Terminal Evaluation of the UN Environment Project
“Implementation of the National Biosafety Framework of Liberia”

May 2018
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Schools Biosafety Outreach Activities in Grand Bassa County, Liberia (source: ANUBIS)

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Evaluation Office of UN Environment
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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 project implemented between 2011 and 2017. The project’s overall objective [“to assist Liberia to have a workable and transparent national biosafety system in line with its national development priorities and international obligations relative to Agenda 21, the Convention on Biological Diversity, and the Cartagena Protocol on Biosafety”]. 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 their executing partner Environmental Protection Agency (EPA) of Liberia and other relevant agencies of the project participating countries.

Key words: Biosafety, Genetically Modified Organisms (GMOs), Environmental Protection Agency (EPA), Cartagena Protocol on Biosafety (CPB), Competent National Authority (CNA), National Biosafety Committee, National Biosafety Framework (NBF), Regulatory regime, Administrative System, Risk Assessment and Management, Awareness and Participation, Liberia, Terminal Evaluation, GEF

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1 This data is used to aid the internet search of this report on the Evaluation Office of UN Environment Website –
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**Support the Implementation of the National Biosafety Framework of Liberia**

### Project Identification Table

<table>
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<th>Sub-programme:</th>
<th>Environmental Governance</th>
<th>Expected Accomplishment(s)/ Programme of Work Output(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN Environment approval date:</td>
<td>20/05/2011</td>
<td>(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.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(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.</td>
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</tbody>
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<table>
<thead>
<tr>
<th>GEF project ID:</th>
<th>3040</th>
<th>Project type:</th>
<th>Medium Size Project</th>
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<tr>
<td>GEF OP #:</td>
<td></td>
<td>Focal Area(s):</td>
<td>Biodiversity</td>
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<td>GEF approval date:</td>
<td>02/03/2011</td>
<td>GEF Strategic Priority/Objective:</td>
<td>Strategic Programme 6: Biosafety (SO3/SP6)</td>
</tr>
<tr>
<td><strong>Expected start date:</strong></td>
<td>June 2011</td>
<td><strong>Actual start date:</strong></td>
<td>17/08/2011</td>
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<tr>
<td><strong>Planned completion date:</strong></td>
<td>25/07/2015</td>
<td><strong>Actual completion date:</strong></td>
<td>03/09/2017</td>
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<tr>
<td>Planned project budget at approval:</td>
<td>USD 1,107,679</td>
<td>Actual total expenditures reported as of June 2017:</td>
<td>USD 904,716</td>
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<td>GEF Allocation:</td>
<td>USD 577,679</td>
<td>GEF grant expenditures reported as of June 2017:</td>
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<td>Expected Medium-Size Project co-financing:</td>
<td>USD 530,000</td>
<td>Secured Medium-Size Project co-financing as of June 2017:</td>
<td>USD 327,037</td>
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<td>First disbursement:</td>
<td>10/08/2011</td>
<td>Date of financial closure:</td>
<td>Not closed</td>
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<tr>
<td>No. of revisions:</td>
<td>8</td>
<td>Date of last revision:</td>
<td>03/05/2017</td>
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<td>No. of Steering Committee meetings:</td>
<td>11</td>
<td>Date of last/next Steering Committee meeting:</td>
<td>26/02/2015</td>
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<td>Coverage (Countries):</td>
<td>Liberia</td>
<td>Coverage - Region(s):</td>
<td>Western Africa</td>
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### List of Acronyms and Abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>ANUBIS</td>
<td>A New UN Environment Biosafety Information System</td>
</tr>
<tr>
<td>BCH</td>
<td>Biosafety Clearing House</td>
</tr>
<tr>
<td>CBD</td>
<td>Convention on Biological Diversity</td>
</tr>
<tr>
<td>CPB</td>
<td>Cartagena Protocol on Biosafety</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency (of Liberia)</td>
</tr>
<tr>
<td>GEF</td>
<td>Global Environment Facility</td>
</tr>
<tr>
<td>GMO</td>
<td>Genetically Modified Organism</td>
</tr>
<tr>
<td>LMO</td>
<td>Living Modified Organism</td>
</tr>
<tr>
<td>NBC</td>
<td>National Biosafety Committee</td>
</tr>
<tr>
<td>NBF</td>
<td>National Biosafety Framework</td>
</tr>
<tr>
<td>NEA</td>
<td>National Executing Agency</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
</tr>
<tr>
<td>ProDoc</td>
<td>Project Document</td>
</tr>
<tr>
<td>TOC</td>
<td>Theory of Change</td>
</tr>
<tr>
<td>ToR</td>
<td>Terms of Reference</td>
</tr>
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</table>
Executive Summary

1. This is the final report of the Terminal Evaluation of the Project “Support the Implementation of the National Biosafety Framework of Liberia” (GFL/2328-2716-4899) approved by GEF and UN Environment in 2011 for a duration of 4 years (2011-15). The total budget of the Project is US$ 1.107.679 USD, the 52% of which represents the GEF allocation (US$ 577.679) and the remaining 48% (US$ 530.000) to be provided in kind by the Government of Liberia.

2. The project is a Medium Size Project (MSP) 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.

3. During its implementation, the Project has been granted 2 no-cost extensions for a total of 20 months, essentially due to the extraordinary external challenges caused by the Ebola outbreak that have affected Project implementation, as described in chapter 5.3, shifting its Official End date to 25/03/2017. The Evaluation took place in the period between May to November 2017 and included a mission to Liberia from 30/10/2017 to 02/11/2017.

4. This Terminal Evaluation is part of a cluster of three Evaluations that also included two other similar Projects of Implementation of the National Biosafety Frameworks in Ghana and Nigeria. A Comparative Analysis of the three Projects has also been produced (Annex 6), as requested by the Terms of Reference of the Evaluation (Annex 2).

5. Liberia has adhered to the Convention on Biological Diversity (CBD) in 1992 and ratified the Cartagena Protocol on Biosafety (CPB) in 2003. With the support of GEF/UN Environment Project “Development of the National Biosafety Framework” (2002-2004) the country has produced its National Biosafety Framework (NBF) and requested further support for its implementation, which eventually occurred through the formulation and implementation of the current Project.

6. The Project objective was “To assist Liberia to have a workable and transparent national biosafety system in line with its national development priorities and international obligations relative to Agenda 21, the Convention on Biological Diversity (CBD), and the Cartagena Protocol on Biosafety”.

7. The National Executing Agency of the Project has been the Environmental Protection Agency (EPA), which is the regulatory Institution of the Government of Liberia for the sustainable management of the environment and its natural resources. A Biosafety Unit has been established in the EPA with the support of the Project.

8. The Environmental Protection Agency (EPA) has promoted a National Biosafety Committee (NBC) composed by all line-Ministries, University and Research Institutions, Civil Society Organisations and the Private Sector. The Committee has been very active during all the Project lifetime and has been matched by relevant capacity building activities.

9. The main national stakeholders have adopted the “Guidelines for Networking cooperation and Information exchange among Competent Authorities”, which define the role of the National Biosafety Committee (NBC) in supporting and supervising the Biosafety Unit at EPA. According to the Guidelines, “the NBC is a collaborative mechanism which operates under the leadership of the National Competent Authority, the EPA, to provide support on administration of biosafety issues, including but not limited to (1) the conduct of risk assessment, (2) Monitoring, and (3) Compliance enforcement”.

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In fact, through a participatory and constant stakeholders’ involvement, the Project has delivered a quite impressive number of Outputs, more so, when taking into account, not only the complex and highly challenging socio-political and institutional context of the country, but also the occurrence of exceptional external factors that have hit Liberia and caused a serious disruption in the Project’s activities (Outbreak of Ebola virus in 2014 and 2015). These considerations have induced the Evaluation Team to upgrade the Effectiveness rating to Moderately Satisfactory, as explained in chapter 5.4.2 (§ 83) and in Table 10 (chapter 6.1.1).

A Draft National Biotechnology and Biosafety Policy has been prepared, discussed and validated in two workshops with the stakeholders since February 2012. However, the draft has never been formally endorsed at a superior level (the EPA Policy Council, see chapter 5.4.1). The Draft Biosafety Act has also been prepared, discussed and finalized, and eventually submitted to the Office of the President in 2014 to be further transmitted to the Parliament, which only happened in 2017. The Draft is expected to be discussed by the Parliament in 2018. The same applies to five Draft Regulations finalized in 2014, regarding Transboundary Movement, Labelling, Liability and Redress, Environmental Release and Contained Use of Genetically Modified Organisms (GMOs).

Despite the protracted delays in progressing with the regulatory regime, the project has at any rate given steps for the design and implementation of the administrative system of the Biosafety Framework. Guidelines and application forms for processing request have been prepared and Risk Assessment workshops have also been organised. Specific “Guidelines for Monitoring and Enforcement of Environmental Impacts of Living Modified Organisms” have also been drafted, as well as “Customs Guidelines for Transboundary Movement of LMOs into Liberia”. The National Standards Laboratory has been upgraded for the detection of Genetically Modified Organisms (GMOs), following a Memorandum of Understanding between the Environment Protection Agency and the Ministry of Commerce.

A set of training / awareness guides for the stakeholders, the media, the general public and the schools has been produced and disseminated. Workshops on “Public Participation and Decision-making” have been organised in three different regions of the country to inform and debate on the implementation and challenges of the National Biosafety Programme. A Biosafety/Biotechnology Curriculum has been developed and mainstreamed into the Graduate Program of the University of Liberia and a course has started at the Department of Biological Sciences (certificate and degree levels), with 32 students enrolled.

Whereas some of them have been addressed by the Project, as showed by the significant enhancement of national capacities and of public awareness, the Project has inevitably been strongly challenged by the complex socio-political and institutional context of the country, as well as by administrative inertia. Mitigating those risks has proved to be virtually unsurmountable for the Project team that had to give up on attaining some relevant expected Outputs, like the endorsement of the Biosafety Policy, the approval of the draft Biosafety Law and of subsequent Regulations.

Similarly, the existing mechanism of coordination put in place (the National Biosafety Committee, NBC) is a collaborative, non-statutory mechanism that, while surely creating a favourable “micro-environment” for progressing in the implementation of the Biosafety Framework, has not received any formal endorsement and is, therefore, deprived of institutional strength to play a role in the socio-political and institutional arena.

Overall, it has to be considered that the country is facing huge challenges in priority sectors like, for instance, Health and Education, that may jeopardise the Government support for the implementation of the Biosafety Framework, a problem of opportunity cost. In fact, one cannot forget that Liberia is 177th out of 185 countries in the Human Development Index of 2015. Regional and international support should, therefore, still play a substantive role in maintaining
Biosafety well present in the Agenda and in sustaining the results obtained so far, as discussed in chapter 5.8 (Sustainability).

17 The Evaluation has concluded that the Biosafety Framework of Liberia started from a very low baseline and has surely progressed within a highly limiting context. While commendable results have, nonetheless, been achieved, relevant assumptions still stand unfulfilled, particularly in the institutional sphere (Regulatory and Administrative systems), in public participation mechanisms and in the enhancement and consolidation of an effective programme for Capacity Building (see assumptions in chapter 4.2 and Diagram 2).

18 Based on all the above, the answers to the key strategic questions specified in the Terms of Reference of the Evaluation (see Annex 2) have to be assessed in their likelihood of evolution and consolidation, for which substantive assumptions have to materialise, as visualised in Diagrams 2 and 3 (Chapters 4.2 and 4.3).

19 A “fully functional and responsive regulatory regime that responds to the obligations under the Cartagena Protocol on Biodiversity” (as asked in the first question) cannot be claimed to be in place, since none of the legal instrument prepared by the Project has been formally adopted in the country.

20 The development of “institutional and technical capacity, awareness and participation amongst the key actors” (as asked in the second question) has been surely fostered by the Project. These achievements, however, did not receive adequate institutional and socio-political support. Moreover, the progression in the process needs more technical support for improving and consolidating the capacity put in place in the areas of Risk Assessment, GMOs detection, Monitoring and Enforcement, among others. This is also captured in the Assumptions of Diagram 2 and is reflected in the Recommendations of this report.

21 Regarding the third question, concerning the “consolidation of a functional national system that can monitor Biotechnology and follow up the releases of Living Modified Organisms (LMOs) and their possible effects on the environment”, there is the need of structured procedures and mechanisms, relying on formal, statutory and enforceable instruments that a “collaborative mechanism” (like the National Biosafety Committee) cannot provide.

22 The following Table provides the summarised rating of the different criteria established by UN Environment Evaluation Office (EO) that have been assessed all along this report. Overall, the rating of Project performance is rated “Moderately Satisfactory”.

Summary of the Evaluation Criteria and Ratings Table

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Summary Assessment</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Strategic Relevance</td>
<td>Very satisfactory in all aspects</td>
<td>HS</td>
</tr>
<tr>
<td>B. Quality of Project Design</td>
<td>Project Design Quality was assessed in Inception Report and found weak in Intended Results and Causality, Logical Framework and Monitoring, Governance and Supervision Arrangements.</td>
<td>MU</td>
</tr>
<tr>
<td>C. Nature of External Context</td>
<td>Implemented few years after a devastating and long-lasting civil war. Ebola crisis (2014 and 2015) has extraordinarily disrupted project activities.</td>
<td>Unfavourable</td>
</tr>
<tr>
<td>D. Effectiveness</td>
<td>Overall Effectiveness rating upgraded to MS (see foot-note 7 in Table 10, chapter 6.1.1)</td>
<td>MS</td>
</tr>
<tr>
<td>1. Achievement of outputs</td>
<td>A quite impressive number of Outputs despite complex and highly challenging context.</td>
<td>S</td>
</tr>
<tr>
<td>2. Achievement of direct outcomes</td>
<td>Limiting socio-political and institutional context did not permit to achieve the implementation of the Regulatory, Administrative and Monitoring/Enforcement systems.</td>
<td>MU</td>
</tr>
</tbody>
</table>
Terminal Evaluation of the Project “Support the Implementation of the National Biosafety Framework of Liberia”

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Summary Assessment</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Likelihood of impact</td>
<td>To a limited extent, measures designed to move towards intermediate states have started, but did not produce yet tangible results.</td>
<td>MU</td>
</tr>
<tr>
<td>E. Financial Management</td>
<td>Overall Satisfactory</td>
<td>S</td>
</tr>
<tr>
<td>F. Efficiency</td>
<td>Project time-efficient, despite several hindrances and exceptional humanitarian crisis.</td>
<td>S</td>
</tr>
<tr>
<td>G. Monitoring and Reporting</td>
<td></td>
<td>S</td>
</tr>
<tr>
<td>H. Sustainability</td>
<td></td>
<td>MU</td>
</tr>
<tr>
<td>1. Socio-political sustainability</td>
<td>Highly depending on the overall socio-political context of the country</td>
<td>MU</td>
</tr>
<tr>
<td>2. Financial sustainability</td>
<td>Strong budgetary limitations without external support</td>
<td>MU</td>
</tr>
<tr>
<td>3. Institutional sustainability</td>
<td>Weak institutional and technical framework so far.</td>
<td>MU</td>
</tr>
<tr>
<td>I. Factors Affecting Performance</td>
<td></td>
<td>MS</td>
</tr>
<tr>
<td>1. Preparation and readiness</td>
<td>Project builds upon previous project “Development of NBF”, stakeholders well defined.</td>
<td>S</td>
</tr>
<tr>
<td>2. Quality of project management and supervision</td>
<td>Project appropriately managed and regularly backstopped by UN Environment TM</td>
<td>S</td>
</tr>
<tr>
<td>3. Stakeholders participation and cooperation</td>
<td>Assiduous participation of main stakeholders</td>
<td>S</td>
</tr>
<tr>
<td>4. Responsiveness to human rights and gender equity</td>
<td>Not explicitly implemented, not referred to in any Project document / report produced by the Project.</td>
<td>MU</td>
</tr>
<tr>
<td>5. Country ownership and driven-ness</td>
<td>Satisfactory at stakeholders’ level, but Unsatisfactory at higher level (all draft policy and regulatory instruments were not endorsed and approved)</td>
<td>U</td>
</tr>
<tr>
<td>6. Communication and public awareness</td>
<td>Through public awareness activities, school activities, workshops, Biosafety Curricula at academic level, yet in need of a comprehensive strategy and action plan</td>
<td>MS</td>
</tr>
<tr>
<td>Overall project rating</td>
<td></td>
<td>MS</td>
</tr>
</tbody>
</table>

23 The recommendations of the Evaluation (chapter 6.3) can be summarised as follows:

**Recommendation 1:**
The Evaluation strongly recommends keeping on and increasing Capacity Building activities through the formulation and adoption of a comprehensive short-medium term Capacity Building Plan (2-3 years) that should contain:

a) The improvement of the technical know-how in key areas, such as Risk Assessment, GMOs detection at laboratory level and for the Customs staff, Public Awareness and Participation including Risk Communication and further implementation of the Biosafety courses at academic level;

b) The setting of a resources mobilization strategy at National, Regional and International level (NBSAP, ECOWAS, NEPAD, GEF/UN Environment, Bilateral Cooperation).

**Recommendation 2:**
The Evaluation recommends the following measures:

a) To keep the Biosafety Unit active within the Multilateral Environmental Agreements division at the Env. Protection Agency;
b) The implementation of the Biosafety actions foreseen in the NBSAP (Target 13, Conservation of Genetic Resources);

c) The enhancement of the existing National Biosafety Committee (NBC) in support of the Biosafety Unit of the EPA, through its gradual consolidation and possible transformation from a collaborative mechanism into a statutory body of the Agency.

**Recommendation 3:**
The Evaluation recommends giving effective steps for the revision and improvement of the whole Monitoring and Reporting System of the Projects, particularly addressing:

a) Awareness raising and capacity building of Projects’ Teams on the relevance and implementation of effective Project Monitoring and Reporting Systems, based on a sound “Project Management by Results”;

b) Putting in value, review and improve the existing Monitoring and Reporting tools (particularly the “Costed M&E Plan”, the “GEF Tracking Tools” and the “Project Implementation Review” / PIR), as living instruments for the setting of appropriate Project Monitoring Systems at Project level.
1 Introduction

1. 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 from modern biotechnology.

2. This is the final report of the Terminal Evaluation of the Project “Support the Implementation of the National Biosafety Framework of Liberia” (GFL/2328-2716-4B99) that was approved by GEF the 02/03/2011 and by UN Environment the 20/05/2011 for a duration of 4 years (2011-15). The total budget of the Project is US$ 1.107.679 USD, the 52% of which represents the GEF allocation (US$ 577.679) and the remaining 48% (US$ 530.000) to be provided in kind by the Government of Liberia. During its implementation, the Project has been granted 2 no-cost extensions for a total of 20 months, shifting its Official End date to 25/03/2017.

3. The project is a Medium Size Project (MSP) 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.

4. The National Executing Agency of the Project is the Environmental Protection Agency (EPA), which is the regulatory Institution of the Government of Liberia for the sustainable management of the environment and its natural resources.

5. The Evaluation took place in the period between May to November 2017 and included a mission to Liberia from 30/10/2017 to 02/11/2017. The Evaluation Team consisted of one consultant specialist of projects evaluation in the environmental sector (See Annex 8) working under the methodological guidance of the Evaluation Office of UN Environment.

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2 In this Report, the terms Living Modified Organism (LMO) and Genetically Modified Organism (GMO) are considered synonymous and indifferently used.
2 Evaluation Methods

2.1 Overall approach of the Evaluation

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 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:

a. to provide evidence of results to meet accountability requirements, and
b. to promote learning, feedback, and knowledge sharing through results and lessons learned among UN Environment, the GEF, the National Executing Agency and the national partners.

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). Sustainability is rated from Highly Likely (HL) down to Highly Unlikely (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).

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 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 has been shared with the Biosafety Task Manager at UN Environment.

The Evaluation has fostered a participatory approach with key stakeholders at national level. During the preparation of the field visit, the consultant, through the support of Biosafety Task Manager at UN Environment, has come to contact with the national Executing Agency and the Project Team and has shared with them some preliminary tools to systematise and discuss main achievements (see following section 2.2).

The Consultant has met the main national key-players during the country visit and has largely and openly discussed with them relevant strong and weak points regarding Project’s implementation, performance and sustainability. Whenever possible, the information received during the visit or acquired through the desk review (reports, etc.) has been triangulated through personal interviews with project stakeholders.

Taking into account that the Project was expected to mostly deliver institutional and capacity building outputs and outcomes, quantitative outputs have been assessed against their quality and effectiveness, hence their capacity to drive and sustain changes at higher level of objectives. The process for the attainment of Project’s results has also been assessed, in order 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

11. Overall, the Terms of Reference (TOR) of the Evaluation and the methodological tools and formats provided by the UN Environment Evaluation Office have proved to be a robust methodological framework for the Evaluation exercise, facilitating the systematisation and presentation of the evaluation findings.

12. The Desk Review of all project documents and reports filed in the e-platform ANUBIS (A New UNEP Biosafety Information System) has been most helpful to gather relevant information regarding the technical and financial performance of the Project.

13. The Inception phase of the Evaluation has permitted a preliminary approach to the Project and the delivery of the Inception Report, which laid the foundation for the main report in some essential aspects, by including:
   
   - The thorough Review of the Project Design Quality (PDQ) that has highlighted strong and weak points of Project Design (see section 5.2), particularly of the Logical Framework (Logframe);
   
   - The construction of the Theory of Change of the project (see chapter 4);
   
   - The Stakeholders analysis, which has put in evidence the expected roles and responsibilities of the main key-players of the Project, laying the ground for the assessment of the effective institutional framework of the Project and of its institutional sustainability (see chapter 3.3);
   
   - The integration of supplementary and specific questions to the evaluation key-questions defined in the evaluation framework of the Terms of Reference.

14. Exchanges with the Evaluation Manager of UN Environment Evaluation Office and with the UN Environment Task Manager / Biosafety have been constant and most useful to clarify issues of methodological and technical nature regarding the evaluation development and the project implementation.

15. Some tools prepared in advance by the Consultant have been shared with the Project team before the fielding of the mission, notably a revised matrix of Project Outputs integrated by consultant’s questions and comments and the Financial Tables. All of them have been discussed with the Project Team and relevant stakeholders during the country visit.

16. The country visit lasted 3 days and has permitted to directly meet and interview Project’s key-stakeholders including representatives of the National Executing Agency (the Environmental Protection Agency, EPA, also Competent National Authority for the Cartagena Protocol on Biosafety and the Convention on Biological Diversity), several members of the National Biosafety Committee (NBC), main partner institutions and, of course, the current National Project Coordinator (also Focal Point for the Cartagena Protocol) and the Financial Assistant of the Project (see list in Annex 3). The recent loss of the former National Project Coordinator has deprived the mission of his precious experience, information and opinions.

17. The main methods and tools used in the Evaluation can be summarised as follows:

   - A Desk Review of all project documents and tools the consultant had access to (see Annex 7), including the ANUBIS e-platform;
   
   - Exchanges with the Project Management Team at UNEP, namely the Task Manager;
• Revision of the Final Project Outputs (posted in ANUBIS) and elaboration of comments and questions, shared with the National Project Coordinator before fielding the mission and extensively discussed with him during the visit;

• A Country Visit, which included:
  - Meetings with the Project Team, the management staff of the National Executing Agency (Env. Protection Agency) including its Deputy Executive Director and the main Project’s Stakeholders (see above);
  - Visit to the National Standards Authority where the laboratory equipment has been installed;
  - Drafting of preliminary Conclusions and Recommendations and discussion with the National Project Coordinator in the final de-briefing.

18. This Terminal Evaluation is part of a cluster of three Evaluations that included two other similar Projects of Implementation of the National Biosafety Frameworks in Ghana and Nigeria. Actually, the field missions in the three countries were carried out back to back and a Comparative Analysis has also been produced (Annex 6), as requested by the Terms of Reference of the Evaluation (Annex 2).
3 The Project

3.1 Context

19. Liberia is very rich in biodiversity (flora and fauna), most of it held under the forest ecosystem (the country hosts about 40% of the remaining Upper Guinea Rain Forest of West Africa). The country has also valuable agricultural genetic resources which include landraces of several domesticated animals and crops such as rice, tuber crops, grain legumes, citrus, as well as wild relatives of crops, all of them valuable sources of genetic material.

20. The country has adhered to the Convention on Biological Diversity (CBD) in 1992 and ratified the Cartagena Protocol on Biosafety (CPB) in 2003. The National Biodiversity Strategy and Action Plan (NBSAP) has been completed (2004) providing the country with a basic tool for the sustainable use of Liberia’s biological resources for national socio-economic development. With the support of GEF/UN Environment, the country has produced its National Biosafety Framework (NBF) in 2004 and requested further support for its implementation, which eventually occurred through the formulation and implementation of the current Project.

21. As clearly stated in the Project Document (ProDoc), the project was expected “to contribute to the sustainable utilization of the country’s rich genetic resources for economic development (through biotechnology) on the one hand and, on the other hand, ensuring protection against potential risks of Living Modified Organisms (LMOs).”

22. As a matter of fact, after a recent past of a lasting and tragic civil war, the country is now re-positioning itself in the global economy, with an emphasis on commercial farming and agribusiness. Therefore, while market-oriented agriculture is gaining momentum in Liberia, Sustainable Development and Biodiversity Conservation challenges remain at the top of the national agenda, hence confirming the need for a functional National Biosafety Framework to manage Biotechnology potential and Biosafety concerns.

23. Extraordinary external challenges (Ebola outbreak) have affected Project implementation, as described in chapter 5.3.

3.2 Objectives and components

10. According to the ProDoc (Project Document), the Project objective is “To assist Liberia to have a workable and transparent national biosafety system in line with its national development priorities and international obligations relative to Agenda 21, the Convention on Biological Diversity (CBD), and the Cartagena Protocol on Biosafety”. According to the Project Results Framework (Logframe), the Project comprises 4 main Components, each of them with one expected Outcome, as outlined in following Table 1.

<table>
<thead>
<tr>
<th>Components</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Development of a comprehensive national Biosafety Policy</td>
<td>Biosafety recognized and mainstreamed as a sustainable development issue in the national development</td>
</tr>
<tr>
<td>2) Strengthening the administrative and regulatory framework on biosafety</td>
<td>A functional regulatory and administrative system for biosafety established in line with obligations to the Cartagena Protocol</td>
</tr>
</tbody>
</table>
Terminal Evaluation of the Project “Support the Implementation of the National Biosafety Framework of Liberia”

<table>
<thead>
<tr>
<th>Components</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3) Creating the necessary institutional capacity and human resources for effective decision making and compliance in biosafety</td>
<td>A functional national system for monitoring and enforcement established</td>
</tr>
<tr>
<td>4) Generating and managing biosafety information and public sensitization strategies</td>
<td>A functional national system for public awareness, education and Public participation established</td>
</tr>
</tbody>
</table>

### 3.3 Stakeholders

24. The key-player for Biosafety in Liberia is the Environmental Protection Agency (EPA), which is the coordinating and regulatory Institution of the Government of Liberia for the sustainable management of the environment and its natural resources. EPA is the Competent National Authority (CNA) for the Cartagena Protocol, focal point for the Biosafety Clearing-House (BCH) and for the Convention on Biological Diversity (CBD). It has also been the National Executing Agency (NEA) of the Project.

25. Other relevant players are the Ministries with responsibility for the management of GMOs in their respective areas, namely: Ministry of Agriculture (for genetically modified plants and animals), Min. of Health (for genetically modified derived food, food products and drugs), Min. of Commerce & Industry (for the labelling and packaging of genetically modified food and food products) and Min. of Finance (Customs). Table 2 here below summarizes main roles and responsibilities of biosafety key-players in Liberia. Other national stakeholders include Academic and Research Institutions, Private Sector and Civil Society organisations, as visualised in Diagram 1 below.

<table>
<thead>
<tr>
<th>Stakeholder: Environmental Protection Agency (EPA)</th>
<th>Interest and power over project results/implementation</th>
<th>Institutional role and responsibilities</th>
<th>Expected changes through project implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA has been the National Executing Agency (NEA) of the Project on behalf of the Government of Liberia, to manage the project and ensure that its objectives are met by the end of the project. Set and coordination of the National Biosafety Committee, in close cooperation with the relevant government agencies, the scientific community and the public and private sectors.</td>
<td>Oversee and coordinate environmental management in the country including development and implementation of the NBF National Focal Point for the Convention on Biological Diversity (CBD), the Cartagena Protocol on Biosafety (CPB) and the BCH (Biosafety Clearing-House) Approval of biosafety applications in consultation with relevant Competent Ministries/Agencies and National Biosafety Committee (NBC). Promote public awareness on biotechnology and biosafety issues.</td>
<td>To be further empowered (institutionally and technically) and fully operational for playing its key-role of overall coordination and management of Biosafety in the country Full institutional uptake of the results of the Project The setting of a Biosafety Unit within the EPA</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stakeholder: Ministry of Agriculture</th>
<th>Interest and power over project results/implementation</th>
<th>Institutional role and responsibilities</th>
<th>Expected changes through project implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member of the Nat. Biosafety Committee</td>
<td>Carry out risk assessment/audit on Gen. Modified plants and animals. Advice the Nat. Biosafety Com. (NBC) on issues related to biosafety in agriculture.</td>
<td>Enhanced role (institution and capacity building) in setting and managing Regulatory, Administrative and Monitoring activities in its specific area, including Risk Assessment</td>
<td></td>
</tr>
</tbody>
</table>

### Table 2: Role and responsibility of key-players

<table>
<thead>
<tr>
<th>Stakeholder: Environmental Protection Agency (EPA)</th>
<th>Interest and power over project results/implementation</th>
<th>Institutional role and responsibilities</th>
<th>Expected changes through project implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA has been the National Executing Agency (NEA) of the Project on behalf of the Government of Liberia, to manage the project and ensure that its objectives are met by the end of the project. Set and coordination of the National Biosafety Committee, in close cooperation with the relevant government agencies, the scientific community and the public and private sectors.</td>
<td>Oversee and coordinate environmental management in the country including development and implementation of the NBF National Focal Point for the Convention on Biological Diversity (CBD), the Cartagena Protocol on Biosafety (CPB) and the BCH (Biosafety Clearing-House) Approval of biosafety applications in consultation with relevant Competent Ministries/Agencies and National Biosafety Committee (NBC). Promote public awareness on biotechnology and biosafety issues.</td>
<td>To be further empowered (institutionally and technically) and fully operational for playing its key-role of overall coordination and management of Biosafety in the country Full institutional uptake of the results of the Project The setting of a Biosafety Unit within the EPA</td>
<td></td>
</tr>
<tr>
<td>Interest and power over project results/implementation</td>
<td>Institutional role and responsibilities</td>
<td>Expected changes through project implementation</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>----------------------------------------</td>
<td>--------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Monitoring and inspection of crop plants and seed certification.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Stakeholder: Ministry of Health and Social Welfare**

| Member of the Nat. Biosafety Committee | Perform risk assessment/audit on Gen. Modified derived food, food products and drugs. Monitoring and inspection of safety in food, drugs and other relevant products. Undertake health Res. & Dev. relevant to biotechnology and biosafety. | Enhanced role (institution and capacity building) in setting and managing Regulatory, Administrative and Monitoring activities in its specific area |

**Stakeholder: Ministry of Commerce and Industry**

| Member of the Nat. Biosafety Committee | Ensure proper labelling and packaging of Gen. Modified food and food products indicating their nature as genetically modified food. | Enhanced role (institution and capacity building) in setting and managing Regulatory, Administrative and Monitoring activities in its specific area |

**Stakeholder: Ministry of Finance (Customs)**

| Member of the Nat. Biosafety Committee | Enforcement of biosafety regulations at entry points including labelling requirements, handling, packaging, inspection, sampling and identity preservation | Enhanced role (institution and capacity building) in setting and managing Regulatory, Administrative and Monitoring activities in its specific area |

**Stakeholder: Research and Academic Institutions**

| Some are Members of the Nat. Biosafety Committee | Risk assessment and risk management As members of the Nat. Biosafety Committee, assist in scientific reviews for GMOs applications. Impact studies of GMOs on socio-economic welfare of farmers and/or producers, Outreach materials for public awareness on biotechnology and biosafety. | Enhanced role (institution and capacity building) in developing a knowledge system on Biosafety in Liberia (Biosafety Courses) and in providing technically-sound advice for decision-making |
3.4 Project implementation structure and partners

26. Following what was established in the ProDoc, the Environmental Protection Agency (EPA), in its role of National Executing Agency of the Project, has promoted a National Biosafety Committee (NBC) that has also functioned as the coordinating/steering committee of the Project. The Committee was initially composed by 17 members: 4 members of the EPA (including the Chairman, the Nat. Project Coordinator and the Focal Point for the Convention on Biological Diversity), 2 members of the Min. Agriculture, 2 members of the Forestry Dev. Authority and 1 member each of the Min. Education, Min. Health, Min. Finance (Customs), Min. Commerce & Industry, University of Liberia, Liberia Inst. for Medical Research, Nat. Consumers Council, Liberia Nat. Bar Association and Monrovia Breweries Inc.

27. The National Biosafety Committee (NBC) has been very active during all the Project lifetime, with 11 meetings from September 2011 to February 2015 (last meeting reported in the Information System ANUBIS). The assiduity in the presence of the members has been remarkable, particularly those representing governmental institutions. New members have also posteriorly integrated the Committee (e.g. Min. Justice, Liberia Marketing Association, Nat. Standards Laboratory).

28. The National Project Coordinator (NPC), with the support of a Project Financial Assistant, has been responsible for the coordination and supervision of all the activities of the Project, such as the preparation of work plans and budgets, communication with authorities and stakeholders, organization and supervision of the external technical assistance, monitoring and reporting to UN Environment.

3.5 Changes in design during implementation

29. During its lifetime, the Project has been granted 8 budget revisions, which have been used mainly for re-allocating unspent money and do not have substantially changed the project design. The Project was also granted two no-cost extensions (total of 20 months), the first of which was accorded for 16 months (May 2015) due to the outbreak of Ebola Virus in the country, which disrupted project activities and the movement of project staff. A second extension of 4 months has been granted for the administrative closure of the Project.

As discussed later under Effectiveness (chapter 5.4), the Project had to give up on targeting some of the key-Outputs (e.g. Law, Regulations) and find out viable, adaptive solutions to pursue its expected results. All the same, we do not consider that the Project design has been changed, since
the Project has worked in the same direction as originally foreseen with a re-definition (downsizing) of some outputs.

### 3.6 Project financing

Table 3: GEF Budget at design and expenditures by components (June 2017)

<table>
<thead>
<tr>
<th>Component/sub-component</th>
<th>Estimated cost at design (USD)</th>
<th>Actual Cost (USD)</th>
<th>Expenditure ratio (actual/planned)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Stocktaking and Biosafety Policy</td>
<td>62.000</td>
<td>Not available (n/a)</td>
<td></td>
</tr>
<tr>
<td>2. Administrative and Regulatory Systems</td>
<td>145.000</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>3. Inst. &amp; Capacity Building National of Monitoring and Enforcement Systems</td>
<td>210.929</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>4. Public awareness &amp; participation</td>
<td>82.000</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>5. Monitoring and Evaluation</td>
<td>20.000</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>6. Project management</td>
<td>57.750</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>577.679</strong></td>
<td><strong>577.679</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Table 4: Co-financing Table

<table>
<thead>
<tr>
<th>Co-financing (Type/Source)</th>
<th>UN Environment own Financing (US$1,000)</th>
<th>Government (US$1,000)</th>
<th>Other* (US$1,000)</th>
<th>Total (US$1,000)</th>
<th>Total Disbursed (US$1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Planned</td>
<td>Actual</td>
<td>Planned</td>
<td>Actual</td>
<td>Planned</td>
</tr>
<tr>
<td>Grants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equity investments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-kind support</td>
<td>530</td>
<td>327</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>530</strong></td>
<td><strong>327</strong></td>
<td><strong>530</strong></td>
<td><strong>327</strong></td>
<td><strong>530</strong></td>
</tr>
</tbody>
</table>

* 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 Theory of Change (TOC) of the project: overview

30. The Project Document (ProDoc) does not include any Theory of Change (TOC)\(^3\) and the Logical Framework (Logframe) is flawed, since it only provides Outcomes. Though the clear identification of the Project’s Outputs was not explicitly required at the time of Project’s formulation\(^4\), their absence is a major shortcoming: the concrete products to be delivered by the Project are not specified and the logical sequence of Activities-Outputs-Outcomes is not made explicit. It is equally lacking the description of the intervention logic from the Outcomes to the long-term Impact.

31. Despite the above, some information available in the ProDoc (Project Components and Results), in the Logframe, namely the columns of Outcome Indicators and Targets, have been useful to identify “hidden” Project’s Outputs. Similarly, two other annexes of the ProDoc (the “Key deliverables” table and the “Monitoring and Evaluation Framework”) have also been of some use. Considering that, a Reconstructed Theory of Change has been possible. The reconstruction, in retrospect, of the Theory of Change is discussed in the following chapters 4.2 and 4.3 and visualised in Diagrams 2 and 3.

32. The Table here below compares the project’s results as stated in the Logical Framework (Logframe) of the ProDoc and as formulated in the Theory of Change (TOC) at Evaluation.

<table>
<thead>
<tr>
<th>Results as stated in the ProDoc Logframe</th>
<th>Results as stated in the TOC at Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact (in the ProDoc, chapter 3.1)</td>
<td>Impact</td>
</tr>
<tr>
<td>&quot;To integrate biosafety into sustainable management plan for biodiversity. This will greatly contribute to the sustainable utilization of the country’s rich genetic resources for economic development (through biotechnology) on the one hand, and on the other hand, ensuring protection against potential risks of LMOs&quot;</td>
<td>Enhanced conservation and sustainable use of biological diversity in Liberia</td>
</tr>
<tr>
<td>Intermediate States to Impact</td>
<td></td>
</tr>
<tr>
<td>Safe transfer, handling and use of living modified organisms that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health (see art. 1 of CPB) (Int. State 3)</td>
<td>National Biodiversity Strategy and Action Plan (NBSAP) fully operational (Int. State 4)</td>
</tr>
<tr>
<td>Overall Goal (in the ProDoc)</td>
<td>Main Project Outcome</td>
</tr>
<tr>
<td>To assist Liberia to have a workable and transparent</td>
<td>A workable and transparent national biosafety system in</td>
</tr>
</tbody>
</table>

---

\(^3\) Not required at the time of Project’s formulation

\(^4\) Information supplied by the UN Environment Task Manager for Biosafety
<table>
<thead>
<tr>
<th>Results as stated in the ProDoc Logframe</th>
<th>Results as stated in the TOC at Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>national biosafety system in line with its national development priorities and international obligations relative to Agenda 21, the CBD and the Cartagena Protocol on Biosafety</td>
<td>Liberia</td>
</tr>
</tbody>
</table>

**Intermediate States to Main Project Outcome**

- Improved Decision-making processes for LMOs approval, effective implementation mechanisms and enhanced quality information and transparency
- Improved Governance of National Biosafety systems based upon: Rule of Law and Compliance, Accountability and Liability, Equity, Transparency and Citizens’ Participation

<table>
<thead>
<tr>
<th>Outcomes (in the ProDoc and Logframe)</th>
<th>Immediate Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1. Biosafety recognized and mainstreamed as a sustainable development issue in biodiversity management plan</td>
<td>1) Biosafety recognized and mainstreamed into sustainable development policy</td>
</tr>
<tr>
<td>1.2. Strengthened public and political support for Biosafety policy</td>
<td></td>
</tr>
<tr>
<td>2. A functional regulatory and administrative system established in line with obligations to the Cartagena Protocol</td>
<td>2) A functional regulatory system for biosafety</td>
</tr>
<tr>
<td>3. A functional national system for monitoring and enforcement established</td>
<td>3) An administrative system for handling applications, Risk Assessment and Risk Management</td>
</tr>
<tr>
<td>4. A functional national system for public awareness, education and public participation established</td>
<td>4) A functional national system for monitoring and enforcement</td>
</tr>
<tr>
<td>5) A functional system for public awareness, education and participation</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outputs from the ProDoc, Logframe and Monitoring and Evaluation Plan (App. 7 of the ProDoc)</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy is approved by the National Legislature and signed by the President</td>
<td>Biosafety Policy approved by the National Legislature and signed by the President</td>
</tr>
<tr>
<td>Incorporation of biosafety into the Country’s sustainable management plan for biodiversity</td>
<td>Biosafety incorporated into the Country’s sustainable management plan for biodiversity</td>
</tr>
<tr>
<td>Biosafety Act passed into law by the end of Project</td>
<td>Biosafety Act passed into law by the end of Project</td>
</tr>
<tr>
<td>Implementing regulations and guidelines prepared in use</td>
<td>Implementing regulations and guidelines prepared and in use, including for Risk Assessment</td>
</tr>
<tr>
<td>Methodologies for Risk Assessment and Risk Management of LMOs; Standard Operating Procedures for handling of confidential information, transit, contained use, deliberate releases; the AIA and FFP, HTPI, accidental releases and illegal movements developed; Guidelines, manuals and procedures for handling requests for LMOs prepared and made available for use Roles and responsibilities for monitoring and enforcement in place</td>
<td>Sets of procedures prepared for emergency response, accidental release, illegal movement, transit, contained use, AIA and FFP, handling transport, packaging and identification of GMOs Human resources trained on Risk Assessment Manuals and tools for Risk Ass. prepared Roles and responsibilities of relevant institutions defined Monitoring tools developed and in place</td>
</tr>
</tbody>
</table>
### Results as stated in the ProDoc Logframe

- Monitoring tools developed
- Facilities for LMO detection identified and equipped and used for training
- A fully functional National BCH is in place by the end of first year of Project implementation
- Effective and sustained public awareness and education system in place by the end of first year of project implementation
- Effective system for public participation in decision making is in place by the second year of project implementation
- Set of training guides for the competent authorities and the media developed;
- Outreach material produced and disseminated;
- Curriculum on biosafety developed.

### Results as stated in the TOC at Evaluation

- A functional laboratory equipped for GMOs detection
- A fully functional National BCH in place
- Effective and sustained public awareness and education system in place
- Effective system for public participation in decision making is in place
- Outreach material for awareness disseminated, including for authorities and the media
- Curriculum on biosafety developed.

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33. The comparative table above shows a substantive correspondence between the two columns, except for the Outcome 2 of the Logframe that has been split in two separate immediate outcomes in the Theory of Change (second column), to differentiate Regulatory and Administrative achievements, which are, in fact, conceptually and operationally distinct. Moreover, Intermediate States have been identified in the TOC between Immediate Outcomes and Main Project Outcome, as well as from Project Outcome to Impact.

#### 4.2 The causal logic from Outputs to Outcome

34. The Project is focussed on the setting and implementation of a national biosafety system/framework. Although National Biosafety Frameworks (NBF) vary from country to country, they usually contain a few common components:

- A Government policy on biosafety;
- A regulatory regime for biosafety;
- An administrative system to handle notifications or requests for authorisations;
- Systems for ‘follow up’ such as enforcement and monitoring for environmental effects;
- Mechanisms for public awareness, education and participation.

35. The five Immediate Outcomes of the Project actually refer to the establishment of the five components of the National Biosafety Framework (NBF) outlined here above. The 15 Outputs have been consequently clustered in five groups (one Cluster/Outcome), in such a way that a coherent logic does exist between the Project’s results and the NBF structure (see diagram 2).

36. The setting and implementation of a NBF involves complex institutional changes and this complexity reflects into the expected results of the Project where, not only the Outcomes, but also most of the Outputs are of institutional nature. For instance, Outputs from 1 to 4 refer to Policy and Legislative measures, while Outputs 5, 8, 12 and 13 entail processes, mechanisms and procedures of participation, negotiation, coordination and institutional uptake.

37. This is particularly true for the pathway to Immediate Outcomes 1 and 2, where some key-outputs (Policy, Law and Regulations), despite many efforts, proved to be undeliverable, as
described in chapter 5.4.1. As a matter of fact, the Project Document, in its “Risk Analysis and Risk Management Measures”, had identified some “high” risks, such as “Administrative inertia to advance the biosafety policy and regulatory regime” and “Weak institutional coordination”.

38. The pivotal role of the Environmental Protection Agency (EPA) has been the key-driver in the process, along with a pool of motivated stakeholders and the technical-methodological support of UN Environment. In the difficult socio-political and institutional context of Liberia, some of the key-players have played, according to stakeholders’ opinion, a substantive “championing” role, such as the former National Project Coordinator.

39. The achievement of Project’s Outcomes relies on the setting of a solid policy and regulatory regime for Biosafety, which, as discussed in Chapter 5 (Findings) did not happen so far. There is therefore a basic, outstanding assumption at this level that did not materialise and that would weaken the overall path to the main Outcome (see diagram 2).

40. The pathway from the five Immediate Outcomes to the main Project Outcome (A fully operational National Biosafety Framework in Ghana) entails two Intermediate States, as visualised in Diagram 2 below. Once the five operational systems are in place (Immediate Outcomes), they jointly contribute to achieve Intermediate State 1 (IS 1) “Improved decision-making processes for LMOs approval, effective implementation mechanisms and enhanced quality information and transparency”. The lack of an approved and enforceable Regulatory System deprives the Biosafety Framework of a key-driving force for decision-making, since no formal mechanisms exist for that purpose. Meanwhile, as discussed in Chapter 5 (Findings), all the regulatory documents (Law, Regulations and Guidelines) have been thoroughly prepared, discussed among the stakeholders and revised. On that basis, steps have been given to improve the national technical and methodological capacity of the stakeholders in decision-making, which has, nonetheless, to be further enhanced, for instance on Risk Assessment. Therefore, should the regulatory regime be established, the assumption that the National Capacity of Risk Assessment is in place, stands as a relevant assumption.

41. Improved decision-making will lead to Intermediate State 2 (IS 2) “Improved Governance of National/International Biosafety systems based upon: Rule of Law and Compliance, Accountability and Liability, Equity, Transparency and Citizens’ Participation” (I.S. 2), under the assumption that the political will of the Governments is not missing, which should be reflected, again, in the approval of the Biosafety Law and Regulations. That should also be reflected in the development of a National Action Plan to streamline national policy on Biosafety into government plans and in an effective strategy of resource mobilisation put in place. The main impact drivers at that stage will be effective forms of stakeholders’ participation (in planning, decision making and funding), conducive to open and transparent information flows and negotiation processes at different levels.
Diagram 2: Reconstructed TOC from Project Outputs to Outcome

Main Project Outcome
A workable and transparent national biosafety system in Liberia

I.S. 2
Improved governance, of national Biosafety systems based upon: Rule of law and compliance, Accountability and Liability, Equity, Transparency, Citizens’ Participation

DRIVERS: Public continues to be informed. Effective forms of stakeholders participation (planning, decision making, funding). Open and transparent negotiations processes.

ASSUMPTIONS: Political will of the Government. Law and Regulations in place. An effective resource mobilisation strategy in place. International support and cooperation. Regional Cooperation.

I.S. 1
Improved Decision-making, Effective mechanisms, Enhanced quality information and transparency


Outputs
1) Biosafety Policy approved
2) Biosafety incorporated into the nat. management plan for biodiversity
3) Biosafety Act passed into law
4) Implementing regulations and guidelines prepared and in use
5) Sets of administrative procedures prepared for handling applications, etc.
6) Human resources trained on Risk Assess.
7) Manuals and tools for Risk Ass. prepared
8) Roles and responsibilities of relevant institutions defined
9) Monitoring tools developed and in place
10) A functional laboratory equipped for GMOs detection
11) A National BCH in place
12) Effective public awareness and education system
13) Effective system for public participation in decision making
14) Outreach material for awareness disseminated
15) Curriculum on biosafety developed.

Assumptions for all Outputs: Human Resources available in partner institutions

Drivers for all Outputs: leading role of Nat. Exec. Agency (EPA), active stakeholders’ participation, championing role of the UN Nat. Project Coordinator, support of UN Env. Task Manager
4.3 The pathway from Outcome to Impact

42. The intended impact of the project is the Global Environmental Benefit (GEB) to which it contributes: i.e. the enhanced conservation and sustainable use of biological diversity in Liberia. The pathway from Outcome to Impact also contemplates Intermediate States (IS). The full operationalisation of the National Biosafety Framework (Main Project Outcome) will allow the country to fulfil its obligations pursuant to the Cartagena Protocol on Biosafety (CPB), as expressed in Art. 1 of the Protocol (see diagram 3 below), which has been identified as the Intermediate State 3 (IS 3). This step implies that the country has the capacity to sustain and gradually upgrade its operational National Biosafety Framework (NBF) as a response to new challenges and priorities emerged at country level, and in accordance with COP-MOP\(^5\) decisions and recommendations regarding any specific subject contemplated in the Protocol. Regional and International cooperation may play a relevant role at this level.

43. Admitting that a Biosafety policy is in place (Immediate Outcome 1) and that the Assumptions identified in the pathway to IS 1 and IS 2 regarding the availability of financial resources are fulfilled (see Diagram 2), Biosafety has to be meaningfully integrated in the strategy and plans that the country has identified for the sustainable use of its natural resources, including Biodiversity. The National Biodiversity Strategy and Action Plan (NBSAP) is currently the main strategic instrument for the purpose. This is reflected in the Intermediate State 4 (IS 4) of Diagram 3 here below. Intermediate States 3 and 4 are not sequentially linked, but jointly contributing to Impact. Biodiversity conservation depends also on the impact that other actors / sectors have on the Environment, such as, among others, Agriculture/Rural Development policies, Energy and Industry sectors and Tourism development, as well as on Citizens’ foot-print caused by their behaviour. This aspect

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\(^5\) Conference of the Parties serving as the Meeting of the Parties to the Cartagena Protocol on Biosafety
Diagram 3: Reconstructed TOC from Project Outcome to Impact

**Impact**

Enhanced conservation and sustainable use of biological diversity in Liberia

**Assumptions:** Enabling national policies and strategies in key sectors (e.g. Agriculture / Rural Development, Energy and Industry, Tourism). Limited Citizens’ ecological foot-print.

**Drivers:** NBSAP operational. Financial Resources flow consolidated. Best practices of Risk Assessment and Management are sustained, replicated and upgraded. Enforcement of legislation and regulations. Regional cooperation, international commitment.

Safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health, and specifically focusing on transboundary movements, as requested under art. 1 of CPB

**Assumptions:** COP-MOP playing steering role. Regional and International Cooperation

**Drivers:** the capacity of NBA and stakeholders to sustain and upgrade the NBF.

**Assumptions:** Liberia has a NBSAP in place and funded under the coordination of Environmental Protection Agency (EPA).

**Drivers:** Biosafety Strategy and Plan prepared by the EPA is in place and funded

**Project Outcome:** A workable and transparent national biosafety system in Liberia
5 Evaluation Findings

5.1 Strategic Relevance

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

44. The Project spans over two UN Environment Medium-Term Strategies (2010-2013 and 2014-2017) and three Biennial PoWs (Programme of Work), i.e. 2012-2013, 2014-2015 and 2016-2017, Environmental Governance Sub-Programme. Table 6 here below provides a summarised outline of the contribution of the Project to the Expected Accomplishment (EA) of the Environmental Governance Sub-Programme in the two Medium-term Strategies.

Table 6: Contribution of the Project to the Medium-Term Strategy (MTS)

<table>
<thead>
<tr>
<th>Expected Accomplishment (EA)</th>
<th>Contribution of the Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTS 2010-2013, Sub-programme Environmental Governance, EA(b):</td>
<td>Overall support to the implementation of the NBF</td>
</tr>
<tr>
<td>States increasingly implement their environmental obligations and achieve their environmental priority goals, targets and objectives through strengthened laws and institutions</td>
<td>Draft Biosafety Policy</td>
</tr>
<tr>
<td>Draft Biosafety Law and Regulations, Guidelines</td>
<td></td>
</tr>
<tr>
<td>Establishment of the National Biosafety Authority (EPA)</td>
<td></td>
</tr>
<tr>
<td>MTS 2014-2017, Sub-programme Environmental Governance, EA2:</td>
<td>Overall support to the implementation of the NBF</td>
</tr>
<tr>
<td>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</td>
<td>Draft Biosafety Policy</td>
</tr>
<tr>
<td>Draft Biosafety Law and Regulations, Guidelines</td>
<td></td>
</tr>
<tr>
<td>Establishment of the National Biosafety Authority (EPA)</td>
<td></td>
</tr>
<tr>
<td>Capacity Building in Risk Assessment and Management</td>
<td></td>
</tr>
<tr>
<td>Capacity building and outreach activities of Public Awareness and Information</td>
<td></td>
</tr>
</tbody>
</table>

5.1.2 Alignment to UN Environment /GEF Strategic Priorities

45. The project is a Medium Size Project (MSP) financed through GEF-4 mechanism and belongs to GEF Biodiversity Focal Area. It is relevant to GEF Strategic Programme 6 (BD-SP6): Building Capacity for the Implementation of the Cartagena Protocol on Biosafety.

46. Given its focus on Capacity Building and, to some extent, on Technology Support (for instance training in Risk Assessment, Risk Monitoring, Laboratory upgrading) 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 were not specifically addressed by the Project.

47. The Project has also promoted South-South Cooperation on Biosafety at regional and sub-regional level (West Africa Region) and benefited from the support of the African Biosafety Network of Expertise (ABNE) for capacity building activities.
5.1.3 Relevance to Regional, Sub-regional and National Environmental Priorities

48. Biosafety is surely gaining interest and relevance in Liberia, as well as throughout the West Africa Region, as an inescapable aspect of Sustainable Development to be considered when planning the use of Genetically Modified Organisms (GMOs) for agricultural production (both for food security and market purposes), without harming the environment and the socio-economic context of traditional agriculture, as mentioned in chapter 3.1 (Project Context).

49. The West Africa Region is promoting a regional agenda of development and cooperation, also in the area of Biotechnologies and Biosafety, mainly through the Economic Community of West African States (ECOWAS). In this context, the project has been instrumental to the promotion of forms of regional and sub-regional cooperation, particularly in the area of Capacity Building.

5.1.4 Complementarity with Existing Interventions

50. The Project was conceived to implement the National Biosafety Framework (NBF) formulated through the support of the previous GEF/UN Environment Project “Development of the National Biosafety Framework” (2002-2004) and actually built upon the achievements and the institutional network created in the context of the previous project. The Project has also been complementary to the GEF/UN Environment Projects supporting the setting and consolidation of the BCH in Liberia and is part of a larger portfolio of GEF projects supporting Biodiversity Conservation in Liberia. As a whole, the strategic Relevance of the Project can be rated as HS (Highly Satisfactory).

5.2 Quality of Project Design

51. The Project Design Quality (PDQ) has been assessed in the Inception Report of the Evaluation, through the detailed “Template for the assessment of the Project Design Quality (PDQ)” prepared by UN Environment Evaluation Office, which contemplates a rating system, based on a six-point scale: Highly Satisfactory (6), Satisfactory (5), Moderately Satisfactory (4), Moderately Unsatisfactory (3), Unsatisfactory (2), Highly Unsatisfactory (1), also in use for the main evaluation.

52. Overall, the ProDoc has been found to be a tidy and reader-friendly document and scored quite well in most of the 13 criteria in use in the Template. Situation and problem analyses are clear and synthetic, Partnership and stakeholders’ participation is appropriately described, and Risk Identification is also well discussed. Nevertheless, the Project Design scored poorly in three relevant aspects, namely Intended Results and Causality; Logical Framework and Monitoring; and Governance and Supervision Arrangements.

53. Though the Outcomes are fairly well defined, the causal pathway between activities, outputs and outcomes is neither described in the ProDoc, nor can be deduced from the Logframe. In fact, chapter 3.4 of the ProDoc deals with the rationale of the Project, not with the Intervention logic and assumptions, as requested. There is a certain confusion in the terms used in the Logframe and other ProDoc annexes (Outcomes, Outputs, Results, Targets, Indicators, etc.). Some of the Indicator Targets are not quantified. The role of different Committees (Supervision Arrangements) is not clearly explained. The final rating of the Project Design (processed through a table that multiplies the score of each criterion for a coefficient of weighting) is “Moderately Unsatisfactory” (total average score: 3.2).

54. The quality of Project Design is, in fact, generally unsatisfactory, though to different extents, in all the three projects evaluated in the current evaluation (Ghana, Liberia, Nigeria), which show similar, recurrent shortcomings.
5.3 Nature of the External Context

55. The Project has been implemented only a few years after the Peace Agreement of 2003 and the General Elections of 2005, following a devastating and long-lasting civil war that had dramatically reduced the presence of qualified human resources, destroyed several infrastructures and wiped out the institutional setting of the country.

56. The Ebola crisis that heavily affected the country in 2014 and 2015 has extraordinarily disrupted project activities and the movement of project staff, leading to a request of extension (a 16 months extension was granted). The external context has therefore been evaluated as Unfavourable.

5.4 Effectiveness

5.4.1 Achievement of Outputs

57. The information provided in the table “Final Project Output Summary” posted in ANUBIS has been reviewed and systematised according to the pathway designed in the Theory of Change, to make more visible the linkage between the Outputs delivery and the Immediate Outcomes of the Project, as expressed in Table 5 (Chapter 4.1, Theory of Change) and in Diagram 2 (Chapter 4.2, Causal logic from Outputs to Outcome). On that basis, the main findings are discussed here below.

Outputs related to the Immediate Outcome 1 “Biosafety recognized and mainstreamed into sustainable development policy” (Outputs 1 and 2 in Diagram 2)

58. The Project has timely and carefully prepared a Draft National Biotechnology and Biosafety Policy in 2011, discussed it and finally validated in two workshops with the stakeholders by February 2012. Since then, the draft has been waiting for a first, preliminary endorsement by the Policy Council of the Environmental Protection Agency / EPA (the National Executing Agency of the Project), before moving upwards to be “approved by the National Legislature and signed by the President” (as the planned Output goes). The EPA Policy Council is the highest policy decision-making body of the Agency, and as explained in the Progress Report of the Project of June 2015, it “has been dormant for about three years and therefore could not endorse the Biosafety Policy, following completion of the Policy since three years ago”.

59. Liberia has recently (March 2017) prepared the revised National Biodiversity Strategy and Action Plan (NBSAP) 2017-25, which includes Biosafety in some of the actions and indicators regarding Target 13 (conservation of genetic resources). The Plan highlights the need for setting the Biosafety Regulations and the enhancement of national capacities in Risk Assessment.

Outputs related to the Immediate Outcome 2 “A functional regulatory system for biosafety established” (Outputs 3 and 4 in Diagram 2)

60. The Environmental Protection Agency (EPA), Competent National Authority for Biosafety, has been assiduously supported for the improvement and consolidation of its technical and methodological capacity to implement the National Biosafety Framework. A Biosafety Unit has been created within the Division of Multilateral Environmental Agreements at the EPA.
61. The Draft Biosafety Act, originally designed through the previous Project “Development of the National Biosafety Framework” (2004) has been prepared, discussed with national stakeholders and finalized. It has eventually been submitted to the Office of the President in 2014 to be further transmitted to the Parliament, which only happened recently, in 2017. The country has recently held (2017) political elections and the new Parliament will only be able to discuss it in 2018.

62. The same applies to five Draft Regulations finalized in 2014, regarding Transboundary Movement, Labelling, Liability and Redress, Environmental Release and Contained Use of Genetically Modified Organisms (GMOs). They are still pending the approval from the Board or from the Council of EPA.

Outputs related to the Immediate Outcome 3 “Administrative system for handling applications, Risk Assessment and Risk Management” (Outputs 5 to 7 in Diagram 2)

63. Despite the protracted delays in progressing with the regulatory regime, the project has at any rate given steps for the design and implementation of the administrative system of the Biosafety Framework. Workshops have been organised with the participation of the main stakeholders for the “Identification of Sector Roles and Responsibilities in cases of Emergency Response, Accidental Release, Illegal Movement, Uses and Handling of Living Modified Organisms”. Guidelines and application forms for processing request have been prepared and Risk Assessment workshops have also been organised.

64. The main national stakeholders have prepared and adopted in 2014 the “Guidelines for Networking cooperation and Information exchange among Competent Authorities”, which define the specific roles and responsibilities of the regulatory entities in the conduct of risk assessment, monitoring and enforcement.

65. The same Guidelines have clarified the role of the National Biosafety Committee (NBC) in supporting and supervising the Biosafety Unit at EPA. According to the Guidelines, “the NBC is a collaborative mechanism which operates under the leadership of the National Competent Authority, the EPA, to provide support on administration of biosafety issues, including but not limited to (1) the conduct of risk assessment, (2) Monitoring, and (3) Compliance enforcement”.

Outputs related to the Immediate Outcome 4 “A functional national system for monitoring and enforcement” (Outputs 8 to 10 in Diagram 2)

66. The “Guidelines for Networking cooperation and Information exchange among Competent Authorities”, mentioned above, also refer to the monitoring and compliance/enforcement system. Moreover, specific “Guidelines for Monitoring and Enforcement of Environmental Impacts of Living Modified Organisms” have been drafted, as well as “Customs Guidelines for Transboundary Movement of LMOs into Liberia”, for which a first training workshop targeting Customs officers has been organised and implemented.

67. With the financial and technical support of the Project, the National Standards Laboratory has been upgraded for the detection of Genetically Modified Organisms (GMOs), following a Memorandum of Understanding between the Environment Protection Agency and the Ministry of Commerce. A basic, preliminary training has been carried out on GMOs detection with the support
of an international consultant. The laboratory is not operational since the training was only introductory and there is the need for further technical and practical training.

### Outputs related to the Immediate Outcome 5 “A functional system for public awareness, education and participation” (Outputs 11 to 15 in Diagram 2)

68. A “Strategy for public awareness and participation on Biosafety” has been prepared and shared with the main stakeholders. It represents the guiding document for the activities carried out in this component, among which we highlight:

- The production of a set of training / awareness guides for the stakeholders and the media;
- The production and dissemination of outreach material for the general public and for the schools, such as the leaflets “Biosafety and You” and “Frequently Asked Questions”.

69. Three workshops on “Public Participation and Decision-making” have been organised in three different regions of the country to inform and debate on the implementation and challenges of the National Biosafety Programme, addressing stakeholders from both public and private sectors, including the media.

70. A set of standards have been identified and included in the “Guidelines for Producing and Validating Data Related to Living Modified Organisms for Inputting into Liberia National Biosafety Clearing-House / BCH” (2014) in order to strengthen and facilitate the effective participation to the national dedicated website and to the BCH Central, as well as to ensure data quality. Workshops for the main institutions have consequently been organised.

71. Curricula to mainstream Biosafety into academic and professional programs at the University of Liberia have been drafted, largely discussed and finalized in 2016. A Memorandum of Agreement has been signed between the Environmental Protection Agency (EPA) and the College of Agriculture and Forestry to mainstream Biosafety into the University of Liberia Teaching Programme. On that basis, a Biosafety/Biotechnology Curriculum has been developed and mainstreamed into the Graduate Program of the University and a course has started at the Department of Biological Sciences of the University (certificate and degree levels). In November 2017, 32 students were attending the course.

**Final remarks on Outputs achievement**

72. The Project has delivered a quite impressive number of Outputs, most of them through a participatory and constant stakeholders involvement. More so, when taking into account, not only the complex and highly challenging socio-political and institutional context of the country, but also the occurrence of exceptional external factors that have hit Liberia and caused a serious disruption in the Project’s activities (Outbreak of Ebola virus in 2014 and 2015).

73. Strictly speaking, the Project has failed to achieve three crucial expected outputs (the approval of the Biosafety Policy, the Law and the Regulations), which, in retrospect, were possibly far too ambitious and unrealistic to achieve, mainly because of the overall socio-political environment, linked to bureaucratic inertia. Faced with these obstacles, the attitude of the National Executing Agency and its partners has been adaptive and proactive. That has permitted the
achievement of Project’s Outputs at a suitable level, probably the best possible, considering the limiting external factors. Overall, Outputs achievement is rated Satisfactory (S).

5.4.2 Achievement of Outcomes

74. The Evaluation has assessed to what extent the actual delivery of the Outputs has produced, or have the potential to produce in the short-medium term, the institutional changes and systemic effects (Immediate Outcomes) resulting in a fully operational National Biosafety Framework (Main Outcome). On this basis, this chapter presents a qualitative analysis and interpretation of the Outcomes achieved in the light of the reconstructed Theory of Change (TOC) from Outputs to Outcomes, depicted in Diagram 2.

75. Outcome 1 “Biosafety recognized and mainstreamed into sustainable development policy” has been only partially achieved. The Biosafety Policy has not been endorsed and formally adopted, but the inclusion of Biosafety into the National Biodiversity Strategy and Action Plan (NBSAP) is a positive and relevant achievement.

76. The Immediate “Functional regulatory system for Biosafety” (Outcome 2) currently contemplates only several, specific guidelines, since the draft Law and Regulations have not been approved so far. Ruling Biosafety through Guidelines, a small Biosafety Unit in the Environmental Protection Agency and a National Biosafety Committee (a collaborative mechanism, not a statutory instrument) can be functional for the time being, but obviously inadequate if ever Genetically Modified Organisms come into the agenda of the national agricultural development, which did not happen so far (see Institutional Sustainability, chapter 5.8.3). Relevant assumptions, therefore, persist on this regard, as discussed in the pathway from Outputs to Outcome (see chapter 4.2 and diagram 2). The same can apply to Immediate Outcomes 3 and 4 (the Administrative and the Follow-up/Monitoring/Enforcement systems).

77. Regarding Immediate Outcome 5 “A functional system for public awareness, education and participation”, there are positive elements to be considered, such as the on-going preparation of the Awareness and Participation Strategy, the Guidelines for the implementation of a quality-based flow of information through the Biosafety Clearing-House (BCH) and the design and implementation of Biosafety Curricula at academic level. However, although some outputs have been delivered in the right direction, a functional and organic system is not in place.

Final remarks on Outcomes achievement

78. The Biosafety Framework of Liberia started from a very low baseline and has surely progressed within a limiting context. The scores presented by the Project in the Initial, Mid-Term and Final “Tracking Tools” objectively reflect this situation. They were, respectively: 5/32, 11/32 and 18/32. Actually, while some of the limitations of the current context have been by-passed through adaptive solution described in this chapter, relevant assumptions still stand unfulfilled, particularly in the institutional sphere (Regulatory and Administrative systems), in public participation mechanisms and in the enhancement and consolidation of an effective programme for Capacity Building (see assumptions in chapter 4.2 and Diagram 2).

79. Key-stakeholders for Outputs and Outcomes achievement have been the Environmental Protection Agency (EPA), particularly the National Project Coordinator (staff of the Agency), and the national stakeholders actively involved in collaborative mechanisms (the National Biosafety Framework of Liberia started from a very low baseline and has surely progressed within a limiting context. The scores presented by the Project in the Initial, Mid-Term and Final “Tracking Tools” objectively reflect this situation. They were, respectively: 5/32, 11/32 and 18/32. Actually, while some of the limitations of the current context have been by-passed through adaptive solution described in this chapter, relevant assumptions still stand unfulfilled, particularly in the institutional sphere (Regulatory and Administrative systems), in public participation mechanisms and in the enhancement and consolidation of an effective programme for Capacity Building (see assumptions in chapter 4.2 and Diagram 2).

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Committee, Memorandum of Understandings and Agreements). A key-role has also been played by UN Environment, by effectively providing counselling, expertise and funding.

80. Despite the remarkable resilience demonstrated by the stakeholders and their capacity to find out and implement adaptive forms of Biosafety management, their motivation was not sufficient to set out a workable Framework. Policy, Regulatory and Administrative systems are not in place and the adequate capacity for technically-sound decision-making and for the effective management of the regulatory, administrative and monitoring systems still remains a strong Assumption for achieving Intermediate State 1 (Improved Decision-making), as discussed in the TOC (see Assumptions in chapter 4.2 and Diagram 2). In the light of all these considerations, the achievement of Project Outcomes has been rated Moderately Unsatisfactory (MU).

81. The Evaluation has, nevertheless, to highlight the linkages between the nature of the project context in which the project was operating (rated Unfavourable, see chapter 5.3), and the overall performance in effectiveness in achieving its goals and objectives. The Evaluation Team has, therefore, agreed on upgrading the overall score of Project’s Effectiveness, as summarised in Table 10 of Chapter 6.1.1, to Moderately Satisfactory (MS), particularly taking into account the provision in TOR guidelines and foot-note 7 related to Table 10.

5.4.3 Likelihood of impact

82. The possible pathway from the Project Outcome to the intended Impact of the Project has been discussed in chapter 4.3 and visualised in Diagram 3. As explained in previous sections 5.4.1 and 5.4.2, the conditionality of the overall socio-political and institutional context is extremely strong and can be unmanageable for a circumscribed agenda like Biosafety is, at present, in Liberia.

83. In fact, the huge challenges that the country is facing in priority sectors like, for instance, Health and Education, may jeopardise the Government support for the implementation of the Biosafety Framework, a problem of opportunity cost. One cannot forget that Liberia is 177th out of 185 countries in the Human Development Index of 2015. Regional and international support should, therefore, still play a substantive role in maintaining Biosafety well present in the Agenda (see Assumptions in Diagram 3, Pathway to Impact).

84. According to its TOR, the Evaluation should assess the likelihood of the Project to achieve the expected Impact, by using the rating scales of Table 7 and 8 that follow, which basically combines Project Outcome achievement with the progress towards superior levels, the so-called Intermediate States towards Impact (Diagram 3 in chapter 4.3). The unfavourable socio-political and institutional context did not permit to achieve the full implementation of the Regulatory, Administrative and Monitoring/Enforcement systems, particularly the enactment of the Biosafety Law and its Regulations, which has been identified as a crucial assumption for progressing toward Impact. (see diagrams 2). As a result, the Outcome Rating in Table 7 falls under “D”.

85. Some steps have been given to enhance results sustainability (e.g. the inclusion of Biosafety in the National Biodiversity Strategy and Action Plan, the setting of the National Biosafety Committee, a Biosafety academic course), but their effects are not yet tangible, because too limited or recent for supporting the progress towards Intermediate States, which has been rated “C”.

86. The combination of these due elements gives an aggregate rating “DC” and the Project is currently considered “Moderately Unlikely” to achieve the expected Impact (see Table 8 below).
Table 7. Rating scale for outcomes and progress towards ‘intermediate states’

<table>
<thead>
<tr>
<th>Outcome Rating</th>
<th>Rating on progress toward Intermediate States</th>
</tr>
</thead>
<tbody>
<tr>
<td>D: The project’s intended outcomes were not delivered</td>
<td>D: No measures taken to move towards intermediate states.</td>
</tr>
<tr>
<td>C: The project’s intended outcomes were delivered, but were not designed to feed into a continuing process after project funding</td>
<td>C: The measures designed to move towards intermediate states have started but have not produced results</td>
</tr>
<tr>
<td>B: The project’s intended outcomes were delivered, and were designed to feed into a continuing process, but with no prior allocation of responsibilities after project funding</td>
<td>B: The measures designed to move towards intermediate states have started and have produced results, which give no indication that they can progress towards the intended long-term impact.</td>
</tr>
<tr>
<td>A: The project’s intended outcomes were delivered, and were designed to feed into a continuing process, with specific allocation of responsibilities after project funding.</td>
<td>A: The measures designed to move towards intermediate states have started and have produced results, which clearly indicate that they can progress towards the intended long-term impact.</td>
</tr>
</tbody>
</table>

Table 8. ‘Overall likelihood of impact achievement’ on a six-point scale.

<table>
<thead>
<tr>
<th>Highly Likely</th>
<th>Likely</th>
<th>Moderately Likely</th>
<th>Moderately Unlikely</th>
<th>Unlikely</th>
<th>Highly Unlikely</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA AB BA CA BB+ CB+ DA+ DB+</td>
<td>BB CB DA AC+ BC+</td>
<td>AC BC CC+ DC+</td>
<td>CC DC AD+ BD+</td>
<td>AD BD CD+ DD+</td>
<td>CD DD</td>
</tr>
</tbody>
</table>

5.5 Financial Management

87. The Project has satisfactorily managed the financial and administrative aspects. As showed in table 9, financial reports have been prepared regularly, appropriate administrative procedures for procurement have been adopted and the purchase of the main equipment (laboratory) has been carried out without major problems. Two relevant Project’s Agreements with national stakeholders have been enacted and are filed in the Biosafety Information System (ANUBIS). Eight Budget Revisions have been prepared and approved, mainly for re-allocation of unspent money, without substantive changes through budget lines. Overall, Financial Management is rated Satisfactory (see table below).

Table 9: Financial Management Table

<table>
<thead>
<tr>
<th>Financial management components:</th>
<th>Rating ***</th>
<th>Evidence/ Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Questions relating to financial management across the life of the project:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compliance with financial requirements and procedures of UN Environment and all funding partners (including procurement rules, financial reporting and audit reports etc)</td>
<td>S</td>
<td>- Inventory reports have been prepared in 2015 and in 2017 (filed in the Information System ANUBIS) - The Project has undergone one auditing at the end of 2012 (report in ANUBIS) and the final Auditing is already planned for the month of November 2017</td>
</tr>
<tr>
<td>Timeliness of project financial reports and audits</td>
<td>S</td>
<td>Financial report uploaded to the Information System ANUBIS. One audit was done in 2012 and the final one is expected by November 2017.</td>
</tr>
<tr>
<td>Quality of project financial reports and audits</td>
<td>S</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Contact/communication between the PM/TM &amp; FMO</td>
<td>S</td>
<td>Through Periodic Progress Reports, field visits of the UN Environment Task Manager and constant communication (email, etc.), participation to the annual NPC meetings</td>
</tr>
<tr>
<td>PM/TM &amp; FMO responsiveness to addressing and resolving financial issues</td>
<td>HS</td>
<td>Very Satisfactory</td>
</tr>
<tr>
<td>2. Questions relating to financial information provided during the evaluation:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Financial management components:

<table>
<thead>
<tr>
<th>Provision of key documents to the evaluator (based on the provision of A-F below)</th>
<th>Rating</th>
<th>Evidence/ Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. An up-to-date ‘Co-financing and Project Cost’s table</td>
<td>S</td>
<td>All available in ANUBIS and hard-copies</td>
</tr>
<tr>
<td>B. A summary report on the project’s annual financial expenditures during the life of the project</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>C. Financial documents from Mid-Term Evaluation/Review (where appropriate)</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>D. All relevant project legal agreements (e.g. SSFA, PCA, ICA) – where appropriate</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>E. Associated financial reports for legal agreements (where applicable)</td>
<td>Yes</td>
<td>With the Ministry of Commerce (laboratory) and with the university (Biosafety Courses)</td>
</tr>
<tr>
<td>F. Copies of any completed audits</td>
<td>Yes/No</td>
<td>Only one Audit is posted in ANUBIS</td>
</tr>
</tbody>
</table>

Demonstrated knowledge by the PM/TM & FMO of partner financial expenditure: HS

PM/TM & FMO responsiveness to financial requests during the evaluation process: HS

**Overall rating: S***

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

PM/TM  Project Manager/Task Manager

FMO  Financial Management Officer

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### 5.6 Efficiency

88. The project has been very time-efficient, despite the exceptional circumstances (Ebola outbreak) that have hampered or totally prevented the activities. A no-cost extension of 16 months was approved for that reason and a second one of 4 months for the administrative closure of the Project. Most of the planned activities were already either concluded or on-going when the slowing down or interruption occurred, and they were resumed and timely concluded, once the emergency was out.

89. As previously discussed under chapter 5.4, the Project has put in place adaptive management solutions face to some unsurmountable obstacles of institutional nature, which has allowed to maximize results within the secured budget and agreed project timeframe. The budget allocated has been timely spent at 100%. The project has also relied upon collaborative agreements and partnerships, building upon pre-existing institutions and fostering synergies and complementarities.

90. Despite cost-effectiveness, the Project has been greatly challenged by the limited achievement of Project Outcomes. Overall, Project Efficiency is rated **Satisfactory (S)**.

### 5.7 Monitoring and Reporting

91. The Project Document included (as in all GEF /UN Environment Projects) a costed Monitoring and Evaluation (M&E) Plan (Appendix 7 to the ProDoc), with a budget of 20,000 USD, including a Mid-term Review (actually carried out in August 2014, the report of which, however, has not been found in ANUBIS), the Final Evaluation (the current one) and annual Audits.

92. The Costed M&E Plan presented some useful elements (baseline situation, mid-term and final targets) that could have actually helped to design and implement a Project Monitoring System to track progress on a more regular basis (for instance quarterly or every six months, in
concomitance with the Progress Reports). That was not the case, in Liberia and in the other two projects under evaluation (Ghana and Nigeria). In fact, usually, Project Teams do not know about the existence of this tool or do not consider it significant. As already mentioned, the Framework Results (Logframe) only presented Outcomes and the so-called “Outcome Indicators” could be considered, in fact, Outputs.

93. The Project Document did not clearly identify and foresee the setting of a comprehensive Monitoring System, except: a) the Mid-term Review carried out by the Task Manager (TM); b) the follow-up and supervision of the TM, which was actually very assiduous, and c) the setting of a stakeholders’ Biosafety / Steering Committee that was conceived as, and indeed was, a relevant instrument for the overall, strategic steering of the Project, not a Monitoring instrument for Project Management. The annual regional meeting organised by UN Environment Task Manager for the Project Teams of a group of countries has also been recognised by the Teams as a very useful instrument of exchange, mutual learning and joint self-evaluation of projects’ progress and problems.

94. The National Project Coordinator (NPC) made a constant, proximity-monitoring of Project’s Activities, through the Annual Workplan, which basically comprised a Calendar of Activities and represented the most used instrument to steer and monitor the Project. This is also a common finding in all the three Projects evaluated (Ghana, Liberia and Nigeria).

95. The usual GEF/UN Environment tools for Reporting on Project’s Progress have been regularly implemented, transmitted and are all filed in the file-repository (ANUBIS). GEF Tracking Tools (Initial, Mid Term and Final) have also been produced and are filed in ANUBIS.

96. Overall, the Reporting system above did not fully succeed in being an effective Monitoring System (a common situation in the three countries involved in the current Evaluation), for two main inter-related reasons:

- In the evaluator’s opinion, the Project Teams look at the Progress Reports as a bureaucratic / administrative requirement for the Information System (ANUBIS), rather than an effective monitoring and steering tool for the efficient and effective implementation of the Project. Admittedly, the format of the Progress Reports does not help the users in considering it as a “living” and useful instrument, too. Usually, the Progress Reports are a “copy and paste”, from one semester to another, with just few lines of updating activities (e.g. workshops, training, a new document produced). Feed-backs from UN Environment are also insufficient, just few comments in track-changing mode by the Task Manager that cannot, obviously, cope alone with a bulk of progress reports coming from all over the world, all at the same deadline. No follow-up has been registered also by the Evaluation Office and the Sub-programme coordinator (Environmental Governance) on the annual Project Implementation Reviews (PIR).

- Emphasis is given, at all levels, on Activities rather than Outputs delivery and, even less, on Outcomes achievement. The only reporting instrument that has a valuable approach focussed on Outcomes (and specific to Biosafety Projects) is the so-called “GEF Tracking tool” that is, or should be, prepared at the beginning, at mid-term and at the end of the Project. In the evaluator’s opinion, however, and again, the tool is regarded as a sort of “questionnaire” to be completed for the donor, rather than a useful instrument to self-assess and discuss the effectiveness of the Project. The lack of any reported and meaningful feedback (at least not found in ANUBIS) both from GEF and UN Environment also reinforces this common “misinterpretation”. The problem is complex and probably generated by an insufficient awareness and comprehension of what a “Result-based approach” of a Project is, at all levels, and by a common under-estimation
of the relevance of the “basics” of Project Management (including Planning, Monitoring and Evaluation) for appropriately running a Project.

97. From all the above, it seems clear that the effectiveness of Monitoring and Reporting should be assessed against a number of causal and complex problems that could not be addressed and worked out solely by the Project Team, the Task Manager and the Steering Committee. As a matter of fact, the Reporting System was implemented and the value of the ANUBIS platform has to be objectively emphasised. For instance, most of the information, evidences and facts made available to the Evaluation have only been possible thanks to data posted in ANUBIS. This is a relevant finding that cannot be undervalued.

98. The Evaluation, therefore, believes that the assessment and rating of Monitoring and Reporting has to be regarded as a value judgement not specifically addressing Project’s performance, but, rather, the overall Monitoring and Reporting System put in place by the Implementing Agency (UN Environment) and the Global Environment Facility (GEF). As visualised in the Rating Table in Chapter 6.1.1, the rating of the components of the System is uneven, and the overall rating is, everything considered, Satisfactory (S).

5.8 Sustainability

99. 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 and c) Institutional sustainability.

5.8.1 Socio-political sustainability

100. The Project has given substantive steps in putting forward various aspects of Biosafety Agenda with a range of national partners. Governmental institutions, Academic world, Schools and Youth, General Public and politicians currently know about Biosafety much more than five years ago, which is a first condition for socio-political sustainability.

101. Biosafety seems likely to gain more attention and support if strongly linked to the Biodiversity and Natural Resources Management programmes of the country, an “appealing” agenda, both at national and international level. Therefore, the inclusion of Biosafety in the National Biodiversity Strategy and Action Plan 2017-2030 (NBSAP) can become a key-driver for the Socio-political Sustainability of the national Biosafety Framework in the near future.

102. Nevertheless, a proper and comprehensive regulatory and administrative regime remains a crucial conditionality, particularly if a more challenging agenda would approach, with the introduction of Genetically Modified Organisms in Liberia. The Project Team and the national Stakeholders deem that effective awareness and information activities are indispensable and should be strongly pursued towards Policy and Decision-Makers, notably the line-Ministries, the Cabinet of the Government and the Office of the President.

103. Moreover, socio-political sustainability will also crucially depend on the setting of a sound and transparent process of discussion, decision-making and implementation of the Biosafety agenda at national level through an open and participatory approach, which did not happen so far. Overall, Socio-political sustainability is still rated Moderately Unlikely (MU).
5.8.2 Financial sustainability

104. As previously discussed in the report, Biosafety priorities are reflected in the National Biodiversity Strategy and Action Plan 2017-2030 (NBSAP). The next challenge ahead is, therefore, to have Biosafety activities specifically budgeted in the Plan (see Assumption for Intermediate State 1 and 4, Diagrams 2 and 3).

105. Taking into account the strong limitations of the national budget, Biosafety will still need external support and that is why the national stakeholders have to seriously put in place a resource mobilisation and fund-raising strategy (Assumption in Diagram 2), perhaps with the support of UN Environment and also through regional initiatives. Under current conditions, Financial Sustainability is rated Moderately Unlikely (MU).

5.8.3 Institutional sustainability

106. The current anchorage of Biosafety as a Unit within the Division of Multilateral Environmental Agreements of the Environment Protection Agency (EPA) is a positive factor to be considered. This option actually highlights the international commitment and accountability of the country to its obligations pursuant the Cartagena Protocol, which is a form to give Biosafety more institutional weight and relevance, hence sustainability.

107. Maintaining the Unit sufficiently operational and effective, however, could prove difficult after the closure of the Project, given the evident budgetary limitations of the Environmental Protection Agency, which spends around 80% of its meagre budget for the salary of its personnel and has a challenging agenda ahead regarding the Conservation of the Natural Resources of the country.

108. The collaborative, non-statutory forms of partnerships put in place (the National Biosafety Committee, NBC) is based on the document “Guidelines for Networking, Cooperation and Information Sharing on Biosafety related issues among Competent Authorities” (in fact one of the Outputs of the Project, see section 5.4.1), which, however, has not received so far any formal endorsement by the institutions involved.

109. Besides its institutional weakness, the Biosafety Committee also lacks the necessary technical support (for instance a Technical Advisory Committee) for enabling in the future a solid process of decision-making based on technically sound information. Overall, under current conditions, the institutional sustainability is rated Moderately Unlikely (MU).
6 Conclusions and Recommendations

6.1 Conclusions

110. The Project has been conceived to support Liberia in having a workable and transparent National Biosafety Framework (NBF), through the setting and implementation of its five core components, i.e. a Biosafety policy, a regulatory regime, an administrative system, a follow-up/monitoring/enforcement system and mechanisms for public awareness, education and participation. These five elements of the NBF coincide, in fact, with the five Immediate Outcomes of the Project (see Table 5 in chapter 4.1 and Diagram 2 in chapter 4.2, Theory of Change).

111. The common approach of GEF/UN Environment projects for “National Biosafety Framework Implementation”, their similar design and expected results may fail to properly take into account the actual baseline situation and peculiarity of the countries. As a matter of fact, in the case of Liberia, the Project Document in its “Risk Analysis and Risk Management Measures”, had already identified some outstanding risks (see chapter 4.2), such as “Administrative inertia to advance the biosafety policy and regulatory regime”, “Weak institutional coordination”, “Low capacities in risk assessment, monitoring and handling of application requests” and “Low public awareness on biosafety”.

112. Whereas some of them have been addressed by the Project, as showed by the significant enhancement of national capacities and of public awareness (see chapter 5.4.1, regarding the delivery of relevant Outputs on those aspects), the Project has inevitably been strongly challenged by the complex socio-political and institutional context of the country, as well as by administrative inertia. Mitigating those risks have proved to be virtually unsurmountable for the Project team that had to give up on attaining some relevant expected Outputs, like the endorsement of the Biosafety Policy, the approval of the draft Biosafety Law and of subsequent Regulations.

113. Moreover, the socio-economic situation of Liberia, a low-income country rating 177th out of 185 countries in the 2015 Human Development Index, represents an objectively strong conditionality in terms of priority definition and opportunity cost for Biosafety agenda. On the top of that, the exceptional outbreak of Ebola virus in 2014 created a new national emergency and disrupted many activities in the country, including Project’s activities.

114. Faced with these impediments, the Project has given proof of a high capacity of resilience, risk adaptation and adaptive management. Not only the essential policy and regulatory instruments mentioned above have been discussed and prepared, but also the administrative system for Biosafety management has been designed and a number of national stakeholders have been actively involved in the process.

115. A collaborative, non-statutory mechanism has been established (the National Biosafety Committee, NBC, described and discussed in 5.4.1 regarding Outputs for Immediate Outcome 3 and under Institutional Sustainability) and supported by relevant capacity building activities. On this basis, the Project has been able to create a favourable “micro-environment” for progressing in the implementation of the Biosafety Framework, looking forward to a more conducive “macro-environment” in the socio-political and institutional context.

116. This progress has, for instance, led to the setting of the laboratory for the detection of Genetically Modified Organisms at the National Standards Laboratory (Min. of Commerce), and to the implementation of a Biosafety Curriculum at the University of Liberia, through an already ongoing course able to deliver either a “stand-alone” academic certificate or a credit for the Graduation level. “Guidelines for Networking cooperation and Information exchange among Competent Authorities” have also been set-out, which define the role and responsibility of the
National Biosafety Committee (NBC). However, the document lacks institutional strength since the NBC and its outcomes are not bounding or enforceable, given the non-statutory nature of the Committee.

117. The undisputable and significant achievements at Outputs level cannot conceal the current fragility of the Biosafety Framework in Liberia, since the underlying assumptions for its consolidation have not been removed or mitigated so far, just by-passed through the flexible and adaptive approach of the Project, as discussed in the final remarks of chapter 5.4.2 (Outcomes achievement) and 5.4.3 (Likelihood of Impact).

118. Moreover, evidently, the “light” model of Framework established so far has to prove efficient and effective face to the actual introduction (no matter legal or illegal) of Genetically Modified Organisms in the country, which did not happen, or was not detected, so far.

119. The Evaluation has also concluded that the overall Monitoring and Reporting System of UN Environment / GEF Projects shows, as largely discussed in chapter 5.7, some positive elements, such as the setting and effective use of a regular Reporting system and of the ANUBIS platform, and the constant proximity monitoring by the Project Team, the Project Steering Committee and the UN Environment Task Manager. Nevertheless, relevant weaknesses have also been detected within the whole chain of the GEF / UN Environment Monitoring and Reporting System, resulting in the inadequate use of the Planning, Monitoring and Evaluation tools foreseen in the Project Document, the lack of a comprehensive and effective Project Monitoring System in place and a low capacity of the Project Team to grasp principles and methods of a “Result-based approach” to the Project, of which the Monitoring system is an essential component. A Recommendation (chapter 6.3) has been formulated on this respect.

120. Based on all the above, the answers to the key strategic questions specified in the Terms of Reference of the Evaluation (see Annex 2) have to be assessed in their likelihood of evolution and consolidation, for which substantive assumptions have to materialise, as visualised in Diagrams 2 and 3 (Chapters 4.2 and 4.3).

121. A “fully functional and responsive regulatory regime that responds to the obligations under the Cartagena Protocol on Biodiversity” (as asked in the first question) cannot be claimed to be in place, since none of the legal instrument prepared by the Project has been formally adopted in the country. This is an unavoidable assumption for achieving a transparent and accountable process of Decision-making and a reliable Biosafety Governance system (see Diagram 2, chapter 4.2).

122. The development of “institutional and technical capacity, awareness and participation amongst the key actors” (as asked in the second question) has been surely fostered by the Project, as demonstrated by the acquired capacity of preparing substantive policies, strategies, regulatory instruments and academic curricula, as well as by the proactive involvement of national partners in those endeavours. These achievements, however, did not receive adequate institutional and socio-political support. Moreover, the progression in the process needs more technical support for improving and consolidating the capacity put in place, so as to make Liberia fully responsive face to further, foreseeable challenges, for instance in the areas of Risk Assessment, GMOs detection, Monitoring and Enforcement, among others. This is also captured in the Assumptions of Diagram 2 and will be reflected in the Recommendations of this report.

123. The third question, concerning the “consolidation of a functional national system that can monitor Biotechnology and follow up the releases of Living Modified Organisms (LMOs) and their possible effects on the environment”, has been partially answered in the previous paragraph. There is the need of structured procedures and mechanisms, relying on formal, statutory and enforceable instruments that a “collaborative mechanism” (like the National Biosafety Committee) cannot provide.
6.1.1 Evaluation Criteria and Ratings Table

The following Table provides the summarised rating of the different criteria established by UN Environment Evaluation Office (EO) that have been assessed all along this report. Overall, the rating of Project performance is rated “Moderately Satisfactory”.

Table 10: Evaluation Criteria and Ratings Table

<table>
<thead>
<tr>
<th>Criterion (section ratings A-I are formed by aggregating the ratings of their respective sub-categories, unless otherwise marked)</th>
<th>Summary Assessment</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Strategic Relevance</strong></td>
<td>Very satisfactory in all aspects (see below)</td>
<td>HS</td>
</tr>
<tr>
<td>1. Alignment to MTS and PoW</td>
<td>Well aligned with PoW 2010-11, Sub-Programme Environmental Governance, Expected Accomplishment (EA) B.</td>
<td>HS</td>
</tr>
<tr>
<td>2. Alignment to UNEP/GEF/Donor strategic priorities</td>
<td>Project belongs to GEF Biodiversity Focal Area, Strategic Programme 6 (BD-SP6): “Building Capacity for the Implementation of the Cartagena Protocol on Biosafety”.</td>
<td>HS</td>
</tr>
<tr>
<td>3. Relevance to regional, sub-regional and national environmental priorities</td>
<td>Relevant for the management and safe use of GMOs in the context of Sustainable Development at national and West-Africa level</td>
<td>HS</td>
</tr>
<tr>
<td><strong>B. Quality of Project Design</strong></td>
<td>Project Design Quality assessed in Inception Report. Scores poorly in Intended Results and Causality, Logical Framework and Monitoring, Governance and Supervision Arrangements.</td>
<td>MU</td>
</tr>
<tr>
<td><strong>D. Effectiveness</strong></td>
<td>Overall Effectiveness rating upgraded to MS (see foot-note 7 and § 83)</td>
<td>MS</td>
</tr>
<tr>
<td>1. Achievement of outputs</td>
<td>A quite impressive number of Outputs despite complex and highly challenging socio-political and institutional context. For this reason, some outputs were not delivered.</td>
<td>S</td>
</tr>
<tr>
<td>2. Achievement of direct outcomes</td>
<td>Limiting socio-political and institutional context did not permit to achieve the implementation of the Regulatory, Administrative and Monitoring/Enforcement systems. Human Resources in need of further improvement.</td>
<td>MU</td>
</tr>
<tr>
<td>3. Likelihood of impact</td>
<td>To a limited extent, measures designed to move towards intermediate states have started, but did not produce yet tangible results.</td>
<td>MU</td>
</tr>
<tr>
<td><strong>E. Financial Management</strong></td>
<td>Financial reporting regularly completed and filed</td>
<td>S</td>
</tr>
<tr>
<td>1. Completeness of project financial information</td>
<td>Smoothly in place throughout project life</td>
<td>S</td>
</tr>
<tr>
<td>2. Communication between finance and project management staff</td>
<td>Compliant (e.g. procedures for international purchase of equipment)</td>
<td>S</td>
</tr>
<tr>
<td><strong>F. Efficiency</strong></td>
<td>Project time-efficient, despite several hindrances and exceptional humanitarian crisis. Cost-effectiveness greatly challenged by the partial achievement of Outcomes.</td>
<td>S</td>
</tr>
</tbody>
</table>

7 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.
6.2 Lessons Learned

125. **Lesson 1.** The satisfactory performance (highly satisfactory in terms of Outputs) of the Project, under the hard socio-economic situation of Liberia and its complex socio-political and institutional context, represents in itself an extraordinary lesson to be learned. The personal commitment of the people championing Biosafety in the country, the proactive engagement of the national stakeholders involved and the targeted technical support of UN Environment can make, and indeed made, the difference. This is a relevant and encouraging lesson to be learned.

126. **Lesson 2.** Risk adaptation and a flexible approach can produce, if not sustainable Outcomes, significant and quality Outputs that represent valuable assets available for further steps and achievements.
127. **Lesson 3.** Stakeholders’ participation is not only instrumental to the achievement of results, but also an extraordinary element of mutual reinforcement, team-building and consensus building that enhances individual and groups’ capacity to tackle problems and to identify workable solutions.

6.3 **Recommendations**

128. Based on the main Findings and Conclusions, the evaluation mission’s recommendations are the following:

**Recommendation 1: to the Environmental Protection Agency (EPA) and UN Environment (regarding Capacity Building)**

<table>
<thead>
<tr>
<th>Recommendation 1:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Evaluation strongly recommends keeping on and increasing Capacity Building activities through the formulation and adoption of a comprehensive short-medium term Capacity Building Plan (2-3 years) that should contain:</td>
</tr>
<tr>
<td>c) The improvement of the technical know-how in key areas, such as Risk Assessment, GMOs detection at laboratory level and for the Customs staff, Public Awareness and Participation including Risk Communication and further implementation of the Biosafety courses at academic level;</td>
</tr>
<tr>
<td>d) The setting of a resources mobilization strategy at National, Regional and International level (NBSAP, ECOWAS, NEPAD, GEF/UN Environment, Bilateral Cooperation).</td>
</tr>
</tbody>
</table>

**Summary of Findings and Conclusions supporting the Recommendation**

Capacity building activities have been implemented but strongly need to be continued and improved. (ref. TOC § 42, Findings § 81, 83, Sustainability § 111, Conclusions § 124).

**Recommendation 2: to the Environmental Protection Agency (EPA) and UN Environment (regarding the Sustainability of the National Biosafety Framework in place)**

<table>
<thead>
<tr>
<th>Recommendation 2:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Evaluation recommends the following measures:</td>
</tr>
<tr>
<td>d) To keep the Biosafety Unit active within the Multilateral Environmental Agreements division at the Env. Protection Agency;</td>
</tr>
<tr>
<td>e) The implementation of the Biosafety actions foreseen in the NBSAP (Target 13, Conservation of Genetic Resources);</td>
</tr>
<tr>
<td>f) The enhancement of the existing National Biosafety Committee (NBC) in support of the Biosafety Unit of the EPA, through its gradual consolidation and possible transformation from a collaborative mechanism into a statutory body of the Agency.</td>
</tr>
</tbody>
</table>
Summary of Findings and Conclusions supporting the Recommendation

Preliminary conditions exist for Socio-political, Institutional and Financial Sustainability, yet in need of gradual and substantive measures for their full achievement (ref. Findings § 62, 67, 77, 78, 83, 87, Lik. of Impact § 87, Sustainability § 103 to 107, Conclusions § 117 to 120).

Recommendation 3: to GEF and UN Environment, particularly UN Environment Evaluation Office (EO) (regarding the implementation of the Monitoring and Reporting System in all Projects)

Recommendation 3:
The Evaluation recommends giving effective steps for the revision and improvement of the whole Monitoring and Reporting System of the Projects, particularly addressing:

  c) Awareness raising and capacity building of Projects’ Teams on the relevance and implementation of effective Project Monitoring and Reporting Systems, based on a sound “Project Management by Results”;
  d) Putting in value, review and improve the existing Monitoring and Reporting tools (particularly the “Costed M&E Plan”, the “GEF Tracking Tools” and the “Project Implementation Review” / PIR), as living instruments for the setting of appropriate Project Monitoring Systems at Project level.

Summary of Findings and Conclusions supporting the Recommendation

Relevant weaknesses have been detected within the whole chain of the GEF / UN Environment Monitoring and Reporting System, resulting in the inadequate use of the Planning, Monitoring and Evaluation tools foreseen in the Project Document, the lack of a comprehensive and effective Project Monitoring System in place and a low capacity of the Project Team to grasp principles and methods of a “Result-based approach” to the Project. (ref. whole Chapter 5.7, Conclusion § 121)
Annexes

1) Evaluation ToR (without annexes)
2) List of people met
3) Summary co-finance information and a statement of project expenditure by activity
4) Evaluation Bulletin
6) List of documents consulted
7) Brief CV of the consultant
8) Quality Assessment of the Evaluation Report
TERMS OF REFERENCE

Terminal Evaluation of the UN Environment/Global Environment Facility projects:

B: “Implementation of National Biosafety Framework for Ghana”

Section 1: PROJECT BACKGROUND AND OVERVIEW

Project rationale

17. **Nigeria**: Nigeria as a nation is highly endowed with enormous biodiversity which requires conservation and sustainable utilization of these natural resources. With the advent of modern Biotechnology, Living Modified Organisms (LMOs) and their products have received a lot of international attention as well as their perceived adverse impacts on the environment and on human health. Nigeria joined the confederation of nations in taking precautionary safety measures by signing the Cartagena Protocol on Biosafety (CPB) in 2000 and ratified in 2003. Nigeria has also developed a National Biosafety Frame and is currently developing its Biosafety Clearing House. Genetically engineered/modified (GE/GM) crops in agriculture are increasingly becoming available on the market, especially in agricultural development. To apply GM technology to solve such problems requires capacity building in the field of risk assessment and risk management, detection of LMOs as well as socio-economic and ethical aspects associated with adoption of the GM technology. It is therefore, important to strengthen the national capacity in all subjects related to safe application of modern biotechnology. It is very crucial now for the country to collaborate with development partners to build a functional National Biosafety Framework that would facilitate the safe application of modern biotechnology in the country and the implementation of the Cartagena Protocol on Biosafety.

18. **Ghana**: Ghana developed its National Biosafety Framework in 2004 which addresses a biosafety policy, regulatory regime, systems for handling, monitoring and enforcement and public participation with related institutional arrangements. Biotechnology in Ghana has been highlighted as one of the strategic tools to modernize agriculture, assist in increased agricultural productivity, increased agro-processing and industrial delivery. Nevertheless, some gaps and weak points still exist in the national biosafety system and, taking into account the rapid developments in modern biotechnology, new requirements resulting from development at global and regional levels are to be implemented and reflected at national level as required by treaty and constitutional obligations. The project stands to help Ghana develop capacity to gain information and technical capacity in risk assessment among others as tools to ensuring environmental and food safety especially of LMOs in field trials and as food for feed and/or for processing. In the absence of the project, the competent authorities would be lacking the necessary capacities, both technical and material, and the necessary information sources to cover sufficiently all aspects and new developments connected with the environmental safe management of modern biotechnology.

19. **Liberia**: Liberia is endowed with rich biological diversity as well as other natural resources; its flora and fauna include plethora of plant and animal species of which a total of 110 are endemic (103 plants and 7 animals species) and of high conservation significance. Unfortunately, there is a steady decline in the country's biological diversity owing to a number of anthropogenic factors, a few of which include: unregulated logging, shifting cultivation, monoculture plantations, charcoal production, poaching and hunting, as well as the abandonment of crop landraces in favour of exotic crop varieties that have been introduced into the country for relief purposes. This latter threat is of particular significance to biosafety because it could lead to loss of valuable genes. Cognizant of the threats to the environment and particularly
biodiversity, Liberia acceded to Cartagena Protocol on 15 February 2002 and completed its National Biosafety Framework (NBF) in 2004. However, there are serious capacity needs in terms of skilled human resources and adequate infrastructure. The project is therefore vital to address the capacity building needs of Liberia with respect to the final target of a fully operational NBF, and thus enable Liberia to integrate biosafety into its sustainable management plan for biodiversity and to meet its obligation as a Party to the Cartagena Protocol on Biosafety. Additionally, a functional biosafety system will also safeguard against genetic erosion of the country's valuable crop landraces that are being used as the genetic reservoir for crop improvement, e.g. local rice varieties in breeding programs both regionally and globally to ensure food security.

**Project objectives and components**

20. These projects are part of the GEF’s wider efforts in assisting countries to implement a biosafety regulatory regime in accordance with Agenda 21 and CBD. The global project will assist Parties to the Protocol to meet their obligations by building or strengthening the capacity needed to have an operative NBF in their respective countries including Biosafety Clearing House and enabling activities such as training in risk assessment and risk management of GMOs. This will be done in collaboration with other relevant government sectors, NGOs, private sector, academic and research institutions and CBOs.

21. **Nigeria**: The goal of this Project is to facilitate compliance with and the implementation of the Cartagena Protocol through the establishment of a National biosafety system. Specifically, its main objective is to assist Nigeria to put in place a well-articulated, effective and transparent national biosafety system through the development of the necessary policies, regulatory and technical instruments, and local capabilities in order to meet national development needs.

22. The project components and expected results for Nigeria are as summarised in the table below:

**Table 2. Projects components and outcomes – Nigeria**

<table>
<thead>
<tr>
<th>Project component</th>
<th>Expected Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline established for information on the safe use of biotechnology in Nigeria through a stocktaking analysis.</td>
<td>• Gaps and areas of intervention in the National Biosafety Framework identified to facilitate final project design</td>
</tr>
<tr>
<td>System for handling LMO issues</td>
<td>• A fully functional national systems for handling requests with fully functional risk assessment and risk management system</td>
</tr>
<tr>
<td>Establishment of a regulatory regime consistent with CPB and national obligations</td>
<td>• A fully functional and responsive regulatory regime in line with CPB and national needs</td>
</tr>
<tr>
<td>Strengthening systems for monitoring and enforcement. Strengthening systems for monitoring and enforcement</td>
<td>• Full Systems for monitoring of environmental effects and enforcement are in place.</td>
</tr>
<tr>
<td>System for public education, awareness and participation</td>
<td>• A plan for public education, awareness and participation and access to information is formulated and implemented</td>
</tr>
</tbody>
</table>

23. **Ghana**: The overall goal of the project is to assist Ghana to put in place a functional, transparent and robust national biosafety framework, in accordance with national development priorities, and to fulfil its obligations as a Party to the Cartagena Protocol, Agenda 21 and other related international instruments. The objective of the project is to “strengthen and evolve the institutional and human capacity needed to meet the critical challenges in the operationalisation of the NBF and the obligations under the Cartagena Protocol on Biosafety”. The specific objectives include the following:

- To integrate and incorporate Biosafety issues into the National Development Planning agenda as spelt out in the Ghana Poverty Reduction Strategy, the National Biodiversity Strategy, the National Science, Technology and Innovation Policy and related sectoral policies on sustainable and environmental safe use of Biological Diversity and the proposed Biotechnology and Biosafety Policy.
• To review, consolidate and establish a fully functional and responsive regulatory regime, in line with the Cartagena Protocol on Biosafety (CPB), as well as its national needs and priorities.
• To establish and consolidate a transparent, functional and predictable process related to administration of requests including risk assessment and decision-making in the management of modern biotechnology activities.
• To establish and operationalise a coordinated and collaborative monitoring and enforcement system with delegated responsibilities as spelt out in the National Biosafety Framework and the Biosafety Bill.
• To establish and consolidate a functional national system for public awareness, education, participation, and access to information.

24. The project components and expected results for Ghana are as summarised in the table below:

Table 3. Projects components and outcomes – Ghana

<table>
<thead>
<tr>
<th>Project component</th>
<th>Expected Outcomes</th>
</tr>
</thead>
</table>
| Stocktaking and Biosafety Policy Integration           | • Stocking document used as a baseline for the design of the implementation project.  
|                                                        | • By 2011, Biosafety is integrated and incorporated into the biotechnology and biosafety policy with specific action plans and related sustainable development plans |
| Strengthening the Biosafety Regulatory and Administrative System | • Ghana has a fully functional and responsive regulatory and administrative system with implementation regulations/guidelines/operational procedures in line with CP and other relevant international agreements and national needs in relation to the management of modern biotechnology |
| Monitoring and Enforcement                            | • Ghana has a functional national system for “follow-up” activities, namely monitoring of environmental effects and enforcement |
| Public Awareness and Participation                     | • Ghana has a functional national system for public awareness, education, participation, access to information |

25. Liberia: The overall goal of the project is to assist Liberia to have a workable and transparent NBF in line with its national development priorities and international obligations relative to Agenda 21, the CBD, and the Cartagena Protocol on Biosafety. Specifically, the Project aims to assist Liberia to put in place a well-articulated and effective national biosafety system through the development of necessary policy, regulatory and technical tools as well as capacity building interventions. Its specific objectives are:
• To integrate and incorporate Biosafety into the national sustainable development plan and/or strategies of Liberia.
• To assist in the establishment and consolidation of a fully functional and responsive regulatory regime in line with Cartagena Protocol and also Liberia’s needs and priorities.
• To assist Liberia to establish and consolidate a functional national system for handling requests, perform risk assessment, make decisions on requests, and perform administrative tasks.
• To assist in the establishment and consolidation of a functional system for “follow-up”, namely monitoring of environmental effects and enforcement in Liberia.
• To establish and consolidate a functional national system for public awareness, education, participation and access to information.

26. The project components and expected results for Liberia are as summarised in the table below:

Table 4. Projects components and outcomes – Liberia

<table>
<thead>
<tr>
<th>Project component</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of a comprehensive national biosafety policy</td>
<td>• Biosafety recognized and Mainstreamed as a sustainable development issue in the national development</td>
</tr>
<tr>
<td>Strengthening the administrative and regulatory</td>
<td>• A functional regulatory and administrative system for</td>
</tr>
</tbody>
</table>
**Executing Arrangements**

27. The GEF Implementing Agency for the three projects was UN Environment acting as intermediary between the GEF and the executing agencies in both countries. In this capacity, UN Environment had overall responsibility for the implementation of the projects, project oversight, technical support and co-ordination with other GEF projects.

In Nigeria, the National Executing Agency (NEA) was the Federal Ministry of Environment - which is also the CPB National Focal point. This was later changed to the National Biosafety Management Agency established by the Biosafety Act (2015) which transferred the focal Point and all administrative matters on Biosafety. The NEA was responsible for the sustainability of national biosafety activities on completion of the national project, and providing the necessary scientific, technical, financial and administrative support to the work of the National Coordinating Committee (NCC), working in close co-operation with relevant government agencies, the scientific community, the public and private sectors. The NCC provided policy oversight to the execution of the national project and cross sectoral inputs, and it gave recommendations to facilitate the mainstreaming of biosafety activities in the national sustainable development agenda. A National Project Coordinator (NPC) appointed by the NEA coordinated the execution of the national project, and was the liaison officer for relevant stakeholders. The NPC was assisted by technical, administrative and financial support staff in the project.

In Ghana, the National Executing Agency was the Ministry of Environment, Science and Technology (MEST), also designated as the National Competent Authority by the Government of Ghana under the NBF, whose functions were executed through the Biotechnology and Nuclear Agriculture Research Institute (BNARI) of the Ghana Atomic Energy Commission, an agency under MEST. BNARI worked on behalf of the Government of Ghana to manage the project and ensure that its objectives are met by the end of the project. MEST through its technical agencies provided the necessary scientific, technical, financial and administrative support to the project, working in close co-operation with the relevant government agencies, the scientific community and the public and private sectors. The National Biosafety Committee, with representation from universities, research institutes, regulatory institutions, private sector and civil society, as well as various line Ministries and agencies, provided advice and guidance for the implementation of the National Biosafety Framework. A National Project Coordinator appointed by NEA, with assistance from a full-time project administrative/financial assistant, was responsible for the overall co-ordination, management and supervision of all aspects of the national project.

8 Change of NEA in Nigeria was communicated to UNEP per later dated 22/03/2016 which was uploaded in ANUBIS under “other documents”

9 In Liberia and Ghana, the NCC functions were absorbed into the functions of the already established statutory bodies – the National Biosafety Committee. The National Biosafety Committee is envisaged to evolve into the Technical Advisory Committee under the Biosafety Act in Ghana.

10 With the passage of the National Biosafety Act of Ghana, a National Biosafety Authority (NBA) has been established and is currently the National Focal Point and also Competent Authority on Biosafety. However, it was agreed that BNARI will still host the Project Secretariat and closely work with the NBA till end of the current project.
29. In Liberia, the Environmental Protection of Liberia (EPA) was the National Executing Agency of the project, working in close collaboration with relevant agencies and ministries of government, as well as other stakeholders who participated in the NBF. The NEA used a multi-disciplinary and multi-sectoral National Biosafety Committee to advise and guide the implementation of the National Biosafety Framework. The NBC therefore functioned as the project’s steering committee. The NEA may also establish sub-working groups. A National Project Coordinator appointed by NEA, with assistance from a full-time project administrative/financial assistant, was responsible for the overall co-ordination, management and supervision of all aspects of the national project. The NPC provided overall supervision for any staff in the NBF Team as well as guiding and supervising all other staff appointed for the execution of the various national project components.

Project Cost and Financing

30. The three projects fall into the medium-size project (MSP) category. In Nigeria the overall project budget was US$ 2,011,000 comprising of a GEF allocation of US$ 965,000 and US$ 1,046,000 in-kind co-financing support from the Government of Nigeria. For Ghana, the overall project budget was US$ 1,436,364 of which US$ 636,364 was received from the GEF financing whereas US$ 800,000 was to be provided through co-financing. As for the project in Liberia, the overall budget was US$ 1,107,679 comprising US$ 577,679 from GEF and US$530,000 from co-financing from the Government of Liberia.

<table>
<thead>
<tr>
<th>Financing source</th>
<th>Amount (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEF Trust Fund</td>
<td>965,000</td>
</tr>
<tr>
<td>Co-financing (National counterpart funding)</td>
<td>1,046,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,011,000</strong></td>
</tr>
</tbody>
</table>

Table 5. Estimated project cost in Nigeria (USD)

<table>
<thead>
<tr>
<th>Financing source</th>
<th>Amount (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEF Trust Fund</td>
<td>636,364</td>
</tr>
<tr>
<td>Co-financing (National counterpart funding)</td>
<td>800,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,436,364</strong></td>
</tr>
</tbody>
</table>

Table 6. Estimated project cost in Nigeria (USD)

<table>
<thead>
<tr>
<th>Financing source</th>
<th>Amount (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEF Trust Fund</td>
<td>577,679</td>
</tr>
<tr>
<td>Co-financing (National counterpart funding)</td>
<td>530,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,107,679</strong></td>
</tr>
</tbody>
</table>

Table 7. Estimated project cost in Liberia (USD)

Implementation Issues

31. The UNEP-GEF Biosafety Unit supports several projects funded through the GEF that enable countries to fulfill their obligations as parties to the Cartagena Protocol on Biosafety (CPB) or enable countries to become Parties to the CPB. The specific project interventions include development and implementation of biosafety frameworks at national and regional levels. In addition to achieving the evaluation objectives described in section 2 below, the evaluation should endeavour to capture a comparative analysis of the three countries - Nigeria, Ghana and Liberia, as they are from the same sub region and there is a potential for the harmonization of their national biosafety systems, as most of the regulatory systems in these three countries are similar and there is a lot of trade between them.

Section 2. OBJECTIVE AND SCOPE OF THE EVALUATION

53
Key Evaluation principles

32. 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.

33. The "Why?" Question. As this is a terminal evaluation and 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 consultant’s mind all through the evaluation exercise and is supported by the use of a theory of change approach. This means that the consultant 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.

34. Baselines and counterfactuals. In attempting to attribute any outcomes and impacts to the project intervention, the evaluator 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.

35. 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 Office. There may, however, be several intended audiences, each with different interests and needs regarding the report. The Evaluation Manager will plan with the consultant 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; conference calls with relevant stakeholders, the preparation of an evaluation brief, or an interactive presentation.

Objective of the Evaluation

36. In line with the UN Environment Evaluation Policy\textsuperscript{11} and the UN Environment Programme Manual\textsuperscript{12}, 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 main project partners in each country. Therefore, the evaluation will identify lessons of operational relevance for future project formulation and implementation, especially for the additional phases of the biosafety projects, if applicable.

Key Strategic Questions

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\textsuperscript{12} http://www.UN Environment.org/QAS/Documents/UN ENVIRONMENT_Programme_Manual_May_2013.pdf . This manual is under revision.
37. In addition to the evaluation criteria outlined 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:

To what extent were the projects able to assist Nigeria, Ghana and Liberia to establish and consolidate a fully functional and responsive regulatory regime that responds to their obligations under the Cartagena Protocol on Biodiversity, as well as their national needs for a viable and profitable National Biosafety Framework?

To what extent were the projects able to develop institutional and technical capacity, awareness and participation amongst the key actors in Nigeria, Ghana and Liberia to ensure that biosafety becomes part of their permanent action?

To what extent were the projects able to assist Nigeria, Ghana and Liberia to establish and consolidate a functional national system that can monitor Biotechnology and follow up the releases of Living Modified Organisms (LMOs) and their possible effects on the environment?

To what extent are outcome indicators verifiable, and record progresses towards their target values?

Evaluation Criteria

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

Strategic Relevance

39. 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 projects’ 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:

i. Alignment to the UN Environment Medium Term Strategy13 (MTS) and Programme of Work (POW)

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

ii. Alignment to UN Environment /GEF Strategic Priorities

41. GEF strategic priorities will vary across interventions. UN Environment strategic priorities include the Bali Strategic Plan for Technology Support and Capacity Building14 (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.

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13 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.

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

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

iv. **Complementarity with Existing Interventions**

43. An assessment will be made of how well each 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. 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 and country ownership and driven-ness.

### Quality of Project Design

44. 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. 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 projects’ strengths and weaknesses at design stage are included.

*Factors affecting this criterion may include (at the design stage):* stakeholders participation and cooperation and responsiveness to human rights and gender equity, including the extent to which relevant actions are adequately budgeted for.

### C. Nature of External Context

45. At evaluation inception stage a rating is established for the projects’ 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 and unexpected external operating context, the overall rating for Effectiveness 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

46. The evaluation will assess effectiveness across three dimensions: achievement of outputs, achievement of direct outcomes and likelihood of impact.

#### Achievement of Outputs

47. The evaluation will assess the projects’ success in producing the programmed outputs (products and services delivered by the project itself) 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, a table should be provided showing the original formulation and the amended version for transparency. The achievement of outputs will be assessed in terms of both quantity and quality, and the assessment will consider their usefulness and the timeliness of their delivery. The evaluation will briefly explain the reasons behind the success or shortcomings of each project in delivering its programmed outputs and meeting expected quality standards.
Factors affecting this criterion may include: preparation and readiness, and quality of project management and supervision.

i. Achievement of Direct Outcomes

The achievement of direct outcomes is assessed as performance against the direct outcomes as defined in the reconstructed Theory of Change. These are the first-level outcomes expected to be achieved as an immediate result of project outputs. As in (i) above, a table can be used where substantive amendments to the formulation of direct outcomes are 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 contribution should be included.

Factors affecting this criterion may include: quality of project management and supervision; stakeholders’ participation and cooperation; responsiveness to human rights and gender equity and communication and public awareness.

ii. 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. The Evaluation Office’s approach to the use of TOC in project evaluations is outlined in a guidance note available on the EQU website (http://web.unep.org/evaluation/working-us/theory-change) and is supported by an excel-based flow chart called, Likelihood of Impact Assessment (see Annex 1). 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.

The evaluation will consider the extent to which the project has played a catalytic role or has promoted scaling up and/or replication as part of its Theory of Change and as factors that are likely to contribute to longer term impact.
52. 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 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 project management; stakeholders' participation and cooperation; responsiveness to human rights and gender equity; country ownership and driven-ness and communication and public awareness.

E. Financial Management

53. Financial management will be assessed under three broad themes: completeness of financial information, communication between financial and project management staff and compliance with relevant UN financial management standards and procedures. 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 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 and quality of project management and supervision.

F. Efficiency

54. In keeping with the OECD/DAC definition of efficiency, the evaluation will assess 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.

55. 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.

Factors affecting this criterion may include: preparation and readiness (e.g. timeliness); quality of project management and supervision and stakeholders participation and cooperation.

G. Monitoring and Reporting

19 A list of relevant SDGs is available on the EO website www.UN Environment.org/evaluation
56. The evaluation will assess monitoring and reporting across three sub-categories: monitoring design and budgeting, monitoring implementation and project reporting.

   i. Monitoring Design and Budgeting

57. Each project should be supported by a sound monitoring plan that is designed to track progress against SMART indicators towards the achievement of the projects outputs and direct outcomes, including at a level disaggregated by gender or groups with low representation. 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 Implementation

58. 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. 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.

   ii. Project Reporting

59. UN Environment through its GEF Biosafety projects has a centralised Project Management Reporting Information System – ANUBIS, through the projects upload reports (quarterly, half yearly and annual) against agreed project milestones. This information will be provided to the Evaluation Consultant by the Evaluation Manager. Some projects have additional requirements to report regularly to funding partners, which will be supplied by the project team (specifically the Project Implementation Reviews and Tracking Tool). 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 and responsiveness to human rights and gender equity (e.g. disaggregated indicators and data).

H. Sustainability

60. 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. 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.

   i. Socio-political Sustainability

61. 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.

   ii. Financial Sustainability

62. 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

20 SMART refers to indicators that are specific, measurable, assignable, realistic and time-specific.
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. The question still remains as to whether the future project outcomes will be financially sustainable.

iii. **Institutional Sustainability**

63. The evaluation will assess the extent to which the sustainability of project outcomes 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.

*Factors affecting these criteria 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 and country ownership and driven-ness.

**Factors and Processes Affecting Project Performance**

64. (These factors are rated in the ratings table, but are discussed as cross-cutting themes as appropriate under the other evaluation criteria, above).

i. **Preparation and Readiness**

65. This criterion focuses on the inception or mobilisation stage of the project. 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 covered in the template for the assessment of Project Design Quality).

ii. **Quality of Project Management and Supervision**

66. 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.

67. 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 project management should be highlighted.

iii. **Stakeholder Participation and Cooperation**

68. 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.

iv. **Responsiveness to Human Rights and Gender Equity**

69. 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.

70. The report should present the extent to which the intervention, following an adequate gender analysis at design stage, has implemented the identified actions and/or applied adaptive management to ensure that Gender Equity and Human Rights are adequately taken into account. In particular, the evaluation will consider to what extent project design (section B), the implementation that underpins effectiveness (section D), and monitoring (section G) 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; (iii) the role of women in mitigating or adapting to environmental changes and engaging in environmental protection and rehabilitation.

v. Country Ownership and Driven-ness

71. The evaluation will assess the quality and degree of engagement of government / public sector agencies in the project. 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 and interests of all gender and marginalised groups.

vi. Communication and Public Awareness

72. 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 gender and 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 socio-political, institutional or financial sustainability, as appropriate.

Section 3. EVALUATION APPROACH, METHODS AND DELIVERABLES

73. 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 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.

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

(a) A desk review of:
   o Relevant background documentation, inter alia UNEP, SCBD and GEF-4 policies, strategies and programmes pertaining to biosafety at the time of the project’s approval;
   o 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;
   o Project reports such as six-monthly progress/technical and quarterly financial reports, progress reports from collaborating partners, meeting minutes, relevant correspondence and including the Project Implementation Reviews and Tracking Tool etc.;
   o Project outputs/outcome reports, if available

(b) Interviews (individual or in group) with:
Terminal Evaluation of the Project “Support the Implementation of the National Biosafety Framework of Liberia”

- UN Environment Task Manager (TM);
- Project management team;
- UN Environment Fund Management Officer (FMO);
- Project partners in each country, including national executing agencies, project coordinators, members of the national coordinating committees and advisory group/steering committee;
- Other relevant resource persons.

(c) Field visits of approximately 4-5 days in each country to be scheduled in consultation with the project team and the Evaluation Office of UN Environment;

(d) Other data collection tools as may be deemed useful.

Evaluation Deliverables and Review Procedures

75. The consultant will prepare and submit the following deliverables for each project:

- **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.

- **Draft and Final Evaluation Report:** (see links in Annex 1) containing an executive summary that can act as a standalone 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 Bulletin:** a 2-page summary of key evaluation findings for wider dissemination through the EOU website.

76. **Review of the draft evaluation report.** The consultant 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 consultant 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 consultant for consideration in preparing the final report, along with guidance on areas of contradiction or issues requiring an institutional response.

77. Based on a careful review of the evidence collated by the evaluation consultant 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.

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

79. At the end of the evaluation process, the Evaluation Office will prepare a Recommendations Implementation Plan for each project, 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 Consultant

80. 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 (Alex Owusu-Biney), Fund Management Officer (Paul Vrontamitis21) 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 team will, where possible, provide logistical support (introductions, meetings etc.) allowing the consultant to conduct the evaluation as efficiently and independently as possible.

81. The consultant will be hired over the period May/2017 to December/2017 during which time the evaluation deliverables listed in Section 11 ‘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 is required. Knowledge of English language along with excellent writing skills in English is required. Experience in managing partnerships, knowledge management and communication is desirable for all evaluation consultants.

82. 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 above in Section 11 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).

Schedule of the evaluation

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

Table 3. Tentative schedule for the evaluation

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Tentative timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kick-off meeting</td>
<td>May 2017</td>
</tr>
<tr>
<td>Inception Report</td>
<td>June 2017</td>
</tr>
<tr>
<td>Data collection and analysis, desk-based interviews and surveys</td>
<td>June - September 2017</td>
</tr>
<tr>
<td>Field Mission – 4-5 days in each country (based on meeting arrangements and available budget)</td>
<td>October 2017</td>
</tr>
<tr>
<td>Draft report to Evaluation Manager (and Peer Reviewer)</td>
<td>November 2017</td>
</tr>
<tr>
<td>Draft Report shared with UN Environment Project Manager and team</td>
<td>November 2017</td>
</tr>
<tr>
<td>Draft Report shared with wider group of stakeholders</td>
<td>December 2017</td>
</tr>
<tr>
<td>Final Report</td>
<td>December 2017</td>
</tr>
</tbody>
</table>

Contractual Arrangements

84. Evaluation Consultant are 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 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 projects’ executing or implementing units. All consultants are required to sign the Code of Conduct Agreement Form. Fees will be paid on an installment basis, paid on acceptance by the Evaluation Office of expected key deliverables. The schedule of payment is as follows:

85. Schedule of Payment for the Consultant:

21 Ruth Irungu supports Paul Vrontamitis in the fund management of the projects
**Nigeria NBF**

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Percentage Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved Inception Report</td>
<td>30%</td>
</tr>
<tr>
<td>Approved Draft Main Evaluation Report</td>
<td>40%</td>
</tr>
<tr>
<td>Approved Final Main Evaluation Report</td>
<td>30%</td>
</tr>
</tbody>
</table>

**Ghana**

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Percentage Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved Inception Report</td>
<td>30%</td>
</tr>
<tr>
<td>Approved Draft Main Evaluation Report</td>
<td>40%</td>
</tr>
<tr>
<td>Approved Final Main Evaluation Report</td>
<td>30%</td>
</tr>
</tbody>
</table>

**Liberia**

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Percentage Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved Inception Report</td>
<td>30%</td>
</tr>
<tr>
<td>Approved Draft Main Evaluation Report</td>
<td>40%</td>
</tr>
<tr>
<td>Approved Final Main Evaluation Report</td>
<td>30%</td>
</tr>
</tbody>
</table>

86. **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.

87. The consultant may be provided with access to UN Environment’s Programme Information Management System (PIMS) or to ANUBIS, and if such access is granted, the consultant agree not to disclose information from that system to third parties beyond information required for, and included in, the evaluation report.

88. 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 consultant have improved the deliverables to meet UN Environment’s quality standards.

89. 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 consultant’s fees by an amount equal to the additional costs borne by the Evaluation Office to bring the report up to standard.
## Annex 2: List of People Met

### LIBERIA – LIST of PEOPLE MET (30/10 – 01/11/2017)

<table>
<thead>
<tr>
<th>NAME</th>
<th>POSITION &amp; INSTITUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr Sampson Kea</td>
<td>National Project Coordinator / Nat. Focal Point for Cartagena Protocol (staff of EPA)</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:skpchea719@gmail.com">skpchea719@gmail.com</a></td>
</tr>
<tr>
<td>Mr James Aquoi</td>
<td>Financial Assistant of the Project (staff of EPA)</td>
</tr>
<tr>
<td>Mr Urias Goll</td>
<td>Deputy Executive Director of EPA</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:ugoll@epa.gov.lr">ugoll@epa.gov.lr</a></td>
</tr>
<tr>
<td>Mr Datuama Cammure</td>
<td>Multilateral Environmental Agreements (MEA) of EPA, Focal Point for CBD</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:jcammue@epa.gov.lr">jcammue@epa.gov.lr</a></td>
</tr>
<tr>
<td>National Biosafety Committee</td>
<td>17 members of the NBC in a joint meeting</td>
</tr>
<tr>
<td>Mr Stephen Mamby</td>
<td>Director of General Standards Laboratory (Min. of Commerce)</td>
</tr>
<tr>
<td>Mr P. Adjamo</td>
<td>Tech. Manager (Testing) at the Laboratory</td>
</tr>
<tr>
<td>Ms. K. Reeves</td>
<td>Coordinator (Testing) at the Laboratory (Trained by the Project)</td>
</tr>
</tbody>
</table>
### Annex 3: Summary Co-finance Information and Statement of Project Expenditure by Activity

#### GEF Budget at design and expenditures by components (June 2017)

<table>
<thead>
<tr>
<th>Component/sub-component</th>
<th>Estimated cost at design (USD)</th>
<th>Actual Cost (USD)</th>
<th>Expenditure ratio (actual/planned)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Stocktaking and Biosafety Policy</td>
<td>62,000</td>
<td>Not available (n/a)</td>
<td></td>
</tr>
<tr>
<td>2. Administrative and Regulatory Systems</td>
<td>145,000</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>3. Inst. &amp; Capacity Building National of Monitoring and Enforcement Systems</td>
<td>210,929</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>4. Public awareness &amp; participation</td>
<td>82,000</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>5. Monitoring and Evaluation</td>
<td>20,000</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>6. Project management</td>
<td>57,750</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>577,679</strong></td>
<td><strong>577,679</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

#### Co-financing Table

<table>
<thead>
<tr>
<th>Co financing (Type/Source)</th>
<th>UN Environment own Financing (US$1,000)</th>
<th>Government (US$1,000)</th>
<th>Other* (US$1,000)</th>
<th>Total (US$1,000)</th>
<th>Total Disbursed (US$1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Planned</td>
<td>Actual</td>
<td>Planned</td>
<td>Actual</td>
<td>Planned</td>
</tr>
<tr>
<td>Grants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equity investments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-kind support</td>
<td>530</td>
<td>327</td>
<td>530</td>
<td>327</td>
<td>530</td>
</tr>
<tr>
<td>Other (*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>530</td>
<td>327</td>
<td>530</td>
<td>327</td>
<td>530</td>
</tr>
</tbody>
</table>

* This refers to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries
Annex 4: Evaluation Bulletin


National Biosafety Frameworks (NBF) Implementation

The common overall objective of the Projects was to assist the countries in achieving an operational National Biosafety Framework (NBF) including:

- A Government policy on biosafety
- A regulatory regime for biosafety
- An administrative system to handle notifications or requests for GMOs authorisations
- Systems for ‘follow up’ such as enforcement and monitoring for environmental effects
- Mechanisms for public awareness, education and participation.

Ghana, Liberia and Nigeria show a similar pathway in the development and implementation of their NBF. They all ratified the Protocol in 2003, developed a NBF with the support of GEF/UN Environment in the same years (from 2002 to 2004/2006) and moved to NBF implementation within the same financial frame (GEF-4), being granted an Implementation Project virtually in the same period (from 2011/12 to 2017).

GEF budget allocation for the three Projects was:

<table>
<thead>
<tr>
<th>Country</th>
<th>USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>636,364</td>
</tr>
<tr>
<td>Liberia</td>
<td>577,679</td>
</tr>
<tr>
<td>Nigeria</td>
<td>965,000</td>
</tr>
</tbody>
</table>

Relevance

The Projects have played a key-role in the progress of the NBF in the three countries.

- In Ghana and Nigeria, the Project timeframe has coincided with the implementation of a new Regulatory regime and subsequent establishment of two new Competent Authorities: the National Biosafety Authority (NBA) in Ghana and the National Biosafety Management Agency (NBMA) in Nigeria, both operational since 2015. In both cases, therefore, the Projects have been highly instrumental to the progress of the NBF in a delicate phase of change and evolution.

- Biosafety baseline was less developed in Liberia and the overall socio-political and economic context far more challenging. The Project has strategically supported the Environmental Protection Agency (EPA) in integrating Biosafety among its priorities and in supporting a proactive group of stakeholders in the formulation and drafting of all regulatory and administrative tools of the Biosafety Framework.

- The three projects have been actively cooperating with Regional, African and International partners (e.g. ECOWAS, African Biosafety Network of Expertise / NEPAD, USAID, among others).

Performance

- Biosafety Regulatory regimes responding to the obligations of the Cartagena Protocol are operational in Ghana and Nigeria (Biosafety Laws, Regulations, Guidelines), whereas Liberia did not succeed so far to approve the draft Law and Regulations.

- The pivotal role of the National Biosafety Authority (Ghana) and of the National Biosafety Management Agency (Nigeria) is clear, as well as the mechanisms and procedures for processing requests of GMOs Authorizations, for Decision-making and for implementing Risk Assessment and Risk Management measures.
Liberia has set a Biosafety Unit within the Dept. of Multilateral Environmental Agreements of the EPA and a National Biosafety Committee is actively in place to support awareness, education, lobby and advocacy activities at different levels.

Nigeria and Liberia have put in place their first laboratory for GMO detection.

Mechanisms for Public Awareness, Education and Participation have been put in place at a variable extent. Nigeria has translated the Biosafety Law in three national languages and so far organized four National Conferences with a very large participation of different societal groups. Liberia has started a first University course on Biosafety (Dept. of Biological Sciences) with 32 enrolled students.

Projects are bound by timeframes (3-4 years) that are usually inconsistent with the dynamics and the timing of governance processes. This is a major constrain that has made very difficult (Ghana and Nigeria) or impossible (Liberia) to achieve the expected institutional results (e.g. approval of Laws and Regulations, setting of new Biosafety Authority or Agency) within the planned project's schedule.

National Biosafety Stakeholders of the three countries usually point out similar reasons that (at a variable extent depending on the country) have brought about hindrances and delays, such as:
- Change of Government
- Change of Parliamentarians
- Change of line-Ministries
- Multi-sectoral nature of Biosafety
- Poor knowledge / awareness on Biosafety
- Controversial nature of GMOs debate
- Administrative / bureaucratic inertia
- Institutional indifference
- Other national priorities.

Capacity Building remains a limiting factor for progressing Biosafety agenda in the three countries. Even though Biotechnology is a well-developed sector in Ghana and Nigeria, Biosafety is still in need of a consistent critical mass of experts to support Risk Analysis in its different perspectives: impact on Biodiversity and Human Health, socio-economic implications of GMOs introduction, linkage with other national, regional and international norms (capacity building of the Judiciary).

Ghana and Nigeria have given steady and significant steps to implement their NBF. Nigeria has recently authorized the environmental release of GMO Cotton and Ghana has been for years developing Confined Field Trials in different crops, with the perspective of their possible commercial use.

The two countries need to enhance and consolidate their new Competent Authorities (NBA and NBMA) through focused capacity building plans in the short and medium term. Both institutions also need to gain wider acceptance among different societal sectors and to consolidate their impartial role of neutral brokers.

Biosafety programs are still at an early stage in Liberia, despite significant advances in the last few years. The possibility of focused training and internships of Liberian technicians and experts to Ghana and Nigeria should be be effectively explored and implemented.

Regional (West Africa through ECOWAS) and African cooperation (e.g. NEPAD) is an on-going and promising factor of development of Biosafety agenda to be fostered through common capacity building actions and exchanges. UN Country Teams (UNCT) could also play an active role on Biosafety by promoting a common agenda on Biotechnologies and Biosafety among the line-agencies (e.g. UN Environment, FAO, WHO).
Comparative analysis of Ghana, Liberia and Nigeria NBF Implementation Projects

(November 2017)

A) Overview

Ghana, Liberia and Nigeria share a geographical (West Africa) and institutional context (e.g. the ECOWAS / Economic Community of West African States). The three countries are also linked by their common language (English), whereas most of the countries in the Region is Francophone.

At the same time, as schematised in the following table, key socio-economic and demographic indicators of the three countries are very dissimilar.

<table>
<thead>
<tr>
<th>Area 000 Km²</th>
<th>Population 2016 Million people</th>
<th>Pop. Density (p/ Km²)</th>
<th>GDP 2016 Million USD (world ranking)</th>
<th>GDP per capita USD (2016)</th>
<th>Economy classification (World Bank)</th>
<th>HDI 2016 (ranking)</th>
<th>HDI classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana 238,5</td>
<td>28,2</td>
<td>118</td>
<td>42.690 (85)</td>
<td>1.513,46</td>
<td>Lower-Middle Income</td>
<td>0,579 (139)</td>
<td>Medium Hum. Dev.</td>
</tr>
<tr>
<td>Liberia 111,3</td>
<td>4,6</td>
<td>41</td>
<td>2,101 (167)</td>
<td>455,37</td>
<td>Low-Income</td>
<td>0,427 (177)</td>
<td>Low Human Dev.</td>
</tr>
<tr>
<td>Nigeria 923,7</td>
<td>185,9</td>
<td>201</td>
<td>405.083 (26)</td>
<td>2.177,99</td>
<td>Lower-Middle Income</td>
<td>0,527 (152)</td>
<td>Low Human Dev.</td>
</tr>
</tbody>
</table>

B) The progress of the National Biosafety Framework in Ghana, Liberia and Nigeria

- The three countries show a similar pathway in the development and implementation of their National Biosafety Framework (NBF). They all ratified the Protocol in 2003, developed a NBF with the support of GEF/UN Environment in the same years (Ghana and Liberia from 2002 to 2004 and Nigeria from 2002 to 2006) and moved to NBF implementation within the same financial frame (GEF-4), being granted an Implementation Project (under current evaluation) virtually in the same period (from 2011-12 to 2017, including extensions).
In absence of a full regulatory regime in place (which only happened in Ghana and Nigeria in 2011 and 2015, respectively), the three countries have been promoting and implementing the Biosafety agenda for years mainly through collaborative mechanisms, so-called National Biosafety Committees (NBC) or National Coordinating Committees. Though at a variable extent and with different institutional roles, the Committees have played a key, driving role in the definition, discussion and revision of the Biosafety Regulatory regime, have carried out incessant lobbying and advocacy actions towards policy and decision-makers and have represented a highly significant opportunity for stakeholders’ meaningful participation in the shaping of the National Biosafety Framework and, as in the case of Ghana, in decision-making on GMOs application.

The evolution of the NBCs has been different in the three countries:

- **Liberia** does not have so far approved any Law regarding Biosafety and the National Biosafety Committee is still in place as a collaborative mechanism supporting the Biosafety Unit of the Competent National Authority (the Environmental Protection Agency, NPA), yet, with no formal, statutory role.

- **Ghana** has recognised, through its Regulations of 2007, the National Biosafety Committee (NBC) as the Competent National Authority and National Focal Point for Biosafety. Later, following the approval of the Biosafety Act in 2011, this role has been transferred to the newly created National Biosafety Authority (NBA), namely to its Governing Board (where some of the institutions members of the previous NBC are present). A Technical Advisory Committee (TAC) has also been created by the Biosafety Law of 2011 for technically supporting the Board in decision-making, particularly in risk assessment. Ghana has four on-going field trials and, so far, no application received for GMOs deliberate release into the environment.

- **Nigeria**, the National Biosafety Management Agency (NBMA) has been created by Law in 2015 and has, in fact, become the new Competent National Authority and Focal Point for Biosafety, assuming the full responsibility on Biosafety in the country, including decision-making and risk assessment. According to the Law (2015) and subsequent Regulations (2017) the Agency may set an “ad hoc” National Biosafety Committee for advising on risk assessment and decision-making. Nigeria has five on-going field-trials and has also authorised in 2016 the commercial use (deliberate release) of GMO cotton.

C) The Competent National Authorities (CNA) in the three countries

- In Liberia the Environmental Protection Agency is the Governmental Agency responsible for the sustainable management of the environment and its natural resources and for the implementation of the Multilateral Environmental Agreements ratified by the country, including the Cartagena Protocol.

- Ghana and Nigeria have opted for the creation, by Law, of a specific institution (the National Biosafety Authority in Ghana and the National Biosafety Management Agency in Nigeria) responsible for the overall Biosafety Management in the country (decision-making on
applications, risk assessment and management, coordination and supervision, monitoring and enforcement, public information and participation).

<table>
<thead>
<tr>
<th>Ghana</th>
<th>Liberia</th>
<th>Nigeria</th>
</tr>
</thead>
<tbody>
<tr>
<td>The NCA was the National Biosafety Committee until the approval of the Biosafety Law in 2011. The Law of 2011 established the National Biosafety Authority (NBA) that is the current Competent National Authority for the Cartagena Protocol.</td>
<td>The Environmental Protection Agency (EPA) is the Competent National Authority for the Cartagena Protocol since the country’s ratification of the Protocol in 2003.</td>
<td>The Federal Ministry of Environment was the CNA until the approval, in 2015, of the Law that established the new National Biosafety Management Agency (NBMA) and transferred to the new Agency all competencies regarding the Protocol.</td>
</tr>
</tbody>
</table>

D) Approach to the Regulatory Framework and Decision-making process

- Liberia has not yet approved a Biosafety Law and Regulations, which, nonetheless, have been discussed and prepared since 2014. At the current stage, therefore, the country does not have a legally approved regulatory regime in place.

- Ghana and Nigeria have approved, respectively in 2011 and 2015, a national Law on Biosafety. As mentioned above, the two Laws have established and fully empowered a new “ad hoc” national Authority / Agency for Biosafety. Both institutions are managed by a Chief Executing Officer (CEO) appointed by the President.

- There are substantive differences in the form of management and of decision-making among the two countries:
  - Ghana has opted for a “light” institutional model of its National Biosafety Authority, with a strong collegiality in decision-making and a significant devolution of powers to external, frontline “Regulatory Agencies”. Decision-making power on Applications lies on the Board of the Authority, whose membership is established by Law and whose members (13 members) are appointed by the President for a duration of three years. Consequently, the staff of the Authority (a total of 25 members foreseen in the organogram) is supposed to function as a sort of Secretariat in support of the Governing Body of the Authority and to liaise with the sectoral Regulatory Agencies. A Technical Advisory Committee (TAC), also foreseen by the Law, is nominated by the Board for a period of three years to advise the Board on different technical issues.

27 The Biosafety Act 831 / 2011 in Ghana, the National Biosafety Management Act of 2015 in Nigeria
➢ Nigeria has opted for the creation of a centralised, self-contained and robust National Biosafety Management Agency (NBMA), which currently includes more than 200 staff members. The Agency has full responsibility and power on all aspects of Biosafety Management in the country, including Risk Assessment and Risk Management, Decision-making on Applications, Monitoring and Supervision, Inspection and Enforcement. The Board of the Agency only has advisory functions regarding the functioning of the Agency (not on Biosafety Management issues). Non-mandatory, “ad hoc” Committees (a National Biosafety Committee and a National Technical Sub-Committee) may be called by the Agency in support of its regulatory functions, namely for Risk Assessment. Both Committees have an advisory function and their membership is not defined by Law, but decided by the Agency on a case-by-case basis, according to the need.

E) Projects timeframe and governance processes

- Projects are bound by timeframes (e.g. 3 years in case of Ghana and 4 years for Liberia and Nigeria) that are usually inconsistent with the dynamics and the timing of governance processes. This is a major constrain that has made very difficult (Ghana and Nigeria) or impossible (Liberia) to achieve the expected results in the institutional sphere (e.g. approval of Laws and Regulations, establishment of new Biosafety Authority or Agency) within the planned project’s schedule.

- National Biosafety Stakeholders of the three countries usually point out similar reasons that (at a variable extent depending on the country), have brought about hindrances and delays. A list of them include:
  - Change of Government
  - Change of Parliamentarians
  - Change of line-Ministries
  - Multi-sectoral nature of Biosafety
  - Controversial nature of GMOs debate
  - Administrative / bureaucratic inertia
  - Institutional indifference
  - Different priorities
  - Poor knowledge on Biosafety

F) Public Awareness, Education and Participation: a challenging issue

- The three Projects Teams attribute great relevance to the setting of an effective Biosafety System for Public Information, Awareness and Participation and believe that the System plays a key-role for the socio-political sustainability of the National Biosafety Framework.

- The Projects are experiencing a common problem in tackling the issue, due to the variety of “target groups” to be addressed: President’s Office, Government, Line-Ministries, members of the Parliament, Officers of Stakeholders Line-Ministries and Agencies, Academic institutions and Schools, Lawyers and Judiciary System, the Media, Consumers Associations, Farmers Associations, Private Sector, Environmental and Civil Society NGOs.
• The Projects show concerns regarding the form of properly conveying what they usually define “right messages on GMOs and Biosafety” to the different audiences listed above. The Communication Strategies they are conceiving and developing seem focused on “how communicate to”, more than “how communicate with”. The weakness of an effective two-way communication can deprive Biosafety managers of a relevant instrument to understand societal opinions, perceptions, doubts and concerns regarding GMOs and Biosafety, which is a crucial element for the smooth development of Biosafety agenda in the countries.
## Comparative Analysis of main components of the National Biosafety Framework

<table>
<thead>
<tr>
<th>Component</th>
<th>GHANA</th>
<th>LIBERIA</th>
<th>NIGERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Biosafety Policy</strong></td>
<td>▪ Approved by the Line-Ministry&lt;br&gt;▪ Biosafety included in the NBSAP&lt;br&gt;▪ Mid-term (2018-21) Biosafety Plan prepared to fit-in Nat. Dev. Plan</td>
<td>▪ No Policy approved&lt;br&gt;▪ Biosafety included in the NBSAP</td>
<td>▪ Approved by the Federal Executive Council&lt;br&gt;▪ Biosafety included in the NBSAP (NBSAP revision on-going)</td>
</tr>
<tr>
<td><strong>Regulatory Framework</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biosafety Law</td>
<td>YES (2011)</td>
<td>NO (drafted but not approved)</td>
<td>YES (2015)</td>
</tr>
<tr>
<td>Biosafety Regulations</td>
<td>NO (drafted but not approved)</td>
<td>NO (drafted but not approved)</td>
<td>YES (2017)</td>
</tr>
<tr>
<td>Guidelines</td>
<td>YES (several guidelines prepared and adopted)</td>
<td>Partially (Guidelines prepared but not in force)</td>
<td>YES (several guidelines prepared and adopted)</td>
</tr>
<tr>
<td>Competent National Authority</td>
<td>National Biosafety Authority (NBA), established by Law (2011), in place since 2015 (10 staff at October 2017)</td>
<td>Environmental Protection Agency (NBA), with a Biosafety Unit within the Dept. of Multilateral Env. Agreements and the support of a Nat. Biosafety Committee (collaborative mechanisms, non-statutory body).</td>
<td>National Biosafety Management Agency (NBMA) established by Law (2015) and in place since 2015 (207 staff at October 2017)</td>
</tr>
</tbody>
</table>
Terminal Evaluation of the Project “Support the Implementation of the National Biosafety Framework of Liberia”

<table>
<thead>
<tr>
<th>Component</th>
<th>GHANA</th>
<th>LIBERIA</th>
<th>NIGERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative System</td>
<td>▪ Operational</td>
<td>▪ Not in place</td>
<td>▪ Operational</td>
</tr>
<tr>
<td></td>
<td>▪ Guidelines and other tools in place</td>
<td>▪ Guidelines prepared, not in force</td>
<td>▪ Guidelines and other tools in place</td>
</tr>
<tr>
<td></td>
<td>▪ MoUs with frontline Regulatory Agencies</td>
<td></td>
<td>▪ MoUs with Frontline Agencies</td>
</tr>
<tr>
<td>Decision-making process by Law</td>
<td>The Board of the NBA decides on applications with support from Technical Advisory Committee</td>
<td>Not applicable</td>
<td>NBMA decides. It may request advising on Risk Assessment from “ad hoc” National Biosafety Committee (non-mandatory).</td>
</tr>
<tr>
<td>Follow-up, Monitoring &amp; Enforcement System</td>
<td>▪ Operational</td>
<td>▪ Not in place</td>
<td>▪ Operational</td>
</tr>
<tr>
<td></td>
<td>▪ Guidelines and other tools in place</td>
<td>▪ Guidelines prepared, not in force</td>
<td>▪ Guidelines and other tools in place</td>
</tr>
<tr>
<td></td>
<td>▪ MoUs with frontline Regulatory Agencies</td>
<td></td>
<td>▪ MoUs with Partners</td>
</tr>
<tr>
<td>GMO Laboratory</td>
<td>▪ Lab not installed</td>
<td>▪ Lab in place but not operational</td>
<td>▪ Lab in place, fairly operational</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ Lab in place, fairly operational with staff</td>
</tr>
<tr>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Biosafety Curricula</td>
<td>▪ Biosafety Curricula prepared (for Academic level and for Extension), not yet implemented</td>
<td>Biosafety Curricula prepared and approved, on-going courses at the University (Biology) with 32 students</td>
<td>▪ Biosafety Curricula not in place</td>
</tr>
</tbody>
</table>
Terminal Evaluation of the Project “Support the Implementation of the National Biosafety Framework of Liberia”

<table>
<thead>
<tr>
<th>Component</th>
<th>GHANA</th>
<th>LBERIA</th>
<th>NIGERIA</th>
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<tbody>
<tr>
<td>TOTAL</td>
<td>😊😊😊😊😊😊</td>
<td>😊😊😊😊😊😊</td>
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</tbody>
</table>
## Annex 6: List of Documents Consulted

### LIST OF DOCUMENTS CONSULTED

#### Project and GEF / UN Environment Documents:
- Terms of Reference of the Terminal Evaluation (2017)
- Evaluation Criteria and Ratings Table (UNEP, 2016)
- Use of Theory of Change in project evaluations (UNEP, 2016)
- Project Document "Support the Implementation of the National Biosafety Framework of Liberia” and its Annexes (in ANUBIS)
- From ANUBIS: PIRs, Budget Revisions, Audit Reports, etc.
- Tools and documents in http://www.unep.org/evaluation/

#### Global / Background documents:
- Cartagena Protocol on Biosafety (CPB)
- Bali Strategic Plan for Technology Support and Capacity-building
- Status of capacity-building activities, UNEP/CBD/BS/COP-MOP/5/INF/9, September 2010
- UNEP Programme of Work 2010-2011
- UNEP Medium-term Strategy 2010–2013, "Environment for Development"
- 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)
- Genetically Modified Organisms and Biosafety: A background paper for decision-makers and others to assist in consideration of GMO issues, IUCN, 2004

#### Liberia websites:
- [https://www.thegef.org/projects?f[]=field_country:94&f[]=field_p_focalareas:2205&f[]=field_p_implagencies:171](https://www.thegef.org/projects?f[]=field_country:94&f[]=field_p_focalareas:2205&f[]=field_p_implagencies:171)
- [http://bch.cbd.int/about/countryprofile.shtml?country=Lr](http://bch.cbd.int/about/countryprofile.shtml?country=Lr)
- [http://www.epa.gov.lr/](http://www.epa.gov.lr/)
Annex 7: 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).


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 8 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.

<table>
<thead>
<tr>
<th>Substantive Report Quality Criteria</th>
<th>UN Environment Evaluation Office Comments</th>
<th>Report Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality of the Executive Summary:</strong> 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.</td>
<td>Executive covers the most pertinent issues/highlights of the evaluation findings</td>
<td>5</td>
</tr>
<tr>
<td><strong>I. Introduction</strong></td>
<td>Precise, well written and captures the main introductory points</td>
<td>5</td>
</tr>
<tr>
<td>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.) 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?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>II. Evaluation Methods</strong></td>
<td>This section is complete, concise, and it covers the required sub-topics satisfactorily</td>
<td>6</td>
</tr>
<tr>
<td>This section should include a description of how the TOC at Evaluation was designed (who was involved etc.) and applied to the context of the project? A data collection section should include: a description of evaluation methods and information sources used,</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

28 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.
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.).

The methods used to analyse data (e.g. scoring; coding; thematic analysis etc.) should be described.

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.

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.

**III. The Project**

This section should include:

- **Context:** 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).
- **Objectives and components:** Summary of the project’s results hierarchy as stated in the ProDoc (or as officially revised)
- **Stakeholders:** Description of groups of targeted stakeholders organised according to relevant common characteristics
- **Project implementation structure and partners:** A description of the implementation structure with diagram and a list of key project partners
- **Changes in design during implementation:** Any key events that affected the project’s scope or parameters should be described in brief in chronological order
- **Project financing:** Completed tables of: (a) budget at design and expenditure by components (b) planned and actual sources of funding/co-financing

This section is also complete and covers all the required sub-topics in a concise and clear manner.

**IV. Theory of Change**

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. *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’. The TOC at Evaluation should be presented clearly in both diagrammatic and narrative forms. Clear articulation of each major causal pathway is expected, The TOC diagram is coherent and is a result of a consultative process. The narrative is clear and provides a suitable explanation of the causal pathways depicted in the diagrammatic representation. Drivers and Assumptions, as well as stakeholders/change agents in the pathways are described.*
V. Key Findings

A. Strategic relevance:
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:

i. Alignment to the UN Environment Medium Term Strategy (MTS) and Programme of Work (POW)
ii. Alignment to UN Environment/GEF/Donor Strategic Priorities
iii. Relevance to Regional, Sub-regional and National Environmental Priorities
iv. Complementarity with Existing Interventions

Section is well done and covers all the main aspects of relevance prescribed in the TOR

B. Quality of Project Design
To what extent are the strength and weaknesses of the project design effectively summarized?
The strengths and weaknesses of the design are sufficiently described. Where relevant, references to the PDQ assessment that was completed at the inception phase have been used to further support the rating of this criterion.

C. Nature of the External Context
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.
The report sufficiently describes the key external issues that are most likely to affect the project’s performance. This is also cross referenced in other sections of the report as appropriate

D. Effectiveness

(i) Outputs and Direct Outcomes: 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.
Outputs are described by component, and with sufficient evidence provided to support a detailed assessment of the delivery of outputs. The chapter also presents a qualitative analysis and interpretation of the Outcomes achieved in the light of the reconstructed Theory of Change (TOC) from Outputs to Outcomes.

(ii) Likelihood of Impact: 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?
How well are change processes explained and the roles of key actors, as well as drivers and assumptions, explicitly discussed?
Draft report:
The narrative provides an adequate and considered analysis of the causal pathways from outcomes to intermediate states through to impact. The ROTI method has
### E. Financial Management
This section should contain an integrated analysis of all dimensions evaluated under financial management. And include a completed 'financial management' table. Consider how well the report addresses the following:
- **completeness** of financial information, including the actual project costs (total and per activity) and actual co-financing used
- **communication** between financial and project management staff and
- **compliance** with relevant UN financial management standards and procedures.

**Draft report:**
The section has been covered relatively well and a table summarizing financial management performance is included. Issues of completeness, communication and compliance are addressed to varying degrees.

**Score:** 5

### F. Efficiency
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:
- Implications of delays and no cost extensions
- Time-saving measures put in place to maximise results within the secured budget and agreed project timeframe
- 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.
- The extent to which the management of the project minimised UN Environment's environmental footprint.

**This section has been covered sufficiently.**

**Score:** 5

### G. Monitoring and Reporting
How well does the report assess:
- Monitoring design and budgeting *(including SMART indicators, resources for MTE/R etc.)*
- Monitoring implementation *(including use of monitoring data for adaptive management)*
- Project reporting *(e.g. PIMS and donor report)*

**This section is well covered and goes beyond assessing the progress reporting by also looking into the project’s results-based monitoring and how the findings of the monitoring toolkit have been used for adaptive management.**

**Score:** 6

### H. Sustainability
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:
- Socio-political Sustainability
- Financial Sustainability
- Institutional Sustainability *(including issues of partnerships)*

**The assessment of sustainability does identify the most pertinent issues likely to undermine sustenance of outcomes. The analysis is satisfactory and some suggestions have been made to clarify some minor contradictions.**

**Score:** 5

### I. Factors Affecting Performance
These factors are not discussed in stand-alone sections but are **integrated in criteria A-H as appropriate.** To what extent, and how well, does the evaluation report cover the following cross-cutting themes:

**The required sub-criteria are all covered sufficiently. Cross referencing has been done appropriately. Suggestions for improvement (e.g. inclusion of**

**Score:** 5
- Preparation and readiness
- Quality of project management and supervision
- Stakeholder participation and co-operation
- Responsiveness to human rights and gender equity
- Country ownership and driven-ness
- Communication and public awareness

Supporting evidence) have been made in some cases.

### VI. Conclusions and Recommendations

#### i. Quality of the conclusions:
The key strategic questions should be clearly and succinctly addressed within the conclusions section. 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.

The conclusions section is very well developed and clearly presents the most critical findings of the evaluation. Responses to the key strategic questions are not concisely developed.

#### ii) Quality and utility of the lessons:
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.

The lessons are relevant and based on findings. The context is summarized well and crossreferences have been used adequately. Minor amendments needed to rephrase the lessons learned.

#### iii) Quality and utility of the recommendations:
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.

The recommendations are relevant and identify the action and who should implement it.

### VII. Report Structure and Presentation Quality

#### i) Structure and completeness of the report:
To what extent does the report follow the Evaluation Office guidelines? Are all requested Annexes included and complete?

Well done. Follows the EO guidelines

#### ii) Quality of writing and formatting:
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?

Clear, well formatted document

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29 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.
Does the report follow Evaluation Office formatting guidelines?

<table>
<thead>
<tr>
<th>OVERALL REPORT QUALITY RATING</th>
<th>HS</th>
</tr>
</thead>
</table>

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.