

---

## Terminal Evaluation of the UN Environment Project “Regional Project for Implementing National Biosafety Frameworks in the Caribbean Sub-Region” (GEF ID. 2967)

---



May 2019

**Photos Credits:**

© <https://caribbeanbiosafety.org/about-the-project> (cover page)

This report has been prepared by independent consultant evaluators and is a product of the Evaluation Office of UN Environment. The findings and conclusions expressed herein do not necessarily reflect the views of Member States or the UN Environment Senior Management.

For further information on this report, please contact:

Evaluation Office of UN Environment  
P. O. Box 30552-00100 GPO  
Nairobi Kenya  
Tel: (254-20) 762 3389  
Email: [unenvironment-evaluation-director@un.org](mailto:unenvironment-evaluation-director@un.org)

“Regional Project for Implementing National Biosafety Frameworks in the Caribbean Sub-Region”

GEF ID: 2967

May 2019

All rights reserved.

© (2019) Evaluation Office of UN Environment

## **ACKNOWLEDGEMENTS**

---

This Terminal Evaluation was prepared for the Evaluation Office of UN Environment by Camillo Risoli. The report benefits from a peer review conducted within Evaluation Office of UN Environment.

The Evaluation Office of UN Environment would like to thank the University of West Indies (UWI), particularly Mr Stephan J:G. Gift, Pro Vice Chancellor, School for Graduate Studies & Research (St. Augustine Campus, Trinidad and Tobago) and Mr. Path Umaharan, Director of the Cocoa Research Center and Technical Lead of the Project.

The Evaluation Office is particularly grateful to Ms Michelle John, Regional Project Manager of the Project, for her continuous and precious support and the valuable information provided all along the implementation of the Evaluation.

Special thanks also to the National Project Coordinators / Focal Points that efficiently organised the agenda of the country-visits: Ms Helena Brown and Ms Janil Gore-Francis (Antigua and Barbuda), Ms Angela Alleyne (Cave Hill UWI Campus Barbados) and Mr Michael James (Barbados), Mr Vidyanand Mohabir and Ms Stacy Lord (Guyana), Ms Jannel Gabriel and Ms Francillia Solomon (St. Lucia), Ms Marci Gompers-Small (Suriname), and Ms Marissa Moses and Ms Janelle Smith (Trinidad and Tobago).

The Evaluation Office is grateful to Mr Simeon Collins, Chief Executive Officer of CAHFSA (Caribbean Agr. Health and Food Safety Agency) and to Mr Gavin Peters and Ms Julieth Goldsmith (Animal Health and Plant Health Specialist at CAHFSA) for their availability to meet and exchange with the mission. A special thanks to Mr Ronnie Brathwaite (former Deputy Programme Manager of CARICOM Agric. Development).

The availability of the Representatives of CARDI (Caribbean Agr. Research and Dev. Institute), CARPHA (Caribbean Public Health Agency), IICA (Inter-American Institute for Cooperation in Agriculture) and of Ms Vyjayanthi Lopez (FAO Sub-regional Office for the Caribbean) has to be particularly acknowledged.

We are also grateful to Ms Marianela Araya and Mr Brad Auer (former and current Task Managers), and to Ms Gloritzel Frangakis (Programme Assistant) for their support and valuable information provided during the Evaluation.

### ***Evaluation team***

Camillo Risoli – Lead Consultant

### ***Evaluation Office of UN Environment***

Pauline Marima – Evaluation Manager

Mela Shah – Evaluation Programme Assistant

## ABOUT THE EVALUATION

---

**Joint Evaluation:** No

**Report Language(s):** English

**Evaluation Type:** Terminal Project Evaluations

**Brief Description:** This report is a terminal evaluation of a UN Environment-GEF Regional Project implemented in the Caribbean Sub-region between 2011 and 2018. The Project Objective was “To implement effective, operable, transparent and sustainable National Biosafety Frameworks (NBF) which cater for national and regional needs, deliver global benefits and are compliant with the Cartagena Protocol on Biosafety (CPB) in 12 Caribbean Countries”. The evaluation sought to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UN Environment, the GEF and the executing regional partner University of West Indies (UWI), and the relevant stakeholders (regional and national) of the project.

**Key words:** [Cartagena Protocol, Biosafety, National Biosafety Framework (NBF), Caribbean Region, Regional Project, Regional Policy, Capacity Building, Socio-political and Institutional Sustainability, Project Evaluation, GEF] <sup>1</sup>

---

<sup>1</sup> This data is used to aid the internet search of this report on the Evaluation Office of UN Environment Website

# Table of Contents

<b>TABLE OF CONTENTS</b> .....	<b>IV</b>
<b>LIST OF TABLES AND FIGURES</b> .....	<b>VI</b>
<b>LIST OF ACRONYMS AND ABBREVIATIONS</b> .....	<b>IX</b>
<b>EXECUTIVE SUMMARY</b> .....	<b>X</b>
<b>1 INTRODUCTION</b> .....	<b>1</b>
<b>2 THE EVALUATION</b> .....	<b>2</b>
2.1 Overall approach of the Evaluation .....	2
2.2 Methods and tools for data collection and analysis .....	2
2.2.1 Desk Review .....	3
2.2.2 Exchanges of information and preparation of the visit to the Region .....	3
2.2.3 Field visit in the Sub-region (13/01–01/02/2019) .....	4
2.2.4 On-line questionnaire (survey) .....	6
<b>3 THE PROJECT</b> .....	<b>6</b>
3.1 Context .....	6
3.2 Objectives and components .....	8
3.3 Stakeholders .....	9
3.3.1 Regional Players .....	9
3.3.2 National Players .....	10
3.3.3 International Players .....	11
3.4 Project implementation structure and partners .....	12
3.5 Changes in design during implementation .....	13
3.6 Project financing .....	16
<b>4 THEORY OF CHANGE (TOC) OF THE PROJECT</b> .....	<b>17</b>
4.1 The reconstructed TOC of the project: overview .....	17
4.2 The causal logic from Outputs to Outcomes .....	29
4.3 The pathway from Outcome to Impact .....	32
<b>5 EVALUATION FINDINGS</b> .....	<b>36</b>
5.1 Strategic relevance .....	36
5.1.1 Alignment to the UN Environment Medium Term Strategy (MTS) and Programme of Work (POW) .....	36
5.1.2 Alignment to UN Environment /GEF Strategic Priorities .....	36
5.1.3 Relevance to Regional, Sub-regional and National Environmental Priorities .....	37
5.1.4 Complementarity with Existing Interventions .....	37
5.2 Quality of Project Design .....	38
5.3 Nature of the External Context .....	39

5.4	Effectiveness .....	39
5.4.1	Delivery of outputs .....	39
5.4.2	Achievement of Outcomes .....	46
5.4.3	Likelihood of impact .....	52
5.4.4	Gender and Human Rights mainstreaming in the Project .....	53
5.5	Financial management .....	54
5.5.1	Completeness of financial information .....	55
5.5.2	Communication Between Finance and Project Management Staff .....	56
5.5.3	Compliance with UN financial management standards and procedures .....	56
5.6	Efficiency .....	58
5.7	Monitoring and Reporting .....	60
5.7.1	Monitoring design and budgeting .....	60
5.7.2	Monitoring implementation .....	61
5.7.3	Project reporting .....	62
5.8	Sustainability .....	64
5.8.1	Socio-political sustainability .....	64
5.8.2	Financial sustainability .....	64
5.8.3	Institutional sustainability .....	64
<b>6</b>	<b>CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>66</b>
6.1	Conclusions .....	66
6.1.1	Evaluation Criteria and Ratings Table .....	70
6.2	Lessons Learned .....	73
6.3	Recommendations .....	74
	<b>ANNEXES .....</b>	<b>76</b>
	ANNEX 1: RESPONSE TO STAKEHOLDER COMMENTS RECEIVED BUT NOT (FULLY) ACCEPTED BY THE EVALUATOR .....	77
	ANNEX 2: TERMS OF REFERENCE FOR THE EVALUATION .....	79
	ANNEX 3: LIST OF PEOPLE MET .....	99
	ANNEX 4: SUMMARY CO-FINANCE INFORMATION AND STATEMENT OF PROJECT EXPENDITURE BY ACTIVITY .....	103
	ANNEX 5: EVALUATION BRIEF .....	104
	ANNEX 6: LIST OF THE DOCUMENTS OFFICIALLY PUBLISHED AND DISTRIBUTED BY THE PROJECT ... ..	105
	ANNEX 7: LIST OF DOCUMENTS CONSULTED .....	106
	ANNEX 8: ON-LINE QUESTIONNAIRE .....	108
	ANNEX 9: CAPACITY BUILDING ACTIVITIES .....	110
	ANNEX 10: TRACKING TOOLS COMPARATIVE TABLES .....	111

ANNEX 11: LIST OF COUNTRY MISSIONS .....	115
ANNEX 12: BRIEF CV OF THE CONSULTANT .....	116
ANNEX 13: QUALITY ASSESSMENT OF THE EVALUATION REPORT .....	117

### **List of Tables and Figures**

Table 1: Project Components and Outcomes from the Logframe .....	8
Table 2: National Executing Agencies / Country .....	11
Table 3: Budget (GEF) at design and expenditures by UN Environment Components (September 2018) .....	16
Table 4: Co-financing Table (GEF Projects only) (updated September 2018) .....	17
Table 5: Comparison of Results Framework.....	19
Table 6 : Summary of main Drivers and Assumption by Direct Outcome .....	31
Table 7: Alignment of the Project to UN Environment Medium-Term Strategy (MTS) 2010-2013 and 2014-2017 .....	36
Table 8: Financial Management Table .....	56
Table 9: Evaluation Criteria and Ratings Table .....	70
Figure 1: Diagram of Reconstructed Theory of Change (Pathway) from Outputs to Direct Outcomes to Main Project Outcome .....	34
Figure 2: Diagram of Reconstructed TOC from Project Outcome to Impact .....	35

## Project Identification Table

<b>GEF Project ID:</b>		GEF ID: #2967	
<b>Implementing Agency:</b>	UN Environment	<b>Executing Agency:</b>	University of West Indies (UWI) with other regional collaborators and National Executing Agencies
<b>Sub-programme:</b>	Environmental Governance	<b>Expected Accomplishment(s):</b>	(MTS 2010-2013) Governance EA(b): States increasingly implement their environmental obligations and achieve their environmental priority goals, targets and objectives through strengthened laws and institutions.  (MTS 2014-2017) Environmental Governance EA2: The capacity of countries to develop and enforce laws and strengthen institutions to achieve internationally agreed environmental objectives and goals and comply with related obligations is enhanced.
<b>UN Environment approval date:</b>	22/09/2011	<b>Programme of Work Output(s):</b>	
<b>GEF approval date:</b>	April 2011	<b>Project type:</b>	Full Size Project
<b>GEF Operational Programme #:</b>	GEF IV SP6 (Biosafety)	<b>Focal Area(s):</b>	Biodiversity
		<b>GEF Strategic Priority:</b>	BD 3
<b>Expected start date:</b>	June 2011	<b>Actual start date:</b>	October 2011
<b>Planned completion date:</b>	Jun 2015	<b>Actual completion date:</b>	30/06/2018 (technical completion according Amendment n.3 to the PCA of 02/2017), then postponed to 31/12/2018. Admin closure at June 2019.
<b>Project Preparation Grant - GEF financing:</b>	110,502 USD	<b>Project Preparation Grant - co-financing:</b>	111,002 USD
<b>Planned project budget at approval:</b>	12,870,075 USD	<b>Actual total expenditures reported as of September 2018:</b>	11,776,953.27 USD
<b>GEF grant allocation:</b>	5,972,493 USD (46%)	<b>GEF grant expenditures reported as of September 2018:</b>	5,665,829.58 USD (48%)
<b>Expected Medium-Size Project/Full-Size Project co-financing:</b>	6,897,582 USD (54%)	<b>Secured Medium-Size Project/Full-Size Project co-</b>	6,111,123.69 USD (52%)



		<b>financing (September 2018):</b>	
<b>First disbursement:</b>	October 2011	<b>Date of financial closure:</b>	Planned June 2019
<b>No. of revisions:</b>	9	<b>Date of last revision:</b>	01/01/2018 (Accepted in June 2018)
<b>No. of Regional Steering Committee meetings:</b>	9	<b>Date of last/next Steering Committee meeting:</b>	<b>Last:</b> December 2017
			<b>Next:</b>
<b>Mid-term Review/ Evaluation (planned date):</b>	October 2013	<b>Mid-term Review/ Evaluation (actual date):</b>	October 2014
<b>Terminal Evaluation (planned date):</b>	September 2018- March 2019	<b>Terminal Evaluation (actual date):</b>	September 2018- March 2019 (Field Visit: January 2019)
<b>Coverage - Country(ies):</b>	12 countries: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago	<b>Coverage - Region(s):</b>	Caribbean
<b>Dates of previous project phases:</b>	na	<b>Status of future project phases:</b>	na

## **List of Acronyms and Abbreviations**

ANUBIS	A New UNEP Biosafety Information System
BCH	Biosafety Clearing-House
CAHFSA	Caribbean Agricultural Health and Food Safety Agency
CARDI	Caribbean Agricultural Research and Development Institute
CARICOM	Caribbean Community
CARPHA	Caribbean Public Health Agency
CBD	Convention on Biological Diversity
CNA	Competent National Authority
EOU	Evaluation Office of UN Environment
FAO	Food and Agriculture Organisation (of UN)
GEF	Global Environment Facility
ICGEB	International Center for Genetic Engineering and Biotechnology
IICA	Inter-American Institute for Cooperation in Agriculture
M&E	Monitoring and Evaluation
NBF	National Biosafety Framework
NEA	National Executing Agency
NGO	Non-Governmental Organisation
ProDoc	Project Document
RPM	Regional Project Manager
SIS	Small Island State
TE	Terminal Evaluation
TM	Task Manager (of UN Environment)
TOC	Theory of Change
TOR	Terms of Reference
UWI	University of West Indies

## Executive Summary

1. This is the final report of the Terminal Evaluation (TE) of the “Regional Project for Implementing National Biosafety Frameworks in the Caribbean Sub-Region” (GEF ID 2967, fused with GEF ID 3735) that was approved in April 2011 for a duration of 4 years (2011-15) with a total budget of 12,870,075 USD, the 46% of which represents the GEF allocation (5,972,493 USD) and the 54% the Co-financing (6,897,582 USD).
2. Three subsequent amendments to the Project Cooperation Agreement (in 2015, 2016 and 2017) granted three no-cost extensions for a total of 45 months, shifting the Official End of the Project (Technical Completion) the 31/12/2018 and the planned Administrative Closure the 21/06/2019.
3. The Evaluation took place in the period between November 2018 to March 2019 and included a mission to the Caribbean Region from 13/01/2019 to 02/02/2019 during which six countries were visited. The Evaluation Team consisted of one consultant specialist of projects evaluation in the environmental sector (See Annex 12) working under the methodological guidance of the Evaluation Office of UN Environment (EOU).
4. The Project was conceived and implemented to support the establishment of an effective National Biosafety Framework (NBF) in each participating country, coupled with a strong emphasis on Sub-regional cooperation, based on the assumptions that effective management of the risks associated with modern biotechnology should be tackled in a coordinated and coherent way throughout the whole sub-region and that economies of scale would be possible, hence increasing the overall efficiency of the Project and of Biosafety Management in the Caribbean.
5. The Project Objective defined in the Logical Framework was “To implement effective, operable, transparent and sustainable National Biosafety Frameworks (NBF) which cater for national and regional needs, deliver global benefits and are compliant with the Cartagena Protocol on Biosafety (CPB) in 12 Caribbean countries”. The 12 countries that participated to the Project were: Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago.
6. The University of West Indies (UWI), through its Campus in Trinidad and Tobago, was the Lead Executing Agency (LEA) that coordinated the whole Project, while in each participating country a National Executing Agency (NEA) was identified and responsible for the implementation of the Project at national level. In most of the cases the NEA coincided with the Competent National Authority (CNA) for the implementation of the Cartagena Protocol on Biosafety (see chapter 3.3).
7. The design of the Project included five components (see chapter 3.2) and a large number of results and activities at regional and national levels. Component 1 was a totally country-driven component envisaging the full implementation of 12 NBFs, while Component 5 was of fully regional nature and considered those all-embracing activities needed to build regional support mechanisms for NBFs implementation.
8. Components 2, 3 and 4 were to be executed concurrently at both the national and regional level to address different issues, namely: the enhancement of overall capacities for detection, risk assessment, management and monitoring of LMOs (Comp. 2), training and capacity building of human resource at the national and regional level (Comp. 3) and the

setting and improvement of biosafety information systems in the region to benefit both the general public and decision-makers (Comp. 4).

9. The Project was complex (see Figure 1 in chapter 4) and demanding for several reasons not only related to its regional scope, but also to the novelty and multidisciplinary feature of Biosafety and to the uneven, but generally low, baseline situation in terms of national capacities (particularly, the solidity of the institutional environment and the presence of a critical mass of human resources). The “one size fits all” approach of the Project Design identified standard results to be attained for all the 12 countries (e.g. 12 National Policies, 12 National Laws, etc.) and showed patently inadequate since the beginning, in view of the heterogeneous mix of countries and their uneven capacity of “inputs absorption” and “outputs delivery” (see chapter 5.2 and Lessons Learned in chapter 6.2).

10. As discussed in chapter 3.5, the adequacy of the University of West Indies (UWI) as Lead Executing Agency (LEA) was also strongly challenged by the complexity of responsibilities and functions related to its regional, coordinating role. Although the option of UWI as LEA was the best possible option, the University did not have any experience in managing a demanding GEF Full Size Project of around 12M USD and, as already remarked by the Mid-Term Evaluation, “the challenges of working with a group of sovereign governments were underestimated”. There were also problems of unclear definition of strategy, roles and responsibilities related to Project implementation, within the University.

11. As a result, as discussed in chapter 3.5, very few tangible results were obtained in the first three years of the Project and the Mid-Term Evaluation (October 2014) estimated that, with just one year of implementation left, only around 25% of the Outputs could be considered delivered or likely to be delivered by the end of the Project. The Management response put in place by the Project with the support of the Implementing Agency and the Regional Steering Committee included the integration of an external player (the International Centre for Genetic Engineering and Biotechnology, ICGEB) as a substantive “service provider” to catch up with the accumulated delays in outputs delivery in several aspects, particularly training and capacity/institution building.

12. As a result of the above, the Project gained momentum and significant outputs were satisfactorily delivered at national and regional level (see chapter 5.4.1). A large and diversified programme of training and capacity building was organised and implemented, allowing to widespread the “fundamentals” of Biosafety throughout the Region. The quality and quantity of the Outputs produced is remarkable (including a Master Course in Biosafety that graduated 17 students so far). A network of national and regional laboratories for GMOs detection was set, a Biosafety Regional Policy was prepared and eventually approved at CARICOM level in 2017, a Model Biosafety Legislation was drafted as well, at the regional level, and the Caribbean Centre for Biosafety (CCB) was conceived and established for being the virtual information hub (a possible “regional” BCH) to provide access to a range of information resources for the countries of the region.

13. At national level, outputs delivery was uneven and strongly challenged by different degrees of interest and level of response and participation from the 12 participating countries. Although all the countries significantly progressed in the formulation, revision and adoption of their Biosafety regulatory regimes, only few of them have been able so far to fully deliver the most ambitious outputs, like a National Policy or a National Law on Biosafety (chapter 5.4.1).

14. The achievement of the five expected Direct Outcomes (see chapter 5.4.2) was uneven and concerns exist regarding the sustainability of the results obtained so far. Although Biosafety Governance has overall improved in the Region, no country can presently claim having a fully operational NBF. The effectiveness of the large capacity building programme implemented is also challenged by the reduced applicability of the training in the job, due to the limited extent of Biosafety activities in most of the countries.

15. The role of the University of West Indies (UWI) in coordinating and delivering capacity building activities was much lower than expected. The large use of external (international) training service-providers is raising concerns regarding the sustainability of this “model”, since no significant steps have been given by UWI and the Project to discuss, find out and test alternative and more sustainable and affordable models of capacity building (see chapter 5.4.2).

16. Following the approval by CARICOM of the Biosafety Regional Policy in 2017, the Caribbean Agricultural Health and Food Safety Agency (CAHFSA) was identified by CARICOM as its Regulatory Agency for Biosafety, which was a substantive step in terms of institutional anchorage of Biosafety at regional level (see chapter 5.4.2). This has allowed the opening of a dialogue between the University of West Indies (UWI) and CAHFSA regarding the transition of responsibilities from UWI to CAHFSA and the modalities of future cooperation, issues that are still “on the table” and in need of further elaboration and operationalisation (see chapter 5.8.3).

17. CAHFSA, though created by the Member States of CARICOM in 2010, was eventually established in 2014 with the appointment of a Chief Executive Officer and the opening of its Headquarter in Paramaribo (Suriname) in December 2016. Therefore, the Institutional Sustainability (see chapter 5.8.3) of Project results crucially depends on the strengthening and consolidation of CAHFSA in terms of human resources and capacity building, on the setting of effective mechanisms of coordination and partnership with UWI and other regional/international players, on the establishment with the Competent National Authorities of appropriate mechanisms of coordination and communication, and on the implementation of a resource mobilisation strategy to cope with the pressing need of financial resources (see chapter 5.8.2, Financial Sustainability).

18. CAHFSA and UWI did jointly define in December 2017 a Road-Map for the implementation of the Biosafety Policy in the Region, which is imperative to be made operational through some urgent measures and a short / medium-term plan of action (see Recommendations in chapter 6.3, synthetically reported here below at the end of this Executive Summary).

19. The Terminal Evaluation has formulated three (3) lessons learned based on the findings of the evaluation, as well as four (4) recommendations (refer to chapter 6.2 and 6.3), summarised as follows:

**Lesson 1.** National Projects in small countries may largely benefit from a Regional Component that can implement joint activities or common procedures (e.g. a network of laboratories, joint trainings, production of communication tools).

**Lesson 2.** The “one size fits all” approach in Regional and Sub-regional Projects can impact negatively on the effectiveness (attainment of results) and time-efficiency of the Project.

**Lesson 3.** Particularly in Projects with regional and national dimensions, the appropriate sequencing of the activities and of outputs delivery at regional and national level is a relevant aspect that may affect Project's effectiveness and efficiency.

**Recommendation 1:** It is highly recommended that UWI and CAHFSA prepare, formalise and implement a Short-Term Operational Plan (max. 6 months) to ensure:

- a) the progressive and smooth transition of responsibilities and competencies from UWI to CAHFSA;
- b) the modalities of coordination between CAHFSA and UWI in the new institutional framework of Biosafety in the Region.

**Recommendation 2:** It is strongly recommended that UWI and CAHFSA urgently address the following aspects:

- a) Transfer of the responsibility of the Biosafety website (former Project website) to CAHFSA and possible hosting in CAHFSA website;
- b) Clear definition of responsibilities, functions and tasks between CAHFSA and UWI regarding the functioning of the virtual Caribbean Centre for Biosafety put in place by the Project;
- c) Full establishment of the Regional Network of GMOs Laboratories (pending MoUs to be signed between the National laboratories and UWI);
- d) Identification of technical, material and financial resources needed for the implementation of the points above.

**Recommendation 3:** It is strongly recommended that CAHFSA prepare a short-medium term action plan to address the following aspects:

- a) Completing the existing CAHFSA management team with a specialist in Food Safety with responsibility on Biosafety;
- b) Strengthening CAHFSA technical capacity in Biosafety Management through a specific capacity building programme of CAHFSA staff;
- c) To implement a piloting phase of regional coordination of CAHFSA on the priority Biosafety tasks identified in the Road-Map (e.g. the finalisation of the Model Biosafety Legislation, establishment of the Regional Biosafety Risk Assessment Working Group, setting and implementation of a communication/coordination strategy between CAHFSA and the Competent National Authorities, among others);
- d) Definition of a strategy for Resource Mobilisation at different levels to ensure Biosafety financial sustainability at regional and national levels.

**Recommendation 4:** It is recommended UWI to diversify its training offer in Biosafety through:

- the design and implementation of certificate-level modules / courses on Biosafety;
- mainstreaming biosafety courses into existing modular courses and programmes, such as the MSc in Biotechnology and the MSc in Genetic Resources Management and Utilisation.

20. The project performance against evaluation criteria was rated against a six-point scale ranging from highly satisfactory to highly unsatisfactory. The report details the assessments made based on the guidelines provided in the Terms of Reference for the evaluation. The table below provides the summarized ratings of the different criteria (the detailed Table is in chapter 6.1, Conclusions)

### Summary of the Evaluation Criteria and Ratings Table

<b>Criterion</b>	<b>Rating</b>
<b>A. Strategic Relevance</b>	HS
<b>B. Quality of Project Design</b>	MU
<b>C. Nature of External Context</b>	Unfavourable
<b>D. Effectiveness</b>	MS
<i>1. Achievement of outputs</i>	S
<i>2. Achievement of direct outcomes</i>	MS
<i>3. Likelihood of impact</i>	MU
<b>E. Financial Management</b>	S
<b>F. Efficiency</b>	MU
<b>G. Monitoring and Reporting</b>	S
<b>H. Sustainability</b>	MU
<i>1. Socio-political sustainability</i>	MU
<i>2. Financial sustainability</i>	MU
<i>3. Institutional sustainability</i>	ML
<b>I. Factors Affecting Performance</b>	MS
<i>1. Preparation and readiness</i>	MU
<i>2. Quality of project management and supervision</i>	S
<i>3. Stakeholders participation and cooperation</i>	S
<i>4. Responsiveness to human rights and gender equity</i>	MU
<i>5. Country ownership and driven-ness</i>	MS
<i>6. Communication and public awareness</i>	S
<b>Overall project rating</b>	<b>MS</b>

# 1 Introduction

21. In its capacity as an Implementing Agency of the Global Environmental Facility (GEF), UN Environment has been providing administrative and technical assistance to countries participating in the Cartagena Protocol on Biosafety (CPB) for the development and implementation of National Biosafety Frameworks (NBF). The frameworks are a combination of policy, legal, administrative and technical instruments enabling the countries to manage the safe transfer, handling and use of Living Modified Organisms (LMOs)<sup>2</sup> from modern biotechnology.

22. This is the final report of the Terminal Evaluation (TE) of the “Regional Project for Implementing National Biosafety Frameworks in the Caribbean Sub-Region”<sup>3</sup> (GEF ID 2967, fused with GEF ID 3735) that was approved in April 2011 for a duration of 4 years (2011-15) with a total budget of 12,870,075 USD, the 46% of which represents the GEF allocation (5,972,493 USD) and the 54% the Co-financing (6,897,582 USD). The Project was prepared through a Project Preparation Grant (PPG) signed in 2008 for a total amount of 221,504 USD, partially funded by GEF (110,502 USD).

23. Three subsequent amendments to the Project Cooperation Agreement (in 2015, 2016 and 2017) granted three no-cost extensions for a total of 45 months, shifting the Official End of the Project (Technical Completion) the 31/12/2018 and the planned Administrative Closure the 21/06/2019.

24. The project is a Full Size Project (FSP) financed through GEF-4 mechanism and belongs to GEF Biodiversity Focal Area. It is relevant to GEF Strategic Programme 6 Biodiversity (BD-SP6): Building Capacity for the Implementation of the Cartagena Protocol on Biosafety. The Project makes part of UN Environment Biennial Programme of Work (MTS 2010-2013 and MTS 2014-2017), as discussed in chapter 5.1.1.

25. As described in chapter 3.3 (Stakeholders), a designated National Executing Agency (NEA) was expected to coordinate and steer Project activities in each of the 12 participating countries, whereas, at Regional level, a Lead Executing Agency (LEA) was identified to coordinate the whole Project. This function was carried out by the University of West Indies (UWI), namely the St. Augustine Campus in Trinidad and Tobago.

26. The Evaluation took place in the period between November 2018 to March 2019 and included a mission to the Caribbean Region from 13/01/2019 to 02/02/2019. The Evaluation Team consisted of one consultant specialist of projects evaluation in the environmental sector (See Annex 12) working under the methodological guidance of the Evaluation Office of UN Environment (EOU).

---

<sup>2</sup> In this Report, the terms LMO (Living Modified Organism) and GMO (Genetically Modified Organism) are considered synonymous and indifferently used.

<sup>3</sup> The “Caribbean region” is often considered as a Sub-region of the Latin-America and Caribbean Region. In the context of this Project (and of the Evaluation) the term “Caribbean Region” or simply “the Region” is used to indicate the Caribbean sub-region.



## **2 The Evaluation**

### **2.1 Overall approach of the Evaluation**

27. In line with the UN Environment Evaluation Policy and Evaluation Manual and following the Guidelines for GEF Agencies on Conducting Terminal Evaluations, the Terminal Evaluation (TE) has been undertaken upon completion of the Project to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation had two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback and knowledge sharing through results and lessons learned among UN Environment, the GEF, the Regional and National Executing Agencies and the regional and national partners.

28. The report follows the format for Terminal Evaluations provided by the UN Environment Evaluation Office. According to the UN Environment evaluation methodology, most criteria have been rated on a six-point scale as follows: Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); Highly Unsatisfactory (HU). Ratings are provided at the end of the assessment of each evaluation criterion (Chapter 5: Findings) and the complete ratings table is included under the Conclusions section (6.1).

29. As requested by the UN Environment methodology for Terminal Evaluations, an Inception Report was produced at the beginning of the mission, containing a review of the project context, of the quality of project design, a draft reconstructed Theory of Change (TOC) of the project, the evaluation framework and a tentative evaluation schedule. The Inception Report underwent a Peer Review at the UN Environment Evaluation Office and was shared with the Project Team.

30. The Evaluation has fostered a participatory approach so as to capture a wide range of findings and opinions from different stakeholders at national and regional level. Quantitative and qualitative methods and indicators were used, taking into account that the projects were expected to mostly deliver institutional and capacity building outputs and outcomes.

31. Being so, quantitative outputs were assessed against their quality and effectiveness, hence their capacity to drive and sustain changes at higher level of objectives. That was possible by triangulating the information (reports, etc.) with the country visits, through personal interviews or group semi-structured interviews with stakeholders, including those who have benefited from the training and capacity building activities. The process for the attainment of Project's results has also been assessed, to capture the level of participation and ownership of the different stakeholders involved, as well as to better understand the reasons for successes or failures.

### **2.2 Methods and tools for data collection and analysis**

32. The main methods and tools used in the Evaluation are outlined here below and are described in detail in the following chapters:

- Desk Review of all project documents and tools the consultant has access to (see list in Annex 7);
- Exchanges (e-mail) prior to the field visit with the Project Team at Regional level, the Task Manager, the former National Project Coordinators of the Project and / or the National Executing Agencies and CPB Focal Points of the countries to be visited, as well as with CARICOM (The Caribbean Community) and CAHFSA (Caribbean Agricultural Health and Food Safety Agency);
- Field-visits to a group of countries selected according to criteria set in agreement with the Project Team and the TM (see chapter 2.2.2);
- A questionnaire (survey) sent to the main national stakeholders (through existing lists provided by the Project) in order to capture perceptions and opinions particularly from the countries not visited during the Evaluation.

### **2.2.1 Desk Review**

33. The Desk Review included the main documents posted in the UN Environment Biosafety Information System (ANUBIS), with particular attention to:

- Yearly Project Implementation Reviews (PIR) from June 2013 to June 2018;
- Mid-Term Evaluation report (October 2014);
- Final Reports of the 12 National Projects (overall produced at the end of 2016);
- GEF “Tracking Tools” prepared by the 12 participating countries at the Beginning, Mid-Term and End of the National Projects;
- Report of the Closure Meeting (April 2018) of the National Projects (Component 1 of the Regional Project);
- Reports (Outputs) of the four Sub-contracts with the International Center for Genetic Engineering and Biotechnology (ICGEB), from April 2015 to April 2018;
- Report “Assessment of Capacity in the Caribbean Sub-Region in Support of Biosafety Systems” (D. Jacobs, Institutional Development Consultants, February 2017);
- Report “Project Business Plan” prepared by ICGEB under the 3<sup>rd</sup> Contract (2017);
- “Project Achievement Report” prepared by ICGEB under the 3<sup>rd</sup> Contract (2017);
- Proceedings of the main Training Workshops implemented by the Project (2015-2018)
- Reports of the country-visits of the Regional Project Manager (2015-2018);
- Minutes and Reports of the Regional Steering Committees (2015, 2016, 2017);
- Minutes / decisions of the Meeting UWI / CAHFSA (December 2017) regarding implementation of a road map for the regional biosafety policy;
- The Final Report of the Project (January 2019).

### **2.2.2 Exchanges of information and preparation of the visit to the Region**

34. Exchanges took place prior to the field visit with the Project Team at Regional level and the TM to focus on the main methodological aspects of the Evaluation, particularly the Evaluation Framework set in the Inception Report, and the definition of the criteria for the selection of the countries to be visited and of the regional stakeholders to be met.

35. It was agreed upon that: a) five/six countries should be visited, by including both Small Island States (SIS) and Mainland States; b) both Barbados and Trinidad and Tobago UWI Campuses should be visited, and c) some CARICOM agencies and other regional players should also be met.

36. Eventually, the six countries included in the visit were (criteria for selection between parentheses): Antigua and Barbuda (SIS), Barbados (SIS, UWI Campus, FAO Sub-regional Office), Guyana (mainland state and Caribbean Community-CARICOM Head-quarter), St. Lucia (SIS), Suriname (mainland and CAHFSA, Caribbean Agricultural Health and Food Safety Agency); Trinidad and Tobago (Regional Project Team, UWI Campus, the Caribbean Agricultural Research and Development Institute-CARDI, the Caribbean Public Health Agency-CARPHA and the Inter-American Institute for Cooperation on Agriculture-IICA).

37. Subsequently, contacts were established with the (former) National Project Coordinators of the Project and / or the National Executing Agencies and the CPB Focal Points of the six countries to be visited, as well as with CARICOM (The Caribbean Community) and CAHFSA (Caribbean Agricultural Health and Food Safety Agency), i.e. the two Regional Institutions with whom the Project had already set some collaboration. The purpose and the objective of the terminal Evaluation were discussed and exchanged with all these stakeholders and the final agenda of the visit was finalized, with the active participation of the countries and of the regional institutions.

38. E-mail exchanges occurred with the former and current Regional UN Environment Task Manager for Biosafety, currently based, respectively, in Montreal and San Francisco. The Programme Assistant based in the Regional UN Env. Office in Panama was also contacted and provided punctual and relevant support all along the evaluation. A final de-briefing at the end of the country visits was hold with the current TM via skype. The Group Leader Biosafety of the International Center for Genetic Engineering and Biotechnology (ICGEB), involved in the capacity / institution building activities in support of the Project, was also approached by email.

### **2.2.3 Field visit in the Sub-region (13/01–01/02/2019)**

39. The country visits lasted one day (Antigua and Barbuda), two days (Barbados, Guyana, St. Lucia and Suriname) and five days (Trinidad and Tobago) and a total of 67 people (45F, 22M) were met and interviewed, either individually, in small groups (2-3 people) or in larger groups (up to 8-10 people).. The summarized Final Report of the National Projects (Power Point presentation) was usually used as a guiding instrument for the discussion with the National Stakeholders. The list of people met is in Annex 3.

40. National Stakeholders met included:

- The (former) National Project Coordinators of the six countries (met individually and in group);
- The national CPB / CBD / BCH Focal points;
- the representatives of the main Governmental Institutions participating in the National Biosafety Committees, notably the Environmental Protection Agencies or the Sustainable Development and Environment Departments, the Ministry of Agriculture, the National Bureaus of Standards, the Ministry of Legal Affairs and Custom Officers, among others;

- Representatives of environmental NGOs and religious groups (in S. Lucia);
- Representative of Private Sector (Supermarket Chain, in S. Lucia);
- A group of three teachers of the Master Course in Biosafety at the UWI Campus in Barbados;
- Six former students of the Master in Biosafety (met in Antigua and Barbuda, Barbados, Guyana and St. Lucia) and a group of four current students met at UWI Campus in Barbados.

41. The Evaluation has extensively worked with the Regional Project Team (the Regional Project Manager and the Technical Lead) at the UWI Campus in Trinidad and Tobago. Main Project outputs and the SWOT analysis prepared by the Project Manager were discussed, as well as the main achievements at Regional level and Sustainability issues (prepared by the Technical Lead). The Consultant prepared a synthesis document of "Preliminary Notes for the de-briefing" that was shared and analyzed with the Project Team in the conclusive meeting of the visit. Project Sustainability and the way-forward were at the core of the final meeting.

42. The Evaluation also met and exchanged with the Pro Vice Chancellor Graduate Studies and Research at UWI Campus particularly focusing on the challenges ahead and with the Administration Office (Bursary) of the University to understand the main difficulties met in managing the funds of the Project.

43. The meetings with Regional Institutions included:

- The team of the Caribbean Agricultural Health and Food Safety Agency (CAHFSA) met in Paramaribo / Suriname). CAHFSA is currently the CARICOM regulatory agency in charge of Biosafety at regional level (see chapter 3, Stakeholders, and chapter 5.8.3, Institutional Sustainability);
- The representatives of the Caribbean Agricultural Research and Development Institute (CARDI) and of the Caribbean Public Health Agency (CARPHA) based in Port of Spain / Trinidad and Tobago;
- The Deputy Programme Manager (Agriculture Development) of CARICOM in Georgetown / Guyana (outgoing);
- The FAO Plant Production and Protection Officer (a.i. Sub-regional Coordinator) of the FAO Sub-Regional Office for the Caribbean in Bridgetown, Barbados.

44. Overall, the field visit throughout the Region has been extremely useful, allowing a close view of a representative sample of countries owning different perspectives, priorities and visions regarding Biosafety. The visit has also permitted to better understand the complexity of the Project and the many management and administrative challenges that the Regional Project Manager and the National Executing Agencies faced, particularly at the beginning of the Project. The meetings with the Regional Institutions and Agencies provided relevant insights to the regional dimension and challenges of the Project, and to the regional sustainability of the Project results.

45. Nevertheless, only half of the participating countries were directly visited and, for those not visited, the only "first-hand", available information was their "final report" (end of 2016) and the GEF "Tracking Tools" (see chapter 2.2.1, Desk Review).

46. Due to the fragmentation and dispersion of the countries, there are objective methodological limitations in the process of a Regional Evaluation, as well as complex problems of organization and logistic to be solved for fielding the evaluation (availability of stakeholders, flights availability, etc.).

#### **2.2.4 On-line questionnaire (survey)**

47. As mentioned above, while a final decision regarding the countries to be visited was done, a questionnaire (survey) was sent to a selected list of representatives of all the 12 countries participating to the Project. The list of the recipients of the Questionnaire was prepared by merging the List of the National Focal Points of the Project (representing the National Executing Agencies), the list of the National Project Coordinators (appointed by the Nat. Executing Agencies to manage the National Projects) and the list of the countries' participants to the Closure Meeting of the National Projects (April 2018), all the lists being provided by the Regional Project Manager.

48. The total number of the survey's recipients was 29 and 10 people (8 Female and 2 Male) answered to the questionnaire. Although the response rate (34%) is the usual average rate in the on-line surveys, the great majority of the respondents were from the countries eventually visited and only one respondent was from a non-visited country. Therefore, in terms of supplementary information regarding non-visited countries, the questionnaire was of little use. Nevertheless, the answers received and, notably, the comments contained in their answers showed their interest and the originality of their feed-back. The survey has been processed (see Annex 8) and some of the opinions and perceptions captured have also been inserted in specific boxes along the report to provide the reader with a first-hand opinion from the stakeholders.

## **3 The Project**

### **3.1 Context**

49. The Caribbean region, with its diverse ecosystems (marine, terrestrial and freshwater), is one of the world's biodiversity hotspots. Its rich biological diversity is particularly vulnerable due, on the one hand, to the acknowledged fragility of small-island ecosystems and, on the other hand, to the encroachment into areas of forest by commercial agriculture "based mainly on the use of external inputs, notably crop species of which LMO-types are commercially available and which could be introduced unintentionally and or accidentally"<sup>4</sup>.

50. Interest and projects for research and development of Biotechnology in the region do exist and, as remarked in the Project Document, "...there is potential for Caribbean countries, particularly Jamaica and Trinidad & Tobago, to release their own LMOs. In the short and mid-term, Caribbean countries will largely continue to import LMOs foods...". The Caribbean Sub-region is actually highly depending on imported food for consumption, mainly from Unites States.

---

<sup>4</sup> Project Identification Fiche (PIF), GEF, 2008

51. Regional integration has been progressing through the Caribbean Community (CARICOM)<sup>5</sup> and its institutions, like the Secretariat (based in Guyana), the Caribbean Court of Justice, the CARICOM Single Market and Economy (CSME), the Caribbean Agricultural Health and Food Safety Agency (CAHFSA), the Caribbean Agricultural Research and Development Institute (CARDI), the Caribbean Public Health Agency (CARPHA) and the CARICOM Regional Organisation for Standards and Quality (CROSQ), among others.

52. The ultimate goal of the CSME is “to provide the foundation for growth and development through the creation of a single economic space for the production of competitive goods and services”<sup>6</sup>. In this context, as already observed by the Mid-Term Evaluation of the Project<sup>7</sup>, “the importance of having operational biosafety frameworks that follow consistent policy and regulatory guidelines across the sub-region is reinforced by trans-boundary LMO movements to Caribbean countries that import GM foods” and “there are frequent trans-shipments in Caribbean waters, which raise the issue of LMOs in transit that aren’t subject to the Cartagena Protocol on Biosafety (CPB)’s Advanced Informed Agreement”.

53. As emphasised in the Project Documents, although not all Caribbean countries concur on the magnitude and consequences of the potential threats of modern biotechnology, all coincide on the relevance of having biosafety systems in place. In fact, the need for a coherent biosafety risk management system and an effective National Biosafety Framework (NBF) in each Caribbean country supported by regional services and mechanisms, has been increasingly recognized.

54. It is with this recognition, that the countries of the Caribbean Community participated in the GEF/UNEP global project on “Development of National Biosafety Frameworks”, which was completed in 2009 with the preparation of the National Biosafety Frameworks (NBF).

55. Through that project, some of the countries adopted an official policy and prepared some legal instruments for biosafety or developed technical and administrative guidelines, while others formulated recommendations for implementing their biosafety frameworks and proposed specific actions, time frames and follow-up activities. In 2009, the CARICOM's Council for Trade and Economic Development (COTED) established and mandated a Technical Working Group as well, to formulate a “Regional Biotechnology and Biosafety Policy” for preparing the cooperative coordination process for biosafety and biosecurity, as discussed in chapter 5.4.1.

56. The current “Regional Project for Implementing National Biosafety Frameworks in the Caribbean Sub-Region” was, therefore, conceived and implemented to support the establishment of an effective NBF in each participating country, coupled with a strong emphasis on Sub-regional cooperation, based on the assumptions that effective management of the risks associated with modern biotechnology should be tackled in a coordinated and coherent way throughout the whole sub-region and that economies of scale would be

---

<sup>5</sup> The Caribbean Community (CARICOM) is a grouping of twenty countries: fifteen Member States and five Associate Members and is home to approximately sixteen million citizens (<https://caricom.org>).

<sup>6</sup> <https://caricom.org/caricom-single-market-and-economy>

<sup>7</sup> Mid-Term Evaluation Report, UN Environment Evaluation Office, 2014

possible, hence increasing the overall efficiency of the Project and of Biosafety Management in the Caribbean.

### 3.2 Objectives and components

57. The Project Objective defined in the Logical Framework was “To implement effective, operable, transparent and sustainable National Biosafety Frameworks (NBF) which cater for national and regional needs, deliver global benefits and are compliant with the Cartagena Protocol on Biosafety (CPB) in 12 Caribbean countries”.

58. The Project was conceived with five components. The following table presents each Component and expected Outcomes as outlined in the Logical Framework (Logframe) of the Project.

**Table 1: Project Components and Outcomes from the Logframe**

<b>Project component</b>	<b>Expected Outcomes</b>
<p><u>Component 1:</u> Establishment of National Legal Frameworks for Biosafety / Biotechnology. Country-driven component to rely on coordinated actions between the Lead Executing Agency and 12 National Executing Agencies.</p>	<p><u>Outcome 1</u> Biosafety governance regimes are improved and aligned with the CPB in 12 countries of the Caribbean sub-region</p>
<p><u>Component 2:</u> Establishment and Upgrading of Resource Base and Institutional Capacities for Biosafety Decision-Making and Management. Component to be executed concurrently at both the national and regional level to enhance overall capacities for detection, risk assessment, management and monitoring of LMOs (in harmonization with Component 3)</p>	<p><u>Outcome 2</u> Well-articulated and technically sound risk assessment, risk management and follow-up systems are functioning for biosafety in the Caribbean</p>
<p><u>Component 3:</u> Human Resources Development in Support of Biosafety Management throughout CARICOM Member States. Component supporting the production of biosafety procedural and training manuals and the delivery of human resource training at the national and regional levels.</p>	<p><u>Outcome 3</u> A multi-disciplinary cadre of trained personnel and technical support mechanisms, that combine both national and regional capacities, are operational and ensure the future sustainability of biosafety management in CARICOM countries.</p>
<p><u>Component 4:</u> Strengthening biosafety information management in the Caribbean sub-region.</p>	<p><u>Outcome 4</u> National and regional mechanisms that provide access to biosafety information in order to promote transparency, raise public awareness</p>

Project component	Expected Outcomes
Component expected to boost the quality and availability of relevant biosafety information in the region to benefit both the general public and decision-makers.	and facilitate biosafety decision- making are institutionalized throughout the region
<p><u>Component 5:</u></p> <p>Regional processes in support of the project and NBF sustainability in the Caribbean.</p> <p>This Component included:</p> <p>(5.1) Building regional support mechanisms for biosafety embracing activities needed to build regional support mechanisms for NBF implementation;</p> <p>(5.2) Regional project management for region-wide technical coordination of project activities (including its administration and financial management);</p> <p>(5.3) Regional project M&amp;E for overall monitoring and evaluation of project performance and impact.</p> <p>This component is of a fully regional nature and considers those all-embracing activities needed to build regional support mechanisms for NBF implementation.</p>	<p><u>Outcome 5.1</u></p> <p>Regional processes aid to lay the foundations for regional biosafety services and a regional framework to assist NBF implementation in the Caribbean</p> <p><u>Outcome 5.2</u></p> <p>Regional processes support project management</p> <p><u>Outcome 5.3</u></p> <p>Regional processes support project M&amp;E</p>

59. The overall sequence of Project Objective, Outcome and Outputs, as spelled out in the Project Document, is discussed in chapter 4 (Theory of Change of the Project).

### 3.3 Stakeholders

60. Due to its design and scope, the Project is implemented by National and Regional Stakeholders, which is important to differentiate for the analysis.

#### 3.3.1 Regional Players

61. The main key-player of the Project was a Regional player, the University of West Indies (UWI), through its Campus in Trinidad and Tobago (St. Augustine Campus)<sup>8</sup>, which was the Lead Executing Agency (LEA) that coordinated the whole Project. As such, UWI managed all project operations and administration, including financial book-keeping, contracting, procurements, organization of events and reporting to UN Environment. UWI was legally responsible for delivering project results, facilitating regional collaboration for the project, hosting the Project Management Unit (PMU), monitoring project progress and performance, and ensuring periodic reports, reviews and audits as required by GEF and UN Environment.

<sup>8</sup> UWI has three Campuses in the Region: Trinidad & Tobago (appr. 20,000 students), Barbados (appr. 9,000 students) and Jamaica (appt. 15,000 students), plus the virtual Open Campus that provide a network of training services in all the countries.



62. As explained in the ProDoc, the choice of the Lead Executing Agency “was oriented by considering properties that were relevant to both functions: biosafety management and project management”. It is also relevant to outline the criteria that were defined, according to the ProDoc, “at the request of participating countries, and by means of a prolonged consultation exercise” to identify the LEA. The criteria identified were:

- Preferably be a “creature of CARICOM” or have close affiliations to CARICOM, and be a Caribbean institution with strong links to CARICOM Member States;
- Have operational structures already in place to promptly upstart the project;
- Have prior experience with large multi-national and donor-funded projects, preferably with GEF projects in the region;
- Have a mandate that is applicable /relevant to biosafety;
- Could potentially become a biosafety service provider, and eventually be designated “Regional Biosafety Authority” or act as a regional hub or coordinating entity for biosafety;
- Have the capacity to mobilize or provide co-financing towards the project, and eventually towards the functioning of NBFs to ensure their sustainability over time.

63. UWI was selected under the assumption that it was the regional institution / stakeholder that better responded to the above criteria. In fact, it is the fulfilment of those criteria / assumptions that makes UWI a key-player and potentially a powerful “driving force” in the Theory of Change (TOC) of the Project (see chapter 4).

64. The Caribbean Community (CARICOM) and its Institutions are formally mandated for the setting and implementation of the regional integration agenda in key socio-economic sectors. The ProDoc attribute to them a key-role in the establishment and implementation of a coordinated Regional Biosafety Framework, due to the crucial role of the Caribbean Single Market and Economy (CSME) in framing all aspects related to the transboundary movement of Genetically Modified Organisms (GMOs) into and within the region. Some sectoral CARICOM institutions were considered of particular relevance for Biosafety Management at regional level, notably the Caribbean Agricultural Health and Food Safety Agency (CAHFSA), the Caribbean Agricultural Research and Development Institute (CARDI) that, together with CARICOM representatives, were part of the Regional Steering Committee of the Project. CARICOM was also expected to co-finance some of the activities of the Project with a contribution of 2M USD in cash, which actually did not materialise (see chapter 3.5).

### **3.3.2 National Players**

65. At National level, a designated National Executing Agency (NEA) was expected to be the key-national player, by coordinating and steering Project activities in each of the 12 participating countries. The role of the NEA included managing project funds at the national level and procuring project staff (including a National Project Coordinator), equipment and services. Each country should also identify a National Project Focal Point (NPFP) and form a National Steering Committee.

66. The designated NEAs at the time of Project formulation were as follows (some of them have, however, changed during Project implementation, like in St. Lucia, St. Vincent and the Grenadines, Suriname and Trinidad and Tobago):

**Table 2: National Executing Agencies / Country**

Country	National Executing Agency
Antigua and Barbuda	The Environment Division within the Ministry of Health and Environment in coordination with the Min of Agriculture (Plant Protection Unit)
The Bahamas	The Bahamas Environment, Science and Technology (BEST), Ministry of Environment;
Barbados	The Ministry of Environment, Water Resources, and Drainage (currently Min. of Environment and Beautification) in collaboration with the Ministry of Agriculture
Belize	Belize Agriculture and Health Authority, Ministry of Agriculture
Dominica	The Environmental Coordinating Unit within the Ministry of Health and Environment
Grenada	The Ministry of Agriculture, Lands, Forestry and Fisheries
Guyana	The Environmental Protection Agency
St. Kitts and Nevis	The Ministry of Sustainable Development
Saint Lucia	The Ministry of Agriculture, Lands, Fisheries and Forestry (current NEA is the Ministry of Education, Innovation, Gender Relations and Sustainable Development)
St. Vincent and the Grenadines	The Ministry of Health and the Environment (current NEA is the Environment Division, Ministry of Finance, Economic Planning, Sustainable Development and Information Technology).
Suriname	The Ministry of Labour, Technological Development and Environment (this changed after elections of 2015; biosafety now falls under the Office of the President, Coordination Environment)
Trinidad and Tobago	The Ministry of Legal Affairs, which had a name change post 2015 elections to the Ministry of the Attorney General and Legal Affairs

### 3.3.3 International Players

67. Mainly due to the objective difficulty to find regional expertise in the field of Biosafety, the Project, since the first years, sought help from international partners, particularly for developing training and capacity building activities. In that context, a prominent role has been played by the International Center for Genetic Engineering and Biotechnology (ICGEB)<sup>9</sup>,

---

<sup>9</sup> ICGEB is an intergovernmental organization established as a special project of UNIDO. It became fully autonomous in 1994 and now counts over 60 Member States. Its main centre is based in Trieste (Italy). <https://www.icgeb.org>

universally recognised as a Center of Excellence for research and training in the field of life sciences and biotechnology particularly addressing developing countries.

68. The Center has been sub-contracted by the Project from 2015 to 2018 as a “service-provider” for capacity building in different aspects of Biosafety and for supporting the Project in the area of strategic planning at regional level (Biosafety Policy, Participation and Outreach Strategy, Risk Assessment Guidelines, among others).

### **3.4 Project implementation structure and partners**

69. The overall management responsibility over the Project fell upon a tiny Project Team (called Project Management Unit, PMU, in the ProDoc) composed essentially by the Regional Project Manager (RPM) from March 2012 to February 2019 (with a change of person in October 2015) supported by a Project Assistant that, however, was only in place until September 2015 and then from June 2016 to May 2017. The RPM that took over in October 2015 had previously been the Project Assistant (11/2012-02/2014) and the project Technical Officer (03/2014-09/2015).

70. A part-time Technical Lead (TL), UWI Professor and Director of the Cocoa Research Center, has played a key-role since the beginning of the Project by representing the Lead Executing Agency and being formally the Budget Holder of the Project (as “in-kind” contribution of UWI). As a matter of fact, the TL and the RPM have formed a well-assorted coordinating team. A Senior Technical Advisor was also in place for the first two years of the Project (October 2011–September 2013).

71. The support of UWI Bursary (Administration) Office has been constant and relevant for the administration of the Project (funds transfer from the Implementing Agency to the Regional Project and from the Regional to the National Projects, accountability and financial reporting, organisation of the annual audits, etc.).

72. The Implementing Agency (UN Environment) has been active in providing strategic and methodological guidance, as well as administrative support, through the Task Manager (TM) and the Programme Assistant based in the Regional Office in Panama, as well as through the Finance Management Officer in Nairobi, particularly in the first years of the Project. From January 2018, a new TM took over (not based in Panama).

73. At National level, 12 National Project Coordinators (NPCs) were appointed by the National Executing Agencies to support the Regional Team. As discussed in chapter 5.5, despite initial difficulties due to their late appointment and to the challenges of the new administrative system to be put in place (ANUBIS), most of the NPCs have progressively taken over their management responsibility at national level.

74. The National Steering/Biosafety Committees foreseen in each country were actually set and, in certain cases (e.g. Trinidad and Tobago), also formally established by a governmental decision. In most of the cases, their membership and effective participation have been limited to the representative of the main line-Ministries and/or public Agencies with minor, if at all, participation of Civil Society and Private Sectors. Although their activity has been fading after the end of the Project, there are cases where the most active members of

the Committees keep-on coordinating around specific on-going activities, such as the revision of Draft Laws and Regulations (e.g. St. Lucia, Antigua and Barbuda, Guyana).

75. The Regional Steering Committee has been active all along the Project lifetime (nine meetings) and has been a relevant instrument of information, discussion and decision-making, by aggregating national and regional project's stakeholders (see also chapter 5.7 on this regard). The Implementing Agency, through the TM, has also regularly participated to the Regional Steering Committee.

### **3.5 Changes in design during implementation**

76. The complex design of the Project combining 12 National Projects and a Regional Component did not essentially change during implementation. Despite its complexity, in fact, the combination of national and regional dimensions was regarded as the only possible approach capable to address capacity and institution building in a harmonised way, while also taking into account the specificity of each national baseline situation.

77. The above notwithstanding, it is undeniable that the Project had a very slow start. In fact, the Project was complex and demanding for several reasons not only related to its regional scope (12 countries, the majority of them being Small Island States), but also to the novelty and multidisciplinary feature of Biosafety and to the uneven, but generally low, baseline situation in terms of national capacities (particularly, the solidity of the institutional environment and the presence of a critical mass of human resources). Bureaucratic inertia and slow responsiveness at national level also played a role.

78. Only 10 out of the 12 participating countries signed (with variable delays) the Partnership Agreement (PA) with the Lead Executing Agency (UWI) and, as a result, two countries (Bahamas and Barbados) only benefited from the Project from the end of 2015 onward, further to the decision taken at the 6th Regional Steering Committee (June 2015) regarding the "non-objection" of the use of the GEF allocations of these countries. Their allocation of funds was directly managed by the Regional project.

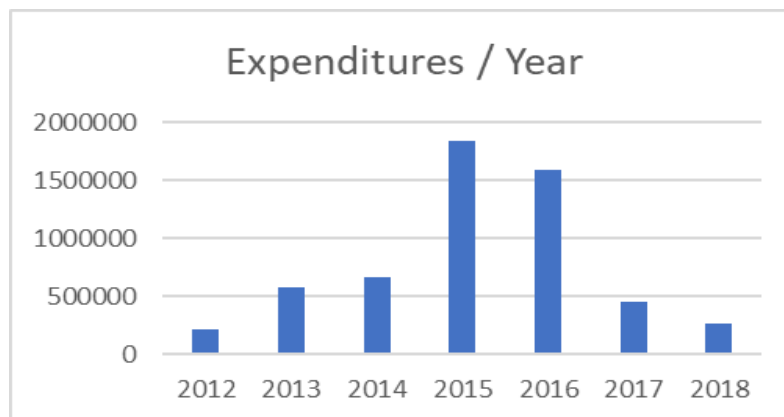
79. The adequacy of the University of West Indies (UWI) as Lead Executing Agency (LEA) was also strongly challenged by the complexity of responsibilities and functions related to its regional, coordinating role. In fact, although the option of UWI as LEA was the best possible option, it was progressively clear that UWI only fulfilled few of the criteria of selection outlined in chapter 3.3.1. While the University had previous experience in managing "Research projects", it did not have any experience in managing a demanding GEF Full Size Project of around 12M USD and, as remarked by the Mid-Term Evaluation, "the challenges of working with a group of sovereign governments were underestimated". There were also problems of unclear definition of strategy, roles and responsibilities related to Project implementation, within the University.

80. As a result, very few tangible results were obtained in the first three years of the Project. The Inception Workshop only took place at the end of 2012 (one year after the first funds advancement occurred in October 2011) and, in the Project Implementation Review (PIR) of June 2013, the Task Manager had already remarked that "there are still considerable delays as per the project's workplan and the same is likely to continue until a more efficient implementation scheme is found".

81. The alarming situation of Project implementation protracted, as confirmed in the PIR of 2014 that recognised that “the revision of outputs by the executing agency is taking a long time. This situation has hindered the project from having an effective socialization of key products; which is paramount for a general understanding of project progress from all the involved parties (including UNEP) and to allow effective and timely actions”. The Mid-Term Evaluation that took place in October 2014 estimated that, with just one year of implementation left, only around 25% of the Outputs could be considered delivered or likely to be delivered by the end of the Project.

82. The Management response put in place by the Project under the supervision of the TM and with the support of the Regional Steering Committee included the integration of an external player (the International Centre for Genetic Engineering and Biotechnology, ICGEB) as a substantive “service provider” to catch up with the accumulated delays in outputs delivery in several aspects, particularly training and capacity/institution building. These tasks were originally planned to be assigned to National/Regional Consultants, which did not happen due to the structural limits of Human Resources in the Region, particularly in the area of Biosafety.

83. As a result of the above, the Project gained momentum, as also shown by the rate of expenditures that notably increased in the years 2015 and 2016.



84. There has also been, from 2015 onward, a more systematic and decisive approach to CARICOM in order to frame Project’s regional component (component 5, see Table 1 above) within the political and institutional context of the Region. That has allowed to address CARICOM institutions through the mediation of CARDI (Caribbean Agricultural Research and Development Institute) and to discuss with CARICOM (2016) the Draft Regional Biosafety Policy prepared by the Project. As described in chapter 5.4.1 (Outputs for Direct Outcome 5) the process was only finalised in October 2017 through the approval and adoption by CARICOM of the Regional Biosafety Policy, which was not explicitly planned in the ProDoc, but proved to be indispensable to frame Biosafety in the institutional context of Regional Policies and Plans.

85. Following the approval by CARICOM of the Biosafety Regional Policy in 2017, the Caribbean Agricultural Health and Food Safety Agency (CAHFSA) was identified by CARICOM as its Regulatory Agency for Biosafety, which has been a substantive step in terms of institutional anchorage of Biosafety at regional level. CAHFSA, that had been created by the Member States of CARICOM in 2010, was eventually established in 2014 with the appointment

of a Chief Executive Officer and the opening of its Headquarter in Paramaribo (Suriname) in December 2016. This has allowed the opening of a dialogue between the University of West Indies (UWI) and CAHFSA regarding the transition of responsibilities from UWI to CAHFSA and the modalities of future cooperation, issues that, as discussed in this report, are still “on the table” and in need of further elaboration and operationalisation.

86. No-cost extensions were also needed on account of the accumulated delays and were subsequently granted through three Amendments to the Project Contract Agreement (PCA) signed in January 2015, February 2016 and March 2017, giving a total of 45 months of no-cost extensions and shifting the Official End Date (including Administrative Closure) to 30/06/2019. The issue is discussed more in depth under chapter 5.6 (Efficiency).

87. The Project underwent a considerable number (nine) of Budget Revisions. With the first Budget Revision (January 2013) the total amount for the National Component (basically the cost of National Project Coordinators) was moved “for ease of reference and reporting expenses” to the Budget line “Sub-contracts to Governmental Agencies”. The budget line for International Consultants was also largely increased for including not only the Senior Technical Advisor but also “funds to hire other consultants”. Budget Revisions of 2016 and 2017 were necessary to reallocate funds due to project extensions. They allowed to extend the contract of the RPM, to increase the budget-line for “Sub-contract to private firms” (in order to renew the collaboration with ICGEB) and for Trainings. The Budget-line for Laboratories was progressively decreased according to the real needs (originally overestimated). These issues are discussed under chapter 5.5 (Financial management).

88. Expected Co-financing described in the ProDoc and accounted for in the Project Budget (App. 1 of the ProDoc) did not fully materialise, notably the expected contribution (in cash) from CARICOM of 2,000,000 USD. As a matter of fact, CARICOM had already officially communicated (October 2010) to UN Environment (Division of GEF Coordination) the intention of making use of that amount for initiatives “complementary to the Biosafety Proposal”, notably the establishment of the Caribbean Agricultural Health and Food Safety Agency (CAHFSA). However, the co-financing figures were not amended in the ProDoc and in the Budget. An alleged pledge (reported in the Budget Revision n. 3) of around 2M USD by the US Department of Agriculture (USDA) to replace the CARICOM co-financing, did not materialise as well, though some in kind contributions were actually provided by USDA through financing training activities in 2014 and through the Cochran Fellowship programme.

89. Alternative sources of funding were looked for in the first years of the Project and indeed some training activities were financed by the Caribbean Basin Agricultural Trade Office (CBATO) of the US Department of Agriculture (USDA) in 2014 (USD 103,559) and through the “Cochran Fellowship programme” that benefited a total of 12 participants from the Region (2013 and 2014). These initiatives, as reported by the Mid-Term Evaluation, were considered by some participants “to be pro-LMO and inconsistent with the Protocol’s principles”. Upon suggestion of the Implementing Agency, the Project has indeed enlarged the range of its cooperation (e.g. ICGEB, the Secretariat of the CBD, the University of Alpen-Adria of Austria, and the National Commission for Biotechnology and Agriculture of Argentina, CONABIA).

### 3.6 Project financing

90. The Project kept record of expenditures by UN Environment Components (budget lines) following the original format (version 1) of the Project Budget found in the ANUBIS System. As discussed in chapter 5.5 (Financial Management), the budget lines of the ANUBIS system do not fully coincide with those of the Budget in the ProDoc (and in the Project Cooperation Agreement). For easy reference, the system used by the Project (ANUBIS format) is reported in the Table below.

91. The main differences between the estimated cost at design and the actual costs are summarised in the previous chapter and also discussed in chapters 5.5 and 5.6. Planned Co-financing data (Table 4) are those indicated in the Project Budget while actual data on co-financing are estimations provided by the Project.

**Table 3: Budget (GEF) at design and expenditures by UN Environment Components (September 2018)**

Budget Line	Description	Estimated cost at design (USD)	Actual Cost (USD)	Expenditure ratio (actual / planned)
1101	National Project Co-ordinator (Reg. Proj. Man.)	156,480.00	236,399.12	151%
1102	Project staff (12 Nat. Coordinators)	1,415,300.00	71,859.72	5%
1120	Administrative staff	456,717.00	0.00	
1201	International Consultants (Senior Tech. Advisor)	156,000.00	399,187.04	256%
1202	National Consultants	270,000.00	51,597.47	19%
1601	Staff travel and transport	0.00	37,895.70	
<b>10</b>	<b>Sub-total Personnel</b>	<b>2,454,497</b>	<b>796,939.05</b>	<b>32%</b>
2201	Subcontract to governmental agencies	1,291,000.00	2,186,535.51	169%
2301	Subcontract to private firms	485,000.00	931,761.83	192%
<b>20</b>	<b>Sub-total Sub-Contracts</b>	<b>1,776,000</b>	<b>3,118,297.34</b>	<b>176%</b>
3201	Training	500,000.00	817,387.22	163%
3301	Meetings	347,000.00	332,332.13	96%
<b>30</b>	<b>Sub-total Training</b>	<b>847,000.00</b>	<b>1,149,719.35</b>	<b>136%</b>
4101	Office supplies and consumables	1,500.00	0.00	
4102	Laboratory supplies and consumables	165,000.00	90,769.34	55%
4201	Non-laboratory purchase	24,000.00	4,057.93	17%
4202	Laboratory equipment	600,000.00	387,998.09	64%
<b>40</b>	<b>Sub-total Equipment and Premises</b>	<b>790,500</b>	<b>482,825.36</b>	<b>61%</b>
5201	Publication, reporting and dissemination	13,700.00	36,850.65	269%
5202	Audit reports	48,000.00	44,436.30	93%
5301	Communication	0.00	1,220.00	
5302	Others	0.00	12,704.83	
5303	Technical Support	42,796.00	22,836.70	53%
<b>50</b>	<b>Sub-total Miscellaneous</b>	<b>104,496</b>	<b>118,048.48</b>	<b>113%</b>
<b>Total (US\$)</b>		<b>5,972,493.00</b>	<b>5,665,89.58</b>	<b>95%</b>

**Table 4: Co-financing Table (GEF Projects only) (updated September 2018)**

Co-financing (Type/Source)	UNEP own Financing (US\$1,000)		Governments (12 countries) and UWI (US\$1,000)		Additional Other* (US\$1,000)		Total (US\$1,000)		Total Disbursed (US\$1,000)
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
– Grants			2,000						
– In-kind support	20		4,698	5,814	200	298			
<b>Totals</b>			<b>6,698</b>	<b>5,814</b>	<b>200</b>	<b>297</b>	<b>6,898</b>	<b>6,111</b>	<b>6,111</b>

\* This refers to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.

## 4 Theory of Change (TOC) of the project

### 4.1 The reconstructed TOC of the project: overview

92. The reconstructed Theory of Change (TOC), based on projects design and logical framework, aims at mapping the possible pathways of change between the project’s outputs to the expected outcomes, up to the intended impact, as well as the main drivers and assumptions<sup>10</sup> having a bearing on the envisaged change.

93. The Project Design and the Logical Framework (Logframe) include Components and Outcomes at National and Regional levels. More specifically (see Table 1 in chapter 2):

- Component and Direct Outcome 1 regard establishing **governance** regimes for National Biosafety Frameworks;
- Components and Direct Outcomes 2, 3 and 4 refer to enhancing **institutional mechanisms** (Comp.2), **human resources** development (Comp.3) and **information management** (Comp.4), both to Regional and National levels;
- Component and Direct Outcome 5 refer exclusively to the setting of sustainable implementation of Regional biosafety processes and mechanisms.

94. The ProDoc clearly states that the “five components will be implemented in a complementary manner at both the national and regional levels” and also relates that “extensive discussions took place during the project preparation phase (2009/2010) on the supporting mechanisms required to aid NBF implementation”, and “to what extent (and with

<sup>10</sup> Drivers: where the project has a measure of control and can make a meaningful influence. Assumptions: conditions that are beyond the direct control of the project or may be facilitated by supporting actions or conditions (Use of Theory of Change in Project Evaluations, UN Environment Evaluation Office, October 2017).



what cost-savings) biosafety responsibilities should be devolved regionally could not be defined”.

95. Nevertheless, according to the ProDoc, it was generally agreed that “countries would face strong limitations if technical assistance for NBF implementation is not regionally available” and “the leadership role of the project’s executing agency will be paramount in promoting biosafety coordination at the regional level and resolving the eventual designation of an entity or entities to function as a biosafety hub for the region”.

96. From all the above, the linkage, complementarity and interaction between the national and regional dimension of the Project emerge as key-aspects for the overall, coherent and steady progress of Biosafety agenda in the Region. Nonetheless, the national and the regional dimension of the Project, though complementary, refer to different levels of strategy and of institutional frameworks, including different stakeholders and key-actors that, for the sake of clarity and for analytical purposes, is important to differentiate.

97. For this reason, as described more in detail in following chapter 4.2, the Outputs at regional level are gathered (in the TOC) in a single group (under Direct Outcome 5) instead of being scattered under other Outcomes (as in the LogFrame).

98. The relevance of the national and regional dimensions of the Project and their complementarity is captured in the reconstructed Theory of Change (TOC) of the Project by the two main pathways (the green and the blue) visualised in Diagram 1 and representing, respectively, the (exclusively) national and regional pathways to the Main project Outcome. The issue is discussed more in detail in following chapter 4.2.

99. The following Table 5 compares Results Framework of the project, as stated in the ProDoc and its LogFrame, versus results framework in the reconstructed Theory of Change (TOC). The differences between the two columns mainly reside in the fact that, as previously explained, the Outputs that only refer to the regional component of the Project have been all considered under Direct Outcome 5 in the TOC, instead of being distributed under other Outcomes (as in the LogFrame). The definition of the Direct Outcome 5 (TOC) is also different from the definition in the ProDoc, as explained in Chapter 4.2.

**Table 5: Comparison of Results Framework**

Results as stated in the ProDoc Logframe	Results as stated in the TOC at Evaluation (Chapter 4.2 and 4.3, Diagrams 1 and 2)
<b>Goal of the Project (in the ProDoc)</b>	<b>Impact</b>
<p>To implement effective, operable, transparent and sustainable National Biosafety Frameworks which cater for national and regional needs, deliver global benefits and are compliant with the Cartagena Protocol on Biosafety in the Caribbean sub-region countries of Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago to ensure that their biodiversity will be less vulnerable to any potential risks from introduced LMOs.</p>	<p>Enhanced conservation and sustainable use of biological diversity in the Caribbean Sub-region</p> <p><b>Intermediate States (I.S.) to Impact</b></p> <p><b>I.S. 4:</b> Safe transfer, handling and use of living modified organisms in the Caribbean Sub-region, specifically focusing on transboundary movements, as requested under art. 1 of Cartagena Protocol (CPB)</p> <p><b>I.S. 3:</b> Improved governance of national / regional biosafety systems based upon: Rule of law and compliance, Accountability and Liability, Equity, Transparency, Citizens' Participation</p> <p><b>I.S. 2:</b> Improved Decision-making at Regional and National level based on effective and coordinated mechanisms, enhanced quality information and transparency</p> <p><b>I.S. 1:</b> An institutional framework adopted for providing regional biosafety services.</p>
<b>Objective (in the ProDoc)</b>	<b>Main Project Outcome</b>
<p>To implement effective, operable, transparent and sustainable National Biosafety Frameworks (NBF) which cater for national and regional needs, deliver global benefits and are compliant with the Cartagena Protocol on Biosafety (CPB) in 12 Caribbean countries.</p>	<p>Effective, operable, transparent and sustainable National Biosafety Frameworks (NBF), which cater for national and regional needs, in place in 12 Caribbean countries</p>
<b>Outcomes (in the Logframe)</b>	<b>Direct Outcomes (DO) in the TOC</b>
<p><b>Outcome 1:</b> Biosafety governance regimes are improved and aligned with the CPB in 12 countries of the Caribbean sub-region</p>	<p><b>Direct Outcome 1 (DO 1):</b> Biosafety governance regimes improved and aligned with the CPB in 12 countries of the sub-region</p>

Results as stated in the ProDoc Logframe	Results as stated in the TOC at Evaluation (Chapter 4.2 and 4.3, Diagrams 1 and 2)
<b>Outcome 2:</b> Well-articulated and technically sound risk assessment, risk management and follow-up systems are functioning for biosafety in the Caribbean	<b>Direct Outcome 2 (DO 2):</b> Well-articulated and technically sound risk assessment, risk management and follow-up systems functioning for biosafety in the Caribbean
<b>Outcome 3:</b> A multi-disciplinary cadre of trained personnel and technical support mechanisms, that combine both national and regional capacities, are operational and ensure the future sustainability of biosafety management in CARICOM countries	<b>Direct Outcome 3 (DO 3):</b> Biosafety management in CARICOM countries ensured through multidisciplinary training and technical support mechanisms
<b>Outcome 4:</b> National and regional mechanisms that provide access to biosafety information in order to promote transparency, raise public awareness and facilitate biosafety decision-making are institutionalized throughout the region	<b>Direct Outcome 4 (DO 4):</b> National and regional mechanisms institutionalized throughout the region, providing access to biosafety information
<b>Outcome 5.1:</b> Regional processes aid to lay the foundations for regional biosafety services and a regional framework to assist NBF implementation in the Caribbean	<b>Direct Outcome 5 (DO 5):</b> Regional mechanisms to cost-effectively sustain and coordinate NBFs explored and initiated
<b>Outputs based on Logframe (Ann. 4 of ProDoc) and Monitoring and Evaluation Plan (Ann. 7 of ProDoc) - as enumerated in the Logframe</b>	<b>Outputs as formulated in the in the reconstructed TOC</b>
<b>Outputs for Outcome 1</b>	<b>Outputs corresponding to Direct Outcome 1</b>
<p>1.1 Enactment of biosafety/biotechnology management legislation (or other key element of the regulatory system) to address safety in the field of transboundary movements of the products of modern biotechnology in up to 12 Caribbean countries;</p> <p>1.2 Finalization, updating or reform of biosafety policies in up to 12 Caribbean countries, as needed;</p>	<p>1.1 Biosafety legislation in up to 12 countries</p> <p>1.2 Biosafety policies in up to 12 countries</p> <p>1.3 Key politicians sensitized in up to 12 countries</p> <p>1.4 National Biosafety Authorities operational and effective in up to 12 countries</p> <p>1.5 Institutional responsibilities clearly defined</p> <p>1.6 Technical Advisory Committees or equivalent in place</p>

Results as stated in the ProDoc Logframe	Results as stated in the TOC at Evaluation (Chapter 4.2 and 4.3, Diagrams 1 and 2)
<p>1.3 Key politicians sensitized over biosafety, and its strategic importance and multiple dimensions (environmental benefits /risks, trade issues, R&amp;D opportunities, ethical and socio-economic considerations, etc) in up to 12 Caribbean countries;</p> <p>1.4 Establishment and effective operation of National Biosafety Authorities in up to 12 Caribbean countries;</p> <p>1.5 Clearly defined institutional responsibilities amongst national agencies with a responsibility in biosafety management</p> <p>1.6 Establishment and effective operation of Scientific and Technical Advisory Committees, or equivalent ad hoc or permanent support structures, in up to 12 Caribbean countries;</p> <p>1.7 Assessments and establishment of financing options, including cost recovery mechanisms, for maintaining operations of NBF (including BCH functions);</p> <p>1.8 Key stakeholder groups (users of modern biotechnology) sensitized;</p> <p>1.9 Consolidation of ties and working relationship with scientific / research /biotech sector, and permeation of science-based criteria into the biosafety debate;</p> <p>1.10 Coaching on NBF operations provided to directly relevant (on-the-ground) staff, especially for handling and resolving LMO requests and communicating decisions;</p> <p>1.11 Manuals and protocols for following administrative procedures produced in up to 12 Caribbean countries;</p> <p>1.12 Peer review and scientific validation of criteria and methodology used for LMO risk assessments.</p>	<p>1.7 Financing mechanisms identified to maintain NBF operations</p> <p>1.8 Key stakeholder groups sensitized</p> <p>1.9 Working relationship with biotech sector improved and consolidated</p> <p>1.10 Relevant Staff coached on NBF implementation</p> <p>1.11 Manuals and protocols produced on admin procedures</p> <p>1.12 Criteria and Methodology for risk assessment reviewed and validated</p> <p>1.13 Key decision-makers sensitized over synergies and cost-savings</p>

Results as stated in the ProDoc Logframe	Results as stated in the TOC at Evaluation (Chapter 4.2 and 4.3, Diagrams 1 and 2)
1.13 Key decision-makers sensitized over the synergies and cost-savings to be had between IAS and LMO management	
Outputs for Outcome 2	Outputs corresponding to Direct Outcome 2
<p>2.1 Technical documents and tools (standards, protocols, guidelines) for risk assessment (validated by peers) and risk management (if relevant, standardized and regionally harmonized) including for biosafety inspections/audits, monitoring, enforcement, evaluation and measurement of environmental impacts.</p> <p>2.2 Capacity/needs assessments (Gap Analysis) of technical biosafety management capacity, including capacities that could be cost-effectively accessed at the regional level in order to provide services (to countries) in support of biosafety risk assessment processes and risk management responsibilities, in the Caribbean region (☒ coupled to Output 5.1.a);</p> <p>2.3 Short term attachments for scientists and specialized personnel involved in risk assessment or risk management of LMOs;</p> <p>2.4 Personnel trained in the CPB, biosafety risk assessments, LMO detection, BCH use and transboundary issues (coupled to Outputs under Component 3);</p> <p>2.5 Detection laboratories for LMO testing and verification, established and operationalized within select participating countries and linked as a regional biosafety laboratory network</p> <p>2.6 Cost-effective (and if relevant, harmonized) institutional arrangements established amongst National Biosafety Authorities and regional biosafety laboratories, including linkages between national and regional laboratories.</p> <p>2.7 Laboratory equipment, supplies and reagents procured for LMO testing and verification analyses.</p>	<p>2.2 Gap Analysis of Biosafety Management capacity produced and available</p> <p>2.3 Short term specialists for RA/RM recruited</p> <p>2.4 Personnel trained in the CPB, RA, LMO detection, BCH use, etc</p> <p>2.7 Laboratories equipped and supplied</p> <p>2.8 Nat. Bureau of Standards strengthened</p> <p><b><i>All other Outputs under Outcome 2 in the LogFrame (e.g. 2.1., 2.5, 2.6, etc.) have been considered under Direct Outcome 5, because explicitly referring to Regional mechanisms to sustain NBFs.</i></b></p>

Results as stated in the ProDoc Logframe	Results as stated in the TOC at Evaluation (Chapter 4.2 and 4.3, Diagrams 1 and 2)
<p>2.8 Capacity strengthened of Bureau of Standards of each participating country to provide monitoring services and standards for biosafety management.</p> <p>2.9 Coordinated regional/national accreditation scheme established for biosafety laboratories.</p> <p>2.10 LMO detection protocols adopted and standardized amongst countries (coupled to Outputs under Component 3)</p> <p>2.11 Establishment of an institutionalized and financially sustainable regional support mechanism (extensive or case-specific) to aid participating countries in conducting risk assessment processes and carrying out coordinated and optimize risk management actions.</p> <p>2.12 Border control procedures for imports /exports of LMOs, including transshipments and transit, proposed and if possible agreed to. (coupled to Outputs under Component 3)</p>	
Outputs for Outcome 3	Outputs corresponding to Direct Outcome 3
<p>3.1 Technical public functionaries, decision-makers, scientists and advisors, and customs officers and inspectors trained with regards to their specific functions and responsibilities in biosafety (as defined under each NBF) (coupled to Outputs under Component 2);</p> <p>3.2 Knowledge on BCH use across several institutions (coupled to Outputs under Component 2);</p> <p>3.3 Range of training materials, new curricula (with practical /hands-on exercises) and training manuals produced;</p> <p>3.4 Experience gained in recommending biosafety decisions and biosafety measures, based on LMO risk assessments and science-based criteria coupled with socio-economic considerations.</p>	<p>3.1 Technical officers, decision-makers, scientists and advisors, customs officers and inspectors trained</p> <p>3.2 Institutions capacity to use BCH improved</p> <p>3.3 Training materials, manuals and curricula produced</p> <p>3.4 Increased experience in biosafety decisions / measures based on sound risk assessments and socio-economic considerations</p> <p>3.5 Mock or real risk assessment reported and decisions recorded in BCH</p> <p>3.6 Lab staff trained in LMO detection and sampling;</p> <p>3.7 Trainers and specialists coached or trained on CPB</p>

Results as stated in the ProDoc Logframe	Results as stated in the TOC at Evaluation (Chapter 4.2 and 4.3, Diagrams 1 and 2)
<p>3.5 Mock or real risk assessment reports and BCH records for communication of decisions;</p> <p>3.6 Laboratory technicians trained in LMO detection and sampling;</p> <p>3.7 Teachers and specialists involved in human resources formation coached or trained on the requirements and opportunities of the CPB;</p> <p>3.8 Experience in carrying out LMO analyses, with statistically significant test results;</p> <p>3.9 LMO detection and sampling manuals, reviewed by peers, and if relevant, standardized or incorporated into biotechnology teachings (coupled to Outputs under Component 2);</p> <p>3.10 Regional Roster of Biosafety Experts compiled on basis of nominees from national rosters and training program;</p> <p>3.11 Range of biosafety specialization (short) courses available to CARICOM Member States, and possibility a post-graduate course;</p> <p>3.12 Self-financing mechanisms to sustain the training program beyond the project;</p> <p>3.13 Knowledge exchange with national and CARICOM staff specialized in border control of traded goods to receive feedback, inputs and review of proposed border control procedures for imports /exports of LMOs, including cases of transit and transshipments.</p>	<p>3.8 Increased experience in LMO analyses and test results;</p> <p>3.11 Short Biosafety courses and possibly Post-graduate course in place;</p> <p>3.12 Self-financing mechanisms for training in place</p> <p><b><i>Outputs 3.9, 3.10 and 3.13 have been moved under Direct Outcome 5, because exclusively referring to Regional Mechanisms.</i></b></p>
<b>Outputs for Outcome 4</b>	<b>Outputs corresponding to Direct Outcome 4</b>

Results as stated in the ProDoc Logframe	Results as stated in the TOC at Evaluation (Chapter 4.2 and 4.3, Diagrams 1 and 2)
<p>4.1 Equipment and software procured to establish effective regional and national biosafety clearing house mechanisms and database systems;</p> <p>4.2 Government personnel trained in BCH use and responsibilities assigned (coupled to Component 3);</p> <p>4.3 National BCH nodes (nBCH) and data management systems established and operating in each participating country as a means to facilitate public participation and access to information on biosafety, as well as comply with CPB obligations;</p> <p>4.4 Assessment to determine the level of resources (physical, human and financial) required to establish and maintain the regional clearing house mechanism and its data bases;</p> <p>4.5 Regional BCH Node designed (architecture) and hosted by a regional entity defined and agreed by all countries, and linked to the BCH Central Portal and other relevant sites;</p> <p>4.6 Regional BCH Node for facilitating public participation and access to information on biosafety established and populated with: a toolkit designed to help users; data bases of approved and traded LMOs; risk assessment tools (including standards, protocols, etc); training manuals; outreach material; and project products, amongst others.</p> <p>4.7 Data bases for LMOs traded within and through CARICOM, and LMOs commercially approved or produced by CARICOM's trading partners.</p> <p>4.8 Agreements with Customs Offices and regional organizations on information and documentation requirements for LMO imports;</p>	<p>4.2 National Staff trained in BCH and responsibilities assigned</p> <p>4.3 National BCH (nBCH) established and operational in each country</p> <p>4.9 Collaborative networks on LMO/IAS with the potential to become a regional information exchange network for LMOs decision-making and notification</p> <p>4.10 Enhanced access and use of RA reports for decision-making</p> <p>4.11 Non-government stakeholders sensitized on BCH use</p> <p>4.12 Politicians and decision-makers sensitized on Biosafety Information Management</p> <p>4.13 Public education and outreach (PEO) strategy in place to guide production and dissemination of information / awareness material</p> <p>4.14 Stakeholders participation promoted at the national level through awareness raising and targeted outreach</p> <p>4.15 Outreach materials produced (e.g. web applications, brochures, monthly e-newsletter, posters, videos, etc.)</p> <p>Some Outputs (e.g. 4.1, 4.4, 4.5, etc.) have been moved under Direct Outcome 5, because exclusively referring to Regional mechanisms.</p>



Results as stated in the ProDoc Logframe	Results as stated in the TOC at Evaluation (Chapter 4.2 and 4.3, Diagrams 1 and 2)
<p>4.9 Collaborative networks and information sharing on LMO/IAS management in each participating country and in partnership with regional and international institutions /initiatives, which could be up-scaled to create a regional information exchange network to support biosafety decision making and notification processes;</p> <p>4.10 Enhanced use of technical and scientific information for biosafety decision-making through access to risk assessment reports;</p> <p>4.11 Non-government stakeholders sensitized over relevance and uses of BCH, stimulating improved/ well informed stakeholder participation in biosafety processes;</p> <p>4.12 Politicians and decision-makers sensitized over the strategic relevance of biosafety information management;</p> <p>4.13 Public education and outreach (PEO) strategy to guide the development and sharing of public awareness material regarding biotechnology and access to information on biosafety;</p> <p>4.14 Awareness raising activities at the national level, covering biosafety, biotechnology, bio-security and IAS, and targeted outreach to encourage stakeholder participation in consultations over biosafety policies and regulations;</p> <p>4.15 Outreach materials such as: web applications, brochures, monthly e-newsletter, posters, a public information educational/informational pack (comprising an environmental education series), public service announcements, regional article blasts, and videos for public education;</p>	

Results as stated in the ProDoc Logframe	Results as stated in the TOC at Evaluation (Chapter 4.2 and 4.3, Diagrams 1 and 2)
<p>4.16 Assessment of effectiveness and usefulness of regional and national BCH mechanisms and database systems (including considerations over certification requirements and other trade-related issues, and links with IAS), in order to derive lessons learnt and review sustainability factors. (builds on Output 5.1.b)</p>	
Outputs for Outcome 5	Summary of Outputs corresponding to Direct Outcome 5
<p>5.1.a) Viability assessment /analysis of the financial, technical and political implications of establishing sustainable biosafety services and functions at the regional level;</p> <p>5.1.b) Analysis of the potential of the Regional BCH Node to become the gatekeeper of regional biosafety applications, allow electronic tracking of applications and permits granted, ensure adequate public access to information on the processing of such applications, and facilitate public input into the risk assessment process;</p> <p>5.1.c) Political decision on biosafety services and responsibilities that can devolved at the regional level cost-effectively</p> <p>5.1.d) Institutional framework for providing regional biosafety services, including an initial pilot phase for regional coordination of biosafety tasks, and a self-financing plan for such services. (see IS 1 to Impact)</p> <p>5.1.e) Action plan to pursue synergies between LMO and IAS / pest management frameworks.</p>	<p>2.1 RA and RM tools (protocols, guidelines, etc.) standardized and regionally harmonized</p> <p>2.5 Network of detection laboratories (nat. and regional level) established</p> <p>2.6 Institutional arrangements established amongst Nat. Bios. Authorities and regional labs</p> <p>2.9 Regional/national accreditation scheme established for biosafety labs</p> <p>2.10 LMO detection protocols adopted and standardized</p> <p>2.11 Regional support mechanism for RA and RM established and financially sustainable</p> <p>2.12 Agreed border control procedures established for imports /exports of LMOs, including trans-shipments</p> <p>3.9 LMO detection and sampling manuals produced, standardized and used</p> <p>3.10 Regional Roster of Bios. Experts compiled</p> <p>3.13 Knowledge exchange among border control staff in the region in place</p> <p>4.1 Equipment and software for nat. and reg. BCH in place</p> <p>4.4 Needs Assessment of resources for regional BCH delivered</p>

Results as stated in the ProDoc Logframe	Results as stated in the TOC at Evaluation (Chapter 4.2 and 4.3, Diagrams 1 and 2)
	<p>4.5 Reg. BCH Node designed and hosted by a regional entity</p> <p>4.6 Regional BCH Node set with toolkit for users, data bases, etc.</p> <p>4.7 Data bases in place for LMOs traded or produced in CARICOM.</p> <p>4.8 Agreements between Customs and regional organizations on LMO imports.</p> <p>4.15 Variety of outreach materials produced and disseminated</p> <p>4.16 Effectiveness of BCH mechanisms in place (nat. and regional) assessed</p>

## 4.2 The causal logic from Outputs to Outcomes

100. There are 59 Outputs in the LogFrame (excluding those related to the internal Project Management). It must also be considered that the Outputs related to Direct Outcome 1 (they are 13 in the LogFrame), should be multiplied by 12 countries, i.e. a total of 156 Outputs just for Direct Outcome 1. There was, therefore, a huge number of planned Outputs to be delivered by the Project. Diagram 1 below provides a reconstruction of the pathway from Project's Outputs to Direct Outcomes and to the Main Project Outcome

101. **Direct Outcome 1 (DO1)** refers to the improvement of Biosafety governance regimes in 12 countries of the sub-region. The analysis of the 13 Outputs to be delivered for DO1 (see Table 5) shows that the "usual" Biosafety governance elements should be delivered and in place, among others: a Competent National Authority, a National Policy and a Law, Institutional responsibilities defined, a functional Technical Advisory Committee in place, Financing mechanisms also in place, and Key stakeholder groups and politicians sensitized.

102. The experience and the achievements of the previous Project "Development of Nat. Biosafety Framework" (completed in 2009) were expected to play a key-driving role. There was also the underlying assumption that the political will of all the countries to implement National Biosafety Frameworks (NBF) was overall present and that their baseline situation and capacity was similar or homogeneous, which motivated the identification of "standard" Outputs to be delivered in all the 12 countries (see table 6 at the end of this Chapter).

103. **Direct Outcome 2 (DO2)** consists of "well-articulated and technically sound risk assessment, risk management and follow-up systems functioning for biosafety in the Caribbean" and mainly contemplated Outputs at regional level, considering the difficulty (and opportunity) of having in place 12 national Risk Assessment (RA) systems, as well as the need of harmonised Risk Management (RM) and follow-up systems within the Region. Therefore, relevant Outputs related to standardised and harmonised RA and RM (e.g. Output 2.1, 2.11) or to agreed border control procedures (e.g. Output 2.12) are considered specific to the regional component of the Project (Direct Outcome 5 in the TOC). The setting of a minimal in-country capacity of GMOs detection (Output 2.7) was regarded as a priority at national level, combined with a regional network of referral laboratories (Output 2.5).

104. The identification, training and establishment of a set of national / regional experts for Biosafety RA and RM seems to be a preliminary condition to be fulfilled. Therefore, intensive capacity building of national and regional human resources on RA and RM (contemplated under DO 3) should be considered a relevant Key-Driver (see Table 6 below). The same could apply for the setting of a regional and articulated network of laboratories for GMOs detection. In this case, the "in-house" technical capacity of the campuses of the University of West Indies (UWI) in Trinidad & Tobago, Barbados and Jamaica can be a relevant Driver, as far as the technical support to the national laboratories is concerned. The main Assumption is that the functioning of the national laboratories is financed by the Governments.

105. **Direct Outcome 3 (DO3)** has been slightly reformulated to underline the expected change, as follows: "Biosafety management in CARICOM countries ensured through a multi-disciplinary cadre of trained personnel and technical support mechanisms, that combine both national and regional capacities". This Direct Outcome is key for the project and its key-role is highlighted in the reconstructed TOC (see Diagram 1), where the Outputs for DO 3 lay the foundation of the whole Project design.

106. Despite its crucial role, the logical pathway of DO 3 is not clear in the LogFrame and a consistent cause-effect sequence is not evident. On the one hand, in fact, different types of Outputs (training events, training manuals, a number of trainees, roster of experts, etc.) are mixed-up in a sort of “shopping list” (see Table 5) without shaping a structured and coherent programme able to sustain the future management of Biosafety in the Sub-region, as formulated in DO3.

107. On the other hand, the logical sequence (cause-effect) between the training activities and their effectiveness in terms of “future sustainability of Biosafety management” in the region is not discussed in the ProDoc. In fact, training effectiveness implies that institutional and organisational structures are in place and effective in receiving, integrating and making the best use of the trained human resources (an assumption to hold). There was also a widely perceived risk (repeatedly expressed along the whole LogFrame), of staff turnover in the Caribbean countries, which, of course, can jeopardise capacity building efforts. The assumption that the trained human resources are retained can be relevant.

108. The ProDoc defines that the Regional Executing Agency, the University of West Indies (UWI), would play a key-role in organising, coordinating and delivering trainings, also through the support of external consultants (see Drivers and Assumptions in Table 6).

109. **Direct Outcome 4 (DO4)** “National and regional mechanisms institutionalized throughout the region, providing access to biosafety information” is based on the delivery of relevant Outputs (see Table 5), among which we underscore:

- National BCH (nBCH) established and operational (Output 4.3);
- Politicians and decision-makers sensitized on Biosafety Information Management (Output 4.12);
- Public education and outreach (PEO) strategy in place to guide production and dissemination of information / awareness material (Output 4.13);
- Stakeholders participation promoted at the national level through awareness raising and targeted outreach (Output 4.14);
- Outreach materials (e.g. web app., brochures, e-newsletter) produced (Output 4.15).

110. The support of GEF/UN Environment Project BCH-Phase II and the technical assistance of a regional BCH expert are strong key-drivers. The preliminary creation of the Project website (<https://caribbeanbiosafety.org/>) may have played a key-driving role for the setting of the National BCHs, by giving them visibility and linking them to a Regional Node. The institutional and financial sustainability of the national BCHs is a relevant assumption to hold (see Table 6 below).

111. **Direct Outcome 5 (DO 5)** is the only “strictly-regional” Direct Outcome (Outcome 5.1 in the LogFrame) and its pathway is crucial and complementary to the national pathway of Direct Outcome 1 in achieving the Main Project Outcome.

112. The way this Outcome is presented in the ProDoc, particularly in the LogFrame, is, however, ambiguous and confusing. The original formulation in the LogFrame just refers to the setting of “regional processes supporting the foundations for regional biosafety services and a regional framework” (see table 5 above). The Outcome Indicator (in the LogFrame) is more precise and demanding: “Regional mechanisms to sustain and coordinate NBFs cost-effectively are explored and initiated”, and the Indicator Target (in the LogFrame) is “An institutional framework adopted for providing regional biosafety services, including an initial

pilot phase for regional coordination of biosafety tasks, and a self-financing plan for such services” (which, incidentally, also coincides with Outputs 5.d of the LogFrame).

113. These three enunciations are conceptually different and increasingly exigent in terms of achievements. The first refers to “regional processes”, the second to “regional mechanisms” and the third to a regional “institutional framework”. The reconstructed TOC at Evaluation has retained the second enunciation (corresponding to the Outcome Indicator in the LogFrame) as Direct Outcome 5 i.e. “Regional mechanisms to cost-effectively sustain and coordinate NBFs explored and initiated”, being the closest one to the results that the Project has been actually pursuing at regional level. As discussed in next chapter 4.3, the adoption of a regional institutional framework for Biosafety in the Region (Output 5.d in the LogFrame) can be regarded as the next step forward in the pathway to Impact (Intermediate State 1 in Diagram 2).

114. The reconstructed TOC has gathered under Direct Outcome 5 (DO 5) all the Outputs to be delivered at regional level by the Project. They are 18, which shows the relevance of the regional dimension of the Project (see diagram 1). Some of them refer to the setting of a regional Risk Assessment (RA) and Risk Management (RM) system (Outputs 2.1 and 2.11), including harmonised Border Control systems (Output 2.12 and 3.13), some to the setting and implementation of a regional network of GMOs detection laboratories (e.g. Outputs 2.5, 2.10, 3.9) and to the implementation of a regional Information system (Regional Node or Regional BCH), like Outputs 3.10, 4.5, 4.6 and 4.16.

115. The LogFrame had originally identified three kind of analyses, as Outputs to be delivered (see Table 5 above), namely: a) Viability Analysis of the financial, technical and political implications of establishing biosafety services and functions at regional level; b) Analysis of the potential role of Regional BCH Node as gatekeeper and manager of regional biosafety applications, and in ensuring adequate public access to information; and c) Analysis of political decision on biosafety services and responsibilities that can be cost-effectively devolved at the regional level. These analyses have been, in fact, relevant **activities** carried out by the Project with national and regional stakeholders all along the Project.

116. The coordination between the Leading Executing Agency (UWI) and CARICOM agencies seems a crucial driver for the delivery of the Outputs and of DO 5, while the main assumption is that Technical Assistance and Financial Resources are available for the implementation and maintenance of the regional mechanisms to be put in place. The main Drivers and Assumptions discussed in this chapter are compiled and presented in the following Table.

**Table 6 : Summary of main Drivers and Assumption by Direct Outcome**

Direct Outcome (DO)	Drivers	Assumptions
DO 1	<ul style="list-style-type: none"> <li>The experience and the achievements of the previous Project “Development of Nat. Biosafety Framework” (completed in 2009)</li> </ul>	<ul style="list-style-type: none"> <li>Political will of the countries to implement National Biosafety Frameworks (NBF) is overall present</li> <li>Countries’ baseline situation and capacity is similar or homogeneous, which motivates the identification of “standard” Outputs to be delivered in all the 12 countries</li> </ul>
DO 2	<ul style="list-style-type: none"> <li>Intensive capacity building on RA and RM (contemplated under DO 3)</li> </ul>	<ul style="list-style-type: none"> <li>The functioning of the national laboratories is financed by the Governments</li> </ul>

Direct Outcome (DO)	Drivers	Assumptions
	<ul style="list-style-type: none"> <li>“In-house” technical capacity of the labs of the UWI in Trinidad &amp; Tobago, Barbados and Jamaica to support the national labs</li> </ul>	
<b>DO 3</b>	<ul style="list-style-type: none"> <li>The leading role of UWI as key-player in capacity building at regional level</li> <li>A pool of national / regional consultants (experts in areas related to Biosafety)</li> </ul>	<ul style="list-style-type: none"> <li>National institutions are effective in receiving, integrating and making the best use of the trained human resources</li> <li>Trained human resources are retained (turn-over is minimised)</li> <li>Consultants (experts and trainers) are available</li> <li>UWI is able to deliver regional biosafety services (including continuous training and sustainable capacity building actions)</li> </ul>
<b>DO 4</b>	<ul style="list-style-type: none"> <li>The support of GEF/UN Env. Project BCH-Phase II</li> <li>The technical assistance of the regional BCH expert</li> <li>The preliminary creation of the Project website (<a href="https://caribbeanbiosafety.org/">https://caribbeanbiosafety.org/</a>) giving visibility to the national BCHs and linking them to a Regional Node.</li> </ul>	<ul style="list-style-type: none"> <li>National BCHs are institutionally and financially sustainable</li> </ul>
<b>DO 5</b>	<ul style="list-style-type: none"> <li>The coordination between the Leading Executing Agency (UWI) and CARICOM agencies</li> </ul>	<ul style="list-style-type: none"> <li>Technical Assistance and Financial Resources are available for the implementation and maintenance of the regional mechanisms</li> </ul>

### 4.3 The pathway from Outcome to Impact

117. The intended Impact of the Project is the Global Environmental Benefit (GEB) to which it contributes: the “Enhanced conservation and sustainable use of biological diversity in the Caribbean Sub-region”. The pathway from the Main Project Outcome to the intended Impact is not a straightforward process: four transitional conditions (called Intermediate States) have to be fulfilled, as shown in Diagram 2.

118. Once the NBFs are effectively operational in responding to national and regional needs (Main Project Outcome), the coordination between the Competent National Authorities and the Regional Regulatory Agency (the Caribbean Agricultural Health and Food Safety Agency, CAHFSA) will be the key-driving force to transit to the **Intermediate State 1** (IS 1): “An institutional framework adopted for providing regional biosafety services”. The formulation of this Intermediate State corresponds to the Indicator Target defined in the Log Frame for Outcome 5.1. Relevant assumptions must hold for IS 1, notably the existence of a Resource Mobilisation strategy and the availability of Financial Resources, and the enhancement of the in-house capacity of CAHFSA, a relatively “young” institution.

119. The establishment of a regional Biosafety Framework can lead to **Intermediate State 2** (IS 2), i.e. the “Improved decision-making capacity at national and regional level, based on effective and coordinated mechanisms, enhanced quality information and transparency”.

Drivers for this step will be the coordinating role at national level of the Competent National Authorities, effective regulatory regimes and administrative systems for managing GMOs applications and for decision-making, technically-sound systems of Risk Assessment and Risk management, quality information available and flowing into the regional and national BCHs, the participation of stakeholders and of the public in general in decision-making processes. The availability of expertise for Risk Assessment remains a strong assumption, as well as the availability of external partners for technical assistance. Capacity of dialogue and collaborative attitudes are also essential assumptions to hold for sound and sustainable decision-making processes.

120. Improved decision-making processes may lead to “Improved governance of National and Regional Biosafety Systems” (Intermediate State 3, IS 3). Main Drivers at this stage are the effective participation of Biosafety Stakeholders in planning, decision-making and funding, transparency in decision-making and negotiation, the functioning of effective monitoring, inspection and enforcement procedures, a fully operational regional BCH and the consolidation of Regional Cooperation within the CARICOM system. The political will of the States and of CARICOM to jointly manage Biosafety is a strong assumption to hold for improved Biosafety Governance, as well as the operationalisation of the existing Biosafety Regional Policy through a Regional Action Plan and an effective resource mobilisation strategy in place.

121. Improved Biosafety Governance can lead to the fulfilment of the requirements of the Cartagena Protocol on Biosafety (CPB), as synthesized in its art. 1, which is the **Intermediate State 4** (IS 4), under the assumption that best practices of Risk Assessment and Management are sustained, replicated and upgraded, and the financial flow is consolidated.

122. Biosafety must continue to be strongly integrated into Biodiversity Policies and Plans at regional and national level, so as to contribute to the Global Environmental Benefit of “Enhanced conservation and sustainable use of biological diversity in the Caribbean Sub-region”, which the intended Impact of the Project. The assumption that other development policies, at national and regional level, do not conflict with Sustainability and Biodiversity conservation is a strong assumption to hold, particularly taking into account sectors like Agriculture and Fishery, Energy and Industry sectors, Trade, and Tourism.



Figure 1: Diagram of Reconstructed Theory of Change (Pathway) from Outputs to Direct Outcomes to Main Project Outcome

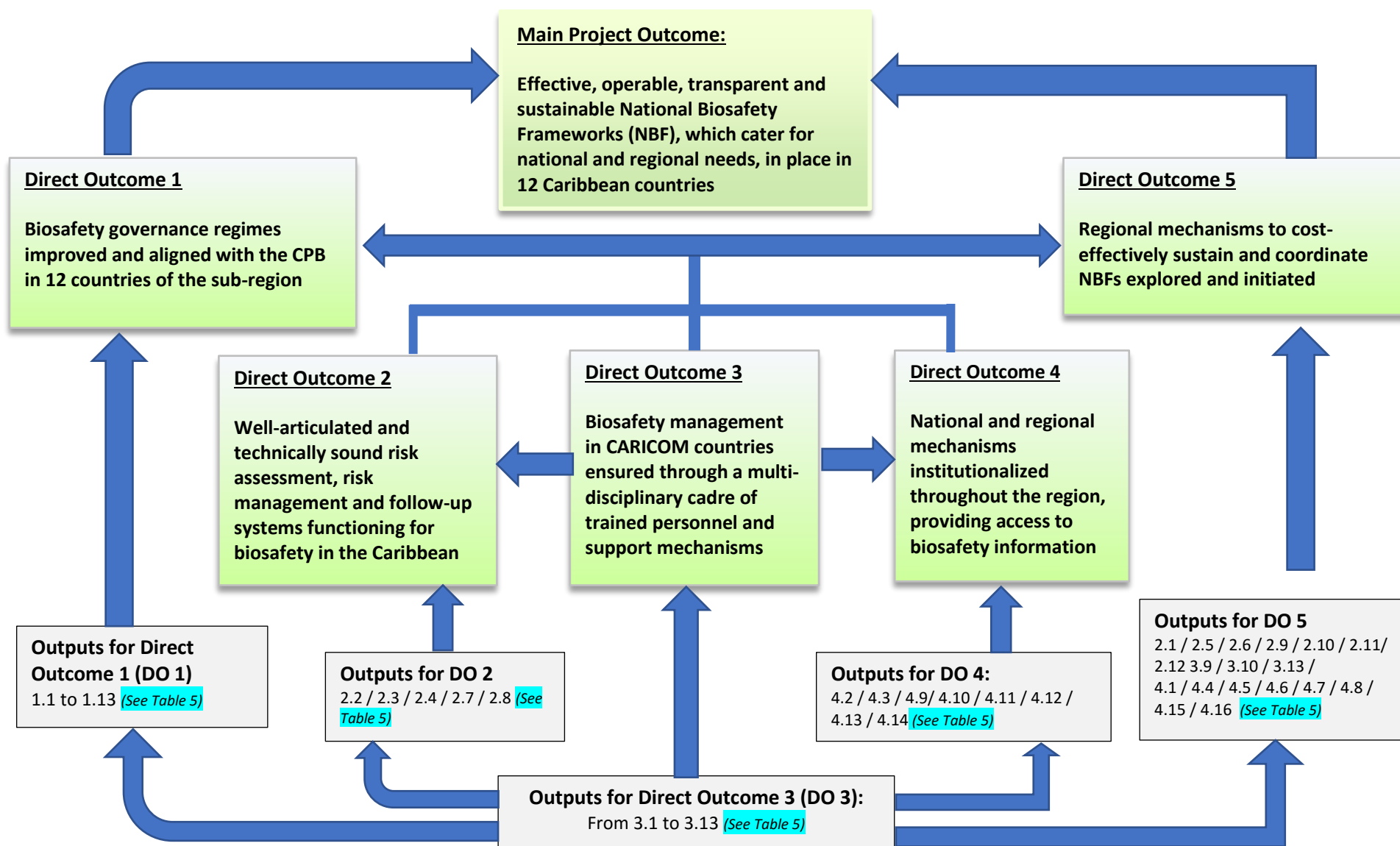
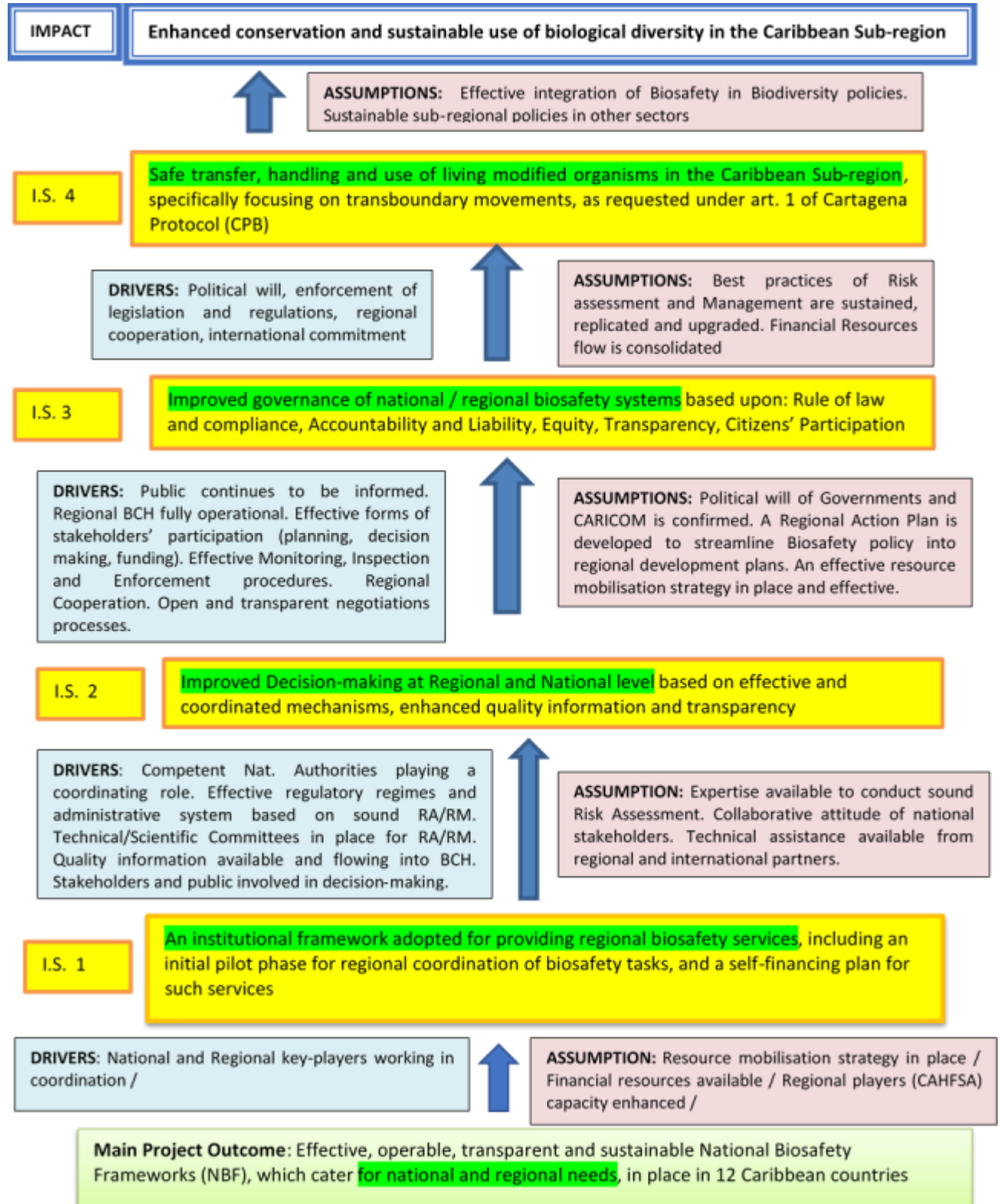


Figure 2: Diagram of Reconstructed TOC from Project Outcome to Impact



## 5 Evaluation Findings

### 5.1 Strategic relevance

#### 5.1.1 Alignment to the UN Environment Medium Term Strategy (MTS) and Programme of Work (POW)

123. The Project is aligned with UN Environment Sub-Programme Environmental Governance objective: “The capacity of States to implement their environmental obligations and achieve their environmental priority goals, targets and objectives through strengthened laws and institutions is enhanced”. More particularly, it is aligned with the Medium-Term Strategy (MTS) 2010-2013 Sub-programme Environmental Governance (Expected Accomplishment b) and with Medium-Term Strategy (MTS) 2014-2017 Sub-programme Environmental Governance (Expected Accomplishment 2) as summarised in following Table 7.

**Table 7: Alignment of the Project to UN Environment Medium-Term Strategy (MTS) 2010-2013 and 2014-2017**

Expected Accomplishment (EA) MTS 2010-2013, Env. Governance	Contribution of the Project
<p><b>Expected Accomplishment b (EAb):</b> States increasingly implement their environmental obligations and achieve their environmental priority goals, targets and objectives through strengthened laws and institutions.</p>	<ul style="list-style-type: none"> <li>• Support to the implementation of the National Biosafety Framework of 12 Caribbean countries, including Biosafety National Policies and Laws</li> <li>• Support to CARICOM for the preparation and implementation of a Regional Biosafety Policy and a Biosafety Model Legislation for the countries of the Region</li> </ul>
Expected Accomplishment (EA) MTS 2014-2017, Environmental Governance	Contribution of the Project
<p><b>Expected Accomplishment 2 (EA2)</b> Law: The capacity of countries to develop and enforce laws and strengthen institutions to achieve internationally agreed environmental objectives and goals and comply with related obligations is enhanced.</p>	<ul style="list-style-type: none"> <li>• Strengthening of the Competent National Authorities and National Stakeholders’ through Training and Capacity Building, enhanced access to Information and Education on Biosafety, regional network of GMOs Laboratories, coordination and harmonisation at regional level</li> </ul>

#### 5.1.2 Alignment to UN Environment /GEF Strategic Priorities

124. The project belongs to GEF Biodiversity Focal Area and is relevant to GEF Strategic Programme 6 (BD-SP6): Building Capacity for the Implementation of the Cartagena Protocol on Biosafety.

125. Given its focus on an extensive Capacity Building programme at regional level and on Technology Support (for instance the implementation of the MSc in Biosafety, the establishment of a regional Network of GMOs laboratories), the Project is surely aligned with Bali Strategic Plan (BSP). The project has been active in addressing many of the cross-cutting issues listed in Section D of the Plan, such as the Strengthening of national institutions, the Development of national law and regulations and the Compliance with obligations under multilateral environmental agreements. Gender issues, however, were not specifically addressed by the Project.

126. The Project has also promoted South-South Cooperation on Biosafety at Caribbean and Latino-American level, through initiatives of exchange with Cuba and Argentina.

### **5.1.3 Relevance to Regional, Sub-regional and National Environmental Priorities**

127. The Project has a Regional scope and is implemented at Regional and National levels in 12 Caribbean countries. It has been relevant at Regional and National level for the following reasons:

- At National level, it has supported 12 countries of the Region (Parties of the Cartagena Protocol on Biosafety, CPB) in implementing their National Biosafety Frameworks and in integrating Biosafety into National Biodiversity Strategies and Plans, which are crucial for the Sustainable Development of the countries of the Region. The relevance of biodiversity and ecosystems conservation for the Caribbean Region is highlighted in chapter 3.1 (Context).
- It has strengthened the coordination and cooperation among the countries providing opportunities for exchange, networking and joint initiatives in Environmental programmes (e.g. Regional Training activities, harmonised Biosafety Policy, regional Network of GMOs Laboratories, a joint instrument for Biosafety Information, Regional Working Group on Biosafety, among others).
- It has also meaningfully contributed to the objectives of Regional Integration promoted by the CARICOM and has enhanced the participation of the Regional Institutions (CARICOM) in Biosafety issues, hence supporting a regional approach to Environmental issues, like GMOs Risk Assessment and Management, regional Environmental Policies and Regulatory Frameworks, particularly relevant considering the existing free-trade area between CARICOM Member States.
- It has enhanced the participation and visibility of the countries of the Region, particularly the Small Island States, at international level, by opening opportunities of Cooperation with Regional and International Agencies and Institutions, and by enhancing their active participation in International Fora (for instance, through a side-event organised through the Project at the COP-MOP of Cancun in 2016).

128. Notwithstanding all the above, it has to be highlighted that the group of 12 participating countries is not homogeneous, as discussed in different parts of this report. Countries' priorities, therefore, may also differ. For instance, mainland countries that share porous borders with GMOs countries (like Belize, Guyana and Suriname) or are interested in introducing GMOs cultivation, may look with interest at the setting of a Regulatory Biosafety Framework, either for control purpose or for attracting private investors.

129. Other countries may assign to Biosafety a low level of priority, when compared with some more pressing needs in key-areas like Health and Education, Employment, Infrastructures, and Natural Disaster preparedness and mitigation. This is particularly true for the Small Island States.

### **5.1.4 Complementarity with Existing Interventions**

130. Most of the Biosafety Competent National Authorities (CNA) are also CNA for the CBD and for the Nagoya Protocol. That has provided opportunities for complementarity and synergies, particularly considering the quantity and quality of capacity building activities to

which the technical officers and the top-managers of those institutions have been exposed through the Project.

131. As a whole, the strategic Relevance of the Project is rated **Highly Satisfactory (HS)**.

## 5.2 Quality of Project Design

132. The assessment of the Quality of the Project Design was carried out in the Inception Report through the desk review of the ProDoc and its main Appendices (e.g. the Logical Framework, the Monitoring and Evaluation Framework, and the Budget), and conveyed a mixed picture of clear, well-articulated parts and some elusive chapters regarding relevant aspects that could have deserved a deeper discussion and a more precise definition.

133. The country visits and the exchanges with the Project Team and the National Stakeholders have also highlighted strong points and structural weaknesses in the Project Design that have significantly influenced Project's results and its Sustainability, as discussed here below.

134. The regional approach of the Project has proved to be key for the achievement of results at national level, in view of the limited knowledge and capacities of the countries in a new issue like Biosafety. Although the implications of such an approach in the management complexity of the Project were not sufficiently considered in the design, the option of having a regional project for the Caribbean Sub-region proved to be right and there is a full consensus among all stakeholders that the regional approach has been indispensable to progress at national level.

*"A number of things (legislation, training) that could not have been accomplished at the national level but better accomplished as a region"*

*"The regional component was very critical also in facilitating networking among various territories where vast experiences were shared and each one learned from the other in terms of their own national experiences"*

*"Where the national project was defiant, the regional project picked up and was of tremendous benefit"*  
*(respondents to on-line questionnaire)*

135. The "one size fits all" approach of the Project Design had identified standard results to be attained for all the 12 countries (e.g. 12 National Policies, 12 National Laws, etc.), which showed patently inadequate since the beginning, in view of the heterogeneous mix of countries and their uneven capacity of "inputs absorption" and "outputs delivery". The approach was also identified by the Mid-term Evaluation of the Project (2014) as one of the most important causes of the slow start of the Project and of the low performance in the first three years of execution. This issue is described and discussed particularly in chapter 5.4.1 (Outputs delivery) and chapter 5.6 (Efficiency).

136. The Results Framework (Logframe) and the Monitoring and Evaluation Framework (App.7 of the ProDoc) were coherently linked to one another and provided a consistent picture at Outputs level, with baseline, mid-term and final targets for indicators. However, in most of the cases, Outcome indicators were, in fact, Outputs and did not capture the measurable effect of the Outcomes in terms of systemic or behavioural change. Moreover, some of the Outputs (particularly those related to Outcomes 2 and 3) were confusingly or vaguely formulated.

These issues are discussed more in depth with clarifying examples in chapter 5.7.1 (Monitoring design and budgeting).

137. Sustainability challenges were addressed in the Project Design, particularly the capacity to sustain the regulatory and institutional framework for Biosafety at national and regional level, as well as their financial sustainability. However, the ProDoc did not fully succeed in defining robust sustainability mechanisms and a clear Project exit strategy, which, in fact, at the end of the Project, remain a key-challenge ahead.

138. Everything considered, the overall Project Design is rated **Moderately Unsatisfactory (MU)**.

### 5.3 Nature of the External Context

139. The dispersion, geographical discontinuity and small dimension of the Small Island States of the Caribbean shape a geographical situation that can, *per se*, be considered a limiting external context, strongly impacting on projects performance. Moreover, the Caribbean region is prone to seasonal hurricanes that may strongly impact particularly on the small island countries. Actually, some of the countries have been hit hard by hurricanes during Project lifetime, notably in 2017. For instance, the office of the Competent National Authority in Dominica was virtually destroyed and also Antigua and Barbuda was seriously affected. Overall, the External Context has been considered **Unfavourable (U)**.

### 5.4 Effectiveness

#### 5.4.1 Delivery of outputs

140. The main Outputs delivered by the Project are described here below grouped by Direct Outcome (see Table 5).

<b>Outputs related to Direct Outcome 1 (Biosafety governance regimes improved and aligned with the CPB in 12 countries of the sub-region; Outputs 1.1 to 1.13)</b>
--

141. Biosafety Competent National Authorities (in many cases coinciding with the CBD National Authorities) have been identified in all the countries and have been active at a variable extent (Output 1.4). In some cases, they have shown an increasing institutional dynamism and have been very active at national and regional level.

142. Not all the countries have clearly defined roles and responsibilities regarding Biosafety (Output 1.5), but all 12 countries have established, at a variable extent of consolidation, multi-sectoral National Biosafety Committees. Stakeholders' coordination has continued after the end of the National Projects (end 2016) and still occur when specific issues need to be discussed regarding the setting and implementation of the National Biosafety Framework, for example to discuss the draft Laws and Policies.

143. Some countries have a Biosafety Policy (Output 1.2) approved (e.g. Antigua & Barbuda, Grenada, St. Lucia), or have drafts already finalized, revised or in need of revision (e.g. Belize, Guyana, St. Kitts & Nevis, St. Vincent and the Grenadines, Trinidad & Tobago). Suriname has included Biosafety in other existing Policies.

*"The project had so many facets and all needed to be done on different paces. Some components were dependant on the implementation of other components. Especially the policy formulation part was very much dependant on the pace of policy formulation in the country, because of the different steps that are involved and that pace was not calculated in the project implementation time" (respondent to online questionnaire)*

144. Regarding Output 1.1 (Biosafety Law), it has to be considered that it can be delivered in presence of a Policy. One country (St Kitts & Nevis) had already approved a Biosafety Act before the starting of the operations of the Project in 2012 (the Act is currently under review) and St Lucia has recently progressed towards the enactment of a National Law, which has already been endorsed by the Cabinet. Most of the countries have prepared a draft bill on Biosafety (at different level of completion), while some have provisions regarding Biosafety within other existing laws (e.g. Belize, Dominica). Certain countries have drafted Regulations, notably Antigua & Barbuda, which is in its 3rd Draft of the Biosafety & Biotechnology Management Bill and in the 2nd draft of four Regulations.

*"The lack of passage of this bill into law is not really indicative of lack of political will but rather is a reflection of lack of human resources at the Ministry of Legal Affairs" (respondent online questionnaire)*

*"Due to political shifts (elections) during the project implementation period, the newly established Government needed to be informed about the project again and the project component realigned with the newly established policy guidelines. Before this was re-established, the project was already in the final phase" (respondent online questionnaire)*

145. Administrative procedures for Biosafety Management and for Decision-making (Outputs 1.11 and 1.12), as well as the setting of financial mechanisms (Output 1.7) have proved to be still premature in absence of clear regulatory frameworks.

146. A consistent number of staff and technical officers have been exposed to Biosafety training (as discussed under Direct Outcome 3) and a Roster of Experts has been created in many countries. Nevertheless, activities and outputs related to sensitisation of key stakeholders (Outputs 1.3, 1.8), particularly decision-makers, have generally been left behind, despite some interesting and notable experiences, as proved by the existence of Biosafety Policies and draft Laws in some countries. Information and Participation of national stakeholders are mainly discussed under Direct Outcome 4.

147. From a strictly quantitative point of view, it can be argued that the overall Outputs delivery for Outcome 1 has been below the expectations. This conclusion solely, however, would not duly take into account the low and uneven baseline situation of the countries when the Project started, the small dimension of political and institutional frameworks of many of the countries of the Region, particularly the Small Island States, and the objective existence of more pressing national priorities.

**Outputs related to the Direct Outcome 2 (Well-articulated and technically sound risk assessment, risk management and follow-up systems functioning for biosafety in the Caribbean); Outputs 2.2 / 2.3 / 2.4 / 2.7 / 2.8**

148. Emphasis has been given on the delivery of instruments for GMOs detection at laboratory level. All countries (except Bahamas) have received the basic tools and/or

equipment for GMO detection, as well as technical assistance to assess the needs of upgrading existing infrastructures, and an initial training.

149. The lack of appropriate infrastructures is the main issue at stake for the proper functioning of the laboratories in most of the countries. In fact, only two countries that already had a functional (non-GMO) laboratory were able to upgrade it with the GMO-detection equipment provided by the Project, and currently have a fully-fledged GMO laboratory (Belize and Trinidad and Tobago).

**Outputs related to the Direct Outcome 3 (Biosafety management in CARICOM countries ensured through a multi-disciplinary cadre of trained personnel and support mechanisms); Outputs 3.1 to 3.13**

150. An intensive Capacity Building programme has been put in place by the Project since the beginning and has gained momentum from 2015 to 2018 through four sub-contracts of service-provision signed with the International Centre for Genetic Engineering and Biotechnology (ICGEB). Other international partnerships for Capacity Building have been established with the Secretariat of the CBD, the Alpen-Adria University (Austria), the American Association of Cereal Chemists (AACC International) and the Caribbean Basin Agricultural Trade Office (CBATO) of the US Department of Agriculture (USDA).

151. A total of 13 Regional Workshops have been organised by the Project over the main aspects of Biosafety, such as Biosafety Legislation, Regulations and Administrative Systems, Decision-making and Guidelines Application, Socio-economic considerations, Risk Communication and GMOs Lab detection, among others. Two mock-exercises (one on GMO Food/Feed Safety Assessment and one on the Analysis of GMO dossiers) were also carried out. Moreover, specific workshops were organised on BCH use in six different countries and a regional workshop on Borders Control for Customs and Quarantine Officers was also carried-out at the University of West Indies (UWI).

152. Study-visits were organised at ICGEB Headquarter (Italy), to Argentina, Cuba and United States. In total, an impressive number of participants (545) has been exposed to capacity building activities on several aspects (see complete list of capacity building activities in Annex 9)<sup>11</sup>.

153. High-quality training material has been produced and/or made available for the workshops. In particular, ICGEB has produced eight Guidelines covering different aspects of Biosafety treated in the workshops. Four Laboratory Manuals for GMOs Detection have also been produced by UWI.

154. A MSc course in Biosafety (see Output 3.11) has been conceived, organised and implemented at the UWI Campus in Barbados. Seventeen (17) students have successfully concluded the Course (in two cohorts) and most of the countries (10) have benefited from the Course through fellowships of the Project. A third cohort is on-going with five students without the support of the Project. The course is basically on-line, except the module on Laboratory Methods (optional) and the exams. The students met during the country visits (six) are all actively engaged (some with position of responsibility) in the area of Biosafety (mainly in the national Min of Environment and Min of Agriculture). The possibility of having the Course

---

<sup>11</sup> Taking into account that a person may have participated to more than one training event, the number of people trained is inferior. For instance, the report "Assessment of capacity in the Caribbean sub-region in support of Biosafety Systems", UWI/GEF/UN Env., N. Jacob, 2017) refers that "a total of 428 persons received capacity building in one or more areas".



online has been crucial for enabling people working in different Ministries and Agencies to participate and benefit from the Course, hence increasing its effectiveness.

155. The opinion of the former students is highly positive in terms of methodology (quality of the didactic material, tutoring, etc.) and content of the Course. The efforts and capacity of UWI in delivering the programme has to be strongly commended, due to the complexity of organising this kind of learning-training activity at distance. The “Open Campus” of UWI, a virtual (fourth) campus present in all the countries through a link-person, has also played a role in assisting the students.

156. Legal aspects of Biosafety are treated in the Course (as an optional module), but biosafety policies, institutional frameworks, socio-economic considerations, biosafety information and public participation are not sufficiently treated and that could be considered as an opportunity to widen the approach of the Course in the future. As a matter of fact, the final researches of the students show a variety of interests, which is very positive. Issue like “Potential Socioeconomic Impacts of Genetically Modified Corn in Belize”, “Shifting Priorities: The Role of Biosafety in Sustainable Farming in St. Vincent and the Grenadines”, “Biosafety: Knowledge, Attitude and Perception of GMOs in The Bahamas” or “An examination of the biosafety clearing house (BCH) and its impact on Biosafety in the Caribbean Region” show the interests of the students and the openness of the Course.

157. A challenging issue is the cost of the Course (15,000 USD), which can be hardly sustainable by the students without an external sponsor. The University is looking at the possibility to diversify its offer, also through single modules (delivering certificates instead of a complete MSc) and the active search of future sponsors (in absence of the Project). In that perspective, it could be possible and suitable to mainstream biosafety courses into other existing MSc such as MSc in Biotechnology, MSc in Genetic Resources Management and Utilisation, as well as in other Graduate Courses of the Faculty of Science and Technology and of Food and Agriculture.

158. It can be concluded that a large and diversified programme of training and capacity building has been organised and implemented by the Project, mainly with the substantive support of the University and the ICGEB. The quality and quantity of the Outputs produced is remarkable and one can conclude that the “fundamentals” of Biosafety have been widespread in a highly professional and balanced way throughout the Region.

**Outputs related to Direct Outcome 4 (National and regional mechanisms institutionalized throughout the region, providing access to biosafety information); Outputs 4.2 / 4.3 / 4.9/ 4.10 / 4.11 / 4.12 / 4.13 / 4.14**

159. All the National BCHs have been long-established with the support of the Secretariat of CBD and the BCH Projects (BCH 1 and 2) and are accessible through the Global BCH. The Project has supported the countries in upgrading and uploading their BCH to the Caribbean Centre for Biosafety (CCB) put in place by the Project (see Outcome 5).

160. While the national pages on the Global BCH present little information, due to the incipient stage of the activities related to Biosafety and GMOs in the countries, most of the countries have taken advantage of the support of the Project by remarkably improving their page on the CCB with relevant information and an appealing format, such as Antigua and Barbuda, Bahamas, Belize, Grenada, St Kitts and Nevis, St. Lucia and Suriname.

161. Some countries have implemented relevant activities of Information and Awareness Raising at national level, stimulating Public Participation regarding GMOs and Biosafety. Notably, Grenada, Guyana, St Lucia, St. Vincent and the Grenadines, and Trinidad and Tobago have produced their own information material, like leaflets and posters. Guyana has also produced a communication tool broadcasted through TV and remarkably promoted public debates in some of the regions of the country regarding the draft policy and the draft law on Biosafety, as well.

162. Since in the three mainland countries (Belize, Guyana and Suriname) the challenge of GMOs cultivation is an issue at stake (with the potential to become a controversial one), and due to the massive presence of GMOs for Food and Feed in the whole Region, the need for a clear, appropriate and technically-sound information to be vehiculated to Decision-makers and to the Public in general is high. A preliminary “mock exercise” on “Safety assessment for Foods and Animal Feeds derived from GMOs” has been carried-out in St. Lucia and in Antigua and Barbuda in 2018, under the guidance of ICGEB.

163. In all the countries visited, the stakeholders have underlined the importance of targeting policy / decision makers through an appropriate strategy and methodological tools (lobby and advocacy, meetings, tailored communication tools), which currently emerges as a key-point to be addressed in the near future in order to gain socio-political, institutional and financial sustainability at national level.

164. Overall, it can be said that many activities and outputs have been delivered in this component that have substantively increased the level of knowledge and information on Biosafety in the whole Region. The Competent National Authorities are currently much more aware of the relevance of having in place functional systems for Public Information and of the challenges of matching different stakeholders with proper and specific activities and tools, diversified by stakeholders’ groups, which is an important sensitisation-step at institutional level.

**Outputs related to Direct Outcome 5 (Regional mechanisms to cost-effectively sustain and coordinate NBFs explored and initiated); Outputs 2.1 / 2.5 / 2.6 / 2.9 / 2.10 / 2.11 / 2.12 / 3.9 / 3.10 / 3.13 / 4.1 / 4.4 / 4.5 / 4.6 / 4.7 / 4.8 / 4.15 / 4.16**

165. The Project has approached the regional dimension in a coordinated and harmonised way. Based on the dialogue with both National and Regional Stakeholders, the following priority areas were identified:

- Harmonised Regional Biosafety Policy
- Biosafety Model Legislation
- GMOs Laboratories Network
- Capacity Building
- Regional mechanisms for Information, Public Education and Awareness

166. Regarding the Regional Biosafety Policy, it has to be recalled that CARICOM had appointed in 2009 a technical committee to develop a Regional Biotechnology and Biosafety Policy, as mentioned in Chapter 3.1 (Context). The document produced did not have operational details and was essentially developed based on a top down approach. Most national decision-makers in member countries felt rather uncomfortable with the topic due to its political implications and the draft policy did not progress. The Project has largely taken advantage of the intensive Capacity Building activities put in place from 2015 for raising awareness among national officers regarding the need of a harmonised Biosafety Policy at

regional level. It also stimulated a more participatory discussion around the topic and promoted a bottom-up approach, through which the Project could formulate a draft Biosafety Regional Policy that also included operational details.

167. The draft Regional Policy was circulated to all member states, responses were obtained, and the revised policy has been submitted to CARICOM. In 2016 the COTED (Council for Trade and Economic Development) of CARICOM gave significant steps to discuss the draft policy with CARICOM Agencies (notably CAHFSA, the Caribbean Agricultural Health and Food Safety Agency) and with the member States that were asked to make comments. Three member-countries did present comments, as well as the CARICOM Secretariat and CARPHA (Caribbean Public Health Agency), which were incorporated in the draft.

168. As a result, in October 2017, the Regional Biosafety Policy was eventually approved and adopted by CARICOM. The Caribbean Agricultural Health and Food Safety Agency (CAHFSA) was identified by CARICOM as the regional Regulatory Agency for Biosafety.

169. Therefore, the Caribbean Region currently has a harmonised Regional Policy on Biosafety, which represents of course a highly significant Output to which the Project contributed in a decisive way. The Regional Policy can be very useful to support the countries in setting their own Policy or, for the countries that have already a Biosafety Policy in place (see Direct Outcome 1), to possibly review and improve their existing Policy, would it be the case, according to their sovereign decision.

170. Once the Regional Policy was adopted, the Project supported CAHFSA in preparing a Model of Biosafety Legislation (Law) that could help the countries to prepare their National Law. This process is quite recent. The draft model has been prepared by a regional consultant under the supervision of CAHFSA, peer-reviewed and is currently under revision by the consultant. The countries, according to information received at CAHFSA, will be asked (as happened for the Policy) to comment on the Model, the final version should be discussed at COTED level and with the Legal Affairs Committee of CARICOM, and eventually continue its legal procedure at superior / political level for final approval, a process that can take around two years.

171. This issue is raising some concerns regarding the on-going process of drafting and approval of the National Laws (see Outcome 1). As a matter of fact, all the countries are indeed working, though at a variable extent of advancement, on their National Draft Laws. Some countries are revising their existing Law (St Kitts and Nevis), have already approved their law by the Cabinet (St Lucia), or are in an advanced stage of revision of their draft Law (Antigua & Barbuda). If these processes are somewhat put on hold in the countries because of the expected modelling of a regional law, there could be the risk of demotivation and of losing momentum at national level.

172. Moreover, discrepancies may appear between the national Laws or Draft Laws and the model proposed at regional level regarding controversial issues, such as GMOs cultivation and GMOs Food and Feed labelling. This is a delicate process that needs to be appropriately addressed in the immediate future through a balanced approach and a two-way effective communication between national and regional stakeholders.

173. The recent approval of the Biosafety Regional Policy (end of 2017) and the incipient phase of preparation of the Model Biosafety Legislation raised questions regarding the late timing of these two crucial regional initiatives. In fact, it can be argued, they should have been more profitably undertaken at the beginning of the Project, so as to support and coordinate

the on-going establishment of the national regulatory regimes. This issue is also discussed in chapter 5.6 (Efficiency).

174. As a matter of fact, as discussed in chapter 3.5, the approach and coordination of the Project with CARICOM institutions has been systematically pursued only after the “re-setting” of the Project in 2015, which also coincided with the adoption of the new CARICOM Strategic Plan 2015-2019 and the establishment of CAHFSA in December 2014. Therefore, it was not possible to advance earlier at Regional level.

175. The Project has produced a regional strategy for the setting of an appropriate model for GMOs detection in the Region, through a Regional Network of GMOs Laboratories. The network is based on a “three tiers” design comprising National, Regional and International Laboratories. More specifically: a) National laboratories for developing basic analysis on GMO presence (see Outcome 2); b) three referral GMO Labs (based in the three UWI Campus in Trinidad & Tobago, Barbados and Jamaica) for accurate qualitative analyses and c) an International Lab (based in USA) giving appropriate support, if needed, for international accreditation.

176. The Network is expected to be institutionalised through formal MoUs between the National and the Regional Laboratories. A draft MoU has been prepared by the Project and some of the countries have already signed it. The equipment for the regional labs has been purchased and received. One of the three regional labs (in Barbados Campus) is in need of infrastructural upgrading in order to be a GMO reference laboratory.

177. Overall, the setting of the Labs Network can be considered on-going, yet in need of some institutional, operational and decisive steps both at national and regional level to be minimally operational, as discusses in following chapter 5.4.2.

178. Capacity Building Outputs at Regional level have been discussed under Direct Outcome 3 above (the Regional Workshops and the MSc in Biosafety).

179. Regarding Regional mechanisms for Biosafety Information, Public Education and Awareness, the Project has put in place its website (<https://caribbeanbiosafety.org/>) with the technical support of a private service provider of Trinidad & Tobago. The website contains, at the Homepage: the National BCH of the countries, the Project Outputs (i.e. all the Project publications such as manuals, guidelines, brochures, videos, etc.), the proceedings of most of the Training Workshops organised by the Project, and the so-called Caribbean Centre for Biosafety (see below).

180. The Caribbean Centre for Biosafety (CCB) (<https://caribbeanbiosafety.org/centre-for-biosafety/>) has been conceived, as explained in the website, for being the virtual information hub “to provide project countries with access to a range of resources to enhance the sustainability of biosafety in the Region”. The CCB should also disseminate updated information regarding Biosafety issues in the region and the decisions made at the national level regarding GMOs, hence functioning as a sort of Regional Node or Regional Biosafety Clearinghouse (rBCH). At present, the CCB contains the list of the experts available in the region and the link to them for technical assistance on specific matters, the so-called “Technical Resource Group on Biosafety”, as well as the list of the future National Laboratories and a brochure of the MSc on Biosafety.

181. The Project website, though appealing and user-friendly, does not permit to register the number of “visits”. Actually, the countries’ stakeholders interviewed during the mission in

different countries admitted not having recently visited the website or, in many cases, did not know about it. Not only the setting, but also the running of the Project website was externalised. The Project team did not contemplate a (part time) UWI staff that could have possibly maintained and updated the site at the end of the Project, and no staff of UWI received a BCH training. These findings raise concerns regarding the effectiveness and the future sustainability of the “Caribbean Centre for Biosafety” (CCB), as discussed in following chapter 5.4.2.

182. The Project has prepared a Communication Strategy in 2015 (with the support of ICGEB) and has produced and disseminated to the countries Outreach material regarding GMOs and Biosafety. It has been a relevant activity leading to the delivery of different tools, namely six Factsheets and Brochures, and seven Videos that have been used, though not systematically, by the countries during the execution of the national projects.

### ***Final remarks on Outputs delivery***

183. The Project was called to deliver a very high number of outputs at national and regional level, most of them having been satisfactorily delivered. In some cases, particularly related to capacity building and to the setting of regional mechanisms and procedures, the delivery can be considered highly satisfactory. As already mentioned in Chapter 5.2 (Quality of Project Design), the regional approach of the Project has been crucial to attain results at national level.

184. The complexity of the Project and the difficulty experienced in its initial Management by the Leading and the National Executing Agencies, account for the very low delivery of the Outputs in the first three years, as already pointed out by the Mid-term Evaluation. However, the team steadily in place since 2015 has been able to catch-up with the delays accumulated, by delivering a high number of relevant Outputs.

185. However, outputs delivery has been uneven and strongly challenged by different degrees of interest and level of response and participation from the 12 participating countries. For example, although all the countries have significantly progressed in the formulation, revision and adoption of their Biosafety regulatory regimes, only few of them have been able to fully deliver the most ambitious outputs, like a National Policy or a National Law on Biosafety. As discussed under chapter 5.2 (Quality of Project Design), a country-tailored approach could have allowed the identification of more realistic outputs adequate to the diverse existing conditions and needs of each country.

186. Overall, Outputs delivery has been rated **Satisfactory (S)**.

### **5.4.2 Achievement of Outcomes**

<b>Direct Outcome 1: Biosafety governance regimes improved and aligned with the CPB in 12 countries of the sub-region</b>
---

187. The heterogeneous delivery of Outputs at national level brings about different levels of achievement of Direct Outcome 1. It is, however, evident that, despite the uneven countries’ baseline and dissimilar pace of implementation, all the countries have made significant steps to set and improve their Biosafety governance regimes. Moreover, a process of capacity and institution building has been triggered in all the countries and has the potential for further promoting the Biosafety Agenda and for gaining increased dynamics, visibility and acceptance among the main decision and policy makers.

*“The Project resulted in the Biosafety Policy, law and regulations, as well as guidelines, it led to widespread public sensitisation on biotechnology and Biosafety including the establishment of the Biosafety website; it built capacity of hundreds of public officers and private individuals in various aspects of Biosafety management, communication, administration, detection etc.” (respondent to on-line questionnaire)*

188. There is a consensual perception and opinion of all national and regional stakeholders regarding the overall progress of governance regimes, when compared with the baseline situations. This finding is also corroborated by the analyses produced by two Reports prepared by an external Consultant<sup>12</sup> and by the service-provider ICGEB (International Centre for Genetical Engineering and Biotechnology)<sup>13</sup>.

189. The Terminal Evaluation has prepared a comparative analysis (see Annex 10) of the GEF Tracking Tools<sup>14</sup> produced by the 12 countries at the beginning, mid-term and end of the Project, which is also reinforcing this perception. The Tracking Tools have been developed by GEF to track and monitor progress in eight issues / components of the National Biosafety Frameworks (NBF), namely: a) Biosafety Policy; b) Biosafety Regulatory Regime; c) Administrative System; d) Risk Assessment and Decision-making; e) Follow-up and Monitoring; f) Public awareness; g) Education; and h) Participation. The scoring criteria of the Tools are also summarised in Annex 10.

190. The 12 countries participating to the Project used the Tracking Tools as an instrument of “Self-evaluation” and that has to be taken into account. Nevertheless, when triangulating the results of the Tools with opinions and perceptions expressed by different Project’s stakeholders at country and regional level, and by the Project Team, Consultants and Service-Providers, the self-assessment of the Tracking Tools looks very much aligned with that of the others.

191. The “Comparative Table by Country” presented in Annex 10 shows that:

- Most of the countries believe having significantly progressed towards the operationalisation of their National Biosafety Frameworks (NBF), though at a very variable extent;
- The average score of the 12 countries of the Region, at the end of the Project, is relatively low (14/32), which corresponds to the 45% of the maximum score possible;
- Only four countries, at the end of the Project, believe having at least achieved the average-level score (16/32), i.e. Antigua and Barbuda, Belize, Grenada and St. Lucia (alphabetically);
- Five countries rate themselves below but close to the average (Guyana, St. Kitts and Nevis, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago);
- Three countries appear to be well below the average (Bahamas, Barbados and Dominica).

192. The “Comparative Table by Criteria” of Annex 10 shows that the countries believe that there has been little improvement in the Regulatory and Administrative regimes, which implicates that also the Risk Assessment, Decision-making, Monitoring and follow-up

<sup>12</sup> N. Jacobs, “Assessment of capacity in the Caribbean sub-region in support of Biosafety Systems”, UWI/GEF/UN Env., February 2017

<sup>13</sup> ICGEB, “Project achievement report”, 2017

<sup>14</sup> The template format for the GEF-4 Tracking Tool for Biosafety (GEF Biodiversity Focal Area - Strategic Objective Three: Safeguarding Biodiversity) is part of the ProDoc (App. 15)

systems are at a very incipient stage. Overall, the countries believe that their performance in informing the Public has significantly improved, but Public Participation in decision-making is low. The question regarding Higher Education (that received the maximum score) has been obviously influenced by the opportunity of the Master Course in Biosafety, which, however, has benefited just 1 or 2 people by country.

*"My country became a party to the Cartagena Protocol on Biosafety since 2005 and therefore I cannot fault the project which essentially started its implementation around 2013 on the lack of efficient implementation of the NBF in my country. While resources is always an issue, stronger political will and commitment are more significant obstacles than that of limitations of the project" (respondent to on-line questionnaire)*

193. The overall improvement of Biosafety governance, however, cannot conceal the challenges ahead regarding the full operationalisation of the National Biosafety Frameworks, particularly regarding the regulatory and administrative systems, risk assessment and decision-making, and follow-up and monitoring systems. As discussed under Sustainability (chapters 5.8.1 and 5.8.3), the situation among the countries is different from one another and the causes are multiple and different, as well (see, for instance, the divergent opinions of the respondent quoted here above and the one quoted under paragraph 125 regarding "political will"). As rightly pointed out the by the mentioned Assessment (Jacob, 2017), "Overall, CARICOM countries have little or no legislative or regulatory infrastructure to support the full establishment and deployment of functional biosafety systems for GMOs". The self-evaluation of the countries produced through the Tracking Tools shows that there is a generalised awareness of the limited progress of the frameworks, and the TE has also captured a widespread concern regarding the sustainability and improvement of the results obtained so far. Overall, the achievement of Direct Outcome 1 has been considered **Moderately Satisfactory (MS)**.

#### **Direct Outcome 2 (Well-articulated and technically sound risk assessment, risk management and follow-up systems functioning for biosafety in the Caribbean)**

194. Capacity building activities have been carried-out, and guidelines and manuals have been produced on issues related to Risk Assessment and Analysis, and on GMOs Detection in laboratories. However, only one country (St. Lucia) has developed a full mock-exercise on Food and Feed Risk Assessment (on two varieties of maize and soja bean) and two countries have set a fully-fledged laboratory for GMO quantitative detection (Belize and Trinidad and Tobago).

195. As a matter of fact, in absence of an operational regulatory regime and of concrete application for the introduction of GMOs for whatever purpose, the institutional capacity of the countries to undertake sound risk assessment, management and follow-up has not been set and tested.

196. Overall, the achievement of Direct Outcome 2 is considered **Moderately Unsatisfactory (MU)**.

#### **Direct Outcome 3 (Biosafety management in CARICOM countries ensured through a multi-disciplinary cadre of trained personnel and support mechanisms)**

197. As described in previous chapter 5.4.1, the Project has delivered a variety of quality training and capacity building activities that have benefited a large number of professionals

of the Region working in areas related to Biosafety. That notwithstanding, some considerations and concerns do exist regarding the effectiveness and sustainability of the Outputs produced and some have already been pointed-out by the main training service-provider (ICGEB) in their workshops' report and in their Final Assessment (2017), as well as in Jacob's report of 2017 (see foot-notes<sup>12</sup> and <sup>13</sup>). Elements of concerns can be summarised as followed:

- The workshops, because of their short duration and of the entry-profile of the participants, have to be considered as a preliminary / introductory approach to the subjects, particularly when considering the complexity of the contents (e.g. Risk Assessment, Biosafety Legislation, etc.).
- Though some participants have attended to several workshops, there seems to be a high number of trainees that just received few, or even only one of them. In other words, it can be argued, there may have been a fragmentation / dispersion of the training efforts.
- The "hands-on" training has been quite limited (two "mock-exercises", some practical exercises on GMOs lab detection and on the use of the BCH).
- Training effectiveness implies the applicability of the training in the job, which not always happens due to the limited extent of Biosafety activities in most of the countries.

*"More staffing and coordination are required at the national level. Scientific officers are also required to sustain an effective NBF. While there may be person trained at the postgraduate level if there are no positions in or employment opportunities through the Government, then the effort cannot be sustained" (respondent to online questionnaire)*

*"There has been a lot of "fundamentals" in the workshops, the problem is their applicability" (from one direct interview)*

198. It was foreseen in the ProDoc that the capacity building activities would be coordinated and implemented by the University of West Indies (UWI) also through national/regional consultants. In practice, as already pointed out in the TOR of the Evaluation, "UN Environment and UWI followed through by revising the strategy for implementing project activities, most notably by sub-contracting the International Centre for Genetic Engineering and Biotechnology (ICGEB) to undertake tasks that were previously supposed to be assigned to individual consultants". The existence or availability of consultants for delivering the trainings is, in fact, a relevant assumption (see Table 6 in chapter 4.2) that did not hold in practice, to a large extent.

199. With the remarkable exception of the Master Course in Biosafety and few workshops, the role of the University of West Indies (UWI) in coordinating and delivering capacity building activities has been much lower than expected. The assumption (see table 6 in chapter 4.2) that UWI could be able to deliver regional biosafety services, including continuous training and sustainable capacity building actions, did not hold to a large extent. In fact, virtually all the training workshops at regional and national levels have been delivered by external (international) players through Service-Provision contracts, notably the four contracts with ICGEB. Concerns exist regarding the sustainability of this "model", since no significant steps



have been given by UWI and the Project to discuss, find out and test alternative and more sustainable and affordable models of capacity building.

200. It has also to be remarked that capacity building has almost exclusively targeted national staff working in different Ministries and Agencies at national level (this explain the high number of “trainees” and their “dispersion”), whereas possible targets at regional level have not been contemplated (e.g. teachers / lecturers / researchers of UWI and other Universities, e.g. Guyana and Suriname Universities, and staff of the specialised Regional Agencies of CARICOM, e.g. CAHFSa, CARPHA, CARDI).

201. As a matter of fact, the service-provider ICGEB, when discussing the factors to be strategically addressed in a possible Biosafety “Business Model” for the Region<sup>15</sup> recommended that “a greater involvement of regional entities should be encouraged, for example to curate the pool of available technical resources, whilst maintaining sovereign rights of decision-making”. Some of the Outputs produced by the Project (e.g. the MSc Course, the Workshops, the Roster of Experts and the Technical Resources Working Group on Biosafety) indeed go in that direction.

202. Overall, the achievement of Direct Outcome 3 is considered **Moderately Satisfactory (MS)**.

**Direct Outcome 4 (National and regional mechanisms institutionalized throughout the region, providing access to biosafety information)**

203. The support of the Project has been highly instrumental in improving access to biosafety information throughout the participating countries. There are two main issues that are currently at stake. The first is the consolidation of the Caribbean Centre for Biosafety that is discussed under Direct Outcome 5. The second is the effectiveness of the communication and information towards Policy and Decision-makers, which is recognised by all national stakeholders as a weak point to address in the near future for the progress of the regulatory and administrative systems of Biosafety in the countries. The issue is intimately related to Risk Communication.

204. In fact, a general Communication Strategy has been prepared by the Project, and Risk Communication has been matched by one of the Regional Workshops of the Project. The mock-exercise on Safety Assessment of GMOs Food and Feed carried out in Antigua and Barbuda and in St. Lucia is also considered a preliminary stage for a subsequent Risk Communication. Nevertheless, no concrete steps have been given so far to establish and test methods and tools of Risk Communication with focussed audiences. Overall, the achievement of Direct Outcome 4 is considered **Moderately Unsatisfactory (MU)**.

**Direct Outcome 5 (Regional mechanisms to cost-effectively sustain and coordinate NBFs explored and initiated).**

205. As described in previous chapter 5.4.1, the project has produced important Outputs in the perspective of setting and consolidating regional mechanisms for the harmonisation and coordination of Biosafety Management at the regional level, such as the approval by CARICOM of a Regional Biosafety Policy, the preparation of a Biosafety Model Legislation, the on-going establishment of a Regional Network of GMOs Laboratories, the organisation of a variety of

<sup>15</sup> ICGEB, “Project business plan”, UWI-ICGEB, 2017

Training and Capacity Building activities at the regional level, and the setting of preliminary regional mechanisms for Biosafety Information, Public Education and Awareness.

206. The Regional Component of the Project has been implemented through a participatory and “bottom-up” approach in the definition and planning of results and activities at regional level, and in the design of the regional mechanisms to be implemented, which mostly happened through the regular meetings of the Regional Steering Committee and through specific consultations, when needed.

207. The approval of the Biosafety Regional Policy is relevant for more the one reason: it provides the countries with a policy framework of reference, it shows the political will and institutional up-take of regional institutions on Biosafety, it may encourage policy and decision-makers in giving steps at national level for setting a national agenda on Biosafety and, last but not least, it gives concrete and practical orientations about the modalities of implementation of regional mechanisms.

208. The Policy defines some “models for regional harmonization” in different priority areas, namely: Biosafety of LMOs intended for intentional introduction into the environment, Biosafety systems for LMO-FFP, labelling of LMO-FFP, Biosafety Framework for LMOs in contained use, LMOs in transit, and Liability and Redress. The models for harmonization in these areas should probably be defined in detail through specific orienting guidelines to be prepared.

209. As discussed in Chapter 3.5 (Changes in design during implementation), the Caribbean Agricultural Health and Food Safety Agency (CAHFSA) has been identified by CARICOM as the Regional Regulatory Agency for Biosafety, which has been a substantive step in terms of institutional anchorage of Biosafety at regional level. This has allowed the opening of a dialogue between the University of West Indies (UWI) and CAHFSA regarding the transition of responsibilities from UWI to CAHFSA and the modalities of future cooperation, which has to be made operational through a detailed plan, as discussed in chapter 5.8.3 (Institutional Sustainability).

210. The Model Legislation can also be useful for orienting the countries in implementing their regulatory regime, although, as discussed in previous chapter (under Outputs for Direct Outcome 5), issues of national sovereignty and possible diverging approaches may show up. The process of revision, distribution and countries’ reviewing of the model for comments is under the responsibility of the Caribbean Agricultural Health and Food Safety Agency (CAHFSA).

211. The Regional Network of GMOs Laboratories has been conceived and its implementation is on-going. Its model of functioning based on three levels of functions (national, regional, international) is also approached in the regional Biosafety Policy. The institutionalisation of the network is on-going through the signature of a Memorandum of Understanding between each National Laboratory and the Regional Laboratories (UWI) and needs to be made operational through Operational Guidelines and further trainings of the laboratories’ staff.

212. The setting and consolidation of regional mechanisms for Biosafety Information, Public Education and Awareness is raising some concerns as discussed in the previous chapter. The sustainability of the Caribbean Centre for Biosafety (CCB), the virtual hub for Biosafety Information put in place by the Project, cannot be taken for granted, so far. Some aspects, though generically discussed and agreed upon between CAHFSA and the University

(UWI) since December 2017, need to be made operational, among them the “re-setting / re-design” of the hub, following the passage of responsibility to CAHFSA, the clear definition of the objective and scope of the CCB, as well as roles, functions and coordination mechanisms between CAHFSA and the University (UWI), including a budget to make the Centre operational.

213. In fact, in absence of a Project to coordinate efforts and to provide exchange and capacity building opportunities, the setting and effective functioning of the Caribbean Centre for Biosafety (CCB) can be crucial to maintain a minimum level of coordination and exchange among the Competent National Authorities (CNA), as well as between the CNAs and CAHFSA. Moreover, the CCB is key to establish a Biosafety Information System based on the research, systematisation, flowing and exchange of quality information among national, regional and international partners. To do that, material and financial resources are needed, as well as dedicated human resources.

214. Overall, the achievement of Direct Outcome 5 is considered **Moderately Satisfactory (MS)**.

#### ***Final remarks on Outcomes achievement***

215. The achievement of the five Direct Outcomes has been uneven, as described and discussed above. Based on UN Environment Matrix of Evaluation Criteria, the findings of the Terminal Evaluation indicate that:

a) the main Project Outcome (Effective, operable, transparent and sustainable National Biosafety Frameworks/NBF, which cater for national and regional needs, in place in 12 Caribbean countries) has only partially been achieved;

b) some relevant Drivers to support transition from Outputs to Outcomes are only partially in place, such as the leading role of UWI as key-player in capacity building at regional level, the presence of a pool of national / regional consultants (experts in areas related to Biosafety), the coordination between the Leading Executing Agency (UWI) and CARICOM agencies);

c) some relevant assumptions do not hold yet or proved unrealistic, such as homogeneous countries’ baseline situation, the overall solid and constant political will, the availability of regional consultants and trainers in Biosafety, the capacity of UWI to deliver regional biosafety services (e.g. continuous training, regional node of BCH), the capacity of national institutions to integrate and make the best use of the trained human resources, and the financial sustainability of the NBF.

216. On these bases, the Terminal Evaluation concludes that the level of achievement of the Main Project Outcome is **Moderately Satisfactory (MS)**.

#### **5.4.3 Likelihood of impact**

217. The Project has somewhat progressed in the pathway from Main Project Outcome towards Impact (See Diagram 2, Chapter 4). The “Institutional framework” envisaged for the Intermediate State 1 (IS 1) has surely been approached through the approval of the Regional Biosafety Policy (October 2017), the identification of the Caribbean Agricultural Health and Food safety Agency (CAHFSA) as the CARICOM regional Regulatory Agency for Biosafety, as well as the on-going MSc in Biosafety and the incipient setting of the Regional Network of GMOs Laboratories.

218. These elements allow to recognise that substantive steps have been given to transit from Direct Outcome 5 (regional mechanism explored and initiated) to Intermediate State 1 (Institutional framework adopted for providing regional biosafety services). Nevertheless, the two main assumptions identified in Diagram 2 for enabling the transition to Intermediate State 1 (availability of financial resources and enhancement of CAHFSA technical capacity) do not hold yet and, as a consequence, a functional regional system / framework for Biosafety in the Caribbean Sub-region cannot be considered in place.

219. The pilot / transition phase envisaged for Intermediate State 1 has still to be planned in its operational details. Concerns exist, as discussed in previous chapter 5.4.2 under Direct Outcome 5, regarding the viability and modality of the passage of responsibilities from the Project/UWI to CAHFSA, and the subsequent full enactment of the role of CAHFSA as Regional Biosafety Regulatory Agency. A piloting phase of regional coordination on some Biosafety tasks, as well as mechanisms of self-financing are not yet in place.

220. The non-achievement of Intermediate State 1 can create a “bottleneck” hampering the progress towards effective Biosafety Systems both at a national and regional level in the Caribbean.

221. Based on the UN Environment Matrix of Evaluation Criteria, the findings of the Terminal Evaluation indicate that:

- a) those direct outcomes that are the most important to attain intermediate states (notably Direct Outcomes 1 and 5) are partially achieved;
- b) other Direct Outcomes (2, 3 and 4) are also partially achieved;
- c) relevant assumptions for progress from project outputs to direct outcome(s) hold partially as discussed in the previous chapter;
- d) relevant drivers to support transition from outputs to Direct Outcomes (s) are only partially in place, as discussed in previous chapter;
- e) no Intermediate State has been achieved;
- f) assumptions from Intermediate States to Impact do not hold and drivers from Intermediate States to impact are not in place.

222. Everything considered, the Terminal Evaluation concludes that the progress of Project Results obtained so far towards Impact is **Moderately Unlikely (MU)**.

#### **5.4.4 Gender and Human Rights mainstreaming in the Project**

223. As mentioned in chapter 5.2 (Project Design) the Project was Gender-blind and Human Rights-blind in its design. This approach did not essentially change during the implementation. Project documents systematically presenting disaggregated data by gender are few. We can mention the “Assessment of Biosafety Capacity in the Caribbean Sub-Region” (Jacob, 2017) referring that 54% of the participants to the training workshops of the Project were Female and the Technical Report on the MSc in Biosafety (2017) indicating that students graduated from the MSc (total 17) are 12F and 5M.

224. The Evaluation has also analysed the training material used in the workshop “Socio-Economic Considerations (SECs) in GMO Decision-Making” (2015) without finding any Gender and /or Human Rights approach regarding decision-making on GMOs use.

225. The Human Rights Approach to Biosafety identifying possible “Duty Bearers” and “Rights Holders” has not been used in any of the various capacity building and information tools implemented by the Project regarding issues like Access to Information and Transparency (e.g. Labelling), Public Participation in Decision-making, Compliance and Enforcement.

226. The Regional Biosafety Policy clearly states that it “will take into account the sovereign rights of CARICOM countries as well as the human rights of the individual” but the concept is not further developed in the document and remains a declaration of principle without practical orientation for application.

## **5.5 Financial management**

227. The overall financial management of the Project has been complex, particularly in its initial phase. Although there was one Project Document and one single Budget, part of the activities were to be implemented in the participating countries through the allocation of funds to be transferred, spent and accounted for, at national level (the so-called National Projects).

228. The system of disbursement and reporting to and from the countries has been difficult to implement, mainly because the Project Management Unit, the National Project Coordinators and the Lead Executing Agency (UWI) did not know the system ANUBIS (A New UNEP Biosafety Information System). Their training “on the job” (mainly through email and skype, from Nairobi to the Regional Project and from the Project to the National Executing Agencies and National Project Coordinators), was not sufficient to allow all the actors to fully understand and efficiently apply the system.

229. The UWI’s Bursary (Administration), recipient of the funds from the Implementing Agency, was responsible for processing and transferring the funds to the countries and, also on that side, there were delays and misunderstandings regarding the functioning of the administrative system of the Implementing Agency. It has to be noted that the UWI Campus in Trinidad and Tobago is “managing” around 20,000 students and the administration of the Project represented a supplementary task for the already overloaded UWI Administration.

230. Eventually, the Project was allowed to use Excel format during one year to avoid the disruption of the activities, which, in turn, caused subsequent problems and delays in the financial reporting and in the first budget revisions, producing delays in the successive disbursement of funds to the countries<sup>16</sup>. In January 2014 there were still many aspects to be clarified (see minutes of the meeting between the Project / UWI and UN Environment Finance Officer in Nairobi).

231. Overall, the problem of introducing and setting the ANUBIS system simultaneously in 12 National projects plus in the Regional Project and in UWI Administration was surely underestimated by the Implementing Agency and was one of the main causes of delays and inefficiency.

232. The budget lines of the ANUBIS system are different from the budget lines used in the Project Cooperation Agreement (PCA) and in the ProDoc, and that caused supplementary problems. For instance, budget line 1101 is called “National Project Coordinator” in ANUBIS, while in the ProDoc Budget is called “Regional Project Manager”. The problem was solved by

---

<sup>16</sup> The use of Excel in 2016 was a result of the fact that since the national projects should have ended in 2015, there were no budgets for 2016. These were generated from the unspent balances from 2015 (information provided by the RPM).

the Task Manager in 2014 by providing a table of conversion to reconcile the two formats. Eventually, the ANUBIS format was the one used to administer the Project. The Financial Table 3 in chapter 3.6 has been prepared by the Regional Project Manager by using the ANUBIS format.

233. The functioning of the system gradually improved along the years, particularly through the continuous support of the Regional Project Manager to the countries. The administrative problems of those years, however, contributed to the delays of the administrative closure and auditing of the National Projects.

234. The operations of the Project were completed by 31/12/2018 and the administrative closure of the Project was planned for 31/06/2019. The contract of the Regional Project Manager ended on 28/02/2019.

### **5.5.1 Completeness of financial information**

235. With the progressive improvement of the system, the financial information of the Project has been properly managed. The flow of the financial reports onto ANUBIS has been steady and timely submitted (quarterly) and it has been found complete and updated. The actual project expenditures to September 2018 have been easily produced by the RPM during the TE, by Budget Line (see Table 3 in chapter 3.6).

236. The actual costs of the Project at the end of the operations represent the 95% of the GEF Budget. As mentioned in Chapter 3.5, the Project underwent a considerable number of Budget Revisions (nine), all of them explained in detail, signed and uploaded onto ANUBIS.

237. Significant re-allocation of funds between Budget Lines and between Components were requested by the Project and UWI, and approved by the Implementing Agency to respond to the real needs of the Project. We outline:

- The substantive increase of Training Budget-line (3201) that increased by 63%;
- The doubling (+ 92%) of the budget-line of Sub-Contracts to Private Firms (2301) to cover the contracts with ICGEB, not originally foreseen;
- The shifting “for ease of reference and reporting expenses” of the amount allocated for the National Component (Budget Line 1102, called “Project Staff” in the ANUBIS format and “Project Coordinators” in the Project Budget) to the Budget Line 2201 (called Sub Contract to Governmental Agencies in the ANUBIS format) that was increased of 69%;
- The large increase (+156%) of the budget line (1201) for International Consultants to cover the salary of the Senior Technical Advisor (STA) in the two first years of the Project and other International Consultants (the Mid-term Evaluation report specifies that the contract between UWI and the STA was not approved by the Implementing Agency);
- The increase (51%) of the budget-line (1101) for the Regional Project Manager to cover the subsequent extensions of her contract, due to the Project extensions;
- The decrease (minus 95%) of the Budget Lines of the Project Staff (1102), as explained above, for shifting the funds to Governmental Agencies;
- The significant decrease (minus 39%) of the budget-line (4202) for Lab Equipment, probably over-estimated in the original budget.

238. The information on co-financing (in-kind contribution) is based on estimation of the Lead Executing Agency (UWI) and of the Project Manager. It represents about 91% of the originally foreseen at Project design (see table 3 in chapter 3.6).

### 5.5.2 Communication Between Finance and Project Management Staff

239. The problems experienced by the Project in implementing the financial reporting system of ANUBIS were progressively worked-out through:

- the communication between the Regional Project Manager (RPM) and the Implementing Agency (Finance Management Officer in Nairobi, Task Manager and Programme Assistant in Panama);
- the assiduous support of the RPM to the National Executing Agencies and the National Project Coordinators.

240. It is, in fact, interesting to remark that the Final Report of the Project includes, among the Best Practices, the implementation of the ANUBIS system, that “greatly assisted in project execution and management, simplified activities such as budget revision, expenditures reporting, etc.”

241. Two main issues are, nevertheless, underscored in the Final report of the Project on this regard:

- a. the “need of training for Project Staff in UN Env / GEF procedures” at the beginning of the Project;
- b. the “clear definition of the rules for project execution, including reporting (financial and progress) requirements, workplan and budget revisions, distinguishing between national and regional responsibilities”.

### 5.5.3 Compliance with UN financial management standards and procedures.

242. The Project has fully complied with UN standards procedures and rules regarding timely (quarterly) reporting, justified Budget Revisions, rules for equipment purchases and inventories. Auditing of the National Projects has suffered remarkable delays (some counterparts also changed), but the necessary documentation was eventually in place from all the countries at the time of the evaluation. Regional Project Audits were also pending for 2017 (it is on-going) and 2018 (planned) during the evaluation.

243. The Financial Management Table below requires the TE to score the main financial issues to be evaluated. The overall rating for Financial Management is rated **Satisfactory (S)**.

**Table 8: Financial Management Table**

Financial management components:	Rating *	Evidence/ Comments
<b>1. Questions relating to financial management across the life of the project:</b>		
Compliance with financial requirements and procedures of UN Environment and all funding partners (including procurement rules, financial reporting and audit reports etc)	<b>S</b>	Despite evident problems at the beginning, the Project has subsequently complied with UN Environment procedures (quarterly fin. Reporting, justified Budget Revisions, procedures for sub-contracts and for purchases.
Timeliness of project financial reports and audits	<b>S</b>	Financial reports have been timely (Quarterly) and accurately provided. Financial Audits have been regularly implemented at Regional level, being pending for 2017 due to the

Financial management components:		Rating *	Evidence/ Comments
			busy agenda of the Auditing Firm. There are delays from the National Executing Agencies in providing the necessary documents for making the final auditing of the National Projects.
Quality of project financial reports and audits		<b>S</b>	Good quality of financial reports and audits
Contact/communication between the PM/TM & FMO		<b>MS</b>	Communication and support have been key for implementing the Admin System (ANUBIS) in 10 countries and at Regional level.  Better Planning of the Implementing Agency and structured Communication / Training tools (online) could have helped to overcome the initial problems in concurrently setting the ANUBIS system in 10 countries and at regional level.
PM/TM & FMO responsiveness to addressing and resolving financial issues		<b>HS</b>	Availability, positive attitude and effectiveness have been remarkable at all levels (Implementing, Lead Executing and National Executing Agencies) and among all the Managers involved (National and Regional Project Managers, Task Manager and Programme Assistant at ROLAC, Finance manager in Nairobi Office).
<b>2. Questions relating to financial information provided during the evaluation:</b>			
Provision of key documents to the evaluator (based on the provision of A-F below)		<b>HS</b>	
A.	An up-to-date 'Co-financing and Project Cost's table	<b>YES</b>	Financial breakdown of September 2018 (end of operations) presented and discussed during the country visit. Cost table available by Budget Lines. Co-financing Table also available with detailed information by year and by source of co-financing (12 Governments, UWI, external donors).
B.	A summary report on the project's annual financial expenditures during the life of the project.	<b>YES</b>	Easily accessible through ANUBIS (see diagram of expenditures / year in chapter 3.5)
C.	Financial documents from Mid-Term Evaluation/Review (where appropriate)	Not applicable	
D.	All relevant project legal agreements (e.g. SSFA, PCA, ICA) – where appropriate	<b>YES</b>	All PCAs and letters of National Executing Agencies with commitment on co-financing available and filed in ANUBIS. All Sub-contracts with external Service Providers also available and stores in ANUBIS
E.	Associated financial reports for legal agreements (where applicable)	Not applicable	



Financial management components:		Rating *	Evidence/ Comments
F.	Copies of any completed audits	YES	In Anubis
Demonstrated knowledge by the PM/TM & FMO of partner financial expenditure		HS	High involvement of TM and RPM in financial management and very good knowledge of the financial expenditures and status
PM/TM & FMO responsiveness to financial requests during the evaluation process		HS	RPM, TM and Programme Assistant high responsive
<b>Overall rating</b>		<b>S</b>	

\* Ratings given on a 6-point satisfactory scale from 'Highly satisfactory' (HS) to Highly Unsatisfactory (HU).

PM/TM Project Manager/Task Manager

FMO Financial Management Officer

## 5.6 Efficiency

244. There has been a protracted delay in the phase of Inception and early Implementation, that caused a low rate of Outputs delivery in the first three years of the Project. The problems described in the previous chapter regarding the setting and implementation of the ANUBIS system must not be underestimated as a relevant cause of time-inefficiency of the Project, well on the contrary. However, other aspects also played a role.

245. The complexity of the Project Design and the high number of Outputs and Activities to be implemented in 12 countries and at regional level (see chapters 3.5, 4.2 and 5.2) have been strong challenges at the moment of moving "from paper to ground", for all the players involved: the Project Management Unit, the Lead Executing Agency (UWI), the National Executing Agencies and the Implementing Agency.

246. Taking into account the extent of the expected results, dispersion and fragmentation of efforts and resources have represented a serious risk for the Project during all its lifetime and have hampered its Efficiency (see box below).

*"Any future projects designed to assist countries in implementing the CPB in the Region should focus on the achievement of fewer and more targeted outputs" (extract from the Project Final Report, 01/2019)*

*"There were too much deliverables that proved over-ambitious which did not take into account the objective realities on the ground as we colloquially say" (Respondent to online questionnaire)*

247. The "one size fits all" approach adopted by the Project design (see chapter 5.2) is not usually considered an efficient approach in terms of allocation of resources, including time and funding (see below).

*"For example, my country was the first country who signed up all the agreements and had to wait for some countries who were procrastinating and that caused unnecessary delays". (Respondent to online questionnaire).*

*"Project budget allocations to NEAs are similar among countries. This arrangement is relatively equitable for most of the smaller countries, but it does not meet the needs of Guyana and Suriname that have dispersed populations and extensive borders with their neighbours" (Mid-Term Evaluation Report, 2014)*

248. The Project was approved for a duration of 48 months and was expected to end by September 2015. Three no-cost extensions were granted for a total of 45 months putting off the official end date (including the administrative closure) to June 2019. The first extension of 9 months (until May 2016) was unrealistically short, in view of the amount of activities and outputs left behind because of the initial delays, and a second extension was granted until March 2017 (plus the administrative closure). In fact, as shown by the diagrams of expenditures presented in chapter 3.5, the Project markedly increased its activities and expenditures in 2015 and 2016 (spending around 60% of its budget in those years). Key activities were the implementation of the National Projects, several Regional Training and Capacity Building activities, and the Purchase of Lab equipment, among others.

249. At the conclusion of the National Projects (2016), the Regional Steering Committee (November 2016) discussed the opportunity to ask for a third no-cost extension, due to the need of completing the Capacity Building programme, to ensure the follow-up of the national projects after their formal closure and, most of all, to give significant steps for the Regional Component (Direct Outcome 5), particularly the Regional Biosafety Policy that was still at an incipient phase of implementation (see chapters 5.4.1 and 5.4.2). As a matter of fact, a third extension was required and granted, shifting the technical closure of the Project to June 2018 (administrative closure to June 2019).

250. The large period of extension significantly affected Project's time-efficiency. A key-problem, already remarked and discussed in the Mid-term Evaluation of 2014, was the slow start of the Project due also to the insufficient preparedness of the key-stakeholders involved, both at National level (the Competent National Authorities) and at Regional level (the University and CARICOM institutions).

251. Time-efficiency also refers to the timeliness of outputs delivery, i.e. whether they were delivered according to expected timeframes, as well as whether events were sequenced efficiently. The Final Report of the Project has remarked that "the regional policy and model legislation should have been submitted before, or in parallel with the process of the revision of national policies and laws to ensure alignment between the two". This remark is correct (see chapter 5.4.1, regarding Outputs delivery for Direct Outcome 5), yet, it has to be admitted that the timing mainly depended on external factors (preparedness of CARICOM institutions).

252. Turning to a competent and effective service-provider (ICGEB) for the delivery of key-outputs in the area of Capacity and Institution Building proved to be a time-saving measure that also maximised results (quantitatively and qualitatively), in absence of viable alternative solutions and approaches. The fact that around 20% of the Project Budget was allocated for sub-contracting one service-provider has, nonetheless, to be noted.

253. The regional dimension of the Project has produced "economies of scale" in the implementation of certain activities, like the organisation of regional trainings for a large number of beneficiaries, the unified production of training and communication tools, the joint purchase of equipment and materials for the laboratories, among others.

254. As far as possible, the Project has relied and built upon national and regional existing institutions (e.g. the Competent National Authorities, CARICOM institutions, the University of West Indies/UWI). That also reflected in the large co-financing (estimated). Whereas this is usually considered as a positive factor for increasing project efficiency, it cannot be omitted that the limited preparedness of these institutional actors to participate to Project

implementation has been a major factor of low efficiency, at least in the first years of the Project.

**255.** Everything considered, the Efficiency of the Project is considered **Moderately Unsatisfactory (MU)**

## **5.7 Monitoring and Reporting**

### **5.7.1 Monitoring design and budgeting**

256. The Project Document comprised a costed Monitoring and Evaluation (M&E) Framework (Appendix 7 to the ProDoc), that included budget provisions for a Mid-Term Evaluation (USD 18,000) a Terminal Evaluation (USD 22,500), M&E operations and reporting (USD 36,778) and Regional Steering Committees and Inception Workshop (USD 200,000). The subdivision of the amount between the activities does not seem very balanced; for instance, the budget for the two Evaluations, in view of the number and the dispersion of the countries involved, looks underestimated.

257. As mentioned in Chapter 5.2 (Quality of Project Design), the Logical Framework and the M&E Framework of the ProDoc showed some weak points in terms of Outcome Indicators. Most of them are, in fact, Outputs, rather than SMART<sup>17</sup> Outcome Indicators as, for instance, the “number of countries with a roster of experts” as an indicator for Outcome 1 (Improved Governance), which is, in fact, an Output, or “at least 3 people from each participating country are trained in LMO border control” as an indicator for Outcome 3 (Biosafety management ensured through capacity building), which is, as well, an Output. Outcome indicators should measure the effect of the Outputs (Effectiveness) in terms of systemic changes (e.g. institutional, behavioural, decisional or economic changes) and this aspect is not adequately captured in the LogFrame and in the M&E Framework.

258. There is, however, a remarkable exception in the definition of the Main Project Outcome (called Project Objective in the Log Frame) that has two interesting SMART Indicators: a) Improved GEF biosafety tracking tool scores, and b) improvements in responses to questions of Second National Reports to the CPB, considering all project countries.

259. Some of the Outputs (particularly those related to Outcomes 2 and 3) were confusingly or vaguely formulated. For instance, “Personnel trained in the CPB, biosafety risk assessments, LMO detection, BCH use and transboundary issues” is not specific (mixing-up different aspects, like BCH, Risk assessment, which personnel?), is not clear (“trained in the CPB?”) and not measurable (how many?), or the Output “Experience gained in recommending biosafety decisions and biosafety measures”, which is also vague, not specific and not verifiable (measurable).

260. It is well understandable the difficulty in defining outputs and indicators for a project involving 12 countries with uneven baseline situations. As a result, most of the Outputs were not quantified and there were no outputs indicators. This could have been different with a different project design (“country-tailored” instead of “one size”, as discussed in chapter 5.2).

261. The monitoring tools foreseen (column “Monitoring / Sampling” of the M&E Framework) are essentially the periodic reporting tools of the Project (Six-month Progress Reports and yearly Project Implementation Reviews (PIR)).

---

<sup>17</sup> Specific, Measurable, Achievable, Relevant, Time-bound

262. The ProDoc included also (App. 15 of the ProDoc) the “GEF Tracking Tools for the Strategic Program 6: Building capacity for the implementation of the Cartagena Protocol on Biosafety”<sup>18</sup>.

263. Despite the scope and complexity of the Project, the ProDoc did not foresee any specific tool for addressing monitoring at a disaggregated level (for instance by country or group of countries, by gender, by thematic areas, for instance “Capacity Building” or “Biosafety Governance”), or through case studies.

264. Similarly, no monitoring staff (part-time consultant) was planned for the Regional Team to specifically address the implementation of the M&E system and regularly compile data and information for the periodic reporting of the Project.

265. Overall, monitoring design and budgeting is considered **Moderately Satisfactory (MS)**.

### 5.7.2 Monitoring implementation

266. The Regional Project Manager (RPM) has assiduously ensured the follow-up and monitoring of Project activities and Outputs delivery, particularly at national level that was the most difficult to monitor. That mostly happened through the requirement, reception, analysis and systematisation of the Progress Reports of the National Project Coordinators, and through the frequent email and skype meetings with the National Project Coordinators and the Competent National Authorities. Due to the large geographic and thematic scope of the Project and to the frequent administrative and management pending issues, the RPM devoted much of her time to monitoring, follow-up and advise with national coordinators and counterparts.

267. Country visits were also carried out by the RPM, following specific requests from the National Coordinators and/or from the Competent National Authorities. The planning of the country missions “on demand” has surely responded to a criterion of time-efficiency and has permitted to give priority to those countries with more pressing or serious problems. A total of 24 country missions were carried out during the whole Project lifetime, 15 of them from 2015 to 2018 (3-4 missions / year). The full list of the country missions is in annex 11.

268. However, the missions “on demand” have not permitted a regular, systematic and face-to-face monitoring exercise between the Project Management Unit and the National Coordinators. Virtually all the countries (with exception of St. Vincent and the Grenadines that received six visits) received from one to three monitoring visits of the Project Management during the whole duration of the Project, which seems too little. The presence of a Monitoring Officer of the Project could have helped to ensure a more effective monitoring of the Project and to reduce the burden on the Regional Project Manager.

269. Systematic monitoring activities have been carried out through the periodic reporting system and its tools (Six-month Progress reports and Yearly Project Implementation Review; see next Chapter), which, however, have been conceived, and are actually used, as “reporting tools” more than “Monitoring tools”.

270. The assessment of the Indicators for the Project Objective of the LogFrame was partially carried out in the last Project Implementation Review (PIR, January 2019) that used

---

<sup>18</sup> The Biosafety Tracking Tool has been developed by GEF to help track and monitor progress in the achievement of the primary outcome of Strategic Program Six of the GEF-4 Biodiversity Strategy: “Operational national biosafety decision-making systems that contribute to the safe use of modern biotechnology in conformity with the provisions and decisions of the CPB.”

the GEF Tracking Tools score as an Indicator of the progress of the Project, as requested in the LogFrame. However, findings and conclusions were not taken into account in the Project Final Report.

271. The use of specific Monitoring tools was not specifically required to the Project by the Implementing Agency. As in most of GEF/UN Environment Projects, the current Project also used the Workplan as a relevant instrument for the implementation of the Project M&E system, for readjusting priorities, formalising “Adaptive management” measures, or for introducing “Risk mitigation plans”.

272. All 12 countries carried out the self-evaluation exercise of the results obtained at mid-term (2014) and at the end of the Project (2017) through the “GEF Tracking Tools” (see above in the previous chapter).

273. The M&E Framework of the Project (App. 7 of the ProDoc) foresees a regular supervision of the progress of the Project by the Regional Steering Committee, the University and by external Evaluators (Mid-term and Final Evaluation). This approach seems to mix-up different levels and types of responsibilities.

274. As far as the Regional Steering Committee is concerned, its function in the Project was the exchange of information, overall strategic planning, oversight and steering of the Project, rather than a management supervision of Project performance. Regional Steering Committees took place and are reported in ANUBIS, with a constant presence of one to three representatives from each country, the Project Team, UN Environment Task Manager, UWI (in the first years of the Project), CARICOM agencies, IICA representatives, ICGEB (from 2015 onward) and, occasionally, the Secretariat of the CBD and international organisations like FAO. A Closure Meeting of the National Projects took also place in April 2018, where the two UN Env. Task Managers (former and current), CAHFSA, CARICOM, ICGEB and IICA representatives were also present.

275. The University of West Indies (UWI), as Lead Executing Agency of the Project, has monitored the execution of the Project mainly through the constant participation of the Technical Lead (a UWI Staff) in the Regional Project Team (see chapter 3.4). A more participating attitude of UWI in the periodic and systematic monitoring of the Project (for instance in six-month meetings with the Project Team or, at least, in the Regional Steering Committees) could have been, of course, highly commendable. Unfortunately, that did not happen and can also be regarded as an indicator of the level of ownership and participation of the Lead Executing Agency in the Project.

276. Project Mid-Term Evaluation took place in October 2014 and was carried out by an independent, international consultant. It was a key-moment of analysis and systematisation of the situation of the Project after nearly three years of implementation, and a substantive instrument for decision-making and readjustment of strategies, priorities and workplans.

277. Overall, Monitoring Implementation is considered **Moderately Satisfactory (MS)**.

### **5.7.3 Project reporting**

278. Six-month Progress Reports and yearly Project Implementation Reviews (PIR) have been regularly produced by the Regional Project Manager, using the GEF/UN Environment format. They have been revised and commented by the Task Manager, transmitted and filed in ANUBIS. The reports are well prepared and objective, with relevant and orderly presented

information. The Task Manager has always provided thoughtful comments and given suggestions for actions and improvements.

279. The Project has also timely produced its Final Report that has been signed and officially transmitted to the Implementing Agency the 23/01/2019. The Report includes exhaustive, yet synthetic, objective factual information on Project's delivery at Outputs level. It also includes a clear enunciation of Lessons Learnt and Best Practices, as well as Project's statement regarding the mechanisms of Sustainability put in place. When compared with analogous reports, the current one is above average for its clarity and completeness, particularly when considering the scope and complexity of the Project.

280. Unfortunately, the standard format used for the Final Report (GEF/UN Environment format) is not fully based on a Result-Based Approach and is misleading in terms of assessment of results. In fact, it adopts the Status of Completion of Activities (complete/on-going) as the main indicators of performance. As a result, with virtually 100% of Activities Completed, the Report gives the misleading idea that the Project was highly performant, which, in terms of results, is only partially true.

281. The format includes a column where "Results/Outcomes" have to be reported. Since most of the indicators of Outcomes are in fact Outputs (as discussed in previous chapter 5.7.1), the Final Report is practically assessing Completeness of Activities and, in some cases, Delivery of Outputs, not Outcomes achievement. This is also the case for the Final Report of the Project under Evaluation.

282. The 12 countries have prepared their Project Final Reports using a standard template provided by the Regional Project Manager for the purpose. They are filed in ANUBIS. All the Reports provide significant and objective information, particularly the final sections of the reports (Challenges in the execution, Opportunities provided by the Project, Lessons Learned, Next steps).

283. The "Report of the National Projects Closure Meeting" (April 2018) has also been produced and is available in ANUBIS. It contains relevant chapters such as "Project achievement and lessons learned", "Lessons learned: Implementing Agency perspective", "Power Point Presentations of the 12 countries" and "The Regional Road-map for Biosafety"

284. The Project has also produced specific assessment reports on some issues of particular interest, such as "Evaluation of the National Biosafety Laboratories" (D. Gopaulchan, 2015), "Sustainability of Biosafety in the CARICOM region" (P. Umaharan, 2016), the "Assessment of the production and trade of Genetically Modified Organisms in the Caribbean region" (N. Jacobs, 2016), the "Technical Report on M.Sc. and Diploma in Biosafety programme" (A. Alleyne, 2017), the "Project Achievement Report" (ICGEB / UWI, 2017) and the "Assessment of capacity in the Caribbean sub-region in support of Biosafety systems" (N. Jacob, 2017). All the Training Workshops have also been duly reported and are filed in ANUBIS and in the Project website.

285. Two of the Reports mentioned above present disaggregated data by Gender, regarding the beneficiary of the Training workshops of the Project (Jacobs, 2017) and of the MSc in Biosafety (Alleyne, 2017).

286. Overall, despite some methodological shortcomings, the Project has produced a remarkable amount of valuable reports of different kind and at different levels, and Project Reporting is considered **Satisfactory (S)**.

## 5.8 Sustainability

287. The evaluation has analysed to what extent follow-up work has been initiated and how project results could be sustained and enhanced over time. Three aspects of sustainability have been addressed: a) Socio-political sustainability, b) Financial sustainability, c) Institutional sustainability

### 5.8.1 Socio-political sustainability

288. Although all the countries have progressed in the implementation of their Biosafety Frameworks, the sustainability of the Project's outcomes much depends on the level of interest and priority that Biosafety may attract from the politicians and the governments, which is variable from country to country.

289. Countries where GMOs cultivation can become an issue at stake, such as the mainland countries (Belize, Guyana and Suriname), may have more interest in further developing their Biosafety Framework and sustain the results obtained so far. This has been, so far, the case of Belize.

290. The progress of the Biosafety Agenda at Regional level, with the adoption of the Regional Biosafety Policy and the on-going preparation of "model legislation" may have a strong impact on the countries that have progressed at a lesser extent in establishing their regulatory regimes. Overall in the Region, Socio-political Sustainability can be considered so far **Moderately Unlikely (MU)**.

### 5.8.2 Financial sustainability

291. Overall, Financial Sustainability is perceived as a problem, due to the budget limitations of Environmental sector everywhere, compared with other priority sectors like Education, Health and Infrastructures.

292. At regional level as well, the current budget attributed by CARICOM to the Caribbean Agricultural Health and Food Safety Agency (CAHFSA) looks patently inadequate and the formulation of a Resource Mobilisation Plan by CAHFSA seems the only way to provide a certain sustainability. Financial Sustainability is rated **Moderately Unlikely (MU)**.

*"Some funding is available but it is far from adequate...for example, the laboratory is not completely functional due to lack of financial resources to complete the actual physical infrastructure"*

*"There has not been a sufficient allocation of funding to address all requirements of continuing implementation of the Biosafety framework"*

*"Government has not made budgetary provisions for the implementation of the NBF. Financial challenges and fiscal difficulties are the main reason for that scenario"*

*(respondents of different countries to on-line questionnaire)*

### 5.8.3 Institutional sustainability

293. Institutional sustainability is variable from country to country. In some countries the adoption of a full regulatory regime (Policy, Law, Regulations, Guidelines, etc.) is on-going and the anchorage of Biosafety within Ministries or Agencies related to Environment, Sustainable

Development or Agriculture looks solid, though frequently relying upon the dynamism and capacity of “championing” officers.

294. Other countries, particularly some Small Island States, could consider more appropriate and sustainable to include Biosafety in already existing institutional and regulatory frameworks of other sectors (e.g. Agriculture, Environment, etc.) by identifying, as suggested in the mentioned “Project business plan” (ICGEB/UWI, 2017), “possibilities for which specific responsibilities can be embedded into broader government regulation, resulting in the exploitation and enlargement/adaptation of existing regulatory structures and services”.

295. At regional level, Institutional Sustainability will much depend on the strengthening and consolidation of the Caribbean Agricultural Health and Food Safety Agency (CAHFSA) so as to comply with its mandate as Biosafety Regulatory Agency for the Region, and on its capacity to liaise and coordinate with the University (UWI), other CARICOM Agencies (CARDI and CARPHA), and with other Regional/International players (e.g. IICA, FAO, *Codex Alimentarius*). The dynamism and competence of the current management team is a strong point of the Agency, as well their experience in Food and Feed Risk Assessment (Animal Health) at regional level.

296. The decisions taken at the Joint Meeting between CAHFSA (Caribbean Agricultural Health and Food Safety Agency) and the University of West Indies (UWI) in December 2017 have defined a sort of Road-Map for the implementation of the Biosafety Policy in the Region, that has to be made operational through a detailed work-plan.

297. The following elements extracted from the Road-Map can be considered as relevant drivers for the Institutional Sustainability of the results achieved so far:

- The finalisation of the Model Biosafety Legislation and its discussion with the Member States and other CARICOM Agencies;
- Awareness raising, Lobby and Advocacy at regional level toward the Permanent Secretaries of Ministries of Trade and Agriculture as well as Member States of CARICOM and the CARICOM Secretariat (Legal and Agricultural Divisions), focussing on the Regional Biosafety Policy, Biosafety Legislation, Trade-related Issues, Biosafety and Research, Biosafety and Development;
- Production of information material (videoclips and one-page flyers) highlighting implications of Biosafety on Trade and Development for the purpose above;
- Establishment of the Regional Biosafety Risk Assessment (RA) Working Group (based on the Technical Resource Group on Biosafety set by the Project), to prepare and conduct regional risk assessment for GMO food and feed coming into the region, and to provide support to the Member States in conducting national risk assessment for GMOs;
- Preparation of a Risk Assessment Model, based on the Guidance Risk Analysis framework for GMO's prepared by the Project, to be used by the RA Working Group above;
- Transfer of the responsibility of the Biosafety website (former Project website) to CAHFSA and possible hosting in CAHFSA website; further diffusion of the videos produced by the Project;
- Full establishment of the Regional Network of GMOs Laboratories;
- Definition of a Communication Strategy of the Regional Regulatory Agency (CAHFSA) with the Member States and subsequent possible “way forward” by country (or group)



of countries), including country-tailored strategies of NBF implementation and resource mobilisation.

298. A relevant aspect of Institutional Sustainability regards the sustainability of the Master Course in Biosafety. On this regard, as discussed in chapter 5.4.1 (Outputs for Direct Outcome 3), the University is addressing the issue by exploring the possibility to diversify its offer, also through single modules (delivering certificates instead of a complete MSc). The possibility of mainstreaming Biosafety into other existing MSc as well as in other Graduate Courses could also be a factor of sustainability.

299. Overall, Institutional Sustainability is considered **Moderately Likely (ML)**.

## 6 Conclusions and Recommendations

### 6.1 Conclusions

300. The Project was complex and demanding for several reasons related to its regional scope (12 countries, the majority of them being Small Island States), the novelty and multidisciplinary feature of Biosafety and the uneven, but generally low, baseline situation in terms of national capacities, particularly the solidity of the institutional environment and the presence of a critical mass of human resources.

301. Outputs delivery has also been strongly challenged by different degrees of interest and level of response and participation from the 12 countries. The Project Design also played a role on that, because the “one size fits all” approach adopted by the Project did not permit to identify, from the beginning, country-tailored strategies of implementation and more realistic objectives, on a “case by case” basis.

302. The adequacy of the University of West Indies (UWI) as Lead Executing Agency (LEA) was also strongly challenged by the complexity of responsibilities and functions related to its regional, coordinating role. While the University had previous experience with research projects, it did not have previous experience in managing a demanding GEF Full Size Project of around 12M USD. Moreover, as remarked by the Mid-Term Evaluation, “the challenges of working with a group of sovereign governments were underestimated”.

303. The introduction and setting of the reporting system ANUBIS has also been, particularly in the first years, a major challenge for the Project, as described in Chapter 5.5 (Financial Management). The complexity of the Project and the difficulties experienced in its initial Management by the Leading and the National Executing Agencies, largely contributed to the very low delivery of the Outputs in the first three years, as already pointed out by the Mid-term Evaluation.

304. The Management response put in place by the Implementing Agency and the Project successfully redressed the situation and eventually most of the Outputs were satisfactorily delivered, particularly those related to capacity building and to the setting of regional mechanisms and procedures. Of course, due to the considerable extension of the duration of the Project (plus 45 months over the 48 originally planned), its time-efficiency has been highly affected.

305. All the countries have progressed in the implementation of their National Biosafety Frameworks. The process of formulation, revision and adoption of national regulatory regimes

has been set in motion and has advanced everywhere, but only few countries have been able so far to deliver the most ambitious outputs, like a Biosafety Policy (three countries) or a Biosafety Law (two countries).

306. The Project has also shown that there are heterogeneous levels of national ownership and institutional uptake of the National Biosafety Frameworks. Therefore, the socio-political and institutional sustainability of Project's results at national level is also uneven. All Competent National Authorities and national stakeholders underline the need of targeting policy/decision makers through a specific strategy of information and awareness raising for ensuring socio-political, institutional and financial sustainability.

307. The Project has delivered a large number of capacity and institution building activities and outputs of high quality in different priority areas related to Biosafety. The UWI Campus of Barbados has also conceived, organised and implemented a Master in Biosafety that has graduated 17 students so far.

308. These initiatives have permitted to disseminate information and knowledge on Biosafety to a very large number of Human Resources of the Region. Therefore, the bases have been created for upgrading and building a regional pool of experts able to provide technical support to the countries and to the region in key areas, such as Biosafety policy-making and legislation, GMO risk assessment and management, GMOs detection, among others. The creation of the Technical Resource Group on Biosafety represents a first step in that direction.

309. Nevertheless, concerns exist regarding the effective applicability of the capacities acquired due to the limited extent of Biosafety activities in most of the countries. Moreover, with the remarkable exception of the Master Course organised by the University of West Indies (UWI), the bulk of the capacity building activities has been delivered by external (international) players through service-provision contracts. Concerns exist, therefore, regarding the sustainability of this "model", since no significant steps were given by the Project and UWI to discuss, find out and test alternative and more sustainable and affordable models of capacity building.

310. The regional component of the Project has been implemented in a consistent and harmonised way and through a bottom-up approach that has fostered the participation of national stakeholders in the discussion and definition of main regional mechanisms and procedures to be implemented. Relevant Outputs at regional level have been delivered, such as the formal approval by CARICOM of the Regional Biosafety Policy, the on-going elaboration of a Biosafety Model Legislation, the initial establishment of the regional Network of Laboratories for GMOs detection, the implementation of the relevant regional initiatives of training and capacity building mentioned above, and the setting of regional mechanisms for Information, Public Education and Awareness.

311. The approval of the Biosafety Regional Policy has been relevant by providing a policy framework of reference and by showing the political will and institutional up-take of regional institutions, hence encouraging decision-makers in progressing at national level. Last but not least, it has also given concrete and practical orientations about the modalities of implementation of regional mechanisms in some priority areas, which can be used for the elaboration of specific / thematic guidelines.

312. The identification of the Caribbean Agricultural Health and Food Safety Agency (CAHFSA) as the Regional Regulatory Agency for Biosafety has been a substantive step in

terms of institutional anchorage of Biosafety at regional level. This has allowed the University of West Indies (UWI) and CAHFSA to start planning the transition of responsibilities from UWI to CAHFSA and the modalities of future cooperation, as discussed in chapter 5.8.3 (Institutional Sustainability).

313. The setting and consolidation of regional mechanisms for Biosafety Information, Public Education and Awareness is also raising some concerns, because the sustainability of the Caribbean Center for Biosafety (CCB), the virtual hub for Biosafety Information put in place by the Project, cannot be given for granted, so far. In fact, the two key-players (UWI and CAHFSA), still need to clearly define objectives and scope of the CCB, as well as roles, functions and coordination mechanisms between CAHFSA and the University (UWI), including a plan of action and a budget to make the Center operational.

314. The existence of a solid institutional framework at regional level is a key-issue to be considered, both for the sustainability of the National Biosafety Frameworks and for the viability of the regional mechanisms put in place and to be consolidated, potentially leading to a Regional Biosafety Framework, which cannot yet be considered in place. The strengthening and consolidation of the Caribbean Agricultural Health and Food Safety Agency (CAHFSA) is crucial to comply with its mandate of Biosafety Regulatory Agency for the Region and to make fully operational the Road-Map agreed upon by UWI and CAHFSA. Financial sustainability at regional level is also considered a relevant aspect to be considered due to the existing budget limitations within CARICOM agencies.

315. The Terminal Evaluation is also asked to provide answers to the five **key strategic questions** outlined in the Terms of Reference of the Evaluation, listed here below:

1) To what extent has the project mobilised the establishment of a fully functional and responsive National Biosafety Framework in each participating country that can address possible risks to national and regional biodiversity from unregulated exposure to LMOs?
2) To what extent did the project help to enhance national institutional and technical capacity and awareness amongst the key actors for effective enforcement of Biosafety Laws, decrees and sub-decrees on biosafety?
3) To what extent did the project outputs produced have the weight of scientific authority and credibility necessary to influence policy makers in line Ministries / Authorities?
4) To what extent are the outcome indicators verifiable, and record progresses towards the achievement of the development objectives, as well as the obligations under the Cartagena Protocol?
5) To what extent has the project set in motion the necessary mechanisms for on operational Biosafety Framework at the Regional level?

316. Regarding Question 1, the Findings and Conclusions above show that the Project, though actively setting in motion a wide process of establishment of the National Biosafety Frameworks in each participating country, has only partially achieved this result (see Achievement of Direct Outcome 1 in chapter 5.4.2). **Low baseline situations among the countries, uneven levels of interest, national ownership and institutional uptake account for this partial achievement.** As a result, no country presently has a fully operational system to address and manage the possible risks from unregulated exposure to LMOs.

317. Regarding Question 2, **the intensive programme of capacity building implemented by the Project has surely enhanced institutional and technical capacity and awareness among the key-actors** (see results for Direct Outcome 3, in chapters 5.4.1). However, Biosafety Management issues, like Risk Assessment, Decision-making procedures, and Monitoring and Enforcement, have only been preliminarily and mostly theoretically addressed. As discussed in this report (see particularly Chapter 5.4.2, Direct Outcome 5, and chapter 5.8.3, Institutional Sustainability) **the strengthening of institutions and capacities at Regional level is key for the efficient and effective Management of Biosafety throughout the countries of the Region**. The Biosafety Regional Policy has identified key-areas (among them, Risk Assessment, GMOs detection, harmonised Borders Control procedures) that need to be translated in regional guidelines and reinforced by the creation of a pool of regional experts able to advise and assist the countries.

318. Regarding Question 3, **the Project has surely produced remarkable outputs that have the scientific authority and credibility to influence policy makers**. The adoption by CARICOM of the Regional Biosafety Policy, essentially based on a draft-proposal of the Project, is an evidence of that. There are also guidelines and reports that contain valuable technical information that may influence policy makers at regional and national level. **The main problem is the low capacity of targeting policy and decision-makers through appropriate and specific activities of lobby and advocacy and through successful communication tools** (discussed in chapter 5.4.2 regarding Direct Outcome 4). Policy and decision-makers, however, are also influenced by the overall opinion and perception of their constituencies (voters). Therefore, sound Risk Assessments translated in simple and clear messages are also needed for the Public in general.

319. Regarding Question 4, it has to be considered that the (Direct) Outcome Indicators were not properly defined in the LogFrame, since most of them were, in fact, Outputs, as discussed in chapter 5.7.1. Therefore, they are of little use in recording progress towards development objectives and impact. The only Indicators that could correspond to the quality expressed in Question 4 are those related to the Main Project Outcome (Project Objective in the LogFrame), which, however, were not specifically addressed and discussed in the Final Report of the Project. One of them refers to the improvement (at least >20%) of the score of the GEF Tracking Tools, which, though verifiable, is not significant (Relevant) for measuring the progress in the achievement of higher-level objectives. Actually, the baseline indicator was very low and therefore, even with very high increments, the final result remained well below the expected (see for instance, in the comparative Table of Annex 10 the extreme case of Bahamas that registered an increase of the score/indicator of 400%, yet, with a performance of 25%).

320. Regarding Question 5, **there is much evidence that the Project has set in motion and implemented, at a variable extent, some mechanisms for an operational Biosafety Framework at the Regional level** (e.g. the Regional Policy, the Model Legislation, the Laboratory Network, the Master in Biosafety, the virtual Caribbean Center for Biosafety). Nevertheless, some of these mechanisms still need a decisive effort to be fully operational and, most of all, the new institutional frame of Biosafety at regional level has to be fully made operational (operationalisation and strengthening of the Biosafety Regulatory Agency, CAHFSA).

## 6.1.1 Evaluation Criteria and Ratings Table

**Table 9: Evaluation Criteria and Ratings Table**

Criterion ( <i>section ratings A-I are formed by aggregating the ratings of their respective sub-categories, unless otherwise marked</i> )	Summary Assessment	Rating
<b>A. Strategic Relevance</b>		<b>HS</b>
1. Alignment to MTS and POW	Well aligned with MTS 2010-2013 (EAb) and MTS 2014-17 (EA2), Sub-Programme Environmental Governance.	HS
2. Alignment to UNEP/GEF/Donor strategic priorities	Aligned with GEF Strategic Programme 6 (BD-SP6): Building Capacity for the Implementation of the Cartagena Protocol on Biosafety.	HS
3. Relevance to regional, sub-regional and national environmental priorities	Relevant to Biodiversity and Sust. Dev. at national and regional level. Relevant to regional policies of economic integration in different areas (Trade, Public Health, Food Safety and Agriculture, Environment)	S
4. Complementarity with existing interventions	Complementary to other GEF funded actions in the framework of the CBD	S
<b>B. Quality of Project Design</b>	"One size fits all" approach inadequate to accommodate different baseline situations and uneven levels of interest and participation among countries. Weak definition of Outcome Indicators. Outputs somewhat vague and not measurable. Unclear definition of sustainability mechanisms and exit strategy. Project design was Gender and HR blind.	<b>MU</b>
<b>C. Nature of External Context</b>	Challenging geographical dispersion, hurricane-prone region, some Island-States hit by hurricanes during Project lifetime	<b>Unfavourable</b>
<b>D. Effectiveness<sup>19</sup></b>		<b>MS</b>
1. Achievement of outputs	Heterogeneous delivery depending on uneven situations and level of interest. Despite important initial delays, most of outputs delivered, some at a highly satisfactory level (e.g. capacity building).	S
2. Achievement of direct outcomes	Overall improvement but uneven achievement of Biosafety Governance (Dir Outcome 1). Partial achievement of relevant Regional mechanisms (Dir Outcome 5). Moderate effectiveness of training and capacity building (Dir Outcome 3). Less effective in Dir Outcome 2 and 4.	MS

<sup>19</sup> Where a project is rated, through the assessment of Project Design Quality template during the evaluation inception stage, as facing either an Unfavourable or Highly Unfavourable external operating context, the overall rating for Effectiveness may be increased at the discretion of the Evaluation Consultant and Evaluation Manager together.

Criterion (section ratings A-I are formed by aggregating the ratings of their respective sub-categories, unless otherwise marked)	Summary Assessment	Rating
3. Likelihood of impact	Relevant direct outcomes only partially achieved. Assumptions for progress from outputs to direct outcomes hold partially and also Drivers to support transition from outputs to direct outcomes only partially in place. No Intermediate State achieved.	MU
<b>E. Financial Management</b>		<b>S</b>
1. Completeness of project financial information	After initial difficulties in adopting the ANUBIS System, financial information has been provided accurately and timely (quarterly). Budget revisions clearly explained (all in Anubis). Updated expenditures provided during the Evaluation by Budget Line.	S
2. Communication between finance and project management staff	Availability, Communication and High Responsiveness of all actors have been key for implementing the Admin System in 10 countries and at Regional level at one time. Better planning and appropriate training tools of Implementing Agency could have helped in minimising problems with Anubis in the first two years of the Project	MS
3. Compliance with UNEP standards and procedures	Overall compliant with UN standards and procedures. Financial reporting accurately and timely (quarterly) provided. Full compliance with Purchase and Inventories standards. Financial Audits pending in National Projects and for year 2017 for Regional Project (also due to delays of the Audits Firm)	S
<b>F. Efficiency</b>	Project complexity and design (one size fits all) challenged efficiency. High number of Outputs caused dispersion and fragmentation of efforts and resources. Initial delays strongly impacted on time-efficiency (45 months of extension). Non-aligned timing of regional and national outputs delivery (because of external factors). Relevant time-saving and optimal results in capacity building through adaptive measures (external service-providing). Large use of existing institutions at national and regional level, high co-financing.	<b>MU</b>
<b>G. Monitoring and Reporting</b>		<b>S</b>
1. Monitoring design and budgeting	Costed M&E Plan in the ProDoc, with Mid-term Eval, Terminal Eval, Regional Steering Com. and M&E operations budgeted, though in unbalanced way. Format for GEF Tracking Tools also in the ProDoc. However, most of the Indicators of Outcome in the Logframe are, in fact, Outputs and in some cases they are not measurable and verifiable. Outputs are	MS

Criterion (section ratings A-I are formed by aggregating the ratings of their respective sub-categories, unless otherwise marked)	Summary Assessment	Rating
	also in many cases too vague and generic. There are no tools for disaggregated data.	
2. Monitoring of project implementation	Assiduous Monitoring by RPM, particularly follow-up and advising Nat. Proj. Coordinators and Nat. Exec. Agencies. 24 Country missions carried out (2012-2018). Systematic monitoring through six-month format Progress Reports GEF Tracking Tools implemented at Project Start (2012), Mid-term (2014) and End (2016/2017) by all 12 countries. Mid-Term Evaluation done (2014). Constant monitoring from TM. Nine Regional Steering Committees	MS
3. Project reporting	Six-month Progress Reports and Yearly Pr. Implementation Review (PIR) regularly produced by RPM, revised and commented by TM and filed in Anubis. All 12 countries presented well-drafted Final Report (2016) with SWOT Analysis. Other thematic / technical Reports produced by Consultants, Master Course and ICGB. All Regional Workshop produced a Final Report.	S
<b>H. Sustainability</b> (the overall rating for Sustainability will be the lowest rating among the three sub-categories)		<b>MU</b>
1. Socio-political sustainability	Variable from country to country depending on their level of interest and priority. Full ownership still to be achieved. Progress at Regional level (e.g. Regional Policy)	MU
2. Financial sustainability	Depending on socio-political relevance of Biosafety both at national and CARICOM level. Current budgets insufficient	MU
3. Institutional sustainability	Uneven among the countries, but with positive examples of solid institutional anchorage and uptake. Road-map exist at regional level for the institutional uptake by CAHFSA	ML
<b>I. Factors Affecting Performance</b>		<b>MS</b>
1. Preparation and readiness	Project approach did not consider uneven baseline situation among countries. Overall, countries were not prepared to take the challenge. Problems with new administrative system (Anubis) underestimated.	MU
2. Quality of project management and supervision	Overall satisfactory both at the level of the Regional Management of the Project and of the Implementing Agency, despite the challenging complexity of the Project	S

<b>Criterion</b> ( <i>section ratings A-I are formed by aggregating the ratings of their respective sub-categories, unless otherwise marked</i> )	<b>Summary Assessment</b>	<b>Rating</b>
3. <i>Stakeholders participation and cooperation</i>	Despite initial difficulties, good participation and cooperation of national and regional stakeholders	S
4. <i>Responsiveness to human rights and gender equity</i>	Gender-blind Project, since its phase of preparation and design. HR approach (Biosafety duty bearers and Rights holders) not introduced in any capacity building activity	MU
5. <i>Country ownership and driven-ness</i>	Uneven among the countries but overall in process of improvement.	MS
6. <i>Communication and public awareness</i>	Implemented in all the countries and also through a Regional Communication Strategy	S
<b>Overall project rating</b>		<b>MS</b>

## 6.2 Lessons Learned

Background: The small dimension of many countries of the Region entails limited availability of human, material and financial resources for the execution of the Project. The Regional approach of the Project has been key for the implementation and the achievement of results at National level.

**Lesson 1. National Projects in small countries may largely benefit from a Regional Component that can implement joint activities or common procedures (e.g. a network of laboratories, joint trainings, production of communication tools).**

Background: The Project involved 12 countries of the Region and adopted a “one size fits all” approach by which “standard” Outputs were defined in the LogFrame for all and each of the countries, disregarding of different national priorities and uneven baseline situations. Some planned Outputs were too ambitious or unrealistic to be delivered by some countries in the timeframe of the Project.

**Lesson 2. The “one size fits all” approach in Regional and Sub-regional Projects can impact negatively on the effectiveness (attainment of results) and time-efficiency of the Project.**

Background: The modelling and drafting of the Biosafety Regional Policy happened, for different reasons, at an advanced stage of the Project. Therefore, its effectiveness for the implementation of the National Biosafety Frameworks have been limited so far.



**Lesson 3. Particularly in Projects with regional and national dimensions, the appropriate sequencing of the activities and of outputs delivery at regional and national level is a relevant aspect that may affect Project's effectiveness and efficiency.**

## 6.3 Recommendations

**Recommendation 1:** to UWI (University of West Indies) and CAHFSA (Caribbean Agricultural Health and Food Safety Agency) regarding the implementation of the new institutional Biosafety Framework at Regional level.

**Justification:** The institutional responsibility for Biosafety at regional level has been attributed by CARICOM to CAHFSA (see Direct Outcome 5 in chapter 5.4.2). A Road-Map for Biosafety defining the aspects to be jointly addressed by UWI and CAHFSA has been agreed upon by the two institutions (see chapter 5.8.3, Institutional Sustainability). Mechanism to ensure the transition of responsibilities by UWI to CAHFSA, as well as the modalities of coordination between CAHFSA and UWI in the context of the new institutional framework at regional level need to be clearly specified and addressed (see chapter 5.8.3)

### **Recommendation 1:**

It is highly recommended that UWI and CAHFSA prepare, formalise and implement a Short-Term Operational Plan (max. 6 months) to ensure:

- a) the progressive and smooth transition of responsibilities and competencies from UWI to CAHFSA;
- b) the modalities of coordination between CAHFSA and UWI in the new institutional framework of Biosafety in the Region.

**Recommendation 2:** to UWI (University of West Indies) and CAHFSA (Caribbean Agricultural Health and Food Safety Agency) addressing some priority aspects to be considered in the Short-Term Operational Plan (Rec. 1).

**Justification:** the regional Road-Map for Biosafety has defined the main aspects to be jointly addressed by UWI and CAHFSA (listed in chapter 5.8.3, Institutional Sustainability). There is the urgent need to finalise some pending activities and complete the delivery of pending results (see chapters 5.4.2 and Direct Outcome 5 in chapter 5.4.3), also through the mobilisation of technical and financial resources for the purpose (see chapter 5.8.2 and 5.8.3).

### **Recommendation 2:**

It is strongly recommended that UWI and CAHFSA urgently address the following aspects:

- a) Transfer of the responsibility of the Biosafety website (former Project website) to CAHFSA and possible hosting in CAHFSA website;
- b) Clear definition of responsibilities, functions and tasks between CAHFSA and UWI regarding the functioning of the virtual Caribbean Center for Biosafety put in place by the Project;

- c) Full establishment of the Regional Network of GMOs Laboratories (pending MoUs to be signed between the National laboratories and UWI);
- d) Identification of technical, material and financial resources needed for the implementation of the points above.

**Recommendation 3:** to CAHFSA (Caribbean Agricultural Health and Food Safety Agency) addressing the need to progress towards the full adoption of an institutional framework for providing regional biosafety services.

Justification: As discussed in chapter 5.4.3 (Likelihood of Impact) and chapter 5.8.3 (Institutional Sustainability), some relevant regional mechanisms have been put in place, without achieving, however, a fully operational institutional framework for providing regional biosafety services. As also highlighted in the Conclusions (chapter 6.1), the strengthening and consolidation of CAHFSA is crucial to comply with its mandate of Biosafety Regulatory Agency for the Region and to make fully operational the Road-Map agreed upon by UWI and CAHFSA. Financial sustainability is also considered an area of great concern (see chapter 5.8.2).

**Recommendation 3:**

It is strongly recommended that CAHFSA prepare a short-medium term action plan to address the following aspects:

- a) Completing the existing CAHFSA management team with a specialist in Food Safety with responsibility on Biosafety;
- b) Strengthening CAHFSA technical capacity in Biosafety Management through a specific capacity building programme of CAHFSA staff;
- c) To implement a piloting phase of regional coordination of CAHFSA on the priority Biosafety tasks identified in the Road-Map (e.g. the finalisation of the Model Biosafety Legislation, establishment of the Regional Biosafety Risk Assessment Working Group, setting and implementation of a communication/coordination strategy between CAHFSA and the Competent National Authorities, among others);
- d) Definition of a strategy for Resource Mobilisation at different levels to ensure Biosafety financial sustainability at regional and national levels.

**Recommendation 4:** to UWI (University of West Indies) regarding the sustainability of the Master Course (MSc) in Biosafety

Justification: the sustainability of the MSc in Biosafety is challenged by its high cost (15,000 USD) and the University is looking at the possibility to diversify its offer through complementary or alternative models.

**Recommendation 4:**

It is recommended UWI to diversify its training offer in Biosafety through:

- the design and implementation of certificate-level modules / courses on Biosafety;
- mainstreaming biosafety courses into existing modular courses and programmes, such as the MSc in Biotechnology and the MSc in Genetic Resources Management and Utilisation.

## **ANNEXES**

- 1) Response to stakeholder comments received but not (fully) accepted by the evaluators
- 2) Evaluation ToR (without annexes)
- 3) List of people met
- 4) Summary co-finance information and a statement of project expenditure by activity
- 5) Evaluation Brief
- 6) List of documents published by the Project
- 7) List of documents consulted
- 8) On-line Questionnaire (results)
- 9) Capacity building activities
- 10) Tracking Tools comparative tables
- 11) List of Country Missions
- 12) Brief CV of the consultant
- 13) Quality Assessment of the Evaluation Report

**ANNEX 1: RESPONSE TO STAKEHOLDER COMMENTS RECEIVED BUT NOT (FULLY) ACCEPTED BY THE EVALUATOR**

<b>Stakeholder comments</b>	<b>Evaluator response</b>
From: Reg. Project Manager (RPM)	
<b>2.2.2 Exchanges of information and preparation of the visit to the Region</b>	
§ 16: <i>Trinidad and Tobago – the Ministries of the Attorney General and Agriculture, Land and Fisheries – are not listed among the stakeholders who met with the Evaluator</i>	<p>Chapter 2.2.2 describes the preparation of the mission and the criteria for the selection of the countries.</p> <p>Paragraph 16 has been reformulated as follows: “Eventually, the six countries included in the visit were (criteria for selection between parentheses): etc. etc.</p> <p>The full list of People Met during the mission is presented in Annexe 3 of the Report</p>
<b>Table 2 (Chapter 3.3.2)</b>	
Table 2: <i>was wondering about the source of the information. In the case of T&amp;T, the EMA was never the NEA. The NEA for the national project was the Ministry of Legal Affairs, which had a name change post 2015 elections to the Ministry of the Attorney General and Legal Affairs</i>	<p>Source: Project Document (Section 4).</p> <p>Table 2 refers, as specified in the text, to the NEA at the time of Project formulation.</p> <p>For better clarity, the revisions of the RPM have been included in Table 2 for the four countries where the NEA has changed during Project implementation</p>
<b>Chapter 5.5 (Financial Management)</b>	
<p>§ 211: <i>the use of Excel in 2016 was a result of the fact that since the national projects should have ended in 2015, there were no budgets for 2016. These were generated from the unspent balances from 2015. In addition the system did not allow for budget revisions to be done in Anubis and while it was used for expenditure reporting, the absence of a budget to record the expenditure against, meant that balances would have been negative. As such. It was felt that Excel would provide an easy alternative to do the reporting, but alas ...</i></p> <p>§ 214 and § 223 <i>Please note that the necessary documentation was in place from ALL countries for the conduct of the national audits. These were sought either directly from countries which managed the expenditure of their funds, or from the UWI, where funds were managed on behalf of countries. To assist with the process of finally wrapping the activity,</i></p>	<p>The comment has been (partially) included in a footnote, to avoid excessive technicalities in the text.</p> <p>§ 214 and 223 have been reformulated</p>

<p>a request was made to 3 countries for additional information.</p>	
<b>Chapter 5.6 (Efficiency)</b>	
<p>§ 233:  <i>Am not really sure what the final verdict on the inclusion of the ICGEB exactly is. Yes it is said that it "... proved to be a time-saving measure that also maximized results ..."and yes, this is a role that the UWI should have fulfilled, but in terms of being an adaptive management strategy to achieve outstanding outputs in the area of capacity building, I do not get a sense of whether or not a bad or good thing was done.</i></p> <p><i>Suppose the "Moderately Unsatisfactory" rating for the section on "Efficiency" answers the query.</i></p>	<p>The conclusion is in the sentence reported by the RPM: (...proved to be a time-saving measure etc etc).</p> <p>Other issues (particularly effectiveness and sustainability, etc.) related to sub-contracting for capacity-building are discussed under chapter 5.4.2, more specifically in the section regarding Direct Outcome 3.</p> <p>Following the criteria for ratings given by the Evaluation Office, time-efficiency and the efficient sequence of the activities (e.g. regional / national sequence) play a major role in the evaluation of Project Efficiency. These issues are discussed in chapter 5.6.</p>
<b>Chapter 5.7.2 (Monitoring Implementation)</b>	
<p>§ 249:  <i>Am not sure how the conclusion drawn in the last sentence was arrived at.</i></p> <p>§ 251: <i>In light of the template used, in light of the statement made in the last sentence, am not sure where this should have been captured. This also links back the comments made under items 261 and 300. Cognisance has also been taken of the comments noted under item 263.</i></p> <p>§ 263: <i>the difference noted here was due in part to the fact that the template provided to the countries to do their final report was not based on the "requested standard format". The template used was proposed by me as I wanted them to 'officially' put on record a lot of the information that they were asked to provide at RSC meetings, e.g. This could then serve the purpose of better gauging what the needs are.</i></p>	<p>§ 249. Probably a misunderstanding of the evaluator. The last sentence has been cancelled.</p> <p>§ 251. Perhaps captured in the last column (Results/Outcomes) of section 2.1 of the Project Final Report?</p> <p>Comments over § 261 and § 300 not found</p> <p>§ 263 Noted and amended</p>

## ANNEX 2: TERMS OF REFERENCE FOR THE EVALUATION

**(Abridged version; No Annexes)**

### Section 1: PROJECT BACKGROUND AND OVERVIEW

#### Project General Information

**Table 1. Project summary**

GEF Project ID:		GEF ID: #2967	
Implementing Agency:	UN Environment	Executing Agency:	University of West Indies (UWI) with other regional collaborators and National Executing Agencies
Sub-programme:	Environmental Governance	Expected Accomplishment(s):	(MTS 2010-2013) Governance EA(b): States increasingly implement their environmental obligations and achieve their environmental priority goals, targets and objectives through strengthened laws and institutions.  (MTS 2014-2017) Environmental Governance EA2: The capacity of countries to develop and enforce laws and strengthen institutions to achieve internationally agreed environmental objectives and goals and comply with related obligations is enhanced.
UN Environment approval date:		Programme of Work Output(s):	
GEF approval date:	April 2011	Project type:	Full Size Project
GEF Operational Programme #:	GEF IV SP6	Focal Area(s):	Biodiversity
		GEF Strategic Priority:	BD 3
<i>Expected start date:</i>	June 2011	<i>Actual start date:</i>	October 2011
<i>Planned completion date:</i>	Jun 2015	<i>Actual completion date:</i>	December 2018 (technical completion) June 2019 (admin closure)
<i>Planned project budget at approval:</i>	12,980,577 USD	<i>Actual total expenditures reported as of [date]:</i>	...
GEF grant allocation:	5,972,493 USD	GEF grant expenditures reported as of March 2018:	...
Project Preparation Grant - GEF financing:	608,294 USD	Project Preparation Grant - co-financing:	...
<i>Expected Medium-Size Project/Full-Size Project co-financing:</i>	6,897,582 USD	<i>Secured Medium-Size Project/Full-Size Project co-financing:</i>	5,532,626.32 USD
First disbursement:	October 2011	Date of financial closure:	June 2019
No. of revisions:	9	Date of last revision:	01/01/2018
No. of Steering Committee meetings:	4	Date of last/next Steering Committee meeting:	Last: December 2016      Next:
Mid-term Review/ Evaluation ( <i>planned date</i> ):	N/A	Mid-term Review/ Evaluation ( <i>actual date</i> ):	N/A
Terminal Evaluation ( <i>planned date</i> ):	January-April 2018	Terminal Evaluation ( <i>actual date</i> ):	May 2018
Coverage - Country(ies):	12 countries: Bahamas, Belize, Grenada, Guyana, Suriname, Trinidad and Tobago, St. Vincent and the Grenadines, St. Lucia, Barbados, Dominica, Antigua and Barbuda, St. Kitts and Nevis	Coverage - Region(s):	Caribbean

## **Project rationale<sup>20</sup>**

Modern biotechnology and the trade in Living Modified Organisms (LMOs) presents an undetermined level of risk to the biodiversity and human health of fragile small island and coastal developing States in the Caribbean region. In the short- and mid-term, Caribbean countries will largely continue to import LMO foods, including food components used for research and contained use, while expanding the region's burgeoning biotechnology industry. In order for the introduction of new organisms - especially those intended for the environment - to bring about benefits, precaution and safeguards are required.

It is critical that modern biotechnology products, including LMOs, are managed so that all concerns with respect to negative impacts to human, animal and plant health and environmental safety are addressed, and plans are put in place to minimize such risks should they occur. Having the necessary safeguards in place, and requiring explicit decisions to precede the importation and release of LMOs, are means to allow the responsible use of these products.

With the impending onset of the Caribbean Single Market and Economy (CSME) and the recent creation of the Caribbean Agricultural Health and Food Safety Agency (CAHFSA), the conditions are ripe within the region to bring environmental considerations into trade-related operations. If the region is able to tap into the potential benefits of modern biotechnology without compromising its natural resource base or the confidence of their citizens, it will have gained global environmental benefits by achieving the Cartagena Protocol objectives in a biodiversity rich, vulnerable and unique region, and in a manner that is compatible with its own development goals.

A coherent biosafety risk management system requires an effective and operational NBF in each participating Caribbean country supported by regional services and mechanisms. It is with this recognition that the countries of the Caribbean Community participated in the UNEP/GEF global project on "Development of National Biosafety Frameworks". By early 2009, 12 countries of the region had completed draft versions of their National Biosafety Frameworks (NBF), with some taking a step further and adopting official policy and legal instruments for biosafety, and developing technical and administrative guidelines, while others formulated recommendations for implementing their biosafety frameworks and proposed specific actions, time frames, and follow-up activities.

This particular project sought to facilitate the establishment of an effective NBF in each participating country in order to address possible risks to national and regional biodiversity from unregulated exposure to LMOs. The project was founded on the strongly-held belief amongst the participating countries that effective management of the risks associated with modern biotechnology can be aided through improved regional coordination and collaboration.

This project therefore had the task of seeking agreement amongst participating countries on how best to establish sustainable operations of institutional mechanisms and strategies for cooperative coordination and execution of common and delegated biosafety functions.

The project is especially relevant to the GEF Strategic Programme 6, which has as its objective, the building of capacity for implementation of the Cartagena Protocol on Biosafety (CPB). It also conforms to key elements of the Updated Action Plan for Building Capacity for the Effective Implementation of the Cartagena Protocol on Biosafety, agreed at Conference of the Parties (COP) – Meeting of Parties (MOP) 3 of the Convention on Biological Diversity (CBD).

### **Project objectives and components**

This project was a continuation from previous biosafety capacity building efforts, including those of the global UNEP/GEF Biosafety Clearing House project (Phase I) in which some Caribbean countries participated.

The overall goal of the project was: To implement effective, operable, transparent and sustainable National Biosafety Frameworks (NBF) which cater for national and regional needs, deliver global benefits and are compliant with the Cartagena Protocol on Biosafety (CPB) in 12 Caribbean countries.

The project targeted the Caribbean sub-region countries of Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname,

---

<sup>20</sup> Legend: Grey =Info to be added

and Trinidad and Tobago, to ensure that their biodiversity would become less vulnerable to any potential risks from introduced LMOs. More specifically the project aimed to:

- establish institutional (policy /legal) frameworks for biosafety at both the national and regional levels that will allow Parties to the CPB to utilize modern biotechnology in compliance with this Protocol;
- facilitate the establishment, enhancement and operationalization of institutional capacities as well as technical and technological resources among the participating Caribbean Member States for the detection, assessment and management of potential risks from modern biotechnology (in combination with IAS where appropriate) at the national and regional levels;
- develop and strengthen the human resource base and level of expertise in biosafety on a national and regional scale, in support of biosafety management and national biosafety systems in the Caribbean; and
- improve and consolidate biosafety information management within Caribbean project countries in a way that can promote transparency, raise public awareness and facilitate biosafety decision-making, and be up-scaled to provide broader regional information services as needed, and if possible, establish links to IAS information sources.

The project was comprised of five components which were implemented in a complementary manner at both the national and regional levels. The components are described below:

Component 1. Establishment of National Legal Frameworks for Biosafety Biotechnology: This component was country-driven and relied on coordinated actions between the Lead Executing Agency and 12 National Executing Agencies.

Component 2: Establishment and Upgrading of Resource Base and Institutional Capacities for Biosafety Decision-Making and Management: This component was executed concurrently at both the national and regional level, for which the involvement of Inter-American Institute for Cooperation On Agriculture (IICA) and Caribbean Community (CARICOM) - affiliated institutions was paramount.

Component 3: Human Resources Development in Support of Biosafety Management throughout CARICOM Member States: This component supported the production of biosafety procedural and training manuals and the delivery of human resource training at the national and regional levels.

Component 4: Strengthening biosafety information management in the Caribbean sub-region: Together with the National Executing Agencies (NEAs), the CARICOM Secretariat and eventually Caribbean Agricultural Health and Food Safety Agency (CAHFSA) were expected to be key players in this component, which aimed to boost the quality and availability of relevant biosafety information in the region to benefit both the general public and decision-makers.

Component 5: Regional processes in support of the project and NBF sustainability in the Caribbean: (5.1) *Building regional support mechanisms for biosafety*; (5.2) *Regional project management*; (5.3) *Regional project M&E*: This component was of a fully regional nature and included:- those all-embracing activities needed to build regional support mechanisms for NBF implementation; those required for region-wide technical coordination of project activities (including its administration and financial management); and those required for overall monitoring and evaluation of project performance and impact. This fifth component would determine the most appropriate means to maintain the Regional Node for biosafety information exchange, and deliver targeted training and access to appropriate technical and human resource capability.

A summary of the planned outputs and expected outcomes by component are outlined in Table 2 below.

**Table 2: Summarised Results Framework**

Outputs	Expected Outcomes
Component 1: Establishment of National Legal Frameworks for Biosafety/Biotechnology	
1.1 Enactment of biosafety/biotechnology management legislation (or other key element of the regulatory system) to address safety in the field of transboundary movements of the products of modern biotechnology in up to 12 Caribbean countries;	Outcome 1 Biosafety governance regimes are improved and aligned with
1.2 Finalization, updating or reform of biosafety policies in up to 12 Caribbean countries, as needed;	



Outputs	Expected Outcomes	
1.3 Key politicians sensitized over biosafety, and its strategic importance and multiple dimensions (environmental benefits /risks, trade issues, R&D opportunities, ethical and socio-economic considerations, etc) in up to 12 Caribbean countries;	the CPB in 12 countries of the Caribbean sub-region	
1.4 Establishment and effective operation of National Biosafety Authorities in up to 12 Caribbean countries;		
1.5 Clearly defined institutional responsibilities amongst national agencies with a responsibility in biosafety management		
1.6 Establishment and effective operation of Scientific and Technical Advisory Committees, or equivalent ad hoc or permanent support structures, in up to 12 Caribbean countries;		
1.7 Assessments and establishment of financing options, including cost recovery mechanisms, for maintaining operations of NBF (including BCH functions);		
1.8 Key stakeholder groups (users of modern biotechnology) sensitized;		
1.9 Consolidation of ties and working relationship with scientific / research /biotech sector, and permeation of science-based criteria into the biosafety debate;		
1.10 Coaching on NBF operations provided to directly relevant (“on-the-ground”) staff, especially for handling and resolving LMO requests and communicating decisions;		
1.11 Manuals and protocols for following administrative procedures produced in up to 12 Caribbean countries;		
1.12 Peer review and scientific validation of criteria and methodology used for LMO risk assessments.		
1.13 Key decision-makers sensitized over the synergies and cost-savings to be had between IAS and LMO management		
<b>Component 2: Establishment and Upgrading of Resource Base and Institutional Capacities for Biosafety Decision-Making and Management</b>		
2.1 Technical documents and tools (standards, protocols, guidelines) for risk assessment (validated by peers) and risk management (if relevant, standardized and regionally harmonized) including for biosafety inspections/audits, monitoring, enforcement, evaluation and measurement of environmental impacts.		Outcome 2 Well-articulated and technically sound risk assessment, and risk management and follow-up systems are functioning for biosafety in the Caribbean
2.2 Capacity /needs assessments (Gap Analysis) of technical biosafety management capacity, including capacities that could be cost-effectively accessed at the regional level in order to provide services (to countries) in support of biosafety risk assessment processes and risk management responsibilities, in the Caribbean region (→ coupled to Output 5.1.a);		
2.3 Short term attachments for scientists and specialized personnel involved in risk assessment or risk management of LMOs;		
2.4 Personnel trained in the CPB, biosafety risk assessments, LMO detection, BCH use and transboundary issues (→ coupled to Outputs under Component 3);		
2.5 Detection laboratories for LMO testing and verification, established and operationalized within select participating countries and linked as a regional biosafety laboratory network		
2.6 Cost-effective (and if relevant, harmonized) institutional arrangements established amongst National Biosafety Authorities and regional biosafety laboratories, including linkages between national and regional laboratories.		
2.7 Laboratory equipment, supplies and reagents procured for LMO testing and verification analyses.		
2.8 Capacity strengthened of Bureau of Standards of each participating country to provide monitoring services and standards for biosafety management.		
2.9 Coordinated regional/national accreditation scheme established for biosafety laboratories.		
2.10 LMO detection protocols adopted and standardized amongst countries (→ coupled to Outputs under Component 3)		
2.11 Establishment of an institutionalized and financially sustainable regional support mechanism (extensive or case-specific) to aid participating countries in conducting risk assessment processes and carrying out coordinated and optimize risk management actions.		
2.12 Border control procedures for imports /exports of LMOs, including trans-shipments and transit, proposed and if possible agreed to. (→ coupled to Outputs under Component 3)		
<b>Component 3: Human Resources Development in Support of Biosafety Management throughout CARICOM Member States</b>		

Outputs	Expected Outcomes
3.1 Technical public functionaries, decision-makers, scientists and advisors, and customs officers and inspectors trained with regards to their specific functions and responsibilities in biosafety (as defined under each NBF) (→ coupled to Outputs under Component 2);	Outcome 3. A multi-disciplinary cadre of trained personnel and technical support mechanisms, that combine both national and regional capacities, are operational and ensure the future sustainability of biosafety management in CARICOM countries.
3.2 Knowledge on BCH use across several institutions (→ coupled to Outputs under Component 2);	
3.3 Range of training materials, new curricula (with practical /hands-on exercises) and training manuals produced;	
3.4 Experience gained in recommending biosafety decisions and biosafety measures, based on LMO risk assessments and science-based criteria coupled with socio-economic considerations.	
3.5 Mock or real risk assessment reports and BCH records for communication of decisions;	
3.6 Laboratory technicians trained in LMO detection and sampling;	
3.7 Teachers and specialists involved in human resources formation coached or trained on the requirements and opportunities of the CPB;	
3.8 Experience in carrying out LMO analyses, with statistically significant test results;	
3.9 LMO detection and sampling manuals, reviewed by peers, and if relevant, standardized or incorporated into biotechnology teachings (→ coupled to Outputs under Component 2);	
3.10 Regional Roster of Biosafety Experts compiled on basis of nominees from national rosters and training program;	
3.11 Range of biosafety specialization (short) courses available to CARICOM Member States, and possibility a post-graduate course;	
3.12 Self-financing mechanisms to sustain the training program beyond the project;	
3.13 Knowledge exchange with national and CARICOM staff specialized in border control of traded goods to receive feedback, inputs and review of proposed border control procedures for imports /exports of LMOs, including cases of transit and transshipments.	
Component 4: Strengthening biosafety information management in the Caribbean sub-region.	
4.1 Equipment and software procured to establish effective regional and national biosafety clearing house mechanisms and database systems;	Outcome 4. National and regional mechanisms that provide access to biosafety information in order to promote transparency, raise public awareness and facilitate biosafety decision-making are institutionalized throughout the region
4.2 Government personnel trained in BCH use and responsibilities assigned (→ coupled to Component 3);	
4.3 National BCH nodes (nBCH) and data management systems established and operating in each participating country as a means to facilitate public participation and access to information on biosafety, as well as comply with CPB obligations;	
4.4 Assessment to determine the level of resources (physical, human and financial) required to establish and maintain the regional clearing house mechanism and its data bases;	
4.5 Regional BCH Node designed (architecture) and hosted by a regional entity defined and agreed by all countries, and linked to the BCH Central Portal and other relevant sites;	
4.6 Regional BCH Node for facilitating public participation and access to information on biosafety established and populated with: a toolkit designed to help users; data bases of approved and traded LMOs; risk assessment tools (including standards, protocols, etc); training manuals; outreach material; and project products, amongst others.	
4.7 Data bases for LMOs traded within and through CARICOM, and LMOs commercially approved or produced by CARICOM's trading partners.	
4.8 Agreements with Customs Offices and regional organizations on information and documentation requirements for LMO imports;	
4.9 Collaborative networks and information sharing on LMO/IAS management in each participating country and in partnership with regional and international institutions /initiatives, which could be up-scaled to create a regional information exchange network to support biosafety decision making and notification processes;	
4.10 Enhanced use of technical and scientific information for biosafety decision-making through access to risk assessment reports;	
4.11 Non-government stakeholders sensitized over relevance and uses of BCH, stimulating improved/ well informed stakeholder participation in biosafety processes;	
4.12 Politicians and decision-makers sensitized over the strategic relevance of biosafety information management;	
4.13 Public education and outreach (PEO) strategy to guide the development and sharing of public awareness material regarding biotechnology and access to information on biosafety;	

Outputs	Expected Outcomes
4.14 Awareness raising activities at the national level, covering biosafety, biotechnology, bio-security and IAS, and targeted outreach to encourage stakeholder participation in consultations over biosafety policies and regulations;	
4.15 Outreach materials such as: web applications, brochures, monthly e-newsletter, posters, a public information educational/informational pack (comprising an environmental education series), public service announcements, regional article blasts, and videos for public education;	
4.16 Assessment of effectiveness and usefulness of regional and national BCH mechanisms and database systems (including considerations over certification requirements and other trade-related issues, and links with IAS), in order to derive lessons learnt and review sustainability factors. (→ builds on Output 5.1.b)	
<p>Component 5: Regional processes in support of the project and NBF sustainability in the Caribbean</p> <p>5.1 <i>Building regional support mechanisms for biosafety</i></p> <p>5.2 <i>Regional project management</i></p> <p>5.3 <i>Regional project M&amp;E</i></p>	
<p>Outputs (Products) for Outcome 5.1:</p> <p>5.1.a ) Viability assessment /analysis of the financial, technical and political implications of establishing sustainable biosafety services and functions at the regional level;</p> <p>5.1.b) Analysis of the potential of the Regional BCH Node to become the –gatekeeperI of regional biosafety applications, allow electronic tracking of applications and permits granted, ensure adequate public access to information on the processing of such applications, and facilitate public input into the risk assessment process;</p> <p>5.1.c) Political decision on biosafety services and responsibilities that can devolved at the regional level cost-effectively</p> <p>5.1.d) Institutional framework for providing regional biosafety services, including an initial pilot phase for regional coordination of biosafety tasks, and a self-financing plan for such services.</p> <p>5.1.e) Action plan to pursue synergies between LMO and IAS / pest management frameworks.</p>	<p>Outcome 5.1</p> <p>Regional processes aid to lay the foundations for regional biosafety services and a regional framework to assist NBF implementation in the Caribbean</p>
<p>Outputs (Products) for Outcomes 5.2 and 5.3:</p> <p>5.2.a) Regional PMU comprising oversight, coordination and administrative structures;</p> <p>5.2.b) Filing system and accounting system for the project;</p> <p>14</p> <p>5.2.c) Feedback and orientation from Regional Project Steering Committees, and other invited representatives;</p> <p>5.2.d) Appropriate periodic reporting to UNEP, and annual review processes to verify project progress (eg. PIRs);</p> <p>5.2.e) External independent evaluations at project mid-term and end-of-term that rate project results and impacts;</p> <p>5.2.f) Financial audits to verify project accounting;</p> <p>5.2.g) Lessons learnt derived from project implementation and adaptive management.</p>	<p>Outcome 5.2</p> <p>Regional processes support project management</p> <p>Outcome 5.3</p> <p>Regional processes support project M&amp;E</p>

National component activities were designed to support the establishment of the necessary legal and institutional frameworks, public education programs and training necessary for effective and sustained implementation of the CPB. The regional aspects of the project were designed to support: (a) the establishment and/or strengthening of region-wide processes and mechanisms for cooperative coordination to support countries in biosafety management; (b) region-wide training on biosafety risk assessment and risk management, and other specific CPB-related topics; (c) evaluations of existing and required capacity for risk management and LMO detection; (d) the creation of a Regional Node for the Biosafety Clearing House (BCH) to support and coordinate information exchange and access to information on biosafety; and (e) project management structures and processes, and monitoring and evaluation of project performance.

### Executing Arrangements

The GEF Implementing Agency for this project was UN Environment, under the Division of Environmental Policy Implementation (Biosafety). UN Environment was responsible for overall project oversight and performance

appraisal vis-à-vis the GEF. The Division supported project partners to ensure that the project met its stated objectives, operated according to the required UN Environment/GEF standards, and that its outcomes were aligned with global biosafety policy - in particular with the CPB.

The Lead Executing Agency (LEA) was the University of West Indies (UWI). UWI managed all project operations and administration, including financial book-keeping, contracting, procurements, organization of events, reporting to UN Environment, etc. UWI was legally responsible for delivering project results, facilitating regional collaboration for the project, hosting the Project Management Unit (PMU), monitoring project progress and performance, and ensuring periodic reports, reviews and audits take place as required by GEF and UN Environment. UWI also provided all the support services and strategic orientation that the PMU needed to effectively run project operations as a delegated responsibility.

Project activities were managed and coordinated by a Regional Project Manager (RPM) who was hired by the LEA as the head of the PMU. The Project Manager was responsible for the timely and targeted implementation of all aspects of the project. The Project Manager was answerable to the LEA and the Project Steering Committee as the senior body with the responsibility for project oversight.

At the country level, project activities were managed by a NBF Coordinator who was based in each of the participating countries, and who functioned as an extension of the PMU. The Project Manager also liaised closely with national-level NBF Coordinators, who were responsible for all activities within their respective countries.

The LEA and the PM together comprised the core management team of the project. They were expected to monitor progress in implementation against the work plan. The LEA also worked closely with the designated National Executing Agencies (NEAs) in each project country. The role of the NEA included managing project funds at the national level and procuring project staff, equipment and services. The designated NEAs were as follows:

- Antigua and Barbuda - The Environment Division currently within the Ministry of Agriculture;
- The Bahamas - The Bahamas Environment, Science and Technology (BEST), Ministry of Environment;
- Barbados - The Ministry of Environment, Water Resources, and Drainage in collaboration with the Ministry of Agriculture;
- Belize - Belize Agriculture and Health Authority, Ministry of Agriculture;
- Dominica - The Environmental Coordinating Unit within the Ministry of Health and Environment;
- Grenada - The Ministry of Agriculture, Lands, Forestry and Fisheries;
- Guyana - The Environmental Protection Agency;
- St. Kitts and Nevis - The Ministry of Sustainable Development;
- Saint Lucia - The Ministry of Agriculture, Lands, Fisheries and Forestry;
- St. Vincent and the Grenadines - The Ministry of Health and the Environment;
- Suriname - The Ministry of Labour, Technological Development and Environment;
- Trinidad and Tobago - The Environment Management Authority (EMA).

The NEAs were also responsible for implementing the project's national-level work programmes; they provided feedback on project progress at the national-level, including obstacles faced, and participated in the Regional Steering Committee. Each country designated a National Project Focal Point (NPFP), and formed a National Steering Committees.

The Regional Steering Committee (RSC) provided the overall policy direction to project implementation. It comprised of the National Project Focal Points of all the participating countries (and/or the NBF Coordinators) and representatives of the main project organizations involved in technical and administrative delivery of the project as well as regional government bodies.

### **Project Cost and Financing**

The project falls under the full-size project (FSP) category, with an overall project budget of 12,870,075 USD made up of a GEF allocation of 5,972,493 USD, and a co-financing support of 6,897,582 USD from various

partners, both in cash and in-kind. The co-financing consists of 3,697,582 USD from participating Caribbean countries and 3,200,000 USD as co-financing being provided or leveraged by regional partners, namely Caribbean Community (CARICOM) (in cash and in kind), Inter-American Institute for Cooperation On Agriculture (IICA), University of West Indies (UWI) and University of Guyana (UG). Table 3 below shows the itemised budget by component and funding source.

**Table 3. Estimated project budget by component (USD)**

Source	Co-finance (USD)	GEF funds (USD)
Component 1	1,739,590	1,788,300
Component 2	2,667,013	1,464,800
Component 3	958,206	1,178,800
Component 4	666,109	535,800
Component 5		
5.1 Regional biosafety support mechanisms	288,250	94,816
5.2 Regional Project management	410,500	582,403
5.3 Regional Project M&E	167,914	327,574
<b>TOTAL</b>	<b>6,897,582</b>	<b>5,972,493</b>

### Implementation Issues

The first 2-3 years of the project experienced delays in implementation, in part due to complications in coordinating the main stakeholders into their respective roles. Continuing support from the project Task Manager in UNEP helped to eventually streamline the executing arrangements. The project underwent a mid-term evaluation that resulted in several recommendations that were proposed to improve project delivery. Thereafter, UNEP and UWI followed through by revising the strategy for implementing project activities, most notably by sub-contracting the International Centre for Genetic Engineering and Biotechnology (ICGEB) to undertake tasks that were previously supposed to be assigned to individual consultants. This was done in large part due to administrative and other challenges in the recruitment of consultants. Another challenge experienced during project implementation was the different degrees of interest and levels of response and participation from the various countries (12 in number). This may be considered as one of the factors that contributed to the heterogeneous results in these countries.

## Section 2. OBJECTIVE AND SCOPE OF THE EVALUATION

### Key Evaluation principles

Evaluation findings and judgements should be based on sound evidence and analysis, clearly documented in the evaluation report. Information will be triangulated (i.e. verified from different sources) as far as possible, and when verification is not possible, the single source will be mentioned (whilst anonymity is still protected). Analysis leading to evaluative judgements should always be clearly spelled out.

The “Why?” Question. As this is a terminal evaluation and a follow-up project is likely [or similar interventions are envisaged for the future], particular attention should be given to learning from the experience. Therefore, the “Why?” question should be at the front of the consultants’ minds all through the evaluation exercise and is supported by the use of a theory of change approach. This means that the consultants need to go beyond the assessment of “what” the project performance was, and make a serious effort to provide a deeper understanding of “why” the performance was as it was. This should provide the basis for the lessons that can be drawn from the project.

Baselines and counterfactuals. In attempting to attribute any outcomes and impacts to the project intervention, the evaluators should consider the difference between *what has happened with, and what would have happened without, the project*. This implies that there should be consideration of the baseline conditions, trends and counterfactuals in relation to the intended project outcomes and impacts. It also means that there should be plausible evidence to attribute such outcomes and impacts to the actions of the project. Sometimes,

adequate information on baseline conditions, trends or counterfactuals is lacking. In such cases this should be clearly highlighted by the evaluators, along with any simplifying assumptions that were taken to enable the evaluator to make informed judgements about project performance.

Communicating evaluation results. A key aim of the evaluation is to encourage reflection and learning by UN Environment staff and key project stakeholders. The consultant should consider how reflection and learning can be promoted, both through the evaluation process and in the communication of evaluation findings and key lessons. Clear and concise writing is required on all evaluation deliverables. Draft and final versions of the main evaluation report will be shared with key stakeholders by the Evaluation Manager. There may, however, be several intended audiences, each with different interests and needs regarding the report. The Evaluation Manager will plan with the consultant(s) which audiences to target and the easiest and clearest way to communicate the key evaluation findings and lessons to them. This may include some or all of the following; a webinar, conference calls with relevant stakeholders, the preparation of an evaluation brief or interactive presentation.

### **Objective of the Evaluation**

In line with the UN Environment Evaluation Policy<sup>21</sup> and the UN Environment Programme Manual<sup>22</sup>, the Terminal Evaluation (TE) is undertaken at completion of the project to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote operational improvement, learning and knowledge sharing through results and lessons learned among UN Environment and the partners (Caribbean Community (CARICOM) (in cash and in kind), Inter-American Institute for Cooperation On Agriculture (IICA), University of West Indies (UWI) and University of Guyana (UG)). Therefore, the evaluation will identify lessons of operational relevance for future project formulation and implementation.

### **Key Strategic Questions**

In addition to the evaluation criteria outlined in Section 10 below, the evaluation will address the strategic questions listed below. These are questions of interest to UN Environment and to which the project is believed to be able to make a substantive contribution:

1. To what extent has the project mobilized the establishment of a fully functional and responsive National Biosafety Frameworks in each participating country that can address possible risks to national and regional bio diversity from unregulated exposure to LMOs?
2. To what extent did the project help to enhance national institutional and technical capacity and awareness amongst the key actors for effective enforcement of the Biosafety Law, decrees and sub-decrees on biosafety?
3. To what extent did the project outputs produced have the weight of scientific authority and credibility necessary to influence policy makers in line Ministries / Authorities?
4. To what extent are the outcome indicators verifiable, and record progresses towards the achievement of the development objectives, as well as the obligations under the Cartagena Protocol?

### **Evaluation Criteria**

All evaluation criteria will be rated on a six-point scale. Sections A-I below, outline the scope of the criteria and a link to a table for recording the ratings is provided in Annex 1). A weightings table will be provided in excel format (link provided in Annex 1) to support the determination of an overall project rating. The set of evaluation criteria are grouped in nine categories: (A) Strategic Relevance; (B) Quality of Project Design; (C) Nature of External Context; (D) Effectiveness, which comprises assessments of the delivery of outputs, achievement of

---

<sup>21</sup> <http://www.unep.org/eou/StandardsPolicyandPractices/UNEPEvaluationPolicy/tabid/3050/language/en-US/Default.aspx>

<sup>22</sup> [http://www.unep.org/QAS/Documents/UNEP\\_Programme\\_Manual\\_May\\_2013.pdf](http://www.unep.org/QAS/Documents/UNEP_Programme_Manual_May_2013.pdf) . *This manual is under revision.*

outcomes and likelihood of impact; (E) Financial Management; (F) Efficiency; (G) Monitoring and Reporting; (H) Sustainability; and (I) Factors Affecting Project Performance. The evaluation consultants can propose other evaluation criteria as deemed appropriate.

### **Strategic Relevance**

The evaluation will assess, in line with the OECD/DAC definition of relevance, ‘the extent to which the activity is suited to the priorities and policies of the target group, recipient and donor’. The evaluation will include an assessment of the project’s relevance in relation to UN Environment’s mandate and its alignment with UN Environment’s policies and strategies at the time of project approval. Under strategic relevance an assessment of the complementarity of the project with other interventions addressing the needs of the same target groups will be made. This criterion comprises four elements:

#### **Alignment to the UN Environment Medium Term Strategy<sup>23</sup> (MTS) and Programme of Work (POW)**

The evaluation should assess the project’s alignment with the MTS and POW under which the project was approved and include, in its narrative, reflections on the scale and scope of any contributions made to the planned results reflected in the relevant MTS and POW.

#### **Alignment to UN Environment / Donor/GEF Strategic Priorities**

Donor, including GEF, strategic priorities will vary across interventions. UN Environment strategic priorities include the Bali Strategic Plan for Technology Support and Capacity Building<sup>24</sup> (BSP) and South-South Cooperation (S-SC). The BSP relates to the capacity of governments to: comply with international agreements and obligations at the national level; promote, facilitate and finance environmentally sound technologies and to strengthen frameworks for developing coherent international environmental policies. S-SC is regarded as the exchange of resources, technology and knowledge between developing countries. GEF priorities are specified in published programming priorities and focal area strategies.

#### **Relevance to Regional, Sub-regional and National Environmental Priorities**

The evaluation will assess the extent to which the intervention is suited, or responding to, the stated environmental concerns and needs of the countries, sub-regions or regions where it is being implemented. Examples may include: national or sub-national development plans, poverty reduction strategies or Nationally Appropriate Mitigation Action (NAMA) plans or regional agreements etc.

#### **Complementarity with Existing Interventions**

An assessment will be made of how well the project, either at design stage or during the project mobilization, took account of ongoing and planned initiatives (under the same sub-programme, other UN Environment sub-programmes, or being implemented by other agencies) that address similar needs of the same target groups. The evaluation will consider if the project team, in collaboration with Regional Offices and Sub-Programme Coordinators, made efforts to ensure their own intervention was complementary to other interventions, optimized any synergies and avoided duplication of effort. Examples may include UN Development Assistance Frameworks or One UN programming. Linkages with other interventions should be described and instances where UN Environment’s comparative advantage has been particularly well applied should be highlighted.

*Factors affecting this criterion may include:*

- Stakeholders’ participation and cooperation
- Responsiveness to human rights and gender equity
- Country ownership and driven-ness

---

<sup>23</sup> UN Environment’s Medium Term Strategy (MTS) is a document that guides UN Environment’s programme planning over a four-year period. It identifies UN Environment’s thematic priorities, known as Sub-programmes (SP), and sets out the desired outcomes, known as Expected Accomplishments (EAs), of the Sub-programmes.

<sup>24</sup> <http://www.unep.org/GC/GC23/documents/GC23-6-add-1.pdf>

### **Quality of Project Design**

The quality of project design is assessed using an agreed template during the evaluation inception phase, ratings are attributed to identified criteria and an overall Project Design Quality rating is established ([www.unep.org/evaluation](http://www.unep.org/evaluation)). This overall Project Design Quality rating is entered in the final evaluation ratings table as item B. In the Main Evaluation Report a summary of the project's strengths and weaknesses at design stage is included, while the complete Project Design Quality template is annexed in the Inception Report.

*Factors affecting this criterion may include (at the design stage):*

Stakeholders participation and cooperation

Responsiveness to human rights and gender equity

### **C. Nature of External Context**

At evaluation inception stage a rating is established for the project's external operating context (considering the prevalence of conflict, natural disasters and political upheaval). This rating is entered in the final evaluation ratings table as item C. Where a project has been rated as facing either an Unfavourable or Highly Unfavourable external operating context, and/or a negative external event has occurred during project implementation, the ratings for Effectiveness, Efficiency and/or Sustainability may be increased at the discretion of the Evaluation Consultant and Evaluation Manager together. A justification for such an increase must be given.

### **D. Effectiveness**

#### **Delivery of Outputs**

The evaluation will assess the project's success in producing the programmed outputs (*products, capital goods and services resulting from the intervention*) and achieving milestones as per the project design document (ProDoc). Any formal modifications/revisions made during project implementation will be considered part of the project design. Where the project outputs are inappropriately or inaccurately stated in the ProDoc, reformulations may be necessary in the reconstruction of the TOC. In such cases a table should be provided showing the original and the reformulation of the outputs for transparency. The delivery of outputs will be assessed in terms of both quantity and quality, and the assessment will consider their ownership by, and usefulness to, intended beneficiaries and the timeliness of their delivery. The evaluation will briefly explain the reasons behind the success or shortcomings of the project in delivering its programmed outputs and meeting expected quality standards.

*Factors affecting this criterion may include:*

Preparation and readiness

Quality of project management and supervision<sup>25</sup>

#### **Achievement of Direct Outcomes**

The achievement of direct outcomes (short and medium-term effects of the intervention's outputs; a change of behaviour resulting from the use/application of outputs, which is not under the direct control of the intervention's direct actors) is assessed as performance against the direct outcomes as defined in the reconstructed<sup>26</sup> Theory of Change. These are the first-level outcomes expected to be achieved as an

---

<sup>25</sup> In some cases 'project management and supervision' will refer to the supervision and guidance provided by UN Environment to implementing partners and national governments while in others, specifically for GEF funded projects, it will refer to the project management performance of the executing agency and the technical backstopping provided by UN Environment.

<sup>26</sup> UN Environment staff are currently required to submit a Theory of Change with all submitted project designs. The level of 'reconstruction' needed during an evaluation will depend on the quality of this initial TOC, the time that has lapsed between project design and implementation (which may be related to securing and disbursing funds) and the level of any changes made to the project design. In the case of projects pre-dating 2013 the intervention logic is often represented in a logical framework and a TOC will need to be constructed in the inception stage of the evaluation.



immediate result of project outputs. As in 1, above, a table can be used where substantive amendments to the formulation of direct outcomes is necessary. The evaluation should report evidence of attribution between UN Environment's intervention and the direct outcomes. In cases of normative work or where several actors are collaborating to achieve common outcomes, evidence of the nature and magnitude of UN Environment's 'substantive contribution' should be included and/or 'credible association' established between project efforts and the direct outcomes realised.

*Factors affecting this criterion may include:*

Quality of project management and supervision  
Stakeholders' participation and cooperation  
Responsiveness to human rights and gender equity  
Communication and public awareness

### **Likelihood of Impact**

Based on the articulation of longer term effects in the reconstructed TOC (*i.e. from direct outcomes, via intermediate states, to impact*), the evaluation will assess the likelihood of the intended, positive impacts becoming a reality. Project objectives or goals should be incorporated in the TOC, possibly as intermediate states or long term impacts. The Evaluation Office's approach to the use of TOC in project evaluations is outlined in a guidance note available on the EOU website, [web.unep.org/evaluation](http://web.unep.org/evaluation) and is supported by an excel-based flow chart, 'Likelihood of Impact Assessment Decision Tree'. Essentially the approach follows a 'likelihood tree' from direct outcomes to impacts, taking account of whether the assumptions and drivers identified in the reconstructed TOC held. Any unintended positive effects should also be identified and their causal linkages to the intended impact described.

The evaluation will also consider the likelihood that the intervention may lead, or contribute to, unintended negative effects. Some of these potential negative effects may have been identified in the project design as risks or as part of the analysis of Environmental, Social and Economic Safeguards.<sup>27</sup>

The evaluation will consider the extent to which the project has played a catalytic role or has promoted scaling up and/or replication<sup>28</sup> as part of its Theory of Change and as factors that are likely to contribute to longer term impact.

Ultimately UN Environment and all its partners aim to bring about benefits to the environment and human well-being. Few projects are likely to have impact statements that reflect such long-term or broad-based changes. However, the evaluation will assess the likelihood of the project to make a substantive contribution to the high level changes represented by UN Environment's Expected Accomplishments, the Sustainable Development Goals<sup>29</sup> and/or the high level results prioritised by the funding partner.

*Factors affecting this criterion may include:*

Quality of Project Management and Supervision (including adaptive management)  
Stakeholders participation and cooperation  
Responsiveness to human rights and gender equity  
Country ownership and driven-ness

---

<sup>27</sup> Further information on Environmental, Social and Economic Safeguards (ESES) can be found at <http://www.unep.org/about/eses>

<sup>28</sup> *Scaling up* refers to approaches being adopted on a much larger scale, but in a very similar context. Scaling up is often the longer term objective of pilot initiatives. *Replication* refers to approaches being repeated or lessons being explicitly applied in new/different contexts e.g. other geographic areas, different target group etc. Effective replication typically requires some form of revision or adaptation to the new context. It is possible to replicate at either the same or a different scale.

<sup>29</sup> A list of relevant SDGs is available on the EO website [www.unep.org/evaluation](http://www.unep.org/evaluation)

Communication and public awareness

### **E. Financial Management**

Financial management will be assessed under two themes: *completeness* of financial information and *communication* between financial and project management staff. The evaluation will establish the actual spend across the life of the project of funds secured from all donors. This expenditure will be reported, where possible, at output level and will be compared with the approved budget. The evaluation will assess the level of communication between the Project/Task Manager and the Fund Management Officer as it relates to the effective delivery of the planned project and the needs of a responsive, adaptive management approach. The evaluation will verify the application of proper financial management standards and adherence to UN Environment's financial management policies. Any financial management issues that have affected the timely delivery of the project or the quality of its performance will be highlighted.

*Factors affecting this criterion may include:*

Preparation and readiness

Quality of project management and supervision

### **F. Efficiency**

In keeping with the OECD/DAC definition of efficiency the evaluation will assess the extent to which the project delivered maximum results from the given resources. This will include an assessment of the cost-effectiveness and timeliness of project execution. Focussing on the translation of inputs into outputs, cost-effectiveness is the extent to which an intervention has achieved, or is expected to achieve, its results at the lowest possible cost. Timeliness refers to whether planned activities were delivered according to expected timeframes as well as whether events were sequenced efficiently. The evaluation will also assess to what extent any project extension could have been avoided through stronger project management and identify any negative impacts caused by project delays or extensions. The evaluation will describe any cost or time-saving measures put in place to maximise results within the secured budget and agreed project timeframe and consider whether the project was implemented in the most efficient way compared to alternative interventions or approaches.

The evaluation will give special attention to efforts by the project teams to make use of/build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. to increase project efficiency. The evaluation will also consider the extent to which the management of the project minimised UN Environment's environmental footprint.

The factors underpinning the need for any project extensions will also be explored and discussed. As management or project support costs cannot be increased in cases of 'no cost extensions', such extensions represent an increase in unstated costs to implementing parties.

*Factors affecting this criterion may include:*

Preparation and readiness (e.g. timeliness)

Quality of project management and supervision

Stakeholders participation and cooperation

### **G. Monitoring and Reporting**

The evaluation will assess monitoring and reporting across three sub-categories: monitoring design and budgeting, monitoring implementation and project reporting.

#### **Monitoring Design and Budgeting**

Each project should be supported by a sound monitoring plan that is designed to track progress against SMART<sup>30</sup> indicators towards the delivery of the projects outputs and achievement of direct outcomes, including at a level disaggregated by gender, vulnerability or marginalisation. The evaluation will assess the quality of the design of the monitoring plan as well as the funds allocated for its implementation. The adequacy of resources for mid-term and terminal evaluation/review should be discussed if applicable.

#### **Monitoring of Project Implementation**

The evaluation will assess whether the monitoring system was operational and facilitated the timely tracking of results and progress towards projects objectives throughout the project implementation period. This should include monitoring the representation and participation of disaggregated groups in project activities. It will also consider how information generated by the monitoring system during project implementation was used to adapt and improve project execution, achievement of outcomes and ensure sustainability. The evaluation should confirm that funds allocated for monitoring were used to support this activity.

#### **Project Reporting**

UN Environment has a centralised Project Information Management System (PIMS) in which project managers upload six-monthly status reports against agreed project milestones. This information will be provided to the Evaluation Consultant(s) by the Evaluation Manager. Some projects have additional requirements to report regularly to funding partners, which will be supplied by the project team (e.g. the Project Implementation Reviews and Tracking Tool for GEF-funded projects). The evaluation will assess the extent to which both UN Environment and donor reporting commitments have been fulfilled.

*Factors affecting this criterion may include:*

Quality of project management and supervision

Responsiveness to human rights and gender equity (e.g. disaggregated indicators and data)

#### **H. Sustainability**

Sustainability is understood as the probability of direct outcomes being maintained and developed after the close of the intervention. The evaluation will identify and assess the key conditions or factors that are likely to undermine or contribute to the persistence of achieved direct outcomes (ie. 'assumptions' and 'drivers'). Some factors of sustainability may be embedded in the project design and implementation approaches while others may be contextual circumstances or conditions that evolve over the life of the intervention. Where applicable an assessment of bio-physical factors that may affect the sustainability of direct outcomes may also be included.

#### **Socio-political Sustainability**

The evaluation will assess the extent to which social or political factors support the continuation and further development of project direct outcomes. It will consider the level of ownership, interest and commitment among government and other stakeholders to take the project achievements forwards. In particular the evaluation will consider whether individual capacity development efforts are likely to be sustained.

#### **Financial Sustainability**

Some direct outcomes, once achieved, do not require further financial inputs, e.g. the adoption of a revised policy. However, in order to derive a benefit from this outcome further management action may still be needed e.g. to undertake actions to enforce the policy. Other direct outcomes may be dependent on a continuous flow of action that needs to be resourced for them to be maintained, e.g. continuation of a new resource management approach. The evaluation will assess the extent to which project outcomes are dependent on future funding for the benefits they bring to be sustained. Secured future funding is only relevant to financial sustainability where the direct outcomes of a project have been extended into a future project phase. Even where future funding has been secured, the question still remains as to whether the project outcomes are financially sustainable.

---

<sup>30</sup> SMART refers to indicators that are specific, measurable, assignable, realistic and time-specific.

### ***Institutional Sustainability***

The evaluation will assess the extent to which the sustainability of project outcomes (especially those relating to policies and laws) is dependent on issues relating to institutional frameworks and governance. It will consider whether institutional achievements such as governance structures and processes, policies, sub-regional agreements, legal and accountability frameworks etc. are robust enough to continue delivering the benefits associated with the project outcomes after project closure. In particular, the evaluation will consider whether institutional capacity development efforts are likely to be sustained.

*Factors affecting this criterion may include:*

Stakeholders participation and cooperation

Responsiveness to human rights and gender equity (e.g. where interventions are not inclusive, their sustainability may be undermined)

Communication and public awareness

Country ownership and driven-ness

### **Factors and Processes Affecting Project Performance**

*(These factors are rated in the ratings table, but are discussed within the Main Evaluation Report as cross-cutting themes as appropriate under the other evaluation criteria, above)*

#### ***Preparation and Readiness***

This criterion focuses on the inception or mobilisation stage of the project (ie. the time between project approval and first disbursement). The evaluation will assess whether appropriate measures were taken to either address weaknesses in the project design or respond to changes that took place between project approval, the securing of funds and project mobilisation. In particular the evaluation will consider the nature and quality of engagement with stakeholder groups by the project team, the confirmation of partner capacity and development of partnership agreements as well as initial staffing and financing arrangements. *(Project preparation is included in the template for the assessment of Project Design Quality).*

#### ***Quality of Project Management and Supervision***

In some cases 'project management and supervision' will refer to the supervision and guidance provided by UN Environment to implementing partners and national governments while in others, specifically for GEF funded projects, it will refer to the project management performance of the executing agency and the technical backstopping and supervision provided by UN Environment.

The evaluation will assess the effectiveness of project management with regard to: providing leadership towards achieving the planned outcomes; managing team structures; maintaining productive partner relationships (including Steering Groups etc.); communication and collaboration with UN Environment colleagues; risk management; use of problem-solving; project adaptation and overall project execution. Evidence of adaptive management should be highlighted.

#### ***Stakeholder Participation and Cooperation***

Here the term 'stakeholder' should be considered in a broad sense, encompassing all project partners, duty bearers with a role in delivering project outputs and target users of project outputs and any other collaborating agents external to UN Environment. The assessment will consider the quality and effectiveness of all forms of communication and consultation with stakeholders throughout the project life and the support given to maximise collaboration and coherence between various stakeholders, including sharing plans, pooling resources and exchanging learning and expertise. The inclusion and participation of all differentiated groups, including gender groups should be considered.

#### ***Responsiveness to Human Rights and Gender Equity***

The evaluation will ascertain to what extent the project has applied the UN Common Understanding on the human rights based approach (HRBA) and the UN Declaration on the Rights of Indigenous People. Within this human rights context the evaluation will assess to what extent the intervention adheres to UN Environment's Policy and Strategy for Gender Equality and the Environment.

In particular the evaluation will consider to what extent project design, implementation and monitoring have taken into consideration: (i) possible gender inequalities in access to, and the control over, natural resources; (ii) specific vulnerabilities of women and children to environmental degradation or disasters; and (iii) the role of women in mitigating or adapting to environmental changes and engaging in environmental protection and rehabilitation.

#### ***Country Ownership and Driven-ness***

The evaluation will assess the quality and degree of engagement of government / public sector agencies in the project. While there is some overlap between Country Ownership and Institutional Sustainability, this criterion focuses primarily on the forward momentum of the intended projects results, ie. either a) moving forwards from outputs to direct outcomes or b) moving forward from direct outcomes towards intermediate states. The evaluation will consider the involvement not only of those directly involved in project execution and those participating in technical or leadership groups, but also those official representatives whose cooperation is needed for change to be embedded in their respective institutions and offices. This factor is concerned with the level of ownership generated by the project over outputs and outcomes and that is necessary for long term impact to be realised. This ownership should adequately represent the needs of interest of all gendered and marginalised groups.

#### ***Communication and Public Awareness***

The evaluation will assess the effectiveness of: a) communication of learning and experience sharing between project partners and interested groups arising from the project during its life and b) public awareness activities that were undertaken during the implementation of the project to influence attitudes or shape behaviour among wider communities and civil society at large. The evaluation should consider whether existing communication channels and networks were used effectively, including meeting the differentiated needs of gendered or marginalised groups, and whether any feedback channels were established. Where knowledge sharing platforms have been established under a project the evaluation will comment on the sustainability of the communication channel under either socio-political, institutional or financial sustainability, as appropriate.

### **Section 3. EVALUATION APPROACH, METHODS AND DELIVERABLES**

The Terminal Evaluation will be an in-depth evaluation using a participatory approach whereby key stakeholders are kept informed and consulted throughout the evaluation process. Both quantitative and qualitative evaluation methods will be used as appropriate to determine project achievements against the expected outputs, outcomes and impacts. It is highly recommended that the consultant(s) maintains close communication with the project team and promotes information exchange throughout the evaluation implementation phase in order to increase their (and other stakeholder) ownership of the evaluation findings. Where applicable, the consultant(s) should provide a geo-referenced map that demarcates the area covered by the project and, where possible, provide geo-reference photographs of key intervention sites (e.g. sites of habitat rehabilitation and protection, pollution treatment infrastructure, etc.)

The findings of the evaluation will be based on the following:

A desk review of:

- Relevant background documentation;
- Project design documents (including minutes of the project design review meeting at approval); Annual Work Plans and Budgets or equivalent, revisions to the project (Project Document Supplement), the logical framework and its budget;
- Project reports such as six-monthly progress and financial reports, progress reports from collaborating partners, meeting minutes, relevant correspondence and including the Project Implementation Reviews and Tracking Tool etc.;
- Technical reports on project activities and outputs;
- Terminal Reports of the project including final project output, audit report, and final financial statements;
- Other reports deemed useful to the terminal evaluation of the project.

- Interviews (individual or in group) with:
  - UN Environment Task Manager (TM);
  - Project management team;
  - UN Environment Fund Management Officer (FMO);
  - Sub-Programme Coordinator;
  - Project partners ; and
  - Relevant resource persons.

Field visits to a selected number of countries (considered: Panama, Trinidad & Tobago, Guyana, and one other small island state e.g. St. Kitts)

Other data collection tools as may be deemed useful by the Evaluator

### **Evaluation Deliverables and Review Procedures**

The Evaluator will prepare:

**Inception Report:** (see Annex 1 for links to all templates, tables and guidance notes) containing an assessment of project design quality, a draft reconstructed Theory of Change of the project, project stakeholder analysis, evaluation framework and a tentative evaluation schedule.

**Preliminary Findings Note:** typically in the form of a powerpoint presentation, the sharing of preliminary findings is intended to support the participation of the project team, act as a means to ensure all information sources have been accessed and provide an opportunity to verify emerging findings.

**Draft and Final Evaluation Report:** (see links in Annex 1) containing an executive summary that can act as a stand alone document; detailed analysis of the evaluation findings organised by evaluation criteria and supported with evidence; lessons learned and recommendations and an annotated ratings table.

**Evaluation Brief:** a 2-page summary of key evaluation findings for wider dissemination through the EOU website.

**Review procedure for the evaluation report.** The evaluation team will submit a draft report to the Evaluation Manager and revise the draft in response to their comments and suggestions. Once a draft of adequate quality has been peer-reviewed and accepted, the Evaluation Manager will share the cleared draft report with the Project Manager, who will alert the Evaluation Manager in case the report contains any blatant factual errors. The Evaluation Manager will then forward revised draft report (corrected by the evaluation team where necessary) to other project stakeholders, for their review and comments. Stakeholders may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions as well as providing feedback on the proposed recommendations and lessons. Any comments or responses to draft reports will be sent to the Evaluation Manager for consolidation. The Evaluation Manager will provide all comments to the evaluation team for consideration in preparing the final report, along with guidance on areas of contradiction or issues requiring an institutional response.

Based on a careful review of the evidence collated by the evaluation consultants and the internal consistency of the report, the Evaluation Manager will provide an assessment of the ratings in the final evaluation report. Where there are differences of opinion between the evaluator and the Evaluation Manager on project ratings, both viewpoints will be clearly presented in the final report. The Evaluation Office ratings will be considered the final ratings for the project.

The Evaluation Manager will prepare a quality assessment of the first and final drafts of the main evaluation report, which acts as a tool for providing structured feedback to the evaluation consultants. The quality of the report will be assessed and rated against the criteria specified in template listed in Annex 1.

At the end of the evaluation process, the Evaluation Office will prepare a Recommendations Implementation Plan in the format of a table, to be completed and updated at regular intervals by the Task Manager. The Evaluation Office will track compliance against this plan on a six monthly basis.

## **The Evaluator**

For this evaluation, one consultant will work under the overall responsibility of the Evaluation Office represented by an Evaluation Manager (Pauline Marima), in consultation with the UN Environment Task Manager (Brad Auer), Fund Management Officer (George Sadimbah) and the Sub-programme Coordinator of the Environmental Governance Sub-programme (Cristina Zucca). The consultant will liaise with the Evaluation Manager on any procedural and methodological matters related to the evaluation. It is, however, the consultant's individual responsibility to arrange for their travel, visa, obtain documentary evidence, plan meetings with stakeholders, organize online surveys, and any other logistical matters related to the assignment. The UN Environment Task Manager and project teams will, where possible, provide logistical support (formal introductions, meetings etc.) allowing the consultant to conduct the evaluation as efficiently and independently as possible.

The consultant will be hired over the period mid-September 2018 to mid-March 2019 during which time the evaluation deliverables listed in Section 10 'Evaluation Deliverables' above should be submitted.

S/he should have: an advanced university degree in sciences, evaluation experience preferably using a Theory of Change approach, at least 15 years' experience in environmental management or a related field, with a preference for specific expertise in the area of biosafety and biodiversity. Knowledge of English and Spanish languages, along with excellent writing skills in English is required. Experience in managing partnerships, knowledge management and communication is desirable for all evaluation consultants.

The consultant will be responsible, in close consultation with the Evaluation Office of UN Environment, for overall management of these evaluations and timely delivery of their outputs, described above in Section 10 Evaluation Deliverables, above. The consultant will ensure that all evaluation criteria and questions are adequately covered. Detailed guidelines for the Evaluation Consultant can be found on the Evaluation Office of UN Environment website: (<http://web.unep.org/evaluation/working-us/working-us>).

### **Specific Responsibilities:**

The Consultant will be responsible, in close consultation with the Evaluation Office of UN Environment, for overall management of the evaluation and timely delivery of its outputs, described in Section 10 Evaluation Deliverables, above. The consultant will ensure that all evaluation criteria and questions are adequately covered. S/he will be responsible for the evaluation design, data collection and analysis, and report-writing. More specifically:

Inception phase of the evaluation, including:

- preliminary desk review and introductory interviews with project staff;
- draft the reconstructed Theory of Change of the project;
- prepare the evaluation framework;
- develop the desk review, interview protocols, and data collection and analysis tools;
- plan the evaluation schedule;
- prepare the Inception Report, incorporating comments received from the Evaluation Office.

Data collection and analysis phase of the evaluation, including:

- conduct further desk review and in-depth interviews with project implementing and executing agencies, project partners and project stakeholders;
- conduct an evaluation mission to Turkey and India to visit the project locations, interview project partners and stakeholders, including a good representation of local communities. Ensure independence of the evaluation and confidentiality of evaluation interviews.
- regularly report back to the Evaluation Office on progress and inform of any possible problems or issues encountered and;
- keep the Project/Task Manager informed of the evaluation progress and engage the Project/Task Manager in discussions on emerging findings throughout the evaluation process.

Reporting phase, including:

- draft the Main Evaluation Report, ensuring that the evaluation report is complete, coherent and consistent with the Evaluation Office guidelines both in substance and style;
- liaise with the Evaluation Office on comments received and finalize the Main Evaluation Report, ensuring that comments are taken into account
- prepare a Response to Comments annex for the main report, listing those comments not accepted by the Evaluation Consultant and indicating the reason for the rejection; and
- prepare a 2-page summary of the key evaluation findings and lessons;

Managing relations, including:

- maintain a positive relationship with evaluation stakeholders, ensuring that the evaluation process is as participatory as possible but at the same time maintains its independence;
- communicate in a timely manner with the Evaluation Office on any issues requiring its attention and intervention.

Schedule of the evaluation

The table 4 below presents the tentative schedule for the evaluation.

**Table 4. Tentative schedule for the evaluation**

Milestone	Tentative schedule
Kick-off meeting (via Skype)	Mid-September 2018
Inception Report	September 2018
Data collection and analysis, desk-based interviews and surveys	November 2018 - January 2019
Field Mission (based on meeting arrangements and available budget)	January 2019
Draft report to Evaluation Manager (and Peer Reviewer)	January/February 2019
Draft Report shared with UN Environment Task Manager and Project Team	February/March 2019
Draft Report shared with wider group of stakeholders	March 2019
Final Report	March 2019

### Contractual Arrangements

Evaluation Consultants will be selected and recruited by the Evaluation Office of UN Environment under an individual Special Service Agreement (SSA) on a “fees only” basis (see below). By signing the service contract with UN Environment/UNON, the consultant(s) certify that they have not been associated with the design and implementation of the project in any way which may jeopardize their independence and impartiality towards project achievements and project partner performance. In addition, they will not have any future interests (within six months after completion of the contract) with the project’s executing or implementing units. All consultants are required to sign the Code of Conduct Agreement Form.

Fees will be paid on an instalment basis, paid on acceptance by the Evaluation Manager of expected key deliverables. The schedule of payment is as follows:

**Table 5: Schedule of Payment for the consultant:**

Deliverable	Percentage Payment
Approved Inception Report (as per annex document 7)	30%
Approved Draft Main Evaluation Report (as per annex document 13)	40%
Approved Final Main Evaluation Report	30%

Fees only contracts: Air tickets will be purchased by UN Environment and 75% of the DSA for each authorised travel mission will be paid up front. Local in-country travel will only be reimbursed where agreed in advance with the Evaluation Office and on the production of acceptable receipts. Terminal expenses and residual DSA entitlements (25%) will be paid after mission completion.



The consultant may be provided with access to UN Environment's Programme Information Management System (PIMS) and if such access is granted, the consultant agrees not to disclose information from that system to third parties beyond information required for, and included in, the evaluation report. In case the consultant is not able to provide the deliverables in accordance with these guidelines, and in line with the expected quality standards by the UN Environment Evaluation Office, payment may be withheld at the discretion of the Director of the Evaluation Office until the consultants have improved the deliverables to meet UN Environment's quality standards.

If the consultant fails to submit a satisfactory final product to UN Environment in a timely manner, i.e. before the end date of their contract, the Evaluation Office reserves the right to employ additional human resources to finalize the report, and to reduce the consultants' fees by an amount equal to the additional costs borne by the Evaluation Office to bring the report up to standard.

**ANNEX 3: LIST OF PEOPLE MET**

**Barbados:**

**a) University of West Indies (UWI) / Cave Hill Campus:**

Date	Name	Function	e-mail
14/01	Ms Angela Alleyne	Programme Coordinator M.Sc. Biosafety / Senior Lecturer Dept. of Biological and Chemical Sciences, Faculty of Science and Technology	angela.alleyne@cavehill.uwi.edu
14/01	Mr Andrew Stoute	Lecturer M.Sc. Biosafety	a.i.stoute@gmail.com
14/01	Ms Wendy Hollingsworth	Lecturer M.Sc. Biosafety	wendy.pni@gmail.com
14/01	Mr Fred Phillips	Lecturer M.Sc. Biosafety	parhelion1@gmail.com
14/01	Ms Shaka O'Neal	Student M.Sc. Biosafety	shakaoneal600@gmail.com
14/01	Ms Antonia Greaves	Student M.Sc. Biosafety	antonia_greaves@hotmail.com
14/01	Ms Camille Straker	Student M.Sc. Biosafety	camillestrak@gmail.com
14/01	Ms Jenilee Marshall	Student M.Sc. Biosafety	jenileemarshall@gmail.com
14.01	Mr Leonard O'Garro	Director of Centre for Food Sec. and Entrepreneurship	leonard.ogarro492@gmail.com

**b) Min. of Agriculture**

14/01	Mr Michael James	Senior Agricultural Officer	mjames@agriculture.gov.bb spoonoe@yahoo.com
-------	------------------	-----------------------------	--

**c) Min. of Environment and Beautification**

15/01	Mr Rohan Payne	Project Officer	rohan.payne@barbados.gov.bb
15/01	Ms Jamilla Sealy	Project Officer	jamilla.sealy@barbados.gov.bb

**d) FAO Sub-Regional Office for the Caribbean (SLAC)**

01/02	Ms Vyjayanthi Lopez	Plant Production and Protection Officer, Reg. Coord. a.i.	Vyjayanthi.lopez@fao.org
-------	---------------------	---	--------------------------

**Antigua and Barbuda**

16/01	Ms Helena Jeffery Brown	Min. of Health & Environment / Focal point for CBD, CPB, ABS	Helena.JefferyBrown@ab.gov.ag
-------	-------------------------	--	-------------------------------

16/01	Ms Janil Gore-Francis	Head Plant Protection, Dept. of Agriculture / Biosafety Project Coordinator / BCH Focal Point	Janil.gore-francis@ab.gov.ag
16/01	Mr Linroy Christian	Head of Dept. of Analytical Services	Linroy.christian@ab.gov.ag
16/01	Ms Lael Bertide-Josiah	Former student MSc Biosafety / Technical Off. Dept. Analytical Services	
16/01	Ms Kishma Primus	Former student MSc Biosafety	
16/01	Ms Patricia Fenton	Project Assistant (admin.)	

### St. Lucia

17/01	Ms Jannel Gabriel	Sust. Dev. & Env Division, Dept. of Sustainable Development / Resp. for CBD, CPB, ABS	jgabriel.sded@gmail.com>
17/01	Ms Francillia Solomon	Biosafety Project Coordinator / Dept. Sust. Development	Francillia.solomon@govt.lc
17/01	Ms Sharmine Elvin-Edwin	Min of Agric. Officer / Veterinary & Livestock Services Div.	Sharmine.melvilleedwin@govt.lc
17/01	Ms Amanda Gaye Clarke	Min. of Agriculture Information Officer	
17/01	Mr Marnus Cherry	Min. of Agriculture	Marnus.cherry@govt.lc
17/01	Ms Cynthia Cheyl	Min.of Commerce	
17/01	Ms Shirlene Simmons-James	Saint Lucia Nat. Trust (NGO)	
17/01	Mr Ubaidullah Muhammad	Islamic Community St. Lucia	Ubaidullah76@yahoo.com
17/01	Ms Gillian Vidal Jules	Legislative Drafting Unit	Gillian.vidaljules@govt.lc
17/01	Ms Allena Joseph	Dept. of Fisheries	Allena.joseph@govt.lc
17/01	Ms Tzarmallah Joseph	St Lucia Bureau of Standards	t.haynes@slbs.org
17/01	Ms Aisha Jn. Baptiste Sendy	Legal Officer Dept. of Commerce	Aisha.jnbaptiste@govt.lc
18/01	Mr Barry Innocent	Deputy Dir. Agric. Services, Min. of Agriculture	<a href="mailto:ddas@govt.lc">ddas@govt.lc</a> a.barryinnocent@gmail.com
18/01	Ms Amanda Gaye Clarke	Min. of Agriculture Information Officer	
18/01	Ms Alicia George	Director of Agric. Services, Min. of Agriculture	alicialgeorge@yahoo.com
18/01	Ms Troy Valcin	Divisional Head Purchasing Perishables, Massy Stores Ltd.	Troy.valcin@massygroup.com

## Trinidad and Tobago

21/01 , 29/01 , 31/01	Ms Michelle John	Regional Project Manager	regionalbiosafetyproject913@outlook.com
21/01 , 31/01	Mr Pathmanathan Umaharan	Technical Lead Project / Director Cocoa Research Center UWI	pathmanathan.umaharan@sta.uwi.edu
21/01	Mr. Stephan J.G. Gift	Pro Vice-Chancellor Graduate Studies and Research, UWI	pvcgradstudies@uwimona.edu.jm
21/01	Ms Noreen Pearson	Project Accountant, UWI Administration	
21/01	Mr John Ramnanan	Project Accountant, UWI Administration (former)	
28/01	Ms Janelle Smith	Legal Officer, Min. of Attorney General & Legal Affairs	jsmith@AG.GOV.TT
28/01	Ms Marissa Moses	Former Nat. Proj. Coordinator	mosesmarissa@yahoo.com
28/01	Ms Albada Beekham	Director Research, Min of Agriculture	abeekham@gmail.com
28/01	Ms Teresa Rosemons	Deputy Dir. GYS, Min of Agr, BCH Foc. Point	
28/01	Mr Ian Mohammed	Ag. Dep., Dir. Crop Production, Min. of Agriculture	
28/10	Ms Farah Aligour	Min. of Agriculture, CPB Foc. Point	Aaliya1000@gmail.com
28/10	Ms Julia Parris	Plant pathologist, Min Agr.	
29/01	Mr Barton Clarke	Exec. Director CARDI (Caribbean Agr. Research and Dev. Institute of CARICOM)	bclarke@cardi.org
30/01	Ms Sacha Wallace Sankarsingh	Regional Biorisk Manager CARPHA (Caribbean Public Health Agency of CARICOM)	wallacsa@carpha.org
30/01	Mr Gregg Rawlins	Representative of IICA (Inter-American Institute for Cooperation on Agriculture)	Gregg.rawlins@iica.int
30/01	Ms Lisa Harrynanan	Agr. Health and Food Safety Specialist, IICA	Lisa.harrynanan@iica.int

## Suriname

22/01	Ms Marci Gompers	Env. Policy Officer at Cabinet of the President / former Nat. Pr. Coord.	marcigompers@gmail.com
22/01	Ms Ranisha Doerbalie	Technical Officer Plant Protection Min. Agriculture, Animal Husbandry and Fisheries	ranishadoerbalie@gmail.com
22/01	Ms Sadhana Jankie	Technical Officer Min. Agr. (Lab)	sadjan349@yahoo.com
22/01	Ms Shanti Mohan	Min. Justice and Police	Shanti.mohan@hotmail.com
22/01	Ms Jenny Sawiran	Min. Justice and Police	jennysawiran@hotmail.com
23/01	Mr Simeon Collins	Chief Exec. Officer CAHFSA (Carib. Agr. Health and Food Safety Agency of CARICOM)	simeon.collins@cahfsa.org
23/01	Mr Gavin Peters	Animal Health Specialist CAHFSA	gavin.peters@cahfsa.org
23/01	Ms Juliet Goldsmith	Plant Health Specialist CAHFSA	juliet.goldsmith@cahfsa.org

## Guyana

25/01	Mr Vidyanand Mohabir	Environmental Officer Cons. & Sust. Use Biological Res. Man. EPA (Env. Protection Agency)	vvmohabir@gmail.com
25/01	Ms Stacy Lord	Senior Env. Officer EPA	slord@epaguyana.org
25/01	Mr Andrea Mendonça	Technical Officer Bureau of Standards	<a href="mailto:amendonca@gnbsgy.org">amendonca@gnbsgy.org</a>
25/01	Mr David Hermonstine	Technical Officer, Custom	dhermonstine@gra.gov.gy
25/01	Ms Samantha Brotheson	Research Scientist	
25/01	Mr Cleveland Paul	Research Scientist	
25/01	Ms Cassica Bollers	Associate Officer	
25/01	Mr Ronnie Brathwaite	Deputy Programme Manager – Agriculture Development CARICOM	

**ANNEX 4: SUMMARY CO-FINANCE INFORMATION AND STATEMENT OF PROJECT EXPENDITURE BY ACTIVITY**

**Table: Budget (GEF) at design and expenditures by UN Environment Components (September 2018)**

Budget Line	Description	Estimated cost at design (USD)	Actual Cost (USD)	Expenditure ratio (actual / planned)
1101	National Project Co-ordinator (Reg. Proj. Man.)	156,480.00	236,399.12	151%
1102	Project staff (12 Nat. Coordinators)	1,415,300.00	71,859.72	5%
1120	Administrative staff	456,717.00	0.00	
1201	International Consultants (Senior Tech. Advisor)	156,000.00	399,187.04	256%
1202	National Consultants	270,000.00	51,597.47	19%
1601	Staff travel and transport	0.00	37,895.70	
<b>10</b>	<b>Sub-total Personnel</b>	<b>2,454,497</b>	<b>796,939.05</b>	<b>32%</b>
2201	Subcontract to governmental agencies	1,291,000.00	2,186,535.51	169%
2301	Subcontract to private firms	485,000.00	931,761.83	192%
<b>20</b>	<b>Sub-total Sub-Contracts</b>	<b>1,776,000</b>	<b>3,118,297.34</b>	<b>176%</b>
3201	Training	500,000.00	817,387.22	163%
3301	Meetings	347,000.00	332,332.13	96%
<b>30</b>	<b>Sub-total Training</b>	<b>847,000.00</b>	<b>1,149,719.35</b>	<b>136%</b>
4101	Office supplies and consumables	1,500.00	0.00	
4102	Laboratory supplies and consumables	165,000.00	90,769.34	55%
4201	Non-laboratory purchase	24,000.00	4,057.93	17%
4202	Laboratory equipment	600,000.00	387,998.09	64%
<b>40</b>	<b>Sub-total Equipment and Premises</b>	<b>790,500</b>	<b>482,825.36</b>	<b>61%</b>
5201	Publication, reporting and dissemination	13,700.00	36,850.65	269%
5202	Audit reports	48,000.00	44,436.30	93%
5301	Communication	0.00	1,220.00	
5302	Others	0.00	12,704.83	
5303	Technical Support	42,796.00	22,836.70	53%
<b>50</b>	<b>Sub-total Miscellaneous</b>	<b>104,496</b>	<b>118,048.48</b>	<b>113%</b>
<b>Total (US\$)</b>		<b>5,972,493.00</b>	<b>5,665,89.58</b>	<b>95%</b>

**Table : Co-financing Table (GEF Projects only) (updated September 2018)**

Co-financing (Type/Source)	UNEP own Financing (US\$1,000)		Governments (12 countries) and UWI (US\$1,000)		Additional Other* (US\$1,000)		Total (US\$1,000)		Total Disbursed (US\$1,000)
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
- Grants			2,000						
- In-kind support	20		4,698	5,814	200	298			
<b>Totals</b>			<b>6,698</b>	<b>5,814</b>	<b>200</b>	<b>297</b>	<b>6,898</b>	<b>6,111</b>	<b>6,111</b>

\* This refers to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.

## ANNEX 5: EVALUATION BRIEF

**Duration:** 87 months (10/2011-12/2018)

**GEF Allocation:** USD 5,972,493 USD

**Countries:** Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago.

- Project Objective was “To implement effective, operable, transparent and sustainable National Biosafety Frameworks (NBF) which cater for national and regional needs, deliver global benefits and are compliant with the Cartagena Protocol on Biosafety (CPB) in 12 Caribbean countries”.
- The Lead Executing Agency at Regional level was the University of West Indies (UWI) and each country had its National Executing Agency.
- The Project was designed with five components:
  1. Establishment of **National Legal Frameworks** for Biosafety / Biotechnology
  2. Establishment and Upgrading of Resource Base and **Institutional Capacities** for Biosafety Decision-Making and Management
  3. **Human Resources Development** in Support of Biosafety Management throughout CARICOM Member States
  4. Strengthening biosafety **information management** in the Caribbean sub-region.
  5. **Regional processes** in support of the project and NBF sustainability in the Caribbean.

### RELEVANCE

- **National and Regional Approach:** implementation of Nat. Biosafety Frameworks coupled with strong emphasis on Regional cooperation;
- Protection of the **rich and vulnerable biological diversity** fragility of small-island ecosystems and encroachment into areas of mainland forest by commercial agriculture (including GMOs);
- Support to economic and political **processes of regional integration**.

### CHALLENGES

- Complex Project with ambitious results, uneven baseline situation among countries, strong need of institutional support and capacity building;
- “One-size-fits-all” approach with “standard” results proved inappropriate;
- Highly demanding for UWI and the Project Team in terms of Management & Administration.

### PERFORMANCE

- Overall improvement of Biosafety Governance at National level: 12 Biosafety Competent Nat. Authority in place and operational; three countries with an approved Policy, two countries with a National Law, several drafts prepared to be approved;
- Widespread capacity building at regional level (545 people exposed to training);



- High-quality training material produced through ICGB;
- MSc Course in Biosafety at UWI (17 graduated);
- Virtual Caribbean Center for Biosafety created as a regional hub for Biosafety Information;
- Network of national and regional GMOs laboratories;
- A harmonised “Regional Biosafety Policy” approved at CARICOM level, as well as a “Model Biosafety Legislation”.

### WAY FORWARD: PERSPECTIVES and CHALLENGES

- The Caribbean Agricultural Health and Food Safety Agency (CAHFSA) has been identified by CARICOM as the Regulatory Agency for Biosafety in the Region;
- Institutional and Financial Sustainability depend on:
  - strengthening and consolidation of CAHFSA in terms of human resources capacity building;
  - effective mechanisms of coordination and partnership with regional and international stakeholders;
  - appropriate coordination and communication with Competent National Authorities;
  - resource mobilisation strategy to cope with the pressing need of financial resources.

## ANNEX 6: LIST OF THE DOCUMENTS OFFICIALLY PUBLISHED AND DISTRIBUTED BY THE PROJECT

(Posted in the Project Website: <https://caribbeanbiosafety.org/technical-output/>)

### MANUALS

- [Manual 1 – Detection of Cry1A Protein Using Lateral Flow Strips \(PDF\)](#)
- [Manual 2 – Detection of the Cry1Ab Cry1Ac protein using ELISA \(PDF\)](#)
- [Manual 3 – Detection of the CaMV 35S promoter and the NOS terminator using PCR \(PDF\)](#)
- [Manual 4 – Quantitative measurement of GM corn DNA using real-time qPCR \(PDF\)](#)

### GUIDELINES

- [Administration Systems and Arrangements Guidance](#)
- [Fit for Purpose Regulatory Framework for GMO's](#)
- [Containment Management for Research & Development of GM Crops](#)
- [Safety Assessment of GM Foods](#)
- [Guidance of a Risk Analysis Framework for GMOs](#)
- [Post Release Monitoring of Genetically Modified Crop Plants](#)
- [Risk Assessment of Commonly Regulated GM Crop Events](#)
- [Risk Communication Guidelines](#)

### FACTSHEETS AND BROCHURES

- [Regional Project for Implementing National Biosafety Frameworks in the Caribbean Sub-Region](#)
- [Benefits and Risks of GMOs \(PDF\)](#)
- [General Information on Biosafety and Biotechnology \(PDF\)](#)
- [GMO Factsheet 1 – What are GMOs? \(PDF\)](#)
- [GMO Factsheet 2 – Country Regulation \(PDF\)](#)
- [GMO Factsheet 3 – International Agreements \(PDF\)](#)
- [GMO Factsheet 4 – Capacity Building in the Caribbean \(PDF\)](#)

### REPORTS AND STRATEGY DOCUMENTS

- [Proposed “Best – Fit” Administrative Model for the Caribbean Region](#)
- [Report on Assessment of GMOs in the Caribbean Region](#)
- [Policy Brief- Regional Biosafety Harmonization](#)

### ASSESSMENT DOCUMENTS

- [Maize](#)
- [Soya](#)

### VIDEOS

- [GMOs and Human Health](#)
- [GMOs and the Caribbean Region](#)
- [GMOs and the Environment](#)
- [Biosafety and Biotechnology – Benefits, Risks and Regulation](#)
- [Regional Biosafety Policy](#)
- [Regional Laboratory Strategy](#)
- [Regional Biosafety Project](#)



## ANNEX 7: LIST OF DOCUMENTS CONSULTED

### a) Documents consulted during the main evaluation phase

#### **Project:**

- Terms of Reference of the Terminal Evaluation (03/2018)
- Evaluation Criteria and Ratings Table (UN Environment, 2017)
- Evaluation Process Outline for Evaluation Consultants (UN Environment, 2017)
- Guidance on the Structure and Contents of the Inception Report (UN Environment, 2017)
- Template for the Assessment of Project Design Quality (UN Environment, 2017)
- Stakeholder Analysis in the Evaluation Process (UN Environment, 2017)
- Use of Theory of Change in project evaluations (UN Environment, 2017)
- ROtI - Review of Outcomes to Impact: Practitioners Handbook, 2009, GEF
- Project Document "Regional Project for Implementing National Biosafety Frameworks in the Caribbean Sub-Region" and its Annexes (in ANUBIS)
- GEF Project Identification Form (PIF) "Regional project for implementing national biosafety frameworks in the Caribbean sub-region" (2008, in GEF website).
- Mid-Term Evaluation Report (Navajas, 2014)
- "An Assessment of the Production and Trade of Genetically Modified Organisms in the Caribbean Region" (N. Jacobs, UWY/GEF/UNEP, 2016)
- "Assessment of Capacity in the Caribbean Sub-Region in Support of Biosafety Systems" (N. Jacobs, 2017)
- Technical report on MSc and Diploma in Biosafety Programme, October 2017.
- Initial, Mid-Term and Final GEF Tracking Tools (12 countries)

#### **Global:**

- Cartagena Protocol on Biosafety (CPB)
- Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety
- Bali Strategic Plan for Technology Support and Capacity- building
- Status of capacity-building activities, UNEP/CBD/BS/COP-MOP/5/INF/9, September 2010
- Proposed biennial programme and support budgets for 2010-2011, UNEP
- UNEP Medium-term Strategy 2010–2013 and 2014-2017
- Proposed biennial programme of work and budget for 2012–2013
- Strategic plan of CPB 2011-20
- A Comparative Analysis of Experiences and Lessons from the UNEP-GEF Biosafety Projects, 2006, UNEP-GEF Biosafety Unit

- Guidance towards Implementation of National Biosafety Frameworks: Lessons Learned from the UNEP Demonstration Projects, 2008, UNEP-GEF Biosafety Unit
- Learning from experience, the global UNEP-GEF BCH Capacity building project, 2008, UNEP-GEF
- Public Participation and the Cartagena Protocol on Biosafety, A review for DfID and UNEP-GEF (IDS)
- An Explanatory Guide to the Cartagena Protocol on Biosafety, IUCN, 2003
- Genetically Modified Organisms and Biosafety: A background paper for decision-makers and others to assist in consideration of GMO issues, IUCN, 2004

**c) Websites consulted during the main evaluation phase**

- <https://www.unenvironment.org/about-un-environment/evaluation>
- <https://www.thegef.org/project/bs-regional-project-implementing-national-biosafety-frameworks-caribbean-sub-region-under>
- <https://caribbeanbiosafety.org/>
- <http://sta.uwi.edu/>
- <http://biosafety.icgeb.org/projects/Caribbean>
- <https://caricom.org/community/institutions>
- <https://www.cahfsa.org/>
- [https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual\\_Miami%20ATO\\_Caribbean%20Basin\\_11-1-2016.pdf](https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual_Miami%20ATO_Caribbean%20Basin_11-1-2016.pdf)

## ANNEX 8: ON-LINE QUESTIONNAIRE

### Final Evaluation of the Project “Regional Project for Implementing National Biosafety Frameworks in the Caribbean Sub-Region”

#### Results of the Survey with National Stakeholders of the Project (10 respondents)

1) *“The Project has been a success-story for my country”*

I strongly agree	I agree	I moderately agree	I moderately disagree	I disagree	I strongly disagree
XX	XXX	XXXX		X	

2) *“The Regional Component of the Project really made a difference to my country”*

I strongly agree	I agree	I moderately agree	I moderately disagree	I disagree	I strongly disagree
X	XXXXXXXXX	X			

3) *“All relevant national stakeholders who could be affected (positively or negatively) by the Project or who could affect the project, were identified and participated in...” (Please put only one X under each column)*

	...In Project Formulation and Design	...In the Achievement of National Results	...In the Achievement of Regional Results
I strongly agree		X	
I agree	XXXX	XXXXXX	XXXXX
I moderately agree	XXXX	X	XXXXX
I moderately disagree		XX	
I disagree			
I strongly disagree			

4) *“My country relies on strong political will and government commitment to enforce and implement the programmes, plans, agreements, monitoring systems etc. prepared and agreed upon under the project”*

I strongly agree	I agree	I moderately agree	I moderately disagree	I disagree	I strongly disagree
XXXX		XXXXXX		X	

5) *“The relevant institutional structures able to sustain an effective Nat. Biosafety Framework (NBF) are in place in my country”*

I strongly agree	I agree	I moderately agree	I moderately disagree	I disagree	I strongly disagree
	XXXXX	XXX	XX		

6) "Adequate financial resources are available through the national budget of my country to ensure the continuity of programmes, plans, agreements, monitoring systems etc. that were prepared and agreed upon under the project"

I strongly agree	I agree	I moderately agree	I moderately disagree	I disagree	I strongly disagree
	X	XXXX	X	XX	XX

7) "The setting and strengthening of the National Biosafety Framework (NBF) in my country would have benefited more from a direct and exclusive National Project"

I strongly agree	I agree	I moderately agree	I moderately disagree	I disagree	I strongly disagree
X	XXX	XX	X	XXX	X

8) The roles and responsibilities in the Project were sufficiently negotiated and partnership arrangements were properly identified"

I strongly agree	I agree	I moderately agree	I moderately disagree	I disagree	I strongly disagree
	XXXXX	X		XXX	

9) "Financial and management obstacles and limitations of the Project have seriously affected the efficiency of the NBF process in my country"

I strongly agree	I agree	I moderately agree	I moderately disagree	I disagree	I strongly disagree
XX	XXX		X	XX	

10) To what extent have the regional political/institutional arrangements (structures, agreements, etc.) provided an enabling environment for the achievement of project outcomes?"

To a very large extent	To a large extent	To a certain extent	To a limited extent	To a very limited extent	Not at all
	XX	XXXXXX		XX	

11) "Did the Project promote any positive change in the regional political/institutional arrangement that will facilitate and improve Biosafety Management in the Caribbean?"

	At Country level	At Regional level
To a very large extent		
To a large extent	X	XXX
To a certain extent	XXXXXX	XX
To a limited extent	XX	XXXX
To a very limited extent	X	X
Not at all		

## ANNEX 9: Capacity Building Activities

*(Prepared by the Regional Project Manager / Regional Project for Implementing National Biosafety Frameworks in the Caribbean Sub-Region)*

### CAPACITY BUILDING ACTIVITIES - NUMBER OF PERSONS TRAINED (2014 – 2018)

Activity	Year	No. Persons Trained
<b>Regional capacity building workshops</b>		
Environmental Risk Assessment in Biosafety	2014	29
Agriculture, Environmental Risk Assessment and Socio-economics	2014	28
BCH training	2015	17
Lab detection	2015	28
Socio-Economic Considerations (SECs) in GMO Decision-making	2015	26
Biosafety legislation	2016	16
Biosafety regulations and administrative system	2015	17
Risk communication	2016	22
GMO decision-making	2016	27
Food and feed assessment	2016	14
Decision-making and guideline application	2016	18
Sensitisation Workshop on Biosafety for Border Control Officers	2016	27
Mock exercise in the analysis of a dossier	2017	21
<b>Country level capacity building activities</b>		
Lab detection workshop, Barbados	2015	20
Sensitisation workshop, Barbados	2016	24
Sensitisation workshop, Bahamas	2016	17
GMO decision-making workshop, Barbados	2016	30
GMO decision-making workshop, Bahamas	2015	24
BCH training	2016, 2017, 2018	79
Mock exercise in the analysis of a dossier, Guyana	2017	21
Training for lab personnel, St. Kitts and Nevis	2018	13
<b>Other capacity building activities</b>		
Fellowships	2016, 2017, 2018	7
Regulatory exchange visit	2017	3
MSc. Biosafety	2014-2017	17
<b>Total</b>		<b>545</b>

**Note:**

- In the case of the capacity building workshops conducted by the regional component, the number of persons trained **excludes** facilitators, so that the numbers cited in the table above will differ from the numbers indicated in the actual list of participants for each workshop. The same applies to the lab detection workshop conducted in Barbados, as well as the sensitisation and GMO decision-making workshops held in these countries.
- BCH training was conducted in the following countries: Antigua & Barbuda (2017) – 8; Bahamas (2016) – 4; Barbados (2016) – 5; Grenada (2016) – 17; St. Kitts and Nevis (2018) – 10; Suriname (2016) – 35
- Fellowships were undertaken by 4 persons in 2016, 2 in 2017 and 1 in 2018
- Persons from the following countries were supported by the project to pursue the MSc. Biosafety: St. Kitts/Nevis (1), Belize (2), St. Vincent & the Grenadines (2), Antigua (2), St. Lucia (2), Suriname (1), Barbados (2), Bahamas (2), Guyana (2) and Dominica (1)

## ANNEX 10: Tracking Tools Comparative Tables

**Table 1 Comparative Table by Country**  
(TOTAL SCORE / COUNTRY)

The Tracking Tools are monitored for 8 criteria / questions (as specified in the second table) and each criterion receives a score from 0 (min) to 4 (max). Therefore, the **maximum score is 32: 8 (criteria) x 4 (max. score) = 32**

Each line reports the initial, mid-term and final score of a country. The percentage of the last column is calculated dividing the Final Score by the Maximum Possible Score (e.g. Antigua:  $17/32 \times 100 = 53\%$ ). The percentage can be considered an indicator of the country performance.

COUNTRY	Initial Score 2011	Mid-Term Score 2014	Final Score 2018	% Final / Max possible (32)
1. Antigua & Barbuda	3	12	17	53% (17/32)
2. The Bahamas	2	2	8	25%
3. Barbados	10	11	11	34%
4. Belize	8	18	20	62,5%
5. Dominica	1	6	8	25%
6. Grenada	9	15	16	50%
7. Guyana	8	13	14	44%
8. St. Kitts & Nevis	10	13	14	44%
9. St. Lucia	9	16	19	59%
10. St. Vincent & the Gre	11	15	15	47%
11. Suriname	9	13	13	41%
12. Trinidad & Tobago	13	13	13	41%
<b>Overall Average 12 countries (max score by country: 32)</b>	<b>7/32</b>	<b>12/32</b>	<b>14/32</b>	<b>45%</b>

(compiled by the Terminal Evaluation, December 2018)

**Table 2: Comparative Table by Criteria**

(aggregate data for all 12 countries by Criterion / Component of the NBF)

Under each of the 8 criteria, the maximum score is 4 (from 0 to 4). For the total of the 12 countries, the maximum score in each criterion is 4x12=48.

The full list of questions and the meaning of each scoring value is provided below.

CRITERIA	Initial score 2011	Mid-term score 2014	Final score 2018	% Final / Max possible (48)
<b>1) Biosafety Policy</b>	17/48	17/48	20/48	42%
<b>2) Regulatory Regime</b>	12/48	14/48	16/48	33%
<b>3) Admin. System</b>	11/48	14/48	15/48	31%
<b>4) Risk Assess. and Decision-making</b>	3/48	6/48	9/48	19%
<b>5) Follow-up and Monitoring</b>	4/48	6/48	7/48	14%
<b>Public awareness, education and participation</b>				
<b>6) Is information on LMOs made available to public?</b>	25/48	30/48	35/48	73%
<b>7) Has coursework and training on biosafety been integrated into higher education?</b>	10/48	40/48	48/48	100%
<b>8) Has the public been engaged in LMO decision-making?</b>	12/48	16/48	18/48	37%
<b>Average</b>	<b>12/48</b>	<b>18/48</b>	<b>21/48</b>	<b>44%</b>

#### QUESTIONS and SCORES

**1) Has a biosafety policy been developed and is it being fully implemented? Scores from 0 to 4**

0: A standalone biosafety policy does not exist

1: A standalone biosafety policy has been produced

2: A standalone biosafety policy has been produced and has been formally adopted by the government

3: A legally approved biosafety strategy has been incorporated into broader sectoral policies (e.g. agriculture, biotechnology, science and technology, health, etc) and is being enforced

4: A biosafety policy is implemented through a multi-year Action Plan that involves more than one sector of Government or society.

**2) Has a regulatory regime been developed and does it have full legal force?**

0 : A regulatory regime has not been developed

1 : Interim measures for biosafety decision making, including some modification of existing regulations, have been put in place.

- 2 : A regulatory regime has been developed and adopted but does not yet have full legal force
- 3 : The regulatory regime has full legal force, is operational and linked to the administrative system -i.e. used for decisions
- 4 : The regulatory regime covers all the types of LMOs and transboundary movements referred to in the Cartagena Protocol, including agreements with Non-Parties

### **3) Is an administrative system in place and fully operational?**

- 0 : Focal Points and National Competent Authorities not appointed nor available via BCH
- 1 : All Focal Points and National Competent Authorities appointed, and roles & responsibilities stated and available on BCH
- 2 : Procedures for handling requests have been designed, legally adopted, and made available to the public.
- 3 : Requests have been received, processed, and decisions communicated to the BCH. Appeal procedures designed and operational.
- 4 : Administrative system fully supported by national budget allocation or alternative (non-donor) system of revenue generation

### **4) Are risk assessment procedures employed and contributing to decision-making?**

- 0 : No risk assessment is applied to LMOs
- 1 : Sectoral risk assessment dossiers are required to accompany LMO requests
- 2 : Risk assessment/risk management system involves case-by-case analyses by scientific experts that provide recommendations to decision-making bodies. Composition and responsibilities of the decision-making bodies clearly stated and publicized.
- 3 : Decisions on LMOs are integrated across sectors (e.g. take into account risks to human health)
- 4 : Decision-making system allows for socio-economic considerations and for review of decisions based on new evidence

### **5) Does an operational follow-up and monitoring system exist?**

- 0 : No system for follow-up and monitoring exists
- 1 : Institutional and human capacity in place to follow-up and monitor, including Risk Management for field-trials and post-release
- 2 : Compliance mechanisms for Risk Management established
- 3 : Liability and redress mechanisms in place
- 4 : Decisions, risk management plans, and reports on compliance and liability have been posted to the BCH



**6) Is information on LMOs made available to public?**

- 0 : Little or no official information on LMOs available to the general public
- 1 : Information on LMOs generally available in at least one national language
- 2 : Information on LMOs generally available in at least one national language and is kept updated
- 3 : Information on LMOs is used for awareness-raising campaigns
- 4 : Survey results on levels of public awareness available

**7) Has coursework and training on biosafety been integrated into higher education?**

- 0 : No modern biotechnology and biosafety available in the formal (i.e. technical, academic, extramural) education system.
- 1 : Basic modern biotechnology and biosafety information included in the curricula at technical and college levels.
- 2 : Dedicated short-term courses on biosafety available for government staff at technical schools and higher education institutions.
- 3 : National association for biosafety established
- 4 : Undergraduate and graduate degree programs offering concentrations and/or degree programs on modern biotechnology, including biosafety

**8) Has the public been engaged in LMO decision-making?**

- 0 : Little or no direct involvement of public in LMO decision-making
- 1 : Access to information includes other mechanisms in addition to the BCH (i.e. radio and television programs, newspapers columns, blogs, etc.).
- 2 : Mechanism for public involvement in LMO decision-making established
- 3 : Evidence of level of public involvement in LMO decision-making available via BCH or other means
- 4 : Regular open consultation meetings held on biosafety

**ANNEX 11: List of Country Missions**

**REGIONAL PROJECT FOR IMPLEMENTING NATIONAL BIOSAFETY FRAMEWORKS IN THE CARIBBEAN SUB-REGION**

**COUNTRY MISSIONS (2012 – 2018)**

<b>YEAR</b>	<b>COUNTRIES VISITED</b>	<b>PERSONS INVOLVED</b>
<b>2012</b>		
1	St. Vincent & the Grenadines	STA
2	St. Lucia	STA
3	Suriname	STA
<b>2013</b>		
4	Grenada	STA and RPM
5	St. Kitts and Nevis (March)	STA and RPM
6	St. Kitts and Nevis (April)	STA
7	Bahamas	STA and RPM
8	St. Vincent & the Grenadines	STA
9	St. Kitts and Nevis (June)	RPM and PA
<b>2014</b>		
	Nil	
<b>2015</b>		
10	Antigua & Barbuda	RPM
11	Suriname	RPM
12	Grenada	RPM
13	Guyana	RPM
14	Belize	RPM
15	St. Vincent & the Grenadines	RPM
16	Trinidad and Tobago	RPM
<b>2016</b>		
17	Suriname	RPM
18	Belize	RPM
19	St. Vincent & the Grenadines	RPM
<b>2017</b>		
20	Bahamas	RPM
21	Belize	RPM
22	Antigua & Barbuda	RPM
<b>2018</b>		
23	St. Vincent & the Grenadines (January)	RPM
24	St. Vincent & the Grenadines (June)	RPM

Note:

STA (2011-2014) – Leonard O’Garro;

RPM (2012- 2014) – Karen Lynch;

PA (2012 – 2014) – Michelle John;

RPM (2015 – 2018) – Michelle John.

## ANNEX 12: BRIEF CV OF THE CONSULTANT

**Camillo Risoli** (Italy, 1953) is a seasoned international expert in rural development and environmental management. He has a long experience (more than 30 years) in the implementation, coordination and management of projects and programs in Africa and Latin America, with different donors and agencies. Capacity and Institution Building for Rural Development is his main area of expertise.

Camillo has worked as an expert, a chief technical adviser and an independent consultant for UN agencies (FAO, UNEP), Bi-lateral Cooperations (SDC – Swiss Cooperation, Italian cooperation, EC Delegations) and for International NGOs. He has been Team Leader in Long-Term Missions in Nicaragua (1980-82), Cape Verde (1986-96), Mozambique (1996-99) and Zimbabwe (2003-2005).

Food Security and Poverty Reduction have been at the core of his professional commitment, through Community-based projects and participatory actions, Organization & training of rural associations, Sustainable land use and agriculture, Partnership strengthening and networking (Public, Private, Civil Society) for decentralised and participatory local development.

Mainstreaming Environmental issues in Pro-Poor Strategies has been a main component of his action, through Soil & water conservation projects, Reforestation and agro-forestry initiatives, Watershed management and land use planning, Sustainable management of natural resources (soil, water, forests and bio-diversity).

Camillo has acquired a robust experience in advising on national policies and strategic planning for rural development, a solid background in PCM (Programme Cycle Management) and strong skills in Project Monitoring & Evaluation (M&E).

Since 2005, he works as an Independent Consultant and has carried out and led relevant Evaluation missions, such as the Mozambique National Action Plan for Food Security (FAO), the LADA Project - Land Degradation Assessment in Drylands (FAO/UNEP-GEF) in Argentina and China, the Post-Conflict Rural Development in Ivory Coast (FAO/ADB), the setting of the M&E System for FAO/CLCPRO Program (Commission for Locust Control in Western Africa and Maghreb Region), the terminal evaluation of the FAO Programme of Food Security through Commercialization in West Africa (Gambia, Guinea, Liberia, Senegal, Sierra Leone) and the Evaluation of FAO's Decentralization in Latin America & the Caribbean (2013).

From 2012 on, Camillo has carried-out the Biosafety National Frameworks Evaluation (UNEP-GEF) in Kenya, Namibia, Poland, Lithuania, Czech Republic and Slovakia (2012), Bhutan, Lao PDR and Mongolia (2014), Albania, Macedonia and Egypt (2015), Ghana, Liberia and Nigeria (2017) and the Final Evaluation of the Global GEF/UNEP Programme (123 countries) "Development of National Biosafety Frameworks" (2016). He has also evaluated the GEF/UNEP Project "ABS Guatemala: Access to and Benefit Sharing and Protection of Traditional Knowledge to Promote Biodiversity Conservation and Sustainable Use" (2018) and the "Regional Project for Implementing National Biosafety Frameworks in the Caribbean Sub-Region" (2019).

Camillo has a graduate degree in Agricultural Sciences, a Post-Graduate Diploma in Environmental Management at London University and a PhD in Adult Education. He has published with FAO training manuals and methodological guides for trainers and extensionists.

Camillo is currently engaged in the creation of a small private company in partnership with farmers' associations (out-growing scheme) for the development of a profitable value-chain of Aloe Vera in Cape Verde.

## ANNEX 13: QUALITY ASSESSMENT OF THE EVALUATION REPORT

All UN Environment evaluations are subject to a quality assessment by the Evaluation Office. This is an assessment of the quality of the evaluation product (i.e. evaluation report) and is dependent on more than just the consultant's efforts and skills. Nevertheless, the quality assessment is used as a tool for providing structured feedback to the evaluation consultants, especially at draft report stage. This guidance is provided to support consistency in assessment across different Evaluation Managers and to make the assessment process as transparent as possible.

	<b>UN Environment Evaluation Office Comments</b>	<b>Final Report Rating</b>
<b>Substantive Report Quality Criteria</b>		
<p><b>Quality of the Executive Summary:</b></p> <p>The Summary should be able to stand alone as an accurate summary of the main evaluation product. It should include a concise overview of the evaluation object; clear summary of the evaluation objectives and scope; overall evaluation rating of the project and key features of performance (strengths and weaknesses) against exceptional criteria (plus reference to where the evaluation ratings table can be found within the report); summary of the main findings of the exercise, including a synthesis of main conclusions (which include a summary response to key strategic evaluation questions), lessons learned and recommendations.</p>	<p>The executive summary captures all the key features required in the Executive Summary</p>	n/a
<p><b>I. Introduction</b></p> <p>A brief introduction should be given identifying, where possible and relevant, the following: institutional context of the project (sub-programme, Division, regions/countries where implemented) and coverage of the evaluation; date of PRC approval and project document signature); results frameworks to which it contributes (e.g. Expected Accomplishment in POW); project duration and start/end dates; number of project phases (where appropriate); implementing partners; total secured budget and whether the project has been evaluated in the past (e.g. mid-term, part of a synthesis evaluation, evaluated by another agency etc.)</p> <p>Consider the extent to which the introduction includes a concise statement of the purpose of the evaluation and the key intended audience for the findings?</p>	<p>Precise, captures most of the main introductory points recommended by the TOR</p>	5

<p><b>II. Evaluation Methods</b></p> <p>This section should include a description of how the <i>TOC at Evaluation</i><sup>31</sup> was designed (who was involved etc.) and applied to the context of the project?</p> <p>A data collection section should include: a description of evaluation methods and information sources used, including the number and type of respondents; justification for methods used (e.g. qualitative/quantitative; electronic/face-to-face); any selection criteria used to identify respondents, case studies or sites/countries visited; strategies used to increase stakeholder engagement and consultation; details of how data were verified (e.g. triangulation, review by stakeholders etc.).</p> <p>The methods used to analyse data (e.g. scoring; coding; thematic analysis etc.) should be described.</p> <p>It should also address evaluation limitations such as: low or imbalanced response rates across different groups; extent to which findings can be either generalised to wider evaluation questions or constraints on aggregation/disaggregation; any potential or apparent biases; language barriers and ways they were overcome.</p> <p>Ethics and human rights issues should be highlighted including: how anonymity and confidentiality were protected and strategies used to include the views of marginalised or potentially disadvantaged groups and/or divergent views.</p>	<p>Draft report:</p> <p>This section is complete, concise, and the approach and methods used have been described in detail.</p> <p>Final report:</p> <p>Same as draft</p>	6
<p><b>III. The Project</b></p> <p>This section should include:</p> <ul style="list-style-type: none"> <li>• <i>Context</i>: Overview of the main issue that the project is trying to address, its root causes and consequences on the environment and human well-being (i.e. synopsis of the problem and situational analyses).</li> <li>• <i>Objectives and components</i>: Summary of the project's results hierarchy as stated in the ProDoc (or as officially revised)</li> <li>• <i>Stakeholders</i>: Description of groups of targeted stakeholders organised according to relevant common characteristics</li> </ul>	<p>This section is also complete and covers all the required sub-topics in a detailed yet concise manner.</p>	6

<sup>31</sup> During the Inception Phase of the evaluation process a *TOC at Design* is created based on the information contained in the approved project documents (these may include either logical framework or a TOC or narrative descriptions). During the evaluation process this TOC is revised based on changes made during project intervention and becomes the *TOC at Evaluation*.

<ul style="list-style-type: none"> <li>• <i>Project implementation structure and partners:</i> A description of the implementation structure with diagram and a list of key project partners</li> <li>• <i>Changes in design during implementation:</i> Any key events that affected the project's scope or parameters should be described in brief in chronological order</li> <li>• <i>Project financing:</i> Completed tables of: (a) budget at design and expenditure by components (b) planned and actual sources of funding/co-financing</li> </ul>		
<p><b>IV. Theory of Change</b></p> <p>A summary of the project's results hierarchy should be presented for: a) the results as stated in the approved/revised Prodoc logframe/TOC and b) as formulated in the TOC at Evaluation. <i>The two results hierarchies should be presented as a two column table to show clearly that, although wording and placement may have changed, the results 'goal posts' have not been 'moved'.</i> The TOC at Evaluation should be presented clearly in both diagrammatic and narrative forms. Clear articulation of each major causal pathway is expected, (starting from outputs to long term impact), including explanations of all drivers and assumptions as well as the expected roles of key actors.</p>	<p>The TOC diagram is coherent and is a result of a consultative process. The narrative is well thought through. Provides a clear explanation of the causal pathways depicted in the diagrammatic representation, done systematically from outputs to outcomes and through to impact. Drivers and Assumptions, as well as the change agents along these pathways are described.</p>	6
<p><b>V. Key Findings</b></p> <p><b>A. Strategic relevance:</b></p> <p>This section should include an assessment of the project's relevance in relation to UN Environment's mandate and its alignment with UN Environment's policies and strategies at the time of project approval. An assessment of the complementarity of the project with other interventions addressing the needs of the same target groups should be included. Consider the extent to which all four elements have been addressed:</p> <ol style="list-style-type: none"> <li>i. Alignment to the UN Environment Medium Term Strategy (MTS) and Programme of Work (POW)</li> <li>ii. Alignment to UN Environment/GEF/Donor Strategic Priorities</li> <li>iii. Relevance to Regional, Sub-regional and National Environmental Priorities</li> <li>iv. Complementarity with Existing Interventions</li> </ol>	<p>Section is well done and covers the four main aspects of relevance prescribed in the TOR.</p>	6

<p><b>B. Quality of Project Design</b></p> <p>To what extent are the strength and weaknesses of the project design effectively <u>summarized</u>?</p>	<p>A summary of the project's strengths and weaknesses at design stage is included. Implication on implementation is also discussed. The PDQ assessment that was completed at the inception phase has been referred to support the assessment.</p> <p>Final report:</p>	<p>6</p>
<p><b>C. Nature of the External Context</b></p> <p>For projects where this is appropriate, key external features of the project's implementing context that may have been reasonably expected to limit the project's performance (e.g. conflict, natural disaster, political upheaval) should be described.</p>	<p>The TE sufficiently describes the external operating context and some of the implications on project performance</p>	<p>5</p>
<p><b>D. Effectiveness</b></p> <p><b>(i) Outputs and Direct Outcomes:</b> How well does the report present a well-reasoned, complete and evidence-based assessment of the achievement of a) outputs, and b) direct outcomes? How convincing is the discussion of attribution and contribution, as well as the limitations to attributing effects to the intervention.</p>	<p>The delivery of outputs has been assessed in terms of both quantity and quality. Evidence is provided to support the assessment. Elements of ownership and usefulness to intended beneficiaries are included. The chapter also presents a quantitative and qualitative analysis of the achievement of Outcomes achieved in the light of the reconstructed Theory of Change (TOC), also supported by evidence. Reasons behind the success or shortcomings in effectiveness have been covered to varying degrees of detail. Findings have in some instances been corroborated with quotes from survey respondents</p>	<p>6</p>

<p><b>(ii) Likelihood of Impact:</b> How well does the report present an integrated analysis, guided by the causal pathways represented by the TOC, of all evidence relating to likelihood of impact?</p> <p>How well are change processes explained and the roles of key actors, as well as drivers and assumptions, explicitly discussed?</p>	<p>The discussion follows logically from the assessment of Outputs and Direct Outcomes. It is consistent with the TOC narrative and discusses the status of drivers and assumptions in the causal pathways from medium-term Outcomes to Impact. Minor suggestions have been provided to improve the analysis</p>	<p>5</p>
<p><b>E. Financial Management</b></p> <p>This section should contain an integrated analysis of all dimensions evaluated under financial management. And include a completed 'financial management' table.</p> <p>Consider how well the report addresses the following:</p> <ul style="list-style-type: none"> <li>• <i>completeness</i> of financial information, including the actual project costs (total and per activity) and actual co-financing used</li> <li>• <i>communication</i> between financial and project management staff and</li> <li>• <i>compliance</i> with relevant UN financial management standards and procedures.</li> </ul>	<p>The section adequately covers completeness, compliance and communication, as per TOR guidance. Includes a completed 'financial management' table supported with evidence.</p>	<p>6</p>
<p><b>F. Efficiency</b></p> <p>To what extent, and how well, does the report present a well-reasoned, complete and evidence-based assessment of efficiency under the primary categories of cost-effectiveness and timeliness including:</p> <ul style="list-style-type: none"> <li>• Implications of delays and no cost extensions</li> <li>• Time-saving measures put in place to maximise results within the secured budget and agreed project timeframe</li> <li>• Discussion of making use of/building on pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc.</li> <li>• The extent to which the management of the project minimised UN Environment's environmental footprint.</li> </ul>	<p>Section has been covered satisfactorily. Examples/quotes from the survey have been provided to corroborate findings. Implications of efficiency issues on implementation have been included. Efficiency in terms of environmental footprint not considered.</p>	<p>5</p>



<p><b>G. Monitoring and Reporting</b></p> <p>How well does the report assess:</p> <ul style="list-style-type: none"> <li>• Monitoring design and budgeting (<i>including SMART indicators, resources for MTE/R etc.</i>)</li> <li>• Monitoring implementation (<i>including use of monitoring data for adaptive management</i>)</li> <li>• Project reporting (<i>e.g. PIMS and donor report</i>)</li> </ul>	<p>Section adequately covers all dimensions of monitoring as per guidance.</p>	<p>6</p>
<p><b>H. Sustainability</b></p> <p>How well does the evaluation identify and assess the key conditions or factors that are likely to undermine or contribute to the persistence of achieved direct outcomes including:</p> <ul style="list-style-type: none"> <li>• Socio-political Sustainability</li> <li>• Financial Sustainability</li> <li>• Institutional Sustainability (<i>including issues of partnerships</i>)</li> </ul>	<p>One gets a generally good idea of the status of all the dimensions of sustainability. Suggestions to provide a more in-depth assessment of socio-political and institutional dimensions were offered.</p>	<p>4.5</p>
<p><b>I. Factors Affecting Performance</b></p> <p>These factors are <u>not</u> discussed in stand-alone sections but are <b>integrated in criteria A-H as appropriate</b>. To what extent, and how well, does the evaluation report cover the following cross-cutting themes:</p> <ul style="list-style-type: none"> <li>• Preparation and readiness</li> <li>• Quality of project management and supervision<sup>32</sup></li> <li>• Stakeholder participation and co-operation</li> <li>• Responsiveness to human rights and gender equity</li> <li>• Country ownership and driven-ness</li> <li>• Communication and public awareness</li> </ul>	<p>The required sub-criteria are all covered to varying levels of detail throughout the report. Greater attention is needed for the assessment/coverage of country-ownership at the private sector level. Responsiveness to human rights and gender equity is included</p>	<p>5</p>
<p><b>VI. Conclusions and Recommendations</b></p> <p><b>i. Quality of the conclusions:</b> The key strategic questions should be clearly and succinctly addressed within the conclusions section?</p> <p>It is expected that the conclusions will highlight the main strengths and weaknesses of the project, and connect them in a compelling story line. Conclusions, as well as lessons and recommendations, should be consistent with the evidence presented in the main body of the report.</p>	<p>The conclusions section is consistent with findings in the report. Both strengths and weaknesses are discussed. Responses to the key strategic questions are included and are also anchored on findings in the report. Summary of rating table is included.</p>	<p>5</p>

<sup>32</sup> In some cases ‘project management and supervision’ will refer to the supervision and guidance provided by UN Environment to implementing partners and national governments while in others, specifically for GEF funded projects, it will refer to the project management performance of the executing agency and the technical backstopping provided by UN Environment.

<p><b>ii) Quality and utility of the lessons:</b> Both positive and negative lessons are expected and duplication with recommendations should be avoided. Based on explicit evaluation findings lessons should be rooted in real project experiences or derived from problems encountered and mistakes made that should be avoided in the future. Lessons must have the potential for wider application and use and should briefly describe the context from which they are derived and those contexts in which they may be useful.</p>	<p>The lessons are relevant and based on findings, but their formulation could be improved though the potential for wider application is implied. Contextual information can benefit from a more detailed explanation.</p>	5
<p><b>iii) Quality and utility of the recommendations:</b></p> <p>To what extent are the recommendations proposals for specific actions to be taken by identified people/position-holders to resolve concrete problems affecting the project or the sustainability of its results. They should be feasible to implement within the timeframe and resources available (including local capacities) and specific in terms of who would do what and when. Recommendations should represent a measurable performance target in order that the Evaluation Office can monitor and assess compliance with the recommendations.</p>	<p>The recommendations are relevant and feasible though the agent is the Executing Agency and the recommendations can only be communicated to them. Suggestions for additional recommendations were offered.</p>	5
<p><b>VII. Report Structure and Presentation Quality</b></p>		
<p><b>i) Structure and completeness of the report:</b> To what extent does the report follow the Evaluation Office guidelines? Are all requested Annexes included and complete?</p>	<p>The report does follow the recommended structure and meets all the requirements in the TOR</p>	6
<p><b>ii) Quality of writing and formatting:</b></p> <p>Consider whether the report is well written (clear English language and grammar) with language that is adequate in quality and tone for an official document? Do visual aids, such as maps and graphs convey key information? Does the report follow Evaluation Office formatting guidelines?</p>	<p>The report is well written in clear English language that is easy to comprehend. Formatting is well done.</p>	6
<p><b>OVERALL REPORT QUALITY RATING</b></p>		<p><b>HS</b></p>

A number rating 1-6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1. The overall quality of the evaluation report is calculated by taking the mean score of all rated quality criteria.

