni Area to conduct compliance monitoring visits in the area. (Official Monitoring Report was provided. Please see Report for further details).
- On August 23 27, 2017, the <u>Environmental Protection Agency conducted follow-up visits to Mining</u> <u>District No. 4 Cuyuni Area to determine compliance with sanctions issued during the April-May, 2017</u> period. (Awaiting official Report on this monitoring visit).
 - North West, Mining District 5
- On April 24, 2017, to May 10, 2017, a two (2) Member Team (comprising of an officer from the Ministry of Natural Resources (MNR) and the Guyana Geology and Mines Commission (GGMC)) visited Mining District No. 5 North West Area to conduct compliance monitoring visits. (Official Monitoring Report was provided. Please see Report for further details).

ANNEX 9: FULL LIST OF DOCUMENTS REVIEWED

- UNDP 2014-2017 Strategic Plan
- UNDAF 2012 2016
- UNMSDF 2017 2021
- UNDP Country Program Document (2012 2016 and 2017 2021)
- Country Program Action Plan (2012 2016)
- Project Document
- Annual Work Plans (AWPs)
- Annual and Quarterly Progress Reports
- Field Mission Reports
- List of mining areas and project sites
- List and contact details for project staff, key project stakeholders, including Project Boards, and other partners to be consulted
- GEF focal area strategic program objectives
- Training materials and other products produced by the project.
- Applewhite-Hercules, J. (2017). Guyana Mining School and Training Centre Progress Report: August 15th, 2013 to 2nd June,2017
- Ballatore, T.J. (2015). Report Outlining Capacity Building Activities for Training in Satellite Image Interpretation for GGMC and EPA Officers.
- Bynoe, M. (2016).Project Title: Enhancing Biodiversity Protection through Strengthened Monitoring, Enforcement and Uptake of Environmental Regulations in Guyana's Gold Mining Sector: Prioritization

of Hot spots for Monitoring and Enforcement of Gold Mining Activities in Guyana" Project No. 00077684: Final Prioritization Report.

- Faculty of Earth and Environmental Sciences. (2017). Revised Report Mainstreaming Biodiversity Management into Mining (Project 00077684).
- GGMC/EPA Joint Follow-up Visit to Marudi Mountains: May 9-16, 2016
- GGMC/EPA/MNRE Joint Inspection to Para Bara, Region 9: July 22-28, 2016
- GGMC/EPA/MNRE Joint Inspection to Yurong Paru, Region 9: February 20 22, 2017
- Documentation related to measurement of logical framework indicators, e.g., survey results for indicator 2 under Outcome 1 to measure coordination capacity
- Review of course content for Mining School to demonstrate BD mainstreaming.
- List of equipment purchased during project for monitoring and enforcement for different institutions
- Design/ proofs of billboards, posters and booklets to be distributed to different mining areas
- Record of Joint Monitoring Field Exercises carried out during the project.
- Survey results for the Assessment of the Performance of the Mainstreaming BD in the Mining Sector Protect
- Participation records of different capacity building events and training sessions and breakdown of male versus female participants
- List with maps of areas identified as high priority for monitoring and enforcement and list of criteria used to come up with these areas.

ANNEX 10: PROGRAMME MISSION AND PERSONS INTERVIEWED

Table 1: Consultant Meetings with Stakeholders and Field Trips

Day	Time	Activity
am	9:00 h	Security briefing with D.
		Sahadeo
	9:30 h	Meeting with UNDP DRR
	10:30 h - 13:00 h	Meeting with PS and
		Team, MNR; Project
	Mr. Joslyn McKenzie – Permanent Secretary,	Assistant (PA). Focus
	Ministry of Natural Resources (MNR).	Group Meeting with
		Project Management
	Mr. Veetal Rajkumar – Head of the Policy,	
	Planning and Coordination Unit, MNR.	
	Mr. Osbert Ellis – Project Assistant,	
	Mainstreaming Biodiversity in the Gold Mining	
nm	12:20 h	Maating with the
pm	15.50 II	Geospatial Information
	Mr Haimwant Persaud – Head of the	Management (GIM) Unit
	Geospatial Information Management (GIM)	Wanagement (GHVI) Chit
	Unit	
	14:00 h	Meeting with the
		Compliance Division,
	Mr. Derrick Lawrence – Director, Compliance	MNR
	Division, MNR	
	15:00 h	Meeting with the
		Environmental Protection
	Ms. Stacy Lord – Senior Environmental	Agency (EPA)
	Officer, EPA.	
	Mr. Richard Mohabir – Environmental Officer	
	2, EPA.	
		1

am	9:00 h	Meeting with the Guyana
	Ma Wandall Allerma Managan	Geology and Mines
	Mr. Wendell Alleyne – Manager, Environmental Division Guyana Geology and	Commission (GGMC)
	Mines Commission.	
	Mr. Darcy Waldron – Senior Environmental	
	Officer, Environmental Division, GGMC.	
pm	13:30 h	Meeting with the Guyana Gold & Diamonds Miners
	Mr. Avalon Jagnandon – President of the GGDMA.	Association (GGDMA)
	Mr. William Woolford – member of the GGDMA	
	0.00 h	Masting with the
am	9:00 h	University of Guyana (UG)
	Ms. Denise Simmons – Assistant Dean of the Faculty of Earth and Environmental Sciences,	
	UG.	
	10:30 h	Meeting with DRR UNDP.
	Ms. Shabnam Mallick – Deputy Resident Representative, UNDP.	
	11:30 h	Meeting with the Protected
	Ms. Anouska Kinahan – Technical Advisor, PAC.	Areas Commission (PAC)
pm	13:30 h	Meeting with the Guyana
	Mr. Gavin Agard – Deputy Commissioner of Forest GFC	(GFC)
	15:00 h	Meeting with the Guyana
	Ms. Andrea Mohammed – Senior Land Use Planner, GL&SC.	Commission (GL&SC)
	Mr. Asib Mohamed – Land Use Planner, GL&SC.	
	Ms. Stacy Lord – Senior Environmental Officer, EPA.	Field trip to Mahdia, Region 8 to meet with
	Mr. Kerion Husbands - Senior Environmental Officer, Environmental Division, GGMC.	(facilitated by GGMC)
	Ms. Stacy Lord – Senior Environmental Officer, EPA.	Field trip to Port Kaituma, Region 1 to meet with
	Mr. Kerion Husbands - Senior Environmental Officer, Environmental Division, GGMC.	camps(facilitated by GGMC)

am	09:00 h	Meeting with the
	Mr. Shyam Nokta – Director, EMC	Management Consultants (EMC)
am	09:30	Debrief with UNDP RR, DRR, A. Lynch
	Ms. Vedyawattie Looknauth - United Nations	, <u>,</u>
	Development Programme (UNDP).	
	Ms. Andrea Heath-London – Monitoring & Evaluation Analyst, UNDP.	
	10:30	Debrief with PS and Team,
		Project Assistant, MNR;
	Mr. Joslyn McKenzie – Permanent Secretary,	EPA
	Ministry of Natural Resources (MNR).	
	Mr. Veetal Rajkumar – Head of the Policy, Planning and Coordination Unit, MNR.	
	Mr. Osbert Ellis – Project Assistant, Mainstreaming Biodiversity in the Gold Mining Sector Project.	
pm	11:30	Meeting with the Guyana
		Mining School and
	Mr. John Applewhite Hercules –	Training Centre Inc.
	Administrator/Coordinator, GMSTC	(GMSTC)
Post mission	Alexandra Fischer – GEF operational focal	Skype
	point	
	Patrick Chesney, Programmed Specialist,	
	UNDP	

ANNEX 11: KEY (ACTUAL) DELIVERABLE PER OUTPUT

Outcome 1 – Enabling Environment – Achieved excellent results around creating the enabling environment for compliance and environmental management in the sector.

Key Deliverables

- Training of EPA and GGMC Officers in satellite tracking of mining activities and analysis and reporting of findings from satellite images to increase oversight of non-compliance with regulations and illegal mining. (Undertaken during the 4th quarter of 2015). Consultant (Dr. Thomas Ballatore).
- Inter-institutional coordination mechanisms i.e. define agencies' roles; develop collaboration protocol and mechanism of operation of multi-stakeholder enforcement network. (Undertaken during the 4th quarter of 2016 and the 1st quarter of 2017). Consultant (Environmental Management Consultants (EMC)).
- Multi-stakeholder network enhanced to support mainstreaming of BD in mining through strengthened capacity on BD and increased monitoring and enforcement of regulations and codes of practice.

Indicators delivered included:

- Report on the Review of the Legislative Framework, Institutional Mandate and Roles and Responsibilities for BD Monitoring (1st Deliverable) which encompassed:
 - Inter-institutional cooperation in monitoring.
 - Operational mechanism of a multi-stakeholder monitoring network.

- Simplified checklist.
- Training of Senior Officers from the EPA, GGMC and GFC was held on March 24, 2017; at the forum the consultant (EMC) presented and discussed the findings of the first deliverable with the Agencies.
- A Forum for NGOs and CBOs on BD Monitoring in the Mining Sector was held on April 06, 2017. At the forum the consultant (EMC) provided an overview of the policy, regulatory and institutional framework for BD in Guyana and presented as well as discussed recommendations for BD mainstreaming in the mining sector.
- Review of the current legislative framework and institutional mandates of GGMC and GFC and the extent of acknowledging BD as part of monitoring and enforcement. Arrangements for coordination, collaboration, information sharing, reporting and make recommendations for establishing, improving and enhancing mechanisms where they exist. Consultant (EMC)

The criteria/indicators include:

- 1. Report on the Review of the Draft Mining Regulations (1st Deliverable received on July 05, 2017).
- 2. Report on the review of the current legislative framework and institutional mandates of the GGMC and GFC including:
 - 1. The extent to which the agencies take on board BD as part of their monitoring and enforcement activities,
 - 2. Recommendations for establishing, improving and enhancing existing mechanisms. (Draft report was received on July 06, 2017 and was reviewed with comments that were sent to the consultant for finalization). Awaiting submission of Final Report.
 - Strengthened EPA facilitates oversight of mining operations and increases in BD protection through greater capacity of staff to carry out monitoring and enforcement and prioritize actions.
 - Procurement of 3m satellite imagery software, computers, audio-visual and communication equipment, and remote sensing software and ARCGIS license for EPA. (Undertaken in 2015 by MNR and UNDP).
 - Training of EPA Officers in Environmental Regulations and develop monitoring checklist. (Undertaken during the 1st quarter of 2016). Consultant (EMC).
 - Prioritization of hotspots for monitoring and enforcement Report. (Undertaken during the 1st, 2nd and 3rd quarter of 2016). Consultant (Dr. Mark Bynoe)

Outcome 2: Capacity Building: Training activities in total: over 180 Males trained, 138 Females trained

- Mining School programmes to integrate BD considerations.
 - The procurement of bench equipment for the Guyana Mining School and Training Centre Inc. (Undertaken in 2016 by MNR and UNDP).
 - Update Mining School curriculum to integrate BD aspects and Training of trainers at Mining School. (Consultant University of Guyana (UG))
 - 1. On February 01, 2017, the consultants (UG) held a Stakeholder Engagement Workshop to create awareness of the current situation with regard to the Guyana Mining School & Training Centre Inc. (GMSTC); the consultants presented a re-organized structure of the school; and the findings of a curriculum audit that had been undertaken. The workshop provided a platform for recommendations as well as feedback from stakeholders. On March 27 and 28, 2017, the consultants held a Training of Trainers Workshop and trained 11 trainers from GGMC, GGDMA and GMSTC. The indicators delivered included Reports on:
 - Stakeholder Consultations;
 - Curriculum Audit;
 - Proposed Curriculum;
 - Course Outlines for BD Mainstreaming into Mining;
 - Re-structuring of the Guyana Mining School and Training Centre Inc.;
 - Final Sustainability Plan.

- User-friendly material and capacity building to facilitate uptake of BD- friendly practices by miners.
 - Develop user-friendly summaries and posters/billboards and to deliver seminars to miners and translation of Codes of Practice to Portuguese.
 - 1. The University of Guyana (UG) as implementing partner held a Stakeholder Engagement Workshop on February 10, 2017, and presented the draft jingles, infomercials, posters, billboards and the summaries of the Codes of Practice to stakeholders who provided feedback.
 - 2. University of Guyana also conducted Training Seminars for miners and mines officers in:
 - Mahdia, Potaro, Mining District 2.
 - Puruni, Mazaruni, Mining District 3.
 - Bartica, Cuyuni, Mining District 4.
 - Port Kaituma, North West, Mining District 5.
 - Maraudi, Rupununi, Mining District 6.

Indicators delivered included:

- Revision of Summaries of Codes of Practice;
- Translation of Summaries of the Codes of Practice into Portuguese;
- 5 Jingles, 3 Infomercials, designs of 5 Posters and 3 Billboards.
- Print billboards, posters, user-friendly summaries. Advertise jingles and infomercials.
 - Posters and booklet summaries were printed and will be distributed to the GGMC, GMSTC, EPA and PAC for use.
 - Billboards will be printed and installed in the Hotspot Mining Districts.
 - The jingles and infomercials will be advertised on the MNR, EPA and GGMC websites.
- BD joint compliance monitoring of prioritized areas
 - Officers from GGMC, EPA and the Wardens from Compliance Division of MNR conducted BD Joint Compliance Monitoring visits in Areas considered Hotspots for Monitoring and Enforcement of small and medium scaled gold mining on April 18 to May 10, 2017. These areas include:
 - Mahdia, Potaro, Mining District 2.
 - Potaro Essequibo, Mining District 2.
 - Upper Mazaruni, Mining District 3.
 - Puruni, Mining District 3.
 - Cuyuni, Mining District 4.
 - North West, Mining District 5.
- Assessment of the Performance of the Mainstreaming BD in the Mining Sector Project. Consultant (Dr. Paulette Bynoe).
 - The aim was to produce a detailed assessment of the performance and achievements of the Project against the specified objectives, targets and baseline. Her deliverable: was a report on the Project Targets which has been reviewed before and during mission.

- Procurement of office and field equipment for EPA, GGMC and MNR to aid in satellite tracking and monitoring. (Undertaken by MNR).
 - The procurement of various equipment to aid in satellite tracking and monitoring is currently ongoing.
- World Environment Day and International Day of Biological Diversity Activities. The Project funded the following activities:
 - International Day of BD (IDB) BD Youth Forum themed "Youths for BD and Tourism: Showing the Importance through the Performing Arts," represented by students of 16 Environmental clubs from Regions 3, 4 and 5.
 - Launch of State of Environment Report. (Executed on June 05, 2017, at Umana Yana)
 - Connecting Business to Nature The Green Business Forum. (Executed on June 09, 2017): Cross sector of stakeholders shared best practices, institutional arrangements and financing modalities for supporting green business development
- Mining Week Activity: The project has funded the following activity:
 - MNR & GGMC BD and Environmental Awareness Plan.
 - The Plan will be focused on increased Public Relations and Educational Activities in an effort to create Greener Spaces for every small and medium scaled gold mining operation. One priority is to inculcate the production of fresh food using various simple modern technologies available so that miners can have access to fresh, wholesome and safe food at their worksite. The plan will use various audio/visuals methods to emphasise BD and environmental awareness. Than plan is expected to be implemented during the end of August to end of September 2017.

ANNEX 12: EVALUATION MATRIX

Evaluative Criteria Questions	Indicators	Sources	Methodology
Relevance: How does the project relate to the main objectives What is the extent to which biodiversity is relevant to national How relevant is the project design in addressing the outputs?	of the GEF focal area, and to the environment and development priorities at the development priorities?	e local, regional and national level	s?
How relevant to GEF focal areas on Biodiversity, to cross cutting areas, others, climate change?	Whether this project fits any or many /all focal areas and how well the strategies conform to the strategies normally employed to the GEF foal areas.	• Desk Study-Regional, Global and national	InterviewsConsultation
How relevant to the MTSP (regional)?	Whether the project is linked/prominent in the MTSP contributing. I.e. natural resource management or improving protection and use of natural capital strategies?	reports/studies Respondents interviewed at the national ,regional and global levels MTSP National development plan Project Logical Framework analysis Reports of Project including SC meetings minutes. Field visits to speak with Beneficiaries Inception report	SurveyObservations
How Relevant to the SDGs?	SDG framework linked to project plan?		
How relevant to the National development Plan?	In national plan?		
How did the logical framework, strategies and design work out? Assumptions?	 Whether the logical framework was a good monitoring tool? No or few incorrect assumptions Review of the logical of Output 1 enabling activities i.e. regulation and enforcement and Outcome 2 training and capacity development work as per overall expected outcomes. Test main assumptions in ProDoc? Legislation around involuntary certification? Gold Mining Sector? Enforcements -Human Resource in place for enforcement to w work, environmental education linked to the tools of good environmental management i.e. EIA and education? Area monitored for compliance increased to at least 50% over the baseline (number of ha to be confirmed at project outset). WAS THIS CONFIRMED OTHER TARGETS NOT CONFIRMED AT PRODOC. Test Strategies - were strategies smart? 		
Effectiveness: To what extent have the expected outcomes and Has there been progress made towards the achievement of the How have UNDP's practices, policies, decisions, constraints an To what extent have project outputs contributed to achieving U Is UNDP's / EPA's partnership strategy appropriate, effective	objectives of the project been achieved? intended outputs? nd capabilities affected the achievement of the outputs? INDP Country Program (2012-2016) Outcome 3 and viable for the achievement of the outputs?		

Has there been progress made towards the achievement of the intended outputs?	Whether the project has accomplished all the stated outputs as deemed in the logical framework. Whether indicators were monitored and or met i.e. enforcement notices? What have been the main factors as per achievements?	 Desk Study-Regional, Global and national reports/studies Respondents interviewed at the national, regional and global levels MTSP National development plan Project Logical Framework analysis Reports of Project including SC meetings minutes. Field visits to speak with Beneficiaries
How has UNDP's practices, policies, decisions, constraints and capabilities affected the achievement of the outputs?	Implementation modality and whether there was sufficient implementation and monitoring support for NIM. Technical competence of UNDP to support activities? Whether project implementation unit had back office support was appropriate including its technical, administrative, monitoring and leveraging advocacy and positioning Guyana on regional and international stages. UNDPs support for adaptive management and running good steering and technical committee meetings. Did UNDP visit the project sites? Has UNDP played to its comparative advantages in supporting convening i.e. synergies, NGO to government etc?	 Desk Study-Regional, Global and national reports/studies Respondents interviewed at the national ,regional and global levels MTSP National development plan Project Logical Framework analysis
To what extent have project outputs contributed to achieving UNDP Country Program (2012-2016) Outcome 3	This is a look back at the overall results and the contributing to the Outcome 3 but also expected country program cross cutting issues such governance, poverty and women's rights and empowerment. Look at future country program goals doe this project still fit.?	 Reports of Project including SC meetings minutes. Field visits to speak with
Is UNDP's / EPA's partnership strategy appropriate, effective and viable for the achievement of the outputs?	 Whether the UNDP /GEF/EPA have convened partners towards outcome and outputs i.e. implementing, advocacy and program level partnerships. Whether the synergies and coordination of key partners and stakeholders identified in the project document been a priority? 	Beneficiaries
Efficiency: Was the project implemented efficiently, in-line w Has UNDP's/EPA's strategy in producing the outputs been eff How efficient has been the roles, engagement and coordination What is the assessment of the capacity and institutional arrang	ith international and national norms and standards? icient and cost-effective? n among various stakeholders in implementing the project? ements for the implementation of the project?	

Has UNDP's/EPA's strategy in producing the outputs been efficient and cost-effective?	No waste, were contracts big, small or institutional? Was there to many smaller vs larger easy to manages for results initiatives? Was the use of the project sand GEF /UNDP staff time for policy level results efficient or not?	 Desk Study-Regional, Global and national reports/studies Respondents interviewed 	
How efficient has been the roles, engagement and coordination among various stakeholders in implementing the project?	How well was the project coordinated for implementation and results? What have been the role of UNDP/GEF/PIU?	at the national ,regional and global levels • MTSP • National development plan • Project Logical	
Has there been any duplication of efforts among UNDP's interventions and interventions delivered by other organizations in contributing to the outputs?	Consider the synergies with other linked areas in government sectors and programs and in development partner's projects.	 Framework analysis Reports of Project including SC meetings minutes. 	
What is the assessment of the capacity and institutional arrangements for the implementation of the project?	Whether the project capacity building activities formal and informal was planned with strong targets, whether it was assessed and whether the approach was sufficient i.e. learning by doing vs training etc. and sustainability of CB efforts Had there been a baseline assessment of institutional capacity? Has there been any CN tools or strategies used. How the technical committee and steering committees helped for policy learning and change management within government departments?	Field visits to speak with Beneficiaries	
Sustainability: To what extent are there financial, institutional What are the underlying factors beyond UNDP's control that is What is the extent to which UNDP/EPA established mechanism	social-economic, and/or environmental risks to sustaining long-term project r influence the outputs (including the opportunities and threats affecting the achies ns ensure sustainability of the outputs?	esults? evement of the outputs)?	
		• Desk Study-Regional,	
To what extent are there financial, institutional, social- economic, and/or environmental risks to sustaining long- term project results?	What is being put into place to sustain the results from a social economic and environmental, institutional perspective?	 Desk Study-Regional, Global and national reports/studies Respondents interviewed at the national ,regional and global levels 	
To what extent are there financial, institutional, social- economic, and/or environmental risks to sustaining long- term project results? What are the underlying factors beyond UNDP's control that influence the outputs (including the opportunities and threats affecting the achievement of the outputs)?	What is being put into place to sustain the results from a social economic and environmental, institutional perspective? Factors beyond the UNDP control might include: change in government will, change in intuitional set up, climate change. Weather, other competing priorities, other projects on stream with greater resources etc. change in legislations for EIA, big push education about environment?	 Desk Study-Regional, Global and national reports/studies Respondents interviewed at the national ,regional and global levels MTSP National development plan Project Logical Framework analysis 	
To what extent are there financial, institutional, social- economic, and/or environmental risks to sustaining long- term project results? What are the underlying factors beyond UNDP's control that influence the outputs (including the opportunities and threats affecting the achievement of the outputs)? What is the extent to which UNDP/EPA established mechanisms ensure sustainability of the outputs?	What is being put into place to sustain the results from a social economic and environmental, institutional perspective? Factors beyond the UNDP control might include: change in government will, change in intuitional set up, climate change. Weather, other competing priorities, other projects on stream with greater resources etc. change in legislations for EIA, big push education about environment? What have been the mechanisms established for longer term sustainability for example , training of trainer approaches, course in local school of mining , GIS systems , mechanism for monitoring cross sectoral work , Valuation advocacy measures, Certification in Public service commission?	 Desk Study-Regional, Global and national reports/studies Respondents interviewed at the national ,regional and global levels MTSP National development plan Project Logical Framework analysis Reports of Project including SC meetings minutes. Field visits to speak with Beneficiaries 	

Impac	Impact: Are there indications that the project has contributed to, or enabled progress toward, reduced environmental stress and/or improved ecological status?				
con env	Are there indications that the project has tributed to, or enabled progress toward, reduced ironmental stress and/or improved ecological status?	Can respondents see any visible or proven (evidence based) difference in the environment near the mining activities i.e. reduction nine pollution or tree planted or grass growing - health of environmental indicators. Has the companies changed their practices and replanting and providing other local inputs for changed environment.			

ANNEX 13: DETAILED HISTORICAL CHRONOLOGY OF ALL THE PROJECT ACTIVITIES

DATES		ACTIVITIES AND EVENTS		
Mainstream	nin	g Biodiversity in the Mining Sector Project		
2014 year - 1 st year of the project activities				
August	•	Following the approval of the project document, a project agreement and the Annual Work Plan 2014 was signed between the Ministry of Natural Resources and the Environment (MNRE) and the United Nations Development programme (UNDP) on August 22, 2014, with a Total Budget of USD 145,634.		
September	•	On September 23, 2014, the Inception Workshop of the Mainstreaming Biodiversity in the Mining Sector Project was held at the Environmental Protection Agency's (EPA) Boardroom.		
October	•	• Procurement of several audio-visual/communication and information technology equipmen		
November to support strengthening of the EPA, as well as the drafting of Terms of Reference for two local consultancies to be graduated in 2015, 00% of the items prograd and		to support strengthening of the EPA, as well as the drafting of Terms of References (ToRs) for two local consultancies to be executed in 2015, 00% of the items procured under the 2014		
December I for two local consultancies to be executed in 2015, 90% of the items procured for AWP have been delivered to the EPA. The equipment procured for the procure of the items are as a second s		AWP have been delivered to the EPA. The equipment procured for the Environmental Protection Agency (EPA) were as follows:		
		 3m satellite imagery software, 		
		• Mobile Satellite Internet Infrastructure,		
		 Desktop Computers and tough pads, 		
		 Hp Plotter Printer, Audio-visual and communication equipment (satellite phones) 		
		 Remote sensing software and 		
		• ARCGIS license for EPA.		
2015 year- 2 nd year of the project activities				
January	•	Procurement of the above mentioned equipment for the Environmental Protection Agency (EPA) the remaining 10% of the equipment procured were received by the Ministry of Natural Resources (MNR) and sent to the Environmental Protection Agency (EPA).		
February	• February 13, 2015, the Annual Work Plan for 2015 was signed by the Ministry of Natur Resources and the United Nations Development Programme with a total budget of US 292,387.			
March	•	On March 04, 2015, the First Project Steering Committee Meeting was undertaken.		
April	 On April 16, 2015, Project Steering Committee Meeting was undertaken. Procurement of 3m satellite imagery software, computers, audio-visual and communica equipment, and remote sensing software and ARCGIS license for EPA. 			
May	٠	Early general elections were held in Guyana on May 11, 2015, alongside regional elections.		
June		The result was a victory for the A Partnership of National Unity (APNU) – Alliance for Change (AEC), which was 22 of the 65 costs in the National Assembly and a sharpe in		
July		Government.		
August	•	Following the elections, the project was stalled due to change of Government.		
September				
October	•	The Satellite tracking of mining activities and analysis and reporting of findings from satellite images by GGMC and EPA, to increase oversight of non-compliance with regulations and illegal mining. Implementation of the consultancy began in October, 2015. This was inclusive of class room lectures, presentations and a field exercise.		
	•	 15 October 2015 Meetings with project management team and various partners. 		

	• Discussion on logistics and training programme schedule and contents.		
•	 16 October 2015 Meetings with project management team and various partners. Finalization of logistics and training programme schedule and contents. 		
•	17 October 2015		
•	 Consultant preparation and meetings as appropriate. 18 October 2015 		
•	 Consultant preparation and meetings as appropriate. 		
 19 October 2015 Overall Introduction and Overview. Short overview of training programme. Self-introductions. General Strategic Discussion, i.e. How does this training fit the goals of the various trainees and their agencies? (i.e. about selecting most relevant remote sensing products in conjunction with other GIS data to achieve each person/agencies goals). Computer software and data setup. Basic introduction to remote sensing, the various sensors, GIS, ODK and related topics 			
•	 20 October 2015 Fundamentals of Remote Sensing Definition of remote sensing Explanation of aerial photography and satellite imagery (including discussion on use of small unmanned aerial vehiclessUAVs, or drones) Description of all available spaceborne sensors Preliminary discussion on choice of imagery, sources, and cost 		
•	 21 October 2015 Image Interpretation Fundamental concepts of image interpretation Elements of interpretation Overview of Image Classification techniques (unsupervised, supervised, and object-based) Introduction to Open Data Kit Overview of ODK Case studies on ODK use in Chile and Uganda Creation of forms for field visit (23-24 October) Testing of system 		
•	 22 October 2015 Hands-on Image Classification Trainees will work alone or in small groups to classify an image (or images) for the target area (for an area of interest in the field trip itinerary) under the supervision of Ballatore and Villalobos Discussion on results and iterative improvement of classification Short introduction to accuracy assessment Plan for groundtruthing during Field Visit 		
•	23 October 2015 • Field Visit		
•	 24 October 2015 o Field Visit o Return to Georgetown 		
•	 25 October 2015 Departure of Villalobos from GEO to Chile Ballatore preparation and meetings as appropriate 		
•	26 October 2015 • Accuracy Assessment		

	 Theory of accuracy assessment ("getting the right things right" and not just worrying about overall accuracy) Use of ODK and other field data to assess accuracy of classifications done in previous week Discussion on how to improve classification 		
	 27 October 2015 Advanced (Hands-on) Image Classification Re-doing classification based on lessons learn and improved techniques (mainly supervised classification, I am guessing) Judging gains in accuracy of various techniques 		
 28 October 2015 Advanced (Hands-on) Image Classification Discussion on Object-based image analysis using ORFEO toolbox Classification using OBIA Accuracy assessment and discussion Discussion cloud vs. onsite data storage 			
 29 October 2015 Obtaining Images Detailed discussion on contacts and costs for various sensors practical and useful for future work Practical GIS/RS integration How to use non-RS data in a GIS to improve work results How to manage all data among various stakeholders 30 October 2015 Overall Strategic Discussion and "Geospatial Roadmap" 			
	• The programme, made use of studies on use of RS, GIS, ODK, monitoring and enforcement, etc. from Chile, Kenya, Japan, Uganda and USA, and other cases as appropriate.		
November	 The Satellite tracking of mining activities and analysis and reporting of findings from satellite images by GGMC and EPA, to increase oversight of non-compliance with regulations and illegal mining. (Continued). 		
December	• The Satellite tracking of mining activities and analysis and reporting of findings from satellite images by GGMC and EPA, to increase oversight of non-compliance with regulations and illegal mining. (Continued).		
	 December 07, 2017, Deliverable: Report Outlining Capacity Building Activities for Training in Satellite Image Interpretation for GGMC and EPA Officers. 		
	 December 10, 2017, Deliverable: Feasibility of Improving Remote Sensing Efforts. 		
	 December 11, 2017, Deliverable: Protocol for Integrating Satellite Images into Current GIS System. 		
2016 year-	3 rd year of the project activities		
January	• On January 26, 2016, the Annual Work Plan for 2016 was signed by the Ministry of Natural Resources and the United Nations Development Programme with a Total Budget of USD 452,349.		
February	• On February 17, 2016, Implementation of consultancy to carry out prioritization of hotspots for monitoring and enforcement. (Continued).		
March	 March 17, 2016, Project Steering Committee Meeting was undertaken. Implementation of consultancy to carry out prioritization of hotspots for monitoring and enforcement. (Continued). On March 14, 2016, Implementation of consultancy to build capacity of EPA and develop monitoring checklist and written training material. 		

April	 Implementation of consultancy to carry out prioritization of hotspots for monitoring and enforcement. (Continued). Implementation of consultancy to build capacity of EPA and develop monitoring checklist and written training material. Training of EPA Officers in Environmental Regulations and develop monitoring checklist. (Continued). 		
May	 Implementation of consultancy to carry out prioritization of hotspots for monitoring and enforcement. (Continued). Implementation of consultancy to build capacity of EPA and develop monitoring checklist and written training material. Training of EPA Officers in Environmental Regulations and develop monitoring checklist. (Completed). Deliverables included: Training Report outlining the capacity building activities delivered to the EPA Field Officers on the regulatory framework; inclusive of materials developed to accompany training activities. Final Checklist to be used by EPA Officers to facilitate monitoring efforts. 		
June	 Implementation of consultancy to carry out prioritization of hotspots for monitoring an enforcement. (Continued). On June 27, 2016, Project Assistant Mr. Osbert Ellis was hired. 		
July	• Implementation of consultancy to carry out prioritization of hotspots for monitoring and enforcement. (Continued).		
August	• Implementation of consultancy to carry out prioritization of hotspots for monitoring and enforcement. (Continued).		
September	 Implementation of consultancy to carry out prioritization of hotspots for monitoring and enforcement. (Completed). Report on Prioritization of Hot spots for Monitoring and Enforcement of Gold Mining Activities in Guyana. Stakeholder Consultation Report. 		
October	 Support to enhancing capacities of the Guyana Mining School and Training Centre Inc., the University of Guyana partnered with the MNR and UNDP to carry out the activities. Work commenced on October 21, 2016. Support to uptake of biodiversity friendly practices by miners. University of Guyana partnered with the MNR and UNDP to carry out works. Work commenced on October 28, 2016. The Environmental Management Consultants (EMC) was awarded the consultancy to provide "Support to strengthening of monitoring and enforcement of mining regulations." On October 31, 2016 EMC signed the contract to commence activities. 		
November	 On November 22, 2016, Project Steering Committee Meeting was undertaken. Support to strengthening of monitoring and enforcement of mining regulations. (Continued). Support to enhancing capacities of the Guyana Mining School and Training Centre Inc. (Continued). Support to uptake of biodiversity friendly practices by miners. (Continued). On November 06 and 07, 2016, the consultant team of videographers visited several mining capacities of the gaster data and information for information. 		
December	 Support to strengthening of monitoring and enforcement of mining regulations. (Continued). Support to enhancing capacities of the Guyana Mining School and Training Centre Inc. (Continued). Support to uptake of biodiversity friendly practices by miners. (Continued). 		
2017 year-	4 ^{rth} year of the project activities		
January	 Support to strengthening of monitoring and enforcement of mining regulations. (Continued). Support to enhancing capacities of the Guyana Mining School and Training Centre Inc. (Continued). 		

	•	Support to uptake of biodiversity friendly practices by miners. (Continued).
February	•	Support to strengthening of monitoring and enforcement of mining regulations (Continued). Support to enhancing capacities of the Guyana Mining School and Training Centre Inc. (Continued).
		 On February 01, 2017, the consultants (UG) held a Stakeholder Engagement Workshop to create awareness of the current situation with regards to the Guyana Mining School & Training Centre Inc. (GMSTC); the consultants presented a re- organized structure of the school; and the findings of a curriculum audit that had been undertaken. The workshop provided a platform for recommendations as well as feedback from stakeholders.
	•	 Support to uptake of biodiversity friendly practices by miners. (Continued). The consultants (UG) held a Stakeholder Engagement Workshop on February 10, 2017, and presented the draft jingles, infomercials, posters, billboards and the summaries of the Codes of Practice to stakeholders who provided feedback.
March • Support to strengthening of monitoring and enforcement • Training of Senior Officers from the EPA, GGN 2017; at the forum the consultant (EMC) present first deliverable with the Agencies		Support to strengthening of monitoring and enforcement of mining regulations. (Continued). • Training of Senior Officers from the EPA, GGMC and GFC was held on March 24, 2017; at the forum the consultant (EMC) presented and discussed the findings of the first deliverable with the Agencies
	Support to enhancing capacities of the Guyana Mining School and Training Centre Inc. (Continued).	
		and trained 11 trainers from GGMC, GGDMA and GMSTC.
	•	Support to uptake of blodiversity mendry practices by miners. (Continued).
April	•	Support to enhancing capacities of the Guyana Mining School and Training Centre Inc. (Continued).
	•	 Support to uptake of biodiversity friendly practices by miners. (Continued). Support to strengthening of monitoring and enforcement of mining regulations. (Continued). A Forum for NGOs and CBOs on Biodiversity Monitoring in the Mining Sector was
held on April 06, 2017. At the forum the consultant (El policy, regulatory and institutional framework for biod as well as discussed recommendations for biodiversi sector.		held on April 06, 2017. At the forum the consultant (EMC) provided an overview of the policy, regulatory and institutional framework for biodiversity in Guyana and presented as well as discussed recommendations for biodiversity mainstreaming in the mining sector.
• Deliverables included:		• Deliverables included:
		• Report on the Review of the Legislative Framework, Institutional Mandate and Roles and Responsibilities for Biodiversity Monitoring (1 st Deliverable) which encompassed:
		Inter-institutional cooperation in monitoring.
		 Operational mechanism of a multi-stakeholder monitoring network. Simplified excellent
	•	• Simplified checklist. Biodiversity joint compliance monitoring of prioritized areas. (Continued).
		• Officers from GGMC, EPA and the Wardens from Compliance Division of MNR
		conducted Biodiversity Joint Compliance Monitoring visits in Areas considered
		Hotspots for Monitoring and Enforcement of small and medium scaled gold mining on April 18 to May 10, 2017. These areas include:
		Mahdia, Potaro, Mining District 2.
		 Potaro Essequibo, Mining District 2.
		• Upper Mazaruni, Mining District 3.
		• Puruni, Mining District 3.
		Cuyuni, Mining District 4.
		North West, Mining District 5.

May	•	On May 11, 2017, the Annual Work Plan 2017 was signed by the Ministry of Natural Resources and the United Nations Development Programme with a total budget of USD 423,234.46.
	•	Support to enhancing capacities of the Guyana Mining School and Training Centre Inc. (Continued).
		 On May 11, 2017, received Final copies of the Reports on the following Deliverables under the Mining School consultancy: Report on Stakeholder Consultations; Report on Curriculum Audit; Report on Proposed Curriculum; Report on the development of Course Outlines for Biodiversity Mainstreaming into Mining; Report on Re-Structuring of the Guyana Mining School and Training Centre Inc.; Report on the Final Sustainability Plan; Report on the National Stakeholder Engagement Workshop; and Report on the Training of Trainers workshop.
	•	 Support to uptake of biodiversity friendly practices by miners. (Continued). On May 11 and 18, 2017, received Final copies of the Reports on the following Deliverables under the Uptake of Biodiversity Friendly Practices by Miners: Report on Stakeholder Engagement Workshop; Revision of Summaries of Codes of Practice; Translation of Summaries of the Codes of Practice into Portuguese; Reports on Training Seminars; and Jingles, Infomercials, Posters and Billboards.
	•	 Biodiversity joint compliance monitoring of prioritized areas (completed). Officers from GGMC, EPA and the Wardens from Compliance Division of MNR conducted Biodiversity Joint Compliance Monitoring visits in Areas considered Hotspots for Monitoring and Enforcement of small and medium scaled gold mining on April 18 to May 10, 2017. These areas include:
		 Mahdia, Potaro, Mining District 2. Potaro Essequibo, Mining District 2. Upper Mazaruni, Mining District 3. Puruni, Mining District 3. Cuyuni, Mining District 4.
	•	• North West, Mining District 5. The Project Funded the International Day of Biodiversity (IDB) - Biodiversity Youth Forum themed "Youths for Biodiversity and Tourism: Showing the Importance through the Performing Arts," represented by students of 16 Environmental clubs from Regions 3, 4 and 5.
June	•	Support to enhancing capacities of the Guyana Mining School and Training Centre Inc. (Completed).
	•	Support to uptake of biodiversity friendly practices by miners. (Completed).
	•	Procurement of office and field equipment for EPA, GGMC and MNR to aid in satellite tracking and monitoring.
	•	 Assessment of the Performance of the Mainstreaming Biodiversity in the Mining Sector Project. Consultant. Works began on June 05, 2017. The aim was to produce a detailed assessment of the performance and achievements of the Project against the specified objectives, targets and baseline. Deliverable: Report on the Project Targets.
	•	The Project Funded the following Activities:

	 Launch of State of Environment Report. (Executed on June 05, 2017, at Umana Yana) 	
	 Connecting Business to Nature – The Green Business Forum. (Executed on June 09, 2017): Cross sector of stakeholders shared best practices, institutional arrangements and financing modalities for supporting green business development. 	
	 Print billboards, posters, user-friendly summaries. Advertise jingles and infomercials. Posters and booklet summaries were printed and will be distributed to the GGMC, GMSTC, EPA and PAC for use. 	
	 Billboards will be printed and installed in the Hotspot Mining Districts of Guyana. The jingles and infomercials will be advertised on the MNR, EPA and GGMC websites. 	
July	• Report on the Review of the Draft Mining Regulations (1st Deliverable received on July 05, 2017).	
	• Assessment of the Performance of the Mainstreaming Biodiversity in the Mining Sector Project. (Continued).	
	• Procurement of office and field equipment for EPA, GGMC and MNR to aid in satellite tracking and monitoring. (Continued).	
	• Print billboards, posters, user-friendly summaries. Advertise jingles and infomercials. (Continued).	
August • On August 04, 2017, Project Steering Committee Meeting was undertaken.		
	• On August 10, 2017, Assessment of the Performance of the Mainstreaming Biodiversity in	
the Mining Sector Project was completed.		
	• Received Final Report on Assessment of the Performance of the Project.	
	• Procurement of office and field equipment for EPA, GGMC and MNR to aid in satellite tracking and monitoring (Continued)	
	 Print billboards, posters, user-friendly summaries. Advertise jingles and infomercials. (Continued). 	
	 On August 21, 2017, a Billboard was installed in Port Kaituma. On August 28, 2017, a Billboard was installed in Mahdia. 	
	• Terminal Evaluation on the Mainstreaming Biodiversity in the Mining Sector Project. Work commenced on August 21, 2017.	
September	• Terminal Evaluation on the Mainstreaming Biodiversity in the Mining Sector Project.	
Oatobar	(Continued).	
October	• Procurement of office and field equipment for EPA, GGMC and MNR to aid in satellit	
November	 tracking and monitoring. (Continued). Print billboards, posters, user friendly, summaries. Advertise, iingles, and informariels. 	
December	(Continued).	
	• On September 09, 2017, a Billboard was installed in Omai Area, Potaro Essequibo.	
	• EPA compliance monitoring of prioritized areas.	
	• News features, radio features and television panel discussions on the Mainstreaming	
	Biodiversity in the Gold Mining Sector Project.	
	Ministry of Natural Resources and GGMC Biodiversity Work Plan.	

ANNEX 14: PROJECT EXECUTION UNIT

Project Implementing Agency – United Nations Development Programme (UNDP)

- 1. Dr. Patrick Chesney Programme Specialist, UNDP
- 2. Ms. Akua Carberry Programme Associate, UNDP (2014 2016)

Project Executing Agency (PEA) – Environmental Protection Agency (EPA)

Project Execution Unit (PEU)

- 1. Dr. Indarjit Ramdass Executive Director, Environmental Protection Agency. (2014 2016)
- 2. **Mr. Kemraj Parsram** Director, Compliance and Enforcement, Environmental Management Compliance Division, Environmental Protection Agency. (2014 – present)
- 3. **Mr**. **Mahendra Saywack** Technical Officer, Climate Change, Ministry of Natural Resources. (2014 The end 2015).
- 4. **Mr. Imole McDonald** Technical Officer, Environment, Ministry of Natural Resources. (January 2016 June 2016).
- 5. **Mr. Osbert Ellis** Project Assistant, Mainstreaming Biodiversity in the Mining Sector Project, Ministry of Natural Resources. (June 2016 present)
- 6. **Ms. Stacy Lord** Senior Environmental Officer, Environmental Protection Agency. (2014 present)
- 7. **Ms. Diana Fernandes** Environmental Officer II, Environmental Protection Agency. (2014 present)
- 8. **Mr. Richie Mohabir** Environmental Officer II, Environmental Protection Agency. (2014 present)

ANNEX 15: PROJECT STEERING COMMITTEE MEMBERS

- 1. Stakeholder Representative GLSC Ms. Andrea Mahammad Senior Land Use Planner Tel: 226-0529 Ext. 206 Email: andreamahammad2012@gmail.com
- 2. Ms. Oleta Williams (Alt.) Land Use Planner Tel: 226-05922 Ext. 107 Email: glsclupp@gmail.com GGDMA Mr. Colin Sparman Administrator Tel: Email: soamers@yahoo.com GFC Mrs. Sumedha Mahadeo-Singh Botanist Tel: Email: sumedhamahadeo@gmail.com GGMC Mr. Wendell Alleyne Environmental Manager Tel: 225-2862-7 Ext. 279 Email: wendellalleyne@hotmail.com
- 3. Mr. Donald Singh Land Manager Tel: Email: dsurveyor@gmail.com
- Mr. Darcy Walrond (Alt.) Senior Environmental Officer Tel: Email: darcyewalrond@yahoo.com PAC Mr. Damian Fernandes Commissioner Tel: 227-1888 Email: damianjf@gmail.com EPA Dr. Indarjit Ramdass Exec. Director Tel: 225-5467 Ext. 249 Email: iramdass@epaguyana.org
- 5. Mr. Kemraj Parsram Director EMCD Tel: 225-5497 Ext. 300 Email: kemraj.parsram@gmail.com
- Ms. Stacy Lord (Alt.) Senior Environmental Officer Tel: 225-5467 Ext. 230 Email: stacyrlord@gmail.com MNR Mr. Veetal Rajkumar Policy Planning Head Tel: 231-2506 Email: vrajkumar@nre.gov.gy
- 7. Mr. Imole McDonald Technical Officer Tel: 231-2506 Email: imcdonald@nre.gov.gy UNDP Dr. Patrick Chesney Chief Technical Officer Tel: Email: patrick.chesney@undp.org
- 8. Ms. Akua Carberry Project Associate Tel: Email: akua.carberry@undp.org

ANNEX 16: AUDIT TRAIL

All suggested revisions were corrected in this report between September and October 11. Reviewers included Shabnam Mallick, Dr. Patrick Chesney, Alexandra Fischer, Andrea Heath-London and Osbert Ellis. The files were attached in folders showing how each comment was addressed in the new final.

Author	#	Para No./ comment location	Comment/Feedback on the draft TE report	TE team response and actions taken
Patrick		attached files	8 comments - shown to be addressed - attached in two files	Corrected
Cnesney		WITH		
Andrea		address attached	31 plus 8 more total 39 comments - shown to be addressed - attached in two files	Corrected
Osbert			5 revisions plus 5 - shown to be	Corrected
			addressed - attached in two files	
Shabnam			7 plus 13 comments - shown to be	Corrected
			addressed - attached in two files	
Alexandra			85 comments - shown to be addressed	Corrected
			- comments attached in file	

ANNEX 17 - EVALUATION CONSULTANT AGREEMENT FORM

8.

Evaluation Consultant Agreement Form ⁸			
Agreement to abide by the Code of Conduct for Evaluation in the UN System			
Name of Consultant:Ste	ephanie		
Name of Consultancy Organization (where relevant):Guyana			
I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.			
Signed at New York on August 1, 2017			
Signature:Sh electronic			

⁸www.unevaluation.org/unegcodeofconduct

3 For additional information on methods, see the Handbook on Planning, Monitoring and Evaluating for Development Results, Chapter 7, pg. 163

4, as defined and explained in the <u>UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported, GEF-financed</u> <u>Projects (2012)</u> http://web.undp.org/evaluation/documents/guidance/GEF/UNDP-GEF-TE-Guide.pdf

5 The strategy focus was interventions and support to small and medium-scale gold mining activities that in the absence of the mainstreaming BD project would continue to be carried out with relatively high levels of non-compliance with existing environmental regulations and codes of practice, due in part to insufficient oversight capacity and understanding of the regulations in place. The EPA has played a limited role in monitoring this scale of mining activities, focused primarily on investigating incidents once complaints have been made. Satellite imagery was to be targeted a tool for monitoring the illegal mining activities. Furthermore, inter-institutional coordination and collaboration on monitoring and enforcement has been restricted, and in many cases absent. Miners were viewed as having inadequate capacity to enforce the regulations and to minimize impacts on BD. The cumulative impacts of the many small and medium-scale mining operations has thus lead to negative environmental impacts, including contamination of rivers in the interior, and clearing of lands without reclamation, eliminating habitat for the high levels of BD present in Guyana's hinterland and undermining the regrowth of forests. Areas with high BD value in the absence of this intervention would increasingly be degraded or destroyed, leading to loss of BD, ecological integrity and functionality. The level of BD loss will not even be fully understood as full biological inventories were found not to have been carried out for many of the remote forest areas in which mining activities are taking place.

Under the GEF alternative, the project resources would thus be channeled toward strengthening oversight, monitoring and enforcement of environmental regulations and codes of practice and targeted institutional and individual capacity building for Mining School trainers, field officers and local leaders on the existing environmental regulations and on appropriate measures to preserve BD. Increased EPA oversight; coordination among EPA, GGMC, GFC and GLSC; and increased use of satellite tracking will strengthen enforcement. The production of user-friendly material and the integration of the topic of BD in the curriculum of the Mining School will build the understanding of miners on the regulations in place, on the value of BD and ecosystem services, and how these can be preserved.

⁶ The commitment to the UNCCD entails aiming to halt the ongoing loss of healthy land from land degradation and to restore degraded lands to its productive capacity from all the different drivers; not just from mining alone. There is no specific focus on mining as a driver of LD) See more on the UNCCD's current initiative of Land Degradation Neutrality (LDN) country Target Setting Programme (TSP)

⁷ The project objective was to strengthen monitoring and implementation of BD-friendly practices in Guyana's gold mining sector to reduce BD loss and maintain ecosystem functionality for the benefit of all Guyanese. This was to be achieved through project focus on enhanced monitoring and enforcement of the environmental regulations and codes of practice as a result of a strengthened EPA, increased inter-institutional collaboration and greater satellite tracking. In addition, the training and individual and institutional capacity building was expected to contribute to a greater understanding of the regulatory framework in place and of best practices in the gold mining sector to reduce negative impacts on BD.

⁸⁸ The evaluator reviewed the proposed new curricula (consultancy was performed by the Guyana University) for the Certificate in Surface Exploration and Mining. Courses/Modules and Levels. It contained three levels as follows: Level 1 Mineral, Rocks and Soils in Guyana Use of Cartographic Maps of Guyana Basic First Aid Occupation Health and Safety for Mining Operations; Level 2 Technical Communication Introduction to Geological Processes, Features and Relationships Samples and Measurements Regulations for Environmental Management in the Mining Industry Codes of Practice: Guidelines for the Mining Industry; Level 3 GIS for Exploration and Mining Operations Use of Geological Maps of Guyana Locate and Evaluate Mineral Deposits Mercury Free SMS Gold Mining Plan SMS Mine Operations

¹ http://atlas.media.mit.edu/en/profile/country/guy/

² The projects results also fit within the context of the stated priorities of the new country cooperation framework. The United Nations system,

Jointly with the Governments of the Caribbean, decided in the course of 2015 to move from 6 United Nations Development Assistance Frameworks to a common United Nations Multi-country Sustainable Development Framework (MSDF). National consultations have been conducted in 15 countries to ensure that the development challenges identified in the Common Multi-country Assessment are consistent with national development needs. Four key priority areas will inform the national and regional actions of the United Nations system and partners: (1) a sustainable and resilient Caribbean; (2) a safe, cohesive and just Caribbean; (3) a healthy Caribbean; and (4) an inclusive, equitable and prosperous Caribbean. These national and subregional priorities were validated with 18 Caribbean governments and are fully aligned with the Caribbean Community (CARICOM) Strategic Plan (2015-2019), the SIDS Accelerated Modalities of Action Pathway, and the 2030 Agenda for Sustainable Development2. Specifically, in line with the main approaches of the UNDP Strategic Plan, 2014-2017, UNDP will focus during the next five years on: (a) enhanced public health; (b) inclusive prosperity; (c) natural capital; and (d) democratic governance. This project contribute to all as a cross cutting input but specifically to the goals on natural capital.

⁹ From Bynoe 2017 -Joint monitoring exercises have been conducted between the EPA and the GGMC (and other agencies) over the period under review; however, these have been primarily investigations in response to complaints. Table 3.1 shows the areas and sizes of the areas which have been jointly monitored over the period 2015 to 2017.

Specifically related to the Project, five (5) joint monitoring exercises for compliance were conducted by the GGMC, the EPA and the Ministry of Natural Resources over the period April 18-May 10, 2017

10 The high priority areas for monitoring and enforcement will be identified as part of Output 1.1.

¹¹From Bynoe Report 2017. 'Over the period 2013 to June 2017, the Guyana Mining School and Training Centre Inc. implemented the following courses that implicitly integrate biodiversity considerations:

Introductory Level Training of Prospectors for the Extractive Industry; Intermediate Level Training of Prospectors for the Extractive Industry; Advanced Level Training of Prospectors for the Extractive Industry; Advanced Level Training of Prospectors for the Extractive Industry; and Health and Safety at Placer Mine Site/Codes of Practice. The availability of resources has limited the implementation of these courses; over the period 20132015, there has been only one member of staff attached to the Mining School, while in 2015 training facilities, including computers, were established in two areas, namely Linden and Mahdia, which facilitated the offering of the computer-based course, Intermediate Level Training of Prospectors for Extractive Industry, by the Mining School. With the assistance of a Consultant in 2016, the Mining School was then in a position to offer the course Health and Safety at Placer Mine Site/Codes of Practice.

Faculty of Earth and Environmental Sciences (2017) developed the following six 'stand-alone' Biodiversity courses: Understanding Biodiversity and the Need for Biodiversity Conservation; Mining, Biodiversity Social-Economic Impacts; Best Practices for Mining in relation to Biodiversity Conservation; Integrating Biodiversity Conservation into Sustainable Mining; and An Introduction to GIS and Remote Sensing for Biodiversity Conservation. With the exception of the last course, the tutors of the Mining School would require short-term training prior to implementing them. The Mining School has commenced using the simplified versions of the Codes of Practice (developed by the Faculty of Earth and Environmental Sciences) in conducting its training in 2017 (J. Applewhite-Hercules, interview, June 23, 2017).'