

**Terminal Evaluation of the UNEP/GEF Project
“Implementation of National Biosafety
Framework of Bangladesh”**

**GEF ID # 4022
(2013 – 2018)**



**Evaluation Office
of the United Nations Environment Programme
Distributed: March 2021**



Photos Credits:

Front cover:

© Dhaka Tribune, July 2018, "Farmers busy selling GMO Bt brinjal at a village market"

Annex 7 (Evaluation Brief):

© DOE / *Workshops and Training Manuals*

© Cornell Univ. Alliance for Science / *Bt Brinjal Bangladesh*,

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

For further information on this report, please contact:

Evaluation Office of UNEP

P. O. Box 30552-00100 GPO

Nairobi Kenya

Tel: (254-20) 762 3389

Email: unenvironment-evaluation-director@un.org

Website: <https://www.unenvironment.org/about-un-environment/evaluation>

Project: "Implementation of the National Biosafety Framework of Bangladesh"

GEF ID number: 4022

01/21

All rights reserved.

© 2021 UN Environment Programme

ACKNOWLEDGEMENTS

This Terminal Evaluation was prepared for UNEP by Mr Camillo Risoli, as an independent consultant.

The evaluator would like to express their gratitude to all persons met and who contributed to this evaluation, as listed in Annex 3.

The evaluation team would like to thank the project team and in particular Mr Mohammed Solaiman Haider (Project Director, Department of Environment) and Mr Alex Owusu-Biney (UNEP Task Manager responsible for the project) for their contribution and collaboration throughout the Evaluation process.

The participation of National Stakeholders to the Evaluation exercise has been substantive and highly appreciated.

The evaluation consultant hopes that the findings, conclusions and recommendations will contribute to the successful progress of the Biosafety programme in Bangladesh and to the continuous improvement of similar projects in other countries and regions.

BRIEF CONSULTANT BIOGRAPHY

Camillo Risoli is a senior Monitoring & Evaluation Consultant with extensive experience in the coordination, management and evaluation of cooperation projects in the area of Capacity / Institution Building for Rural Development and Environmental Management. He has been Lead Evaluator of several GEF/UNEP Projects of Development and Implementation of National Biosafety Frameworks in more than 20 countries, as well as the Biosafety Regional Framework implementation in the Caribbean and the Final Evaluation of the Global GEF/UNEP Programme (123 countries). (Annex 8)

Evaluation team

Camillo Risoli – Principal Evaluator

Evaluation Office of UNEP

Myles Sven Hallin – Evaluation Manager

Mela Shah – Evaluation Programme Assistant

ABOUT THE EVALUATION

Joint Evaluation: No

Report Language(s): English

Evaluation Type: Terminal Evaluation

Brief Description: This report is a terminal evaluation of a UN Environment-GEF project implemented between 2013 and 2018. The project's overall development goal "To assist Bangladesh to implement the National Biosafety Framework in compliance with the Cartagena Protocol on Biosafety through enhancing the existing capacity on Biosafety at the Institutional, Individual and Systemic levels in Bangladesh, as well as to address national needs and priorities". 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 Department Of Environment (DOE) of Bangladesh and other relevant agencies of the project.

Key words: Biosafety, Genetically Modified Organisms (GMOs), Department of Environment (DOE), Cartagena Protocol on Biosafety (CPB), Competent National Authority (CNA), National Committee on Biosafety, Regulatory regime, Administrative System, Risk Assessment and Management, Awareness and Participation, Socio-political and Institutional Sustainability, Project Evaluation, GEF¹

Primary data collection period: April-June 2020

Field mission dates: NA

¹ This data is used to aid the internet search of this report on the Evaluation Office of UN Environment Website –

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	3
ABOUT THE EVALUATION	4
TABLE OF CONTENTS	5
LIST OF ACRONYMS	6
PROJECT IDENTIFICATION TABLE	7
EXECUTIVE SUMMARY	9
I. INTRODUCTION	1415
II. EVALUATION METHODS	1546
III. THE PROJECT	1819
A. Context	1819
B. Results framework.....	1920
C. Stakeholders	1920
D. Project implementation structure and partners	2122
E. Changes in design during implementation.....	2223
F. Project financing.....	2223
IV. THEORY OF CHANGE AT EVALUATION	24
V. EVALUATION FINDINGS	3331
A. Strategic Relevance	3331
B. Quality of Project Design	3432
C. Nature of the External Context	3533
D. Effectiveness	3533
E. Financial Management	5047
F. Efficiency.....	5249
G. Monitoring and Reporting	5249
H. Sustainability.....	5350
VI. CONCLUSIONS AND RECOMMENDATIONS	5753
A. Conclusions	5753
B. Summary of project findings and ratings.....	6056
C. Lessons learned.....	6258
D. Recommendations.....	6258
ANNEX 1: RESPONSE TO STAKEHOLDER COMMENTS RECEIVED BUT NOT (FULLY) ACCEPTED BY THE EVALUATOR	6662
ANNEX 2: TERMS OF REFERENCE FOR THE EVALUATION	6864
ANNEX 3: LIST OF PEOPLE MET	8682
ANNEX 4: LIST OF DOCUMENTS CONSULTED	8783
ANNEX 5: LIST OF ACTIVITIES / OUTPUT	9086
ANNEX 6: FINANCIAL TABLES	9389
ANNEX 7: EVALUATION BRIEF	9792
ANNEX 8: BRIEF CV OF THE CONSULTANT	9994
ANNEX 9: QUALITY ASSESSMENT OF THE EVALUATION REPORT	10095

LIST OF ACRONYMS

ANUBIS	A New UNEP Biosafety Information System
BCH	Biosafety Clearing House
CBD	Convention on Biological Diversity
CNA	Competent National Authority
CPB	Cartagena Protocol on Biosafety
DOE	Department of Environment (of the MEFCC)
GEF	Global Environment Facility
GMO	Genetically Modified Organism
LMO	Living Modified Organism
LogFrame	Logical Framework (Framework of Results)
MEFCC	Ministry of Environment, Forests and Climate Change
NBF	National Biosafety Framework
NCB	National Committee on Biosafety
NEA	National Executing Agency
NGO	Non-Governmental Organisation
ProDoc	Project Document
ToC	Theory of Change
ToR	Terms of Reference

PROJECT IDENTIFICATION TABLE

Table 1: Project Identification Table

GEF Project ID:	4022		
Implementing Agency:	UN Environment Programme	Executing Agency:	Department of Environment, Ministry of Environment, Forests and Climate Change
Relevant SDG(s) and indicator(s):			
Sub-programme:	Environmental Governance	Expected Accomplishment(s):	<p>MTS 2010-2013 Expected Accomplishment (EA) (b): Institutional capacities and policy and/or legal frameworks enhanced to achieve internationally agreed environmental goals</p> <p>MTS 2014-2017 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.</p>
UNEP approval date:	29/11/2012	Programme of Work Output(s):	
GEF approval date:	July 2012	Project type:	Medium-size Project
GEF Operational Programme #:	GEF 4	Focal Area(s):	Biodiversity
		GEF Strategic Priority:	SP 6 – S03 Biosafety (Implement the Cartagena Protocol on Biosafety)
Expected start date:	29/11/2012	Actual start date:	14/01/2013
Planned completion date:	28/11/2016	Actual operational completion date:	28/06/2018
Planned project budget at	USD 1,417,390	Actual total expenditures	USD 1,417,390

approval:		reported as of 28/06/2018	
GEF grant allocation:	USD 884,090	GEF grant expenditures reported as of 28/06/2018	USD 884,090
Project Preparation Grant - GEF financing:	USD 25,000	Project Preparation Grant - co-financing:	USD 24,800
Expected Medium-Size Project/Full-Size Project co-financing:	USD 533,300	Secured Medium-Size Project/Full-Size Project co-financing:	USD 533,300
First disbursement:	14/01/2013	Planned date of financial closure:	na
No. of formal project revisions:	7 (in ANUBIS)	Date of last approved project revision:	19/04/2018
No. of Steering Committee meetings:	3 in 2017 (documented in ANUBIS)	Date of last/next Steering Committee meeting:	Last: 27/08/2017 Next:
Mid-term Review/ Evaluation (planned date):	January 2017	Mid-term Review/ Evaluation (actual date):	18-25 March 2017
Terminal Evaluation (planned date):	February 2020	Terminal Evaluation (actual date):	March 2020
Coverage - Country(ies):	Bangladesh	Coverage - Region(s):	Asia & Pacific
Dates of previous project phases:	GEF/UNEP Project "Development of the National Biosafety Framework" (2004-2006)	Status of future project phases:	NA

EXECUTIVE SUMMARY

Project background

1. This is the final report of the Terminal Evaluation of the Project "Implementation of the National Biosafety Framework of Bangladesh" (GFL/5060-2716-4C59) that was approved in November 2012 and officially started in January 2013 for a duration of 4 years. The total budget of the Project was USD 1,417,390, 62% of which represents the GEF allocation (USD 884,090) and the remaining 38% (USD 533,300) was provided in kind by the Government of Bangladesh. The Project was granted a no-cost extension of 19 months, shifting its Official End date to 28/06/2018.
2. The project is a Medium Size Project (MSP), financed through the GEF-4 mechanism and belongs to GEF Biodiversity Focal Area. It is relevant to GEF Strategic Programme 6, Biodiversity (BD-SP6) and Strategic Objective 3 (SO3): Building Capacity for the Implementation of the Cartagena Protocol on Biosafety. The Project was part of UNEP Biennial Programmes of Work (2012-2013, 2014-2015 and 2016-2017). The National Executing Agency of the Project was the Department Of Environment (DOE) of the Ministry of Environment, Forests and Climate Change (MEFCC), which is also the Competent National Authority for the Cartagena Protocol on Biosafety and hosts the Biosafety Clearing House.
3. Bangladesh ratified the Cartagena Protocol on Biosafety (CPB) in 2004 and developed its National Biosafety Framework (NBF) in 2006 with the support of the UNEP-GEF Project on Development of National Biosafety Frameworks. In 2012, under the Bangladesh Environment Conservation Act of 1995, the Government promulgated the Bangladesh Biosafety Rules, providing regulations on the approval process for genetically engineered products developed domestically or by another country.
4. Actually, Genetically Modified Organisms (GMOs) cultivation is regarded in Bangladesh as a strategic instrument to boost food production and the agricultural sector, reducing food insecurity while increasing agriculture productivity and farmers income. GMO Bt Brinjal (Egg Plant) is currently cultivated (since 2014) by around 27,000 growers, and four other GMO crops are in an advanced state of field trials (late blight resistant potato, Bt cotton, vitamin-A enriched Golden Rice and High Iron and Zn Rice).
5. As rightly said in the Project Document (ProDoc) "the issue is to maintain a balance between biotechnology development and a regulatory response to meet both national and international obligations", and "a coordinated approach will have to be developed to ensure that development of biotechnology is balanced by a sound and science based regulatory approach to the use of GMOs in Bangladesh". These are, essentially, the challenges that the Project was called to address and against which its effectiveness and impact have to be assessed. In practical terms, the Project Objective as formulated in the ProDoc is "To assist Bangladesh to implement the National Biosafety Framework (NBF) in compliance with the Cartagena Protocol on Biosafety through enhancing the existing capacity on Biosafety at the Institutional, Individual and Systemic levels in Bangladesh, as well as to address national needs and priorities".

This evaluation

6. The Evaluation has fostered a participatory approach with key stakeholders at national level. Due to the on-going Covid-19 pandemic, the consultant could not visit the country. Nevertheless, written exchanges through emails and online interviews were extremely useful to in depth discuss achievements, problems and perspectives with

the Project Director, Director (Planning) of the Department of Environment, as well as with other relevant institutional stakeholders involved in the implementation of the National Biosafety Framework. Chapter II describes main methods and tools of the Evaluation exercise, as well as main limitations.

Key findings

7. The Project has delivered a significant number of Outputs (see chapter V, Section D): various regulatory and procedural instruments have been produced, crop scientists, regulators and practitioners have been exposed to training and awareness raising activities, national and international workshops and seminars on biosafety have been organised and implemented, different committees have been established and are operational to manage biosafety at institutional, research and field level. Expected Outputs regarding Biosafety Policy and the Regulatory Regime are progressing through their long and elaborate process of approval, waiting for completion of formalities, approval and publication.
8. The assessment of the institutional changes and systemic or behavioural effects (Outcomes) produced by the Project provides a mixed picture, as discussed in chapter V, Section D. The approval and implementation of a national Biosafety Policy with an Action Plan (Outcome 1) has proved to be difficult to achieve. Similarly, the process of revision and updating of the existing Biosafety Rules and Guidelines (Outcome 2) has been very complex and highly energy demanding, yet not formally concluded and fully achieved. Overall, the elaborate process of approval of regulatory instruments in the country has surely played a major role in hampering the process, coupled with insufficient preparedness of policy and decision-makers in attributing adequate importance and priority to biosafety, which calls for increased actions of information, lobby and advocacy so as to increase their interest and commitment.
9. The "Coordinated administrative set-up and mechanisms for handling of requests/applications and decision-making" (Outcome 3) is actually in place and functional, as demonstrated by the relevant applications and decisions made so far, from 2013 onward, regarding GMOs crops (brinjal, rice, potato, cotton) for field trial and for limited cultivation. However, it is consensual among national stakeholders that there are relevant issues to be decidedly tackled and improved, such as (a) the composition, efficiency and effectiveness of the decision-making body, the National Committee on Biosafety (NCB); (b) the quality (efficiency, openness and transparency) of the communication between the Applicant/Developer and the NCB during the application and decision-making process; (c) the quality of the decision-making process (technically-sound Risk Assessment, clearly understandable and unambiguous decisions, socio-economic considerations, transparent and publicly available decisions).
10. A comprehensive Monitoring and Enforcement (M&E) system is indeed in place and operational (Outcome 4), through a series of approved procedures and operational tools (e.g. Institutional Biosafety Committees -IBC-, Field Level Biosafety Committees – FBC, a national laboratory for GMOs detection). The experience developed so far on GMOs Brinjal with farmers shows that modalities and responsibilities regarding the prescription, monitoring and enforceability of regulatory measures should be better defined in the field, so as to improve biosafety management at farmers' level. Since wide scale cultivation is progressing, it is important to clarify the responsibilities of the main actors involved: DOE/Competent Nat. Authority, BARI (Bangladesh Agricultural Research Institute, developer of GMO Brinjal), DAE (Department of Agriculture Extension in charge of GMOs seeds distribution and technical assistance to farmers), and, of course, the Farmers themselves.

11. The potential of the GMO detection laboratory established at the DOE has not been yet fully developed, mainly due to its quite recent establishment (2018), and there is the need to strengthen the detection system in support of the regulatory requirements of testing the materials entering into the country legally or illegally, particularly GMOs for Food, Feed and Processing (FFP). It is, therefore, crucial to establish an efficient and effective referral system from the port of entries to the DOE laboratory and to further train the personnel at the port-of-entries and border control to handle those situations in a smarter way. There is also the need to improve the detection capacity of the laboratory through the upgrading of its technical staff.
12. Enhanced public awareness and public participation in decision making on GMO (Outcome 5) has been only partially achieved. It is largely recognised by all stakeholders that there has been a notable increase of awareness and information regarding GMOs and Biosafety among different institutions and societal groups. However, public participation is not yet at a suitable level and there is room for improving mechanisms and procedures of consultation, discussion and participatory decision-making regarding GMOs use, particularly the cultivation or import of GMOs for food, which can be a sensitive issue. Appropriate institutional mechanisms of information-sharing, like the BCH, are also in need of a more dynamic and transparent approach regarding the communication process of risk assessment and decision-making.
13. The evaluation has ascertained the overall complexity of the coordinating role undertaken by the Department of Environment as the Competent National Authority for the Cartagena Protocol, as well as the need for enhancing and consolidating its institutional capacities, particularly the increasing need of specialised Human Resources. The coordinating role of the DOE implies, as specified in the ProDoc, "constant exchange, networking and follow up from the part of the Department of Environment", which is a relevant assumption to hold, as visualised in Diagram 1 of the ToC (chapter IV). This key-assumption was addressed by the large consultative inter-sectoral processes put in motion through the Project, particularly with the Research and Development sector in the country. Nevertheless, the process has to be pursued at different levels, as discussed under Socio-political Sustainability and Institutional Sustainability (Chapter V, Section H).

Conclusions

14. The evaluation has concluded that the sustainability of the results obtained so far has to be further addressed. The political commitment of the country towards Biosafety has to be unequivocally expressed through the adoption and implementation of Policy and Regulatory frameworks, hence allowing biotechnology developers and biosafety regulators to be effectively and smoothly operational under clear and consensual strategies and regulations. Capacity building on different subjects related to Biosafety remains a key issue to increase the institutional solidity and sustainability of main stakeholders, particularly the Competent National Authority, Academic and Research institutes, Biotechnology developers. There is also the need to improve socio-political sustainability through a focussed and transparent communication strategy enabling Public Information, Awareness and Participation.
15. Based on the findings from this evaluation, the project demonstrates performance at the "Satisfactory" level. A table of ratings against all evaluation criteria is found in the Conclusions section of the Report.

16. The ToR of the Evaluation had identified two key strategic questions to be answered by the Evaluation. Answers to these questions are fully reported in chapter VI (Conclusions) and summarised here below:

Question (a): To what extent did the project help to enhance national institutional and technical capacity and awareness amongst the key actors for effective enforcement of the Biosafety Law, decrees and sub-decrees on biosafety?

The process of revision and updating of the existing Regulatory instruments (Biosafety Rules and Guidelines) has involved different institutions and has contributed to enhance the overall institutional and technical capacity among key actors. Biosafety Systems, though in need of improvement, are in place and operational to make decisions and to implement, monitor and enforce them. The Project has supported the Competent National Authority and other National Stakeholders through capacity building, technical assistance to the Competent National Authority (national consultants, equipment), production of training and awareness material (manuals, guidelines, outreach material) and the establishment of the GMO laboratory.

Question (b): To what extent are the outcome indicators verifiable, and record progresses towards the achievement of the development objectives, as well as the obligations under the Cartagena Protocol?

The evaluation has actually pointed out (in its chapter V, section B - Quality of Project Design) some relevant weak points regarding the definition of the Results Framework and the way to objectively measure and assess Project performance. In some cases, Outcomes indicators are just a repetition or a reformulation of the Outcome itself, while in other cases Indicators of Outputs are used instead (e.g. number of participants, trainings, meetings, etc.). Nevertheless, the objectives to be achieved were clear to the Project Team and their partial achievement cannot be ascribed to the weakness of the Results Indicators. As discussed in Chapter V (Section D - Effectiveness), delays in the approval of Biosafety Policy, Rules and Guidelines, as well as existing shortcomings of the Biosafety Administrative, Decision-making, Monitoring and Enforcement Systems can be ascribed to other relevant factors, such as insufficient political commitment, not fully clear and effective operational procedures and inter-institutional mechanisms, and needs of more specialised human resources.

Lessons Learned

17. Lesson 1: Project expected results of institutional nature that need endorsement and approval at Governmental and Parliamentary level (e.g. Policy, Law, Guidelines, etc.) may prove difficult to be achieved within Project timeframe.

Recommendations

18. Recommendation 1:

The Evaluation recommends that UNEP Project staff strongly communicate the following recommendation to the Department of Environment - to give priority to and improve:

- the efficiency, effectiveness and transparency of the operating procedures of the National Committee on Biosafety (NCB) in handling GMOs applications, risk assessment and decision-making. This will entail a more time-efficient functioning of the NCB (regular quarterly meetings, implementation of time-limit for decision-making), open communication and exchange of information between NCB and the Applicants during the assessment process, adoption of knowledge-based and technically sound Risk Assessment practices, as well as

clear and transparent decisions made public through appropriate channels of information;

- the field coordination of Biosafety management in GMOs cultivation (Brinjal) with the relevant stakeholders (Bangladesh Agricultural Research Institute/BARI, Department of Agriculture Extension/DAE, the Farmers).

Recommendation 2:

The Evaluation recommends that UNEP Project staff communicate the following recommendation to the Department of Environment - to reinforce Biosafety Capacity Building activities through three main programs targeting priority groups as follows:

- Mainstreaming of biosafety and biodiversity among various associated ministries and to high-level policy and decision-makers;
- Effective use / application of Biosafety rules, regulations, guidelines and procedural mechanisms among scientists, researchers and technical officers associated to Biotechnology and Biosafety programs and activities, with particular reference to newly appointed staff;
- Strengthening the capacity of DOE Staff at central and decentralised levels with particular reference to Biosafety Monitoring and Enforcement at Field Level (Districts), to the GMO Laboratory staff, and to Projects Management at central level (with a special focus on administrative and financial skills).

For the purpose, it is equally recommended that training/capacity building activities and programs outlined above should be part of the post-2020 global biodiversity framework and clearly spelled out in the upcoming National Biodiversity Strategy and Action Plan with a priority basis.

Recommendation 3:

The Evaluation recommends that UNEP Project staff communicate the following recommendation to the Department of Environment: to enhance the Public Awareness and Participation Component of the NBF through the implementation of a Strategy and Action Plan in coordination with UNEP and the support of bilateral/multilateral partners at regional and international level.

Recommendation 4:

The Evaluation recommends that UNEP Project staff communicate the following recommendation to the Department of Environment: to prepare and make operational a Strategy of Resource Mobilisation for the implementation of the NBF by taking into account possible resource partners at national, regional and international level.

I. INTRODUCTION

19. In its capacity as an Implementing Agency of the Global Environmental Facility (GEF), UNEP 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 (LMO) from modern biotechnology².
20. This is the final report of the Terminal Evaluation of the Project "Implementation of the National Biosafety Framework of Bangladesh" (GFL/5060-2716-4C59) that was approved in November 2012 and officially started in January 2013 for a duration of 4 years. The total budget of the Project was USD 1,417,390, 62% of which represents the GEF allocation (USD 884,090) and the remaining 38% (USD 533,300) was provided in kind by the Government of Bangladesh. The Project was granted a no-cost extension of 19 months, shifting its Official End date to 28/06/2018.
21. The project is a Medium Size Project (MSP), financed through the GEF-4 mechanism and belongs to GEF Biodiversity Focal Area. It is relevant to GEF Strategic Programme 6, Biodiversity (BD-SP6) and Strategic Objective 3 (SO3): Building Capacity for the Implementation of the Cartagena Protocol on Biosafety. The Project makes part of UNEP Biennial Programmes of Work (2012-2013, 2014-2015 and 2016-2017), as discussed in Chapter V - Section A.
22. The National Executing Agency of the Project was the Department Of Environment (DOE) of the Ministry of Environment, Forests and Climate Change (MEFCC), which is also the Competent National Authority for the Cartagena Protocol on Biosafety and hosts the Biosafety Clearing House.
23. The Evaluation took place in the period between April to November 2020 and could not include a mission to Bangladesh due to the on-going pandemic. 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.

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

II. EVALUATION METHODS

Overall approach of the Evaluation

24. In line with the UNEP 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:
- (i) to provide evidence of results to meet accountability requirements, and
 - (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UN Environment, the GEF, the National Executing Agency and the national partners.
25. The report follows the format for Terminal Evaluations provided by the UNEP Evaluation Office. According to the UNEP 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 V: Findings) and the complete ratings table is included under the Conclusions (chapter VI – section B).
26. As requested by the UNEP methodology for Terminal Evaluations, an Inception Report was produced at the beginning of the mission, containing a review of the project context, of the quality of project design, a draft reconstructed Theory of Change (ToC) of the project (ToC at Inception), the evaluation framework and a tentative evaluation schedule. The Inception Report underwent a Peer Review at the UNEP Evaluation Office and has been shared with the Biosafety Task Manager at UN Environment. The reconstructed Theory of Change at Inception has been revised and slightly modified during the evaluation, taking into account supplementary information from the Projects stakeholders and evaluation findings. The ToC at Evaluation is presented and discussed in chapter IV.
27. The Evaluation has fostered a participatory approach with key stakeholders at national level. 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 and questions to systematise and discuss main achievements, as described below (Methods and tools).
28. The Consultant could not visit the country due the on-going COVID-19 pandemic. Written exchanges through emails and online interviews were extremely useful to in depth discuss achievements, problems and perspectives with the Project Director, Director (Planning) of the Department of Environment, as well as with other relevant institutional stakeholders involved in the implementation of the National Biosafety Framework. However, direct contacts with other relevant societal or professional groups were not possible (e.g. farmers cultivating GMOs crops, rural extensionists, women groups, consumers groups). Data was collected with respect to ethics and human rights issues. All information was gathered after prior informed consent from people, all discussions remained anonymous and all information was collected according to the UN Standards of Conduct.

Methods and tools for data collection and analysis

29. Overall, the Terms of Reference (ToR) of the Evaluation and the methodological tools and formats provided by the UNEP Evaluation Office have proved to be a robust methodological framework for the Evaluation exercise, facilitating the systematisation and presentation of the evaluation findings.
30. 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 (PDO) that has highlighted strong and weak points of Project Design (see Chapter V – Section B), particularly of the Logical Framework (Logframe);
 - The reconstruction of the Theory of Change of the project (see chapter IV).
31. The main methods and tools used in the Evaluation can be summarised as follows:
- a) A Desk Review of all project documents and reports the consultant had access to (see Annex 4), particularly through the e-platform ANUBIS (A New UNEP Biosafety Information System), which has been most helpful to gather relevant information regarding the technical and financial performance of the Project;
 - b) Exchanges with the Project Management Team at UNEP, namely the Task Manager;
 - c) Revision of the Final Project Outputs (posted in ANUBIS) and elaboration of a matrix of Project Outputs integrated by consultant's questions and comments. The matrix has been shared and discussed with the Project Director in Bangladesh through emails;
 - d) Subsequent exchanges through emails and skype meetings with the Project Director in Bangladesh during the evaluation to clarify specific points;
 - e) Interviews through emails with national stakeholders that played a relevant role in the implementation of Project activities, mainly from the Research and Development sector (see Annex 3). The questions addressed to the stakeholders were essentially three: the first one regarding the involvement/participation of the institution in the implementation of the Biosafety Framework, the second asking a grounded opinion on the achievements attained by the Project (strengths) and the third one, to highlight main challenges (current weak points and threats ahead).
 - f) Presentation and discussion with the Project Director of Preliminary Findings, including possible Recommendations, by email and skype meeting;
 - g) Constant exchanges with the Evaluation Manager of UNEP Evaluation Office and with the UNEP Task Manager / Biosafety. They provided constructive help in clarifying issues of methodological and technical nature regarding the evaluation development and the project implementation.
 - h) As the evaluation was undertaken remotely, information from project reports was verified through interviews and interviews were compared and contrasted to assess accuracy of information. The data analysis was an iterative process throughout the Evaluation, where initial findings and recommendations were discussed and tested with stakeholders as the Evaluation progressed to ensure their validity and appropriateness, and stakeholder participation and ownership.

Limitations

32. The impossibility to visit the country has been a limiting factor that has deprived the evaluation of a direct and intensive exchange with the Project Team and National Stakeholders. Nonetheless, written feedback has been received from six, out of eight main National Stakeholders contacted by the evaluator (see Annex 3). Written responses (usually 2-3 pages) have, in some cases, generated further questions that have received written responses as well. As already mentioned, the lack of direct interaction with stakeholders at field level (Farmers and Extensionists) and with Civil Society groups, has represented an objective limitation of the Evaluation.

III. THE PROJECT

A. Context

33. Bangladesh ratified the Cartagena Protocol on Biosafety (CPB) in 2004 and developed its National Biosafety Framework (NBF) in 2006 with the support of the UNEP-GEF Project on Development of National Biosafety Frameworks.
34. Based on the overall framework of the national Environmental Policy of 1992, the country produced its National Biodiversity Strategy and Action Plan (NBSAP) in 2004, which included "measures and standards to deal with invasive alien species and genetically modified organisms". In 2006 the Ministry of Environment and Forests updated existing Biosafety Guidelines, which were approved and published by the Government in 2008. Meanwhile the country also produced a National Biotechnology Policy in 2006 followed by National Guidelines for Fish and Animal Biotechnology and by National Guidelines on Medical Biotechnology.
35. In 2012, under the Bangladesh Environment Conservation Act of 1995, the Government promulgated the Bangladesh Biosafety Rules, providing regulations on the approval process for genetically engineered products developed domestically or by another country.
36. All the above shows the high interest and commitment of the country in developing a vibrant Biotechnology sector, while providing appropriate measures in terms of environmental safeguards and mechanisms of Biosafety regulation and control.
37. As a matter of fact, Genetically Modified Organisms (GMO) crop cultivation, namely GMO Bt Brinjal (Egg Plant) is currently cultivated (since 2014) by a considerable number of Bangladesh's estimated 150,000 brinjal growers (around 20% of them – 27,000 farmers - in 2018), and four other GMO crops are in an advanced state of field trials (late blight resistant potato, Bt cotton, vitamin-A enriched Golden Rice and High Iron and Zn Rice)³. Current development and perspectives of GMOs open-field cultivation highlights the role and the need of a fully operational National Biosafety Framework.
38. As rightly said in the Project Document (ProDoc) "the issue is to maintain a balance between biotechnology development and a regulatory response to meet both national and international obligations", and "a coordinated approach will have to be developed to ensure that development of biotechnology is balanced by a sound and science based regulatory approach to the use of LMOs in Bangladesh". These are, essentially, the challenges that the Project should have taken into consideration and attempted to address and against which its effectiveness and impact have to be assessed.
39. In practical terms, as explained in the Project Strategy of the ProDoc, the Project was called to address some main constraints in areas such as: regulations and soft laws; capacity building in GMOs Risk Assessment and Risk Management; improved infrastructure for monitoring and detection of LMOs; and enhancing public awareness and capacity to actively and meaningfully participate in decision-making on LMOs notifications.

³ International Service for the Acquisition of Agri-biotech Applications (ISAAA), 2015, "Global Status of Commercialised Biotech/GM Crops:2015", confirmed through interviews.

B. Results framework

40. The Project Objective as formulated in the ProDoc is "To assist Bangladesh to implement the National Biosafety Framework (NBF) in compliance with the Cartagena Protocol on Biosafety through enhancing the existing capacity on Biosafety at the Institutional, Individual and Systemic levels in Bangladesh, as well as to address national needs and priorities".
41. In that perspective, the Project was designed to address the five main components of National Biosafety Frameworks⁴. The Components and Outcomes identified in the ProDoc and in its Results Framework (Logical Framework) are as follows:

Table 1: Components and Outcomes of the Project (source: Results Framework, ProDoc)

COMPONENT	EXPECTED OUTCOMES
1. Stand-alone Biosafety National Policy and Updating Guidelines	- Biosafety policy with an Action is approved by the government and published in the national Gazette - Updated National Biosafety Guidelines
2. Biosafety Rules/Regulations	- Biosafety legal regime established in the country and NBF is fully operational and gazetted
3. GMOs Handling Application / Notification	- Coordinated administrative set-up in place for handling of requests/applications
4. Monitoring and Enforcement system	- A comprehensive Monitoring and Enforcement system in place for operation
5. Public awareness and participation in decision making. Regional harmonisation and knowledge sharing	- Public awareness and education on LMOs are raised significantly by successful completion of national programs - Competent National Authority (CNA) decision making bodies allowing specific provisions for public participation in decision making process

42. The expected Outcomes jointly contribute, according to the Reconstructed Theory of Change (ToC, see chapter IV below), "to implement the National Biosafety Framework in compliance with the Cartagena Protocol on Biosafety", as defined in the Project Objective mentioned above.
43. It is evident from the table above, the amplitude of the Components and the complexity of the Outcomes to be achieved by the Project. Moreover, as discussed under chapter IV (ToC), many of the Outputs to be delivered are, according to the Project Design, of an institutional nature increasing the complexity of delivering Project Outputs (e.g. Biosafety Policy, a Biosafety Legal Regime, set of administrative procedures and mechanisms) and as such depending on the existence of enabling external conditions / assumptions (e.g. political will, inter-institutional coordination, etc.).

C. Stakeholders

44. The Department of Environment (DOE) of the Ministry of Environment, Forests and Climate Change is the key-stakeholder for Biosafety Framework implementation in Bangladesh. The DOE is the Competent National Authority (CNA) for the Convention on Bio-Diversity (CBD), for the Cartagena Protocol on Biosafety (CPB) and is also the

⁴ As originally designed in UNEP-GEF, 2005, Toolkits for the Development of National Biosafety Frameworks

focal point for the Biosafety Clearing House (BCH). The DOE is also the National Executing Agency of the Project. Its role is summarised in following Table 2.

Table 2: Role and responsibility of the Department of Environment (DOE) of the Ministry of Environment, Forests and Climate Change

Role, interest and power over project results/implementation	Overall institutional role and responsibilities	Expected changes through project implementation
<ul style="list-style-type: none"> • DOE is the National Executing Agency (NEA) of the Project on behalf of MEFCC; • Manage the project and ensure that its objectives are met through the Project Director in DOE; • Responsible for reporting to UNEP and the CNA (Competent Nat. Authority) • Developed the National Biosafety Framework (NBF) of Bangladesh (previous Project) 	<ul style="list-style-type: none"> • CNA for CPB (on behalf of the Ministry) • The Department is the one-stop institution for all Biosafety coordination. <p>Overall Mission:</p> <ul style="list-style-type: none"> • Fair and consistent application of environmental rules and regulations; • Guiding, training, and promoting awareness of environmental issues; • Sustainable action on critical environment problems. 	<ul style="list-style-type: none"> • 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

45. Due to the multi-sectorial nature of biosafety, different Ministries and Institutes are involved to a variable extent in the implementation of the NBF. Some of them are part of the National Committee on Biosafety (NCB), which is according to the Bangladesh Biosafety Rules (2012) the policy and decision-making body for biosafety and is chaired by the Secretary of the Ministry of Environment and Forests. The Ministries that are statutory parts of the NCB are: the Ministry of Science and Technology; Ministry of Agriculture; Ministry of Fisheries and Livestock; and Ministry of Health.
46. Representatives of these Ministries have been actively involved in several Project activities, such as the review and updating of Biosafety Rules and Guidelines and have benefited from the Capacity Building activities organised by the Project.
47. Considering the context described in the previous chapter, the role of the Ministry of Agriculture is key for the crops that are intended to be tested in Confined Field Trials or released into the environment for cultivation in Bangladesh. In fact, all national applications for these purposes enter the system through the National Technical Committee on Crop Biotechnology (NTCCB), within the Ministry of Agriculture, which reviews the application and submits it to the NCB. In the case of Bangladesh importing a biotech crop for cultivation, an application is submitted to the NCB who then forwards it to the Ministry of Agriculture for review by the NTCCB.
48. In Bangladesh there are several institutions involved in Biotechnology activities, as shown in the Table 3 below. All institutions working with genetically modified organisms must establish an Institutional Biosafety Committee (IBC), as described in chapter V, Section D – Effectiveness (Outputs for Outcome 3). The Project has supported some of these institutes through specific training activities.

Table 3: Main National Institutions involved in Biotechnology activities

1. Bangladesh Agricultural Research Institute (BARI); 2) Bangladesh Sugarcane Research Institute (BSRI); 3) Bangladesh Institute of Nuclear Agriculture (BINA); 4) Bangladesh Rice Research Institute (BRR); 5) National Institute of Biotechnology (NIB); 6) Bangladesh Atomic Energy Commission (BAEC); 7) Bangladesh Livestock Research Institute (BLRI), 8) Department of Biotech, Bangladesh University – BAU; 9) Department of Biochemistry and Molecular Biology - BAU; 10) BRAC University; 11) Microbiology laboratory, Department of Botany; 12) Bangladesh Academy of Sciences.	
Overall institutional role and responsibilities	Expected changes through project implementation
<ul style="list-style-type: none"> • Biotechnology and Biosafety research and training including laboratory analytical functions to support regulatory agencies; • Technical support on LMO Detection; • To provide expert scientists to assist in risk assessment and risk management activities 	<ul style="list-style-type: none"> • Enhanced role (institution and capacity building) in setting and managing Regulatory, Administrative and Monitoring activities in their specific area • Capacity Building of Institutional Biosafety Committees (IBC) in these Institutes

D. Project implementation structure and partners

49. The Department of Environment (DOE), in its role as the national Executing Agency (NEA) of the Project, appointed a Project Director, recruited a Project Coordinator and established a Project Steering Committee.
50. The Project Director has been responsible for the overall coordination and finance management of the Project, and for Project reporting to the Project Steering Committee (PSC), to the Competent National Authority (CNA), i.e. the Ministry of Environment, Forests and Climate Change, and to GEF/UNEP. The Project Coordinator was recruited by the Project and was responsible for the operations of the Project and its technical and administrative progress with the support of a Finance Assistant. He reported to the National Project Director and to the PSC.
51. A Project Steering Committee (PSC), headed by the Secretary, Ministry of Environment and Forests, was established to oversee the progress of the project and expected to meet quarterly. The Steering Committee (chaired by the Secretary, MEFCC) included representatives of the MEFCC and of other Ministries, such as Science and Technology, Agriculture, Planning, Finance, as well as representatives of Academic and Research Institutes. The implementation structure is visualised here below:

Figure 1: Project implementation structure (Source: ToR of the Evaluation)**E. Changes in design during implementation**

52. The original Project Document contemplated the promulgation of the Biosafety Rules as a Project Output (see Table 6 in following chapter IV, Output 2.1). However, Biosafety Rules were promulgated by the Ministry of Environment, Forests and Climate Change under the Environment Conservation Act (1995) in 2012, i.e. before the commencement of the Project. As discussed more in depth in Chapter V, Section D – Effectiveness (Availability of Outputs), Output 2.1 was reformulated at the beginning of the Project taking into consideration the need for improved synergies between existing biosafety Guidelines (2008) and Biosafety Rules (2012), and for their overall updating.
53. During its lifetime, the Project has been granted 7 budget revisions (listed in ANUBIS), which have been mainly used for re-allocating unspent money. The Project was also granted in 2016 a no-cost extension of 19 months due to delays in its start-up for the internalization of the Project into the national planning system. For instance, the National Director and the National Coordinators became officially operational only in 2014, i.e. one year after the official start of the Project. Overall, no significant changes in design occurred during project implementation.

F. Project financing

54. The following Table compares the estimated cost at design (GEF Budget) and the actual cost as presented in the Final Financial Statement of the Project. Expenditure ratio, particularly divergencies between estimated and actual costs, are discussed in chapter V, Section E - Financial management.

Table 4: GEF Budget at design and expenditures by Budget Line / Object of Expenditure (10/2019)

UNEP BUDGET LINE / OBJECT OF EXPENDITURE	Estimated cost at design (USD)	Actual Cost (USD)	Expenditure ratio (actual/planned)
10 PROJECT PERSONNEL	126,090	183,917	146%
20 SUB-CONTRACT	259,000	145,361	56%
30 TRAINING	258,600	218,184	84%
40 EQUIPMENT & PREMISES	150,500	282,594	188%
50 MISCELLANEOUS	89,900	54,034	60%
Total	884,090	884,090	100%

Table 5: Co-financing Table (Source: Project Final Report, in ANUBIS)

Co-financing (Type/Source)	UNEP own Financing		Government USD		Other * USD		Total USD		Total Disbursed USD
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
Grants									
Loans									
Credits									
Equity invest.									

Co-financing (Type/Source)	UNEP own Financing		Government USD		Other * USD		Total USD		Total Disbursed USD
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
In-kind support			533,000	533,000			533,000	533,000	533,000
Other *									
Total			533,000	533,000			533,000	533,000	533,000

* This refers to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation

IV. THEORY OF CHANGE AT EVALUATION

The reconstructed Theory of Change (ToC) of the project: overview

55. The reconstructed ToC, based on the project's design and logical framework, aims at mapping the possible pathways of change between the project outputs and the expected outcomes, up to the intended impact, as well as identifying the main drivers and assumptions which have effects on the envisaged change process.
56. At the time of Project formulation a ToC was not required in the project design documentation. Moreover, the format in use for the Logical Framework (Project Results Framework, App. 4 of the ProDoc) only contemplated results at Outcome level. Outputs were defined in the App. 6 of the ProDoc (Key deliverables and benchmarks).
57. Based on an analysis of the Project Design (see chapter V, Section B), the ProDoc did not fully succeed in providing a clear and exhaustive description of its expected results at different levels, and the logical sequence between Activities, Outputs and Outcomes was not discussed. Project Outcomes were not always clearly formulated in either the ProDoc or the Project Results Framework, and there were also inconsistencies between the two. In light of that, and taking into account UNEP's definitions (2019) of different results levels, Project results have been partially reformulated or rephrased in a reconstructed ToC, which is discussed in the following sections and visualised in Diagrams 1 and 2.
58. Table 6 below compares a summary of the project's results hierarchy for: a) the results as stated in the ProDoc and b) as formulated in the TOC at Evaluation and provides justifications for the reformulation.

Table 6: Justification for Reformulation of Results Statements

Formulation in original project document(s)	Formulation for Reconstructed ToC at Evaluation	Justification for Reformulation
LONG TERM IMPACT		
Not discussed	Enhanced conservation and sustainable use of biological diversity in Bangladesh.	The Project Impact is the Global Environmental Benefit the Project is contributing to.
INTERMEDIATE STATES (IS)		

Formulation in original project document(s)	Formulation for Reconstructed ToC at Evaluation	Justification for Reformulation
<p>Project Objective as in ProDoc: "To assist Bangladesh to implement the National Biosafety Framework in compliance with the Cartagena Protocol on Biosafety through enhancing the existing capacity on Biosafety at the Institutional, Individual and Systemic levels in Bangladesh, as well as to address national needs and priorities".</p>	<p>Intermediate State 4 (IS 4): Art. 1 of Cartagena Protocol fulfilled: "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"</p> <p>Intermediate State 3 (IS 3): Improved governance of national / regional biosafety systems based upon: Rule of law and compliance, Accountability and Liability, Equity, Transparency, Citizens' Participation</p> <p>Intermediate State 2 (IS 2): Improved Decision-making, Effective mechanisms, Enhanced quality information and transparency</p> <p>Intermediate State 1 (IS 1): A National Biosafety Framework fully operational in Bangladesh</p>	<p>Reformulated to disentangle the original description of the Project Objective (which encompasses different levels of expected results) and to specify main stages of progress of the NBF towards Impact.</p>
PROJECT OUTCOMES		
As formulated in App. 4 (Project Results Framework) of the ProDoc as Outcome Indicators "End of Project Targets".	Formulation for Reconstructed ToC at Evaluation	Justification for Reformulation
<ul style="list-style-type: none"> - Biosafety policy with an Action Plan is approved by the government and published in the national Gazette - Updated National Biosafety Guidelines 	<p>1. Biosafety Policy with an Action Plan approved, published and implemented</p>	<ul style="list-style-type: none"> - Emphasis is on the implementation, as specified in Output 1.1 (see below). - Guidelines usually make part of the operationalisation of a regulatory regime (Outcome 2)
<ul style="list-style-type: none"> - Biosafety legal regime established in the country and NBF is fully operational and gazetted 	<p>2-Biosafety legal regime established, enacted and fully operational in the country</p>	<p>Clearer reformulation (word "enacted" is also used in the ProDoc Results Framework)</p>
<ul style="list-style-type: none"> - Coordinated administrative set-up in place for handling of requests/applications 	<p>3- Coordinated administrative set-up and mechanisms in place for handling of requests/applications</p>	<p>No substantive change (emphasis on operational mechanisms)</p>
<ul style="list-style-type: none"> - A comprehensive Monitoring and Enforcement system in place for operation 	<p>4- A comprehensive Monitoring and Enforcement system in place and operational</p>	<p>No substantive change</p>

Formulation in original project document(s)	Formulation for Reconstructed ToC at Evaluation	Justification for Reformulation
<ul style="list-style-type: none"> - Public awareness and education on LMOs are raised significantly by successful completion of national programs - CNA decision making bodies allowing specific provisions for public participation in decision making process 	5- Enhanced public awareness and public participation in decision making on LMOs	More synthetic. It encompasses both Public awareness and Public participation. Also more coherent with expected Outputs.
PROJECT OUTPUTS		
As formulated in App. 6 of the ProDoc (Key deliverables and Benchmarks)	Formulation for Reconstructed ToC at Evaluation	Justification for Reformulation
<ul style="list-style-type: none"> 1.1 Biosafety policy approved & implemented by Government 1.2 NBF and Biosafety Guidelines updated by DOE 	1.1 Draft Biosafety Policy updated, discussed with stakeholders and prepared for Government approval	<ul style="list-style-type: none"> -Policy approval and implementation are expected at Outcome level (see above) -Guidelines are contemplated in Output 2.1 (see below)
2.1 Biosafety Rules promulgated by the Ministry of Environment and Forests under Environment Conservation Act 1995	2.1 Biosafety Rules (2012) and Guidelines (2008) updated	Biosafety Rules were promulgated in 2012 before the Project started
<ul style="list-style-type: none"> 3.1 A fully functional administrative system for handling requests for LMOs 3.2 A fully functional system for risk assessment and decision-making 3.3 An efficient system for handling, storing and exchanging information on biosafety in place under the nBCH 	<ul style="list-style-type: none"> 3.1. A fully functional administrative system for: <ul style="list-style-type: none"> - handling requests for LMOs - risk assessment and decision-making 3.2. An efficient system for handling, storing and exchanging information on biosafety in place under the nBCH 	No substantive changes
<ul style="list-style-type: none"> 4.1 Fully functional and effective inspection, monitoring and enforcement system in place in Bangladesh 4.2 Strengthened laboratories able to detect LMOs 4.3 Emergency response procedures (ERP) established. 	<ul style="list-style-type: none"> 4.1 Fully functional and effective inspection, monitoring and enforcement system in place 4.2 Laboratories able to detect LMOs 4.3 Emergency response procedures (ERP) established. 	No substantive changes
<ul style="list-style-type: none"> 5.1 Fully functional system for access to, and sharing of information in place in Bangladesh, inter alia through dynamic operations of national BCH 5.2 Strengthened system for public awareness on the safe use of LMOs in place. 5.3 Strengthened system for public participation in decision-making on LMOs in place. 5.4 Establish networks established with other Implementation project teams for sharing experiences, lessons & best practices 	<ul style="list-style-type: none"> 5.1 Fully functional system for access to, and sharing of information (national BCH); 5.2 Strengthened system for public awareness and participation in place; 5.3 Networks established at regional level for sharing experiences, lessons & best practices 	No substantive changes

The pathway towards the implementation of the National Biosafety Framework

59. Diagram 1 maps out the lower part of the reconstructed ToC, from Activities up to the implementation of the National Biosafety Framework. There are five logical pathways of Activities/Outputs towards Project Outcomes corresponding to each of the five components of the National Biosafety Framework (NBF).
60. The ToC also shows that there is an "if...then..." chain (cause-effect) between Outcomes 2, 3 and 4: if a regulatory regime is in place, then and administrative system can be set up and work, and if the administrative system works and decisions are made, then a monitoring and enforcement system makes sense and has to be made functional.
61. **Key-drivers** in the pathway to the implementation of the NBF are all the previous achievements of the country in the area of Biosafety, notably:
- ◆ the Nat Biosafety Framework prepared with the support of the GEF/UNEP Project of NBF Development (2004-06);
 - ◆ the Biosafety Guidelines of Bangladesh gazetted in 2008 (in absence of a regulatory regime and a policy, at that time);
 - ◆ the Biosafety Rules of Bangladesh, promulgated under the Environment Conservation Act (1995) and published in the National Gazette in 2012. These rules codify the regulatory structures and processes contained in the Biosafety Guidelines of Bangladesh (2008).
62. The Nat. Exec. Agency (DOE) plays a key role in the implementation of the NBF, particularly its capacity of coordination and partnership with other national and international stakeholders.
63. Most of the Outcomes are of an institutional nature, involving political, regulatory, procedural mechanisms to be agreed upon and implemented, which are not fully under control of the Project and of the NEA. Moreover, they refer to different sectors, such as Agriculture, Research and Technology, Health, Trade, among others. The ProDoc identified some risks and mitigation measures, notably the key-assumption that "constant exchange, networking and follow up from the part of the National Executing Agency, the Department of Environment" are in place and maintained.
64. The process of moving from a draft NBF to its full implementation requires a number of **assumptions** to hold in different areas of action, as outlined here below:
- ◆ Human Resources have to be available and made operational at a suitable level, not only within the Competent National Authority (DOE), but also in other sectors involved in Biosafety, such as Agriculture, Science & Technology, Academic Institutions;
 - ◆ The Competent National Authority is able to assume the leadership and to play its coordinating role in Biosafety policy and decision-making through mechanisms of coordination and inter-sectorial work;
 - ◆ Enabling socio-political environment at a higher and wider level, i.e. policy and decision-makers willing to make Biosafety progressing in the national agenda, as well as public opinion and civil society able to meaningfully participate in the process.
65. The Project may have progressed more in some components and less in others. Depending, on the one hand, on the level of achievement of any of the five Outcomes and, on the other hand, on the capacity to coordinate them in a harmonised way, a

more advanced state of change could be achieved, corresponding to the original Project Objective and identified in the ToC as the **first Intermediate State (IS 1)** towards Impact, i.e. "A National Biosafety Framework fully operational in Bangladesh".

The pathway to Impact

66. The intended Impact of the Project is the Global Environmental Benefit to which the Project is contributing: the "Enhanced conservation and sustainable use of biological diversity in Bangladesh". Overall, the pathway towards higher levels of results entails the continuous and progressive improvement of decision-making processes and of governance mechanisms. Schematically, the pathway from the Intermediate State 1 to the intended Impact can be simplified by identifying further transitional conditions (Intermediate States) to be fulfilled, as shown in Diagram 2. Assuming that the Intermediate State 1 (IS 1) is achieved and maintained, three other Intermediate States can be achieved:

- "Improved decision-making processes for LMOs approval, effective implementation mechanisms and enhanced quality information and transparency" **(Intermediate State 2 / IS 2)** can be achieved under the conditions that, firstly, the NBF has the financial resources to effectively monitor all the relevant aspects of the GMOs management and, secondly, a resource mobilisation strategy is conceived and developed. Key impact drivers at that stage are the coordinating role of the Competent National Authority/CNA (DOE), effective GMOs management systems (e.g. for detection and referral, for handling applications, for risk assessment and monitoring), stakeholders and public participation, quality information available and timely flowing into the BCH.
- "Improved Governance of National/Regional Biosafety systems based upon: Rule of Law and Compliance, Accountability and Liability, Equity, Transparency and Citizens' Participation" **(Intermediate State 3 / IS 3)** can be achieved under the assumption that the required political will of the Government is not missing. That should be reflected in the implementation of a National Policy on Biosafety and of an Action Plan (actually foreseen in the first Project Outcome). Improved Governance also implies that the national policy on Biosafety is streamlined into government plans and an effective strategy of resource mobilisation is operational. The main impact drivers at that stage will be effective forms of stakeholder participation (in planning, decision making and funding), conducive to open and transparent information flows and negotiation processes at different levels.
- The **Intermediate State 4 (IS 4)** is the "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 Cartagena Protocol (CPB). Political will and negotiations will act as impact drivers at that level, under the main assumption that decision-making of the National Committee on Biosafety (NCB) persists based on rigorous Risk Assessment and Risk Management best practices, and that financial resources flow into Biosafety programs mechanisms. Under the same assumption that internationally followed principles of Risk Assessment and Risk Management are lastingly used by the Competent National Authority, the Project Impact (Enhanced Conservation and Sustainable Use of Biological Diversity in Bangladesh) can be achieved.

67. As visualised in Diagram 2, Intermediate States 2, 3 and 4 are not necessarily sequential and could be emerging simultaneously, though it is expected that IS 4 would come after the other two. IS 2 can also be a driving force to IS 3.

Diagram 1: Pathway towards the National Biosafety Framework

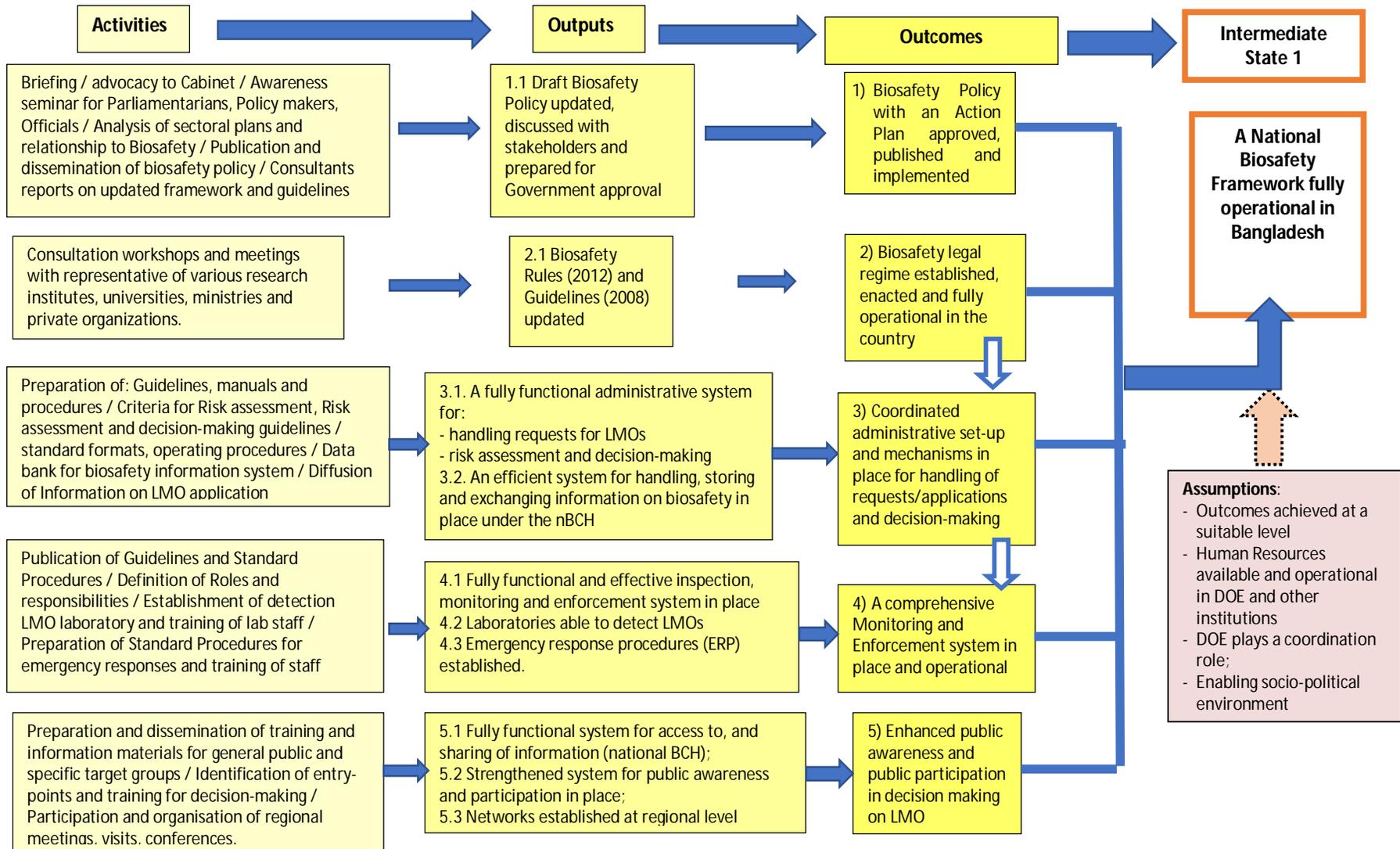
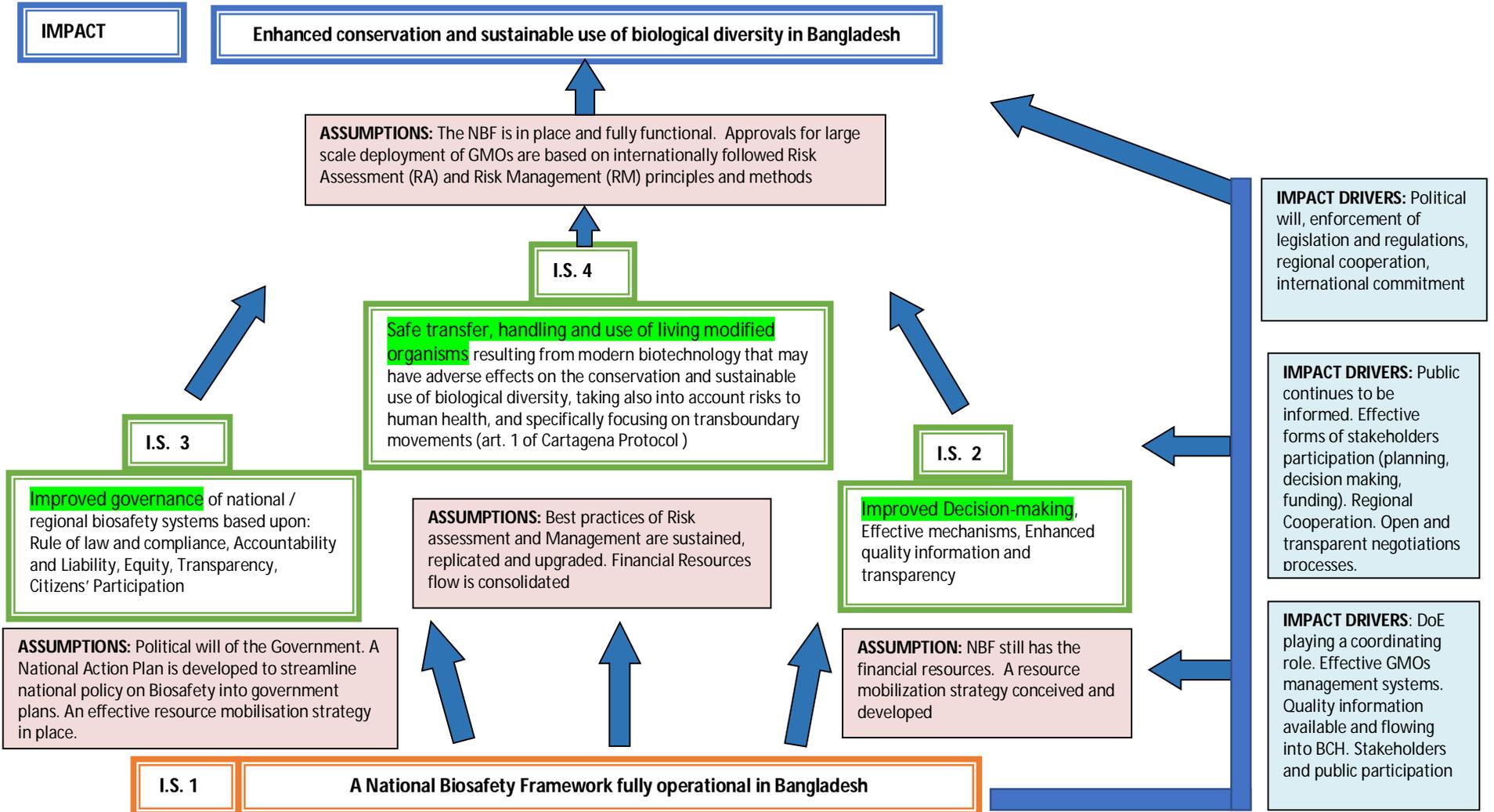


Diagram 2: Pathway from NBF to Impact



V. EVALUATION FINDINGS

A. Strategic Relevance

Alignment to MTS and POW

68. The Project spans over two UNEP 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 7 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 7: Contribution of the Project to the Medium-Term Strategy (MTS)

Expected Accomplishment (EA)	Contribution of the Project
<p>MTS 2010-2013, Sub-programme Environmental Governance, EA(b): States increasingly implement their environmental obligations and achieve their environmental priority goals, targets and objectives through strengthened laws and institutions</p>	<ul style="list-style-type: none"> • Overall support to the implementation of the NBF • Biosafety Policy • Updated Biosafety Rules and Guidelines • Support to the National Committee on Biosafety (NCB)
<p>MTS 2014-2017, Sub-programme 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;</p>	<ul style="list-style-type: none"> • Overall support to the implementation of the NBF • Biosafety Policy • Updated Biosafety Rules and Guidelines • Support to the National Committee on Biosafety (NCB) • Capacity Building in several areas of Biosafety Management

Alignment to UNEP/Donor Strategic Priorities

69. 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.

70. Bali Strategic Plan (BSP) was not mentioned in the ProDoc and not explicitly focussed by the Project. Nevertheless, given its focus on Capacity Building, on Technology Support (e.g. establishment of a GMO laboratory in Bangladesh) and on South-South Cooperation, the Project was de facto aligned with BSP. Actually, the project has been active in addressing many of the cross-cutting issues listed in section D of the BSP, 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.

71. The Project has also promoted South-South Cooperation on Biosafety at regional level (mainly in the framework of SAARC / South Asian Association for Regional Cooperation), through study-tours and exchanges with neighbouring countries, and through the annual meetings of the GEF/UNEP Biosafety Projects' Coordinators.

Relevance to Regional, Sub-regional and National Priorities

72. Biosafety is surely gaining relevance in Bangladesh like in the whole Southern Asia and South-East Asia Regions, due to the interest of the countries to expand Biotechnologies, including GMOs, for agricultural purposes. Generally, the Asian countries that were in the lead of the "green revolution" of past century, regard GMOs cropping as a strategic instrument to boost food production and the agricultural sector, reducing food insecurity while increasing agriculture productivity and farmers income. Although the use of GMOs is far from being a consensual issue throughout the region, at a variable extent from country to country, there is a generalised recognition that Biosafety should be a priority to address, taking into account environmental and human health concerns.
73. The above is particularly true for Bangladesh, which has been the first country of the Region to produce GMO Brinjal (egg-plant) at a considerably large scale, and is at an advanced trial stage for further introducing other GMO crops, among them the main staple food, rice. It is, therefore, a priority for the country to set Biosafety principles and procedures at the level they deserve. In fact, Bangladesh Environment Policy 2018 covers Biosafety under Biodiversity, Ecosystem Conservation and Biosafety, as one sector.

Complementarity with Existing Interventions

74. The Project was conceived to implement the National Biosafety Framework (NBF) formulated through the support of the previous GEF/UNEP Project "Development of the National Biosafety Framework" (2004-2006) and actually built upon the achievements and the institutional network created in the context of the previous project (see Context, chapter III, Section A). The Project has also been complementary to the GEF/UNEP Projects supporting the setting and consolidation of the BCH (Biosafety Clearing House) in Bangladesh and is part of a larger portfolio of GEF projects supporting Biodiversity Conservation in the country.
75. As mentioned in Chapter III - Context, the need to keep a balanced approach between Biotechnology development and meeting Biosafety national and international standards, was at the core of the Project rationale. Therefore, GEF/UNEP Project can also be considered complementary to USAID overall support to the development of Biotechnology and GMOs cultivation in Bangladesh and in the Region through the South Asia Biosafety Program (SABP), as described in chapter VI, Section D (regarding the delivery of Output 5 on regional network and harmonization).

Rating for Strategic Relevance:	Highly Satisfactory (HS)
--	---------------------------------

B. Quality of Project Design

76. 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 UNEP 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.
77. The Review of the Project Design quality has been done on the basis of the ProDoc and its Appendices, particularly Appendix 1 (Budget), Appendix 4 (Results Framework), Appendix 5 (Workplan and timetable), Appendix 6 (Key deliverables and benchmarks) and Appendix 7 (Costed M&E plan). Overall, the Project Design scores satisfactorily in most of its sections. The Design provides a well-structured analysis of Project relevance, and a synthetic and clear description of its governance and implementing structure. Its budget is balanced and reasonably commensurate to the

Project expected results. Government co-financing has been incremented after PRC (Project Review Committee) remarks.

78. Despite an interesting stock-taking of the in-place capacities of national Biotech institutions (around 12 different institutions listed in a long table under the chapter of Sustainability), the stakeholders analysis presented in the design is weak and does not provide a clear idea of the opportunities and challenges of national coordination and possible partnerships around Biosafety.
79. Project Design is particularly weak in its crucial sections regarding "Intended Results and Causality" and "Logical Framework and Monitoring". Project Outcomes description in the ProDoc is not fully matching with the Results Framework, and the ProDoc does not minimally explain and discuss the logical cause-effect sequence of activities and deliverables that should lead to the achievement of Project Results. The underlying logic of the Project Design and the way to objectively measure and assess Project performance is therefore not fully evident.

Rating for Project Design: Moderately Satisfactory (MS)

C. Nature of the External Context

80. Because of its geographical situation, Bangladesh is prone to natural disasters (floods), particularly in the last years also due to the climate-change trends. However, they do not seem to have substantively hampered Project implementation, thanks to country preparedness. The socio-political environment is also challenging, particularly due to the overall sub-regional situation, including the high number of refugees. All these factors are influencing the overall national scale of priorities and socio-political focus, hence possibly diverting decision-makers' interest towards more pressing issues.

Rating for Nature of the external context: Moderately Favourable (MF)

D. Effectiveness

81. The information provided by the "Final Project Output Summary" and the "Terminal Report" prepared by the Project Team, and filed in ANUBIS, was corroborated through direct exchanges with the Project Team all along the evaluation exercise. The information has been analysed and systematised according to the pathway designed in the ToC (Chapter IV). Availability of Outputs below is described in relation to outcomes following the sequence described in Table 6 and in Diagram 1 of Chapter IV.

Availability of Outputs

Outputs related to Outcome 1 (Biosafety Policy with an Action Plan)	
Rfr: Table 6 / Diagram 1	
1.1	Draft Biosafety Policy updated, discussed with stakeholders and prepared for Government approval

82. The Project started in 2014 to revise the existing documents regarding Biosafety Policy prepared during the previous GEF-UNEP Project (Development of the NBF). The idea was to formulate a "stand-alone Biosafety Policy" and several activities were consequently developed. In 2015, a first draft of the "Biosafety Policy of Bangladesh"

was prepared. Workshops and consultations were organised to review the draft and get the opinion of relevant stakeholders.

83. More specifically, a Consultation-workshop took place in 2015 to finalize the draft. Policy draft revision and stakeholders consultation continued in 2016 and a final draft of Biosafety Policy of Bangladesh was prepared in 2017 (in both English and Bangla), including the general outline of an Action Plan, and was submitted in 2018 to the Ministry of Environment, Forests and Climate Change (MEFCC) for Government approval and Gazette notification.
84. According to information received during the evaluation, the Policy has to follow its bureaucratic course for final endorsement and is currently awaiting further processing for approval by the Cabinet. Nevertheless, the developed policy in the draft form has been made public in the national Biosafety Clearing House/BCH (<http://www.bchbd.org/>), in the page "Supplementary Documents and Publications" with the title "Biosafety Policy of Bangladesh, 2020 - Drafted Version", and any user can take note of the document before it is published into the gazette.
85. As for the integration of Biosafety in National Policies, the revised National Biodiversity Strategy and Action Plan (NBSAP) 2016-2021, which is based on CBD Strategic Planning (Aichi Biodiversity Targets), actually includes the implementation of the National Biosafety Framework in the list of Projects related to Biodiversity, which is positive. However, Biosafety is not discussed in any part of the Plan.

Outputs related to Outcome 2 (Biosafety legal regime)

Rfr: Table 6 / Diagram 1	
2.1 Biosafety Rules (2012) and Guidelines (2008) updated	

86. The original project document contemplated the promulgation of the Biosafety Rules as a Project Output (see Table 6, Output 2.1). However, Biosafety Rules were promulgated by the Ministry of Environment and Forests under Environment Conservation Act (1995) in 2012, i.e. before the commencement of the Project. As for the Biosafety Guidelines of Bangladesh, they were first gazetted in June 2002 by the Ministry of Science and Technology to expedite the biotech activities in the country. After the country's ratification of the Cartagena Protocol (2004) and the formulation of the National Biosafety Framework (2006)⁵, the Guidelines document was again gazetted, with very few changes, by the Ministry of Environment and Forests in January 2008.
87. According to the Department of Environment (DOE), existing Rules (2012) and Guidelines (2008) met country regulatory needs to a great extent. During project implementation an activity was planned to look back and investigate to see if there was room for improvement, particularly as the two documents (Rules and Guidelines) were developed at different times and questions of examining lacuna and possible incoherence were pertinent. The Guidelines document, originally prepared in 2002 (see above), was particularly in need of review.
88. As a consequence, the Project supported in 2016 a Consultation Workshop on "Updating Biosafety Rules of Bangladesh / 2012 and Biosafety Guidelines of

⁵ Through the support of the previous GEF/UNEP Project "Development of the National Biosafety Framework" (2004-2006), see Section on Complementarity with Existing Interventions (§ 74).

Bangladesh / 2008" with the participation of 76 representatives of various research institutes, universities, ministries and private organizations. Four workshops were also organised in 2017 and 2018 on "Biosafety Regulatory System and Network Development" at a decentralised level, in four different administrative areas (Divisions) of the country, with a large number of participants coming from different institutions of the Divisions (Ministries, Research Institutes, University, etc.).

89. The consultation process described above led to the elaboration in 2017 of the "Revised Biosafety Guidelines of Bangladesh – Draft". The Ministry of Environment called for opinions/comments from other ministries/institutes and organized a meeting which came up with the decision that both legal documents (the Rules and the Guidelines) should be merged into a single document and the whole document should be translated in Bangla as per national process and policy. DOE made the cumbersome task of translating the documents in Bangla and prepared a combined document for further processing by the Ministry.
90. Following the consultation and revision process described above, the "Revised Biosafety Guidelines of Bangladesh" of 2017 have been further improved through minor changes and have been only recently (2020) uploaded to the National BCH in the "Supplementary Documents and Publications" section, as "Biosafety Guidelines of Bangladesh, 2020 - Drafts for Amendment" which, as indicated in the title, cannot yet be considered as a finalised document.
91. According to information from the Department of Environment (DOE), the amended draft is regularly followed up by the DOE to complete the queries and comments given by various ministries. Bangladesh ministries follow a system to finalize legal documents that takes a lengthy course of time (usually 5-6 years according to the Competent National Authority) and the draft is currently under process to be forwarded to the Ministry of Law and Parliamentary Affairs for vetting and further completion of formalities for approval and publication.
92. Overall, the process of updating the Biosafety Rules and Guidelines has been exceedingly time and energy consuming, and, as mentioned above, not yet fully achieved. Although the process of approval and promulgation of a Law is usually convoluted and lengthy in Bangladesh (see above), the Competent National Authority also believes that Biodiversity (including Biosafety) is not yet at the top of the priorities even within the MEFCC, particularly when compared with Climate Change that have direct, huge and tangible socio-economic repercussions upon the country and its population.

Outputs related to Outcome 3 (Handling Applications)	
Rfr: Table 6 / Diagram 1 3.1. A fully functional administrative system for: - handling requests for LMOs - risk assessment and decision-making 3.2. An efficient system for handling, storing and exchanging information on biosafety in place under the BCH	

93. The Project has contributed to enhance the national capacities to develop and implement the national Administrative System of Biosafety, through information, awareness raising and training activities, as well as through other opportunities of dialogue and interaction (e.g. preparation of manuals, setting of standard procedures, etc.). It has to be highlighted the organization and coordination of a national workshop in 2016 for the members of different committees and enforcing agencies'

officials, to describe and discuss the functional administrative system for handling and notifications of GMOs, with more than 150 participants.

94. While awaiting the formal approval of the revised Updated Guidelines (see above), the administrative System for handling requests, risk assessment and decision-making is anyway in place and functional through the existing Guidelines (2008). On this basis, approvals of Confined Trials of Transgenic Potato, Golden Rice, High Iron and Zn Rice, and Bt Cotton, as well as limited cultivation of Bt Brinjal have been processed from 2013 onward.
95. The Updated Guidelines follow the same format of the previous Guidelines (2008) and include four main Chapters, namely:
- Chapter 1 defining Scope and Objectives of the Biosafety Guidelines;
 - Chapter 2 (Institutional Arrangements) describing the composition, role, responsibility and functions of the different Biosafety Committees (see description below) called to manage different aspects of GMOs use and management (from Handling Applications and Decision-making, Risk Assessment and Risk Management, Monitoring and Enforcement);
 - Chapter 3 (General Provisions) defining Objectives, Principles and Methodologies of Risk Assessment and Risk Management related to different scope and use of GMOs;
 - Chapter 4 concerning Physico-chemical and Biological Containments: procedures and facilities.
96. Under the chapter of "Institutional Arrangements", the updated Guidelines define the delegation of responsibility and functions from the Competent National Authority (CNA), i.e. the MEFCC, to the National Committee on Biosafety (NCB), "to ensure environmentally safe management of modern biotechnological development including research and development, introduction, use and trans-boundary movement of GMOs/LMOs". The powers vested to in the NCB by the Guidelines are outlined here below:
- Draft and adopt policies and measures to ensure safety of humans and environment;
 - Stop or prevent any activity with a GMO after establishing that the activity is unsafe to the personnel, community and/or the environment;
 - Approve applications for GMO research, introduction, commercial use, transboundary movement and release to the environment;
 - Approve biosafety related guidelines, manuals, SOPs (Standard Operating Procedures), and formats/forms;
 - Certify/Authorize laboratories to conduct GMO research;
 - Approve Institutional Biosafety Committee (IBC) upon recommendation of respective heads of institutions/ universities/ private organizations.
97. The NCB is supported by a technical committee, the Biosafety Core Committee (BCC), to assist and accelerate the functions of NCB, specifically providing technical reviews of any application for lab research, contained trial, confined trial, field trial, open field trial, field release, introduction, use, and importation of GMOs as well as forwarding recommendations to the NCB for its consideration.
98. Each research institution working on Biotechnologies has to establish an Institutional Biosafety Committee (IBC), a Field Level Biosafety Committee (FBC) and designated Biological Safety Officers (BSO). The IBC is empowered to enforce all biosafety

regulations within the institute/organisation, to report infractions to the NCB and to stop a project if its continuation is considered a threat to laboratory personnel, public or environment. Actually, all the Institutes currently working with GMOs in Bangladesh have an operational IBC.

99. The Updated Guidelines are addressing some recognised weak points of the current Administrative System for Handling Applications and Decision-making, by improving the efficiency, transparency and foreseeability of the System. Main innovations concern: (a) the definition of the time-frame (90 days) to approve or disapprove the applications (which should address the recurrent complaints of the applicants on the lengthy and unforeseeable timing of the process), (b) the reduction of the number of the members of the National Committee on Biosafety (NCB) from 21 to 12 (and a quorum of 7), which should make easier to hold quarterly meetings as foreseen in the Guidelines, (c) a more detailed description of the power, function and responsibilities of the Biosafety Core Committee (BCC), so as to avoid inconsistencies and overlapping functions with NCB.
100. Although, as described above, the Updated Guidelines represent an attempt to improve System effectiveness and efficiency, they still show room for improvement and can possibly raise further concerns among national stakeholders. Actually, weak or debatable points are still present, such as the preponderance of Public Sector representatives (11 out of 12 members of the NCB), the low representation of Civil Society (just one member), the absence of representatives from the Private Sector and of independent scientists and experts, and the remarkable reduction of representatives of GMOs developers.
101. Another major concern raised by virtually all stakeholders interviewed, regards the weak national capacities of conducting technically-sound, knowledge-based Risk Assessments. This has been pointed out by stakeholders as a crucial challenge to be addressed not only through short trainings and workshops, but with a medium-long term view encompassing the development of academic curricula and inter-disciplinary approach.

Outputs related to Outcome 4 (Monitoring and Enforcement)	
Rfr: Table 6 / Diagram 1	
4.1 Fully functional and effective inspection, monitoring and enforcement system in place	
4.2 Laboratories able to detect LMOs	
4.3 Emergency response procedures (ERP) established.	

102. In the framework of the Updated Biosafety Guidelines 2020, the Project has supported the development of a Biosafety inspection, monitoring and enforcement system, specifically the production of:
- ◆ A Monitoring and Enforcement Manual (2019), which provides comprehensive guidelines on monitoring, compliance and enforcement of the laws and regulations related to biosafety in Bangladesh for use by monitoring officers, inspectors, investigators, decision makers and their partners. It covers different areas of work, such as GMOs released into the environment, importation, development, packaging, contained use, transfer and field testing;
 - ◆ Specific Guidelines for Monitoring Confined Field Trial of Genetically Engineered Plants;

- ◆ Standard Operating Procedures (SOP) on different issues, namely: Transport, Storage, Harvest Disposal of Genetically Engineered Plant (GEP) material; Field Trial Compliance Monitoring of Bt Egg Plant and Post-Harvest Management of Bt Egg Plant (in need of updating);
- ◆ Emergency Response Procedures (ERP) for GMOs in Bangladesh guiding GMOs operators working with contained laboratory research, confined field trial, transport, import, export and transit of GMOs in the country, particularly regarding the establishment and implementation of Emergency Response Plans related to unintentional or accidental release of GMO outside the permitted areas;
- ◆ A Manual on GMO Detection and Good Laboratory Practices (2019).

103. The Institutional Biosafety Committees (IBC), as defined in the Biosafety Guidelines, play a key-role in monitoring and ensuring that Biosafety procedures are fully in place and respected by the Institutes that are in the front-line of GMOs Research & Development. IBCs' functions and responsibilities are clearly spelled out in the Guidelines and all Institutes currently working with GMOs have an operational IBC.

104. To address Output 4.2, a GMO Laboratory has been established in Bangladesh with the support of the Project. It is part of the Central Laboratory of the Competent National Authority, the Department of Environment (DOE) of the MEFCC. The support of the Project started in 2015 with the renovation of the lab space at the Department of Environment's premises and with the commencement of processes for the procurement of lab equipment for GMO detection.

105. The Lab was officially inaugurated by the Minister in 2017 and is currently equipped for GMO detection. A group of four DOE Laboratory Officials received three short initial trainings on GMO Detection and Good Laboratory Practices (2017 and 2018) as well as on safety analysis, detection and quantification of GMOs (2017). Training was undertaken both in the country and abroad in India. Despite this, their capacities have to be further improved to be up to future challenges. The lab is reported to still be working below its optimal service-delivery capacity, as discussed later under Achievement of Outcome 4.

Outputs related to Outcome 5 (Public Awareness and Participation)	
Rfr: Table 6 / Diagram 1 5.1 Fully functional system for access to, and sharing of information (national BCH); 5.2 Strengthened system for public awareness and participation in place; 5.3 Networks established at regional level for sharing experiences, lessons & best practices	

106. The Bangladesh Biosafety Clearing House (BBCH) has been established and is publicly accessible at <https://www.bchbd.org/>. On this website, the page "Regulatory Documents", contains the Biosafety Guidelines 2008 (in English) and the Biosafety Rules 2012 (in Bangla). The page "Supplementary Documents and Publications" contains the draft of the Biosafety Policy, the Updated Draft of the Biosafety Guidelines 2020, all supplementary Guidelines, Manuals, Standard Operating Procedures and the Emergency Response Procedures listed in the previous paragraphs. On the page "Outreach Materials" there are two interesting video

- documentaries (one on Biotechnology and Biosafety, and one on the GMO Lab), one TV Spot and some leaflets.
107. The website is in the process of being updated, with the support of the DOE Information & Technology wing. Bangladesh is trying to establish an interconnectivity between the Bangladesh Biosafety Clearing House and the Global Biosafety Clearing House through the support of the GEF/UNEP Project for "BCH III". All relevant information as per the provisions of the Protocol are expected to be updated once the BCH III phase is completed. So far, none of the decisions made on applications (from 2013 onward) has been recorded in the BBCH.
108. It is relevant to underline the production of the "Training manual on Biosafety of Genetically Modified Organism (GMOs)" published in 2017 with the support of the Project to serve as a conceptual guide for trainers on different issues related to Biosafety (also available in the BBCH).
109. The Project has supported several activities of awareness raising and capacity building, as described under previous outputs, and also worked at a decentralised level to disseminate and discuss biosafety regulatory documents, policies, etc. They have targeted a large number of people representing (mostly) research, academic, development and regulatory institutions and agencies working on Biosafety-related issues and, to a lesser extent, farmers representatives, media representatives, NGOs and consumers.
110. Widespread initiatives specifically addressing different societal groups (e.g. Young People, Consumers, Farmers, Teachers, Students, etc.), Civil Society associations, Religious Groups and the Public in general, are not very visible so far. This is an area in need of a more focussed intervention (see Output 5.2 "A strengthened system for public awareness and participation") and of a clear communication strategy, given the extent of the Biotechnology sector in the country, the on-going and planned use of GMOs cultivation for food, and the fulfilment of requirements under art. 23 of the Cartagena Protocol.
111. There is no evidence of the Project having explicitly addressed during its implementation the awareness raising and participation of specific groups related to gender, age, minorities, socio-economic vulnerability or marginalisation. Gender-specific data regarding the participants to project activities (e.g. training, consultation workshops) are usually not compiled and available.
112. With regard to the regional dimension and networking on Biosafety, the Project has supported the organisation and implementation of the Biosafety Regional Harmonization Workshop in Dhaka, Bangladesh (2019) with participants and presentations from Bangladesh, Bhutan, Cambodia, India, Indonesia, Malaysia, Maldives, Philippines and Vietnam. Recommendations, particularly on enhancing harmonization of risk assessment and management, were issued by the participants in the workshop.
113. The Project has also supported the participation of the Project Coordinator in the annual meetings of Biosafety Projects Coordinators at regional (or sub-regional level) held in Amman, Thimphu, Hyderabad, Dhaka, Shiraz and Dushanbe. Study visits by national officers from Bangladesh institutions were also organised and implemented in Australia, Malaysia, Philippines and Singapore. The reports of the participants give details on the content and usefulness of the study visits (posted in ANUBIS).
114. Representatives from the Competent National Authority confirm that they consider all the activities described above under the Output on Public Awareness and

Participation as being of great interest to enhance inter-country and inter-personal network on pushing forward the agenda of harmonization.

115. The consultant received reports on activities undertaken by the South Asia Biosafety Program (SABP), funded by USAID. These activities complement the work of this project (see § 75), although there is no clear evidence of collaboration or conversations between the two projects. The Evaluation has also noted that another website is operational in Bangladesh called "Bangladesh Biosafety Portal" created in 2017 (© 2017 Bangladesh Biosafety | South Asia Biosafety Program). The Portal contains a "User's Guide to Biosafety Regulatory Process for Genetically Engineered Plants in Bangladesh" (2017), published with the Copyright of Department of Environment (DOE) in collaboration with the South Asia Biosafety Program (SABP) and USAID. Although not created by this project, the Portal looks very user-friendly and quite instructional for GMOs applications in Bangladesh, though it is not validated by the government as an information hub to be used by potential users.
116. Bangladesh and India actively participate in the South Asia Biosafety Program (SABP) supported by the United States Agency for International Development (USAID) and dedicated to assisting India and Bangladesh in further strengthening institutional governance of biotechnology. The South Asia Biosafety Conference (SABC) is active in organising initiatives for regional harmonisation, to which Bangladesh representatives are participating. In 2018, the Conference was held in Dhaka.

Final remarks on Outputs availability

117. The concept of Biosafety was a revived topic⁶ in Bangladesh when the activity of the project started. Stakeholders interviewed consider that making people aware at various levels of capacity and understanding about a new topic was surely challenging. The Project has substantively backed many activities of the Competent National Authority and produced relevant Outputs in all the five components of the National Biosafety Framework (NBF), as described in this chapter.
118. Overall, the activities of the Project and the delivery of the expected Outputs have been significant both in quantity and quality. Various regulatory and procedural instruments have been produced, crop scientists, regulators and practitioners have been exposed to training and awareness raising activities on a large array of subjects, different committees have been established and are operational, policymakers and media personnel have also benefited from awareness raising and information activities. National and international workshops and seminars on biosafety have been organised and implemented.
119. Some expected Outputs regarding Biosafety Policy and the Regulatory Regime are also progressing through their long and elaborate process of approval, waiting for completion of formalities, approval and publication. Although there are, of course, challenges ahead, as discussed in the next chapter regarding Outcomes, the delivery and availability of Outputs, everything considered, can be considered Highly Satisfactory.

Achievement of Project Outcomes

⁶ A previous UNEP/GEF project, "Development of the National Biosafety Framework" (2004-2006) ended in 2006 and included activities on compiling a biosafety inventory, drafting a National Biosafety Framework and Policy. The project involved a more limited range and number of relevant position holders.

120. The Evaluation has assessed the extent to which the delivery of the Outputs has produced the institutional changes and systemic or behavioural effects (Outcomes) resulting in a fully operational National Biosafety Framework. On this basis, this chapter presents a qualitative analysis and interpretation of the Outcomes achieved in the light of the reconstructed ToC discussed in chapter IV and visualised in Diagram 1.
121. **Outcome 1** - "Biosafety Policy with an Action Plan approved, published and implemented" has proved to be an Outcome difficult to achieve in Bangladesh within a time-bound Project (see also Lessons Learned, chapter VI – Section C). The draft Policy was prepared by the Project and submitted in 2018 to the Ministry of Environment, Forest and Climate Change (MEFCC) that approved it. The Policy is undergoing further processing for approval by the cabinet, a process that, according to the Competent National Authority, usually takes (from submission to approval) a period of 3-4 years to complete its bureaucratic course for final endorsement.
122. Biosafety is also mentioned in the revised National Biodiversity Strategy and Action Plan (NBSAP) 2016-2021 and, although it does not yet represent a substantive part of it, its presence in the Plan has to be considered, in itself, a promising factor.
123. **Outcome 2** – Although the project began in 2013, since 2012 Bangladesh has had a "Biosafety legal regime established, enacted and fully operational in the country" (Outcome 2). The updated revision of the two pivotal instruments of the regime (the Guidelines of 2008 and the Rule of 2012) is currently at the Ministry of Law and Parliamentary Affairs for final vetting and submission to the Parliament. As discussed in previous Section (namely, under Outputs for Outcome 2), the process has been complex and highly energy demanding. It has involved a large representation of national institutions at central and decentralised level, being, therefore, a relevant opportunity of capacity / institution building for the creation / enhancement of a national "critical mass" of people and institutions around Biosafety issues.
124. However, and despite the undeniable efforts of the Competent National Authority and of national Stakeholders, it has to be acknowledged that the Updated Rules and Guidelines are not yet formally approved, which is, of course, a reason of deep concern for all the national players actively involved in the process, taking into account the growing challenges of the boosting sector of Biotechnology in the country. More so, when considering (as visualised in Diagram 1 of the Theory of Change, chapter IV), that an effective and functional regulatory regime (Outcome 2) is a pre-condition for a functional administrative system and clear and transparent decision-making (Outcome 3), and for more effective monitoring and enforcement procedures and mechanisms (Outcome 4).
125. The elaborate process of approval of regulatory instruments in the country has surely played a major role in hampering the process, coupled with insufficient preparedness of policy and decision-makers in attributing adequate importance and priority to biosafety, which calls for increased actions of information, lobby and advocacy so as to increase their interest and commitment.
126. **Outcome 3.** The "Coordinated administrative set-up and mechanisms in place for handling of requests/applications and decision-making" is actually in place and functional, as demonstrated by the relevant applications and decisions made so far (from 2013 onward) regarding GMOs crops (brinjal, rice, potato, cotton) for field trial and for limited cultivation, as discussed in previous section (namely Outputs for Outcome 3). Stakeholders have learned a lot from the experience and there is a consensus that procedures and mechanisms of the administrative system and of the

decision-making process need a general improvement. It is consensual among national stakeholders that the main issues to be decidedly tackled are:

- a) the composition, efficiency and effectiveness of the National Committee on Biosafety (NCB);
- b) the quality (efficiency, openness and transparency) of the communication between the Applicant/Developer and the NCB during the application and decision-making process;
- c) the quality of the decision-making process (technically-sound Risk Assessment, clearly understandable and unambiguous decisions, socio-economic considerations, transparent and publicly available decisions).

127. Regarding the above, the evaluation notes that, although the updated version of the Guidelines is proposing a more efficient membership of the National Committee on Biosafety (NCB), Independent Experts, Private sector and Civil Society representatives still appear under-represented. There is also the need to make procedures and protocols smoother, well understandable and manageable for each step, hence making the whole application process more predictable in terms of calendar (for instance, the NCB is not regularly meeting as foreseen in the Guidelines), duration and requirements, and more verifiable and transparent by the Applicant and by all the members of the NCB.

128. Decisions have not always been unambiguous, too. Terms like "limited cultivation" may give room to subjective interpretations, in absence of quantified "limits". As a result, the approval for "limited cultivation" of GMO Brinjal has de facto led to 27,000 small farmers cultivating GMO crops (2018), with the possibility that each farmer could further share GMO seeds with friends and neighbours. It is difficult in such a case to trace the border between limited cultivation and environmental release, with evident implications also for Outcome 4 (Monitoring and enforcement, see below).

129. **Outcome 4, "A comprehensive Monitoring and Enforcement (M&E) system in place and operational"** is also functional through a series of approved procedures and operational tools, including GMO detection facilities. Institutional Biosafety Committees (IBC) are operational for monitoring the Confined Field Trials (CFT), and Field Level Biosafety Committees (FBC) are also functioning for limited field cultivation. FBC are usually formed in combination with representatives of DOE, a Scientist/Researcher of the respective institute conducting the CFT or Field Release, and of the Direction of Agricultural Extension (DAE). The Committee inspects the fields and records the findings in standard formats, and the Monitoring Reports are submitted to the National Committee on Biosafety.

130. The experience developed so far on GMOs Brinjal shows that there is still room for improvement in the system of monitoring and enforcement. Specifically, modalities and responsibilities regarding the prescription, monitoring and enforceability of regulatory measures should be better defined at field level. Actually, a recent study conducted by two researchers of the Department of Biotechnology, Bangladesh Agricultural University of Mymensingh⁷, has observed that "although the government endorsed various uses of GMOs, there is no comprehensive information how the biosafety rules and guidelines are applied or followed by the farmers". The

⁷ Muhammad Shahidul Haque and Nihar Ranjan Saha "Biosafety Measures, Socio-Economic Impacts and Challenges of Bt-brinjal Cultivation in Bangladesh", Department of Biotechnology, Bangladesh Agricultural University, Mymensingh, Bangladesh, 2020. <https://www.frontiersin.org/articles/10.3389/fbioe.2020.00337/full>

study has found that "more than 50% of farmers manage border crop, yet nearly equal percentage of farmers either do not manage or unaware of the matter". Lack of supervision is pointed out as a possible cause behind the inadequacy of biosafety management by the farmers. The study also indicates that the majority (62%) of the farmers mix GMO brinjal with traditional brinjals during harvesting, and labelling cannot obviously be done properly. In fact, brinjal is usually sold by the farmers at open, local markets.

131. Since wide scale cultivation is progressing, it is important to clarify the responsibilities of the main actors involved: DOE/Competent National Authority, BARI (Bangladesh Agricultural Research Institute, developer of GMO Brinjal), DAE (Department of Agriculture Extension in charge of GMOs seeds distribution - for free - and technical assistance to farmers), and, of course, the Farmers themselves. The Competent National Authority (DOE) reported that the National Committee on Biosafety is addressing the issue, by reviewing the reporting system of field monitoring, while, on the other hand, DOE is in the process of expanding its activities to every district (or even sub-district) level, which should improve enforcement and monitoring at field level, as further discussed in section H (Institutional Sustainability). Further verification that this clarification is taking place was not possible during this evaluation process.
132. The potential of the GMO detection laboratory established at the DOE has not yet been fully developed, mainly due to its quite recent establishment (2018). On the one hand, the lab is already providing services to the public and private universities and research institutes to assist their GMO research work, and there could be room for an increased partnership in that field. On the other hand, there is obviously the need to strengthen the detection system in support of the regulatory requirements of testing the materials entering into the country legally or illegally, particularly GMOs for Food, Feed and Processing (FFP). It remains crucial to establish, as part of Outcome 4, an efficient and effective referral system from the port of entries to the DOE laboratory and to further train the personnel at the port-of-entries and border control to handle those situations in a smarter way. The DOE had already planned trainings for the Border Control & Custom Department officials, but the trainings have been postponed due to COVID-19 incidence. There is also the evident need to improve the detection capacity of the laboratory, also through the upgrading of its technical staff, as already mentioned in the previous section (§ 105).
133. **Outcome 5 - "Enhanced public awareness and public participation in decision making on LMO"** has been only partially achieved. There is a common perception among stakeholders that there is indeed a notable increased awareness and information regarding GMOs and Biosafety among different institutions and societal groups, when compared with some years ago. However, overall public participation is not yet at a suitable level and there is room for improving mechanisms and procedures of consultation, discussion and participatory decision-making regarding GMOs use, particularly the cultivation or import of GMOs for food, which can be a sensitive issue. The study mentioned above (see footnote 7), also revealed a limited weakness in awareness, understanding and training among the farmers on GMO brinjal cultivation and biosafety management.
134. Appropriate institutional mechanisms of information-sharing, like the BCH, are admittedly in need of a more dynamic and transparent approach regarding the communication process of risk assessment and decision-making. On this regard, the Department of Environment (DOE) is continuously putting effort to make BCH more informative and transparent on decisions to be posted as per requirement of the Protocol, and the BCH is in the process of improvement with the technical assistance of GEF/UNEP "BCH III Project".

Final remarks on Outcomes achievement

135. Having a fully operational National Biosafety Framework (NBF) is extremely relevant for Bangladesh, given the on-going and rapid development of biotechnologies in the country to cope with the challenges of demographic pressure, food security and agricultural development. The full achievement of the five expected Outcomes is crucial and the quality of the results have to be commensurate to the challenge.
136. Primarily, political commitment of the country towards Biosafety, which started with the ratification of the Cartagena Protocol in 2004, has to be unequivocally expressed through the adoption and implementation of clear and effective Policy and Regulatory frameworks, so as to allow biotechnology developers and biosafety regulators to be effectively and smoothly operational under clear and consensual strategies and regulations. Unfortunately, the great efforts deployed by the Competent National Authority and its national and international stakeholders to support the country in having an operational Biosafety Policy with a clear Action Plan, as well as updated Biosafety Rules and Guidelines, has not, so far, achieved all expected results, as discussed above. It has also to be underlined that Biodiversity (including Biosafety) is attracting less resources from the Government when compared with other environmental issues, like Climate Change. The Competent National Authority is even struggling to regularly participate to COP-MOP activities related to CBD and CPB, due to the lack of human and financial resources.
137. Within the existing limitations, operational Biosafety systems have been put in place, though they are admittedly in need of improvement. Given the inter-sectorial nature of Biosafety, regulatory and procedural mechanisms must be agreed upon, approved, improved and implemented through the coordination of different stakeholders. Inter-sectorial coordination and partnership has been a highly demanding task for the Project, involving different sectors beside Environment, such as Agriculture, Fishery and Livestock, Research and Technology (with several Research Institutes), Health, Trade, among others.
138. The overall complexity of the coordinating role undertaken by the Department of Environment as the Competent National Authority for the Cartagena Protocol has to be emphasised, as well as the need for enhancing and consolidating its institutional capacities, particularly the increasing need of specialised Human Resources. The coordinating role of the DOE implies, as specified in the ProDoc, "constant exchange, networking and follow up from the part of the Department of Environment", which is a relevant assumption to hold, as visualised in Diagram 1 of the ToC. This key-assumption was addressed by the large consultative inter-sectoral processes put in motion through the Project, particularly with the Research and Development sector in the country. Nevertheless, the process has to be pursued at different levels, as discussed under Socio-political Sustainability and Institutional Sustainability (Section H).
139. The Biosafety Administrative System for Applications and Decision-making, and for Monitoring and Enforcement have been put in place and are operational. However, as discussed above, there is room for making the operating procedures of application and decision-making more efficient, effective and transparent, while monitoring mechanisms at field level also need to be improved through more effective coordination and clear definition of roles and responsibilities. There is also the need to implement a system of inspection, referral and GMO detection so as to increase the effectiveness of the GMO laboratory.

140. Though Information and Awareness on Biosafety is reported to have increased in the country in the last few years, there is the need to conceive and implement a more comprehensive awareness and participation strategy particularly targeting policy and decision-makers, civil society groups and the private sector, obviously including the main group of GMOs users so far, the Farmers.
141. The following Table provides a synthetic view of the overall results attained by the Project. Overall, the achievement of Outcomes is rated Moderately Satisfactory (MS).

Table 8: Main Project achievements

Project Component	Baseline situation (2013)	Expected target End of Project	Results achieved (at evaluation)	Note / Comment
Biosafety Policy	No specific Biosafety Policy in place	Outcome 1: Biosafety Policy with an Action Plan approved, published and implemented	Final draft of Biosafety Policy of Bangladesh prepared in 2017 (in English and Bangla)	Submitted in 2018 to the MEFCC for Government approval and Gazette notification. Not yet approved.
Biosafety Regulatory Regime	<ul style="list-style-type: none"> Biosafety Guidelines approved in 2008 Biosafety Rules promulgated in 2012 	<p>Outcome 2: Biosafety legal regime established, enacted and fully operational in the country</p> <p>Output: Biosafety Rules and Guidelines updated</p>	<ul style="list-style-type: none"> Existing Biosafety Rules and Guidelines revised and updated Final draft submitted in 2017 to MEFCC for further steps at Governmental and Parliament level 	<p>Draft currently at the Ministry of Law and Parliamentary Affairs for final vetting and submission to the Parliament.</p> <p><u>Note:</u> Biosafety is currently regulated through Guidelines of 2008 and Rules of 2012</p>
GMOs Handling Application and Decision-making System	Competent Nat. Authority (DOE) and National Committee on Biosafety (NCB) in place (based on Guidelines 2008)	<p>Outcome 3: Coordinated administrative set-up and mechanisms in place for handling of applications</p> <p>Main Outputs:</p> <ul style="list-style-type: none"> fully functional administrative system for: <ul style="list-style-type: none"> handling requests for LMOs risk assessment and decision-making 	<ul style="list-style-type: none"> The System is operational based on the Guidelines 2008. Amendment proposed in updated Guidelines not yet in force (see Outcome 2) Capacity Building for different committees and enforcing agencies' officials <p>There is no clear evidence that the functioning of the System has substantively improved during Project timeframe.</p>	<p>Updated guidelines when approved could increase efficiency of the System</p> <p>NCB efficiency and transparency, and improved communication between NCB and Applicants are key to fully achieve Outcome 3</p>

Project Component	Baseline situation (2013)	Expected target End of Project	Results achieved (at evaluation)	Note / Comment
Monitoring and Enforcement System	Monitoring and Enforcement system not in place.	Outcome 4: A comprehensive Monitoring and Enforcement system in place and operational Main Outputs: - Laboratories able to detect LMOs - Emergency response procedures (ERP) established	<ul style="list-style-type: none"> • Trainings, relevant Manuals and Guidelines for Mon. and Enforcement produced • Institutional Bios. Committees and Field Biosafety Committees in place and operational • Standard Operating Procedures (SOP) and Emergency Response Procedures (ERP) established • GMO Laboratory established and operational, training and manuals for Lab Staff 	<p>System needs improvement in defining roles, responsibilities and coordination at field level</p> <p>Laboratory is working below its optimal service-delivery capacity</p>
Public awareness and participation	Limited public awareness and education on Biosafety	Outcome 5: Enhanced public awareness and public participation in decision making on GMOs Main Outputs: - Fully functional system for access to, and sharing of information (national BCH); - Strengthened system for public awareness and participation in place; - Networks established at regional level for sharing experiences, lessons & best practices	<ul style="list-style-type: none"> • Bangladesh Biosafety Clearing House (BDBCH) is in place. No register of "visitors". • Information and awareness raising mainly addressed research, academic, development and regulatory agencies working on Biosafety. • Limited outreach activities for Civil Society and public in general • Relevant activities of network and exchange at sub-regional and regional level 	This is an area in need of a more focussed intervention (Strategy and Action Plan)

Achievement of Likelihood of Impact

142. The possible pathway from a functional National Biosafety Framework (NBF) to the intended Impact has been discussed in the ToC (Chapter IV) and visualised in its Diagram 2. Improved decision-making and governance are key stages towards Impact, and several key-factors (drivers and assumptions) should play a crucial role in progressing the Biosafety agenda in the country.
143. The Project has supported the country in improving the Policy and Regulatory Regime of Biosafety, as well as the Administrative and the Biosafety Monitoring and Enforcement Systems. Decision-making processes and several Governance

mechanisms are in place and operational, admittedly with room for improvement, as discussed in the previous Section. In fact, some of the Key-drivers identified in diagram 2 are still not sufficiently solid to play their key-role, such as "DOE playing a coordinating role, effective GMOs management systems, Stakeholders and public participation". At the same time, strong Assumptions did not fully materialise, like "Political will of the Government, a National Action Plan developed to streamline national policy on Biosafety into government plans, best practices of Risk Assessment and Management are sustained, replicated and upgraded, financial resources flow is consolidated".

144. Overall, there is room for enhancing the effectiveness of some key-players, particularly the consolidation of the DOE's coordinating role and a better Biosafety Management at field level, with the implementation of a clear and smooth monitoring and enforcement system. Openness and transparency are key-aspects of Good Governance to be further improved in the decision-making process, as well as the integration of socio-economic considerations (art. 26 of CPB) in Risk Assessment, concerning the impact of GMOs cultivation on small farmers and local communities. Regular flow and improved quality information available in the BCH, and larger public participation also need to be gradually improved. These are relevant aspects to be considered for socio-political and institutional sustainability of Biosafety, as discussed later in Section H.
145. The Cartagena Protocol on Biosafety (CPB) is part of the Convention on Biological Diversity (CBD) and deserves to be adequately reflected in the National Biodiversity Strategy and Action Plan (NBSAP). It is actually expected, as mentioned in the previous chapter, that the post-2020 global biodiversity framework and the upcoming NBSAP should clearly spell out Biosafety priorities and activities, hence ensuring that Biosafety is fully recognised in the pathway to the expected Global Environmental Benefit (Enhanced conservation and sustainable use of biological diversity in Bangladesh). Moreover, according to the Competent National Authority, Biodiversity as a whole should receive more consideration and resources from the Government to really have a substantive role in the Sustainable Development of the country.
146. Based on all the above, the Likelihood of the project results to contribute to the achievement of the expected Global Environmental Benefit (Impact), i.e. "Enhanced conservation and sustainable use of biological diversity in Bangladesh", is considered Moderately Likely (ML).

Rating for Effectiveness:	Moderately Satisfactory (MS)
----------------------------------	-------------------------------------

E. Financial Management

147. The Project has satisfactorily managed main financial and administrative aspects. Table 9 below is assessing the main components of the Financial Management:
- (a) Adherence to UNEP's Financial Policies and Procedures;
 - (b) Completeness of Financial Information;
 - (c) Communication between Finance and Project Management Staff.
148. As shown 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, except tender delays. Seven Budget Revisions have been prepared and approved mainly for the re-allocation of unspent money, except Revision n. 4 (2015) that enabled a significant reallocation of funds (see Financial Table 10) from Sub-Contracts (covered through increased co-financing) and Trainings (over-estimated in the original budget) to Equipment (Laboratory equipment highly under-estimated in the original budget) and to Personnel (to account for increased need to hire national consultants to develop specific project activities).

Table 9: Financial Management Table

Financial management components	Rating	Evidence/ Comments
1) Adherence to UNEP's/GEF's policies and procedures	S (Satisfactory)	<ul style="list-style-type: none"> - Periodic financial reports timely provided, accepted and uploaded into ANUBIS - Document of substantive Budget Revision (2015) without explanation on reasons for revision - Project complied with UN procurement procedures (e.g. lab equipment) - Inventory signed and posted in ANUBIS for 2017 and 2018. Final Inventory prepared and presented. - Only one consolidated Audit Report submitted (2013-2017) by the Audit Directorate for Foreign Aided Projects. - Auditing presented in Local currency not USD.
2) Completeness of project financial information:	S (Satisfactory)	<ul style="list-style-type: none"> - Overall, all key financial documents posted in ANUBIS and / or available for the evaluator, more specifically: - Co-financing and Project Cost's tables at design (by budget lines) available but not described and discussed in the Project Terminal Report - Revisions to the budget available and posted in ANUBIS - Reasons for major revision n.4 not explained in ANUBIS but clarified during the Evaluation (see § 148 above) - All relevant project legal agreements in ANUBIS; - Fund transfers registered in ANUBIS; - Summary reports on project's expenditures by budget lines regularly provided through Quarterly and Annual financial reports; - Only one consolidated audit (2013-17) produced in local currency.
3) Communication between finance and project management staff	S (Satisfactory)	<ul style="list-style-type: none"> - Project Manager and Task Manager aware and efficient in tackling financial issues - Financial issues (remittances, approvals, etc.) timely addressed - Regular communication between Fund Management Officer, Project Manager and Task Manager during the preparation of financial and progress reports.

Table 10: GEF Budget at design and expenditures by Budget Line / Object of Expenditure (10/2019)

UNEP BUDGET LINE / OBJECT OF EXPENDITURE	Estimated cost at design (USD)	Actual Cost (USD)	Expenditure ratio (actual/planned)
10 PROJECT PERSONNEL	126,090	183,917	146%
20 SUB-CONTRACT	259,000	145,361	56%
30 TRAINING	258,600	218,184	84%
40 EQUIPMENT & PREMISES	150,500	282,594	188%
50 MISCELLANEOUS	89,900	54,034	60%

UNEP BUDGET LINE / OBJECT OF EXPENDITURE	Estimated cost at design (USD)	Actual Cost (USD)	Expenditure ratio (actual/planned)
Total	884,090	884,090	100%

Table 11: Co-financing Table (Source: Project Final Report, in ANUBIS)

Co-financing (Type/Source)	UNEP own Financing		Government USD		Other * USD		Total USD		Total Disbursed USD
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
Grants									
Loans									
Credits									
Equity invest.									
In-kind support			533,000	533,000			533,000	533,000	533,000
Other *									
Total			533,000	533,000			533,000	533,000	533,000

* This refers to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation

Rating for Financial Management: Satisfactory (S)

F. Efficiency

149. The project was delayed in starting up because of the lengthy process of internalization into the national planning system. The Project Director was only officially appointed in January 2014 (one year after the official project starting date) and the Project Coordinator in April 2014. Except for the initial delay, the Project has been time-efficient, despite the extremely elaborate institutional process for achieving policy and regulatory outputs (not yet formally enacted).

150. The rate of expenditures has been regular. Main expenditures were for Laboratory equipment (around 30% of the budget), which needs to improve its Cost-Effectiveness (as discussed in Section D – Effectiveness, Outcome 4), and for Meetings and Trainings (around 25% of the Budget). There is no unspent budget at the end of the Project. As described above in § 148, budget reallocation has permitted a more efficient use of the available resources.

Rating for Efficiency: Satisfactory (S)

G. Monitoring and Reporting

Monitoring Design and Budgeting

151. The costed Monitoring and Evaluation (M&E) Plan (Appendix 7 to the ProDoc) had a budget estimated at USD 30,000, which included Annual Audits (USD 12,000), Mid-Term Review/Evaluation (USD 4,000), Terminal Evaluation (USD 8,000) and Lessons Learnt/publications (USD 6,000). These amounts were allocated in the original Budget. Monitoring was supposed to be implemented through "no-cost" activities, such as continuous monitoring by the UNEP Task Manager (TM), direct exchanges between the Project Team and the TM, and the annual Project

Implementation Report (PIR). Other planned Monitoring instruments were the Mid-Term Review (see below), as well as the participation of the Project Coordinator in the Annual Regional/Sub-regional Meetings of Biosafety Project Coordinators, organised by the TM.

152. The M&E Plan presented some useful elements (baseline situation, mid-term and final targets) that could have helped to design and implement a Project Monitoring System to track progress on a more regular basis, for instance every six months in accordance with the Progress Reports, or annually with the PIR. It should be pointed out that the GEF/UNEP Reporting system does not make systematic use of the Monitoring tools (Targets) identified in the Monitoring and Evaluation Plan. Overall, the Monitoring design and budgeting is considered Satisfactory (S).

Monitoring of Project Implementation and Reporting

153. The Project Team has regularly and assiduously monitored activities and Project implementation. The main instruments for monitoring implementation have been the workplans and the tools of the Project Implementation Report (PIR), which schematically address (through percentage of implementation) the level of progress made towards the objectives and the rate of activity implementation. The TM has provided continuous support and follow-up.
154. As an overall remark for all GEF/UNEP projects, emphasis is given, at all levels, to Activities rather than Outputs delivery and, even less, on Outcomes achievement. The only instrument with a valuable approach that is focussed on Outcomes (and specifically addressing Biosafety Projects) is the so-called "GEF Tracking Tool" that is prepared at the beginning, at mid-term and at the end of the Project. The Project has actually filled-in the Tracking Tools format at the beginning and at Mid-term, with a score (self-assessed) of 10/32 and 17/32, respectively. No Tracking Tool was prepared at the end of the Project to compare progress and assess achievements.
155. The UNEP TM has regularly monitored the progress of the Project and given technical and methodological assistance mainly through emails and comments to the PIR. A thorough Mid-term Review has been conducted by the TM in March 2017 (hence very closed to the technical completion of the Project, December 2017), and a comprehensive report with Conclusions and Recommendations was drafted and discussed with the Team. However, since the Mid-term Review was done very closed to the end of the Project, its effectiveness on steering and re-orienting Project implementation was minimal.
156. Reporting has been regularly done through the annual PIRs and duly revised by the TM with relevant comments and recommendations, where applicable.

Rating for Monitoring and Reporting: Satisfactory (S)

H. Sustainability

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

Socio-political Sustainability

158. As already mentioned in this report, Biotechnology is, in Bangladesh, a fast-developing sector that the Government is willing to expand in order to tackle food and nutritional insecurity and to increase productivity of agriculture, particularly

smallholders farming. The implementation of the National Biosafety Framework is, therefore, a need and a priority. The process of implementation needs continuous engagement and flexibility on the side of the different actors, so as to move steadily and consensually towards higher levels of performance of the systems of Biosafety Management put in place.

159. As described in section D – Effectiveness (Outcomes), concerns exist regarding the political commitment of the country to consider Biosafety (and Biodiversity) as a priority to be addressed through the adoption of political and legal measures. These concerns obviously reflect on the socio-political sustainability of Biosafety in Bangladesh.
160. Cultivating GMO crops for food can also be a controversial issue, as it appears to be in many countries, starting from the neighbouring India, where GMO Brinjal cultivation is under a moratorium by the Government, following large opposition from different societal groups. Formal procedural shortcomings have also led to a moratorium on GMOs Brinjal in the Philippines.
161. There is a consensus among all main stakeholders that Decision-making Processes and Risk Assessment are key-aspects of socio-political sustainability and have to be based on two-way open communication between decision-makers (the National Committee on Biosafety, NCB) and applicants. Other stakeholders and societal actors, however, may also play a key role in enabling or hindering socio-political sustainability. That is why there is an accrued awareness among Biotechnology and Biosafety stakeholders, globally and in Bangladesh, of the relevance of considering Socio-economic factors (as per art. 26 of the Protocol) in support of Risk Assessment and Decision-making. Different societal groups may have diverse Risk Perception and divergent opinions on the suitability of GMOs use for cultivation and on GMOs acceptability as food, and these perceptions and opinions may play a key-role in determining the socio-political sustainability of Biosafety and Biotechnology also in Bangladesh.
162. As discussed in section D – Effectiveness - regarding Outcome 5, the country has taken substantive steps in enhancing information, awareness and procedures of consultation, discussion and participation around Biosafety and Biotechnology. Public awareness is a continuous process relying on regular activity from the Department of Environment (DOE). In addition the DOE is shortly planning a public launch of all the outreach materials developed under the project, including the updated BCH. Once the COVID 19 situation improves, the process of continuously updating the outreach materials will be taken up by the Department of Environment as a regular activity with the support of the Government.
163. As also recommended by the mid-term review of the Project, there is currently the need "to roll out a Public Awareness Component guided by the Public Awareness Strategy with a clear-cut implementation plan, timelines, targets/deliverables and activities". This recommendation is key for socio-political sustainability and is fully aligned with the "Leave No-one behind" principle of Agenda 2030 of Sustainable Development. The Competent National Authority is aware of this need and is prepared to take consistent steps in that direction. Recommendation 3 addresses this issue.

Financial Sustainability

164. The Project Document argues that financial sustainability could be enhanced by putting in place "fees-based" or "user-pays" financial mechanisms to complement investment by government and budgetary allocations for recurrent costs of implementing the NBF. As the applications on GMOs research and development are

still limited to the government research institutions, no fees have yet been imposed for handling applications, which is, of course, a legitimate decision, yet a questionable one. For testing of GMO at the laboratory, a system of fees is already in place, but, again, this will only be imposed for private or non-government applicants.

165. The Competent National Authority believes that fund mobilization on Biodiversity conservation, including Biosafety, could gradually become available from different national, regional and international players, and that, consequently, funding sources would be adequate. In that perspective, it is important to reinforce Biosafety allocation within the Biodiversity Portfolio of the Department (DOE) and to conceive a Fund Mobilisation Strategy for Biosafety (as discussed in the ToC, see Assumptions for IS 2 and 3, in Diagram 2) for accessing funds from different sources, as recommended in Rec. 4. This also implies the need to upgrade DOE staff capacity to efficiently manage a wide and diversified portfolio of projects along with the accountability requirements of different resource partners, as discussed in following Section (Institutional Sustainability) and reflected in Recommendation 2 on Capacity Building.

Institutional Sustainability

166. The institutional framework of Biosafety in the country is quite clear and steadily progressing, as discussed in Section D (Effectiveness). Roles and functions of the different Committees in place are defined and the mechanisms for decision-making, risk assessment and risk management, inspection, monitoring and enforcement are in place, although they are decidedly in need of improvement as previously discussed. A clear definition of institutional responsibilities and coordination mechanisms needs to be more adequately defined, particularly in the case of field management of GMOs cultivation. The role of the Department of Agricultural Extension and of Farmers Associations may be relevant in addressing this aspect of institutional stability.
167. The Competent National Authority (DOE) and national Stakeholders rightly believe that there is a two-fold challenge. On the one hand, mainstreaming Biosafety and Biodiversity has to go further, particularly among various associated ministries and at the highest level of policy and decision-makers. On the other hand, scientists and researchers need to all be "informed users" of biosafety guidelines, rules and regulations, which entails further efforts on training and capacity building, on a continuous basis, especially for newly appointed staff. Both challenges are on the forefront of the priorities for the DOE. This need for capacity building is reflected in Recommendation 2.
168. As for the institutional strength of the Competent National Authority, (the Department of Environment), concerns exist regarding the availability of specialised Human Resources, when compared with the relevant coordination and supervision tasks required by the DOE for managing an increasingly complex issue like Biosafety in Bangladesh. Administrative and Management efficiency is another real concern within the DOE, particularly if a Fund Mobilisation Strategy is put in place and issues of financial management efficiency and of accountability to different resource partners would become a priority to maintain a steadily functional National Biosafety Framework (see Assumptions in Diagram 2, Chapter IV).
169. When talking about Institutional Sustainability it is important to highlight the effort of the Department of Environment (DOE) to expand its activities to every district level of the country, and even up to sub-district level. There are already 64 district level offices set up and these offices are in the process to be equipped with necessary manpower and logistics. The field-level offices will be taking care of enforcement and

monitoring of Biosafety Rules and Guidelines, as previously discussed in Section D (Outcome 4), as well as the Bangladesh Biological Diversity Act. Presently, the available field offices at various divisions and districts are associated with the Field Level Biosafety Committees (FBC) and DOE personnel at the District level have to be matched with an adequate training/capacity building programme (see Recommendation 2).

Rating for Sustainability: Moderately Likely (ML)

VI. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

170. Bangladesh has interest and commitment in developing the Biotechnology sector while providing appropriate measures of environmental safeguard and mechanisms of Biosafety regulation and control. As emphasised in the Project Document "the issue is to maintain a balance between biotechnology development and a regulatory response to meet both national and international obligations". In fact, the country had prepared in 2006 a National Biosafety Framework (NBF) with the support of previous GEF-UNEP Project on Development of NBF, as well as Biosafety Guidelines (approved by the Government in 2008) and the Bangladesh Biosafety Rules that were promulgated in 2012.
171. Conditions were, therefore, met to move towards the implementation of the NBF, which was at the core of the rationale of the current Project. More specifically, the Project Document highlighted the need for "a coordinated approach to be developed to ensure that development of biotechnology is balanced by a sound and science based regulatory approach for the use of LMOs in Bangladesh". In practical terms, the Project was called "to address the main constraints in areas like regulations and soft laws, capacity building in GMOs Risk Assessment and Risk Management, improved infrastructure for monitoring and detection of LMOs, and enhancing public awareness and capacity to actively and meaningfully participate in decision-making on LMOs notifications".
172. The Competent National Authority (the Department of Environment/DOE of the Min. of Environment, Forests and Climate Change/ MEFCC) has been supported by the Project in delivering different outputs for making fully operational the National Biosafety Framework (NBF) and in promoting a coordinated, interinstitutional approach to foster involvement and participation of different Biosafety national stakeholders.
173. The definition, approval and implementation of a Biosafety Policy and of the updated Regulatory Regime (Rules and Guidelines), corresponding to expected Project Outcomes 1 and 2, have actually been at the focus of many Project activities: in depth analysis and assessment of existing legal instruments (the "old" Guidelines approved in 2008 and the Rules enacted in 2012), large stakeholders consultation, subsequent revisions, full translation into Bangla language, further revision, and final submission in 2018 to the MEFCC to undertake the final steps for approval at Governmental and Parliament level. The updated drafts (both in English and in Bangla language) are currently at the Ministry of Law and Parliamentary Affairs for final vetting and submission to the Parliament.
174. The whole process has been highly energy and time-demanding, admittedly more extended than expected, and not yet concluded. Whereas some argue that lack of commitment of policy and decision-makers could be blamed for that, it is also true that the process of elaboration, approvals and final promulgation of legal instruments in Bangladesh is normally very elaborate and time-consuming. Overall, it can be said that supplementary efforts and commitment on the side of Policy and Decision-makers (Ministries, Government and Parliament), and of the Competent National Authority itself are needed to fully deliver the foreseen Policy and Regulatory instruments.
175. The Administrative System for Handling applications and Decision-making is in place, as well as the Monitoring and Enforcement System for the follow-up of the decisions made and for the management of GMOs for different purposes. They

correspond to expected Project Outcomes 3 and 4. Since the country has started in 2013 to undertake field trials and cultivation of some GMOs crops (GMO Brinjal is currently cultivated by a large number of small farmers), the effective functioning of the two Systems is key for the full operationalization of the NBF. The Project has actually supported the Competent National Authority to establish and improve both systems, with mixed results.

176. Stakeholders capacity building has actually been relevant for the setting of the Systems and is highly appreciated by the stakeholders. It unfolded through information, awareness raising and training activities, as well as through other opportunities of dialogue, interaction and coordination (e.g. joint preparation of manuals, establishment of the Institutional Committees, setting of consensual Standard Procedures, etc.). Regional opportunities of training and exchange have also been implemented. All stakeholders agree that information, awareness, knowledge and technical capacities have significantly increased in the last few years, and that the efforts of the Project have strongly contributed to this result.
177. It is also consensual, however, that national capacities on Biosafety Management have to be further improved, taking into consideration the fast development of the Biotechnology sector in Bangladesh and the involvement of new human resources in the sector. All stakeholders agree that Risk Assessment is an area that needs to be substantively improved to sustain knowledge-based and technically sound decision-making on GMOs use. Capacity Building on this subject has been generally pointed out as a priority need.
178. The revision and updating of the Biosafety Guidelines (Outcome 2) has direct and evident implications on the Administrative and Decision-making System, as well as on the Monitoring and Enforcement System (Outcomes 3 and 4). Responsibilities, functions and membership of the National Committee on Biosafety (NCB) are particularly relevant, because the NCB is the key national authority in charge of the assessment and approval (or rejection) of GMOs Application, and of the supervision and coordination of all the operating procedures and institutional mechanisms for the management of GMOs at different levels (laboratory, field trial, cultivation, transboundary movement, release in the market, etc.).
179. As described in Chapter V, section D – Effectiveness (Outcome 3) the functioning of the NCB has been the object of criticism in the past few years, particularly from the Applicants (national GMOs developers). Weak points identified and in need of improvement have been: (a) the composition, efficiency and effectiveness of the Committee (NCB); (b) the quality (efficiency, timeliness, openness and transparency) of the communication between the Applicant/Developer and the NCB during the application and decision-making process; (c) the quality of the decision-making process (technically-sound Risk Assessment, clearly understandable and unambiguous decisions, socio-economic considerations, transparent and publicly available decisions).
180. While some of the revisions proposed in the updated Guidelines do address some of the issues above (e.g. fixing a time-limit of 90 days for communicating NCB decision to the Applicant), other may rise further concerns and criticism, such as the highly unbalanced composition of the NCB (11 out of 12 members represent Ministries or are linked to Public Institutions), as described in Chapter V, Section D 1 (Outputs for Outcome 3).
181. The implementation of an effective Monitoring and Enforcement Biosafety System is challenged by the high and increasing number of small farmers (around 27.000) currently cultivating GMO Brinjal in the country. Decision-making procedures, namely unambiguous decisions, as well as coordinated and effective mechanisms of

regulation, monitoring and enforcement at farmer/field level are strongly needed, and the active participation of the Department of Agricultural Extension (DAE) and of the Farmers themselves is also necessary.

182. The Project has also supported the establishment of the GMO Detection laboratory, which is currently in place and operational since 2018 at the Department of Environment. The Staff of the laboratory has received some initial trainings that have to be complemented by more hands-on training and follow-up. As discussed in Chapter V, section D – Effectiveness (Outcome 4), the potential of the laboratory has to be fully unfolded to support the testing and detection system of the materials entering into the country legally or illegally, particularly GMOs for Food, Feed and Processing (FFP). A referral system linking border entry-points (Custom, Health and Agriculture border control systems) and the laboratory has to be implemented. The Competent National Authority (DOE) has already started organising capacity building activities in that perspective.
183. The component of public awareness and public participation related to Outcome 5 has not been developed as expected. Activities of public information and awareness have been quite limited and a consistent strategic programme to enhance public consultation, discussion and participation is not yet in place. This is an area of concern, particularly considering the increasing field trials and cultivation of GMO food crops, which could be a sensitive and controversial issue in future. The need for an appropriate Communication Strategy to identify different target groups to be matched with appropriate messages and forms of communication has not yet been adequately addressed. Appropriate institutional mechanisms of information-sharing like the BCH are also in need of a more dynamic and transparent approach regarding the communication process of risk assessment and decision-making. There is no information, both in the National and in the Global BCH, of any decision made by the country on GMOs field trials and cultivation.
184. The sustainability of the results obtained so far has to be further addressed as discussed in Chapter V, Section H. The political commitment of the country towards Biosafety has to be unequivocally expressed through the adoption and implementation of Policy and Regulatory frameworks, hence allowing biotechnology developers and biosafety regulators to be effectively and smoothly operational under clear and consensual strategies and regulations. Capacity building on different subjects related to Biosafety remains a key issue to increase the institutional solidity and sustainability of main stakeholders, particularly the Competent National Authority, Academic and Research institutes, Biotechnology developers. There is also the need to improve socio-political sustainability through a focussed and transparent communication strategy enabling Public Information, Awareness and Participation.
185. The ToR of the Evaluation had identified two key strategic questions to be answered by the Evaluation.
- a) To what extent did the project help to enhance national institutional and technical capacity and awareness amongst the key actors for effective enforcement of the Biosafety Law, decrees and sub-decrees on biosafety?
 - b) To what extent are the outcome indicators verifiable, and record progresses towards the achievement of the development objectives, as well as the obligations under the Cartagena Protocol?

Answer to **Question (a)**:

186. Whereas, at the beginning of the Project, the concept of Biosafety was well known in the Competent National Authority (DOE) and in some academic and

research centres, it was relatively new in the overall institutional environment of the country. Making people aware at various levels of capacity and understanding about a new topic was challenging and the results obtained are quite remarkable, when considering the baseline situation. The process of revision and updating of the existing Regulatory instruments (Biosafety Rules and Guidelines) has involved different institutions and has contributed to enhance the overall institutional and technical capacity among key actors. As discussed in this report, Biosafety Systems, though in need of improvement, are in place and operational to make decisions and to implement, monitor and enforce them. The Project has supported the Competent National Authority and other National Stakeholders throughout this process, through capacity building, technical assistance to the Competent National Authority (national consultants, equipment), production of training and awareness material (manuals, guidelines, outreach material), establishment of the GMO laboratory, and the technical and methodological support of UNEP.

Answer to **Question (b)**:

187. The evaluation has actually pointed out (in its chapter V, Section B - Quality of Project Design) some relevant weak points regarding the definition of the Results Framework and the way to objectively measure and assess Project performance. In some cases, Outcomes indicators are just a repetition or a reformulation of the Outcome itself, while in other cases Indicators of Outputs are used instead (e.g. number of participants, trainings, meetings, etc.). The specific Monitoring instrument focussing on the progress of the country towards CPB requirements are the Tracking Tools that, as discussed in section G of Chapter V, were only partially used and were not relevant for practical M&E purposes, since they were not analysed and substantively discussed by the Project Team. Nevertheless, the objectives to be achieved were clear to the Project Team and their partial achievement cannot be ascribed to the weakness of the Results Indicators. As discussed in Chapter V, Section D (Effectiveness), delays in the approval of Biosafety Policy, Rules and Guidelines, as well as existing shortcomings of the Biosafety Administrative, Decision-making, Monitoring and Enforcement Systems can be ascribed to other relevant factors, such as insufficient political commitment, not fully clear and effective operational procedures and inter-institutional mechanisms, and needs of more specialised human resources.

B. Summary of project findings and ratings

188. The following Table provides the summarised rating of the different criteria established by UNEP Evaluation Office (EO) that have been assessed all along this report. Overall, Project performance scores **"Satisfactory" (S)**.

Table 12: Summary of project findings and ratings

Criterion	Summary assessment	Rating
Strategic Relevance	Very satisfactory in all aspects (see below)	HS
1. Alignment to MTS and POW	Aligned with MTS 2010-2013 and 2014-17 Sub-Programme Environmental Governance	HS
2. Alignment to UNEP/Donor strategic priorities	Project belongs to GEF Biodiversity Focal Area, Strategic Programme 6 (BD-SP6): "Building Capacity for the Implementation of the Cartagena Protocol on Biosafety"	HS
3. Relevance to regional, sub-regional and national environmental priorities	Highly relevant to national and regional context and priorities regarding management and safe use of GMOs for agricultural purposes.	HS

Criterion	Summary assessment	Rating
4. Complementarity with existing interventions	Builds upon GEF/UNEP Project "Development of the National Biosafety Framework" (2004-2006) and complements GEF/UNEP Project supporting BCH in Bangladesh.	S
Quality of Project Design	Project Outcomes in the ProDoc not fully matching with the Results Framework. Not fully evident the underlying logic of the Project Design, as well as the way to objectively measure and assess Project performance	MS
Nature of External Context	Socio-political environment in the sub-region including high number of refugees may influence national scale of priorities and socio-political focus.	Moderately Favourable
Effectiveness⁸	Very satisfactory in Outputs availability, rooms for Improvement in Outcomes achievement and Likelihood of Impact	MS
1. Availability of outputs	Outputs delivered very satisfactorily both in quantity and quality (regulatory instruments, capacity building, GMO lab, etc.)	HS
2. Achievement of project outcomes	Overall achieved, though at variable extent. Improvement needed in political commitment, stakeholders coordination and in the implementation of administrative, monitoring and enforcement systems.	MS
3. Likelihood of impact	Decision-making processes and governance instruments in place, though with room for improvement in decision-making procedures and overall governance	ML
Financial Management		S
1. Adherence to UNEP's financial policies and procedures	Overall compliant (e.g. procedures for purchase of equipment)	S
2. Completeness of project financial information	Financial reporting regularly completed and filed	S
3. Communication between finance and project management staff	Smoothly in place throughout project life	S
Efficiency	Project time-efficient despite initial delay, budget revisions improved efficiency.	S
Monitoring and Reporting	Overall satisfactory	S
1. Monitoring design and budgeting	Monitoring and mid-term review budgeted.	S
2. Monitoring of project implementation	Constant and effective monitoring of activities by the Project Team and TM. Mid-term review implemented and reported	S
3. Project reporting	Regular Progress Reports and PIR produced and filed in ANUBIS, as well as NBC and stakeholders meetings. Mid Term Review carried out and reported.	S
Sustainability		ML
1. Socio-political sustainability	In need of improvement in terms of stakeholders communication, participation and transparency, socio-economic considerations.	ML
2. Financial sustainability	To be tackled with a resource mobilisation plan.	ML
3. Institutional sustainability	Main institutional players are in place, though in need of further capacity and institution building (DOE and main national stakeholders)	ML
Factors Affecting Performance		S

⁸ Where a project is rated, through the assessment of Project Design Quality template during the evaluation inception stage, as facing either an Unfavourable or Highly Unfavourable external operating context, the overall rating for Effectiveness may be increased at the discretion of the Evaluation Consultant and Evaluation Manager together

Criterion	Summary assessment	Rating
1. Preparation and readiness	Project builds upon previous project "Development of NBF", Nat. Executing Agency with experience and motivation	S
2. Quality of project management and supervision	Project appropriately managed and regularly backstopped by UNEP TM	HS
3. Stakeholders' participation and cooperation	Assiduous participation of main stakeholders	HS
4. Responsiveness to human rights and gender equity	Not explicitly implemented, not referred to in any Project document / report produced by the Project.	MS
5. Environmental, social and economic safeguards	To be improved through higher public participation	S
6. Country ownership and driven-ness	Overall commitment and country ownership not fully effective so far in approving Policy and Legal instruments on Biosafety	MS
7. Communication and public awareness	Through various awareness activities yet in need of a comprehensive strategy and action plan	S
Overall Project Performance Rating	Satisfactory	S

C. Lessons learned

Lesson Learned #1:	Project expected results of institutional nature that need endorsement and approval at Governmental and Parliamentary level (e.g. Policy, Law, Guidelines, etc.) may prove difficult to be achieved within Project timeframe
Context/comment:	Project Outcomes included a Biosafety Policy with an Action Plan approved, published and implemented, as well as a Biosafety legal regime established, enacted and fully operational, through the approval and promulgation of updated Rules and Guidelines. The Project has prepared all these policy and legal instruments, which, however, have not yet been approved and enacted by the Government and the Parliament.

D. Recommendations

Recommendation #1:	<p>The Evaluation recommends that UNEP Project staff strongly communicate the following recommendation to the Department of Environment: to give priority to and improve:</p> <ul style="list-style-type: none"> ➤ the efficiency, effectiveness and transparency of the operating procedures of the National Committee on Biosafety (NCB) in handling GMOs applications, risk assessment and decision-making. This will entail a more time-efficient functioning of the NCB (regular quarterly meetings, implementation of time-limit for decision-making), open communication and exchange of information between NCB and the Applicants during the assessment process, adoption of knowledge-based and technically sound Risk Assessment practices, as well as
---------------------------	--

	<p>clear and transparent decisions made public through appropriate channels of information;</p> <p>➤ the field coordination of Biosafety management in GMOs cultivation (Brinjal) with the relevant stakeholders (Bangladesh Agricultural Research Institute/BARI, Department of Agriculture Extension/DAE, the Farmers).</p>
Context/comment:	<p>The need for improvement in handling applications and decision-making has been discussed in Chapter V, Section D (Achievement of Outcomes), regarding Outcome 3 (§ 126, 127, 128 and 139), in section regarding Likelihood of Impact (§ 143), under Socio-political Sustainability (Section H, § 161) and Institutional Sustainability. Conclusions in § 179 and 180 are also addressing the issue.</p> <p>Clear definition of institutional responsibilities and coordination mechanisms needs to be better addressed for Biosafety management at field level, as discussed in Chapter V, section D (namely Outcome 4, §129, 130, 131), in Likelihood of Impact, § 144), in section H (Institutional Sustainability, § 166), and also in Conclusion § 181.</p>
Priority Level ⁹:	Important Recommendation
Responsibility:	Competent National Authority (Department of Environment / DOE)
Proposed implementation time-frame:	One year (2021)

Recommendation #2:	<p>The Evaluation recommends that UNEP Project staff communicate the following recommendation to the Department of Environment: to reinforce Biosafety Capacity Building activities through three main programs targeting priority groups as follows:</p> <p>➤ Mainstreaming of biosafety and biodiversity among various associated ministries and to high-level policy and decision-makers;</p> <p>➤ Effective use / application of Biosafety rules, regulations, guidelines and procedural mechanisms among scientists, researchers and technical officers associated to Biotechnology and Biosafety programs and activities, with</p>
---------------------------	---

⁹ Select priority level from the three categories below:

***Critical recommendation:** address significant and/or pervasive deficiencies in governance, risk management or internal control processes, such that reasonable assurance cannot be provided regarding the achievement of programme objectives.*

***Important recommendation:** address reportable deficiencies or weaknesses in governance, risk management or internal control processes, such that reasonable assurance might be at risk regarding the achievement of programme objectives. Important recommendations are followed up on an annual basis.*

***Opportunity for improvement:** comprise suggestions that do not meet the criteria of either critical or important recommendations, and are only followed up as appropriate during subsequent oversight activities.*

	<p>particular reference to newly appointed staff;</p> <p>➤ Strengthening the capacity of DOE Staff at central and decentralised levels with particular reference to Biosafety Monitoring and Enforcement at Field Level (Districts), to the GMO Laboratory staff, and to Projects Management at central level (with a special focus on administrative and financial skills).</p> <p>For the purpose, it is equally recommended that training/capacity building activities and programs outlined above should be part of the post-2020 global biodiversity framework and clearly spelled out in the upcoming National Biodiversity Strategy and Action Plan with a priority basis.</p>
Context/comment:	DOE has so far developed, with the support of the Project, a wide programme of capacity building oriented to the progressive implementation of the National Biosafety Framework, as extensively described in Chapter V, section D – Effectiveness - (Availability of Outputs), which has significantly contributed to the achievement of Outcomes, as discussed in Achievement of Outcomes. It is important to build upon the results obtained so far and further enhance national capacities on Biosafety as discussed in Section H regarding Institutional Sustainability (§ 167, 168 and 169). Conclusive remarks on capacity Building are also provided in § 177, 182 and 184.
Priority Level:	Important Recommendation
Responsibility:	Competent National Authority (Department of Environment / DOE)
Proposed implementation time-frame:	Two years (but taking into account that capacity building should be a permanent function of the Competent Nat. Authority)

Recommendation #3:	The Evaluation recommends that UNEP Project staff communicate the following recommendation to the Department of Environment: enhance the Public Awareness and Participation Component of the NBF through the implementation of a Strategy and Action Plan in coordination with UNEP and the support of bilateral/multilateral partners at regional and international level.
Context/comment:	<p>Though several awareness and public information were developed so far, it has been found that is necessary to match relevant target groups (namely policy and decision-makers, civil society groups and the private sector including the farmers) with a comprehensive awareness and participation strategy (see Chapter V, Section D – Effectiveness, Final remarks in Outcomes achievement, § 140).</p> <p>Section D (Effectiveness) regarding Outcome 5 is also discussing the need of increased transparency and public participation,</p>

	including mechanisms of consultation, discussion and participatory decision-making regarding GMOs use (see § 133 and 134). The issue is also approached under Socio-political Sustainability (section H – Sustainability. § 161, 162 and 163), and in Conclusion § 183.
Priority Level:	Important Recommendation
Responsibility:	Competent National Authority (Department of Environment / DOE)
Proposed implementation time-frame:	Two years (but taking into account that public information and participation should be a permanent function of the National Biosafety Framework)

Recommendation #4:	The Evaluation recommends that UNEP Project staff communicate the following recommendation to the Department of Environment: prepare and make operational a Strategy of Resource Mobilisation for the implementation of the NBF by taking into account possible resource partners at national, regional and international level.
Context/comment:	Biosafety Financial Sustainability is key and the mobilisation of resources is a key-assumption to strengthen Biosafety Agenda (see ToC - Chapter IV, Diagram 2). The issue is discussed under Financial Sustainability (§ 165).
Priority Level:	Opportunity for Improvement
Responsibility:	Competent National Authority (Department of Environment / DOE)
Proposed implementation time-frame:	One year (2021)

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

Table 13: Response to stakeholder comments received but not (fully) accepted by the reviewers, where appropriate

Page Ref	Stakeholder comment	Evaluator(s) Response	UNEP Evaluation Office Response
NA	<p>TM (Mr Alex Owusu Biney)</p> <p>General Comments</p> <p>i. Strong emphasis on high level support in the finalisation and delivery of the Policy and updated Rules and guidelines</p> <p>ii. Support for certification of the Detection laboratory, staff training and awareness of the availability of services</p> <p>iii. Need to ensure synergy and avoid duplication with the SABP and other BS activities. These should be supportive to the national biosafety system</p>	<p>i. The issue of finalisation and delivery of the Policy, and of the updated Rules and Guidelines is largely discussed in the Report, particularly in Section on Effectiveness (see for instance § 136), in Socio-political Sustainability (Section H), in Conclusions (see for instance, § 184) and in Lessons Learned n.1. The Evaluation has confirmed that the process of approval of the Policy and of the Updated Rules and Guidelines is following a convoluted institutional process, which is also largely described and explained in the Report. The "emphasis on high level support" is therefore evident in the Evaluation Report.</p> <p>ii. The Evaluation highlights that the GMO Detection Laboratory needs to be fully operational to achieve cost-effectiveness. See Effectiveness Section D (e.g. § 132), Conclusion § 182 and Rec. n. 2 (Capacity building of Lab Staff). This is of course the first step for gaining technical and institutional credibility, hence allowing to require and obtain a GMOs certification. The evaluator believes that "support for certification" could perhaps be the object of the Project Management Response, once pre-conditions are met.</p> <p>iii. Complementarity with SABP activities is discussed under "Complementarity with existing interventions" (§ 75) and described in § 115 and 116 (Outputs for Outcome 5). The "need to ensure synergy and avoid duplication" is evident. However, unfortunately, the Evaluation did not have the</p>	<p>i. Emphasis on high level support in the finalisation and delivery of the Policy and updated Rules and guidelines could be made stronger as it is a crucial within context of this evaluation.</p> <p>ii. Consultant response adequate</p> <p>iii. Consultant response adequate</p>

Page Ref	Stakeholder comment	Evaluator(s) Response	UNEP Evaluation Office Response
		<p>possibility of deep exchanges and triangulation between the stakeholders involved (mainly DOE, UNEP, GEF, USAID, SABP) around the issue, which should have been fostered by UNEP Project Management Team.</p> <p>Nevertheless, none of the stakeholders interviewed pointed out the "risk of duplication", since the approach and the object of the intervention of GEF/UNEP and of USAID/SABP interventions are different (one more focussed on Biosafety and the other on promoting GMOs Biotechnology in the Region), hence rather complementary than overlapping.</p>	
Page 60	<p>Rec n. 2, last sentence "For the purpose...."</p> <p>This is already captured in the Biosafety Implementation Plans under the Global BF, it will more appropriate if the Country can operationalise the actions spelt out in its Biosafety Capacity Building Activities</p>	<p>This formulation was proposed by the Project Nat. Director, discussed during the Evaluation and remained as such in the phrasing of Rec n.2.</p> <p>The evaluator believes that the operationalisation proposed by the TM could be included in the Management Response.</p>	

ANNEX 2: TERMS OF REFERENCE FOR THE EVALUATION

TERMS OF REFERENCE

**Terminal Evaluation of the UNEP/GEF project
Implementation of National Biosafety Framework of Bangladesh
GEF ID # 4022**

Section 1: PROJECT BACKGROUND AND OVERVIEW**1. Project General Information****Table 1. Project summary**

GEF Project ID:	4022		
Implementing Agency:	UNEP	Executing Agency:	Department of Environment, Ministry of Environment and Forests
Sub-programme:	Environmental Governance	Expected Accomplishment(s):	EA (b) Institutional capacities and policy and/or legal frameworks enhanced to achieve internationally agreed environmental goals, including the 2030 Agenda for Sustainable Development and the Sustainable Development Goals
UNEP approval date:	November 2012	Programme of Work Output(s):	Policy, Draft Bill, Administrative, technical training and Technical guidelines/Manuals with an equipped LMO Detection Laboratory to support Biosafety Decision Making
GEF approval date:	July 2012	Project type:	Medium-size Project
GEF Operational Programme #:		Focal Area(s):	Biodiversity
		GEF Strategic Priority:	SP6-Biosafety/SO3
Expected start date:	November 2012	Actual start date:	April 2014
Planned completion date:	June 2018	Actual completion date:	December 2018
Planned project budget at approval (USD):	USD \$1,417,390	Actual total expenditures reported as of 31/10/2019 (USD):	\$884,090.00 ¹⁰
GEF grant allocation (USD):	USD \$884,090	GEF grant expenditures reported as of [date]:	USD \$884,090
Project Preparation Grant - GEF financing:	USD \$25,000	Project Preparation Grant - co-financing:	USD \$24,800
Expected Medium-Size Project co-	USD \$533,300	Secured Medium-Size Project co-financing:	USD \$533,300

¹⁰ Anubis

financing (USD):			
First disbursement:	January 2013 ¹¹	Date of financial closure:	TBD
No. of revisions:	7 ¹²	Date of last revision:	01/01/2018
No. of Steering Committee meetings:		Date of last/next Steering Committee meeting:	Last: Next:
Mid-term Review/ Evaluation (planned date):	January 2017	Mid-term Review/ Evaluation (actual date):	18.03.2017 to 25.03.2017 ¹³
Terminal Evaluation (planned date):	February 2020	Terminal Evaluation (actual date):	
Coverage - Country(ies):	Bangladesh	Coverage - Region(s):	Africa
Dates of previous project phases:	N/A	Status of future project phases:	N/A

2. Project rationale

1. Bangladesh is rich in biodiversity, comprising of many species of animals and plants; it has been the home of approximately 5000 angiosperm species and a variety of subspecies. Of them, at least 160 species are used as crops. The main crops are rice, wheat, jute, pulses, oilseed plants, minor cereals, sugar crops, fruit plants, vegetables, root tuber crops, spices, forest trees, beverage crops, flowers, medicinal and aromatic plants. There are many wild relatives of crop plants and domesticated animals still abundant in Bangladesh. Rice is widely grown throughout the country and there are more than 4000 indigenous varieties. Bangladesh is party to the Convention on Biological Diversity (CBD) and has committed to the conservation of its indigenous biodiversity and the traditional knowledge and practices of the region. Implementation of the National Biosafety Framework (NBF) is essential to ensure conservation and sustainable use of biological diversity of endemic species and unique ecosystems in Bangladesh.

2. Being a party to the Cartagena Protocol on Biosafety (CPB), Bangladesh is internationally committed to develop and implement biosafety regulatory regimes. Bangladesh developed its National Biosafety Framework in 2007 with the technical assistance of UNEP-GEF. The National Biosafety Framework (NBF) provided the basic elements of biosafety systems to be implemented for conservation of biodiversity and to prevent potential risks to human health. Further implementation of the NBF is necessary to ensure conservation and sustainable use of biological diversity of endemic species and the unique ecosystems found in Bangladesh.

3. In the absence of an implemented biosafety infrastructure and statutory regulations it was considered possible that valuable crop biodiversity might disappear as the result of increased use of genetically modified crops. In 2012 the main constraints to the implementation of a Biosafety regulatory regime in Bangladesh were the absence of statutory rules-regulations, well-managed infrastructures, adequate laboratories, and above all, insufficient trained manpower to conduct risk assessment and management of Living Modified Organisms (LMOs). To overcome these constraints, GEF-assistance to implement the NBF was considered as an urgent step by Bangladesh.

¹¹ Anubis

¹² Anubis

¹³ According to PIR 2018 (4022_PIR FY 18_Bangladesh) Mid-term Review was undertaken at this time.

4. This project was designed to assist in the implementation of the as well as provide support for: the drafting of supporting regulations and soft laws; capacity building in technical training; improved infrastructure for monitoring and detection of LMOs; and enhancing public awareness and capacity to a level of active participation in decision-making on LMOs notifications. These essential elements were lacking prior to this project as a result of resource constraints in the country. The project was designed to institutionalize Biosafety regulations and strengthen infrastructural facilities for risk assessment and management of LMOs. It was expected to implement a framework to facilitate decision-making and provide global environmental benefits on the safe use of modern biotechnology with concomitant conservation of the endemic and unique biodiversity of Bangladesh, while provided measures to ensure the safe transboundary movement of LMOs. Without prevention/mitigation measures being put in place, there was a possibility that biotechnology may be used without safeguards to address potential harm to wild and cultivated species or overall conservation of biodiversity. Since adoption of GM-crops likely in Bangladesh, it was vital that measures were taken to ensure the conservation and sustainable use of biodiversity within the country.

5. The project aimed to ensure harmonization of biosafety standards and regulatory systems at the regional level, as well as strengthen collaboration and networking for the exchange of technological and technical aspects of biosafety management, particularly to assist in the effective implementation of the Cartagena Protocol. To this end, the project attempted to generate effective initiatives, which worked towards strengthening regional cooperation of SAARC and ASEAN countries and that assisted Bangladesh in implementing the National Biosafety Framework in compliance with the Cartagena Protocol on Biosafety. As such the project was designed to enhance the existing capacity of Biosafety at the Institutional, Individual and Systemic levels in Bangladesh, while addressing national needs and priorities.

3. Project objectives and components

4. The overall project objective was: To assist Bangladesh to implement the National Biosafety Framework in compliance with the Cartagena Protocol on Biosafety through enhancing the existing capacity on Biosafety at the Institutional, Individual and Systemic levels in Bangladesh, as well as to address national needs and priorities

Project components	Expected outcomes
1. Development of National Policy on Biosafety and Updating Guidelines on Biosafety and Biosafety Framework (NBF)	<ul style="list-style-type: none"> • A standalone biosafety policy for safe use, handling and trans-boundary movement of LMOs is gazetted • Operational guidance on biosafety provided by the updated Biosafety Guidelines
2. Development and Promulgation of Regulatory Regime on Biosafety	<ul style="list-style-type: none"> • Legal and regulatory framework on biosafety is enacted and strengthened • Regulatory regime on management of LMOs is enforced by appropriate institutions
3. Functional Administrative System for Handling and Notification on LMOs	Institutional Strengthening mechanisms for Handling Application/Notification on LMOs established
4. Monitoring and Enforcement	Monitoring and Enforcement system is in place to handle all uses of LMOs
5. Public Awareness, Education and Enhancing Public Participation, Regional Networking and Collaboration	Increased public awareness and public participation in decision making on LMO notifications Harmonised approaches and shared knowledge on biosafety at the regional level

6. Project Monitoring and Evaluation and Audit	The overall performance and results of the project would be monitored and feedback would be given to the implementing authorities

4. Executing Arrangements

5. The project has been implemented by UNEP (Implementing Agency), specifically through the Ecosystems Division. The Department of Environment (DOE) under the Ministry of Environment and Forests (MoEF) was the Executing Agency responsible for operations of the project in Bangladesh. The Executing Agency was also expected to coordinate and manage overall activities undertaken during the project implementation period and was also responsible for the preparation of all reports to be communicated to UNEP and the MoEF. A Project Steering Committee (PSC), headed by the Secretary, MoEF was designed to be functional during the implementation period to oversee the progress of the project. Positions for a Project Director in the Project Management Unit (PMU) at the Department of Environment (DOE) was intended and was to be responsible for overall project coordination and management. The PMU was designed to comprise of the following:

The Project Director - (appointed by the Ministry of Environment and Forests) Delegated for project finance and responsible for overall project reporting to the project steering committee (PSC) and the NCA, Ministry of Environment and Forests

The Project Coordinator - Responsible for the operation of the Project. He /She is responsible for the technical and administrative progress of the project and reports to the National Project Director (NPD) and PSC.

6. The Project Steering Committee (PSC) was to act as advisory committee for the project. The Secretary, MoEF was to chair the committee and the Project Director was to serve as the member secretary of the committee. For implementation of the project, it was expected that this committee would be constituted on the basis of the Inter-departmental Working Group of the National Competent Authority (NCA), which in this case was represented by the MoEF.

7. The PSC's role was to review project progress and advise on project implementation, by providing feedback and policy decisions. It was expected to meet every three months in order to be informed, receive and provide inputs on the progress of the Project. The committee was able to have meetings in a shorter periodicity, if required. The PSC will report to the National Committee on Biosafety (NCB) and to the Biosafety Core Committee (BCC).

Figure 1. Decision making flowchart and organigram



5. Project Cost and Financing

8. The project falls under the overall project budget of USD 1,417,390.00. The total is 300 co-financing from the Government of Bangladesh. Appendices 1 and 2 of the Project Document. A summary of the line and incremental details are in Thematic consultants Project Document.

Project Management Unit

(PMU)

Project Director

(PD)

Project Coordinator

(PC)

	Project Preparation a	Project Project Coordinator (PC)	Total = a + b	Agency Fee	For comparison: GEF and Co-financing at PIF
GEF financing	25,000		909,090	90,909	909,090
Co-financing	24,800	533,300	558,100		558,100
Total	49,800	1,417,390	1,467,190	90,909	1,467,190¹⁴

6. Implementation Issues

To clarify:

- One 19 month extension was granted during the project, did this result in, or was this caused by, any implementation issues within the project?
- Mid-term Review (MTR) planned and reported in PIR 2018 - 18.03.2017 to 25.03.2017 – Was undertaken by the TM, no documents found in Anubis – May be captured in one of the PIRs, check with TM.
- Figures in the table above from CEO endorsement are not matched in Anubis, the ProDoc or Budget as the agency fee is not included in these documents.

Section 2. OBJECTIVE AND SCOPE OF THE EVALUATION

7. Key Evaluation principles

9. 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.

10. **The "Why?" Question.** As this is a terminal evaluation and a follow-up project is likely [or similar interventions are envisaged for the future], particular attention should be given to learning from the experience. Therefore, the "Why?" question should be at the front of the consultants' minds all through the evaluation exercise and is supported by the use of a theory of change approach. This means that the consultant(s) needs 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.

11. **Baselines and counterfactuals.** In attempting to attribute any outcomes and impacts to the project intervention, the consultant(s) should consider the difference between what has happened with, and what

¹⁴ Figures taken from CEO endorsement

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.

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

8. Objective of the Evaluation

13. In line with the UNEP Evaluation Policy¹⁵ and the UNEP Programme Manual¹⁶, the Terminal Evaluation 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 UNEP and the Department of Environment (DOE), Ministry of Environment, Forests and Climate Change. Therefore, the evaluation will identify lessons of operational relevance for future project formulation and implementation, especially for the second phase of the project, where applicable.

9. Key Strategic Questions

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

- (a) To what extent did the project help to enhance national institutional and technical capacity and awareness amongst the key actors for effective enforcement of the Biosafety Law, decrees and sub-decrees on biosafety?
- (b) To what extent are the outcome indicators verifiable, and record progresses towards the achievement of the development objectives, as well as the obligations under the Cartagena Protocol?

10. Evaluation Criteria

¹⁵ <http://www.unep.org/eou/StandardsPolicyandPractices/UNEPevaluationPolicy/tabid/3050/language/en-US/Default.aspx>

¹⁶ http://www.unep.org/QAS/Documents/UNEP_Programme_Manual_May_2013.pdf . This manual is under revision.

15. 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 availability 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(s) can propose other evaluation criteria as deemed appropriate.

A. Strategic Relevance

16. The evaluation will assess 'the extent to which the activity is suited to the priorities and policies of the target group, recipient and donor'. The evaluation will include an assessment of the project's relevance in relation to UNEP's mandate and its alignment with UNEP'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 UNEP Medium Term Strategy¹⁷ (MTS) and Programme of Work (POW)

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

ii. Alignment to UNEP / Donor/GEF Strategic Priorities

18. Donor, including GEF, strategic priorities will vary across interventions. UNEP strategic priorities include the Bali Strategic Plan for Technology Support and Capacity Building¹⁸ (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.

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

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

iv. Complementarity with Existing Interventions

20. An assessment will be made of how well the project, either at design stage or during the project mobilization, took account of ongoing and planned initiatives (under the same sub-programme, other UNEP 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-

¹⁷ UNEP's Medium Term Strategy (MTS) is a document that guides UNEP's programme planning over a four-year period. It identifies UNEP's thematic priorities, known as Sub-programmes (SP), and sets out the desired outcomes, known as Expected Accomplishments (EAs), of the Sub-programmes.

¹⁸ <http://www.unep.org/GC/GC23/documents/GC23-6-add-1.pdf>

Programme Coordinators, made efforts to ensure their own intervention was complementary to other interventions, optimized any synergies and avoided duplication of effort. Examples may include UN Development Assistance Frameworks or One UN programming. Linkages with other interventions should be described and instances where UNEP's comparative advantage has been particularly well applied should be highlighted.

Factors affecting this criterion may include:

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

B. Quality of Project Design

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

- Stakeholders participation and cooperation
- Responsiveness to human rights and gender equity

C. Nature of External Context

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

D. Effectiveness

i) Availability of Outputs¹⁹

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

¹⁹ Outputs are the availability (for intended beneficiaries/users) of new products and services and/or gains in knowledge, abilities and awareness of individuals or within institutions (UNEP, 2019)

Factors affecting this criterion may include:

- Preparation and readiness
- Quality of project management and supervision²⁰

ii) Achievement of Project Outcomes²¹

24. The achievement of project outcomes is assessed as performance against the project outcomes as defined in the reconstructed²² Theory of Change. These are outcomes that are intended to be achieved by the end of the project timeframe and within the project's resource envelope. As with outputs, a table can be used where substantive amendments to the formulation of project outcomes is necessary. The evaluation should report evidence of attribution between UNEP's intervention and the project outcomes. In cases of normative work or where several actors are collaborating to achieve common outcomes, evidence of the nature and magnitude of UNEP's 'substantive contribution' should be included and/or 'credible association' established between project efforts and the project outcomes realised.

Factors affecting this criterion may include:

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

iii) Likelihood of Impact

26. Based on the articulation of long-lasting effects in the reconstructed TOC (i.e. from project outcomes, via intermediate states, to impact), the evaluation will assess the likelihood of the intended, positive impacts becoming a reality. Project objectives or goals should be incorporated in the TOC, possibly as intermediate states or long-lasting impacts. The Evaluation Office's approach to the use of TOC in project evaluations is outlined in a guidance note available on the Evaluation Office website, <https://www.unenvironment.org/about-un-environment/evaluation> and is supported by an excel-based flow chart, 'Likelihood of Impact Assessment Decision Tree'. Essentially the approach follows a 'likelihood tree' from project 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.

²⁰ In some cases 'project management and supervision' will refer to the supervision and guidance provided by UNEP 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 UNEP.

²¹ Outcomes are the use (i.e. uptake, adoption, application) of an output by intended beneficiaries, observed as changes in institutions or behavior, attitude or condition (UNEP, 2019)

²² UNEP staff are currently required to submit a Theory of Change with all submitted project designs. The level of 'reconstruction' needed during an evaluation will depend on the quality of this initial TOC, the time that has lapsed between project design and implementation (which may be related to securing and disbursing funds) and the level of any changes made to the project design. In the case of projects pre-dating 2013 the intervention logic is often represented in a logical framework and a TOC will need to be constructed in the inception stage of the evaluation.

27. 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.²³ The evaluation will consider the extent to which the project has played a catalytic role or has promoted scaling up and/or replication²⁴ as part of its Theory of Change and as factors that are likely to contribute to longer term impact.

28. UNEP 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 UNEP's Expected Accomplishments, the Sustainable Development Goals²⁵ and/or the high-level results prioritised by the funding partner.

Factors affecting this criterion may include:

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

E. Financial Management

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

Factors affecting this criterion may include:

- Preparation and readiness
- Quality of project management and supervision

F. Efficiency

²³ Further information on Environmental, Social and Economic Safeguards (ESES) can be found at <http://www.unep.org/about/eses>

²⁴ Scaling up refers to approaches being adopted on a much larger scale, but in a very similar context. Scaling up is often the longer term objective of pilot initiatives. Replication refers to approaches being repeated or lessons being explicitly applied in new/different contexts e.g. other geographic areas, different target group etc. Effective replication typically requires some form of revision or adaptation to the new context. It is possible to replicate at either the same or a different scale.

²⁵ A list of relevant SDGs is available on the EO website www.unep.org/evaluation

30. The evaluation will assess the extent to which the project delivered maximum results from the given resources. This will include an assessment of the cost-effectiveness and timeliness of project execution. Focussing on the translation of inputs into outputs, cost-effectiveness is the extent to which an intervention has achieved, or is expected to achieve, its results at the lowest possible cost. Timeliness refers to whether planned activities were delivered according to expected timeframes as well as whether events were sequenced efficiently. The evaluation will also assess to what extent any project extension could have been avoided through stronger project management and identify any negative impacts caused by project delays or extensions. The evaluation will describe any cost or time-saving measures put in place to maximise results within the secured budget and agreed project timeframe and consider whether the project was implemented in the most efficient way compared to alternative interventions or approaches. The evaluation will give special attention to efforts by the project teams to make use of/build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. to increase project efficiency. The evaluation will also consider the extent to which the management of the project minimised UNEP's environmental footprint. The factors underpinning the need for any project extensions will also be explored and discussed. As management or project support costs cannot be increased in cases of 'no cost extensions', such extensions represent an increase in unstated costs to implementing parties.

Factors affecting this criterion may include:

- Preparation and readiness (e.g. timeliness)
- Quality of project management and supervision
- Stakeholders participation and cooperation

G. Monitoring and Reporting

31. 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

32. Each project should be supported by a sound monitoring plan that is designed to track progress against SMART²⁶ indicators towards the provision of the project's outputs and achievement of project outcomes, including at a level disaggregated by gender, vulnerability or marginalisation. The evaluation will assess the quality of the design of the monitoring plan as well as the funds allocated for its implementation. The adequacy of resources for mid-term and terminal evaluation/review should be discussed if applicable.

ii. Monitoring of Project Implementation

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

iii. Project Reporting

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

²⁶ SMART refers to indicators that are specific, measurable, assignable, realistic and time-specific.

and donor reporting commitments have been fulfilled. Consideration will be given as to whether reporting has been carried out with respect to the effects of the initiative on disaggregated groups.

Factors affecting this criterion may include:

- Quality of project management and supervision
- Responsiveness to human rights and gender equity (e.g. disaggregated indicators and data)

H. Sustainability

35. Sustainability is understood as the probability of project 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 project outcomes (ie. 'assumptions' and 'drivers'). Some factors of sustainability may be embedded in the project design and implementation approaches while others may be contextual circumstances or conditions that evolve over the life of the intervention. Where applicable an assessment of bio-physical factors that may affect the sustainability of project outcomes may also be included.

i. Socio-political Sustainability

36. The evaluation will assess the extent to which social or political factors support the continuation and further development of project 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

37. Some project 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 project outcomes may be dependent on a continuous flow of action that needs to be resourced for them to be maintained, e.g. continuation of a new resource management approach. The evaluation will assess the extent to which project outcomes are dependent on future funding for the benefits they bring to be sustained. Secured future funding is only relevant to financial sustainability where the project outcomes of a project have been extended into a future project phase. Even where future funding has been secured, the question still remains as to whether the project outcomes are financially sustainable.

iii. Institutional Sustainability

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

Factors affecting this criterion may include:

- Stakeholders participation and cooperation
- Responsiveness to human rights and gender equity (e.g. where interventions are not inclusive, their sustainability may be undermined)
- Communication and public awareness
- Country ownership and driven-ness

I. Factors and Processes Affecting Project Performance

(These factors are rated in the ratings table, but are discussed within the Main Evaluation Report as cross-cutting themes as appropriate under the other evaluation criteria, above. Where the issues have not been addressed under other evaluation criteria, the consultant(s) will provide summary sections under the following headings.)

i. Preparation and Readiness

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

ii. Quality of Project Management and Supervision

40. In some cases 'project management and supervision' will refer to the supervision and guidance provided by UNEP 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 UNEP. 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 UNEP colleagues; risk management; use of problem-solving; project adaptation and overall project execution. Evidence of adaptive management should be highlighted.

iii. Stakeholder Participation and Cooperation

41. 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 UNEP. 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

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

v. Country Ownership and Driven-ness

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

vi. Communication and Public Awareness

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

Section 3. EVALUATION APPROACH, METHODS AND DELIVERABLES

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

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

(a) **A desk review** of:

- 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;
- Project design documents (including minutes of the project design review meeting at approval); Annual Work Plans and Budgets or equivalent, revisions to the project (Project Document Supplement), the logical framework and its budget;
- Project reports such as six-monthly progress and financial reports, progress reports from collaborating partners, meeting minutes, relevant correspondence and including the Project Implementation Reviews and Tracking Tool etc.;
- Project outputs: as applicable, based on the Results Framework (See final Project Output Document and Results Framework)
- Mid-Term Review or Mid-Term Evaluation of the project;
- Evaluations/reviews of similar projects.

(b) **Interviews** (individual or in group) with:

- UNEP Task Manager (TM) - Alex Owusu-Biney;
- Project management team, including the Project Manager within the Executing Agency - Mohammed Solaiman Haider (National Project Director), Dr. Khalequzzaman Akanda Chowdhury (National Project Coordinator), Ms. Papia Sultana (Assistant Director at the Department of Environment provides operational support to Mr. Haider);
- UNEP Fund Management Officer (FMO) - Martin Okun;

- Portfolio Manager and Sub-Programme Coordinators, Yassin Ahmed (Environment Governance Sub-Programme), Marieta Sakalian (Healthy and Productive Ecosystem);
 - Project partners, including national executing agencies, project coordinators, members of the national coordinating committees and advisory group/steering committee;
 - Relevant resource persons.
- (c) **Surveys** as deemed appropriate and based on stakeholder's analysis.
- (d) **Other data collection tools** as may be deemed useful.

11. Evaluation Deliverables and Review Procedures

46. The evaluation team will prepare:

- **Inception Report:** (see Annex 1 for links to all templates, tables and guidance notes) containing an assessment of project design quality, a draft reconstructed Theory of Change of the project, project stakeholder analysis, evaluation framework and a tentative evaluation schedule.
- **Preliminary Findings Note:** typically in the form of a PowerPoint presentation, the sharing of preliminary findings is intended to support the participation of the project team, act as a means to ensure all information sources have been accessed and provide an opportunity to verify emerging findings. In the case of highly strategic project/portfolio evaluations or evaluations with an Evaluation Reference Group, the preliminary findings may be presented as a word document for review and comment.
- **Draft and Final Evaluation Report:** (see links in Annex 1) containing an executive summary that can act as a stand-alone document; detailed analysis of the evaluation findings organised by evaluation criteria and supported with evidence; lessons learned and recommendations and an annotated ratings table.
- **Evaluation Bulletin:** a 2-page summary of key evaluation findings for wider dissemination through the EOU website.

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

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

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

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

12. Evaluation Consultant

51. For this evaluation one consultant will work under the overall responsibility of the Evaluation Office represented by an Evaluation Manager (Myles Hallin) in consultation with the UNEP Task Manager (Alex Owusu-Biney), Fund Management Officer (Martin Okun) and the Sub-programme Coordinators of the Environment Governance Sub programme (Yassin Ahmed) and the Healthy and Productive Ecosystem Sub programme (Marieta Sakalian). The consultant will liaise with the Evaluation Manager on any procedural and methodological matters related to the evaluation. It is, however, each consultant's individual responsibility to plan meetings with stakeholders, organize online surveys, obtain documentary evidence and any other logistical matters related to the assignment. The UNEP Task Manager and project team will, where possible, provide logistical support (introductions, meetings etc.) allowing the consultants to conduct the evaluation as efficiently and independently as possible.

52. The consultant will be hired for 9 months spread over the period March 2020 to November 2020 and should have: an advanced university degree in environmental sciences, or another relevant political or social sciences area; evaluation experience, preferably using a Theory of Change approach; a minimum of 10 years; experience in environmental management or a related field, with a preference for specific expertise in the area of biosafety and biodiversity. English and French are the working languages of the United Nations Secretariat. For this consultancy, fluency in oral and written English is a requirement, along with excellent writing skills in English. Working knowledge of the UN system and specifically the work of UNEP is an added advantage. The work will be home-based.

53. The consultant will be responsible, in close consultation with the Evaluation Office of UNEP for overall management of the evaluation and timely provision of its outputs, described above in Section 11 Evaluation Deliverables, above. The consultant will make substantive and high-quality contributions to the evaluation process and outputs. The consultant will ensure that all evaluation criteria and questions are adequately covered.

54. In close consultation with the Evaluation Manager, the evaluation consultant will be responsible for the overall management of the evaluation and timely provision of its outputs, data collection and analysis and report-writing. More specifically:

Inception phase of the evaluation, including:

- preliminary desk review and introductory interviews with project staff;
- draft the reconstructed Theory of Change of the project;
- prepare the evaluation framework;
- develop the desk review and interview protocols;
- draft the survey protocols (if relevant);
- develop and present criteria for country and/or site selection for the evaluation mission;
- plan the evaluation schedule;
- prepare the Inception Report, incorporating comments until approved by the Evaluation Manager

Data collection and analysis phase of the evaluation, including:

- Conduct a desk review and in-depth interviews with project implementing and executing agencies, project partners and project stakeholders;
- Ensure independence of the evaluation and confidentiality of evaluation interviews.
- regularly report back to the Evaluation Manager on progress and inform of any possible problems or issues encountered and;

- keep the Project/Task Manager informed of the evaluation progress and engage the Project/Task Manager in discussions on emerging findings throughout the evaluation process.

Reporting phase, including:

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

Managing relations, including:

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

13. Schedule of the evaluation

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

Table 3. Tentative schedule for the evaluation

Milestone	Tentative Dates
Inception Report	March 2020
Desk based review and telephone interviews, surveys etc.	April/May 2020
PowerPoint/presentation on preliminary findings and recommendations	June 2020
Draft report to Evaluation Manager (and Peer Reviewer)	June/July 2020
Draft Report shared with UNEP Task Manager and team	July 2020
Draft Report shared with wider group of stakeholders	August 2020
Final Report	September/October 2020
Final Report shared with all respondents	October/November 2020

14. Contractual Arrangements

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

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

Schedule of Payment for the Consultant:

Deliverable	Percentage Payment
Approved Inception Report (as per annex document 7)	30%

Approved Draft Main Evaluation Report (as per annex document 13)	40%
Approved Final Main Evaluation Report	30%

57. Fees only contracts: Air tickets will be purchased by UNEP and 75% of the Daily Subsistence Allowance 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 Manager and on the production of acceptable receipts. Terminal expenses and residual DSA entitlements (25%) will be paid after mission completion.

58. The consultants may be provided with access to UNEP's Programme Information Management System (PIMS) and if such access is granted, the consultants agree not to disclose information from that system to third parties beyond information required for, and included in, the evaluation report.

59. In case the consultants are not able to provide the deliverables in accordance with these guidelines, and in line with the expected quality standards by the UNEP Evaluation Office, payment may be withheld at the discretion of the Director of the Evaluation Office until the consultants have improved the deliverables to meet UNEP's quality standards.

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

ANNEX 3: LIST OF PEOPLE MET

Due to COVID-19 pandemic, the country visit did not take place. Communication and exchange of information took place through e-mails and /or skype meetings with following people:

NAME	POSITION & INSTITUTION
Mr Mohammed Solaiman Haider haider.doe@gmail.com	National Director of the Project Director of Environment Planning / Department of Environment (Min. of Environment, Forests and Climate Change).
Mr Md. Imdadul Hoque mimdadul07@yahoo.com	Dean, Biological Sciences, the University of Dhaka
Mr Yusuf Akhond a_akhond@hotmail.com	Head, Biotech Division, Bangladesh Agricultural Research Institute (BARI), Gazipur
Mr Wais Kabir waiskabir@hotmail.com	Executive Director Krishi Gobeshona Foundation / KGF, Dhaka. Former Executive Chairman, Bangladesh Agricultural Research Council (BARC)
Mr Rakha Hari Sarker rhsarker2000@yahoo.co.uk	Chairman, Department of Botany, the University of Dhaka
Mr Syed Ahmmad Kabir sakabir76@gmail.com	Senior Chemist, Department of Environment, Central Laboratory
Ms Subarna Islam	Asst. Professor, Dept. of Botany, University of Dhaka

ANNEX 4: 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)
- ROtI - Review of Outcomes to Impact: Practitioners Handbook, 2009, GEF
- Project Document "Implementation of the National Biosafety Framework of Bangladesh" 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)
- An Explanatory Guide to the Cartagena Protocol on Biosafety, IUCN, 2003
- Genetically Modified Organisms and Biosafety: A background paper for decision-makers and others to assist in consideration of GMO issues, IUCN, 2004

Documents and Websites consulted on GMOs and Biosafety in Bangladesh

- DOE Document (posted in <http://www.bchbd.org>):
 - a) Biosafety Policy of Bangladesh (Draft)
 - b) Translated Biosafety Rules into English from the gazetted Bangla version with proposed Amendments (Draft)
 - c) Updated Draft of the Biosafety Guidelines of Bangladesh

- d) Monitoring and Enforcement Manual for GMOs in Bangladesh
- e) Training Manual on Biosafety
- f) Manual on GMO Detection and Good Laboratory Practices
- g) Guidelines for Monitoring Confined Field Trial of Genetically Engineered Plants in Bangladesh
- h) Emergency Response Procedures for GMOs in Bangladesh
- i) National Biodiversity strategy and Action Plan Of Bangladesh 2016-20121
- j) National Biosafety Framework 2006
- k) SOP for Transport of GEP
- l) SOP for Storage of GEP
- m) SOP for Field Trial Compliance Monitoring of Bt EggPlant
- n) SOP for Harvest Disposal of GEP
- o) SOP for Post Harvest Management of Bt EggPlant

- IFPRI Discussion Paper, 2019, "Economic and Health Impacts of Genetically Modified Eggplant / Results from a Randomized Controlled Trial of Bt brinjal in Bangladesh"
- GAIN Report 2017, "Bangladesh Agricultural Biotechnology Annual Report"
- M. Shahidul Haque and N. Ranjan Saha "Biosafety Measures, Socio-Economic Impacts and Challenges of Bt-brinjal Cultivation in Bangladesh", Department of Biotechnology, Bangladesh Agricultural University, Mymensingh, Bangladesh, 2020.
<https://www.frontiersin.org/articles/10.3389/fbioe.2020.00337/full>
- Esha Shah, " 'Science' in the Risk Politics of Bt Brinjal", 2011, Wageningen Univ., in
https://www.researchgate.net/publication/284180536_'Science'_in_the_Risk_Politics_of_Bt_Brinjal
- M. Z. Islam et alia, Hindawi, The Scientific World Journal, 2016, "Variability Assessment of Aromatic and Fine Rice Germplasm in Bangladesh Based on Quantitative Traits"
- <https://www.hindawi.com/journals/tswj/2016/2796720/>
- <http://www.bchbd.org/>
- <https://bangladeshbiosafety.org/>
- https://bangladeshbiosafety.org/wp-content/uploads/2017/11/Users_Guide_to_Biosafety_Regulatory_Process_Bangladesh_2017.pdf
- <https://news.cornell.edu/stories/2018/08/gmo-eggplant-crop-expands-bangladesh>

- "Bt Eggplant Project in Bangladesh: History, Present Status, and Future Direction", 2018, in <https://www.frontiersin.org/articles/10.3389/fbioe.2020.00337/full>
- <https://www.dhakatribune.com/business/2019/03/07/5-yr-after-releasing-its-first-gm-crop-bangladesh-says-farmers-gain-by-adopting-bt-brinjal>

ANNEX 5: LIST OF ACTIVITIES / OUTPUT

Project Activities / Output ²⁷	Expected completion date ²⁸	Evaluator Comments
		<p>Overall comment: all planned Activities were completed and duly reported in the Annual PIRs approved by the UNEP Biosafety Task Manager, as well as in the Project Terminal Report (June 2018).</p> <p>Key-activities have been discussed with the Project Team during the Evaluation. Main findings are discussed in Chapter 5.5.1.</p>
Output 1: Development of National Policy on Biosafety and Updating Guidelines on Biosafety and Biosafety Framework		All planned activities under Output 1 have been completed. (see Chapter 5.5.1)
Activity 1: Review and Analysis of Existing Policy and Legal Framework for Formulating a Stand-alone Biosafety Policy	31/12/2014	
Activity 2: Drafting and finalization of stand-alone Biosafety Policy of Bangladesh	31/12/2017	
Activity 3: Updating Biosafety Guidelines of Bangladesh	31/12/2017	
Activity 4: Training-workshop on biosafety rules and policy for NGOs and industrial stakeholders	30/09/2017	
Activity 5: Training-workshop for policy, planning and administrative personnel and biosafety related committee members for mainstreaming biosafety	01/09/2016	
Activity 6: Workshop on Biosafety Policy, Guidelines & Rules for Scientists and laboratory personnel	30/06/2017	
Activity 7: Visit concerned Ministries, Departments, Institutes for Advocacy and Mainstreaming of Biosafety Policy	31/12/2017	
Output 2: Drafting and Promulgation of Regulatory regime on Biosafety Rules		All planned Activities for Output 2 have been developed (see Chapter 5.5.1)
Activity 1: Drafting of the Amendments to the Bangladesh Biosafety Rules	31/12/2014	
Activity 2: Consultation on the Amendments of Biosafety Rules, Inter-ministerial meeting and government approval	31/12/2017	
Activity 3: Development of Legal and administrative tools e.g., formats, manuals, guidelines, Emergency Response planning	31/12/2017	

²⁷ Outputs and activities as described in the project logframe or in any updated project revision.

²⁸ As per latest workplan (latest project revision)

(ERP) procedures etc. for various uses and application.		
Activity 4: Translation of Biosafety Rules into English and posting to BBCH and DOE, MOEF websites	30/06/2017	
Activity 5: Stakeholders workshop on the regulatory regime and legal documents on biosafety	30/06/2017	
Activity 6: International and National training/ workshop/conferences on Negotiation skills on biosafety, IPR;etc.	31/12/2017	
Activity7: Visit Ministries, Departments, Institutes for Assessing the Implementation of Biosafety Rules, Guidelines and Cartagena Protocol	31/12/2017	
Output 3: Functional Administrative System for handling and notification of LMOs		All planned activities for Output 3 have been satisfactorily implemented as discussed in chapter 5.5.1.
Activity 1: Establishment of Biosafety cell at DoE	31/10/2014	
Activity 2: Procurement of a Photocopier	31/12/2014	
Activity 3: Procurement of Desktop PCs, Laptop and Printer	30/06/2017	
Activity 4: Procurement of Consultancy for LMO detection, Laboratory analysis and Food safety expert	30/05/2016	
Activity 5: Training program for inter-sectoral committee members and enforcing agency officials on functional administrative system for handling and notification of LMOs	31/12/2017	
Activity 6: Procurement of Consultancy for Biosafety Data management and IT consultant	30/05/2016	
Activity 7: Training program on handling LMO application and decision making procedures	30/11/2017	
Activity 8: Study Tours at renowned international centres of excellences on biosafety research	31/03/2016	
Output 4: Monitoring and Enforcement		All listed activities for Output 4 have been implemented, as discussed in chapter 5.5.1.
Activity 1: Procurement of Consultancy for biosafety monitoring system expert	01/01/2017	
Activity 2: Training on Lab Equipment and Good Laboratory Practices (GLP)	30/08/2017	
Activity 3: Development of monitoring and enforcement manuals, formats, inspection and assessment tools, reporting forms and other relevant documents	31/12/2017	Training activities 4, 5 and 6 need to be strengthened
Activity 4 Training on monitoring of laboratory safety levels, containment facilities, field trials and other obligations imposed for various uses of LMOs	30/10/2017	
Activity 5: Strengthening Laboratory facilities for monitoring & enforcement activities	31/12/2017	
Activity 6: Training on biosafety risk assessment and risk management	30/11/2017	
Activity 7: Foreign Training for Scientists, Analysts, NCA officials on safety analysis, detection and quantification of LMO	30/08/2017	
Activity 8: Foreign Training/study tours on monitoring and enforcement of Biosafety related officials	30/07/2017	
Activity 9 : Biosafety Lab Renovation Activities	31/12/2017	
Activity 10 : Procurement and Installation of Lab Equipment	31/12/2017	
Output 5: Public awareness, education, public participation and regional networking/ collaboration		All activities foreseen have been implemented, including the
Activity 1: Development of public awareness and education materials	30/12/2017	

Activity 2: Divisional level training for biosafety education and awareness and network development	30/08/2017	divisional (i.e. decentralised) training and the international conference.
Activity 3: Hosting of international conference and participation in international meetings/workshops on regional harmonization, networking and collaboration	31/12/2018	
Activity 4: Inception workshop, Public Outreach Meetings on the Implementation of NBF	30/06/2016	
Activity 5 Visit Various Institutes for Capacity Assessment and Strengthening Biosafety Networking	31/12/2017	
Output 6: Project Monitoring and Evaluations		
Activity 1: Monitoring and Evaluation Activities	31/12/2017	Overall, planned activities have been implemented satisfactorily as discussed in chapter 5.8.2. Lessons Learned were provided in the Project Terminal Report. As discussed in chapter 5.6, only a consolidated Audit (2013-2017) was carried-out.
Activity 2: Attending Progress Review Meetings at the MOEF, Planning Commission, Economic Relations Division and IMED	31/12/2017	
Activity 3: Formulating the Texts on Lessons Learnt and Dissemination of the Lessons to the UNEP, IMED and Other Stakeholder	31/12/2018	
Activity 4: Annual Audit	31/12/2018	
Output 7: Project Management		
Activity 1: Appointment of Project Director, Procurement of Consultancy services for NPC, Accounts and procurement support consultants and Administrative support consultant Project Director	30/06/2014	Both Activities were fully carried-out
Activity 2: Organising and Attending Steering Committee meetings, Project implementation Committee Meeting, Technical meetings of Biosafety Core Committee, Project Staff Meetings	31/12/2017	

ANNEX 6: FINANCIAL TABLES

Table 1. Project Funding Sources Table (non-GEF Projects only)

Funding source	Planned funding	% of planned funding	Secured funding	% of secured funding
All figures as USD				
Cash				
Funds from the Environment Fund				
Funds from the Regular Budget				
Extra-budgetary funding (listed per donor):				
Sub-total: Cash contributions				
In-kind				
Environment Fund staff-post costs				
Regular Budget staff-post costs				
Extra-budgetary funding for staff-posts (listed per donor)				
Sub-total: In-kind contributions				
Co-financing*				
Co-financing cash contribution				
Co-financing in-kind contribution				
Sub-total: Co-financing contributions				
Total				

*Funding from a donor to a partner which is not received into UN Environment accounts, but is used by a UN Environment partner or collaborating centre to deliver the results in a UN Environment – approved project.

Table 2. Expenditure by Outcome/Output (for both GEF and non-GEF projects)

Component/sub-component/output All figures as USD	Estimated cost at design	Actual Cost/ expenditure	Expenditure ratio (actual/planned)
Component 1 / Outcome 1 Stand-alone Biosafety National Policy and Updating Guidelines	25,000	NA (*)	
Component 2 / Outcome 2 Biosafety Rules/Regulations	85,000	NA(*)	
Component 3 / Outcome 3 GMOs Handling Application / Notification	347,000	NA(*)	
Component 4 / Outcome 4 Monitoring and Enforcement system	115,000	NA(*)	
Component 5 / Outcome 5 Public awareness and	193,690.	NA(*)	

participation in decision making. Regional harmonisation and knowledge sharing			
Project Monitoring and Evaluation	30,000	NA(*)	
Project Management	88,400	NA(*)	
TOTAL	884,090	884,090	100 %

(*) Project Financial Reports and Final Financial Statement (posted in ANUBIS) are presented following UNEP Budget Lines (Objects of Expenditures), not by Project Outcomes / Components (see Table 4 in Chapter 3.6 and here below in Table 2.1)

Table 2.1: GEF Budget at design and expenditures by Budget Line / Object of Expenditure (10/2019)

UNEP BUDGET LINE / OBJECT OF EXPENDITURE	Estimated cost at design (USD)	Actual Cost (USD)	Expenditure ratio (actual/planned)
10 PROJECT PERSONNEL	126,090	183,917	146%
20 SUB-CONTRACT	259,000	145,361	56%
30 TRAINING	258,600	218,184	84%
40 EQUIPMENT & PREMISES	150,500	282,594	188%
50 MISCELLANEOUS	89,900	54,034	60%
Total	884,090	884,090	100%

Table 3: Co-financing Table (GEF projects only)

Co-financing (Type/Source)	UNEP own Financing (US\$1,000)		Government (US\$1,000)		Other* (US\$1,000)		Total (US\$1,000)		Total Disbursed (US\$1,000)
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
- Grants									
- Loans									
- Credits									
- Equity investments									
- In-kind support			533	533			533	533	533
- Other (*)									
Totals			533	533			533	533	533

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

Table 4: Financial Management Table

NON-GEF AND GEF PROJECTS

Financial management components:		Rating	Evidence/ Comments
1. Adherence to UNEP's/GEF's policies and procedures:		S	
Any evidence that indicates shortcomings in the project's adherence ²⁹ to UNEP or donor policies, procedures or rules		Yes	<ul style="list-style-type: none"> - Documents of substantive Budget Revision (2015) without full explanation on reasons for revision. - Only one consolidated Audit Report submitted (2013-2017) by the Audit Directorate for Foreign Aided Projects. - Auditing was presented in Local currency not USD.
2. Completeness of project financial information³⁰:			
Provision of key documents to the evaluator (based on the responses to A-H below)		S	In ANUBIS
A.	Co-financing and Project Cost's tables at design (by budget lines)	Yes	
B.	Revisions to the budget	Yes	7 budget revisions. See chapter 5.6
C.	All relevant project legal agreements (e.g. SSFA, PCA, ICA)	Yes	
D.	Proof of fund transfers	N/A	
E.	Proof of co-financing (cash and in-kind)	No	All in kind
F.	A summary report on the project's expenditures during the life of the project (by budget lines, project components and/or annual level)	Yes	All periodic financial reports in ANUBIS -
G.	Copies of any completed audits and management responses (where applicable)	Yes	Not in USD
H.	Any other financial information that was required for this project (list):	Yes/No or N/A	
3. Communication between finance and project management staff		S	
Project Manager and/or Task Manager's level of awareness of the project's financial status.		HS	
Fund Management Officer's knowledge of project progress/status when disbursements are done.		S	
Level of addressing and resolving financial management issues among Fund Management Officer and Project Manager/Task Manager.		S	
Contact/communication between by Fund Management Officer, Project Manager/Task Manager during the preparation of financial and progress reports.		S	
Project Manager, Task Manager and Fund Management Officer responsiveness		S	

²⁹ If the evaluation raises concerns over adherence with policies or standard procedures, a recommendation may be given to cover the topic in an upcoming audit, or similar financial oversight exercise.

³⁰ See also document 'Criterion Rating Description' for reference

to financial requests during the evaluation process		
Overall rating	S	

ANNEX 7: EVALUATION BRIEF

Implementation of the National Biosafety Framework of Bangladesh

Duration: 67 months (29/11/2012 to 28/06/2018)

GEF Allocation: USD 884,090

Nat. Executing Agency: DOE (Department of Environment of the Ministry of Environment, Forests and Climate Change)

- **Project Objective** was "To assist Bangladesh to implement the National Biosafety Framework in compliance with the Cartagena Protocol on Biosafety through enhancing the existing capacity on Biosafety at the Institutional, Individual and Systemic levels in Bangladesh, as well as to address national needs and priorities".
- The Project focussed on **five main Outcomes**:
 1. **Biosafety Policy** with an Action Plan approved, published and implemented.
 2. **Biosafety legal regime established**, enacted and fully operational in the country.
 3. **Coordinated administrative set-up** and mechanisms in place for handling of requests/applications.
 4. A comprehensive **Monitoring and Enforcement system** in place and operational.
 5. **Enhanced public awareness** and public participation in decision making on LMO

- **Outputs Delivery has been remarkable, both in quantity and quality:**

- ✓ Various regulatory and procedural instruments produced.
- ✓ Crop scientists, regulators and practitioners intensively trained on a large array of subjects, training manuals produced.
- ✓ Different committees established and operational (at National, Institutional and Field Level)
- ✓ GMO lab established.
- ✓ Policymakers and media personnel reached by awareness raising and information activities.
- ✓ National and international workshops and seminars on biosafety organised.



Source: DOE, Workshops and Training Manuals

A relevant Output, the GMO lab: https://www.youtube.com/watch?v=wznWJtdXUA&feature=emb_title

RELEVANCE

Bangladesh is developing a vibrant Biotechnology sector to boost agriculture sector, improve food security and small farmers incomes. GMO Bt Brinjal (Egg Plant) is cultivated by around 27.000 farmers (2018) and four other GMO crops are in an advanced state of field trials (Potato, Cotton, vitamin-A enriched Golden Rice and High Iron and Zn Rice). As underlined in the Project Document "Current development and perspectives of GMOs open-field cultivation highlights the role and the need of a fully operational National Biosafety Framework providing appropriate measures of environmental safeguard, and mechanisms of Biosafety regulation and control".



Photo Source: Dhaka Tribune, July 2018 Farmers busy selling Bt brinjal at a village market

See Video on Biotechnology and Biosafety in Bangladesh:

https://www.youtube.com/watch?time_continue=18&v=HfGn3iDcu7E&feature=emb_logo

CHALLENGES AND PERSPECTIVES

- Decision-making procedures should be smoother and unambiguous, more understandable and also more transparent for all stakeholders.
- More coordination is needed with effective procedures of regulation, monitoring and enforcement at farmer/field level.
- Better involvement of the Department of Agricultural Extension (DAE) and of the Farmers themselves in Biosafety Management at Field Level.
- DOE needs an appropriate Communication Strategy to identify different target groups (e.g. policy and decision-makers, managers and technical officers, teachers and students, farmers, consumers, religious groups, etc.) to be matched with targeted messages and forms of communication.



Photo Source: Bt Brinjal Bangladesh, Cornell Univ. Alliance for Science

ANNEX 8: BRIEF CV OF THE CONSULTANT

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

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

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

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

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

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

From 2012 on, Camillo has carried-out the Biosafety National Frameworks Evaluation (UNEP-GEF) in Kenya, Namibia, Poland, Lithuania, Czech Republic and Slovakia (2012), Bhutan, Lao PDR and Mongolia (2014), Albania, Macedonia and Egypt (2015), Ghana, Liberia and Nigeria (2017), the Final Evaluation of the Global GEF/UNEP Programme (123 countries) "Development of National Biosafety Frameworks" (2016), the ABS-Nagoya Protocol Project in Guatemala (2018) and the Biosafety Regional Framework implementation in the Caribbean (2019).

He has recently evaluated the IFAD Agricultural Service Support Project (ASSP) in Botswana (2019) and the FAO WaPOR Project in Ethiopia (2020). He has participated to the Evaluation of FAO's Contribution to SDG2 as Consultant for the Country Case Study in Cabo Verde (2020).

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 Cabo Verde.

ANNEX 9: QUALITY ASSESSMENT OF THE EVALUATION REPORT

Quality Assessment of the Evaluation Report

Evaluand Title:

Implementation of the National Biosafety Framework of Bangladesh - GEF ID # 4022

All UNEP 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.

	UNEP Evaluation Office Comments	Final Report Rating
Substantive Report Quality Criteria		
<p>Quality of the Executive Summary:</p> <p>The Summary should be able to stand alone as an accurate summary of the main evaluation product. It should include a concise overview of the evaluation object; clear summary of the evaluation objectives and scope; overall evaluation rating of the project and key features of performance (strengths and weaknesses) against exceptional criteria (plus reference to where the evaluation ratings table can be found within the report); summary of the main findings of the exercise, including a synthesis of main conclusions (which include a summary response to key strategic evaluation questions), lessons learned and recommendations.</p>	<p>Final report:</p> <p>Includes all aspects required but not well structured as a narrative. Lessons learned and Recommendations not incorporated into the text.</p>	4
<p>I. Introduction</p> <p>A brief introduction should be given identifying, where possible and relevant, the following: institutional context of the project (sub-programme, Division, regions/countries where implemented) and coverage of the evaluation; date of PRC approval and project document signature); results frameworks to which it contributes (e.g. Expected Accomplishment in POW); project duration and start/end dates; number of project phases (where appropriate); implementing partners; total secured budget and whether the project has been evaluated in the past (e.g. mid-term, part of a synthesis evaluation, evaluated by another agency etc.)</p> <p>Consider the extent to which the introduction includes a concise statement of the purpose of the evaluation and the key intended audience for the findings?</p>	<p>Final report:</p> <p>Complete and concise section that highlights purpose of the Evaluation. Doesn't include a concise statement of the purpose of the evaluation and the key intended audience for the findings</p>	4
<p>II. Evaluation Methods</p> <p>A data collection section should include: a description of evaluation methods and information sources used, including the number and type of respondents; justification for methods used (e.g. qualitative/quantitative; electronic/face-to-face); any selection criteria used to identify respondents, case studies or sites/countries visited; strategies used to increase stakeholder engagement and consultation; details of how data were verified (e.g. triangulation, review by stakeholders etc.).</p>	<p>Final report:</p> <p>Detailed description of the approach taken.</p> <p>Limitations acknowledged and consultant attempted to mitigate limitations.</p>	5

<p>Methods to ensure that potentially excluded groups (excluded by gender, vulnerability or marginalisation) are reached and their experiences captured effectively, should be made explicit in this section.</p> <p>The methods used to analyse data (e.g. scoring; coding; thematic analysis etc.) should be described.</p> <p>It should also address evaluation limitations such as: low or imbalanced response rates across different groups; gaps in documentation; extent to which findings can be either generalised to wider evaluation questions or constraints on aggregation/disaggregation; any potential or apparent biases; language barriers and ways they were overcome.</p> <p>Ethics and human rights issues should be highlighted including: how anonymity and confidentiality were protected and strategies used to include the views of marginalised or potentially disadvantaged groups and/or divergent views. Is there an ethics statement?</p>	<p>Methods to ensure that potentially excluded groups are reached was included.</p>	
<p>III. The Project</p> <p>This section should include:</p> <ul style="list-style-type: none"> • 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). • Results framework: 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 	<p>Final report:</p> <p>Comprehensive section covering all elements.</p>	5
<p>IV. Theory of Change</p> <p>The TOC at Evaluation should be presented clearly in both diagrammatic and narrative forms. Clear articulation of each major causal pathway is expected, (starting from outputs to long term impact), including explanations of all drivers and assumptions as well as the expected roles of key actors.</p> <p>This section should include a description of how the TOC at Evaluation³¹ was designed (who was involved etc.) and applied to the context of the project? Where the project results as stated in the project design documents (or formal revisions of the project design) are not an accurate reflection of the project's intentions or do not follow UNEP's definitions of different results levels, project results may need to be re-phrased or reformulated. In such cases, 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</p>	<p>Final report:</p> <p>The TOC section is well described, including how the results framework was re-aligned to form the reconstructed TOC, TOC diagram and drivers and assumptions</p>	5

³¹ During the Inception Phase of the evaluation process a TOC at Evaluation Inception is created based on the information contained in the approved project documents (these may include either logical framework or a TOC or narrative descriptions), formal revisions and annual reports etc. During the evaluation process this TOC is revised based on changes made during project intervention and becomes the TOC at Evaluation.

that, although wording and placement may have changed, the results 'goal posts' have not been 'moved'.		
<p>V. Key Findings</p> <p>A. Strategic relevance: This section should include an assessment of the project's relevance in relation to UNEP's mandate and its alignment with UNEP's policies and strategies at the time of project approval. An assessment of the complementarity of the project at design (or during inception/mobilisation³²), with other interventions addressing the needs of the same target groups should be included. Consider the extent to which all four elements have been addressed:</p> <ul style="list-style-type: none"> i. Alignment to the UNEP Medium Term Strategy (MTS) and Programme of Work (POW) ii. Alignment to Donor/GEF Strategic Priorities iii. Relevance to Regional, Sub-regional and National Environmental Priorities iv. Complementarity with Existing Interventions 	<p>Final report:</p> <p>Clear and concise.</p>	5
<p>B. Quality of Project Design</p> <p>To what extent are the strengths and weaknesses of the project design effectively <u>summarized</u>?</p>	<p>Final report:</p> <p>Good summary of assessment of project design.</p>	5
<p>C. Nature of the External Context</p> <p>For projects where this is appropriate, key <u>external</u> features of the project's implementing context that limited the project's performance (e.g. conflict, natural disaster, political upheaval³³), and how they affected performance, should be described.</p>	<p>Final report:</p> <p>Requirement met</p>	5
<p>D. Effectiveness</p> <p>(i) Outputs and Project Outcomes: How well does the report present a well-reasoned, complete and evidence-based assessment of the a) availability of outputs, and b) achievement of project outcomes? How convincing is the discussion of attribution and contribution, as well as the constraints to attributing effects to the intervention.</p> <p>The effects of the intervention on differentiated groups, including those with specific needs due to gender, vulnerability or marginalisation, should be discussed explicitly.</p>	<p>Final report:</p> <p>The justification for ratings is laid out and the assessment is transparent and credible. Text struggled to justify ratings in places, could be improved.</p>	4

³² A project's inception or mobilization period is understood as the time between project approval and first disbursement. Complementarity during project implementation is considered under Efficiency, see below.

³³ Note that 'political upheaval' does not include regular national election cycles, but unanticipated unrest or prolonged disruption. The potential delays or changes in political support that are often associated with the regular national election cycle should be part of the project's design and addressed through adaptive management of the project team.

<p>(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?</p> <p>How well are change processes explained and the roles of key actors, as well as drivers and assumptions, explicitly discussed?</p> <p>Any unintended negative effects of the project should be discussed under Effectiveness, especially negative effects on disadvantaged groups.</p>	<p>Final report:</p> <p>The justification for ratings is laid out and the assessment is transparent and credible.</p>	5
<p>E. Financial Management</p> <p>This section should contain an integrated analysis of all dimensions evaluated under financial management and include a completed 'financial management' table.</p> <p>Consider how well the report addresses the following:</p> <ul style="list-style-type: none"> • Adherence to UNEP's financial policies and procedures • 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 	<p>Final report:</p> <p>A concise section supported by information on expenditures under Project Finance</p>	5
<p>F. Efficiency</p> <p>To what extent, and how well, does the report present a well-reasoned, complete and evidence-based assessment of efficiency under the primary categories of cost-effectiveness and timeliness including:</p> <ul style="list-style-type: none"> • 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 during project implementation 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 UNEP's environmental footprint. 	<p>Final report:</p> <p>A clear section in which the assessment of efficiency is made evident. Could have included more detail.</p>	4
<p>G. Monitoring and Reporting</p> <p>How well does the report assess:</p> <ul style="list-style-type: none"> • Monitoring design and budgeting (including SMART results with measurable indicators, resources for MTE/R etc.) • Monitoring of project implementation (including use of monitoring data for adaptive management) • Project reporting (e.g. PIMS and donor reports) 	<p>Final report:</p> <p>Clear and concise discussion, however 3 sections combined into 2 because of lack of information on project reporting</p>	4
<p>H. Sustainability</p> <p>How well does the evaluation identify and assess the key conditions or factors that are likely to undermine or contribute to the persistence of achieved project outcomes including:</p> <ul style="list-style-type: none"> • Socio-political Sustainability • Financial Sustainability • Institutional Sustainability 	<p>Final report:</p> <p>Adequate section.</p>	5

<p>I. Factors Affecting Performance</p> <p>These factors are <u>not</u> discussed in stand-alone sections but are integrated in criteria A-H as appropriate. Note that these are described in the Evaluation Criteria Ratings Matrix. To what extent, and how well, does the evaluation report cover the following cross-cutting themes:</p> <ul style="list-style-type: none"> • Preparation and readiness • Quality of project management and supervision³⁴ • Stakeholder participation and co-operation • Responsiveness to human rights and gender equity • Environmental and social safeguards • Country ownership and driven-ness • Communication and public awareness 	<p>Final report:</p> <p>All elements are addressed to some extent, however not a lot of attention is paid throughout the report to cross-cutting issues in general. Institutional learning could be increased with more emphasis on Human Rights (Right to Food in particular) been addressed within the scope of the project.</p>	4
<p>VI. Conclusions and Recommendations</p> <p>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. Human rights and gender dimensions of the intervention (e.g. how these dimensions were considered, addressed or impacted on) should be discussed explicitly. Conclusions, as well as lessons and recommendations, should be consistent with the evidence presented in the main body of the report.</p>	<p>Final report:</p> <p>Section complete and strategic questions addressed.</p>	5
<p>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 are intended to be adopted any time they are deemed to be relevant in the future and must have the potential for wider application (replication and generalization) and use and should briefly describe the context from which they are derived and those contexts in which they may be useful.</p>	<p>Final report:</p> <p>Section complete.</p>	4
<p>iii) Quality and utility of the recommendations:</p> <p>To what extent are the recommendations proposals for specific action to be taken by identified people/position-holders to resolve concrete problems affecting the project or the sustainability of its results? (i.e. points of corrective action). 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.</p> <p>At least one recommendation relating to strengthening the human rights and gender dimensions of UNEP interventions, should be given. Recommendations should represent a measurable performance target in order that the Evaluation Office can monitor and assess</p>	<p>Final report:</p> <p>The recommendations relate, broadly, to how project can continue to improve in the future, and address important aspects of the project, however some lack feasibility in terms of realistic implementation and specifics in terms of who would do what and when. Some effort will be needed to convert these into actionable points. All</p>	4

³⁴ In some cases 'project management and supervision' will refer to the supervision and guidance provided by UNEP 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 UNEP.

<p>compliance with the recommendations.</p> <p>In cases where the recommendation is addressed to a third party, compliance can only be monitored and assessed where a contractual/legal agreement remains in place. Without such an agreement, the recommendation should be formulated to say that UNEP project staff should pass on the recommendation to the relevant third party in an effective or substantive manner. The effective transmission by UNEP of the recommendation will then be monitored for compliance.</p> <p>Where a new project phase is already under discussion or in preparation with the same third party, a recommendation can be made to address the issue in the next phase.</p>	<p>recommendations are at institutional level.</p> <p>Recommendation relating to strengthening the human rights and gender dimensions is not present.</p>	
<p>VII. Report Structure and Presentation Quality</p>		
<p>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?</p>	<p>Final report:</p> <p>Now follows UNEP's Evaluation Office guidelines.</p>	<p>5</p>
<p>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? Does the report follow Evaluation Office formatting guidelines?</p>	<p>Final report:</p> <p>Quality of report writing and formatting has improved to be adequate</p>	<p>4</p>
<p>OVERALL REPORT QUALITY RATING</p>		<p>4.5 Moderately Satisfactory</p>

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