

**OED PROJECT EVALUATION SERIES**

**Terminal evaluation of the project  
'The Implementation of the National  
Biosafety Framework in accordance with the  
Cartagena Protocol on Biosafety'**

**(GCP/SRL/066/GFF)**

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## Abstract

This is the summary of the terminal evaluation (TE) report of the project, *'The Implementation of the National Biosafety Framework (NBF) in accordance with the Cartagena Protocol on Biosafety (CPB)'* funded by the Global Environmental Facility (GEF) and implemented by the Food and Agriculture Organization of the United Nations (FAO) and executed by the Government of Sri Lanka (GoSL). It covers the period from July 01, 2016, to June 31, 2022. Intended primary users of this report are the Project Management Unit (PMU), FAO Country Office (CO), the Project Steering Committee (PSC), the Project Task Force (PTF), National Competent Authority (NCA) and Sectoral Competent Authorities (SCAs), FAO-GEF Coordinating Unit, and a range of beneficiaries in Sri Lanka, and a wider range of secondary users. The methods applied to compile this report are desk review of project documents; questionnaire surveys; Focus Group Discussions (FGDs); Semi-structured interviews (SSIs); and field visits to assess project implementation and results. The main findings are: High Relevance; Effectiveness is Moderately Satisfactory; Efficiency is Satisfactory, and Sustainability is rated Moderately Unlikely. The project achieved many of its outputs, some over the indicators and before target dates. More co-finance than initially committed was raised. A wide range of stakeholders engaged in project implementation with the majority from government institutes and universities. Gender balance is good with a clear bias towards female participation with many female senior scientists and officials. The project has significantly contributed to increased awareness of the topic of biosafety among stakeholders. Main conclusions are as follows. Project outcomes and objective are highly relevant to its target audiences; some outcomes remain unachieved largely due to the non-enactment of the Biosafety Act (which was not a project output) but is critical to take action according to the CPB; and laboratories upgraded for testing and identification of Living Modified Organisms (LMOs)/Genetically Modified Organisms (GMOs) are the most successful outcomes. Project management was efficient by the small PMU team and successfully navigated the challenges posed by the COVID-19 pandemic. Sustainability is critically hampered by the lack of a legal framework with significant financial risks after project closure. Two main recommendations are to the FAO to convene a strategic level forum with a range of stakeholders and to FAO and the government to develop a new phase of the project to support further capacity development of the key stakeholders and to help overcome to overcome existing critical gaps.

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## List of Acronyms

<b>AgBC</b>	Agriculture Biotechnology Centre
<b>BCH</b>	Biosafety Clearing House
<b>BCIL</b>	Biotechnology Consortium India Ltd
<b>BDD</b>	Biodiversity Division
<b>BDS</b>	Biodiversity Secretariat
<b>CBD</b>	Convention on Biological Diversity
<b>CEA</b>	Central Environmental Authority
<b>CO</b>	Country Office
<b>CPB</b>	Cartagena Protocol on Biosafety
<b>EIA</b>	Export Inspection Agency
<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>FGDs</b>	Focused Group Discussions
<b>FLO</b>	Funding Liaison Officer
<b>GAD</b>	Government Analyst's Department
<b>GEF</b>	Global Environmental Facility
<b>GM</b>	Genetically Modified
<b>GMOs</b>	Genetically Modified Organisms
<b>GoSL</b>	Government of Sri Lanka
<b>HORDI</b>	Horticultural Crops Research and Development Institute
<b>IBCs</b>	Institutional Biosafety Committees
<b>ITI</b>	Industrial Technology Institute
<b>KPIs</b>	Key Person Interviews
<b>LDD</b>	Legal Draftsman's Department
<b>LMOs</b>	Living Modified Organisms
<b>LoA</b>	Letter of Agreement
<b>LTO</b>	Lead Technical Officer
<b>MTR</b>	Mid-Term Review
<b>NBF</b>	National Biosafety Framework
<b>NCA</b>	National Competent Authority
<b>NCCB</b>	National Coordinating Committee for Biosafety
<b>NGOs</b>	Non-Governmental Organizations
<b>NIE</b>	National Institute of Education
<b>NPQS</b>	National Plant Quarantine Service
<b>NSF</b>	National Science Foundation
<b>NTE</b>	Not to Exceed
<b>OED</b>	FAO Office of Evaluation
<b>PGRC</b>	Plant Genetic Resources Centre
<b>PIR</b>	Project Implementation Report
<b>PMU</b>	Project Management Unit

<b>PPR</b>	Project Progress Report
<b>PSC</b>	Project Steering Committee
<b>PTF</b>	Project Task Force
<b>RA</b>	Risk Assessment
<b>RC</b>	Risk Communication
<b>RM</b>	Risk Management
<b>RRDI</b>	Rice Research and Development Institute
<b>SCAs</b>	Sectoral Competent Authorities
<b>SDG</b>	Sustainable Development Goals
<b>SLAB</b>	Sri Lanka Accreditation Board for Conformity Assessment
<b>SLIBTEC</b>	Sri Lanka Institute of Biotechnology Private Limited
<b>SOPs</b>	Standard Operational Procedures
<b>SSIs</b>	Semi-Structured Interviews
<b>TE</b>	Terminal Evaluation
<b>ToC</b>	Theory of Change
<b>ToR</b>	Terms of Reference
<b>ToT</b>	Training of Trainers
<b>UNSDf</b>	United Nations Sustainable Development Framework

# Executive Summary

## Introduction

1. This is the report of the Terminal Evaluation (TE) of the project, '**The Implementation of the National Biosafety Framework (NBF) in accordance with the Cartagena Protocol on Biosafety (CPB)**' which was funded by the Global Environmental Facility (GEF) and implemented by the Food and Agriculture Organization of the United Nations (FAO) and executed by the Government of Sri Lanka (GoSL). This evaluation covered the period from July 01, 2016, to June 31, 2022, This TE is a requisite of both the GEF and FAO. It serves the project monitoring and reporting purposes and supports accountability and learning purposes of GEF, FAO and other participating institutions. The intended primary users of the TE report are expected to be the Project Management Unit (PMU), FAO Country Office (CO), the Project Steering Committee (PSC), the Project Task Force (PTF), National Competent Authority (NCA) and Sectoral Competent Authorities (SCAs), FAO-GEF Coordinating Unit, beneficiaries and other national counterparts in Sri Lanka, and the wider FAO. There is a wider range of intended secondary users including those from government, research institutions, academic institutions, local Non-Governmental Organisations (NGOs), local communities, the private sector and the FAO Regional Office for Asia and the Pacific.
  
2. The project directly responds to the strategic objectives of the GEF focal objectives for biodiversity conservation. Building capacity for the implementation of the CPB is one of the biodiversity focal area strategic objectives. The project consisted of the following:
  - **Component 1:**
    - Outcome 1.1: Enhanced capacity to develop, implement and coordinate biosafety legislations and regulations
    - Outcome 1.2: Administrative systems for making biosafety fully functional
    - Outcome 1.3: National Biosafety Clearing House (BCH) operational
  - **Component 2:**
    - Outcome 2.1: National institutions strengthened for risk assessment (RA), risk management (RM), and risk communication (RC) including monitoring and enforcement
  - **Component 3:**
    - Outcome 3.1: Improved capacity for detection and identification of Living Modified Organisms (LMOs)
    - Outcome 3.2: Laboratories fully operational with the necessary infrastructures to carry out RA, and detection of LMOs, which allow Sri Lanka to meet its obligations under the CPB



- **Component 4:**

- Outcome 4.1: Enhanced awareness, education and public participation in decision-making on biosafety

3. The TE followed the GEF TE Guidelines and assessed (Relevance; Effectiveness; Efficiency; Sustainability; Factors affecting performance (Monitoring and Evaluation and Stakeholder engagement), and Environmental and social safeguards (all with ratings) as well as Gender; Co-financing; Progress to impact; Knowledge management; and Capacity development (no rating given). In particular, the capacity development assessment referred to the FAO OED Capacity Development Evaluation Framework. An evaluation framework based on the above was designed as part of the Inception Report. It is given in Appendix 2 of this report. Three types of questionnaires (based on the Evaluation Matrix) were developed by the evaluation team and administered to three main categories of stakeholders - 1) individuals involved in project management and implementation, which included staff of the PMU and relevant FAO staff 2) institutional partners, including NCAs, SCAs and PSC members, and 3) individual beneficiaries/ trainees. The key questions of the TE in brief are presented in the evaluation report
4. **Evaluation Approach and Methodology:** As well as adhering to the above requirements, and being aligned with OED Manual, procedures and methodological guidelines, it was also based on the ToR to the evaluation team. It also was adapted to overcome the challenging work environment in Sri Lanka that prevailed during the evaluation. Types of methodologies were: questionnaire surveys (applied face-to-face or online according to the profile of respondents and the topics to be assessed, and administered through both one-on-one interviews as well as focused group discussions (FGDs); Semi-structured interviews (SSIs) (with key stakeholders and other informants to collect primary data for the inception report and especially with heads of partner institutions, recipients of services from these institutions, and co-financing partners, etc.); use of the capacity assessment approach (in particular to beneficiaries of the training and capacity building activities); and field visits to technically assess and analyse project implementation and results (to upgraded three laboratories (Agriculture Biotechnology Centre (AgBC) of the University of Peradeniya, Industrial Technology Institute (ITI) and National Plant Quarantine Service (NPQS) and the Department of Customs and Government Analysts Department) where equipment, consumables and training had been provided. Questionnaire responses were also obtained from individual beneficiaries (28) and by online and onsite interviews conducted mostly as FDGs to a total of 125 respondents. The list of stakeholders interviewed is given in Appendix 1. The quality of the knowledge products and communication and information dissemination materials that were developed under the aegis of the project was assessed. Data analysis included collation, analysed and

triangulation of information with interviews and field visit observations. These were used to determine the ratings and conclusions for the key areas in the evaluation matrix. The main limitation was the country situation that prevailed during most of the evaluation period and led to continuous review of risks and where required to make necessary adjustments to plans.

## **Main Findings**

5. The GEF Ratings Table is given as Annexure 1 of the Extended Abstract and also as Appendix 2A of the main report.

- **Relevance**

6. **Finding 1:** The project was designed to deliver the necessary capacities and tools to strengthen the implementation of the NBF and to support the enactment of the Biosafety Act, which was in an advanced draft at the time of project design. The outcomes and outputs addressed the key barriers identified during project design and were validated during the MTR, and TE as relevant to the national context, and remained relevant (in fact, increased in degree of relevance) over time.
7. **Finding 2:** Overall strategic relevance of this project is high. Biotechnology is even more relevant today in the context of increasing agricultural productivity and ensuring nutrition in a country that has a high population density.
8. **Finding 3:** The project is consistent with GEF policies, UN Sustainable Development Framework (UNSDF) in Sri Lanka and the FAO's country priorities

***The rating for overall strategic relevance is SATISFACTORY.***

- **Effectiveness (includes per each outcome as required)**

9. **Finding 4:** All impacts that are evaluated are developmental impacts. Environmental impacts are yet to materialize due to absence of Genetically Modified Organisms (GMOs)/LMOs assessment and release. Outputs have all been achieved to an impressive degree with output level indicators at times even overachieved. Overall, project objective level results are under-achieved while some outcomes too are under achieved. Component 3's Outcomes 3.1 and 3.2 are the most successful.
10. **Finding 4.1:** Incremental environmental and development benefits directly attributable to the project- These are those expected to be addressed through the project, and were to be achieved through implementing all components and achieving outcomes. Detailed findings under each of these are detailed in the evaluation per outcome given below

11. **Finding 4.2:** Achievements independent of the project- Since the design and commencement of this project in 2016, the significant rise of research and development in biotechnology within Sri Lanka is a natural and independent result of the advances in biotechnology taking place globally. This rise and the relevance of the products of biotechnology on human society has inevitably led to the increase of research and interest to develop products with commercial value within Sri Lanka as well.
12. **Finding 4.3:** Indirect positive effects- senior decision makers of the testing laboratories (AgBC of University of Peradeniya, NPQS of the Department of Agriculture, and the ITI laboratory) stated willingness to establish mechanisms for the sustainability of testing laboratories. There is willingness to bring about legal instruments to enable SCAs and research organizations to implement programmes on biosafety.
13. **Finding 4.4:** Indirect negative effects- absence of a regulatory framework on Biosafety (the Biosafety Act) is a significant barrier to upscaling research products, has raised the risk of fragmentation of outcomes between SCAs. The Act is not a product of this project, but it plays a significant part in achieving the expected outcomes and of the project objectives
14. **Finding 4.5:** Level of utilization of generated outputs and outcomes by final beneficiaries (institutional and individual) - Two of the upgraded laboratories are using the equipment and training received from the project for testing of samples submitted by industry for export purposes. The laboratory of the AgBC at University of Peradeniya expects to do so in the future. The guidelines on RA, RM and RC are yet to be utilized. There are no Institutional Biosafety committees (IBCs) yet. The National Institute of Education (NIE) expects to use the secondary school educational materials developed by the project to train teachers and for use at the secondary school student levels.
15. **Finding 5:** The ToC was developed during the MTR implementation of activities and several outputs had matured. Therefore, its impact on the overall project is reduced. The intermediate goal as set out in the ToC is only partially achieved. The Institutional capacity of SCAs remains weak with no operational regulatory framework.
16. **Finding 5.1:** Many changes necessitated due to COVID-19 pandemic in mode of delivery and operation showed resilience of and adaptive management by the PMU. The PMU also contracted institutions to execute work packages rather than hire individuals, thus increasing efficiency and reducing costs.

17. **Finding 5.2:** The risks and assumptions made in the project document could not have accounted for the major disruption that took place in the last two years of project implementation as it was due to COVID-19 pandemic related lockdowns, travel restrictions and subsequent developments in Sri Lanka. The major assumption that has affected project outcomes is the non-enactment of the Biosafety Act.

**Has project outcomes and key outputs been achieved per outcome area?** (This is addressed per outcome with sub questions and rating)

18. **Finding 6.1 (Achievement of Outcome 1):** The legal and institutional basis for implementation of the Biosafety Masterplan remains unaddressed. Thus implementation and coordination of biosafety legislation and regulations is not possible. The reason is that National Biosafety Act is not yet legal.

**Rating of this outcome is MODERATELY UNSATISFACTORY.**

19. **Finding 6.2 (Achievement of Outcome 2):** Administrative and operational procedures manual for applications related to LMOs in Sri Lanka are final. The staff of SCAs are aware of the need to include biosafety within their mandates. The Central Environmental Authority (CEA) of the Ministry of Environment has been identified as the new NCA in early 2021. Institutional strategies and programmes have not been developed and nor can SCAs develop programmes without the legal basis. There is no incentive to do so among SCAs, except to consider taking action on biosafety topics under their own mandates (in the absence of a national regulatory framework) in the future. The lack of capacity of the CEA and inadequate capacity of SCAs are factors that prevent functioning of administrative systems and application of operational procedures.

**Rating of this outcome is MODERATELY UNSATISFACTORY.**

20. **Finding 6.3 (Achievement of Outcome 3):** Sri Lanka BCH has been operational since March, 2021 (<http://lk.biosafetyclearinghouse.net/>). It is an enhanced, well designed and user friendly online platform. As insufficient time has elapsed since the BCH became functional, its maintenance and operational aspects cannot be evaluated. Therefore, assessing these and the level of satisfaction should be conducted at a later date.

**Rating of this outcome is MODERATELY SATISFACTORY.**

21. **Finding 6.4 (Achievement of Outcome 4):** Capacity development and technical knowledge transfer to individuals have taken place, but remains inadequate. There is

increased awareness of the need for biosafety considerations, not only imported organisms or materials, but also for in-country research products among a range of stakeholders. However, there is no evidence of use of guidelines within SCAs and institutionalized training on the use of the guidelines or risk analysis. More training on application of the guidelines was requested by all SCAs, especially as much of the training had been conducted in the virtual mode. Overall, the project has laid the foundation for the SCAs to function in biosafety related procedural requirements but they are currently unable to apply them as opportunities to do so are not present.

***Rating for this outcome is MODERATELY SATISFACTORY.***

22. **Finding 6.5 (Achievement of Outcome 5):** This is the most successful outcome of the project. Three laboratories have been upgraded (with equipment and consumables including chemicals) and training of technical staff including at Indian facilities has been carried out, a national referral laboratory has been identified. Senior scientists capable of steering the biosafety work programmes of the laboratories are in charge with senior administrators expressing willingness or have established mechanisms to ensure financial sustainability of Genetically Modified (GM) testing. Specialized technical staff designated and trained to carry out such testing are available. Two of the laboratories have applied for accreditation status to the Sri Lanka Accreditation Board for Conformity Assessment (SLAB). The recipient organisations acknowledge that these benefits are unlikely to have accrued, over the time frame of four years, in the absence of the project.

***Rating for this outcome is HIGHLY SATISFACTORY.***

23. **Finding 6.6 (Achievement of Outcome 6):** This outcome is connected to outcome 5. Laboratories have the infrastructure to detect GMOs/LMOs as a result of project activities and two are using this capacity to fulfil national needs despite the absence of the Biosafety Act. Meeting the obligations under the CPB which entails carrying out the entire gamut of steps from testing to controlled release and use is not possible yet as the SCAs and the upgraded laboratories do not have the required specialized infrastructure and other resources even for controlled laboratory testing.

***Rating for this outcome is SATISFACTORY.***

24. **Finding 6.7 (Achievement of Outcome 7):** Consistent feedback from almost every beneficiary category reported that their awareness of biotechnology developments, knowledge on LMOs/ GMOs and biosafety had been positively influenced by the project. The project developed a Communications Strategy aimed at creating more awareness among six categories of stakeholders including school-going, universities,

academia, policy makers, media and private sector/ non-government. All participants of awareness raising events had positive feedback of these sessions. The communications material developed have been used extensively in these knowledge and awareness programmes. However, public awareness is questionable as the levels of awareness are below what is expected with sources of information on which the public base their awareness being unsatisfactory for scientific and specialized topic such as biosafety. Postgraduate courses developed by the project need to be included into a large number of universities than at present.

***Rating for this outcome is MODERATELY SATISFACTORY.***

25. **Finding 7:** The key results of project implementation are - Upgrade of laboratories for detection and identification of LMOS/ GMOs; enhanced knowledge and awareness of the importance of biosafety even among biotechnology researchers, senior administrators, and some sections of field level staff of SCAs and reactivation of the BCH and the trained staff of the national focal point for its longer term maintenance. The materials developed by the project are most likely to be included in the school curriculum as there is an ongoing curriculum revision and the topics of biotechnology and biosafety are now sufficiently important for inclusion by the NIE.

***Overall rating for Effectiveness is MODERATELY SATISFACTORY.***

- **Efficiency**
26. **Finding 8.1:** The project has been delivered efficiently and cost-effectively according to the planned work programme, with very few deviations from the original budgets. The project has been able to secure high quality technical advisory services through institutional contracts and avoided the inefficiencies and administrative workload of recruiting a large number of individual consultants for specific work packages/ terms of reference.
27. **Finding 8.2:** Project managed core operations with a very tight PMU of four full-time personnel and one knowledge management consultant. However the lack of (at least part-time) monitoring and evaluation specialist impeded systematic tracking of both results and risks. Budget utilisation as of end August, 2022 is at 95% and has recorded satisfactory financial delivery at project closure.
28. **Finding 9:** The project has adapted well to the restrictions imposed by COVID-19 in 2020 and 2021 despite lockdowns/ travel restrictions which impeded many training programmes and awareness sessions and the resultant crisis situation in the last few months of project implementation. However, the project is found lacking in managing

certain existing and emerging risks satisfactorily to ensure the sustainability of project outcomes.

***Overall assessment of Efficiency is SATISFACTORY.***

• **Sustainability**

29. **Finding 10:** A number of risk factors threaten project achievements. These risks range from likely to highly likely, affecting the continued functioning of project outputs after phase out. The risks are given below in the categories provided in the evaluation guideline. Overall assessment is that the risks are quite severe at the time of evaluation and will have a detrimental impact on the continuation of output-level achievements.
30. Institutional/political risks (highly likely): The absence of an enacted Biosafety Act, regulations and associated legal framework has implications throughout the project, but especially for outputs under Components 1 and 2. The need to enhance the capacity and to elevate it to the expected level of functionality as the NCA has to be addressed.
31. Financial (likely): There is no committed financing from the GoSL for biosafety programmes and activities in the Ministry of Environment, the NCA and the SCAs. There is no financial commitment for the implementation of the Biosafety Masterplan. Risks for sustaining outcomes and application of outputs is likely. This is exacerbated in the current Sri Lankan climate of economic downturn even though it envisaged not to be so in the longer term.
32. Socio-economic (moderately likely): The current socio-economic situation in Sri Lanka prevents policy level officers of the Ministry of Environment, NCA and SCAs paying due attention to sustaining project outputs. While acknowledging that biosafety is an important discussion and will likely come into focus as biotechnology applications may provide solutions to the multiple crises at hand, many of the high-ranking officials of SCAs did not have concrete plans for the continuation of project outputs. The general public largely has a negative perception (if at all) of GMOs and LMOs. The perceptions of media, NGOs, environmental activists remain negative.
33. Environmental (highly unlikely): The environmental concerns are the major reasons for implementation of this project and all stakeholders agree on the need to protect Sri Lanka's natural environment, particularly due to its high levels of endemism. The evaluation team could not find any credible evidence of environmental risks associated with the continuation of the project's outputs.

34. **Findings 11 and 12:** At present, it is very unlikely that the designated NCA will be able to function effectively within the next two years. To carry out the procedural functions of biosafety including monitoring and inspection, this regulatory framework has to be established. The institutional ownership of Biosafety and the project is poor.

The project has trained the staff of the National Focal Point to upload and maintain the BCH. There is a reasonable expectation that they can carry do so. The upgraded laboratories should be able to conduct regular testing and detection work once the Biosafety Act is in force, or if requests for testing is made under another act of an SCA. The prospects for continued functioning of laboratories are high.

35. **Finding 13:** It is very likely that the project results will continue to be useful after project end if there is a regulatory framework for biosafety within the next two years. This is a prerequisite for all other functions (application of RA, RM, RC methodologies, use of guidelines, laboratory testing and identification, and further training within SCAs, awareness and education of non-specialist stakeholders) of the SCAs envisaged by the project. If the SCAs are able to function effectively, the levels of utilization of project outputs will be high.

- **Factors affecting on project performance/ Quality of Execution**

36. **Finding 14:** Project implementation and execution have been clinically satisfactory. The project has achieved many of its outputs, some of them have been achieved well over the targeted number and well before the target date. The project has received excellent technical support from the Lead Technical Officer (LTO) and guidance from the Funding Liaison Officer (FLO). PSCs have been convened and all major decisions approved. Project management was carried out highly efficiently.
37. The PSC is at the apex of its governance mechanism. The PSC was chaired by the Secretary, Ministry of Environment and convened meetings every year. Co-ordination of the project with the National Coordinating Committee for Biosafety (NCCB) in Sri Lanka, the national advisory body for biosafety in Sri Lanka should have been better.
38. Not having a dedicated Monitoring and Evaluation officer or obtaining such services from an expert on part-time contract has impacted systematic data collection on change brought on by the project and reporting on outcome level indicators.
39. The project had carried out all the MTR recommendations to varying degrees and reported this progress in the terminal Project Implementation Report (PIR). There needs to be more follow up actions by the FAO and Ministry of Environment on two critical recommendations; 1) on the assigning of CEA as the NCA and delivering sufficient capacity to the CEA to carry out its duties as NCA; and 2) on supporting



integration of existing Sri Lankan scientific expertise on biotechnology and biosafety to enhance sustainability of project outcomes.

40. Co-financing has been fully realized by the end-of-project. The Project Terminal Report and the final PIR records that the project has been able to raise more co-finance than initially committed. When formulated, the project document records the project committing USD 2.9 million in co-finance which was approximately 110% of the GEF grant and a little over 55% of the total project cost.

### **Stakeholder engagement**

41. A wide range of stakeholders have engaged in the project implementation. The large majority of these were beneficiaries of the project's outreach and awareness activities. Stakeholders were largely drawn from government institutes and universities. Many other stakeholders from private sector, media, and NGOs had participated mostly in single awareness sessions. However, many of them, who had not been exposed to biotechnology and biosafety previously, reported improved and enhanced awareness of both aspects post project exposure. The involvement of private sector and non-governmental organizations' involvement in the project is rudimentary. Therefore, NGOs and private sector involvement is only as a downstream beneficiary. Programmes to sustain engagement of stakeholders have been set out in the above section on Effectiveness and Sustainability.

### **Gender considerations**

42. The project did not have a gender strategy or action plan. The project's stakeholder information shows a good gender balance and in some government institutions and academic settings, a clear bias towards female participation with many female senior scientists. There is sufficient gender balance in the PSC composition as well. Project communications material is gender sensitive. The final project stakeholder lists show that 57% of participants of the training events, awareness sessions and meetings/workshops were female.

### **Knowledge management**

43. The TE finds that the project has significantly contributed to increased awareness among stakeholders as reported under outcomes 3 and 7 of the Effectiveness section. A more in-depth look at the outreach of the project and its contribution to overall knowledge on biotechnology and biosafety finds that the project has successfully packaged and disseminated technical information to a wide range of stakeholders. This was done through the communications and awareness creation work, by

influencing the national science curriculum for schools, by enabling access to knowledge material through the BCH, etc. There has been some criticism that the project 'promoted' biotechnology instead of focusing on biosafety. Some beneficiary feedback also indicated that they considered the project's awareness as 'too basic' and requested the project to have more follow up and higher-level awareness programmes.

### **Achievement of development objective, progress on implementation and overall risk**

44. Progress towards achieving the project's development objective: Moderately Satisfactory. Please see also GEF Rating Table in this summary.
45. Overall progress on implementation: Satisfactory<sup>1</sup>  
Overall Risk to Sustainability Rating: Moderately Unlikely. This is based on the TE findings on Sustainability (paragraphs 35 to 40 above).

### **Conclusions**

- **Relevance**

46. The project was found to be highly relevant to a narrow spectrum of agencies and institutions. These are agencies that are directly engaged with biotechnology in Sri Lanka, including those who maintain laboratory services and academic institutions who firmly agreed that the project's objective to strengthen the biosafety framework and capacities is important to 1) benefit from biotechnological research and development efforts of local and international scientists; and to 2) protect Sri Lanka's unique biodiversity and food security from threats emanating from GMO/ LMOs.
47. The degree of relevance has increased since project development and inception. Biotechnology developments and applications in the region, and in the global agriculture, medical and food technology fields are significant, and have triggered a wave of new scientific research in Sri Lanka as well. COVID-19 pandemic and solutions to it brought medical biotechnology much more to the public attention and limelight. Biotechnology is also seen as a viable solution to Sri Lanka's (and global) food crisis, and future ability to increase food production without opening new land.<sup>2</sup>
48. The project outcomes and objective remain relevant and unfulfilled due to under-achievement and 'difficult' outcome level indicators that were not well formulated or were unachievable in the project time period. Unfortunately, the project did not use

#### Footnotes

<sup>1</sup> Guidelines for GEF Agencies in Conducting TE for Full Sized Projects

<sup>2</sup> Interview with Director General of Agriculture in Peradeniya on August 03, 2022

the MTR (when the project ToC was constructed) to pare down some of these expectations and revise indicators and targets.

- **Effectiveness**

49. Overall, the project has increased awareness of the importance of biosafety to a wide range of stakeholders that is already referred to in the sections on Relevance, Effectiveness and Sustainability.
50. The laboratories upgraded by the project for testing and identification of GMOs/LMOs are the most effective outputs of the project. Without project intervention this enhanced status of the laboratories would not have been possible. They have the highest likelihood of being able to sustain their intended activities after project end.
51. The urgent need to have a regulatory framework on biosafety in Sri Lanka is agreed upon by almost every stakeholder. The Biosafety Act not being enacted by the end of the project is the most serious issue that restricts effectiveness of project outcomes. While the Biosafety Act is not a product of the project, its enactment is a critical assumption for achievement of project effectiveness
52. The national institutional procedures and guidelines prepared by the project are not being followed by the NCA or SCAs for the lack of legal framework. None of the guidelines, risk analyses, manuals, etc. can be applied without a legal framework on biosafety. Existing low levels of collaboration within SCAs resulted in absence or very low levels of transmission of the benefits of training to other relevant officers. Poor coordination between SCAs is a barrier to sustaining project outcomes even if the Biosafety Act enters into force. This situation is not within the control of the project, but it has affected project effectiveness and outcomes and will continue unless addressed. The lack of interagency and coordination between ministries has contributed to the government's initiatives on promotion of biotechnology research and development progressing without acknowledgement of the project.
53. Absence of a central Biosafety Act is likely to lead to fragmentation of the outcomes into the SCAs own mandates. For example, the acts and regulations governing each SCA may be amended to address biosafety and GMO/LMO topics. The Ministry of Health is one of the key SCAs of biosafety. However, their engagement with the project is less than satisfactory. Within the Ministry, the engagement with the project is not meeting expectations yet. Communications about the benefits of the training need improvement and a strengthened commitment to implement the Food Safety Act.

54. Absence of a central, national level legal framework is likely to lead to fragmentation of the outcomes into the SCAs own mandates. For example, the acts and regulations governing each SCA may be amended to address biosafety and GMO/LMO topics. The Ministry of Health is one of the key SCAs of biosafety. However, their engagement with the project is less than satisfactory. Within the Ministry, there is a lack of transmission of the benefits of training (this was observed in other SCAs as well) and their engagement with the project is not yet meeting expectations. Communications about the benefits of the training need improvement and a strengthened commitment to implement the Food Safety Act.
  55. The CEA being identified as the NCA in 2021 is a serious cause for concern as has already been stated. The NCA and SCA's institutional readiness is insufficient to carry out the recommended processes for RM.
  56. Measuring effectiveness is hampered by the absence of a baseline for outcomes as well as the lack of specialized monitoring and evaluation. Effectiveness of capacity building efforts, especially, cannot be measured post-facto without an idea of the baseline situation in each project. The evaluation team did not find credible evidence to support facets such as improved service delivery by the SCAs and laboratories (apart from those to export industry as a separate service), increased funding committed towards biosafety-related activities, etc.
- **Efficiency**
57. The project was managed efficiently by a small PMU team supported by a knowledge management team. At project design, around 26 different technical consultancies were envisaged to deliver the four components. One exemplary management strategy of the project was to 'bundle' these technical consultancies into a few institutional contracts.
  58. COVID-19 related challenges were successfully managed by the PMU and PSC- diverting the project's training and awareness components to online platforms and supporting the national agencies to participate through zoom and other interactive learning tools- which actually enhanced cost-effectiveness by enabling wider participation.
  59. The PMU did not have dedicated monitoring and evaluation capacity, even after the MTR in 2020 the PMU did not engage a Monitoring and Evaluation Specialist to support the terminal PIR and terminal report. As such, the evaluation team finds that the project did not track the indicators included in the project results framework.

60. Co-financing has been fully realized by the end-of-project. The Project Terminal Report and the final PIR records that the project has been able to raise more co-finance than initially committed.

- **Sustainability**

61. Project's sustainability is critically hampered by the lack of a legal framework. All outputs of Components 1 and 2 rest on the assumption that the Biosafety Act will be enacted during the project period and provide the legal backbone for the institutional, procedural and systemic capacities that the project sought to improve. Without the Biosafety Act in place, critical outputs such as the Biosafety Masterplan, Institutional guidelines, RA guidelines and RM/RC methodologies run the risk of not being applied as expected after the project ends.

62. There are significant financial risks after project closure. Only the three laboratories have assured funding and continuity plans post project. There is no assured funding for the Biosafety Masterplan, there are no dedicated funding lines within the NCA or the SCAs for continuity of biosafety related work, even for continuous training of their staff.

63. The project's approach to training is not sustainable. The project should have focused on building a cadre of informed trainers within each SCA and created a pool of national-level trainers to carry on project's capacity building work. Instead, the project has delivered mainly one-off training programmes, that too mostly on online platforms.

64. The risk of social acceptance continues as perceptions and attitudes towards GM technology remain negative, even among key officials of the SCAs, despite the public and targeted awareness campaigns of the project. The risks of introducing GM food, crops or other material are perceived as outweighing potential benefits. The CEA, the designated NCA, is extremely cautious on GMOs and will adopt a precautionary approach to the RA and RM process (as opposed to an approach that will objectively facilitate new biotechnology applications).

65. The role of the PSC in managing the risks of project sustainability (financial, legal-institutional) is seen as inadequate by the evaluation team. The PSC nominated the CEA as the NCA and ensured that there is approval of the Cabinet of Ministers for this nomination. However, the PSC did not address other critical issues that undermine the NCA's capacity to perform the tasks.

## **Recommendations**

66. **Recommendation 1 (To Government Implementing Partner):** Ensure that the Biosafety Act is made legal as urgently as possible. The wide-ranging impacts of the Act not being legal are well documented in this report. Even though the project did not develop the Biosafety Act, the sustainability of a majority of project investments depends on its enactment and implementation
67. **Recommendation 2 (To FAO):** The FAO to consider convening a strategic level forum by the end of 2022 with participation of a diverse range of stakeholders involved in this initiative, and those with limited involvement to date but who should be more closely engaged in the future. This is to discuss the findings of this evaluation and implications at the national scale, in particular, what key steps and commitments should be taken collectively to build on current achievements and address the identified fundamental barriers towards meeting bio-safety goals. This would help to avoid what appears to be an important risk, fragmentation of outcomes into different sectors and that will undermine the aim of this project to establish a national level mechanism to meet the obligations on the CPB.
68. **Recommendation 3 (To FAO and Government Implementing Partner):** The NCCB should be strengthened to become proactive in resolving critical project issues (such as capacitating the NCA, ensuring the masterplan is funded and that SCA's have the requisite internal processes and capacities to implement the RM guidelines) and ensuring sustainability of project outputs such as BCH and knowledge and training material produced. The PSC and PTF should have both paid much more attention to the sustainability aspects of the project during the post MTR period, supporting the PMU not just to complete outputs but to ensure demonstrate outcome level results and continuity of those outputs.
69. **Recommendation 4 (To Project Developers and FAO):** Given the absence of dedicated monitoring and evaluation capacity embedded in the PMU or accounted for in the technical consultancies this has seriously impeded the project's ability to create necessary baselines and collect relevant data to report back on indicators. FAO should ensure in future projects that sufficient monitoring and evaluation capacity is allocated to suit project need and complexities, and in place at an early stage to allow timely development of monitoring and evaluation plans and systems, baselines and other essential provisions. Strong baselines are required to measure change in capacity development projects. Therefore, project development or inception stage must carry out objective capacity assessment for all institutional and individual capacities that the project seeks to transform.

70. **Recommendation 5 (To Government Implementing Partner):** The willingness and capacity of the CEA as the NCA should be examined closely and in the event of the CEA being unable to fulfil its intended role, alternatives need to be put in place. The Ministry of Environment should have a plan B if the CEA's role as NCA is not fulfilled even when the Biosafety Act is finally enacted.
71. **Recommendation 6 (To FAO and Government Implementing Partner):** Further training is needed to bring the SCAs to the required level of competence to handle biosafety and GMO/LMO topics in their own mandates. Continued capacity building is required across all SCAs, with preferably agreements within SCAs on retaining trained staff. The absence of intra agency transmission of knowledge and skills obtained through the project is a serious issue that needs to be addressed in future projects. This is somewhat beyond the control of a project (reasons have been identified before) but ought to be identified clearly and strategies adopted to reduce its impacts as much as possible in donor funded projects.
72. **Recommendation 7 (To FAO and Government Implementing Partner):** Sustained awareness programmes are needed. The Ministry of Environment needs to formulate plans to a) continuously maintain the BCH and update its information, b) use the high-quality awareness and training material produced by the project and c) secure financing from the regular ministry budgetary provisions for the continuity of biosafety related awareness. In particular, an updated status assessment of the levels of public awareness and continued high impact campaigns to improve public engagement is recommended.
73. **Recommendation 8 (To Project Developers, FAO and Government Implementing Partner):** Engage private sector and other stakeholders such as NGOs, media, etc. as much as possible, avoiding the pitfalls of conflicts of interest that may ensue. Many of the awareness programmes were one-off and this is obviously not adequate for a very technical subject area like biosafety and biotechnology, which is also evolving very rapidly.
74. **Recommendation 9 (To Project Developers, FAO and Government Implementing Partner):** During project preparation phase, when carrying out the context analysis, and baseline situation, a more thorough review of the biotechnology related developments should be carried out. Building linkages with this project's outcomes and outputs with ongoing biotechnology research and promotion programmes of the government and private sector may have ensured greater level of sustainability to the outputs of the project. This will also increase the pool of well qualified and competent in-country scientists who can contribute much to the specialized subject area of biosafety and biotechnology but are currently operating outside of the project ambit.

75. **Recommendation 10 (To Project Developers, FAO and Government Implementing Partner):** It is recommended that a new phase of the project is developed to support continued capacity development of the key government agencies, NCA and SCAs. This is essential for the sustainable and effective use of the current project's technical outputs, (Biosafety Masterplan, Draft Administrative Guidelines, RA Methodology, etc.) which are of high quality but would not be sustained beyond project period unless supported externally. A another phase would enable the project to overcome the critical gaps mentioned in this report and ensure that the products and processes of the first project are seamlessly integrated into a new project that will enable Sri Lanka to fully meet the requirements of the CPB while reaping benefits of modern biotechnology.
76. **Recommendation 11 (To the Government Implementing Partner):** It is recommended that periodic programmes or activities that are required as part of obligations to the CPB be carried out even in the absence of a regulatory framework. These types of activities are best if they engage the SCAs, the upgraded laboratories, connect with awareness raising campaigns so that a continuous engagement of major stakeholders is established.
77. **Recommendation 12 (To the FAO and Government Implementing Partner):** It is recommended to develop activities to investigate environmental risks from GMOs/LMOs on a scenario or case analysis basis, especially given Sri Lanka's biodiversity rich status.



## Annexure 1 - GEF Evaluation Criteria Rating Table

GEF criteria/sub-criteria	Rating <sup>3</sup>	Summary comments <sup>4</sup>	SOURCE
<b>A. STRATEGIC RELEVANCE</b>			
A1. Overall strategic relevance	S	Overall strategic relevance of this project is high. Sri Lanka is country that has benefitted from and used modern biotechnology from the 1970s. Biotechnology is even more relevant today in the context of increasing agricultural productivity and ensuring nutrition in a country that has a high population density. However, there is a discrepancy between the official ‘closed doors’ policy for allowing genetically modified organisms and their products into the country, and the advanced biotechnology research that is being supported by the universities, research and development arms of the government and private sector biotechnology firms. The project was aimed to support the country benefit from modern biotechnology related developments while ensuring the safety and security of the environment and human health.	Project Document, PIRs, terminal report, Evaluation Interviews and Questionnaires, FGDs
A1.1. Alignment with GEF and FAO strategic priorities	S	The project was designed to deliver the necessary capacities and tools to strengthen the implementation of the Cartagena Protocol, facilitate technology transfer between global, regional countries biotechnology and biosafety and enhance capacity of national institutions to implement the Biosafety Framework in line with the Convention on	Project Document, PIRs, terminal report, Evaluation Interviews and Questionnaires, FGDs

### Footnotes

<sup>3</sup> See rating scheme at the end of the document.

<sup>4</sup> Include reference to the relevant sections in the report.

		Biological Diversity. The project is consistent with GEF policies, UNSDF in Sri Lanka and the FAO's country priorities.	
A1.2. Relevance to national, regional and global priorities and beneficiary needs	S	The project is aligned to national policies that encourage agricultural and livestock productivity, human health and nutrition, promotes science and technology research and development in the country, promotes industrial application of science and technology and protects against threats to natural biodiversity and human health. The project responds to the Biosafety Policy and NBF developed in 2005 in response to ratification of the Cartagena Protocol for Biosafety. The project is aligned with Sustainable Development Goals (SDGs) on agriculture and food security (Goal2), water (Goal 6), climate resilience (Goal 13) and biodiversity (Goal 15). The project is aligned to the Nationally Determined Contributions to the Paris Agreement and Sri Lanka's (draft) national policy and strategy on sustainable development <sup>5</sup>	Project Document, PIRs, terminal report, Evaluation Interviews and Questionnaires, FGDs
A1.3. Complementarity with existing interventions	MS	At present there are no other projects on biosafety. Existing research programmes have got some degree of exposure on biosafety needs due to this project. However, this has not been translated into implementation of expected outputs in research areas, such as functional institutional biosafety committees. The project has not effectively made better implementation of the biosafety component of the Ministry of Health Food Act.	Project Document, PIRs, terminal report, Evaluation Interviews and Questionnaires, FGDs

Footnotes

<sup>5</sup> <https://www.switch-asia.eu/resource/sri-lanka-national-policy-and-strategy-on-sustainable-development/>

<b>B. EFFECTIVENESS</b>			
B1. Overall assessment of project results	MS	Outputs have largely been achieved to an impressive degree. With the exception of outcomes under Component 1, other outcomes have been achieved to varying degrees with outcome 4 (Component 3) rated highly satisfactory. The comparison of the results framework in the project document (2016) with the reported results in the Terminal Report of the Project (June 2022) supported by the findings of the Evaluation Team confirms these findings.	Document review (PIR 2019, 2020, 2021, 2022), Minutes of Steering Committees, interviews with project manager and PMU, SCAs, interviews with scientists, individual beneficiaries, observations of upgraded laboratories, The Terminal report of the Project (June 2022) and the Project Document (2016)
B1.1 Delivery of project outputs	HS	All outputs achieved, some even overachieved.	Document review (PIR 2019, 2020, 2021, 2022), Minutes of Steering Committees, interviews with project manager and PMU, SCAs, interviews with officials of the NSF, observations of upgraded laboratories, the terminal report of the project (June 2022)
1.2 Progress towards outcomes <sup>6</sup> and project objectives			
- Outcome 1	MU	The Biosafety Act being legal has not been achieved at the time of project closure. The regulations to the Act have been developed but they cannot be implemented in the absence of a regulatory system. There were no samples submitted for testing and there is no incentive	Terminal report of the project, review of PIRs, PPRs, onsite meetings with PMU, NPD and other officials of the national focal point and SCAs (mid to senior level

Footnotes \_\_\_\_\_

<sup>6</sup> Assessment and ratings by individual outcomes may be undertaken if there is added value.

		to submit samples due to the absence of the aforementioned reason. The absence of a functional regulatory system has negatively affected attainment of many project outcomes.	administrators and scientists), interviews with researchers in universities, onsite meeting with legal officers (Office of the Legal Draftsman)
- Outcome 2	MU	The draft manual on administrative and operational procedure for applications related to LMOs; one risk analysis framework, guidelines for RA, RM and RC developed with training of stakeholders. However, no implementation is possible without the legal Biosafety Act. There is no evidence of institutional programmes for biosafety as envisaged by the project. The SCAs also require more training as well as infrastructure to conduct controlled laboratory and field testing of LMOs/GMOs.	Terminal report of the project, review of PIRs, PPRs, onsite meetings with PMU, NPD and other officials of the national focal point and SCAs, individual beneficiaries
- Outcome 3	MS	BCH is operational since March 2021. More than 500 users have accessed the BCH up to time of terminal evaluation. No survey of the levels of satisfaction available. Staff of the national focal point have been trained to upload information and maintain the website. It is too early to assess the impact of the BCH on the stakeholders and on the general public	BCH website, meetings and questionnaires from SCAs, PMU, national focal point staff
- Outcome 4	MS	Trained individual cannot implement the RA, RM and RC and cite the absence of samples submitted for testing. There is no legal requirement to do submit samples in the absence of an enforceable Biosafety Act. Training does not seem to have achieved the expected level of effectiveness within SCAs. Retention of trained staff is also an issue. No evidence of within institution training programmes. All SCAs request further training on RA, RM and RC.	Interviews with senior and technical staff of SCAs, individual beneficiaries

Outcome 5	HS	<p>The most successful outcome is within Component 3 of the project. The laboratory of the ITI is already operational with sample testing for export industries, the laboratory of the NPQS and that of the Agriculture Biotechnology Centre expecting to do so in the near future. The staff of upgraded laboratories are capable to take their training forward. Mechanisms for financial sustainability of testing laboratories are in place at the ITI, being put in place at the other two institutions. Knowledge and skills for establishment of procedures for accreditation of laboratories for LMO/GMO testing have been introduced to the SLAB with their staff trained at facilities overseas. A national referral laboratory has been identified with steps being taken to ensure transparency and efficiency of testing mechanisms.</p>	<p>inspections of laboratories, meetings with senior scientists of SCAs, technical staff and administrators of the upgraded laboratories, senior administrators of the respective institutions, SLAB officials</p>
Outcome 6	MS	<p>The evidence for this outcome overlaps with those for outcome 5. As noted above the upgraded laboratories are either operational or expect to do so even in the absence of the functional Biosafety Act. Even if the Biosafety Act is enforceable SCAs do not possess the specialized infrastructure to carry out controlled laboratory and field testing. The TE team notes that this outcome is an overdesign of the project- too ambitious for Sri Lanka to have the ability for contained laboratory and field testing capabilities by project end</p>	<p>Onsite inspections of laboratories, meetings with senior scientists of SCAs, senior administrators of SCAs, research scientists in universities</p>
Outcome 7	MS	<p>Awareness of the importance of biosafety has increased among SCA senior to field level staff and even among some scientists who carry out research in biotechnology. Outputs have been achieved with high quality communication and education material available. However. There is no public participation and nor is there participation of Sri Lankan industry in biotechnology. There is no evidence of annual budget for programmes for continuous awareness raising within SCAs.</p>	<p>Interviews with senior and technical staff of SCAs, individual beneficiaries, interviews with media personnel and representatives from industry</p>

Overall rating of progress towards achieving objectives/ outcomes	MS	The Project objective is not attained, nor is the intermediate goal as stated in the ToC attained despite impressive attainment of outputs. This rating is a combined result of the ratings for outcomes.	Evidence provided for outcomes 1 to 7 above.
B1.3 Likelihood of impact	MS	The project has increased in relevance by the time of project end in comparison to its inception time. The importance of biosafety is set to increase not only to meet compliance with global requirements under the CPB but also due to the rise of the biotechnology research sector within Sri Lanka. The absence of a functional Biosafety Act undermines many of the expected impacts and reduced the effectiveness of this project but with the caveat that if the Biosafety Act becomes enforceable, that impacts will be much greater.	Sources of evidence listed under Effectiveness
<b>C. EFFICIENCY</b>			
C1. Efficiency <sup>7</sup>	S	The project has been delivered efficiently and cost-effectively according to the planned work programme, with very few deviations from the original budgets. The project has been able to secure high quality technical advisory services through institutional contracts and avoided the inefficiencies and administrative workload of recruiting a large number of individual consultants for specific work packages/ terms of reference. The project managed core operations with a very tight project management unit (PMU) of four full-time personnel and one knowledge management consultant. However the lack of a full time monitoring and evaluation specialist impeded systematic tracking of both results and risks. Budget utilisation as of end August 2022 is at	Interviews with PMU, FAO and Government Focal Point. Review of project budget disbursement, Project Document and PIRs, Terminal report

Footnotes

<sup>7</sup> Includes cost efficiency and timeliness.

		95%. The project faced some budgetary challenges due to the sharp fluctuations in exchange rate in March and April 2022 in Sri Lanka. However, they have adaptively managed this situation to record satisfactory financial delivery at project closure.	
<b>D. SUSTAINABILITY OF PROJECT OUTCOMES</b>			
D1. Overall likelihood of risks to sustainability	MU	In the absence of another phase of this project the outcomes and utilization of outputs will decay rapidly over the short to medium term. Fragmentation of outcomes into institutional mandates is likely. As the outcomes on enactment of the Biosafety Act and implementation of the BS Master Plan are not achieved at project end, there is a significant risk to sustainability	Interviews with senior staff of SCAs including researchers and senior administrative officers, individual beneficiaries, researchers from universities, PMU
D1.1. Financial risks	Unlikely	There is no committed financing from the Government of Sri Lanka for biosafety programmes and activities in the Ministry of Environment, the NCA and the SCAs. There is no financial commitment for the implementation of the Biosafety Master Plan. Committed financing or plans to ensure financial sustainability of the outputs produced by the project are only found in the upgraded laboratories and at the Agriculture Biotechnology Centre, University of Peradeniya. The current economic crisis in the country has exacerbated the negative impacts on financial sustainability.	Interviews with senior staff of SCAs, scientists, national focal point, researchers from universities
D1.2. Socio-political risks	Moderately Likely	The general public largely has a negative perception (if at all) of GMOs and LMOs. The perceptions of the media, NGOs, environmental activists remain negative and have not been influenced by the project. However, it is possible to overcome social perceptions against LMOs/GMOs particularly for those in the areas of health, food and other major economic activities.	Media reports, needs assessment of awareness and education prior to development of the communication strategy; meetings with SCAs

D1.3. Institutional and governance risks	Unlikely	At project end, the unfavourable perception of the CEA of their NCA role; the absence of a legal framework and absence of institutional programmes and ownership are significant risk factors	Meeting with CEA, PMU, national focal point, SCAs
D1.4. Environmental risks	Likely	There do not appear to be significant environmental risks at the time of TE. All stakeholders agree on the need to protect Sri Lanka's biodiversity. However, in a scenario where LMOs/GMOs are to be released, if public perceptions remain unfavourable or are not adequately addressed, there can be significant environmental risks	Meetings with SCAs, individual beneficiaries, scientists from universities
D2. Catalysis and replication		Unable to assess	
<b>E. FACTORS AFFECTING PERFORMANCE</b>			
E1. Project design and readiness <sup>8</sup>	MU	The project was designed to deliver the necessary capacities and tools to strengthen the implementation of the National Biosafety Framework and support the enactment of the Biosafety Act, which was in an advanced draft stage at the time of project design. The outcomes and outputs of the project were designed to achieve the objective which was to strengthen Sri Lanka's regulatory, institutional and technical capacities to implement the national biosafety framework. The outcomes and outputs were designed to address the key barriers identified during project design and were validated during the MTR. However, many of the assumptions made during the design stage proved unviable during implementation (see Table 3). These include critical assumptions such as the time taken for the legal passage of the	Project Document, PIRs, Mid Term review report, terminal report, Evaluation Interviews and Questionnaires, Focus Group Discussions, meetings with PMU and FAO CO, LTO, FLO

Footnotes \_\_\_\_\_

<sup>8</sup> This refers to factors affecting the project's ability to start as expected, such as the presence of sufficient capacity among executing partners at project launch.



		Biosafety Act and the institutional nature of national and sectoral competent authorities.	
E2. Quality of project implementation	S	<p>1. Project implementation and execution has been clinically satisfactory. The project has achieved many of its outputs, some of them have been achieved well over the targeted number and well before the target date. The project has received excellent technical support from the LTO and guidance from the FLO. Project Steering Committees have been convened and all major decisions approved. The Evaluation Team also noted that the Project Steering Committee also had participants who were project beneficiaries. The ET points out that this practice contravenes the firewall that should exist between project implementation and oversight. The TE team acknowledges however, that given the very limited resource pool available in country for biotechnology and biosafety, such overlaps may have been difficult to avoid.</p> <p>2. Not having a dedicated M&amp;E officer or obtaining such services from an expert on part-time contract has impacted systematic data collection on change brought on by the project and reporting on outcome level indicators.</p>	Project Document, PIRs, Mid Term review report, terminal report, Evaluation Interviews and Questionnaires, Focus Group Discussions, meetings with PMU and FAO CO, LTO, FLO

# 1. Introduction

## 1.1 Purpose of the Evaluation

1. This is the report of the terminal evaluation (TE) of the project, **'The Implementation of the National Biosafety Framework (NBF) in accordance with the Cartagena Protocol on Biosafety (CPB)'** which was funded by the Global Environmental Facility (GEF) and implemented by the Food and Agriculture Organization of the United Nations (FAO) and executed in collaboration with the Government of Sri Lanka (GoSL). This evaluation covered the period from July 01, 2016, to June 31, 2022, with particular focus period since the Mid-Term Review (MTR), i.e. November 2020 onwards. The TE aimed to assess the relevance, effectiveness, efficiency, project performance, project execution, operation, and formulate recommendations to improve the future delivery, impact and likelihood of sustainability of project results. It was based on evidence and findings from a range of information types and subsequent analyses. This TE is a requisite of both the GEF and FAO. It serves the project monitoring and reporting purposes and supports accountability and learning purposes of GEF, FAO and other participating institutions.
2. The TE team considers the Project to encompass the FAO, the Project Management Unit (PMU) and the Ministry of Environment, the key stakeholder and the National Focal Point for the CPB. The findings and recommendations and conclusions are based on this wider view of the project.
3. The findings and recommendations of the MTR were important in verifying the final achievements of the project during the TE. The TE was intended to collect knowledge products and, whenever possible, assess their relevance, quality and outreach in advancing the project objectives. The TE recorded supportive examples to guide future actions for potential scaling-up/out, replication or follow-on projects that may use similar approaches and / or have similar target beneficiaries, tools and project design elements. The report makes recommendations to make the most of the institutionalization and appropriation of the project's results by stakeholders and disseminate information to authorities that could benefit from them.
4. The TE team began working in May, 2022 by which time, the working environment in Sri Lanka had taken a turn for the worst due to shortages of fuel and other essentials. The fuel shortage has forced the government to request only 'essential' staff to report to work on a roster basis and others to adopt remote working arrangements. The contract period of the evaluators was extended up to end August, 2022 to meet the changed situation in Sri Lanka and to enable carrying out a comprehensive TE.

5. Given Sri Lanka's current economic crisis at the time of writing, and the hampered functioning of government, the TE team first focussed on meetings that could be conducted on-line. Visits to the laboratories and Focal Group Discussions (FDGs) were conducted from around mid-July to early August. The TE team produced an inception report by end June that was reviewed by FAO. The draft of the TE was submitted in end August 2022.
6. The intended primary users of the TE report are expected to be the PMU, FAO Country Office (CO), the Project Steering Committee (PSC), the Project Task Force (PTF), National Competent Authority (NCA) and Sectoral Competent Authorities (SCAs), FAO-GEF Coordinating Unit, beneficiaries and other national counterparts in Sri Lanka, and the wider FAO. The secondary users might be various relevant ministries in the government, research institutions, academic institutions, local Non-Governmental Organisations (NGOs), local communities, FAO Regional Office for Asia and the Pacific, and the private sector involved in the project implementation.

## **1.2 Evaluation Objectives and Questions**

7. The evaluation aimed to:
  - Analyse the extent and magnitude of project outcomes to date, and to determine the likelihood of future impacts
  - Provide an assessment of the project performance and the implementation of planned activities and outputs against actual results
  - Synthesize lessons learned that may help in the design and implementation of future FAO and FAO-GEF related initiatives. This would include indicating future actions needed to (i) bring about sustainability of outcomes and related activities (ii) mainstream and up-scale its outputs and (iii) to disseminate information to policy and programme level authorities including the SCAs responsible for implementation and continuity of the processes initiated by the project.
8. The TE report provides recommendations for stakeholders to inform potential future investments in this area. This would include future FAO and FAO-GEF related initiatives, highlighting where future actions would be needed to (i) fund subsequent phases of the project, (ii) mainstream and up-scale the project's outputs, and (iii) to disseminate information to authorities responsible for related issues to ensure replication and continuity of the activities initiated by the project.

9. The GEF TE guidelines<sup>9</sup> indicate that the TE should assess at a minimum, and provide a rating, for the following areas<sup>10</sup>: 1) Relevance; 2) Effectiveness; 3) Efficiency; 4) Sustainability; 5) Factors affecting performance (Monitoring and Evaluation and Stakeholder engagement), and 6) Environmental and social safeguards<sup>11</sup>;
10. Additionally, the TE assessed (no rating required): 7) Gender; 8) Co-financing; 9) Progress to impact; 10) knowledge management; and 11) Capacity development<sup>12</sup>. In particular, the capacity development assessment referred to the FAO OED Capacity Development Evaluation Framework.
11. An evaluation matrix that followed the GEF TE Guidelines was designed as part of the Inception Report. It is given in Appendix 2 of this report. Three types of questionnaires (based on the Evaluation Matrix) were developed by the TE team and administered to three main categories of stakeholders -1) individuals involved in project management and implementation, which included staff of the PMU and relevant FAO staff 2) institutional partners, including NCAs, SCAs and PSC members, and 3) individual beneficiaries/ trainees. The key questions of the TE in brief are presented below:
12. Relevance: Does the project design - outputs and activities - support the attainment of the project objective? Are project objectives relevant to national policies and stakeholder aspirations? Is the project objective congruent with the GEF focal areas/operational program strategies, country/government priorities and FAO Sri Lanka Country Programming Framework?
13. Effectiveness: To what extent have the project objectives been achieved, and how effective was the project in achieving those? How effectively was the project able to follow the Theory of Change (ToC) proposed at MTR? Have project outcomes and key outputs been achieved -per outcome area (see specific questions below from Terms of Reference (ToR)) what are the key results of the project implementation?
14. Efficiency: Was the project delivered in an efficient and cost-effective manner? To what extent has the management been able to adapt to changing conditions to improve the efficiency of project implementation?
15. Sustainability: How effectively has the project addressed the major risks and factors that influenced the achievement of project results (financial, socio-economic,

Footnotes

<sup>9</sup> <https://www.gefio.org/sites/default/files/ieo/evaluations/files/gef-guidelines-te-fsp-2017.pdf>

<sup>10</sup> Definitions are from the GEF Evaluation Policy (2019)

<sup>11</sup> A risk rating should be provided, consisting on the information on the identified environmental and social risks and potential impacts associated with the project/program, based on the initial ESS screening

<sup>12</sup> GEF Rating Scheme.

institutional-political and environmental risks to sustainability)? To what extent has the government (or other actors if appropriate) committed financial, human resources, etc. to sustain project investments beyond the project timeframe? What is the assessment of capacity in the NCA and SCAs to function in the post-project period? What is the likelihood that the project results will continue to be useful or will remain even after the end of the project?

16. **Factors Affecting Performance:** To what extent was the project implementation and execution tasks been effectively carried out? What is the extent of stakeholder engagement, involvement in project design and implementation? What was the extent of private sector and non-government stakeholder engagement in project implementation? Did the committed co-finance materialise and in a timely manner? To what extent have the environmental and social safeguards been addressed?
17. **Gender and Cross Cutting Issues:** What are the main gender results of the project compared to original design objectives? How has the project contributed to improved and increased awareness and access to scientific information on biosafety to the public?

### **1.3 Evaluation Approach and Methodology**

18. The evaluation adhered to the GEF Evaluation requirements, and is aligned with OED Manual, procedures and methodological guidelines. The methodology was also based on the ToR but was adapted to overcome the challenging work environment in Sri Lanka that prevailed during the TE. Discussions held during the inception phase, with the FAO CO, RAP Evaluation Manager, Project Manager, National Project Director, etc. were helpful to the methodology.
19. Information was obtained to verify the Evaluation Matrix, pertaining to:
  - Objectives and intended/unintended outcomes of the project and its activities;
  - Strengths and/or challenges related to design and implementation of the project given the specific context;
  - Factors that facilitated or hindered the outcomes;
  - Actual and potential limitations in carrying out the evaluation (time available, lack of documentation, baseline and/or monitoring system) and;
  - Significance of outcomes *vis-à-vis* the achievement of national and FAO Country Programme Framework objectives

## **1.4 Methodological Steps**

### **20. Questionnaire Surveys**

Questionnaires or surveys, applied face-to-face or online according to the profile of respondents and the topics to be assessed, were administered. The questionnaires were administered through both one-on-one interviews as well as Focus Group Discussions (FGDs) where it was possible to gather a number of informants in one location, or online. As most of the field staff of SCAs were more comfortable working in the Sinhala Language, the beneficiary questionnaire was translated into Sinhala before being administered. The TE team did not encounter any Tamil speakers who could not answer questions in English. Sample questionnaires are attached in Appendix 6.

### **21. Semi-structured interviews (SSIs)**

SSIs with key stakeholders and other informants were used to collect primary data for the inception report. SSIs, especially with heads of partner institutions, recipients of services from these institutions, and co-financing partners, were used as complements to refine interview protocols developed for the TE at the start of the evaluation and helped validate evidence gathered through the Key Person Interviews (KPIs) and FDGs supported by checklists and/or interview protocols to be developed by the TE.

### **22. Use of the capacity assessment approach**

The project included outcomes to build skills and capacity amongst target audiences. Therefore, in this evaluation, some elements of a Capacity Assessment Tool was used. This applied in particular to beneficiaries of the training and capacity building activities (see the Capacity Development Assessment Approach in Appendix 2) but was also useful for stimulating discussions with other stakeholders.

### **23. Field visits to technically assess and analyse project implementation and results**

Purposeful sampling strategies were applied to identify the stakeholders and laboratories and institutions to be visited to answer the evaluation questions. The project supported the upgrading of three laboratories (Agriculture Biotechnology Centre (AgBC) of the University of Peradeniya, Industrial Technology Institute (ITI) and National Plant Quarantine Service (NPQS)) and additionally provided equipment to the Department of Customs and Government Analysts Department. All three upgraded laboratories were visited and discussions held with the staff with a view to ascertaining the capacities to provide the intended services. The evidence gathered was triangulated with information received through other sources, through the KPIs, FDGs and SSIs.

### **24. Questionnaire responses were also obtained from individual beneficiaries (28) and by online and onsite interviews conducted mostly as FDGs to a total of 125 respondents.**

These included officials of the Ministry of Environment, staff of FAO, SCAs and NCAs, heads of the three laboratories being upgraded and institutions that host them, Legal Draftsman's Office, officers of Sri Lanka Customs, the Rice Research and Development Institute (RRDI) (of the Department of Agriculture), beneficiaries of training and awareness including agricultural extension officers of the Central Province and Seed Certification Officers of the Department of Agriculture, Food and Drug Inspection officers of the Ministry of Health and officers from Sri Lanka Customs.

The consultants who had worked on the project (except from the Biotechnology Consortium India Ltd (BCIL), members of the PSC, officials of the Sri Lanka Accreditation Board for Conformity Assessment (SLAB), a few officers of the SCAs were interviewed online. Details of the stakeholders interviewed and the type of interview are provided in Appendix 1.

25. The quality of the knowledge products and communication and information dissemination materials that were developed under the aegis of the product was assessed, including their accuracy with regard to the transference of concepts to accessible language according to the target public audience. Quantitative results/ achievements against targets were assessed based on the comprehensive documentation of the project (implementation reports, co-management plans, and other outputs/ publications. The TE team reviewed the baseline and midterm GEF focal area Core Indicators submitted to the GEF and midterm and the terminal Core Indicators.

26. Data analysis

The survey data were collated and analysed, FGD responses recorded and triangulated with information obtained from KPIs and field visit observations. These were used to determine the ratings and conclusions for the key areas in the evaluation matrix- Relevance, Effectiveness, Efficiency, Sustainability, Factors Affecting Implementation, Gender, Social Safeguards and Progress to Impact. Areas where feedbacks differed amongst stakeholder groups are highlighted in this report. Also, recommendations for FAO, the national government, project developers, etc.; the lessons learnt from the project implementation and any observed gaps are provided. A debriefing session was held on 16th August 2022 to share preliminary findings and conclusions with the PMU, FAO Sri Lanka Office and GEF FLO and other key stakeholders.

**1.5 Limitations**

27. By mid-April 2022 Sri Lanka's economic and political crisis intensified with shortages of essentials including cooking fuel, petrol and diesel and daily electricity cuts. As a result of the fuel shortages public servants were asked to work from home and to be called to the workplace on a roster basis and only for 'essential duties'. Therefore,

many of the institutions that the project worked with were functioning below capacity and without key staff. This had a negative impact on accessibility to informants. The key effect of the fuel crisis was the very low number of participants. For example, only a very small number of seed certification officers, agriculture instructors of the Department of Agriculture, from among those who had attended training/awareness events of the project participated in the meeting. Only those who resided very close to the offices of the Department of Agriculture at Gannoruwa and were able to travel, attended. A similar situation prevailed during the meeting with Food and Drug inspectors of the Ministry of Health. This resulted in a low sample size and affected the type (quality) of information gleaned from those onsite interviews.

28. The country situation was under review from May to July 2022, to consider risks and where required make necessary adjustments to plans. The FAO CO provided important guidance on this aspect. Therefore, the evaluation management adopted an adaptive approach. This included exploring different scenarios and applying flexible approaches for data-collection and consultations, including the use of information technology whenever possible to minimize risks. The evaluation manager regularly consulted with the evaluation team to check for potential limitations, and to make rapid adaptive changes to the methodology. All questionnaires were constructed for both face-to-face interviews and online/phone interviews. Visits to laboratories were conducted without hindrance as the PMU was able to provide transport including two visits to Peradeniya in the Kandy District, one visit to the RRDI in Bathalagoda, one visit to the NPQS office at Katunayake, one visit to Sri Lanka Customs Head Office, Colombo and to the ITI laboratory in Colombo. One visit to the laboratory of the Government Analyst and meetings with the technical specialists and the Government Analyst was also carried out.



## 2. Background and Context of the Project

### Box 1: Basic Project Information:

Project title:	<b>Implementation of the National Biosafety Framework (NBF) in accordance with the Cartagena Protocol on Biosafety (CPB)</b>
Project Symbol:	<b>GCP/SRL/066/GFF</b>
Resource Partner:	<b>Global Environment Facility (GEF)</b>
GEF Project ID Number:	<b>5720</b>
Recipient country:	<b>Sri Lanka</b>
Implementing Agency:	<b>Food and Agriculture Organization of the United Nations (FAO)</b>
Executing Agency:	<b>FAO</b>
GEF Focal Area:	<b>Biodiversity</b>
GEF Strategy/operational programme:	<b>SO2: supporting stakeholders in enhancing the recognition and consideration of agricultural sectors in international instruments, governance mechanisms, processes, and partnerships that are relevant to FAO’s mandate.</b>
GEF Strategic Objectives:	<b>BD-3: Build Capacity for the Implementation of the CBF</b>

**Table 2.1: Key Dates and Timelines**

<b>Project Milestone</b>	<b>Timeframe/Date</b>
PIF Approval	<b>May 17, 2014</b>
CEO Endorsement	<b>June 21, 2016</b>
Project Start	<b>January 1, 2017</b>
MTR	<b>July to November, 2020</b>
Project Extensions	Original NTE: <b>December 31, 2020</b> Revised NTE: <b>January 31, 2023</b>

### 2.1 General Context of the Project

29. The aim of the project, which was funded through GEF Cycle 5, was “To strengthen Sri Lanka’s regulatory, institutional and technical capacities for the effective implementation of the NBF in conformity with the CBF” and thereby “to fully implement her obligations under the CPB related to the transboundary movement of Living Modified Organisms (LMOs)”. It also aligned with the objectives of the GoSL to institute a legal and institutional framework for the early detection, safe handling, and

transportation of LMOs and to build capacity for the safe use of modern biotechnology in research and development.

30. Biodiversity is critically important to the economy of Sri Lanka, one of the 36 global “biodiversity hot spots”, due to its species richness and high levels of endemism and the high levels of threat to them while it depends heavily on these biological resources. The country was one of the first countries to ratify the CPB, with the Biodiversity Division (BDD) of the Ministry of Environment being responsible for the coordination and promotion of national efforts to conserve the nation’s biodiversity and oversee biosafety-related activities and therefore acting as the national focal point for the Convention on Biological Diversity (CBD) & CPB.
31. Although the advancement of modern biotechnology was still at an early stage in the country, The GoSL recognised the need for regulation of the import and use of LMOs and biotechnology research and development activities. The GoSL, through the BDD of the Ministry of Environment, implemented the NBF Development Project in 2005. Through this project, the NBF and the National Policy on Biosafety, both of which were approved by the Cabinet of Ministers the same year, were produced. To implement the NBF, the Biosafety Act was drafted in 2014. The government through a number of line ministries and allied government/ semi-government institutions, had been promoting biotechnology research, creating awareness on key issues relating to biosafety and putting in place regulatory systems/requirements for LMOs.
32. This project under review contributed to Output 2.3.2: *‘Capacities of institutions strengthened to implement policies and international instruments that foster sustainable production and address climate change and environmental degradation’* of the Strategic Objective 2 of the then FAO’s Strategic Framework, *‘Make agriculture, forestry and fisheries more productive and sustainable’*. The project responded to GEF strategic objectives BD-3: *“Build Capacity for the Implementation of the CBF.”*

## 2.2 Description of the Project, Project Objectives and Components

33. The project goals at the end of the four-year project were:
  - **Immediate goal:** The immediate goal was that at the end of four years of capacity building, there would be sufficient capacity in the country and effective coordination between the responsible agencies to assess and manage risks associated with LMOs/ Genetically Modified Organisms (GMOs), specifically in transboundary movement. This progress was intended to be achieved through strengthening of the regulatory regime for biosafety management in the country; enhancing scientific, technical and institutional capacities, including for enforcement and monitoring; and managing information and coordination networks. These would be achieved through the enactment of the draft Biosafety

Act; fully implementing the National Policy on Biosafety; and the strengthening of the biosafety framework by having the necessary regulations and adequate levels of human and institutional capacities in place<sup>13</sup>.

- **Development goals:** To assist Sri Lanka to fully implement her obligations under the CPB related to the transboundary movement of LMOs. These included the establishment of rules and procedures for risk analysis, safe transfer, handling and use of LMOs/GMOs, with a special focus on ensuring the safe trans-boundary movement of LMOs/GMs. The project outputs included strategies and processes for the assessment, management and communication of potential risks that the introduction of LMOs pose to the conservation and sustainable use of biodiversity and to human health.

34. In order to attain the project goals and objective, it had four interlinked and mutually reinforcing components structured around seven outcomes:

- **Component 1: Strengthening policy, institutional and regulatory frameworks for biosafety** - This component was designed to help Sri Lanka to address the gaps in existing regulatory and institutional frameworks to implement the NBF and to support the establishment of sound decision-making processes and law enforcement on biosafety. This would be achieved by providing technical support such as awareness building and training workshops for the enactment of the draft Biosafety Act presently under legal review by national authorities, followed by preparation of relevant regulations. GEF incremental resources would also enable stakeholders to develop the National Biosafety Masterplan, which defines the strategies and steps needed to achieve the objectives outlined in the National Policy on Biosafety. Also, under this component, it was planned that an information management and sharing system on biosafety would be re-established by setting up a website and the national Biosafety Clearing House (BCH) strengthened. This component would help to collect, generate and share up-to-date national biosafety information in a manner that would promote transparency and accountability in decision-making. This strengthened information management system was intended to provide regulatory bodies and stakeholders with access to the latest information on biosafety.
- **Component 2: Enhancing system for risk assessment (RA), risk management (RM), and risk communication (RC)** - This component was designed to strengthen the technical capacity of the existing institutions and competent authorities to conduct RA, RM and RC. This work would enable Sri Lanka to execute sound, transparent and science-based analysis and decision-making in biosafety

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<sup>13</sup> Project Document (PRODOC 066) Pages 24-25

consistent with international state-of-the-art practices and standards. Sufficient scientific and technical capacities would be created within competent authorities by training and preparing technical guidelines and manuals, as well as decision-making tools, for RA, RM and RC.

- **Component 3: Developing technical capacity for the detection and identification of LMOs and strengthening biosafety related infrastructure** - This component was designed to strengthen the technical capacity and make fully operational the key laboratories by upgrading necessary infrastructure for carrying out the required identification and detection of LMOs and thereby enable Sri Lanka to meet its obligations under the CPB.
- **Component 4: Knowledge development, public awareness, education and participation** - This Component was designed to support targeted education and outreach campaigns to create awareness of biosafety and to enhance public participation in decision-making. Under this component, enhancement of awareness among policy makers would be pursued to establish political will to incorporate biosafety into national development plans and programmes. In addition, curriculum, syllabus and E-learning course materials for a post-graduate course would be reviewed and elaborated to build sufficient human capacities to address the biosafety needs of the country.

35. In correspondence with the components, seven outcomes and associated outputs were designed to achieve the Project Objective. The outcomes are listed below.

- **Component 1:**
  - Outcome 1.1: Enhanced capacity to develop, implement and coordinate biosafety legislations and regulations
  - Outcome 1.2: Administrative systems for making biosafety fully functional
  - Outcome 1.3: National BCH operational
- **Component 2:**
  - Outcome 2.1: National institutions strengthened for RA, RM and RC including monitoring and enforcement
- **Component 3:**
  - Outcome 3.1: Improved capacity for detection and identification of LMOs
  - Outcome 3.2: Laboratories fully operational with the necessary infrastructures to carry out RA, and detection of LMOs, which allow Sri Lanka to meet its obligations under the CPB

- **Component 4:**

Outcome 4.1: Enhanced awareness, education and public participation in decision-making on biosafety

36. A Mid Term Review (MTR) was carried out from July to November 2020 to assess the project’s results, their value to target beneficiaries, national needs and priorities, as well as documenting important lessons for potential scaling-up/out, replication or follow-on projects in Sri Lanka. In particular, the MTR was to deliver an independent assessment of the project’s relevance, effectiveness, and efficiency, factors affecting project performance and sustainability. It was also intended to flag implementation challenges and early signs of failure (if any), as well as identify potential successes and foreseeable impacts. MTR findings and recommendations were intended to inform any corrective measures and modifications deemed necessary to project design and execution over the remaining project term, to improve future delivery, optimise potentially positive impacts and increase the likelihood of results over the long-term, to enhance the project’s prospects of success. The MTR, which was focused on results achieved from the time of project inception, July 2017, until June 2020, found that the project was still relevant and aligned with GEF and FAO strategic priorities. The overall project rating was satisfactory. The complete table with the MTR rating is available in Table 2.2.

**Table 2.2: Ratings assigned for evaluation criteria by MTR team**

	Rating
A. RELEVANCE /Overall strategic relevance	HS
B. EFFECTIVENESS /Overall assessment of project results	S
C. EFFICIENCY / Efficiency of project delivery	S
D. SUSTAINABILITY OF PROJECT OUTCOMES	
Financial	MS
Socio-political	MS
Institutional and governance	MS
Environmental	S
Catalysis and replication	S
<b>FACTORS AFFECTING PERFORMANCE</b>	
Project design and readiness	MS
Project Execution and management	HS
Project implementation and oversight	S
Financial management and co-financing	S
Project Partnerships and stakeholder engagement	MS
Communication, awareness and knowledge management	MS
Monitoring and Evaluation	S

CROSS-CUTTING CONCERNS	
Gender and other equity dimensions	S
Overall project rating	

GEF scale for ratings results<sup>14</sup>. \*HS=Highly Satisfactory, MS=Moderately Satisfactory, MU=Moderately Unsatisfactory, U=Unsatisfactory, S=Satisfactory, UA= Unable to Assess, L=Likely, ML=Moderately Likely<sup>15</sup>.

37. The MTR provided some key recommendations to improve project alignment with the stated objectives and goals and ensure its contextual response to new developments in biotechnology in Sri Lanka. Among these were recommendations to; support the enactment of the National Biosafety Act, capacitate the Central Environmental Authority (CEA) (including scenario planning and forecasting for future needs) to act as the NCA, more targeted communications and knowledge dissemination and to simplify technical jargon to meaningful messages, integrate more local expertise into project activities, collect gender disaggregated data from project activities and retain the online training models as open source resources for future capacity building.
38. The main project **achievements** to date are highlighted below as reported in the Project Progress Reports (PPRs) and Project Implementation Reports (PIRs). These summaries provide a useful starting point for the TE.
- **Component 1:** The draft Biosafety Act was revised and handed over to the government counterpart along with a curriculum and resource material for training on the regulatory system once the Act is enacted. The draft Biosafety Regulations prepared under the provisions of the Act, the draft Administrative and Operational procedure and Biosafety Masterplan were also completed. The Tri-lingual national website for Biosafety (Sri Lanka BCH) was developed and the focal point was trained to upload information and maintain it. Further, relevant stakeholders were trained to access and share information through the Sri Lanka BCH and central BCH.
  - **Component 2:** Several national guidelines were developed to conduct RA of GMOs and the relevant stakeholders were trained to use the guidelines. Further, key documents related to RA, RM and RC were developed and shared with the government counterpart.
  - **Component 3:** The national laboratories were assessed, and the selected laboratories were upgraded with the necessary equipment and training. Further, Standard Operational Procedures (SOPs) were developed, and the formal accreditation process of the upgraded laboratories was initiated. An Inspection

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<sup>14</sup> Information extracted from the Mid-Term Evaluation Report, page 19.

<sup>15</sup> GEF Rating Scheme

plan was prepared, and the relevant stakeholders were trained on monitoring and inspection of GMOs.

- **Component 4:** The National Biosafety Communication Strategy was prepared, and training of trainers (ToT) were conducted for biosafety resource persons. Several awareness materials were prepared, and targeted awareness workshops were conducted to several stakeholder groups including competent/ enforcement authorities, university students, school children and private sector involved in biotechnology and agriculture. Curriculum and course material on biosafety were prepared for secondary level and tertiary level education. The Biosafety Newsletter was launched, and 7 publications were released during the project duration.

39. The Project document, PRODOC 066 had a detailed results framework, but not an elaborated Theory of Change (ToC). Therefore, the MTR reconstructed a ToC using the project results framework and additional evidence from discussions during the review, which is depicted below.

### **2.3 Theory of Change**

40. ToC was developed with the midterm evaluation of the project. This ToC contains the key barriers described in the project document and the outcomes set out in the project results framework in a systematic manner. The TE examined if the outcomes and intermediate results of the project had been attained, and if barriers were removed and assumptions upheld. The results of this analysis is tabulated in Table 2.3. In the ToC, the green coloured boxes are specific outputs identified in the project document. White ones are either leading to these specific outputs or an “output” in the path towards outcomes. At the time of MTR, some of the green outputs were either completely or partially achieved.

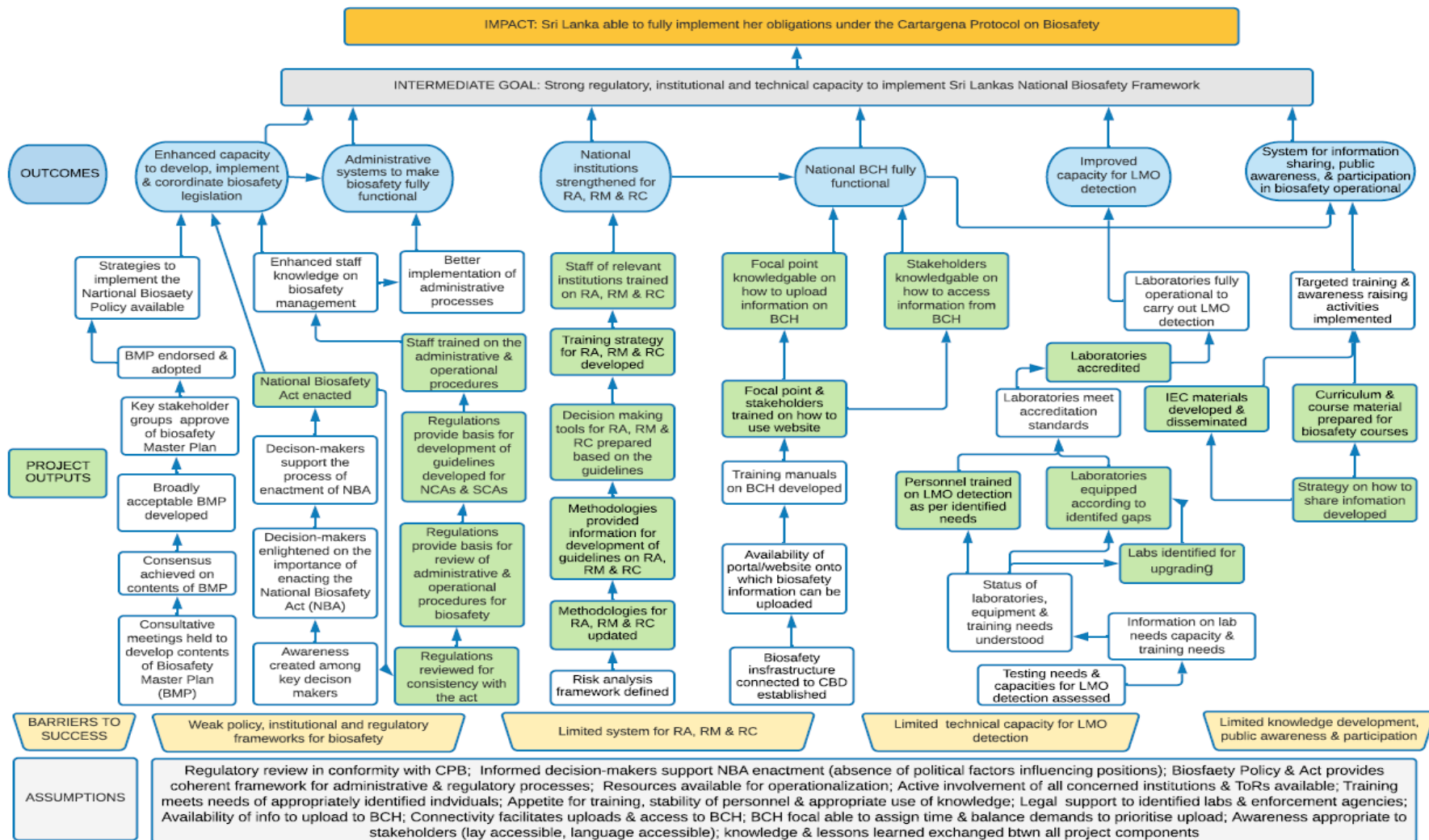


Figure 2.1: Theory of Change (ToC)



The information provided in sub column Pre-condition (Baseline) and sub column Assumptions are from the PRODOC 066, the Project document.

**Table 2.3: Evaluation of the project assumptions and risks**

<b>Project's ultimate Objectives</b>	To strengthen Sri Lanka's regulatory, institutional and technical capacities for the effective implementation of the NBF in conformity with the CBF.		
<b>GEF 5 Strategic Objectives:</b>	BD-3: Build Capacity for the Implementation of the CBF		
	<b>Pre-condition (Baseline)</b>	<b>Assumptions</b>	<b>Comments from the ET</b>
<b>Outcome 1: 1.1</b>	<p>Gaps still remain in existing regulatory and institutional frameworks to implement the NBF;</p> <p>Capacity for sound decision-making processes and law enforcement limited</p>	<p>Government strengthened capacity for the inter-ministerial coordination as well as policy implementation under the regulatory framework;</p> <p>Presence of an institutional framework with concerned ministries to implement biosafety policy with smooth coordination;</p>	<p>Capacity has been strengthened through project activities and there is willingness to implement activities by the SCAs.</p> <p>At the time of project design, the assumption of the Biosafety Act being enacted during the lifetime of the project was reasonable. However, the National Biosafety Act is still not enacted despite project inputs for its revisions. Therefore, the Biosafety Masterplan produced by the project cannot be implemented as expected.</p> <p>At present there is no functional institutional framework for biosafety due to the reason above.</p> <p>The assumptions are partially upheld</p>

<b>Outcome 2: 1.2</b>	Administrative and Operational procedures, which are consistent with the requirements of CPB do not exist	Experts familiar with international best practices to be engaged;  Dedicated personnel available, and familiar with CPB requirements as well as approach to develop administrative mechanism	International and national consultants have provided technical inputs for the development of RA, RM and RC guidelines that are project outputs. Training of stakeholders has taken place but is still insufficient to fully implement the mandates of the SCAs.  Administrative and operational manuals and guidelines on RA, RM and RC are ready and identified personnel from SCAs trained. However, these guidelines cannot be applied owing to the absence of a Biosafety Act.  The assumptions are partially upheld
<b>Outcome 3: 1.3</b>	There is a national BCH established, but not operational due to the lack of capacity to collect, process and manage the information required to run it	Active involvement and role definition of nodal ministry during the project;  Ministry has information for collection and proper IT infrastructure for BCH;	The nodal ministry has the IT infrastructure needed for BCH; its staff have been trained to upload information and maintain the BCH. It is too early to assess the operation of the BCH or its functionality.  It is too early to assess the validity of the assumption at the stage of TE.  This can be done within one year of project phase-out.

<p><b>Outcome 4: 2.1</b></p>	<p>The capacity of national institutions is limited to enable formulation and implementation of integrated and coherent biosafety regulatory mechanisms</p>	<p>ToR of each institution available</p>	<p>The change of the role of NCA from the Ministry of Environment to the CEA took place in 2021 with cabinet level approval. The capacity of the CEA to function as the NCA is a cause for concern.</p> <p>There are no institutional work programmes of SCAs at project end. However, the SCAs have their own legal mandates (acts) which may be amended to include biosafety considerations, in the absence of a functional national regulatory framework</p> <p>The assumption is partially upheld.</p> <p>The TE team believes that there should have been another assumption on capacity development. ToRs of institutions alone do not indicate capacity to carry out the functions laid out therein.</p>
<p><b>Outcome 5: 3.1</b></p>	<p>Capacities in LMO detection and the requirements for the accreditation of laboratories not met for implementation;</p>	<p>Legal backing available for the cooperation with identified laboratories and enforcement agencies, but also capacity development</p>	<p>Capacities of laboratories are enhanced. Laboratories are now able to function as envisaged to detect GMOs/ LMOs. No enforcement is possible due to lack of the Act.</p>

			<p>Capacity development has taken place with two (2) laboratories applying for accreditation with Sri Lanka Accreditation Board for Conformity Assessment (SLAB). The SLAB too has improved its technical and administrative capacity through the project.</p> <p>Assumption on legal backing is not upheld. Assumption on capacity development is partially upheld.</p>
<b>Outcome 6: 3.2</b>	The accreditation of laboratories and strengthening capacities of selected public sector laboratories are required;	<p>Detailed system demonstration with sufficient trial operations carried out;</p> <p>Operation and maintenance mechanism of laboratory instruments ensured</p>	<p>Upgraded laboratories are capable of GMOs/ LMOs detection and identification. Their staff have been trained and can operate the equipment. Two laboratories are already carrying out LMO detection for research purposes or for private sector clients. The laboratory of the AgBC, University of Peradeniya has trained selected groups of stakeholders.</p> <p>Assumptions are upheld.</p>
<b>Outcome 7: 4.1</b>	Awareness of biosafety needs to be further enhanced to broader stakeholders strategically;	<p>Awareness events conducted along with the needs of target stakeholder groups;</p> <p>Communication strategy applied properly;</p>	The communication strategy was based on a baseline survey/ needs assessment of target groups and was implemented with specific materials disseminated to target groups.

		<p>Replication mechanism in place to continue awareness raising after the project including potential funding support for the capacity building of biotechnology professionals</p>	<p>No funding at present for continuation of communication strategy. The project did not intend to address the capacity building of biotechnology professionals except of those who implemented project activities and those who attended project training or awareness.</p> <p>Assumptions are partially upheld</p>
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### 3. Main Findings

#### 3.1 Relevance

*EQ 01: Does the project design – outcomes and outputs - support the attainment of the project objective?*

41. ***Finding 1.*** *The project was designed to deliver the necessary capacities and tools to strengthen the implementation of the NBF. The project was designed to support the enactment of the Biosafety Act, which was in an advanced draft at the time of project design. The outcomes and outputs of the project were designed to achieve the objective which was to strengthen Sri Lanka’s regulatory, institutional, and technical capacities to implement the NBF. The outcomes and outputs addressed the key barriers identified during project design and were validated during the MTR, and TE as relevant to the national context, and remained relevant (in fact, increased in degree of relevance) over time.*
42. The project had four components and seven outcomes. MTR pointed out that there were too many outcomes for a project of its size. However, the original set of seven outcomes (and indicators associated with them) was maintained in the ToC developed at MTR with the project team, FAO and Government counterparts. This ToC was developed in 2020, when many of the major activities were mid-way and maturing. This ToC validated the original barriers (see Figure 2.1) which are; 1) weak policy, institutional and regulatory frameworks for biosafety; 2) Limited systems for RA, RM and RC; 3) Limited Technical capacity for GMOs and LMOs detection and 4) Limited knowledge development, public awareness and participation; and the outcomes associated with them.
43. Discussions with stakeholders at TE clearly point to the elevated ‘relevance’ of these outcomes. If anything, biosafety concerns have increased considerably given the massive strides in the region (Asia) and neighbouring South Asian countries. Many stakeholders, especially heads of institutions identified as SCAs voiced that biotechnology is an urgent need to overcome current crisis in food production, environmental health and consequently, having biosafety protocols in place is an urgent requirement for the country. In that respect the project’s interventions were timely and responded to a national need.
44. As such, the TE concludes that the four components and outcomes therein remained relevant throughout the project period. Many stakeholders interviewed were of the opinion that the project did not successfully achieve these outcomes, therefore they remain a highly relevant but ‘unfulfilled’. This can be attributed to the over

dependence of the entire project on a few critical assumptions (adoption of the Biosafety Act, adoption of the Biosafety Masterplan, adoption of guidelines by the SCAs, demand created for GMO/ LMO testing, etc.). Many targets and outcome level indicators in the project document are not practical given the risks associated with the project. For example, at the objective level the project was expected to report on: **Number of laws enforced by the enhanced high-level inter-ministerial coordination mechanism**. At Outcome level, **Number of agencies that have institutionalized training on RA, RM and RC**. The opportunity presented by the MTR to revisit some of the project assumptions, targets, and indicators was not availed of, and therefore the project continued to report against the original results framework, despite clearly seeing that the outcome achievement would be compromised by the lack of a legal framework by project end.

EQ 02: Are project objectives relevant to national policies and stakeholder aspirations?

EQ 2.2 to what extent has the project been consistent with national and sectoral policies and programmes?

EQ 2.3 Has the project remained relevant to changing contexts and needs?

45. **Finding 2.** *Overall strategic relevance of this project is high. Sri Lanka is country that has benefitted from and used modern biotechnology from the 1970s. Biotechnology is even more relevant today in the context of increasing agricultural productivity and ensuring nutrition in a country that has a high population density. However, there is a discrepancy between the official ‘closed doors’ policy for allowing genetically modified organisms and their products into the country, and the advanced biotechnology research that is being supported by the universities, research and development arms of the government and private sector biotechnology firms. The project was aimed to support the country benefit from modern biotechnology related developments while ensuring the safety and security of the environment and human health.*
46. The project is aligned to national policies that encourage agricultural and livestock productivity, human health and nutrition, promotes science and technology research and development in the country, promotes industrial application of science and technology and protects against threats to natural biodiversity and human health. The project responds to the Biosafety Policy and NBF developed in 2005 in response to ratification of the Cartagena Protocol for Biosafety.
47. Stakeholders and project proponents interviewed during the TE opined that the project’s relevance has been amplified by recent policy decisions and events that have led Sri Lanka to prioritise food production. Chief among these is the Ministry of Environment, Ministry of Health, Department of Animal Production and Health, Department of Agriculture and a number of allied agencies -such as National Seed

Certification Service, NPQS, RRDI and Plant Genetic Resources Centre (PGRC). The project was also considered relevant by respondents representing other national agencies such as, ITI, National Science Foundation (NSF), Sri Lanka Customs, Department of National Botanical Gardens, National Institute of Education (NIE), and SLAB. All academia interviewed by the Evaluation Team responded that the project, and biosafety in general, has being extremely important given Sri Lanka's current economic context and threats to food security. Respondents from Departments of Agriculture, Animal Production and Health, Faculty of Agriculture in University of Peradeniya, consultants from the Faculty of Science, University of Colombo were of the singular view that biotechnical applications were urgently needed to uplift agriculture and other sectors in the country. Further, it was acknowledged that genetically modified seeds or agricultural by-products could be entering the country through illegal or undeclared means. Therefore, strengthening of the regulatory and approval processes is urgent to streamline GMO-related biotech applications and the control, management and monitoring of risks associated with such applications. Discussion with stakeholders noted that the project was in some ways "ahead of the times" in preparing for coping with future changes and challenges that biotechnology application might bring. It was stated by several respondents that the project is more relevant today to Sri Lanka than when it was first developed in 2015 due to the urgency of modern biotech applications to ensure food security and overcome nutritional issues that could arise of the economic crisis faced by the country from 2021 onwards. Academics and researchers interviewed by the project emphasized the need for a national biosafety legal framework that can take biotechnology research and development towards laboratory and field trials and commercial applications. Currently research in this field is confined to laboratories and will not permit field testing until systems and protocols are in place with the appropriate legal framework to guide such efforts. The number of ongoing research projects on biotech applications show that the project has had unexpected impacts on the science and technology sector, which was not a main actor in the project design and implementation. However, it is now a major actor, increasing in size and diversifying and expanding its reach to many aspects of human and natural environment. This is a different situation to that which prevailed during project design in 2016.

*EQ 03: Is the project objective congruent with the GEF focal areas/ operational program strategies, country/ government priorities and FAO Sri Lanka Country Programming Framework?*

48. **Finding 3:** *The project is consistent with GEF policies, UN Sustainable Development Framework (UNSDF) in Sri Lanka and the FAO's country priorities.*



49. **UN and FAO priorities:** The project is aligned to the UNSDF for Sri Lanka under the outcome area 4 on Enhancing resilience to climate change and disasters and strengthening environmental management. The project also responds to the FAO programme priorities for Sri Lanka, especially Outcome 2: The environment, natural resources, forests and ecosystems are more sustainably managed taking account of climate change, and the resilience of the most vulnerable to shocks, natural disasters as climate variability has increased. Supporting Sri Lanka in strengthening its biosafety capacity contributes to the outputs of FAO's work relating to sustainable agriculture. More specifically, it contributes to the strategic objective of supporting stakeholders in enhancing the recognition and consideration of agricultural sectors in international instruments, governance mechanisms, processes, and partnerships that are relevant to FAO's mandate
50. **Sustainable Development Goals:** The project is aligned with Sustainable Development Goals on agriculture and food security (Goal2), water (Goal 6), climate resilience (Goal 13) and biodiversity (Goal 15). The project NDCs / Sri Lanka's (draft) national policy and strategy on sustainable development<sup>16</sup> is explicit in promoting agricultural productivity (Policy Goal 2) and additional policy goals on adoption of science and technology in Sri Lanka and conserving critical biodiversity.
51. **GEF Program Strategies:** The project directly responds to the strategic objectives of the GEF focal objectives for biodiversity conservation. Building capacity for the implementation of the CBF is one of the biodiversity focal area strategic objectives.

***Therefore, the rating for overall strategic relevance is SATISFACTORY.***

### **3.2 Effectiveness**

***EQ 04: To what extent were the project objectives (environmental and development objectives) achieved, and how effective was the project in achieving those?***

52. The questions on effectiveness follow the Evaluation Matrix developed for the TE and included in the Inception Report. Given the complexity of biosafety topic within the country and developments independent of the project, some sub questions were included to address them. The Evaluation Matrix is provided in Appendix 2.
53. ***Finding 4: All impacts that are evaluated are developmental impacts. Environmental impacts are yet to materialize due to absence of GMOs/ LMOs assessment and release. This has implications for the majority of the outcomes as well as for up scaling of many outputs. Outputs have all been achieved to an impressive degree with output level***

Footnotes

<sup>16</sup> <https://www.switch-asia.eu/resource/sri-lanka-national-policy-and-strategy-on-sustainable-development/>

*indicators at times even overachieved. Overall, project objective level results are under-achieved while some outcomes too are under achieved. Component 3's Outcomes 3.1 and 3.2 are the most successful. The lack of baseline information for outcomes prevents comparison of before and after project situation in a quantitative manner.*

54. Enhanced awareness of the importance of a regulatory framework on biosafety (Biosafety Act) for the mandates of the SCAs and for research and development by scientists in Sri Lanka has been achieved. This is especially important due to the rise of biotechnology research and development and the importance of its products in the arenas of human food, animal feed, disease control in humans and animals, introduction of plants, animals and microorganisms to Sri Lanka. Individual beneficiaries such as scientific and technical personnel and administrators have identified gaps in their administrative and operational systems for including biosafety considerations and are willing to act.

- **The incremental environmental and development benefits directly attributable to the project**

55. ***Finding 4.1:*** *These incremental benefits are those that were expected to be addressed through the project, as per the Project Document and were to be achieved through implementing all components and achieving outcomes.*

Detailed findings under each of these are detailed in the evaluation per outcome in EQ 06.

- **Achievements independent of the project**

56. ***Finding 4.2:*** *Since the design and commencement of this project in 2016, the significant rise of research and development in biotechnology within Sri Lanka is a natural and independent result of the advances in biotechnology taking place globally as well as in the Asian continent and specifically within India, Bangladesh and Malaysia. This rise and the relevance of the products of biotechnology on human society has inevitably led to the increase of research and interest to develop products with commercial value within Sri Lanka as well. As a response, most universities both state and even private higher education institutions have introduced degrees on biotechnology.*

57. There is increased demand for university graduates in biotechnology within and outside Sri Lanka and several universities have introduced degrees in Biotechnology and closely related subject areas. The government is actively pursuing strategies to promote biotechnology based research within universities and research institutes and is encouraging industry level investments. The Sri Lanka Institute of Biotechnology

Private Limited (SLIBTEC) (slibtec.gov.lk) established in 2020 is the best known example. An analysis of the inclusion of topics related to biosafety within existing university curricula (that have arisen independently) is needed to highlight the levels of awareness of university academics on the importance of biosafety topics in biotechnology courses and programmes.

- **To what extent did the project have an indirect effect (positive or negative) on other initiatives and how did this come about?**

#### Indirect positive effects

58. ***Finding 4.3:*** Senior decision makers of the testing laboratories (AgBC of University of Peradeniya, NPQS of the Department of Agriculture and the ITI laboratory) stated willingness to establish mechanisms for the sustainability of testing laboratories. There is willingness to bring about legal instruments to enable SCAs and research organisations to implement programmes on biosafety. The role of the science and technology sector in biosafety has risen significantly with the emergence of new stakeholders.
59. The financial mechanism to sustain the ITI testing laboratory is established. The laboratory of the ITI is already testing samples submitted by export industries, while that of the NPQS too expects to sustain testing services as per their mandate. The Department of National Botanic Gardens acknowledges the importance of biosafety for its mandate as floriculture is an important economic activity in Sri Lanka. The importation of plant varieties (with illegal imports and introductions being concerns), ongoing research into development of new varieties of ornamental plants applying biotechnology has led to this new awareness.

Due to the highly specialized subject area of biosafety, even the senior legal officers from the Office of Legal Draftsman (of The Ministry of Justice) in charge of finalising the Biosafety Act have made the effort to study the topic of biosafety legislation to enable greater contributions towards development of a meaningful regulatory framework for Sri Lanka.

#### Indirect negative effects

60. ***Finding 4.4:*** The absence of a regulatory framework on Biosafety is a significant barrier to up scaling research products, has raised the risk of fragmentation of outcomes between SCAs and is acting as a deterrent in some instances to progress of biotechnology research and development. The Biosafety Act is not a product of this project, but it plays a significant part in achieving the expected outcomes and of the project objectives.

- **Level of utilization of generated outputs and outcomes by final beneficiaries (institutional and individual)**

61. **Finding 4.5:** *Testing laboratories-* The upgraded laboratories of NPQS and ITI are using the equipment and training received from the project for testing of samples submitted by industry for export purposes as noted earlier. The laboratory of the AgBC of University of Peradeniya has not received any samples for testing by industry as expected in project outcomes. As no samples have been submitted for testing and release within Sri Lanka, the guidelines on RA, RM and RC developed by the project are yet to be utilized by the SCAs. Despite the availability of guidelines for Institutional Biosafety committees (IBCs) no SCA or a university had established an IBC by the time of the evaluation. The National Institute of Education (NIE) stated that they expect to use the secondary school educational materials developed by the project to train teachers on this topic while being ready to modify this material for use at the secondary school student levels.
62. The use of educational materials developed by the project are addressed in EQ6 (Outcome 7) while BCH and its use is addressed under EQ 6 (Outcome 3).

EQ 05: How effectively was the project able to follow the ToC proposed at MTR?

63. **Finding 5:** *There was no ToC at the start of the project and it was developed during the MTR when implementation of activities and several outputs had matured. Therefore, its impact on the overall project is reduced. The modifications made to the project after the ToC have already been stated. The intermediate goal as set out in the ToC is only partially achieved. The Institutional capacity of SCAs remains weak with no operational regulatory framework.*
64. The causal pathways in the ToC have been followed within the vertical flows leading to outcomes. However, the contribution of the collective outputs to the outcomes as set out in the ToC are not observed except in the outcome 3, (Improved capacity for LMO detection within the upgraded laboratories) and thus of the organisations within which they operate. The interactions between components and sub-components as set out in the ToC are largely unobservable. It is these interactions that determine to a large degree, level of attainment of outcomes and their sustainability after end of the project.
65. There are several contributory factors for the absence of interactions.
- i. The non-enactment of the Biosafety Act is a major factor. The ToC highlights the key role of a legal National Biosafety Act in the overall project as well its direct impacts on project outcomes and outputs.

- ii. The change of functions of the NCA to the Central Environmental Authority (CEA) of the Ministry of Environment in 2021 has further slowed the process of finalising the Biosafety Act due to modifications necessitated in the act to include this new entity.
- iii. The Project Steering Committee should have played a more proactive role in steering the project and taking remedial action to address the significant delays in enacting the Biosafety Act. The contributions made by the National Coordinating Committee for Biosafety (NCCB) of the Ministry of Environment, established long before the project but with its overarching role on Biotechnology, appear inadequate.
- iv. COVID-19 pandemic was an independent factor that affected the entire project and is not specific to its effect on outcomes. Both the direct impact of COVID-19 and its subsequent significant impacts in Sri Lanka have contributed to the weak attainment of outcome 1.

**- Level of coherence between project design and project implementation approach-**

66. ***Finding 5.1:** Many changes necessitated due to COVID-19 pandemic in mode of delivery and operation were adaptations to an unforeseen global situation. This showed resilience of and adaptive management by the PMU. See section on Efficiency (paragraphs 103 - 108) for more details on this aspect. The PMU also contracted institutions to execute work packages rather than hire individuals, thus increasing efficiency and reducing costs. This has been noted in the MTR as well.*

**- Identification of key assumptions and the project's ability to monitor these and adapt as necessary**

67. ***Finding 5.2:** See Table 2.3 in section 2.3 on the analysis of assumptions in ToC evaluation. The findings of the TE on how the project managed risks is set out under EQ 09 as well and also under the Sustainability section. The risks and assumptions made in the project document could not have accounted for the major disruption that took place in the last two years of project implementation as it was due to COVID-19 pandemic related lockdowns, travel restrictions and subsequent developments in Sri Lanka.*

68. A major assumption made by the project (that the Biosafety Act will be enacted in the early stages of project implementation and therefore, provide the legal basis to operationalize the Biosafety framework and masterplan), had not taken place at the time of the TE. The date of enactment cannot be estimated. The inability to monitor this assumption and to take corrective action in a timely manner has been stated already. These two risks together have been detrimental to the achievement of many project outcomes as described in this report.

***Overall rating for Progress towards achieving the project development objective is MODERATELY SATISFACTORY.***

*EQ 06: Has project outcomes and key outputs been achieved per outcome area (see specific questions below from ToR) with effectiveness sub questions.*

**Outcome 1: Enhanced capacity to develop, implement and coordinate biosafety legislations and regulations**

*EQ 6.1: To what extent has the Project effectively enhanced the capacity to develop, implement and coordinate biosafety legislations and regulations?*

69. ***Finding 6.1 (Achievement of Outcome 1):*** *The legal and institutional basis for implementation of the Biosafety Masterplan remains unaddressed. Thus implementation and coordination of biosafety legislation and regulations is not possible. The reason is that the National Biosafety Act not being legal, the regulations are not endorsed and unenforceable.*
  
70. **Strengthening of the regulatory regime for biosafety:** The National Biosafety Masterplan has been elaborated and endorsed by the Ministry of Environment The draft Biosafety Act that existed at the time of project inception has undergone revisions including incorporation of the CEA (of the Ministry of Environment) as the new NCA by a paper submitted to the Cabinet of Ministers
  
71. **Magnitude and intensity of identified barriers and impacts on achievement of results:** Barrier 1 for removal of threats to the country's biosafety system, as in the project document, weak policy, institutional and regulatory framework for biosafety, exists to a significant degree.
  
72. **Gap between expected and achieved progress of indicators in the results framework:** The TE carefully assessed the evidence for achievements under outcome 1. However, there is an absence of outcomes as per the indicators in the PRODOC. The TE team also finds that indicators are inappropriate. Reason being that the outcome statement is about enhancing capacity but the indicators are about implementation examples and laws enforced that requires a legal Biosafety act. Outcome indicators (number of implementation examples (evaluation, management and monitoring of LMOs; Number of laws enforced by the enhanced high-level inter-ministerial coordination mechanism) in the NBF that is in compliance with the CPB) are not achieved. Status of output indicators are as follows for outcome 1. Output 1.1.1: National Biosafety Act enacted (not achieved); Output 1.1.3: Relevant regulations reviewed, drafted and endorsed (not endorsed, therefore partially achieved).

**Rating for this outcome is MODERATELY UNSATISFACTORY.**

**Outcome 2: Administrative systems for making biosafety fully functional**

**EQ 6.2: Effectiveness sub question- To what extent has the project effectively made the administrative systems for making biosafety fully functional**

73. **Finding 6.2 (Achievement of Outcome 2):** Administrative and operational procedures manual for applications related to LMOs in Sri Lanka are final and agreed to by the Ministry of Environment. The staff of SCAs are aware of the need to include biosafety within their mandates. The CEA has been identified as the new NCA in early 2021. The project supported subsequent meetings, discussions etc. to explain the role of the NCA to the CEA and to obtain its comments from them to the draft Biosafety Act. Researchers and consultants to the project affirm the need to establish IBCs within universities. However, institutional strategies and programmes have not been developed and nor can SCAs develop programmes without the legal basis. There is no incentive to do so among SCAs, except to consider taking action on biosafety topics under their own mandates (in the absence of a national regulatory framework) in the future. In the research arena development of research outputs into commercial scale and testing of important GMO/ LMO products is hampered by the absence of the Biosafety Act. This, coupled with the lack of capacity of the CEA and inadequate capacity of SCAs are factors that prevent functioning of administrative systems and application of operational procedures.

The Terminal Report of the project (June 2022) states that endorsement of the administrative and operational manual is “**contingent upon enactment of the Biosafety Act**”. The explanations given under outcome 1 are all relevant here as well.

74. **Magnitude and intensity of identified barriers and impacts on achievement of results:** Both barriers 1 and 2 (Limited system for RA, RM, and RC identified in the project document remain.
75. **Gap between expected and achieved progress of indicators in the results framework:** Outcome indicator (Number of implementation examples using fully functional administrative system) is not achieved. The status of output indicators are as follows for outcome 2. Output (Administrative and operational procedures for biosafety reviewed and updated is partially achieved); Output (Guidelines developed to support the tasks of NCA and SCAs is achieved. Output (Staff of NCA, SCAs and related organizations trained) is achieved. However, the training has not been translated into establishing administrative systems.

**Rating for this outcome is MODERATELY UNSATISFACTORY.**

### **Outcome 3: National BCH operational**

#### **EQ 6.3: Effectiveness sub question - To what extent has the Project effectively made the National BCH operational**

76. **Finding 6.3 (Achievement of Outcome 3):** Sri Lanka BCH has been operational since March 2021 (<http://lk.biosafetyclearinghouse.net/>). It is an enhanced, well designed and user friendly online platform. As insufficient time has elapsed since the BCH became functional, its maintenance & operational aspects cannot be evaluated. So, assessing these and the level of satisfaction should be conducted at a later date.
77. **Systems for information sharing and public awareness:** The Sri Lanka BCH was launched with improvement of its functioning; a procedural manual is available; the staff of the BCH focal point (Ministry of Environment) were trained to upload and maintain the BCH; training modules for accessing information on the national BCH for different stakeholders were prepared; training workshops to access and share information in BCH implemented with as some in-person and some in virtual mode were conducted. The website is well designed, easy to navigate and contains the major types of information required for a non-specialist as well as some types of specialized information. The number of users of this portal is around 600 at present. It is too early to assess the impact of the BCH on the major sectors relevant to biosafety and the efficiency of its maintenance. The MTR noted the rapid adaptation made by the project to the COVID-19 pandemic situation in Sri Lanka and recommended that the material used for online training be made available to a wider audience. The project has ensured that the content for most of its training and awareness programmes are freely available in all three official languages; the national contact points and the list of national testing laboratories are available in the BCH.
78. **Magnitude and intensity of identified barriers and impacts on achievement of results:** Components related to a functional BCH under Barrier 4, “Limited knowledge development, public awareness, education and participation” in the project document, have been partly removed.
79. **Gap between expected and achieved progress of indicators in the results framework:** Outcome indicator (Number of visitors accessing the BCH is known as of August 2022, and achieved, outcome indicator (Satisfaction with level of information and knowledge available in the national BCH has not been assessed) and therefore results not available. The status of output indicators are as follows for outcome 3. Output (An enhanced website established); Output (The BCH focal point trained to collect and manage information); and Output (Stakeholders trained to access and share information through BCH) are all achieved.

**Rating for this outcome is MODERATELY SATISFACTORY.**



#### **Outcome 4: National institutions strengthened for RA, RM and RC including monitoring and enforcement**

*EQ 6.4: Effectiveness sub question: To what extent has the project effectively strengthened the national institutions for RA, RM and RC including monitoring and enforcement?*

80. **Finding 6.4 (Achievement of Outcome 4):** Capacity development and technical knowledge transfer to individuals have taken place, but remain inadequate. There is increased awareness of the need for Risk Assessment (RA), Risk Management (RM) and Risk Communication (RC) not only for imported organisms or materials but also for in-country research products within SCAs and a range of stakeholders. However, there is no evidence of use of RA, RM and RC guidelines within SCAs and institutionalized training on use of the guidelines or risk analysis. Moreover, there is a seeming lack of ownership of the guidelines within SCAs. More training on application of the guidelines was requested by all SCAs, especially as much of the training had been conducted in the virtual mode. Overall, the project has laid the foundation for the SCAs to function in RA, RM and RC and risk analysis procedural requirements but they are currently unable to apply them as opportunities to do so are not present.
81. **Enhanced scientific and technical human resources including for procedural requirements for risk analysis:** Guidelines on RA, RM and RC have been developed through consultative processes and manuals for their application are ready; one risk analysis framework developed; a decision making tool kit for regulatory agencies and draft training manuals on RA, RM and RC are ready. The gaps in the operational aspects of entry, handling, testing and release of LMOs/ GMOs within Sri Lanka were identified as a result of project interventions. The project identified and trained the staff from 21 institutions including from the five focal points (SCAs) on the application of guidelines developed by the project. Individual beneficiaries from SCAs and Sri Lankan Customs were trained in the laboratory of the AgBC of the University of Peradeniya on the identification of GMOs, while many were trained through online sessions on the use of the guidelines. SCAs as well as decision makers relevant to biosafety concur that RA, RM and RC of LMOs/GMOs need to be integrated into the operational mandates of the SCAs and enable legal actions based thereof. The SCAs requested more training to move forward towards achieving outcome level impacts.
82. The increased awareness of the importance of integrating biosafety concerns in the work of the SCAs, among biotechnology research and development scientists, and of the need to further improve the status of scientific knowledge about biosafety among non-specialist (especially field staff) of SCAs is shown through the analysis of beneficiary training in Table 3.1. A significant degree of interest has been generated within the NIE to include the topic of biotechnology/ biosafety within the secondary school curriculum especially as there is an ongoing curriculum reform that will enable

inclusion of this subject area. There is general agreement among academics and research scientists interviewed during the evaluation that they are more aware of the need to be on par with regional developments on biotechnology and biosafety. This has been reinforced through the Regional Conference on Biosafety, which was organised under the auspices of this project to share experiences with counterparts from India, Bangladesh, Bhutan, Malaysia, Philippines and Korea. Sri Lankan scientists, including the consultants to the project, stated that Sri Lanka lags behind in commercial applications of biotechnology research conducted in-country. The capacity for the detection and identification of GMOs/ LMOs is addressed under outcome 5.

83. **Gap between expected and achieved progress of indicators in the results framework:** The outcome indicator (Number of agencies that have institutionalized training on RA, RM and RC) is not achieved while outcome indicator (Number of focal points for RA, RM and RC in each institution identified) is achieved. The status of output indicators are as follows for outcome 4. Output (Methodologies for RA, RM and RC reviewed, refined and updated), Output (Technical guidelines and manuals on RA and RM developed); Output (Decision-making tools prepared for RA, RM and RC); Output (Training strategy for RA, RM and RC developed) are all achieved.
84. **Magnitude and intensity of identified barriers and impacts on achievement of results:** Achievements under Outcome 4 have contributed to reducing barrier 1 (Weak policy, *institutional* and regulatory frameworks for biosafety) and 2 (Limited system for RA, RM and RC than at the levels at project inception

***Rating for this outcome is MODERATELY SATISFACTORY.***

85. It is not possible to evaluate the quality of the manuals, SOPs and guidelines developed through the project from a user (SCA) view point as there has not been opportunities to apply them. The same applies to the quality and user-friendliness of the training material produced, in practice. An examination of the written training materials shows them to be written clearly with detailed instructions.
- A regional conference organised by the project has initiated a process for regional connectivity of biotechnology specialists. It is too early to assess the impact of this meeting as it was held in early 2022. However, given the rise of biotechnology R and D all over the world, it will support future developments.
  - Training approach. There is a lack of Training of Trainers (ToT) or training of Master Trainers within the SCAs. The trainees interviewed at times confused raining with awareness raising sessions many respondents stated that they need further training as some have attended one or two training sessions with most being

online. Prior to COVID-19 pandemic some laboratory-based practical sessions have been conducted but are inadequate to produce the expected outcomes. At the time of the MTR, examination of the feedback surveys of trainees who attended hands on training at the laboratory of the AgBC, showed that such training was very useful as it provided new information and also connected them to the network of government officials who were working in biosafety related activities. The major SCAs have not been able to conduct a survey of samples of items and materials for presence of LMOS/ GMOs from within Sri Lanka, despite agreement that it would be an important exercise (even though limited to being report), without the ability to take legal action if necessary. The current high cost of chemicals and consumables for detection is a major barrier to such surveys. The absence of samples submitted to SCAs has already been referred to.

- Leadership for taking biosafety topics forward within SCAs need to be enhanced, even though the scientific and technical staff of nearly all SCAs carry out biotechnology research, and acknowledge the importance of the Biosafety Act for furtherance of their work.
- The issues of interagency and intra-agency coordination and other factors contributing to weak institutional capacity are noted in this report.
- Lack of a quantitative baseline dataset to compare before and after project capacity enhancement in this vital area of implementing the CPB for comparison is a hindrance to elucidating impacts of the project from those due to other factors

**Table 3.1: Responses of individual beneficiaries of training**

Question Category		Department of Agriculture		Ministry of Health		Sri Lanka Customs	
		Number	%	Number	%	Number	%
What did you gain from the training?	New technical and or scientific knowledge	14	88%	6	100%	5	100%
	New technical skills	14	88%	6	100%	5	100%
	Ability to train others	4	25%	4	67%	-	-
	New administrative skills	4	25%	4	67%	5	100%
	New information on other institutions engaged in Biosafety issues within or outside Sri Lanka	3	19%	3	50%	5	100%
Were there any post training activities planned by your institution or by the Biosafety Project?		5	31%	-	-	0	0%

Have you applied what you gained from the training within your current institution?	4	25%	1	17%	-	-
Was the training able to deliver what you expected from it?	9	56%	-	-	5	100%
To what extent was the training relevant to your area of job?	16	100%	6	100%	5	100%
Were the trainers competent in what they were doing?	15	94%	1	17%	5	100%
Was the training of adequate duration?	2	13%	-	-	4	80%
Are you able to train others within your institution on what you have learnt?	0	0%	-	-	1	20%
Do you get adequate support from your institution for you to implement the benefits of your training?	2	13%	-	-	5	100%
Do you feel that these training programmes supported your career development?	14	88%	-	-	5	100%

**Survey Participants:** Department of Agriculture (Seed Certification Officers, Agriculture Instructors & Research Officers), Ministry of Health (Food and Drug Inspectors), Sri Lanka Customs (Assistant Superintendent of Customs)

### **Outcome 5: Improved capacity for detection and identification of LMOs**

**EQ 6.5: Effectiveness sub question: To what extent has the project effectively improved the capacity for detection and identification of LMOs**

86. **Finding 6.5 (Achievement of Outcome 5):** This is the most successful outcome of the project. Three laboratories have been upgraded (with equipment and consumables including chemicals) and training of technical staff including at Indian facilities has been carried out, a national referral laboratory has been identified. Senior scientists capable of steering the biosafety work programmes of the laboratories are in charge of them with senior administrators expressing willingness or have established mechanisms to ensure financial sustainability of GM testing. Specialized technical staff designated and trained to carry out such testing are available. Two of the laboratories have applied for accreditation status to the SLAB. Technical and administrative procedures for accreditation of laboratories for GM testing and for periodic assessment for compliance have been introduced to SLAB itself including training for key personnel. The recipient organisations (ITI), University of Peradeniya, (AgBC) and

*the Department of Agriculture (NPQS) acknowledge that laboratory equipment, chemicals, and the training received at the Indian laboratory are highly relevant and valuable. All of these are unlikely to have taken place over the time frame of four years, in the absence of the project.*

87. **Institutional capacities for LMO detection:** A significant enhancement of the technical capacity of the three testing laboratories has been achieved through Component 3 activities. This includes the supply and installation of laboratory equipment and consumables including chemicals; training of technical staff through an international training workshop on LMO testing, online training for representatives from the three laboratories and SLAB; in-person national training in one of the upgraded laboratories for representatives from the upgraded laboratories and hands-on training for fifteen participants (from upgraded labs, SLAB and CEA) in an international training on GM Testing at the Export Inspection Agency (EIA), Kochi, India; the Government Analyst's Department (GAD) and Sri Lankan Customs laboratories supplied with tools for specific tests. Trained technical staff of the upgraded laboratories are able to process requests for testing samples based on requests by industry that exports materials overseas. This is taking place even in the absence of a legal Biosafety Act. The project interventions have resulted in the introduction of laboratory accreditation procedures for GM testing laboratories in Sri Lanka for the first time to SLAB and enhanced capacity of SLAB staff for accreditation of GM testing laboratories. This institution appreciates the introduction of this new area of accreditation to their portfolio and acquisition of new knowledge and skills by their technical staff. While not intended to be achieved through the project, scientific and senior administrative staff of the SCAs and researchers in biotechnology identified the lack of infrastructure for confined laboratory and field testing. This is a result of the topic of biosafety being highlighted among such stakeholders.
88. **Gap between expected and achieved progress of indicators in the results framework:** Outcome indicator (Number of detection and identification processes of LMOs within a certain time period) is partially achieved despite the fact that there are no examples of GMO/ LMO detection in samples submitted by importers as expected by the project. However, the ITI laboratory is already carrying out sample testing for export industry while the laboratory of the NPQS has been requested in June 2022 to carry out tests for certain types of exports from Sri Lanka to a foreign country. Outcome indicator (Number of designated staff) is achieved as there were specialized technical staff manning testing laboratories ranging from 4 to 2 in the upgraded laboratories. The status of output indicators are as follows for outcome 5. Output (Testing needs and capacities for LMO detection assessed and key public laboratories identified for up-grading and accreditation) has been achieved, Output (Inspection

plan prepared and inspectors trained) is achieved, Output (Personnel trained on LMO detection and identification) has been achieved.

89. **Magnitude and intensity of identified barriers and impacts on achievement of results:** Barrier 3 in the project document (Limited technical capacity for detection and identification of LMOs and strengthening of biosafety related infrastructure) has been reduced significantly though the achievements of outcome 5.

**Rating for this outcome is HIGHLY SATISFACTORY.**

**Outcome 6: Laboratories fully operational with the necessary infrastructure to carry out RA, and detection of LMOs, which allow Sri Lanka to meet its obligations under the CPB**

**EQ 6.6: Effectiveness sub question: To what extent has the project effectively made the laboratories fully operational with the necessary infrastructures to carry out detection of LMOs, which allow Sri Lanka to meet its obligations under the CPB**

The findings of the TE to this have been provided to a large degree in outcome 5 above.

90. **Finding 6.6 (Achievement of Outcome 6):** *Laboratories have the infrastructure to detect GMOs/LMOs as a result of project activities and two are using this capacity to fulfil national needs despite the absence of the Biosafety Act. All three institutions containing the laboratories have or are expected to have, their own mechanisms for sustainability of the services provided by the laboratories. The laboratory of the AgBC (University of Peradeniya) is identified as the national referral laboratory for LMO/GMO testing. Meeting the obligations under the CPB which entails carrying out the entire gamut of steps from testing to controlled release and use is not possible as the SCAs and the upgraded laboratories do not have the required specialized infrastructure and other resources even for controlled laboratory testing.*
91. The enhancement of the testing capacity of the laboratories of the Government Analysts Department and that of Sri Lanka Customs through the supply of equipment and consumables and the training of staff for testing has been carried out. The quality and user-friendliness of the upgraded laboratory facilities is high as the observations from the visits showed well maintained facilities, clear labelling of the different sections of the testing laboratories with operational procedures for ensuring laboratory safety and non-contamination of samples. The scientific and technical staff were appreciative of the support given by the project as without it, such an upgrade was highly unlikely. As the equipment were provided based on the specifications provided by the laboratory scientists the ability to operate as expected is present. All three upgraded laboratories have been connected as an online network to improve their efficiency as well as improve transparency of the process of sample testing. The staff of the laboratory of the AgBC, University of Peradeniya expressed the hope that

with diversification and increase of agricultural exports from Sri Lanka, and due to its central location in the country (enables it more accessible to industry based in the Central, North Central, Northern, Eastern, and Sabaragamuwa provinces) that its services will be more sought after in the future. The University of Peradeniya stated its willingness to put in place a mechanism to financially sustain this laboratory.

92. **Gap between expected and achieved progress of indicators in the results framework:** Outcome indicator (Number of identified laboratories operational with international standards) is achieved, outcome indicator (Number of facilities for contained testing operational) is not achieved, but the TE team is of the view that the project design has been too ambitious in expecting SCAs to have the capacity for contained laboratory and field trials by the end of the project period. Outcome indicator (Annual budget allocated for operation and maintenance of laboratories) is partially achieved as one laboratory possess it, with the NPQS laboratory performing services as the designated official laboratory of the export and import gateways, and the AgBC laboratory expecting to be financially independent through its outreach services. The status of output indicators are as follows for outcome 6. Output (Key government laboratories identified, established, strengthened and appropriately equipped for RM and detection of LMOs) is achieved, output (Laboratories accredited by SLAB for RA, LMO detection and identification based on ISO and ISTA standards) is not achieved.
93. Two of the upgraded laboratories are in the SLAB accreditation process by the end of the project. The key staff of SLAB have undergone training (Two (2) staff members of the SLAB were trained through online international training on LMO testing; Three (3) staff members of the SLAB obtained 4-day hands-on international training on GM Testing at the EIA, Kochi, India, Four (4) staff members of the SLAB obtained 5-day training on accreditation of GM Testing Labs at the National Accreditation Board for Testing and Calibration Laboratories, India); it is unlikely for these to have taken place in the absence of the project.
94. **Magnitude and intensity of identified barriers and impacts on achievement of results:** Achievements of outcome 6 have contributed towards reducing the effect of barrier 3 (Limited technical capacity for detection and identification of LMOs and strengthening of biosafety related infrastructure).

***Rating for this outcome is SATISFACTORY.***

**Outcome 7: Enhanced awareness, education and public participation in decision-making on biosafety**

**EQ 6.7: Effectiveness sub question: To what extent has the project effectively enhanced awareness, education and public participation in decision-making on biosafety?**

95. ***Finding 6.7 (Achievement of Outcome 7):*** *Consistent feedback from almost every beneficiary category interviewed by the TE team reported that their awareness of biotechnology developments, knowledge on LMOs/GMOs and biosafety had been positively influenced by the project. The project was well supported by the Communications Specialist and an International Expert to design and deliver Biosafety awareness and knowledge sharing session. The project developed a Communications Strategy based on a baseline survey conducted in 2018. The strategy aimed at creating more awareness among six categories of stakeholders including school-going, universities, academia, policy makers, media and private sector/non-government. Some 26 awareness raising events were conducted. Analysis of post event evaluations show that all participants had positive feedback of these sessions. The communications material developed have been used extensively in these knowledge and awareness programmes.*
96. Public awareness is questionable as the levels of awareness are below what is expected with sources of information on which the public base their awareness being unsatisfactory for scientific and specialized topic such as biosafety. There should be more work carried out in this area. Public participation in biosafety cannot be observed as the SCAs and the NCA have not carried out any RA or subsequent steps of GMOs/ LMOs to be used within the country. There is no evidence of budget allocations for conduct of actions on biosafety within the SCAs.
97. Educational materials developed for secondary schools are underutilized at present but there are prospects of being used for ToT (of school teachers) by the NIE. Development of postgraduate courses on biosafety by the project is commendable. There is no evidence that the courses are being used except in the University of Peradeniya, Faculty of Agriculture where undergraduates are using them, with expectations of use in future postgraduate courses. The project design is too ambitious in framing the output on curriculum, syllabus and course material preparation on postgraduate courses and identification of gaps in university level education through the project. This is because a longer time period and much more wide participation of senior academics is required to bring about such curriculum changes. This is a task beyond the project
98. Even though Sri Lankan industry is carrying out research that requires biosafety considerations as an important part of their work it remains very small in number. Only limited use of the upgraded laboratories by exporters is evident. The state owned research institutes and universities that seek to commercialize their outputs and researchers who wish to import and test GMOs within Sri Lanka needs to be concerned about public perceptions and participation in the RA process



99. Overall, it is not clear if the topic of biosafety has been addressed by the project as part of the sustainable development goals in Sri Lanka. It is important to connect a specialized topic such as biosafety to the Sustainable Development Goals (SDG) in outreach and awareness activities to raise its profile and relevance among the public and other non-specialist stakeholders. The visibility of the in-country SDG agenda might not have been as high at project inception (2016) as it is in 2022, however, the communications strategy and some of the educational materials ought to have provided this connection.
100. **Gap between expected and achieved progress of indicators in the results framework:** Outcome indicator (Number of awareness raising events/ campaigns with positive feedback from various stakeholders across the country) is overachieved, while there is no evidence that outcome indicator (Annual budget allocated for continuous actions for Biosafety in the country) is achieved by the National Focal point, NCA or any of the SCAs. The status of output indicators are as follows for outcome 7. Output (Public awareness and participation strategy developed), output (Targeted awareness-raising activities implemented), output (Curriculum, syllabus and course materials prepared for post-graduate course for biosafety, and the gaps in primary (Ordinary Level), secondary and university level education for biosafety filled through improvement of curricula are achieved. However, there is absence of public participation in decision making on biosafety. Enhanced awareness as a result of the project is already stated.
101. Magnitude and intensity of identified barriers and impacts on achievement of results Achievements of outcome 7 have contributed towards reduction of Barrier 4 but remain inadequate to achieve the expected results.

**Rating for this outcome is MODERATELY SATISFACTORY.**

**EQ 07: What are the key results of the project implementation?**

102. **Finding 7:** *The key results are - Upgrade of laboratories for detection and identification of LMOS/ GMOs; enhanced knowledge and awareness of the importance of biosafety even among biotechnology researchers, senior administrators, and some sections of field level staff of SCAs, and reactivation of the BCH and the trained staff of the national focal point for its longer term maintenance. Educational training material for the secondary schools system was identified as being useful for ToT which is an unintended positive effect. The materials developed by the project are most likely to be included in the school curriculum as there is an ongoing curriculum revision and the topics of biotechnology and biosafety are now sufficiently important for inclusion by the NIE.*

**Overall rating for effectiveness is MODERATELY SATISFACTORY.**

### 3.3 Efficiency

EQ 08: Was the project delivered in an efficient and cost-effective manner?

EQ 8.1: Was the project sufficiently and appropriately resourced (e.g.: finance, expert and managerial staff), to generate expected results?

EQ 8.2: Has the project used the best operational model, strategies and pathways to generate results?

103. **Finding 8.1:** *The project has been delivered efficiently and cost-effectively according to the planned work programme, with very few deviations from the original budgets. However the project has been extended over 18 months to complete activities and the TE. The project has been able to secure high quality technical advisory services through institutional contracts and avoided the inefficiencies and administrative workload of recruiting a large number of individual consultants for specific work packages/ ToR. Through several national and one international institutional contractual agreements, the project has managed to secure the services of over 25 different experts in biotechnology and biosafety.*
104. **Finding 8.2:** *project managed core operations with a very tight PMU of four full-time personnel and one knowledge management consultant. However the lack of (at least part-time) monitoring and evaluation specialist impeded systematic tracking of both results and risks. Budget utilisation as of end August 2022 is at 95%. The project faced some budgetary challenges due to the sharp fluctuations in exchange rate in March and April 2022 in Sri Lanka. However, they have adaptively managed this situation to record satisfactory financial delivery at project closure.*
105. **Cost effectiveness:** There was an initial delay in project commencement. The project was due to commence on May 01, 2016; however, this was delayed until January 01, 2017 following the External Resource Department's request for technical clarification from the Biodiversity Secretariat (BDS). However, once project implementation began and prior to the outbreak of the COVID-19 pandemic, the project was found to be generally efficient, meeting expected timelines for completion of activities, not veering too far from budgetary adherence and fulfilling work plans accordingly. The project's cost-effectiveness was evaluated by looking at efforts to bring down implementation overheads, complementarity with other similar efforts and by comparing with projects funded by GEF to support the implementation of the Cartagena Protocol in other countries. The project adopted several important measures that clearly supported cost-effective delivery. One of the main cost saving aspects of the project was the decision to adopt Letter of Agreement (LoA) to contract consulting entities rather than a roster of individual consultants. The project document required the project to recruit 26 different experts (15 local and 11 international) to provide the required technical guidance for the project components.

However, the project contracted two national (Agriculture Biotech Institute from Peradeniya and the NSF) and one international (BCIL) and thereby, significantly reduced the PMU's human resource and project management burden. Relatedly, project efficiency was enhanced through the engagement of fewer project implementers over a longer-term period who could draw down on their acquired substantive knowledge and familiarity with project personnel and systems for subsequent assignments. Understanding the very technical and niche expertise required, the project worked closely with national experts, agencies and with FAO LTO/ FLO to recruit the best possible talent locally and in the region to support project delivery. As such, the project has commendably achieved and even 'over-achieved' many outputs including the drafting of the masterplan, subsidiary legislation to the act, RA methodologies and guidelines, training manuals, laboratory improvement, and production of knowledge material and their dissemination

106. The MTR points out that the project adopted technical working groups to review multiple documents, and this proved more effective and efficient than assigning individual technical committees to each document. This improved the technical working groups' familiarity with the project's technical context and ability to cross-referentially analyse, therefore reducing the time needed for each, and infusing a greater level of consistency of inputs across documents.
107. **Synergistic delivery:** There were no donor-funded projects or programmes that the project could collaborate with during implementation. However, there were government funded programmes indirectly related to the project in key partner agencies that had programmes for biotechnology or biosafety and were happy to collaborate with the project to ensure that their institutional mandates and programmes were supported, and their staff capacities were improved. This was observed and noted in the interviews with respondents from the Department of Agriculture and its many entities, Department of Animal Production and Health, AgBC and ITI. The research institutes have been able to draw on acquired experience and knowledge generated from successive interventions, increasing the efficiency of project support and enhancing the results achieved. There have been synergies created between international biotech institutes and Sri Lankan stakeholders. BCIL based in India, brings to bear experience from a country that has already introduced LMOs. BCIL, shares a focus on biotechnology and biosafety, hence promoting engagement at regional level. Collaboration between BCIL and Sri Lankan institutes such as NSF (a government agency that focuses on scientific research) AgBC, which is attached to Sri Lanka's University Peradeniya produced some commendable outputs/ products such as guidelines, training and communications material.

108. An analysis of the project's expenditure shows that consultants, contracts and non-expendable procurement (for developing and equipping of laboratories) have been the main expenditures, contributing to around 80% of the project's total budget (see Table 3.2). Analysis of expenditure across the project period demonstrate that after a slow Year 1 (2017) the project's financial disbursement picked up considerably and peaked in 2020 when the laboratories were established Table 3.3.). By August 2022, the project was reporting a financial delivery of around 90% counting actuals and commitments (mainly to procure chemicals for laboratory use).

**Table 3.2: Project's financial disbursement (total as of August, 2022) per FAO expenditure category**

GCP/SRL/066/GFF Implementation of the National Biosafety Project				
Period from '1977-11' to '2026-13'				
Activity	Account Description	Budget	Commitments and Actuals	Project Balance
<b>Total Funds Received</b>				2,365,962.00
<b>Expenses</b>				
	5011 Salaries Professional	45,066.00	45,203.00	(137.00)
	5013 Consultants	586,407.00	523,068.00	63,339.00
	5014 Contracts	426,798.00	360,055.00	66,743.00
	5020 Locally Contracted Labour	11.00	11.00	0.00
	5021 Travel	113,147.00	72,086.00	41,061.00
	5023 Training	39,026.00	53,324.00	(14,298.00)
	5024 Expandable Procurement	396,026.00	213,658.00	182,368.00
	5025 Non Expandable Procurement	696,063.00	986,693.00	(290,630.00)
	5028 General Operating Expenses	63,416.00	50,112.00	13,304.00
<b>Total Expenses</b>		<b>2,365,960.00</b>	<b>2,304,210.00</b>	<b>61,750.00</b>

**Table 3.3: Project expenditure for the four components, over the implementation period**

Project GCP/SRL/066/GFF  
 FAO Representation in Sri Lanka  
 Financial Data as at 12-Aug-2022 05:42:22  
 FAO Field Programme Management Information System (FPMIS)

Results Based Inputs	2017	2018	2019	2020	2021	2022	Total
Subtotal Component: PMC	11.00	34,905.00	7,454.00	32,983.29	37,322.71	0.00	112,676.00
<b>COMPONENT 1:</b> Strengthening policy, institutional and regulatory frameworks for biosafety	15,087.00	139,187.60	66,143.60	57,900.88	87,252.45	12,529.00	378,100.53

<b>COMPONENT 2:</b> Enhancing system for RA, RM, and RC	13,259.00	114,009.75	28,435.42	25,451.65	119,164.72	8,569.00	308,889.54
<b>COMPONENT 3:</b> Developing technical capacity for detection and identification of LMOs and strengthening biosafety-related infrastructure	10,302.00	109,091.75	37,166.85	729,437.04	32,326.63	276,219.08	1,194,543.35
<b>COMPONENT 4:</b> Knowledge development, public awareness, education and participation	7,967.00	16,925.00	138,409.00	31,339.67	116,085.24	61,029.00	371,754.91
<b>Grand Total</b>	<b>46,626.00</b>	<b>414,119.10</b>	<b>277,608.87</b>	<b>877,112.53</b>	<b>392,151.75</b>	<b>358,346.08</b>	<b>2,365,964.33</b>

*EQ 09: To what extent has the management been able to adapt to changing conditions to improve the efficiency of project implementation?*

109. **Finding 9:** *The project has adapted well to the restrictions imposed by COVID-19 in 2020 and 2021. This is especially significant given that the last two years of project implementation (from March 2020 to December 2021) were impacted by COVID-19 and associated lockdowns/ travel restrictions which impeded many training programmes and awareness sessions and economic crisis that began brewing in 2021 and snowballed into critical proportions by March 2022, creating fuel shortages, power outages and travel-and-meeting related issues in the last few months of project implementation. However, the project is found lacking in managing certain existing and emerging risks satisfactorily to ensure the sustainability of project outcomes. Adaptive management of a project also involves navigating the institutional and political risks that can impede national ownership and future sustenance of results.*
110. March, 2020 COVID-19 movement restrictions negatively affected activity implementation, delaying for example, the importation of equipment for laboratory upgrades, and related training of lab personnel. While virtual engagements were not originally envisaged, they were necessitated by the pandemic. Although un-intended, COVID-19 also contributed to increasing efficiency of project delivery. By going online to deliver awareness and training, and at a time when many project stakeholders in government were working from home, the outreach was far greater than anticipated and the project managed to secure greater participation for their programmes than if they had delivered these sessions physically at a given location. As such the project exceeded its targets for training and awareness sessions and participation in these sessions.

111. Some of the more successful online training programmes conducted by the project with larger number of participants were;
- 17 virtual training sessions were conducted on RA, RM and RC based on the 7 RA guidelines developed under the aegis of the project, with at least 25 participants in each – well above the target of 100 individuals to be trained.
  - A Regional Conference on Biosafety was held for the stakeholders in the implementation of the NBF in Sri Lanka to share experiences with counterparts in the neighbouring countries. This was participated by India, Bangladesh, Bhutan, Malaysia, Philippines and Korea
  - Five virtual training workshops to access and share information in BCH with at least 30 participants in each.
112. At the MTR the project's adaptive management of the training component was noted as a quick response to the then-emerging situation. The MTR recommended that content developed for online training and awareness can reach a larger number of participants and therefore should be made available for post-project biosafety related capacity and knowledge development. Two years down the road, the project has ensured that the content for most of its training and awareness programmes are freely available through the on-line BCH.
113. However, many respondents felt that the online training sessions needed to be supplemented with physical and more hands-on biosafety related experience. Majority of respondents interviewed by the evaluation team had forgotten the content delivered through the online sessions. Others mistook training programmes for awareness sessions.
114. The TE notes that a critical gap in adaptive management which pertains to managing risks to project outputs and outcomes. The issues have been previously discussed under effectiveness. However, it must be pointed out here that managing risks to sustainability of project outcomes have been below par. Among the risks identified in the initial project document are political risks pertaining to the adoption of the Biosafety Act. Institutional risks on the readiness of the national agencies and the willingness of sectoral agencies to work together and collaborate, and the political will to ensure wider biotechnology application in Sri Lanka. By the MTR it was clear that these risks were posing a significant threat to the project's outcomes and future sustainability. The MTR report recommends that the project spends a considerable time and effort to develop the capacity of the NCA for biosafety in Sri Lanka, to facilitate the process towards the enactment of the Biosafety Act, strengthen the capacity of the CEA as the NCA, and to ensure that there is smooth transition of project knowledge material to the NCA and SCAs and national focal points. However, by the

time of the TE there was no enhanced readiness on the part of the assigned NCA or a legal framework in place to operationalize the many outputs produced by the project.

115. The Project's implementation and financial management is efficient considering the following:
- Financial and progress reports from stakeholders and partners were submitted timely under BH guidance.
  - Co-financing was realized above the initial commitment, and this denotes institutional ownership of and commitment to maintain/use project outputs.
  - Adaptive management was resorted to prevent decline of implementation efficiency due to the COVID-19 outbreak and restrictions on movement and field activities.
  - The availability of training material in all languages easily accessible through the BCH
  - Keeping the PMU small and;
  - Employing institutional contracts to bundle a number of expertise instead of employing individual consultants

***Efficiency is rated SATISFACTORY.***

### **3.4 Sustainability**

***EQ 10: What are the major risks and factors that can negatively impact on sustenance of project results (financial, socio-economic, institutional-political and environmental risks to sustainability)?***

116. ***Finding 10:*** *A number of risk factors threaten project achievements. These risks range from likely to highly likely, affecting the continued functioning of project outputs after phase out. The risks are assessed in detail below in the categories provided in the evaluation guideline. Overall assessment is that the risks are quite severe at the time of evaluation and will have a detrimental impact on the continuation of output-level achievements.*
117. The TE recognized the limits of the PMU to bring about changes that require implementation by the government counterpart. The speed at which changes can be brought to bear on government institutions was overrated at project design stage. At the time of the MTR, when the CEA was identified as the new NCA, it was likely (a reasonable expectation) that the CEA would be better able to assume that role at project end. It was also likely that the National Biosafety Act would have been enacted by project end. However, both these key results have not been achieved and have significant implications for sustainability. The continued use of the guidelines for RA, RM, and RC, administrative and operational manual, training manuals, the potential

for scale up and extension, and longer-term maintenance of the BCH mechanism are all contingent upon an effective regulatory framework and implementation of the Biosafety Masterplan. In the absence of the Biosafety Act there is the likelihood of project outcomes being fragmented between SCA mandates- developing independent of the objectives of this project. The health sector already has an independent legal instrument for addressing biosafety of food items.

**Institutional/political risks (highly likely):**

118. The absence of an enacted Biosafety Act, regulations and associated legal framework has implications throughout the project, but especially for outputs under Components 1 and 2. The enactment of the National Biosafety Act during the project period was a key assumption of the project document and this risk has not been addressed adequately. The absence of the Act impacts on the continuation of several project outputs. Key among these are: Outputs 1.1.1, 1.1.2 and 1.1.3 (Act, masterplan and regulations); Outputs 1.2.1,1.2.2 and 1.2.3 on administrative procedure, guidelines for administrative process and training and all outputs under Outcome 2 which are on the RA and RM methodologies and institutional readiness to apply the guidelines.
119. In addition to the absence of the Act, the lack of a clear NCA, and one that has the confidence of the SCAs is another risk factor observed by the evaluation team. Although the CEA is designated as the NCA, the Authority does not function in that leadership role nor have interactions with the SCAs. Among respondents from the SCAs and academia, there was a perceived dearth of confidence on the ability of the CEA to function as the NCA.
120. It also became disturbingly evident during interviews with CEA that there was a certain degree of institutional unwillingness to take on this new role and responsibility as they considered it outside of their current mandate.<sup>17</sup> Further, there is a notable absence of Institutional readiness within the SCAs (including aligning of institutional mandates and priorities and clear strategies) for execution of the Biosafety Masterplan. Many officers from SCAs have participated in training programmes, but within the SCAs there has not been a discussion on the processes and institutional-level readiness for biosafety related action.
121. The absence of a regulatory framework has and will have increasing negative impacts on biotechnology research and development programs in universities as well as in SCAs and other research organizations. Individual scientists state that it is currently

Footnotes

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<sup>17</sup> The CEA was established by the National Environmental Act (NEA) in 1991. Hence the agency considered being appointed the NCA under the National Biosafety Act as an entirely new and additional responsibility for which they had no institutional capacity or systemic readiness. This was stated in an interview with the TE team at the CEA Board Room by all senior management.



hampering research and application of GMOs/LMOs that are of high social and economic value such as in public health. The science and technology sector does not have a specific legal framework on biosafety but it does have a policy on biotechnology. Biosafety considerations will need to be included if there is increasing pressure on biotechnology researchers to deliver commercially viable products and processes especially through state funded research.

122. **Financial: (Likely).** In the last five years biosafety related investments were mainly from the project, academia or some private sector. There is no committed financing from the GoSL for biosafety programmes and activities in the Ministry of Environment, the NCA and the SCAs. There is no financial commitment for the implementation of the Biosafety Masterplan. Committed financing or plans to ensure financial sustainability of the outputs produced by the project are only found in the upgraded laboratories, which have several sources of funding including costing the testing facilities (ITI), opening up for academic projects and inter-agency collaboration (AgBC of University of Peradeniya). Risks for sustaining outcomes and application of outputs is likely due to absence of finances to continue biosafety work in the NCA and all SCAs. This is exacerbated in the current Sri Lankan climate of economic downturn and government budgetary reductions, even though it envisaged not to be so in the longer term.

**Socio-economic: (moderately likely)**

123. The current socio-economic situation in Sri Lanka, characterised by crippling foreign debt, lack of foreign exchange, food crisis, high inflation, and freeze on development spending, prevents policy level officers of the Ministry, NCA and SCAs paying due attention to sustaining project outputs. In most SCAs (especially those engaged in agricultural production such as Department of Agriculture, Department of Animal Production and Health and Department of Fisheries) the priorities were on immediate crisis management and food security. While acknowledging that biosafety is an important discussion and will likely come into focus as biotechnology applications may provide solutions to the multiple crises at hand, many of the high-ranking officials in SCAs did not have concrete plans for the continuation of project outputs.
124. Despite acknowledging that biotechnology is important for future agricultural and health related applications, the TE found low social acceptance of GMOs/LMOs in general. This was clear among officials, extension services in the SCAs, even among those who received training from the project. There is a deep-rooted suspicion among some members in the scientific community as well. Therefore, the general public largely has a negative perception (if at all) of GMOs and LMOs. The perceptions of media, NGOs, environmental activists remain negative and have not been influenced by the project. Even the CEA, the NCA, generally displayed cautious and negative

perceptions of GMOs/LMOs and their potential introduction into agriculture of health sectors. Therefore, it can be concluded that the public and institutional perceptions may impede the successful adoption of the project's outputs on RM (Component 2) even when a legal framework is in place.

125. **Environmental: (highly unlikely)** The environmental concerns are the major reason for implementation of this project and all stakeholders agree on the need to protect Sri Lanka's natural environment, particularly due to its high levels of endemicity. The evaluation team could not find any credible evidence of environmental risks associated with the continuation of the project's outputs.

*EQ 11: Will the NCA be able to carry out implementation of the biosafety legislation and administrative work?*

*EQ 12: Will the national institutions be able to carry out the functions related to RA, RM, RC, monitoring and inspection of LMOs? What is the assessment of capacity in the NCA and SCAs to function in the post-project period?*

126. **Findings 11 and 12:** *At present it is very unlikely that the CEA will be able to function effectively as the NCA within the next two years, partly due to their stated unwillingness to assume this role and mostly due to lack of capacity to function as the NCA in this very technical subject area. If the Biosafety Act becomes law and there are effective activities to enhance their institutional capacity, the CEA may be able to function in this capacity.-To carry out the functions of RA, RM and RC and monitoring and inspection, this regulatory framework has to be established. In the event of the National Biosafety Act not being in force within the next 2 to 3 years, the SCAs may resort to amending their own acts and regulations to enable them to address critical biosafety issues. However the institutional ownership of Biosafety and the project is poor.*

127. The SCAs need to establish their institutional programmes of work for biosafety with institutional committees and mechanisms for implementation in accordance with the Biosafety Masterplan. As the SCAs are all government institutions each one needs to put in place any mechanisms for financial sustainability of services carried out for industry and others who request their services. To carry out the functions of RA, RM and RC and monitoring and inspection, the regulatory framework have to be established. Even if the Biosafety Act comes into force, the SCAs need more training (of their new officers and junior technical staff) and establishment of specialized infrastructure (for controlled laboratory and field trials etc.) and consumables to effectively carry out all phases.

128. Institutional ownership of biosafety is poor despite agreement by all SCAs of the importance of biosafety currently as well as its increase in the future. There is no evidence of improved services rendered to third parties from the institutions as the SCAs have not received any samples for testing and identification of GMOs/LMOs as envisaged by the project. The Ministry of Health does not carry out such test either despite having a legal basis since 2006. They accept certificates of compliance to the Food Act from importers.
129. Capacity improvement in the SCAs cannot be measured clearly as there is no baseline capacity assessment for comparison. Since project inception, biotechnology has independently risen in importance within the country and globally and has obviously influenced perceptions and capacity building through other means. However, the MTR as well as the TE perceives increased awareness levels (knowledge transfer) across all stakeholders including the SCAs, in the acknowledgement of the increased need to include biosafety aspects into the mandates of SCAs and of university and research institute programmes and willingness to take forward institutional programmes, acknowledgement of the outputs of the project that can be used after project completion, readiness to include biotechnology/ biosafety topics into secondary school curriculum.
130. The project's approach to training also doesn't lend to sustainable retention of training capacity. ToT approach was not followed- intensive training of selected individuals within the key agencies who could have carried out follow up training programmes in the agencies or, or sector-oriented awareness sessions to other colleagues. The individual beneficiaries who responded to the evaluation questionnaire, almost universally, said that the training was inadequate. The only exception is those who received the laboratory training on-site in Peradeniya and in India.
131. Capacity retention in NCA and SCAs and other project partners remain a moot point. Challenges posed by the government administrative system which calls for inter-departmental transfers every 3-4 years, retaining trained technical capacity is an issue for all SCAs. Capacity will be retained only if there are follow up programmes that reinforce the training using the outputs of the project. In the absence of such programmes the capacity will gradually decrease with the retirement or transfers of trained personnel without being transmitted within the institution, as well as loss of skills due to non-application. Again, capacity reinforcement of SCAs will be relevant only if there is appropriate regulatory framework(s) for SCAs and the NCA to carry out their functions under the Biosafety Masterplan. The NSF, the science and technology academic and research programmes of universities will continue to improve their capacities independent of project interventions

EQ 11.1: Will the focal point for biosafety be able to operationalize the national BCH (Sri Lanka BCH website)

132. **Finding 11.1:** *The project has trained the staff of the National Focal Point to upload and maintain the BCH. There is a reasonable expectation that they can carry out the above. It is too early to be specific on this. The knowledge material developed by the project had been uploaded to the BCH. The National Focal Point has at least two officers trained by the project to maintain the national BCH. The national BCH is also linked to the global BCH maintained by the CBD Secretariat (CBD/ CBF). At least one official from the Ministry of Environment, BDD will attend a training workshop organised by the CBD later this year on maintaining and updating the BCH. As such, updating information on the BCH is already factored into the work plans of the Ministry. Evaluation interviews also revealed that the Ministry of Environment will have budgets from 2023 to continue awareness raising and knowledge dissemination activities using material and content created by the project.*

EQ 11.2 Will upgraded labs be able to conduct regulatory testing of LMOs?

133. **Finding 11.2:** *The laboratories should be able to conduct regular testing and detection work once the Biosafety Act is in force, or if requests for testing is made under another act of an SCA. The ITI is highly likely to be financially sustainable as it is already providing services to industry. The NPQS will receive government funding as it is the testing authority for the Plant Protection Act. The laboratory of the AgBC of the University of Peradeniya has plans to establish a mechanism to sustain itself financially as endorsed by the highest levels of university administration. It also expects to provide testing and identification services to export industries in several provinces of Sri Lanka due to its strategic location in the Central Province as well as to capitalize on the rise of export oriented industries on spices and other types of food. The laboratory of ITI is already selling services to private sector food and agri-produce exporters for a fee.*

134. “We will commit to introducing an institutional mechanisms to sustain the laboratory facilities at AgBC. For this, I will be putting in place the required framework for the lab to be recognised as a university institution of national importance and be funded for its upkeep through regular budgets while the laboratory management will also be tasked with ensuring they have sufficient funding for regular research programmes.”  
Vice Chancellor of the University of Peradeniya.

EQ 13: What is the likelihood that the project results will continue to be useful or will remain even after the end of the project?

135. **Finding 13:** *It is very likely that the project results will continue to be useful after project end if there is a regulatory framework for biosafety within the next two years. This is a prerequisite for all other functions (application of RA, RM, RC methodologies, use of guidelines, laboratory testing and identification, and further training within SCAs, awareness and education of non-specialist stakeholders) of the SCAs envisaged by the project. If the SCAs are able to function effectively, the levels of utilization of project outputs will be high.*
136. The crux of the sustainability argument is hinged on the Biosafety Act and its regulatory and institutional framework. Unless there is a streamlined and operational regulatory framework; continued capacity building of SCAs; a functional NCA that has won the confidence of the SCAs of their ability to operate effectively, and continued awareness raising of the public and educational inputs at secondary schools level, the results of the project are likely to decline significantly within the next one to two years. The ability or readiness in Sri Lanka to implement the CBF, which the project strived to achieved will be undermined
137. Recognizing the importance of the Biosafety Act for project sustainability the TE team had meetings with the Legal Draftsman’s Department (LDD) and Ministry of Environment’s, and CEA’s Legal Officers to understand the delays in enacting the Biosafety Act. According to the Legal Draftsman’s Office, the policy decisions and technical details of an Act have to be provided by the relevant ministry- in this case the Ministry of Environment. As for the last communication between parties in March 2022, at the time of the meeting of the TE team with the LDD officials, they were awaiting written submission from the Ministry of queries raised by the LDD, in the process of amending the draft act post comments from the Attorney General’s Office in 2019. There was renewed interest among parties to finalise the revised Biosafety Act and proceed for approval from the Cabinet of Ministers and the Parliament.

***Sustainability is rated MODERATELY UNLIKELY.***

### **3.5 Factors Affecting on Project Performance / Quality of Execution**

**EQ 14:** *To what extent was the project implementation and execution tasks effectively carried out?*

**EQ 14.1:** *Execution support: Efficiency and quality of inputs of PMU and project consultants*

**EQ 14.2:** *Implementation Support: What were the contributions received from FAO and the Government (BDS of the Ministry of Environment) for improved delivery?*

138. **Finding 14:** *Project implementation and execution have been clinically satisfactory. The project has achieved many of its outputs, some of them have been achieved well over the targeted number and well before the target date. The project has received*

*excellent technical support from the LTO and guidance from the FLO. PSCs have been convened and all major decisions approved. The Evaluation Team also noted that the PSC also had participants who were project beneficiaries and also consultants to the project as individual specialists. The evaluation team points out that this practice contravenes the firewall that should exist between project implementation and oversight. The TE team realises however, that given the very limited resource pool available in country for biotechnology and biosafety, such overlaps may have been hard to avoid.*

139. **Finding 14.1 Execution Support:** *The PSC is at the apex of its governance mechanism. The PSC was chaired by the Secretary, Ministry of Environment and convened meetings every year. The Evaluation Team noted that the Steering Committee did not directly link with the NCCB in Sri Lanka. This lack of coordination between the project and the national advisory body for biosafety in Sri Lanka may have led to the delay in enacting the Biosafety Act. The NCCB is also the oversight mechanism for the biosafety framework in Sri Lanka was in fact closely engaged with project development in 2015. However, during implementation, the inter-relationship with the project appears to have weakened and finally, there have been no NCCB meetings convened after 2018. The BDS of the Ministry of Environment is the primary focal point for the NCCB as well as the government focal point for project implementation. Therefore, the weak coordination with the NCCB is regrettable.*
140. The project received excellent level of support from FAO's LTO. All technical outputs of the project and terms of reference for all consultants were cleared by LTO, and prior to COVID-19 lockdown, he travelled to Sri Lanka on mission to support the project. The project was also guided aptly by the FLO to produce timely PIRs (project implementation reviews) and to steer the MTR and ensure the adoption of the recommendations made by the MTR. The FLO guided the development of the project ToC during the MTR. The Budget Holder was the FAO representative in Sri Lanka and the project was supported by the CO based FAO Assistant Representatives for programme and for operations, and sporadically, by the Monitoring and Evaluation Officer. Many of the project's procurements of goods and services were handled by the FAO CO.
141. **Finding 14.2 Implementation:** *The PMU was staffed with a project manager with biotechnology background, an experienced finance and administrative officer, an administrative assistant and a communications specialist (consultant). This team managed all project related events, procurements and meetings/ training programmes, as well as all reporting requirements to government, FAO and GEF. As such, project management was highly efficiently managed.*

142. The PMU has regular formal and informal interaction with the national focal point, the BDD of the Ministry of Environment. The guidance provided by the Director, BDD on stakeholder engagement, technical direction, etc., to the PMU has been instrumental in delivering the outputs effectively. The BDD had a dedicated officer (Assistant Director) who liaised closely with the project, especially on the training and awareness programmes, organising meetings with PSC, SCAs and the CEA, once it was nominated as the NCA.
143. Implementation reviews were conducted during the PIR preparation. FAO conducted implementation reviews during monthly programme meetings. PTF meetings are not recorded.

*EQ 14.3: Quality and usefulness of monitoring and evaluation systems in place?*

144. ***Finding 14.3:*** *Not having a dedicated Monitoring and Evaluation Officer or obtaining such services from an expert on part-time contract has impacted systematic data collection on change brought on by the project and reporting on outcome level indicators.*
145. The Project did not have a dedicated Monitoring and Evaluation Officer and depended on the FAO CO for this support. The PIRs were prepared by the Project Manager, reviewed by the LTO and finally quality assured and approved by the FLO. The evaluation team notes that there was no systematic collection of data for monitoring of the projects. Especially project risks could have been more closely monitored by the PMU and reported in PIRs and flagged at PSCs or PTF meetings. The onus lies not just with the PMU to keep an eye on critical risks, but also by the Budget Holder and the PSC. Many output level indicators in the results framework are straight forward. But outcome level reporting is hindered by the lack of measurable data or ability to ascertain changes from the baseline. For example, the Biosafety Communications Strategy was developed using the data collected from a baseline survey administered in 2018. However, there has been no survey at the end of project -even among the project's direct respondents- to ascertain the improvements in knowledge and awareness, and positive and negative perceptions on biosafety and GMOs even among the project's key stakeholder agencies. The questionnaires employed by the evaluation team pointed to increased awareness in every stakeholder category, even those who had participated for just a single awareness raising session.
146. A more targeted survey by the project team would have been useful to demonstrate results of the implementation of the communications strategy. The evaluation team observes that the narrative reporting at outcome level does not meet the data requirement or provide the accurate picture of progress against indicators in the

project results framework. The inability of FAO and the PMU to source dedicated monitoring and evaluation support especially in the last half of the project (post MTR) is seen as a regrettable missed opportunity,

EQ 14.4: Adoption and implementation of MTR recommendations

147. **Finding 14.4:** *The project had carried out all the MTR recommendations to varying degrees and reported this progress in the terminal PIR. While the recommendations were carried out, there needed to be more follow up actions by the FAO and Ministry of Environment on two critical recommendations; 1) on the assigning of CEA as the National Component Authority and delivering sufficient capacity to the CEA to carry out its duties as NCA; and 2) on supporting integration of existing Sri Lankan scientific expertise on biotechnology and biosafety to enhance sustainability of project outcomes. In the case of the latter, the evaluation team observed that there are several new biotechnology-related developments in Sri Lanka which are quite disconnected from the project and that the project's reach to the semi-government, private sector actors and agencies have been poor in general.*
148. Other critical MTR recommendations remain unaddressed, or not satisfactorily addressed. The MTR recommended that the project engage the wider scientific community in project activities, but this was not satisfactorily followed up. The MTR recommended the reformulation of the log frame and combining outcomes, but indicators and targets were not refined to reflect emerging risks and project related.

EQ 15: What is the extent of stakeholder engagement, involvement in project design and implementation?

149. **Finding 15:** *A wide range of stakeholders have engaged in project implementation. The large majority of these were beneficiaries of the project's outreach and awareness activities. Stakeholders were largely drawn from government institutes and universities. Many other stakeholders from private sector, media, and NGOs had participated mostly in single awareness sessions. However, many of them, who had not been exposed to biotechnology and biosafety previously, reported improved and enhanced awareness of both aspects post project exposure.*
150. There were clearly four main categories of project stakeholders in the initial project documentation. The first category consisted of government agencies who were directly engaged in the project's implementation such as the Ministry of Environment, the CEA, the Department of Agriculture, the Department of Animal Production and Health, the Ministry of Health, the Department of Fisheries and Department of Wildlife Conservation – basically the NCA and SCAs. The second was the range of other project beneficiaries such as the laboratories at AgBC, NPQS and ITI; the universities



who benefitted from the short courses, the government agencies whose staff capacities were developed (Sri Lanka Customs, Seed Certification) and the National Institute for Education (NIE) that benefitted from the material developed for secondary education. The next level of stakeholders were those who supported project to attain its outcomes such as the LLD, SLAB, Attorney General's Department, etc. Finally, there were stakeholders who participated in the awareness sessions which were conducted throughout the last two years, sometimes as webinars and when possible, in person. These included media personnel in print and electronic media outlets, private sector engaged in modern agriculture and agri-business including biotechnology or importation of seeds and livestock feed, university students and school students and importantly, representatives of non-governmental and civil society organizations.

151. Throughout the project, stakeholder engagement has remained targeted and consistent with the project's objectives. Due to its extreme technical niche, the project did not have the wider, far-flung network of stakeholders commonly seen in other development projects and programmes. There is a clear discrepancy in the responses received from individual beneficiaries of the project and institutional beneficiaries. Many individuals report positive feedback from the project and the ability to use the knowledge and information imparted. They generally rank high the level of engagement and meeting of expectations. This could be since many of them were receiving new information and knowledge. A few quotes from in person interviews are given below.
152. "I received a good understanding and awareness of GMOs and LMOs during the workshops I attended in 2017. The Board of Investment promoted foreign direct investment, and I work in the agriculture sector, where biotechnology developments are taking place rapidly. So this exposure was immensely helpful to understand the risks and the right procedure to be followed when encouraging biotech investment to Sri Lanka." Senior official from the Board of Investment.
153. Organisations, on the other hand, had different expectations and the SCAs interviewed by the evaluation team report that their expectations were not fully met by the project. The Department of Agriculture and Department of Animal Production health both report that their ability to function as SCAs is still not adequately developed in terms of internal processes, systems, ability to use the RA guidelines and manuals and ownership of awareness material aimed at their constituency.
154. "Many of us received individual training. Some attended multiple sessions. However, no one has the 'entire picture' of the responsibility of an SCA and institutional procedure to be followed. There have been no discussions within the institutions. No

exchange of information between different people who attended different capacity building or knowledge exchange programmes.” Senior Official from the Department of Animal Production and Health.

155. “No procedure for RA has been yet established. Partly due to the lack of legislative process but also as Department of Agriculture we feel that we should have had more support from the project to establish the internal processes and protocols required of an SCA.” Senior official from Department of Agriculture.
156. Some stakeholders felt that they should have played a more active engagement in the project. The Plant Genetic Resources Centre (PGRC) under the Department of Agriculture for example felt that they should have played a more central role in the project given their mandate and trained personnel for crop germplasm preservation and exchange in the country. The plant breeders (research scientists) from Horticultural Crops Research and Development Institute (HORDI) of the Department of Agriculture and those from the PGRC play an important roles in development of crop varieties using biotechnology.

*EQ 16: What was the extent of private sector and non-government stakeholder engagement in project implementation?*

157. **Finding 16:** *The involvement of private sector and NGOs’ involvement in the project is rudimentary. Interviews and discussions with stakeholders from NGOs and private sector basically were invited for one-off awareness sessions, some of these were conducted on-line. Therefore, NGO and private sector involvement is only as a downstream beneficiary.*
158. Ninety percent (90%) of stakeholders are government and academic. The rest consist of NGOs and media. Even for these, the engagement with the project has been limited to participation in a single awareness programme -for most part. Therefore, the evaluation team concludes that beyond the government agencies directly involved with the project, the academia and educational institutes, the project outreach to private sector, NGOs and media is negligible.

***Overall progress on implementation is SATISFACTORY***

*EQ 17: Did the committed co-finance materialize and in a timely manner?*

159. **Finding 17:** *Co-financing has been fully realized by the end-of-project. The Project Terminal Report and the final PIR records that the project has been able to raise more co-finance than initially committed. When formulated the project document records*

*the project committing USD 2.9 million in co-finance which was approximately 110% of the GEF grant and a little over 55% of the total project cost. In June 2022, the project reports USD 5,152,880.87 in co-finance from the same project partners. All co-financiers are from the national government and there is no cash co-finance reported. All co-finance is in-kind contributions from the national agencies. The full list of co-finance amounts and agencies is found below.*

160. The nature of this support, largely, assumes the form of time- allocations of ministerial/ government agency personnel in support of this project. These individuals are located within targeted partner/ beneficiary institutions, which implies a familiarity with relevant policy, institutional hierarchies, and arrangements (internal and across ministries/ departments). Further to this, they also possess (or in some cases will, after targeted training) the requisite information needed to perform biosafety- related functions. Co-financing, which secures the project an institutional and personnel advantage it would otherwise lack, positively enhances not only the effectiveness but also the efficiency of the project’s performance. Co-financing additionally contributes to the sustainability of project achievements/ results, not only because of the institutional commitment, but importantly because of the capacitation of relevant personnel, the institutional knowledge, and the operationalization of administrative arrangements such that they become entrenched as part of institutional culture, no longer existing merely in documents.

**Table 3.4: Co-financing commitments committed vs. realized at the end of the project**

Sources of Co-financing <sup>18</sup>	Name of Co-financer	Type of Co-financing	Amount Confirmed at CEO endorsement / approval	Actual Amount Materialized at 30 June 2022
National Government	Ministry of Mahaweli Development and Environment	In-Kind	85,714.00	56,439.06
National Government	Ministry of Health, Nutrition and Indigenous	In-Kind	8,571.00	337,266.49
National Government	Department of Animal Production and Health	In-Kind	357,143.00	*216,641.19
National Government	Department of Agriculture	In-Kind	405,714.00	*264,630.44
National Government	National Plant Quarantine Service (NPQS)	In-Kind	291,143.00	**770,489.15

Footnotes

<sup>18</sup> Sources of Co-financing may include: Bilateral Aid Agency(ies), Foundation, GEF Agency, Local Government, National Government, Civil Society Organization, Other Multi-lateral Agency(ies), Private Sector, Beneficiaries, Other.

National Government	Department of Fisheries and Aquatic Resources	In-Kind	36,143.00	*22,094.60
National Government	Department of Wildlife Conservation	In-Kind	285,714.00	400,251.07
National Government	Sri Lanka Customs	In-Kind	382,471.00	903,098.11
National Government	University of Colombo	In-Kind	300,000.00	*565,116.65
National Government	University of Peradeniya	In-Kind	300,000.00	*546,921.58
National Government	National Science Foundation (NSF)	In-Kind	105,714.00	669,932.52
	FAO	In-Kind	400,000.00	400,000.00
<b>TOTAL</b>				5,152,880.87

\* Excluding from 01 July 2020 to 30 June 2021 contributions (pending)

\*\* Excluding from 01 July 2019 to 30 June 2021 contributions (pending)

**EQ 18: Environmental and social safeguards- These have been addressed under Effectiveness (section 3.2, Finding 4, paragraph 53) and are addressed in section 4 below).**

## 4. Gender, Safeguards and Other Cross Cutting Issues

### 4.1 Gender Considerations

*EQ 19: What are the main gender results of the project compared to original design objectives?*

161. **Finding 19:** *The project did not have a gender strategy or action plan. This was pointed out during the MTR and the project has been asked to collect gender disaggregated data from training workshops and awareness sessions to report on gender reach. The project's stakeholder show a good gender balance and in some government institutions and academic settings, a clear bias towards female participation. There is sufficient gender balance in the PSC composition as well. Project communications material is gender sensitive. The central figure used for public and student awareness infographic videos is a female character names Professor Biosafety.*
162. Gender results need to be analysed more fully. However, at the outset gender results look promising despite the project not having a gender strategy or gender action plan. The project also did not engage a gender expert. However, the project has very satisfactory levels of female participation from the governance mechanism right down to the number of participants in awareness sessions.
163. The representation from many of the key government agencies and universities on the PSC were female. Several sectoral component authorities and laboratories were led by females. There were female biotech experts on the consultancy teams hired nationally and internationally.
164. While the Biosafety Act, masterplan or the RA guidelines are not gender specific, the project has created space and opportunity for women scientists to participate in and hone their skills in this very demanding technical arena. It is very encouraging to see the number of young female scientists engaged in biotech research and biotech safety programmes in the government institutes and in academic settings. There was no purposive targeting of women for training and awareness programmes. It was realised early on that this would not be necessary to have any positive discrimination in beneficiary selection. The number of female beneficiaries of the project exceeds that of males, and this alone is a very reassuring development for future female engagement in science.
165. Interestingly, the communications material developed by the project is quite gender sensitive whether by design or default. As stated before the communicators have used a female scientist as the main character explaining the benefits of biotechnology and

the need for biosafety. Such proactive and positive stereotypes will lead to influencing young minds and encourage more women to take up science and technology programmes in higher educational institutions.

166. One MTR recommendation was to collect gender disaggregated data on stakeholders. The final project stakeholder lists shows that 57% of participants of the training events, awareness sessions and meetings/workshops were female.

*EQ 20: How has the project contributed to improved and increased awareness and access to scientific information on biosafety to the public?*

167. **Finding 20:** *The TE finds that the project has significantly contributed to increased awareness among stakeholders as reported under Outcome 7 of the Effectiveness Section. A more in-depth look at the outreach of the project and its contribution to overall knowledge on biotechnology and biosafety finds that the project has successfully packaged and disseminated technical information to a wide range of stakeholders. This was done through the communications and awareness creation work, by influencing the national science curriculum for schools, by enabling access to knowledge material through the BCH, etc. There has been some criticism that the project ‘promoted’ biotechnology instead of focusing on biosafety. Some beneficiary feedback also indicated that they considered the project’s awareness as ‘too basic’ and requested the project to have more follow up and higher-level awareness programmes.*
168. “You have to understand the basic science behind biotechnology to discuss biosafety. You cannot separate them. That is why awareness on biotechnology is a necessary pre-requisite to all awareness and training programmes.” Senior academic and project beneficiary.
169. For many beneficiaries that project had delivered increased awareness on biotechnology and biosafety. Many of the training sessions, being one day events or conducted online- only managed to successfully impart knowledge and awareness than actual skills, or training capability. Beneficiary feedback summarized in the section on Effectiveness (Table 3.1) shows that the majority reported receiving new technical knowledge which is extremely/ highly useful to their work. They also report that they acquired new ‘capacities’ in terms of knowledge that is directly relevant to their work. However, the ability to implement their new knowledge and skills is highly limited.
170. The knowledge material produced by the project cover a wide spectrum of user groups ranging from young children, science educators, policy makers, farmers, media etc. It provides general content on biotechnology applications in agriculture, food

production and medical applications. However, given the project's focus on building capacity in the SCAs, more targeted knowledge material on each on SCA mandates (fishery, health, agriculture, animal production, etc.) would have been more useful to be used as part of the training package. None of the SCAs or individual beneficiaries within the SCAs had been involved in the process of producing this awareness material, and none of them had been provided awareness material to be disseminated in the course of their own work.

171. Public awareness and perceptions on GMOs and LMOs remain somewhat negative. While the TE team has not been able to independently verify this, given the scope of the questionnaire survey, the responses received by the team from government officials, field extension officers, customs and food and drug inspectors, etc., demonstrate that there are negative perceptions and unscientific views still held by the majority. In fact, the fear of public backlash against GM trials was openly discussed by the Director of the Rice Research Institute when he pointed out, "I will not risk the reputation and safety of this research station by engaging in GM trials, knowing that it could well go against the public sentiment. We don't need to risk all the good work we have put into developing Sri Lanka's staple crop of rice through conventional biotechnology."
172. Another issue with the knowledge sharing sessions was that they were mostly done as one-off events. For example, media institutions were invited to one session in 2018 which was an awareness programme about the project, even before the communications strategy or knowledge products were available. NGOs were similarly invited to one meeting. Respondents of both stakeholder categories, when contacted by the TE team, had no recollection of the programme (It happened so long ago) or could not remember the content of the programme (It was technical and not related to issues we deal with every day).

## 5. Conclusions and Recommendations

### 5.1 Conclusions

#### 5.1.1 Relevance

173. The project was found to be highly relevant to a narrow spectrum of agencies and institutions. These are agencies that are directly engaged with biotechnology in Sri Lanka, including those who maintain laboratory services and academic institutions who firmly agreed that the project's objective to strengthen the biosafety framework and capacities is important to 1) benefit from biotechnological research and development efforts of local and international scientists; and to 2) protect Sri Lanka's unique biodiversity and food security from threats emanating from GMO/LMOs.
174. The degree of relevance has increased since project development and inception. Biotechnology developments and applications in the region, and in the global agriculture, medical and food technology fields are significant, and have triggered a wave of new scientific research in Sri Lanka as well. COVID-19 pandemic and solutions to it brought medical biotechnology much more to the public attention and limelight<sup>19</sup>. Biotechnology is also seen as a viable solution to Sri Lanka's (and global) food crisis, and future ability to increase food production without opening new land.<sup>20</sup>
175. The project outcomes and objective remain relevant and unfulfilled due to under-achievement and 'difficult' outcome level indicators that were not well formulated or were unachievable in the project time period. Unfortunately, the project did not use the MTR (when the project ToC was constructed) to pare down some of these expectations and revise indicators and targets.

#### 5.1.2 Effectiveness

176. Overall, the project has increased awareness of the importance of biosafety to a wide range of stakeholders that is already referred to in the sections on Relevance, Effectiveness and Sustainability.
177. The laboratories upgraded by the project for testing and identification of GMOs/LMOs are the most effective outputs of the project. Without project intervention this enhanced status of the laboratories would not have been possible. They have the highest likelihood of being able to sustain their intended activities after project end.
178. The urgent need to have a regulatory framework on biosafety in Sri Lanka is agreed upon by almost every stakeholder. The Biosafety Act not being enacted by the end of

#### Footnotes

<sup>19</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8012985/>

<sup>20</sup> Interview with Director General of Agriculture in Peradeniya on August 03, 2022



the project is the most serious issue that restricts effectiveness of project outcomes. While the Biosafety Act is not a product of the project, its enactment is a critical assumption for achievement of project effectiveness

179. The national institutional procedures and guidelines prepared by the project are not being followed by the NCA or SCAs for the lack of legal framework. None of the guidelines, risk analyses, manuals etc. can be applied without a legal framework on biosafety. Existing low levels of collaboration within SCAs resulted in absence or very low levels of transmission of the benefits of training to other relevant officers. Poor coordination between SCAs is a barrier to sustaining project outcomes even if the Biosafety Act enters into force. This situation is not within the control of the project, but it has affected project effectiveness and outcomes and will continue unless addressed. The lack of interagency and coordination between ministries has contributed to the government's initiatives on promotion of biotechnology research and development progressing without acknowledgement of the project.
180. Absence of a central Biosafety Act is likely to lead to fragmentation of the outcomes into the SCAs own mandates. For example, the acts and regulations governing each SCA may be amended to address biosafety and GMO/LMO topics. The Ministry of Health is one of the key SCAs of biosafety. However, their engagement with the project is less than satisfactory. Within the Ministry, the engagement with the project is not meeting expectations yet. Communications about the benefits of the training need improvement and a strengthened commitment to implement the Food Safety Act.
181. Absence of a central, national level legal framework is likely to lead to fragmentation of the outcomes into the SCAs own mandates. For example, the acts and regulations governing each SCA may be amended to address biosafety and GMO/LMO topics. The Ministry of Health is one of the key SCAs of biosafety. However, their engagement with the project is less than satisfactory. Within the Ministry, there is a lack of transmission of the benefits of training (this was observed in other SCAs as well) and their engagement with the project is not yet meeting expectations. Communications about the benefits of the training need improvement and a strengthened commitment to implement the Food Safety Act.
182. The CEA being identified as the NCA in 2021 is a serious cause for concern as has already been stated. The NCA and SCA's institutional readiness is insufficient to carry out the recommended processes for RM.
183. Measuring effectiveness is hampered by the absence of a baseline for outcomes as well as the lack of specialized monitoring and evaluation. Effectiveness of capacity

building efforts, especially, cannot be measured post-facto without an idea of the baseline situation in each project. The evaluation team did not find credible evidence to support facets such as improved service delivery by the SCAs and laboratories (apart from those to export industry as a separate service), increased funding committed towards biosafety-related activities etc.

### **5.1.3 Efficiency**

184. The project was managed efficiently by a small PMU team supported by a knowledge management team. At project design, around 26 different technical consultancies were envisaged to deliver the four components. One exemplary management strategy of the project was to 'bundle' these technical consultancies into a few institutional contracts.
185. COVID-19 related challenges were successfully managed by the PMU and PSC- diverting the project's training and awareness components to online platforms and supporting the national agencies to participate through zoom and other interactive learning tools- which actually enhanced cost-effectiveness by enabling wider participation.
186. The PMU did not have dedicated monitoring and evaluation capacity, even after the MTR in 2020 the PMU did not engage a Monitoring and Evaluation specialist to support the terminal PIR and terminal report. As such, the evaluation team finds that the project did not track the indicators included in the project results framework.
187. Co-financing has been fully realized by the end-of-project. The Project Terminal Report and the final PIR records that the project has been able to raise more co-finance than initially committed.

### **5.1.4 Sustainability**

188. Project's sustainability is critically hampered by the lack of a legal framework. All outputs of Components 1 and 2 rest on the assumption that the Biosafety Act will be enacted during the project period and provide the legal backbone for the institutional, procedural and systemic capacities that the project sought to improve. Without the Biosafety Act in place, critical outputs such as the Biosafety Masterplan, Institutional guidelines, RA guidelines and RM/RC methodologies run the risk of not being applied as expected after the project ends.
189. There are significant financial risks after project closure. Only the three laboratories have assured funding and continuity plans post project. There is no assured funding for the Biosafety Masterplan, there are no dedicated funding lines within the NCA or

the SCAs for continuity of biosafety related work, even for continuous training of their staff.

190. The project's approach to training is not sustainable. The project should have focused on building a cadre of informed trainers within each SCA and created a pool of national-level trainers to carry on project's capacity building work. Instead, the project has delivered mainly one-off training programmes, that too mostly on online platforms.
191. The risk of social acceptance continues as perceptions and attitudes towards GM technology remain negative, even among key officials of the SCAs, despite the public and targeted awareness campaigns of the project. The risks of introducing GM food, crops or other material are perceived as outweighing potential benefits. The CEA, the designated NCA, is extremely cautious on GMOs and will adopt a precautionary approach to the RA and RM process (as opposed to an approach that will objectively facilitate new biotechnology applications).
192. The role of the PSC in managing the risks of project sustainability (financial, legal-institutional) is seen as inadequate by the evaluation team. The PSC nominated the CEA as the NCA and ensured that there is approval of the Cabinet of Ministers for this nomination. However, the PSC did not address other critical issues that undermine the NCA's capacity to perform the tasks.

#### **5.1.5 Gender, Knowledge Management and Stakeholders**

193. Although the project had no gender strategy, the evaluation team finds that the project has successfully reached large female beneficiary group. The project's stakeholder list shows over 55% of participants are female. There has been good gender balance and in some government institutions and academic settings, a clear bias towards female participation. There is sufficient gender balance in the PSC composition as well. Project communications material is gender sensitive.
194. The project has produced a very good collection of knowledge products for diverse audiences from young school children, tertiary education institutes, general public, SCAs and academic community. The high-quality material- both printed and audio-visual- production was supported by a team of two international and national consultants. Respondents from CEA felt that the awareness material 'promoted biotechnology' rather than discussing the risks of such technology and the need for biosafety.
195. There is no evidence of the project directly engaging with private sector, except to promote awareness among some media organizations and a few agriculture tech

firms. Over 90% of the extensive stakeholder list is government or academia/ educational.

## 5.2 Recommendations

196. **Recommendation 1. To Government Implementing Partner:** Ensure that the Biosafety Act is made legal as urgently as possible. The wide-ranging impacts of the Act not being legal are well documented in this report. Even though the project did not develop the Biosafety Act, the sustainability of a majority of project investments depends on its enactment and implementation
197. **Recommendation 2. To FAO:** The FAO to consider convening a strategic level forum by the end of 2022 with participation of a diverse range of stakeholders involved in this initiative, and those with limited involvement to date but who should be more closely engaged in the future. This is to discuss the findings of this evaluation and implications at the national scale, in particular, what key steps and commitments should be taken collectively to build on current achievements and address the identified fundamental barriers towards meeting bio-safety goals. This would help to avoid what appears to be an important risk, fragmentation of outcomes into different sectors and that will undermine the aim of this project to establish a national level mechanism to meet the obligations on the CPB.
198. **Recommendation 3. To FAO and Government Implementing Partner:** The NCCB should be strengthened to become proactive in resolving critical project issues (such as capacitating the NCA, ensuring the masterplan is funded and that SCA's have the requisite internal processes and capacities to implement the RM guidelines) and ensuring sustainability of project outputs such as BCH and knowledge and training material produced. The PSC and PTF should have both paid much more attention to the sustainability aspects of the project during the post MTR period, supporting the PMU not just to complete outputs but to ensure demonstrate outcome level results and continuity of those outputs.
199. **Recommendation 4. To Project Developers and FAO:** Given the absence of dedicated monitoring and evaluation capacity embedded in the PMU or accounted for in the technical consultancies this has seriously impeded the project's ability to create necessary baselines and collect relevant data to report back on indicators. FAO should ensure in future projects that sufficient monitoring and evaluation capacity is allocated to suit project need and complexities, and in place at an early stage to allow timely development of monitoring and evaluation plans and systems, baselines and other essential provisions. Strong baselines are required to measure change in capacity development projects. Therefore, project development or inception stage

must carry out objective capacity assessment for all institutional and individual capacities that the project seeks to transform.

200. **Recommendation 5. To Government Implementing Partner:** The willingness and capacity of the CEA as the NCA should be examined closely and in the event of the CEA being unable to fulfil its intended role, alternatives need to be put in place. The Ministry of Environment should have a plan B if the CEA's role as NCA is not fulfilled even when the Biosafety Act is finally enacted.
201. **Recommendation 6. To FAO and Government Implementing Partner:** Further training is needed to bring the SCAs to the required level of competence to handle biosafety and GMO/LMO topics in their own mandates. Continued capacity building is required across all SCAs, with preferably agreements within SCAs on retaining trained staff. The absence of intra agency transmission of knowledge and skills obtained through the project is a serious issue that needs to be addressed in future projects. This is somewhat beyond the control of a project (reasons have been identified before) but ought to be identified clearly and strategies adopted to reduce its impacts as much as possible in donor funded projects
202. **Recommendation 7. To FAO and Government Implementing Partner:** Sustained awareness programmes are needed. The Ministry of Environment needs to formulate plans to 1) continuously maintain the BCH and update its information, b) use the high-quality awareness and training material produced by the project and c) secure financing from the regular ministry budgetary provisions for the continuity of biosafety related awareness. In particular an updated status assessment of the levels of public awareness and continued high impact campaigns to improve public engagement is recommended
203. **Recommendation 8. To Project Developers, FAO and Government Implementing Partner:** Engage private sector and other stakeholders such as NGOs, media, etc. as much as possible, avoiding the pitfalls of conflicts of interest that may ensue. Many of the awareness programmes were one-off and this is obviously not adequate for a very technical subject area like biosafety and biotechnology, which is also evolving very rapidly.
204. **Recommendation 9. To Project Developers, FAO and Government Implementing Partner:** During project preparation phase, when carrying out the context analysis, and baseline situation, a more thorough review of the biotechnology related developments should be carried out. Building linkages with this project's outcomes and outputs with ongoing biotechnology research and promotion programmes of the government and private sector may have ensured greater level of sustainability to the

outputs of the project. This will also increase the pool of well qualified and competent in-country scientists who can contribute much to the specialized subject area of biosafety and biotechnology but are currently operating outside of the project ambit.

205. **Recommendation 10. To Project Developers, FAO and Government Implementing Partner:** It is recommended that a new phase of the project is developed to support continued capacity development of the key government agencies, NCA and SCAs. This is essential for the sustainable and effective use of the current project's technical outputs, (Biosafety Masterplan, Draft Administrative Guidelines, RA Methodology, etc.) which are of high quality but would not be sustained beyond project period unless supported externally. A another phase would enable the project to overcome the critical gaps mentioned in this report and ensure that the products and processes of the first project are seamlessly integrated into a new project that will enable Sri Lanka to fully meet the requirements of the CPB while reaping benefits of modern biotechnology.
206. **Recommendation 11. To the Government Implementing Partner:** It is recommended that periodic programmes or activities that are required as part of obligations to the CPB be carried out even in the absence of a regulatory framework. These types of activities are best if they engage the SCAs, the upgraded laboratories, connect with awareness raising campaigns so that a continuous engagement of major stakeholders is established.
207. **Recommendation 12. To the FAO and Government Implementing Partner:** It is recommended to develop activities to investigate environmental risks from GMOs/LMOs on a scenario or case analysis basis, especially given Sri Lanka's biodiversity rich status.

## 6. Lessons Learned

### Project Design, Appraisal and Planning

208. **Lesson 1: Rigorous assessment of key assumptions of FAO and GEF projects prior to approval-** Projects with national legislation or other forms of legal instruments being enacted as key assumptions (they have wide ranging impacts on project effectiveness and sustainability) ought to be considered realistically. This project has clearly demonstrated the pitfalls of having such key assumptions. Project designs with feasible, alternative scenarios that can achieve similar outcomes, even if such a key assumption is violated are likely to avoid negative outcomes.
209. **Lesson 2: Establishment of baseline data during project design or soon after project inception especially in capacity development projects-** In the absence of such information, it is difficult to disentangle impacts on individuals and institutions due to the project interventions from those that arose independently. This project achieved its best results in components that dealt with highly specialized, narrowly focussed activities such as laboratory upgrades, training of its staff and introduction of a new area of accreditation to the SLAB. These were visible as the baseline status was known.

### Project Management and Monitoring

210. **Lesson 3: ToC is available at project approval and for regular monitoring-** This is connected to Lesson 1 as well. The ToC of this project was developed only at the MTR and did not contribute to the desired course corrections by project end. The sum of outputs does not always translate to outcome level results, when there are significant risk factors and these risk factors are not managed and monitored effectively. Care should also be taken in designing indicators for a project. Indicators should be measurable and clear, and quantitative where possible
211. **Lesson 4: Monitoring country ownership of results while the project is in progress-** Without ownership by national institutions such as the NCA and SCAs, the regulations, guidelines, training material and knowledge and awareness material on biosafety prepared by the project will be of little future value or use. National ownership should be cultivated and monitored through national /sectoral institutional focal points, ToT and engaging these agencies (beneficiaries) directly in the production and dissemination of material (guidelines, curricula and knowledge material).

### Risk Management

212. **Lesson 5: The roles of the PSC and the PTF-**The Biosafety Act was highly delayed even up to the time of the MTR. In the period since the MTR, the draft Biosafety Act has been in a near stationary state. Proactive RM should have been a priority post-MTR.

Given the fundamental importance of the act, the aforesaid actors ought to have addressed this delay. The global and regional experience of the FAO and GEF in project management should have been applied better to reduce this delay.

213. **Lesson 6: Contingency plans to adapt to unforeseen global situations such as the COVID-19 pandemic-** This is an obvious necessity in the post COVID world. This project had adapted well by transitioning to online mode of delivery in many of its activities during the pandemic. Even during the ensuing social, economic and political turmoil within the country, some awareness and laboratory related activities were conducted.

#### **Sustainability**

214. **Lesson 7: Ensuring budgets for sustaining project outcomes-** Project and government focal point must ensure that some budgets- either public or another project- is available for when it is clear that without such continuous streamlined support, NCA and SCAs would not be able to sustain biosafety related activities.

#### **Stakeholder Engagement**

215. **Lesson 8: The role of science and technology actors in projects on specialized areas of science-** At the time of project design, biotechnology was already a component in Sri Lanka's scientific research landscape while attention to biosafety aspects (as set out in the CPB) was not a priority. Given the global and regional developments in biotechnology and the role of scientists in them, project should have provided a more important role to these actors. Project designers should engage in trends and or scenario analysis particularly in science and technology based themes. Even in the absence of a legal framework on biosafety the government has promoted biotechnology investments and research.

#### **Other- Capacity Building**

216. **Lesson 9: Training approaches and time frames for expected change to materialize in capacity building projects-** The subject area of Biosafety being a specialized area of biotechnology will require longer time frames to be included within work programmes of SCAs and of the NCA. Adopting a wide range of training approaches for training master trainers within SCAs and sustained over a longer period of time and addressing intra agency knowledge and skills transmission, would have made a greater difference. Retention of trained staff was an issue that affected the capacities of SCAs.



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9. **Secretariat of the Convention on Biological Diversity.** Cartagena Protocol on Biosafety [<https://bch.cbd.int/protocol/>]

### Footnotes

<sup>21</sup> Other sources have been included as footnotes in the text of the report

## **Appendices**

- Appendix 1 : List of Stakeholders Interviewed for the Terminal Evaluation
- Appendix 2A : GEF Evaluation Criteria Rating Table
- Appendix 2B : Evaluation Matrix, Questions and Sub-questions
- Appendix 2C : Capacity Development Assessment Approach
- Appendix 3 : GEF Rating Scheme
- Appendix 4 : Co-Financing Table
- Appendix 5 : Results matrix
- Appendix 6A : Template Questionnaire – PMU
- Appendix 6B : Template Questionnaire – Institutional beneficiaries
- Appendix 6C : Template Questionnaire – Individual Beneficiaries

## Appendix 1: List of Stakeholders Interviewed for the Terminal Evaluation

No	Category	Name	Position / Title	Institution	Type of interview FGD, Individual (I) Onsite (OS), Online (OL), Questionnaire completed (QC)
1.	Project Implementation and Execution	Dr. Sunimal Jayatunga	Additional Secretary/ Env. Pol. and Planning	Ministry of Environment	FGD, OS
2.	Project Implementation and Execution	Ms. Pathma Abeykoon	National Project Director, Director BD	Ministry of Environment	FGD, OS
3.	Project Implementation and Execution	Ms. Surani Pathirana	Focal Point - Assistant Director	Ministry of Environment	FGD, OS
4.	Project Implementation and Execution	Ms. Lumbini Kiriella	Chief Legal Officer	Ministry of Environment	FGD, OS
5.	Project Implementation and Execution	Mr. Shanka Gunawardena	Project Manager	FAO Project Office, Implementation of the National Biosafety Framework	I, OS
6.	Project Implementation and Execution	Ms. Dilini Gunawardena	Programme Assistant	FAO Project Office, Implementation of the National Biosafety Framework	FGD, OS
7.	Project Implementation and Execution	Ms. Mihirini Kandanaarchchi	Public Awareness and Outreach Strategy Implementation Specialist	FAO Project Office, Implementation of the National Biosafety Framework	FGD, OS
8.	Project Implementation and Execution	Mr. Nanda Senanayake	Finance and Operations Assistant	FAO Project Office, Implementation of the National Biosafety Framework	FGD, OS
9.	Project Implementation and Execution	Mr. Vimalendran Sharan	FAO Representative	FAO	I, OS
10.	Project Implementation and Execution	Mr. Dihan Hettige	FAO Assistant Representative (Operations)	FAO	FGD, OL

11.	Project Implementation and Execution	Dr. Mba Chikelu	Lead Technical Officer	FAO	FGD, OL
12.	Project Implementation and Execution	Ms. Chhakchhuak Lianchawii	GEF Funding Liaison Officer	FAO	FGD, OL
<b>Project Consultants (National and International)</b>					
13.	Project Implementation and Execution	Dr. Maheshi Athapaththu	Biosafety Clearing House (BCH) Website Support (Comp 1)	Individual	I, OL
14.	Project Implementation and Execution	Mr. Anandalal Nanayakkara	Biosafety Legal Matters (Comp 1)	Individual	I, OL
15.	Project Implementation and Execution	Prof. Athula Perera	Environmental / Confined Field Trials / Risk Analysis Framework (Comp 2)	National Science Foundation/ Individual	I, QC
16.	Project Implementation and Execution	Prof. Chamari Hettiarachchi	Contained use and Institutional Biosafety Committees (Comp2)	National Science Foundation/ Individual	I, OL, QC
17.	Project Implementation and Execution	Prof. Shamala Thirimanne		National Science Foundation/ Individual	I, OL, QC
18.	Project Implementation and Execution	Prof. Pradeepa Bandaranayake (has another role as Director AgriBiotech Center, University of Peradeniya) as upgraded laboratory testing facility provider	GM Testing Lab & Monitoring and Inspection of GMOs (Comp 3)	National Science Foundation/ Individual	I, OS, QC
<b>Institutional Partners Including NCA/ SCA/ PSC/Project Partners</b>					
19.	National Competent Authority	Lal Fernando	Acting Deputy Director General	Central Environmental Authority	FGD, OS
20.	National Competent Authority	N.S. Gamage	Deputy Director General	Central Environmental Authority	FGD, OS

21.	National Competent Authority	Dr. R.M.S.K. Ratnayake	Deputy Director General	Central Environmental Authority	FGD, OS
22.	National Competent Authority	G.A. Weerasundera	Deputy Director General	Central Environmental Authority	FGD, OS
23.	National Competent Authority	Dr. Jagath Gunawardena	Consultant/ Chair Advisory Board	Central Environmental Authority	FGD, OS
24.	National Competent Authority	P.S. Maliyadda	Assistant Director	Central Environmental Authority	FGD, OS
25.	National Competent Authority	Mr. A.G. Dhammika L. Karunaratne	Deputy Director/ Natural Resources Management and Monitoring Unit (currently director North Central Province)	Central Environmental Authority	FGD, OS
26.	National Competent Authority	Priyangani Gunathilake	Director (Natural Resource Management)	Central Environmental Authority	FGD, OS
27.	National Competent Authority	Manuja Wimalasena	Legal Officer, Legal Unit	Central Environmental Authority	FGD, OS
28.	Sectoral Competent Authority	Dr. Ajantha de Silva	Director General	Department of Agriculture	I, OS
29.	Sectoral Competent Authority	Dr. Samantha K. Wasala	Additional Director General	Department of Agriculture	I, OS
30.	Sectoral Competent Authority	Dr. W.A.P. Weeraratna	Director	Horticultural Crop Research & Development Institute (HORDI), Department of Agriculture	I, OS
31.	Sectoral Competent Authority	Dr. Jayantha Senanayaka	Director	Rice Research and Development Institute, Department of Agriculture	I, OS
32.	Sectoral Competent Authority	K.M.D.W.P. Nishantha	Assistant Director Research (Entomology)	Horticultural Crop Research & Development Institute	FGD, OS

33.	Sectoral Competent Authority	H.M.P.S. Kumari	Assistant Director Research (Plant Breeding Division)	Horticultural Crop Research & Development Institute	FGD, OS
34.	Sectoral Competent Authority	Tharangani Welegama	Assistant Director Research	Horticultural Crop Research & Development Institute	FGD, OS
35.	Sectoral Competent Authority	Bhagya Dissanayake	Assistant Director/ Agriculture Research	Horticultural Crop Research & Development Institute	FGD, OS
36.	Sectoral Competent Authority	Dr. Disna Ratnasinghe	Director, Seed Certification and Plant Protection Centre	Department of Agriculture	I, OS
37.	Sectoral Competent Authority	Dr.Lakmini Priyantha	Additional Director	Seed Certification Service, Department of Agriculture	I, OS
38.	Sectoral Competent Authority (Upgraded laboratories)	Dr. W.A.R.T. Wickramaarachchi	Additional Director/ Plant Quarantine	National Plant Quarantine Service, Katunayake, Department of Agriculture	FGD, OS
39.	Sectoral Competent Authority (Upgraded laboratories)	M. H.A.D. Subhashini	Assistant Director of Agriculture/ Research (ADA-R)	National Plant Quarantine Service, Katunayake	FGD, OS
40.	Sectoral Competent Authority (Upgraded laboratories)	N.H. Madhuka Chitrapala	Assistant Director of Agriculture/ Research (ADA-R)	National Plant Quarantine Service, Katunayake	FGD, OS
41.	Sectoral Competent Authority	Dr. Jeevani Deddugoda	Acting Director	Plant Genetic Resources Centre, Department of Agriculture	FGD, OS
42.	Sectoral Competent Authority	Deepthi Kekulandala	Deputy Director/ Evaluation, Biotechnology and Education	Plant Genetic Resources Centre	FGD, OS
43.	Sectoral Competent Authority	Srimathi Edirisinghe	Head, Tissue Culture Laboratory	Plant Genetic Resources Centre	FGD, OS
44.	Sectoral Competent Authority	Lasantha Ratnaweera	Acting Registrar of Pesticides	Office of the Registrar of Pesticides, Dept. Agriculture	FGD, OS

45.	Sectoral Competent Authority	Upendra Abeysinghe	Deputy Director Research	Office of the Registrar of Pesticides	FGD, OS
46.	Sectoral Competent Authority	Dr. K.A.C.H.A. Kothalawala	Director General	Department of Animal Production and Health (DAPH)	FGD, OS
47.	Sectoral Competent Authority	Dr. R. Munasinghe	Additional Director General	Department of Animal Production and Health	FGD, OS
48.	Sectoral Competent Authority	Dr. N. Priyankarage	Registrar/ Animal Feed	Department of Animal Production and Health	FGD, OS
49.	Sectoral Competent Authority	Dr. Rangani	Director/ Veterinary Regulations	Department of Animal Production and Health	FGD, OS
50.	Sectoral Competent Authority	Dr. S. Keerthirathne	Veterinary Surgeon	Department of Animal Production and Health	FGD, OS
51.	Sectoral Competent Authority	Dr. Priyanwada Wickramasinghe	Head - Vaccine Production Centre/ Veterinary Research Officer and member of the Project Steering Committee	Veterinary Research Institute (VRI), DAPH	FGD, OS
52.	Sectoral Competent Authority	Dr. S.S. Iddamaldeniya	Veterinary Research Officer	Veterinary Research Institute	FGD, OS
53.	Sectoral Competent Authority	Dr. M.A.R. Priyantha	Veterinary Research Officer	Veterinary Research Institute	FGD, OS
54.	Sectoral Competent Authority	Dr. Vijitha Bandara	Head Central Veterinary Investigation Unit	Veterinary Research Institute	FGD, OS
55.	Sectoral Competent Authority	Dr. Chamari Palliyaguru	Head of Division/ Animal Nutrition	Veterinary Research Institute	FGD, OS
56.	Sectoral Competent Authority	Dr. M.D.S. Dissanayake	Head of Division/ Parasitology	Veterinary Research Institute	FGD, OS
57.	Sectoral Competent Authority	Dr. V.T.S.K. Siriwardena	Director	Ministry of Health, Environment Occupation Health and Food Safety (E & OH)	FGD, OS

58.	Sectoral Competent Authority	Dr. Inoka Suraweera	Deputy Director	Ministry of Health, Environment Occupation Health and Food Safety	FGD, OS
59.	Sectoral Competent Authority	Dr. Dedunu Fernando	Medical officer -Food Safety	Ministry of Health, Environment Occupation Health and Food Safety	FGD, OS
60.	Sectoral Competent Authority	Dr. Udari Mabolage	Consultant Community Physician	Ministry of Health, Nutrition and Ind. Medicine	FGD, OS
61.	Sectoral Competent Authority	Mr. M. Marcus Mallikage	Director	Department of Fisheries and Aquatic Resources	I, FGD, OL
62.	Sectoral Competent Authority	Jithmini Weligamage	Legal Assistant Officer	Department of Fisheries and Aquatic Resources,	FGD, OL
63.	Project partner/ Laboratory testing facility provider	Ajith Siriwardena	Deputy Director/ Laboratory	Sri Lanka Customs	FGD, OS
64.	Project partner/ Laboratory testing facility provider	Ms. P. Wijenayake	Superintendent of Customs/ Biodiversity Cultural and Natural Heritage Protection Unit	Sri Lanka Customs	FGD, OS
65.	Project partner/ Laboratory testing facility provider	Ms. Deepika Senevirathne	Deputy Government Analyst	Government Analyst Department	19 <sup>th</sup> October
66.	Project partners	Prof. Ranjith Senaratna	Chairman	National Science Foundation	19 <sup>th</sup> October
67.	Project partners	Dr Mahesha Nadugala	Senior Scientific Officer	National Science Foundation	I, OL, FGD, OS
68.	Project partner/ Laboratory testing facility provider	Dr. Radhika Samarasekera	Director General	Industrial Technology Institute (ITI)	I, OS
69.	Project partner/ Laboratory testing facility provider	Ms. W.T.G.S.L. Withana	Research Scientist	Industrial Technology Institute (ITI)	FGD, OS



70.	Project partner/ Laboratory testing facility provider	Ms. Y. Vidushani	Assistant Research Technologist	Industrial Technology Institute (ITI)	FGD, OS
71.	Project partners	Ms. Deepthika Kulasena	Deputy Legal Draftsman	Legal Draftsman's Department (LDD)	FGD, OS
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74.	Project partners	Ms. Sitara Madiwake	Assistant Lecturer	National Institute of Education (NIE)	I, OL, QC
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77.	Upgraded laboratory of Agriculture Biotechnology Centre	Dr. Bhagya Chandrasekera	Research Scientist, Agriculture Biotechnology Center	University of Peradeniya	I, OS
78.	Project partners (laboratory accreditation)	D. Bandusoma	Deputy Director (Accreditation)	Sri Lanka Accreditation Bureau	FGD, OL
79.	Project partners (laboratory accreditation)	Natasha M.M. Jayamanne	Assistant Director (Accreditation)	Sri Lanka Accreditation Bureau	FGD, OL, QC
80.	Project partners (laboratory accreditation)	P.H.S. Kumarathunga	Assistant Director (Accreditation)	Sri Lanka Accreditation Bureau	FGD, OL, QC
81.	Project partners (laboratory accreditation)	P.T.S.R. Mudalige	Assistant Director (Accreditation)	Sri Lanka Accreditation Bureau	FGD, OL, QC
82.	PSC	Prof. Shamala Tirimanne	Department of Plant Sciences	University of Colombo	I, OL

83.	Project partners (Academic and Researcher)	Prof. Chandrika Nanayakkara	Professor in Plant Sciences	Consultant Sri Lanka Accreditation Bureau, beneficiary of project training on Hands-on laboratory training on detection of genetically modified organisms/living modified organisms, Faculty of Science, University of Colombo	I, OL
84.	Project partners	Dr. S. Krishnarajah	Director General	Department of National Botanical Gardens	FGD, OS
85.	Project partners	Dr. Achala Attanayake	Deputy Director	Department of National Botanical Gardens	FGD, OS
86.	Project partners	Dr. Subhani Ranasinghe	Deputy Director/ National Herbarium	Department of National Botanical Gardens	FGD, OS
87.	Project partners	M.M.D.J. Senaratna	Deputy Director/ Floriculture	Department of National Botanical Gardens	FGD, OS
88.	Project partners	Nadeeka Gunawardena	Agricultural Monitoring Officer/ National Herbarium	Department of National Botanical Gardens	FGD, OS
89.	Project partners	Sudath Jayasekera	Promotions	Board of Investments	I, OL
90.	Project partners	Dr. Dharshan De Silva	Director/ Kotelawala Defense University- Institute for Combinatorial Advanced Research & Education (KDU- CARE)	General Sir John Kotelawala Defense University	I, OS
91.	Project partners	Dr. Gowry Moorthy	Former Senior Scientist National Science Foundation (handled the contracted work from the Biosafety Project)	General Sir John Kotelawala Defense University	I, OS
92.	Project partners (Upgraded laboratory)	Prof. M.D. Lamawansa	Vice Chancellor	University of Peradeniya	I, OS

93.	Project partners (Upgraded laboratory)	Prof. D.K.N.G. Pushpakumara	Professor, Former Dean, Faculty of Agriculture	University of Peradeniya	FGD, OS
94.	Project partners (Upgraded laboratory)	Prof. Venura Herath	Professor, Department of Agricultural Biology, Faculty of Agriculture	University of Peradeniya	FGD, OS
95.	Project partners (Upgraded laboratory)	Dr. Yamuna Somaratna	Faculty of Agriculture	University of Peradeniya	FGD, OS
96.	Project partners			University of Peradeniya	FGD, OS
97.	Project partners			University of Peradeniya	FGD, OS
<b>Beneficiaries</b>					
98.		S.A.M.R. Abeykoon	Deputy Director	Seed Certification Service, Department of Agriculture	FGD, QC, OS
99.		R.A.I.S. Ariyaratne	Deputy Director,	Seed Certification Service, Department of Agriculture	FGD, QC, OS
100.		A.A.S.L. Abeynayake	Research Assistant	Seed Certification Service, Department of Agriculture	FGD, QC, OS
101.		E.W.P.C. Karunaratne	Agriculture Instructor	Seed Certification Service, Department of Agriculture	FGD, QC, OS
102.		G.G.D.S. Chandrasa	Assistant Director	Seed Certification Service, Department of Agriculture	FGD, QC, OS
103.		K.K.S.D. Pradeepika	Deputy Director	Seed Certification Service, Department of Agriculture	FGD, QC, OS
104.		H.R.U.T. Erabadupitiya	Assistant Director	Seed Certification Service, Department of Agriculture	FGD, QC, OS
105.		A.R.J. Athokorale	Research Assistant	Seed Certification Service, Department of Agriculture	FGD, QC, OS
106.		J.W.K. Samaranayake	Assistant Director	Seed Certification Service, Department of Agriculture	FGD, QC, OS
107.		M.G.N. Sundamaliee	Deputy Director, Kandy	Provincial Department of Agriculture	FGD, QC, OS
108.		H.M.G.M.K. Weerasooriya	Deputy Director	Provincial Department of Agriculture	FGD, QC, OS
109.		B.H.M.S.M. Palamkumbura	Agriculture Instructure	Provincial Department of Agriculture	FGD, QC, OS
110.		K.D.M.S.U.B. Dissanayake	Agriculture Instructure	Provincial Department of Agriculture	FGD, QC, OS
111.		N.S. Chamathi	Agriculture Instructure	Provincial Department of Agriculture	FGD, QC, OS
112.		M.C. Perera	Agriculture Instructure	Provincial Department of Agriculture	FGD, QC, OS
113.		Nihal Premarathne	Assistant Director	Ministry of Health, Environmental, Occupational Health	FGD, QC, OS

114.		R.D. Sumanarathna	Food and Drug Inspector	Ministry of Health, Environmental, Occupational Health	FGD, QC, OS
115.		A.C.M Javed Marikkar	Food and Drug Inspector	Ministry of Health, Environmental, Occupational Health	FGD, QC, OS
116.		P.B.L. Pothuwila	Food and Drug Inspector	Ministry of Health, Environmental, Occupational Health	FGD, QC, OS
117.		K.G.S.W. Pathma Kumara	Food and Drug Inspector	Ministry of Health, Environmental, Occupational Health	FGD, QC, OS
118.		Dr. B.D. Fernando	Medical Officer -Food Safety	Ministry of Health, Environmental, Occupational Health	FGD, QC, OS
119.		G.K.A.D.U. Dharmathilake	Assistant Superintendent of Customs	Sri Lanka Customs	FGD, QC, OS
120.		P.W. Balasuriya	Assistant Superintendent of Customs	Sri Lanka Customs	FGD, QC, OS
121.		E.M.D. Niroshana	Assistant Superintendent of Customs	Sri Lanka Customs	FGD, QC, OS
122.		P.N.A. Dayananda	Assistant Superintendent of Customs	Sri Lanka Customs	FGD, QC, OS
123.		D.M.N.C.S. Dissanayake	Assistant Superintendent of Customs		
124.		G.D.N. Menike	Research Officer	National Institute of Post Harvest Management, Department of Agriculture	I, QC
125.		Ruwan Ratnayake	Senior Research Officer	National Institute of Post Harvest Management, Department of Agriculture	I, QC

## Appendix 2A: GEF Evaluation Criteria Rating Table

GEF criteria/sub-criteria	Rating <sup>22</sup>	Summary comments <sup>23</sup>	SOURCE
<b>A. STRATEGIC RELEVANCE</b>			
A1. Overall strategic relevance	S	Overall strategic relevance of this project is high. Sri Lanka is country that has benefitted from and used modern biotechnology from the 1970s. Biotechnology is even more relevant today in the context of increasing agricultural productivity and ensuring nutrition in a country that has a high population density. However, there is a discrepancy between the official 'closed doors' policy for allowing genetically modified organisms and their products into the country, and the advanced biotechnology research that is being supported by the universities, research and development arms of the government and private sector biotechnology firms. The project was aimed to support the country benefit from modern biotechnology related developments while ensuring the safety and security of the environment and human health.	Project Document, PIRs, terminal report, Evaluation Interviews and Questionnaires, Focus Group Discussions
A1.1. Alignment with GEF and FAO strategic priorities	S	The project was designed to deliver the necessary capacities and tools to strengthen the implementation of the Cartagena Protocol, facilitate technology transfer between global, regional countries biotechnology and biosafety and enhance capacity of national institutions to implement the Biosafety Framework in line with the Convention on Biological Diversity. The project is consistent with GEF policies, UN Sustainable Development Framework in Sri Lanka and the FAO's country priorities.	Project Document, PIRs, terminal report, Evaluation Interviews and Questionnaires, Focus Group Discussions

### Footnotes

<sup>22</sup> See rating scheme at the end of the document.

<sup>23</sup> Include reference to the relevant sections in the report.

A1.2. Relevance to national, regional and global priorities and beneficiary needs	S	The project is aligned to national policies that encourage agricultural and livestock productivity, human health and nutrition, promotes science and technology research and development in the country, promotes industrial application of science and technology and protects against threats to natural biodiversity and human health. The project responds to the Biosafety Policy and National Biosafety Framework developed in 2005 in response to ratification of the Cartagena Protocol for Biosafety. The project is aligned with Sustainable Development Goals on agriculture and food security (Goal2), water (Goal 6), climate resilience (Goal 13) and biodiversity (Goal 15). The project is aligned to the Nationally Determined Contributions (NDCs) to the Paris Agreement and Sri Lanka’s (draft) national policy and strategy on sustainable development <sup>24</sup>	Project Document, PIRs, terminal report, Evaluation Interviews and Questionnaires, Focus Group Discussions
A1.3. Complementarity with existing interventions	MS	At present there are no other projects on biosafety. Existing research programmes have got some degree of exposure on biosafety needs due to this project. However, this has not been translated into implementation of expected outputs in research areas, such as functional institutional biosafety committees. The project has not effectively made better implementation of the biosafety component of the Ministry of Health Food Act.	Project Document, PIRs, terminal report, Evaluation Interviews and Questionnaires, Focus Group Discussions
<b>B. EFFECTIVENESS</b>			
B1. Overall assessment of project results	MS	Outputs have largely been achieved to an impressive degree. With the exception of outcomes under Component 1, other outcomes have been achieved to varying degrees with outcome 4 (Component 3) rated highly satisfactory. The comparison of the results framework in the project document (2016) with the reported results in the Terminal Report of the Project (June 2022) supported by the findings of the ET confirms these findings.	Document review (PIR 2019, 2020, 2021, 2022), Minutes of Steering Committees, interviews with project manager and PMU, SCAs, interviews with scientists, individual beneficiaries, observations of upgraded laboratories, The Terminal report of the Project (June 2022) and the Project Document (2016)

Footnotes \_\_\_\_\_

<sup>24</sup> <https://www.switch-asia.eu/resource/sri-lanka-national-policy-and-strategy-on-sustainable-development/>

B1.1 Delivery of project outputs	HS	All outputs achieved, some even overachieved.	Document review (PIR 2019, 2020, 2021, 2022), Minutes of Steering Committees, interviews with project manager and PMU, SCAs, interviews with officials of the National Science Foundation, observations of upgraded laboratories, the terminal report of the project (June 2022)
1.2 Progress towards outcomes <sup>25</sup> and project objectives			
- Outcome 1	MU	The Biosafety Act being legal has not been achieved at the time of project closure. The regulations to the Act have been developed but they cannot be implemented in the absence of a regulatory system. There were no samples submitted for testing and there is no incentive to submit samples due to the absence of the aforementioned reason. The absence of a functional regulatory system has negatively affected attainment of many project outcomes.	Terminal report of the project, review of PIRs, PPRs, onsite meetings with PMU, NPD and other officials of the national focal point and SCAs (mid to senior level administrators and scientists), interviews with researchers in universities, onsite meeting with legal officers (Office of the Legal Draftsman)
- Outcome 2	MU	The draft manual on administrative and operational procedure for applications related to LMOs; one risk analysis framework, guidelines for RA, RM and RC developed with training of stakeholders. However, no implementation is possible without the legal Biosafety Act. There is no evidence of institutional programmes for biosafety as envisaged by the project. The SCAs also require more training as well as infrastructure to conduct controlled laboratory and field testing of LMOs/GMOs.	Terminal report of the project, review of PIRs, PPRs, onsite meetings with PMU, NPD and other officials of the national focal point and SCAs, individual beneficiaries

Footnotes

<sup>25</sup> Assessment and ratings by individual outcomes may be undertaken if there is added value.

- Outcome 3	MS	BCH is operational since March 2021. More than 500 users have accessed the BCH up to time of terminal evaluation. No survey of the levels of satisfaction available. Staff of the national focal point have been trained to upload information and maintain the website. It is too early to assess the impact of the BCH on the stakeholders and on the general public	BCH website, meetings and questionnaires from SCAs, PMU, national focal point staff
- Outcome 4	MS	Trained individual cannot implement the RA, RM and RC and cite the absence of samples submitted for testing. There is no legal requirement to do submit samples in the absence of an enforceable Biosafety Act. Training does not seem to have achieved the expected level of effectiveness within SCAs. Retention of trained staff is also an issue. No evidence of within institution training programmes. All SCAs request further training on RA, RM and RC.	Interviews with senior and technical staff of SCAs, individual beneficiaries
Outcome 5	HS	The most successful outcome is within Component 3 of the project. The laboratory of the ITI is already operational with sample testing for export industries, the laboratory of the NPQS and that of the Agriculture Biotechnology Centre expecting to do so in the near future. The staff of upgraded laboratories are capable to take their training forward. Mechanisms for financial sustainability of testing laboratories are in place at the ITI, being put in place at the other two institutions. Knowledge and skills for establishment of procedures for accreditation of laboratories for LMO/GMO testing have been introduced to the SLAB with their staff trained at facilities overseas. A national referral laboratory has been identified with steps being taken to ensure transparency and efficiency of testing mechanisms.	Onsite inspections of laboratories, meetings with senior scientists of SCAs, technical staff and administrators of the upgraded laboratories, senior administrators of the respective institutions, SLAB officials
Outcome 6	MS	The evidence for this outcome overlaps with those for outcome 5. As noted above the upgraded laboratories are either operational or expect to do so even in the absence of the functional Biosafety Act. Even if the Biosafety Act is enforceable SCAs do not possess the specialized infrastructure to carry out controlled laboratory and field testing. The TE team notes that this outcome	Onsite inspections of laboratories, meetings with senior scientists of SCAs, senior administrators of SCAs, research scientists in universities



		is an overdesign of the project- too ambitious for Sri Lanka to have the ability for contained laboratory and field testing capabilities by project end	
Outcome 7	MS	Awareness of the importance of biosafety has increased among SCA senior to field level staff and even among some scientists who carry out research in biotechnology. Outputs have been achieved with high quality communication and education material available. However. There is no public participation and nor is there participation of Sri Lankan industry in biotechnology. There is no evidence of annual budget for programmes for continuous awareness raising within SCAs.	Interviews with senior and technical staff of SCAs, individual beneficiaries, interviews with media personnel and representatives from industry
Overall rating of progress towards achieving objectives/ outcomes	MS	The Project objective is not attained, nor is the intermediate goal as stated in the ToC attained despite impressive attainment of outputs. This rating is a combined result of the ratings for outcomes.	Evidence provided for outcomes 1 to 7 above.
B1.3 Likelihood of impact	MS	The project has increased in relevance by the time of project end in comparison to its inception time. The importance of biosafety is set to increase not only to meet compliance with global requirements under the CPB but also due to the rise of the biotechnology research sector within Sri Lanka. The absence of a functional Biosafety Act undermines many of the expected impacts and reduced the effectiveness of this project but with the caveat that if the Biosafety Act becomes enforceable, that impacts will be much greater.	Sources of evidence listed under Effectiveness
<b>C. EFFICIENCY</b>			
C1. Efficiency <sup>26</sup>	S	The project has been delivered efficiently and cost-effectively according to the planned work programme, with very few deviations from the original budgets. The project has been able to secure high quality technical advisory services through institutional contracts and avoided the inefficiencies and	Interviews with PMU, FAO and Government Focal Point. Review of project budget disbursement, Project Document and PIRs, Terminal report

Footnotes \_\_\_\_\_

<sup>26</sup> Includes cost efficiency and timeliness.

		administrative workload of recruiting a large number of individual consultants for specific work packages/ terms of reference. The project managed core operations with a very tight project management unit (PMU) of four full-time personnel and one knowledge management consultant. However the lack of a full time monitoring and evaluation specialist impeded systematic tracking of both results and risks. Budget utilisation as of end August 2022 is at 95%. The project faced some budgetary challenges due to the sharp fluctuations in exchange rate in March and April 2022 in Sri Lanka. However, they have adaptively managed this situation to record satisfactory financial delivery at project closure.	
<b>D. SUSTAINABILITY OF PROJECT OUTCOMES</b>			
D1. Overall likelihood of risks to sustainability	MU	In the absence of another phase of this project the outcomes and utilization of outputs will decay rapidly over the short to medium term. Fragmentation of outcomes into institutional mandates is likely. As the outcomes on enactment of the Biosafety Act and implementation of the BS Master Plan are not achieved at project end, there is a significant risk to sustainability	Interviews with senior staff of SCAs including researchers and senior administrative officers, individual beneficiaries, researchers from universities, PMU
D1.1. Financial risks	Unlikely	There is no committed financing from the Government of Sri Lanka for biosafety programmes and activities in the Ministry of Environment, the NCA and the SCAs. There is no financial commitment for the implementation of the Biosafety Master Plan. Committed financing or plans to ensure financial sustainability of the outputs produced by the project are only found in the upgraded laboratories and at the Agriculture Biotechnology Centre, University of Peradeniya. The current economic crisis in the country has exacerbated the negative impacts on financial sustainability.	Interviews with senior staff of SCAs, scientists, national focal point, researchers from universities
D1.2. Socio-political risks	Moderately Likely	The general public largely has a negative perception (if at all) of GMOs and LMOs. The perceptions of the media, NGOs, environmental activists remain negative and have not been influenced by the project. However, it is possible	Media reports, needs assessment of awareness and education prior to development of the communication strategy; meetings with SCAs

		to overcome social perceptions against LMOS/GMOs particularly for those in the areas of health, food and other major economic activities.	
D1.3. Institutional and governance risks	Unlikely	At project end, the unfavourable perception of the CEA of their NCA role; the absence of a legal framework and absence of institutional programmes and ownership are significant risk factors	Meeting with CEA, PMU, national focal point, SCAs
D1.4. Environmental risks	Likely	There do not appear to be significant environmental risks at the time of TE. All stakeholders agree on the need to protect Sri Lanka's biodiversity. However, in a scenario where LMOs/GMOs are to be released, if public perceptions remain unfavourable or are not adequately addressed, there can be significant environmental risks	Meetings with SCAs, individual beneficiaries, scientists from universities
D2. Catalysis and replication		Unable to assess	
<b>E. FACTORS AFFECTING PERFORMANCE</b>			
E1. Project design and readiness <sup>27</sup>	MU	The project was designed to deliver the necessary capacities and tools to strengthen the implementation of the National Biosafety Framework and support the enactment of the Biosafety Act, which was in an advanced draft stage at the time of project design. The outcomes and outputs of the project were designed to achieve the objective which was to strengthen Sri Lanka's regulatory, institutional and technical capacities to implement the national biosafety framework. The outcomes and outputs were designed to address the key barriers identified during project design and were validated during the MTR. However, many of the assumptions made during the design stage proved unviable during implementation (see Table 3). These include critical assumptions such as the time taken for the legal passage of the Biosafety Act and the institutional nature of national and sectoral competent authorities.	Project Document, PIRs, Mid Term review report, terminal report, Evaluation Interviews and Questionnaires, Focus Group Discussions, meetings with PMU and FAO CO, LTO, FLO

Footnotes \_\_\_\_\_

<sup>27</sup> This refers to factors affecting the project's ability to start as expected, such as the presence of sufficient capacity among executing partners at project launch.

E2. Quality of project implementation	S	<p>1. Project implementation and execution has been clinically satisfactory. The project has achieved many of its outputs, some of them have been achieved well over the targeted number and well before the target date. The project has received excellent technical support from the LTO and guidance from the FLO. Project Steering Committees have been convened and all major decisions approved. The Evaluation Team also noted that the Project Steering Committee also had participants who were project beneficiaries. The Evaluation Team points out that this practice contravenes the firewall that should exist between project implementation and oversight. The TE team acknowledges, however, that given the very limited resource pool available in country for biotechnology and biosafety, such overlaps may have been difficult to avoid.</p> <p>2. Not having a dedicated M&amp;E officer or obtaining such services from an expert on part-time contract has impacted systematic data collection on change brought on by the project and reporting on outcome level indicators.</p>	Project Document, PIRs, Mid Term review report, terminal report, Evaluation Interviews and Questionnaires, Focus Group Discussions, meetings with PMU and FAO CO, LTO, FLO
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## Appendix 2B: Evaluation Matrix, Questions and Sub-questions

Evaluation Questions	Measure / Indicator of progress	Main sources of data / information	Methodology
<b>Relevance</b>			
<p>EQ1: Does the project design - outputs and activities - support the attainment of the project objective?</p> <p>1.2 Is the theory of change developed at MT still relevant and validated by stakeholders?</p>	<p>Logical alignment or consistency between project outputs and outcomes and results</p> <p>Level of evidence of acceptance of intended project results by beneficiaries at project design, project MTR and terminally</p> <p>Did the project design involve an assessment of capacity needs of individuals and organizations in biosafety/biotechnology in Sri Lanka</p>	<p>Project related documents (ProDoc, Results Matrix, Logical framework, MTR Report, PIRs, Validation and Inception workshop reports)</p> <p>Project design (PPG) team if available</p> <p>Interview with LTO, FLO, NPD, PM, project partners, beneficiaries</p>	<p>Document Analysis</p> <p>KPI (Key Person Interviews)</p> <p>Perception and experience-based survey questionnaire.</p>
<p>EQ2: Are project objectives relevant to national policies and stakeholder aspirations?</p> <p>2.2 to what extent has the project been consistent with national and sectoral policies and programmes?</p> <p>2.3 Has the project remained relevant to changing contexts and needs?</p>	<p>Alignment of project outcomes and impacts to key government policies and priorities</p> <p>Degree to which project outcomes and impacts contribute to national policies and goals</p>	<p>Document review- Biosafety Policy and Framework, Draft Biosafety Act, National Agricultural Policies and Plans, National Science and Technology Policies, National SDG targets, UNCCD, UNFCCC, Paris Agreement, NAP for Sri Lanka, GEF guidelines)</p>	<p>Document Analysis</p> <p>KPI</p> <p>Questionnaire survey: Perception and experience-based survey questionnaire</p>

<p>EQ3. Is the project objective congruent with the GEF focal areas/operational program strategies, country/government priorities and FAO Sri Lanka Country Programming Framework?</p> <p>3.1 Is the project objective coherent with SDG 15 (and related SDGs such as SDG 13 and SDG2) goals and targets, as well as with relevant international conventions and agreements (e.g. UNCCD, UNFCCC, Paris Agreement, and CBD)?</p>	<p>Extent to which GEF Strategic objectives, FAO country priorities, objectives of UNCCD, UNFCCC and Paris agreement</p> <p>Extent to which the project responds to SDGs and targets under the Convention for Biological Diversity and the Cartagena Protocol for Biodiversity</p>	<p>Final beneficiaries, project partners Interview with LTO, FLO, NPD, PM, project partners, beneficiaries</p> <p>Document review- Biosafety Policy and Framework, Draft Biosafety Act, National Agricultural Policies and Plans, National Science and Technology Policies, National SDG targets, UNCCD, UNFCCC, Paris Agreement, NAP for Sri Lanka, GEF guidelines)</p>	<p>Document Analysis</p> <p>KPI (Key Person Interviews)</p>
<p><b>Effectiveness</b></p>			
<p>EQ4: To what extent have the project objectives been achieved, and how effective was the project in achieving those?</p>	<p>Number of incremental environmental and development benefits directly attributable to the project</p> <p>(determine to the extent possible the impacts/results directly attributable for the project/ record other achievements in the field that has been independent of the project)</p>	<p>Final beneficiaries, project partners</p> <p>Media reports</p> <p>Reports of partner institutions, feedback forms from training events, minutes of steering and technical committees</p>	<p>Document Analysis</p> <p>Focus Group Discussions</p> <p>KPI</p> <p>Questionnaire survey: Perception and experience-based survey questionnaire</p>

	<p>To what extent did the project have an indirect effect (positive or negative) on other initiatives and how did this come about?</p> <p>Level of utilization of generated outputs and outcomes by final beneficiaries (institutional and individual)</p>		
EQ5: How effectively was the project able to follow the theory of change proposed at MTR	<p>Level of coherence between project design and project implementation approach</p> <p>Level of satisfaction level of organizations/individuals to the process followed by the project to improve mandates, structure and systems to achieve project objectives.</p> <p>Identification of key assumptions and the project's ability to monitor these and adapt as necessary</p>	<p>Document review (PIR 2019 and 2020), Minutes of Steering Committees</p> <p>Document review (PIR 2021 and 2022), Minutes of Steering Committees</p> <p>Interview with project manager, project consultants and service providers, beneficiaries and LTO, FLO</p>	<p>Document Analysis</p> <p>KPI</p> <p>Perception and experience-based survey questionnaire</p>
EQ6: Has project outcomes and key outputs been achieved -per outcome area (see specific questions below from TOR)	<p>For each outcome describe; Gap between expected and achieved progress of indicators in the results framework.</p>	<p>Final beneficiaries</p> <p>Media reports</p> <p>Reports of partner institutions</p>	<p>Document Analysis</p> <p>KPI</p>

	<p>Magnitude and intensity of identified barriers and impacts on achievement of results</p> <p>Quality of the manuals, SOPs and guidelines developed through the project.</p> <p>Percentage or number and quality of key strategies/programmes developed with project support and/or as a result of the new acquired techniques</p> <p>Quality and user-friendliness of the laboratory facilities</p> <p>Quality and user-friendliness of the training material produced</p> <p>Degree of perception change for biosafety and biotechnology achieved</p>	<p>Post training evaluations</p> <p>Observations of laboratories and training facilities</p>	<p>Focused group discussions (FGD) with training beneficiaries</p> <p>Questionnaire survey: Perception and experience-based survey questionnaire</p>
<p>Effectiveness sub questions: Outcome 1 (rating required)</p>	<p>To what extent has the Project effectively enhanced the capacity to develop, implement and coordinate biosafety legislations and regulations.</p>		



Outcome 2 (rating required)	To what extent has the Project effectively made the administrative systems for making biosafety fully functional.		
Outcome 3 (rating required)	To what extent has the Project effectively made the National Biosafety Clearing House operational		
Outcome 4 (rating required)	To what extent has the project effectively strengthened the national institutions for RA, RM and RC including monitoring and enforcement.		
Outcome 5 (rating required)	To what extent has the project effectively improved the capacity for detection and identification of LMOs		
Outcome 6 (rating required)	To what extent has the project effectively made the laboratories fully operational with the necessary infrastructures to carry out detection of LMOs, which allow Sri Lanka to meet its obligations under the CPB.		
Outcome 7 (rating required)	To what extent has the project effectively enhanced awareness, education and public participation in decision-making on biosafety?		

<p>EQ7: What are the key results of the project implementation?</p>	<p>Diffusion of know-how [E.g. trained staff are delivering outputs as a direct result of the training]</p> <p>Examples on use of developed manuals, SOPs and guidelines.</p> <p>Budget assigned and expenditure for the targeted institutional programmes and strategies.</p> <p>Increase in beneficiaries and coverage [examples of scale-up]</p> <p>Changes seen in the framework such as:</p> <ul style="list-style-type: none"> <li>a) Improvements in existing institutional policies, programmes and strategies.</li> <li>b) Number and quality of new strategies or programmes developed and under implementation.</li> <li>c) Public budget assigned and expenditures for the targeted programmes and strategies.</li> <li>d) Perception on quality of services from <ul style="list-style-type: none"> <li>i) programme beneficiaries - population;</li> <li>and,</li> <li>ii) institutions staff</li> </ul> </li> </ul>	<p>Final beneficiaries</p> <p>Media reports</p> <p>Reports of partner institutions</p> <p>Post training evaluations</p> <p>Observations of laboratories and training facilities</p>	<p>Document Analysis</p> <p>KPI</p> <p>Focused group discussions (FGD) with training beneficiaries</p> <p>Questionnaire survey: Perception and experience-based survey questionnaire</p>
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Efficiency			
EQ8: Was the project delivered in an efficient and cost-effective manner?	Availability of timely, quality and financial and progress reports.	Project financial reports	Document analysis
8.1 Was the project sufficiently and appropriately resourced (e.g.: finance, expert and managerial staff), to generate expected results?	Level of discrepancy between planned and utilized financial expenditures.	PIRs	KPI
8.2 Has the project used the best operational model, strategies and pathways to generate results?	Quality of results-based management reporting (progress reporting, monitoring and evaluation).  Perception of project partners of the quality and timeliness of project implementation  Perception and experience of cost-effectiveness of the project vis-à-vis expenditure Vs results generated	Interviews with NPD, PMU, FAO programme and operations heads  Interviews with partners and beneficiaries (I think beneficiary knowledge may be quite limited on these issues, but useful to ask them)	Questionnaire survey: Perception and experience-based survey questionnaire
EQ9: To what extent has the management been able to adapt to changing conditions to improve the efficiency of project implementation?	Occurrence of change with time lines in project design/ implementation approach (i.e. adaptive management) when needed to improve project efficiency.	Interviews with NPD, PM, FAO programme and operations heads  Interviews with beneficiaries	Document analysis  KPI  Questionnaire survey: Perception and experience-based survey questionnaire

Sustainability			
EQ10: How effectively has the project addressed the major risks and factors that influenced the achievement of project results (financial, socio-economic, institutional-political and environmental risks to sustainability)	The magnitude/intensity of risk factors affecting the continued functioning of project outputs after phase out assessed per category  (financial, socio-economic, institutional-political and environmental risks to sustainability)	PIR  Interviews with PMU, NPD, steering and operational committees, project partners, beneficiaries	Document analysis  KPI  Questionnaire survey: Perception and experience-based survey questionnaire
EQ11: To what extent has the government (or other actors if appropriate) committed financial, human resources, etc. to sustain project investments beyond the project timeframe?  11.1 Will the NCA be able to carry out implementation of the biosafety legislation and administrative work?  11.2. Will the focal point for biosafety be able to operationalize the national BCH (Sri Lanka BCH website)?  11 .3. Will the national institutions be able to carry out the functions related to RA, RM, RC, monitoring and inspection of LMOs?	Institutional mandates and priorities in execution of Biosafety Masterplan after project phase out.  Financing for the Biosafety Masterplan after project phase out  Financing for the functioning of laboratories and application of risk assessment methodologies  Financing and awareness for continued training programmes and	Interviews with PMU, NPD, project partners, and beneficiaries	Document analysis  KPI  Questionnaire survey: Perception and experience-based survey questionnaire

11 .4. Will upgraded labs be able to conduct regulatory testing of LMOs?			
EQ12: What is the assessment of capacity in the national and sectoral competent authorities to function in the post-project period?	<p>Level of national ownership of the institutional mechanism</p> <p>Evidence of improved services from the institutions</p> <p>Has project interventions influenced the functioning of these institutions have they received increased budgets</p> <p>Extent of capacity improvement in the national and sectoral competent authorities before and after project</p> <p>Extent of capacity retention in national and sectoral competent authorities and other project partners</p>	Interviews with PM, NPD, project partners, beneficiaries and project consultants and service providers	<p>Document analysis</p> <p>KPI</p> <p>Capacity changes assessed through questionnaire survey: Perception and experience-based survey questionnaire</p>
EQ13: What is the likelihood that the project results will continue to be useful or will remain even after the end of the project?	Level of utilization of guidelines, mechanisms, laboratories and training material by government and other stakeholders	Interviews and visits to training and laboratory facilities	<p>KPI</p> <p>Capacity changes assessed through questionnaire survey: Perception and experience-based survey questionnaire</p>

Factors Affecting Performance			
EQ14: To what extent was the project implementation and execution tasks effectively carried out?	Level of commitment of FAO to identify, execution and supervise the project.	Project document	Document analysis
14.1 Execution support: Efficiency and quality of inputs of project management unit and project consultants	Completeness of risk identification and assumptions during project planning design and in implementation	Project reviews (MTR)	KPI
14.2 Implementation Support: What were the contributions received from FAO and the Government (Biodiversity Secretariat of the Ministry of Environment) for improved delivery	Quality of existing systems to identify emerging risks and issues that will affect sustainability	Reports including PIR	Questionnaire survey: Perception and experience-based survey questionnaire
14.3 Quality and usefulness of M&E systems in place	Quality of risk mitigations strategies developed and followed	Interviews with PMU, FAO, FLO, LTO, NPD, Project Steering and Technical committees, project partners	
14.4 Adoption and implementation of MTR recommendations	Level of commitment of execution agencies to deliver the results	(Key interviews on challenges and problems met and solutions taken during project implementation regarding resource mobilization with co-financing partners along the integrated approach in combining the GEF incremental funds with co-financed resources and their timely availability to support the schedule of planned Outputs.	
14.5 How have partners responded to adaptations introduced by the project, especially for Covid-19?	Timeliness of deliverables ensured by each agency		
	Level of coordination and synergy of stakeholders to ensure deliverables	Interviews on using the guide questions on adaptive management, accounting, co-financing, procurement)	
	M&E system in place including data collection systems		

	<p>Functionality of M&amp;E system to collect, store and provide accurate information in timely basis</p> <p>Level of execution of MTR recommendations implications</p> <p>Level of adoption of new approaches, activities, new modalities and new delivery methodologies introduced by the projects</p>		
EQ15: What is the extent of stakeholder engagement, involvement in project design and implementation	Extent of stakeholder awareness and engagement in the project life cycle (design, implementation, MTR)	Interviews with PMU, NPD, project partners, beneficiaries	<p>KPI</p> <p>Questionnaire survey: Perception and experience-based survey questionnaire</p>
EQ16: what was the extent of private sector and non-government stakeholder engagement in project implementation	Number and functionality of private sector partnerships developed by the project	Interviews with PMU, NPD, project partners beneficiaries	<p>KPI</p> <p>Questionnaire survey: Perception and experience-based survey questionnaire</p>
EQ17: Did the committed co-finance materialize and in a timely manner?	<p>Planned vs. actual funds leveraged</p> <p>Timeliness of mobilization, utilization of funds</p>	<p>Interviews with PMU, NPD, project partners, beneficiaries</p> <p>Document review</p>	<p>KPI</p> <p>Questionnaire survey: Perception and experience-based survey questionnaire</p>

EQ18: Environmental and social safeguards	To what extent were environmental and social concerns taken into consideration in the design and implementation of the project?	Interviews with PMU, NPD, project partners, beneficiaries Document review	KPI
<b>Gender and other cross cutting issues</b>			
EQ 19: What are the main gender results of the project compared to original design objectives?  How has the project contributed to bridging gender divide and enabling women's participation in technical and scientific fields?	Magnitude of involvement of women in project implementation  To what extent did knowledge products, guidelines, tools, policies and plans (e.g. National Policy on Biosafety) included gender considerations?  Was the project implemented in a manner that ensures gender equitable participation and benefits? Especially in training and capacity building?  Evidence of utilization of generated benefits by women	Project documents Gender mainstreaming reports  Interviews with LTO, FLO, PMU and NPD  Interviews with FAO  Project beneficiary feedback	Document Analysis  KPI  Questionnaire survey: Perception and experience-based survey questionnaire
EQ20: How has the project contributed to improved and increased awareness and access to scientific information on biosafety to the public?	Number of stakeholders reporting elevated levels of awareness and knowledge	Beneficiary feedback Steering committee minutes  Reports of progress review and technical meetings	KPI  Questionnaire survey: Perception and experience-based survey questionnaire



<p>20.1 How has the project contributed to improved and increased awareness and access to scientific information on biosafety to the secondary school system?</p>	<p>Number of lessons learnt identified documented and incorporated to knowledge management system</p> <p>Evidence of political will or policy influenced through awareness activities</p> <p>Number of outputs generated from the National Education Institute to include biosafety in the school curriculum</p>		
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## Appendix 2C: Capacity Development Assessment Approach

Capacity development (CD) has been a core function to achieve strategic results of the Food and Agriculture Organization of the United Nations (FAO) since its foundation in 1945. In line with development effectiveness principles, FAO recognizes that more effective CD enhances country-ownership, quality, sustainability and scale of intended results.

In 2010 FAO launched its **Corporate Strategy on Capacity Development**.<sup>28</sup> The strategy presented three main elements: i) technical capacities; ii) functional capacities; and iii) three dimensions of capacity, namely the enabling environment, organizations and individuals. In addition, it placed emphasis on national ownership and nationally-led change processes, and highlighted the importance of using an integrated approach to address the three dimensions of capacity development. Each of these three dimensions works interdependently with the others and influences the overall impact of a CD intervention (see Chapter 2 for definition of three dimensions).

As stated in FAO's CD framework *"Capacity development often involves enhancing the knowledge and skills of individuals whose work results greatly rely on the performance of the organizations in which they work. The enabling environment influences the effectiveness of organizations. Conversely, the environment is affected by organizations and the relationships between them"*.

This Terminal Evaluation follows the FAO OED guidance on assessing the different dimensions of capacity - individual, institutional and enabling environment. For Individual and institutional capacities, the evaluators developed questionnaires based on the guidance framework provided for individual and institutional beneficiaries of the Biosafety Project. Changes in the enabling environment were determined through interviews and focused group discussions with stakeholders.

### **Capacity development dimensions (FAO Strategy on CD, 2010):**

- a. Individual dimension** relates to the people involved in agriculture and rural development in terms of: knowledge, skill levels (technical and managerial), competencies, attitudes, behaviours and values that can be addressed through facilitation, training and competency development.
  
- b. Organizational dimension** relates to public and private organizations, civil society organizations, and networks of organizations involved in agriculture and rural development in terms of: i) strategic management functions, structures and relationships; ii) operational capacity (processes, systems, procedures, sanctions,

Footnotes

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<sup>28</sup> <http://www.fao.org/3/a-k8908e.pdf>

incentives and values); iii) human and financial resources (policies, deployment and performance); iv) knowledge and information resources; and v) infrastructure.

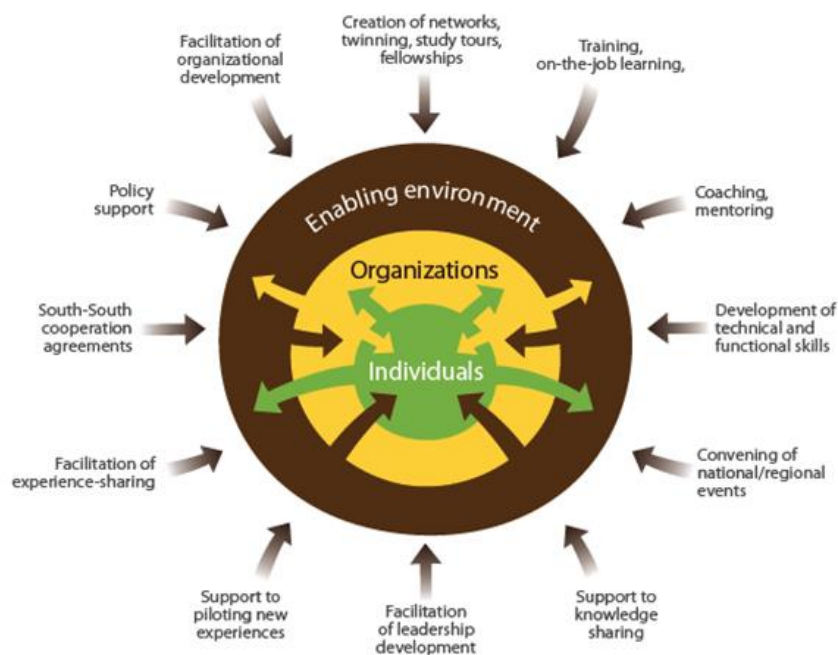
The change in learning that occurs at individual level affects, from a results chain perspective, the changes at organizational level. An example can be the improvement in the use of databases or information systems for decision-making and partnership building effectiveness.

- c. **Enabling environment dimension** refers to the context in which individuals and organizations work, including the political commitment and vision; policy, legal and economic frameworks and institutional set-up in the country; national public sector budget allocations and processes; governance and power structures; incentives and social norms; power structures and dynamics.

**Table A.1: Capacity areas within the three dimensions**

<b>Individual</b>	Skills levels (technical and managerial skills) Competencies	Knowledge Attitudes, behaviours and values
<b>Organizations</b>	Mandates Horizontal and vertical coordination mechanisms Motivation and incentive systems Strategic leadership Inter/intra institutional linkages Programme management Multi-stakeholder processes	Organizational priorities Processes, systems and procedures Human and financial resources Knowledge and information sharing Infrastructure
<b>Enabling environment</b>	Policy and legal framework Political commitment and accountability framework Governance	Economic framework and national public budget allocations and power Legal, policy and political environment

Source: FAO CD Learning Module 2, pg. 14



**Figure A.1: Some of the key modalities used by FAO across the different dimensions**

- d. **Technical capacities:** capacities that Member Countries need in the areas of food and agriculture to enable national and (sub)regional actors to carry out technical tasks to intensify production sustainably, manage natural resources, and eventually to improve food safety and security for all. These may include the Functional (FAO, 2015a).
- e. **Functional capacities:** capacities that Member Countries need to uptake and sustain changes in the agriculture and rural sector. In general, these include capacities relevant to individual and organizational effectiveness, such as management, leadership, budgeting, knowledge, information and communication technology and strategic planning, in addition to soft skills such as communication and advocacy. These skills are perceived to be a necessary complement to technical CD interventions as they empower the actors to effectively apply the new knowledge/skills and upscale the results of the intervention (FAO, 2015a).

The evaluators also used the questionnaires to guide FGD on the how and what of the targeted capacities. The guidance provided by FAO OED sets out the below approaches for capacity development; and to select the types of capacities targeted by project activities and outputs. The lack of a baseline established at the beginning of the project was a serious challenge. Hence the questionnaires were targeted to construct the baseline or 'situation before' the project intervention retrospectively.

## How is capacity being developed?

During the evaluation design stage, the “how” should be identified in the implementation modalities of the CD intervention in order to select the proper methodological tools for the evaluation.



Figure A.2: The ‘How’ of the intervention

## What capacities are being targeted?

The figure below presents generic examples on capacity development results that can be mapped; also a theory of change (TOC) exercise can serve the purpose. On the basis of desk review and preliminary interviews with key stakeholders during the evaluation scoping phase, each of the below “capacities area” (Technical and Functional in particular), related to the initiative being evaluated, should be identified and then validated during the investigation phase. Figure 4 below offers a breakdown of functional and soft skills in systemic, adaptive and influencing. Unexpected as well as negative results might also emerge during the validation stage (for related methods see Appendices 1, 2, 3 and 4).

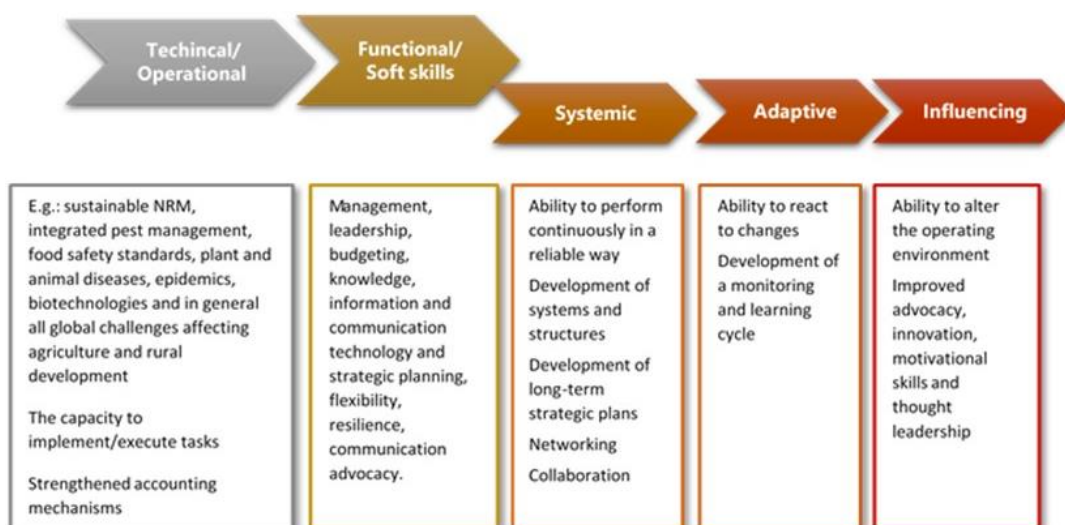


Figure A.3: The ‘What’ of the intervention

### Appendix 3: GEF Rating Scheme

#### **Project Results and Outcomes**

*Project outcomes are rated based on the extent to which project objectives were achieved. A six-point rating scale is used to assess overall outcomes:*

<b>Rating</b>	<b>Description</b>
Highly Satisfactory (HS)	<i>“Level of outcomes achieved clearly exceeds expectations and/or there were no short comings.”</i>
Satisfactory (S)	<i>“Level of outcomes achieved was as expected and/or there were no or minor short comings.”</i>
Moderately Satisfactory (MS)	<i>“Level of outcomes achieved more or less as expected and/or there were moderate short comings.”</i>
Moderately Unsatisfactory (MU)	<i>“Level of outcomes achieved somewhat lower than expected and/or there were significant shortcomings.”</i>
Unsatisfactory (U)	<i>“Level of outcomes achieved substantially lower than expected and/or there were major short comings.”</i>
Highly Unsatisfactory (HU)	<i>“Only a negligible level of outcomes achieved and/or there were severe short comings.”</i>
Unable to Assess (UA)	<i>The available information does not allow an assessment of the level of outcome achievements.</i>

*During project implementation, the results framework of some projects may have been modified. In cases where modifications in the project impact, outcomes and outputs have not scaled down their overall scope, the evaluator should assess outcome achievements based on the revised results framework. In instances where the scope of the project objectives and outcomes has been scaled down, the magnitude of and necessity for downscaling is taken into account and despite achievement of results as per the revised results framework, where appropriate, a lower outcome effectiveness rating may be given.*

#### **Project Implementation and Execution**

*Quality of implementation and of execution will be rated separately. Quality of implementation pertains to the role and responsibilities discharged by the GEF Agencies that have direct access to GEF resources. Quality of Execution pertains to the roles and responsibilities discharged by the country or regional counterparts that received GEF funds from the GEF Agencies and executed the funded activities on ground. The performance will be rated on a six-point scale:*

<b>Rating</b>	<b>Description</b>
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Highly Satisfactory (HS)	<i>There were no shortcomings and quality of <b>implementation</b> of <b>execution</b> exceeded expectations.</i>
Satisfactory (S)	<i>There were no or minor shortcomings and quality of <b>implementation</b> or <b>execution</b> meets expectations.</i>
Moderately Satisfactory (MS)	<i>There were some shortcomings and quality of <b>implementation</b> or <b>execution</b> more or less meets expectations.</i>
Moderately Unsatisfactory (MU)	<i>There were significant shortcomings and quality of <b>implementation</b> or <b>execution</b> somewhat lower than expected.</i>
Unsatisfactory (U)	<i>There were major shortcomings and quality of implementation substantially lower than expected.</i>
Highly Unsatisfactory (HU)	<i>There were severe shortcomings in quality of <b>implementation</b> or <b>execution</b>.</i>
Unable to Assess (UA)	<i>The available information does not allow an assessment of the quality of <b>implementation</b> or <b>execution</b>.</i>

### **Monitoring and Evaluation**

Quality of project M&E will be assessed in terms of:

- Design
- Implementation

### **Sustainability**

*The sustainability will be assessed taking into account the risks related to financial, socio-political, institutional, and environmental sustainability of project outcomes. The evaluator may also take other risks into account that may affect sustainability. The overall sustainability will be assessed using a four-point scale:*

<b><i>Rating</i></b>	<b><i>Description</i></b>
Likely (L)	<i>There is little or no risk to sustainability.</i>
Moderately Likely (ML)	<i>There are moderate risks to sustainability.</i>
Moderately Unlikely (MU)	<i>There are significant risks to sustainability.</i>
Unlikely (U)	<i>There are severe risks to sustainability.</i>
Unable to Assess (UA)	<i>Unable to assess the expected incidence and magnitude of risks to sustainability.</i>

#### Appendix 4: Co-Financing Table

Sources of Co-financing	Name of Co-financer	Type of Co-financing	Amount Confirmed at CEO endorsement / approval	Actual Amount Materialized at 30 June 2022
National Government	Ministry of Mahaweli Development and Environment	In-Kind	85,714.00	56,439.06
National Government	Ministry of Health Nutrition and Indigenous	In-Kind	8,571.00	337,266.49
National Government	Department of Animal Production and Health	In-Kind	357,143.00	216,641.19
National Government	Department of Agriculture	In-Kind	405,714.00	264,630.44
National Government	National Plant Quarantine Services	In-Kind	291,143.00	770,489.15
National Government	Department of Fisheries and Aquatic Resources	In-Kind	36,143.00	22,094.60
National Government	Department of Wildlife Conservation	In-Kind	285,714.00	400,251.07
National Government	Sri Lanka Customs	In-Kind	382,471.00	903,098.11
National Government	University of Colombo	In-Kind	300,000.00	565,116.65
National Government	University of Peradeniya	In-Kind	300,000.00	546,921.58
National Government	National Science Foundation	In-Kind	105,714.00	669,932.52
	Food and Agriculture Organization	In-Kind	400,000.00	400,000.00
			<b>TOTAL</b>	<b>5,152,880.87</b>



## Appendix 5: Results Framework

(Source: PRODOC 066)

APPENDIX-1 RESULTS FRAMEWORK					
	Indicators	Baseline	End of Project Target	Source/Mean of verification	Risks and Assumptions
<b>COMPONENT 1: STRENGTHENING POLICY, INSTITUTIONAL AND REGULATORY FRAMEWORKS FOR BIOSAFETY</b>					
Outcome 1.1: Enhanced capacity to develop, implement and coordinate biosafety legislations and regulations	Number of implementation examples (evaluation, management and monitoring of LMOs) in the National Biosafety Framework that is in compliance with the CPB;  Number of laws enforced by the enhanced high-level inter-ministerial coordination mechanism;	Gaps still remain in existing regulatory and institutional frameworks to implement the National Biosafety Framework (NBF);  Capacity for sound decision-making processes and law enforcement limited;	At least 5 implementation examples with enhanced framework of evaluation, management and monitoring of LMOs;  At least 3 laws enforced by the enhanced mechanism (including Act, Master plan, support regulations);	Government notifications regarding Biosafety Act, regulations and other national documents;  Implementation records;  Policy assessment report;  Capacity development survey of committee members (e.g. before/ after training survey, Knowledge-Attitude Practice (KAP) survey, Most Significant Change (MSC) survey);	<u>Risks</u> Delay in approval or rejection of legal documents by the Parliament; Lack of active involvement of concerned ministries and decision makers for the establishment of biosafety policy framework;  <u>Assumption</u> Government strengthened capacity for the inter-ministerial coordination as well as policy implementation under the regulatory framework;  Presence of an institutional framework with concerned ministries to implement biosafety policy with smooth coordination;

Output 1.1.1: National Biosafety Act enacted	Number of workshops for enactment process;  Number of Biosafety Act enacted by the established decision making process;	Awareness and training are required for the sound decision-making process and law enforcement;  Biosafety Act drafted but not enacted;	At least 4 workshops with about 20 decision-makers to ensure the enactment (at least 30% women) by year 1;  1 Biosafety Act enacted and printed by 2 <sup>nd</sup> Quarter of Year 2;	Workshop outcome documents;  Biosafety Act of Sri Lanka enacted, published and uploaded on national BCH;	<u>Risks</u> Delay in receiving approval from the Parliament or rejection; Changes in the national priorities resulting from change in government;  <u>Assumptions</u> Smooth decision-making process established for the earliest enactment;
Output 1.1.2: National Biosafety Master Plan (Strategy & Action Plan) elaborated and endorsed	Number of stakeholder consultative meetings;  Number of legal documents prepared through the stakeholder consultation as per recommendation in the National Biosafety Framework (i.e. Master Plan);	Recommendation for setting up a National Biosafety Masterplan was given in National Biosafety Framework, 2005 and National Policy on Biosafety but does not exist	At least 2 consultation meetings to elaborate Master Plan;  1 National Biosafety Master Plan endorsed;	Assessment report of consultative meeting;  National Biosafety Masterplan endorsed by the Government of Sri Lanka and published  Uploaded on the national BCH	<u>Risks</u> Delay in decision-making process for endorsement; Lack of priority as the thrust area of the concerned ministries/ departments/ agencies;  <u>Assumptions</u> Active involvement of all concerned in consultation process as scheduled;  Smooth decision-making process established with key decision makers for the earliest enactment;

<p>Output 1.1.3: Relevant regulations reviewed, drafted and endorsed</p>	<p>Number of regulations reviewed and set of regulations available to support Biosafety Act and Master Plan</p>	<p>The draft Biosafety Act is yet to be approved by the Parliament;  Several existing laws have relevant clauses;</p>	<p>At least 20 related regulations reviewed and 1 set of biosafety regulations endorsed by ministry to support the Biosafety Act;</p>	<p>Gazette Notification on Biosafety regulations</p>	<p><u>Risks</u>  Delay in receiving feedback from respondents for review;  Delay in decision-making process for adoption or rejection;  Regulatory regime cannot be easily adopted because of resistance from interest groups;</p> <p><u>Assumptions</u>  Gaps and support options identified properly through the review process;</p> <p>Clear administrative guidance for drafting support policy available;  Smooth coordination including several interest groups ensured for the adoption of related regulations;</p>
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<p>Outcome 1.2: Administrative systems for making biosafety fully functional</p>	<p>Number of implementation examples using fully functional administrative system</p>	<p>Administrative and operational procedures, which are consistent with the requirements of CPB do not exist;</p>	<p>At least 5 implementation examples using a fully functional administrative procedure mechanism as per provisions of the draft Biosafety Act;</p>	<p>Implementation records; Guidelines and manuals;</p>	<p><u>Risks</u> Procedures for the handling of requests are not clear, roles are not defined and do not cover all issues; Lack of trained personnel for the handling of applications;</p> <p><u>Assumptions</u> Experts familiar with international best practices to be engaged;  Dedicated personnel available, and familiar with CPB requirements as well as approach to develop administrative mechanism;</p>
<p>Output 1.2.1: Administrative and operational procedures for biosafety reviewed and updated</p>	<p>Number of improved administrative and operational procedures in consistent with the requirements of CPB  Number of committee meetings;</p>	<p>The Food (Control of Import, Labelling and sale of GM foods) Regulations, 2006 are functional existing biosafety regulations;</p>	<p>1 mechanism for biosafety administrative and operational procedures agreed by the committee (including roles and responsibilities of various committees/departments, nomination of experts, gender aspects etc.);</p>	<p>Manual on administrative and operational procedures published;  Minutes of meetings of the expert committee/working group;</p>	<p><u>Risks</u> Delay in receiving feedback from respondents for review process;  Overlapping mandates and roles among key ministries; Lack of capacity in</p>

		<p>Mechanism for handling applications related to GMOs/LMOs mentioned in the draft Biosafety Act;</p> <p>Terms of Reference for various committees and rules for appointment of members/experts needs to be defined;</p> <p>Committee is required for administer biosafety management system within the national regulatory requirements;</p>	<p>At least 4 committee meetings organized to develop manual;</p>	<p>Terms of Reference for various committees;</p>	<p>understanding biosafety issues and international requirements;</p> <p><u>Assumptions</u> Project partners actively involved in the process; Roles are properly defined;</p> <p>Biosafety Act, laws and regulations provided clear framework/pathway for administrative procedures; Nodal officers are trained in biosafety issues;</p>
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<p>Output 1.2.2: Guidelines developed to support the tasks of National Competent Authority (NCA) and Sectoral Competent Authorities (SCAs)</p>	<p>Number of guidelines for handling applications and formats for application &amp; communicating decisions in place</p>	<p>At present, there is no guidelines available;  Only some draft formats for application available;</p>	<p>1 comprehensive guideline available for handling applications related to GMOs/LMOs and products</p>	<p>Guideline for handling applications related to GMOs/LMOs and products;  Application formats;</p>	<p><u>Risks</u> Guidelines cannot be finalized because of the lack of active inputs by the project partners; Institutional arrangements not permanent; Trained and designated personnel replaced with new personnel in NCS/SCAs;</p> <p><u>Assumptions</u> Guidelines are used to support tasks of NCA and SCAs;  Experts familiar with implementing biosafety framework with NCA and SCAs are engaged;</p> <p>Designated personnel identified and remains the same;</p>
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Output 1.2.3 Staff of NCA, SCAs and related organizations trained	Number of members of regulatory committees and operational staff trained in administrative and operational procedures	A National Coordination Committee on Biosafety (NCCB) is in place;  Sectoral Competent Authorities (SCAs) are formed on case by case basis;  Committees on various aspect of biotechnology are in place	At least 40 committee members and operational staff trained with certificate (at least 30% women);	Certificate of training Proceedings of training workshops	<u>Risks</u> Insufficient number of trainers in various biosafety aspects; Participants for trainings are not appropriately selected;  <u>Assumptions</u> International and national consultants deployed properly; Individuals identified for trainings are responsible for handling biosafety related issues/ applications
Outcome 1.3: National Biosafety Clearing House (BCH) operational	Number of visitors accessing to BCH;  Satisfaction with level of information and knowledge available in the national BCH;	There is a national BCH established but not operational due to the lack of capacity to collect, process and manage the information required to run it;	At least 500 individual accesses to the BCH;  At least 70% of satisfaction rate received from multiple stakeholders;	Access record to the national BCH;  Assessment report including questionnaire and survey of user feedback;	<u>Risks</u> Lack of capacity of the nodal ministry of Cartagena Protocol on Biosafety for the national BCH operation;  <u>Assumptions</u> Active involvement and role definition of nodal ministry during the project;

					Ministry has information for collection and proper IT infrastructure for BCH;
Output 1.3.1: An enhanced website established	Number of national biosafety web-based information infrastructure linked to the central portal of CBD that included a roster of biosafety experts in the country and has database of globally approved LMOs;	There is no dedicated website operational on biosafety in the country;  Information related to biosafety is not available on web sites of the concerned ministries;	1 national biosafety website available with sufficient contents;  1 roster of experts by concerned agencies;  1 online database of globally approved LMOs especially countries with whom Sri Lanka has trade ties (regular updating of the database);	National website in place and operational with up to-date information linked to BCH;  Roster of experts in place and uploaded on BCH;	<u>Risks</u> Lack of qualified technical personnel and required IT infrastructure;  Delay in collection of information; Appropriate experts not selected for Roster;  <u>Assumptions</u> Careful analysis on technical and information requirements for the website carried out;  Information identified to be shared and make it easily accessible for public to promote transparency and accountability of decision-making process;



<p>Output 1.3.2: The BCH focal point trained to collect and manage information</p>	<p>Number of trainings for BCH organized;  Number of individuals trained;  Availability of manual;</p>	<p>The BCH focal point is not familiar with the process;  No manual available;</p>	<p>At least 20 individuals from BCH focal point, associate staff in NCA and nodal officers in SCAs and other scientific agencies trained and made capable to collect and upload information (at least 30% women) ;  4 training sessions for at least 10 IT staff for the management of IT infrastructure including website, roster and database (at least 30% women);  1 procedural manual ready to use for collecting, uploading and managing information on the national BCH;</p>	<p>Procedural Manual for collecting, uploading and managing information;  BCH focal point and associate staff trained;</p>	<p><u>Risks</u> Staff attrition and change in personnel; Availability of qualified staff;  <u>Assumptions</u> Appropriate individuals identified for trainings/ Training of trainers; Proper working documents made available;</p>
<p>Output 1.3.3: Stakeholders trained to access and share information through BCH</p>	<p>Number of training modules;  Number of training organized;  Number of individuals trained;</p>	<p>No information available regarding the number of trained personnel</p>	<p>At least 3 training modules for accessing information on the national BCH for the different stakeholders viz., scientists, regulators, customs and plant quarantine officials; Organize 4 training workshops with at least 30 participants for each module (in total about 120 individuals, at least 30% women);</p>	<p>Training modules for different stakeholders;  Certificate of training;  Proceedings of training workshop;</p>	<p><u>Risk</u> Knowledge and interest of target stakeholders about the subject varied widely;  <u>Assumptions</u> Proper working document to be prepared for the target stakeholder groups categorized for each training module; Train the trainer's approach;</p>

COMPONENT 2: ENHANCING SYSTEM FOR RISK ASSESSMENT (RA), RISK MANAGEMENT (RM), AND RISK COMMUNICATION (RC)					
Outcome 2.1: National institutions strengthened for RA, RM and RC including monitoring and enforcement					
Outcome 2.1: National institutions strengthened for RA, RM and RC including monitoring and enforcement	Number of agencies that have institutionalized training on RA, RM and RC;  Number of focal points for RA, RM and RC in each institution identified;	The capacity of national institutions is limited to enable formulation and implementation of integrated and coherent biosafety regulatory mechanisms;	All members, bodies and relevant agencies received institutionalized training and they are capable to work with the RA, RM and RC framework;  At least 3 focal points identified for institutional RA, RM and RC;  1 institutional mechanism in place to deal with biosafety issues in the country;	Training outcome report;  Capacity development survey of focal points (e.g. before/ after training survey with annual review, Knowledge Attitude-Practice (KAP) survey);	<u>Risks</u> Lack of consensus for procedures/guidelines for RA, RM and RC among institutions; Lack of trained personals in each institution involved on how to perform RA and how to go about RM;  <u>Assumptions</u> ToR of each institution available;
					Institutionalized training approach provided; Training program and guidelines developed based on both national and international experience;

<p>Output 2.1.1: Methodologies for RA, RM and RC reviewed, refined and updated</p>	<p>Number of guidelines for contained use and Risk Analysis Framework developed;</p>	<p>Guidelines for the safe use of Recombinant DNA technology in contained conditions available but not mandated;</p> <p>Brief guidance document "Risk Assessment of GMO/FFPs – A Practical Guide" prepared but yet to be adopted by regulatory agencies;</p>	<p>At least 1 comprehensive guideline available for GMOs/LMOs in contained conditions including green house, net house etc.;</p> <p>At least 1 Risk Analysis Framework covering approach to RA, RM and RC available;</p>	<p>Updated guidelines for the use of GMOs/ LMOs under contained conditions in place and notified;</p> <p>Risk Analysis Framework in place and accepted by regulatory authorities;</p>	<p><u>Risks</u> National experience in various cases of RA, RM and RC not available;</p> <p><u>Assumptions</u> International expertise for risk infrastructure gathered;</p>
<p>Output 2.1.2: Technical guidelines and manuals on RA and RM developed</p>	<p>Number of technical guidelines in place covering various aspects of RARM</p>	<p>No existing guidelines or manuals</p>	<p>5 guidelines available to regulate activities involving GMOs/LMOs for RARM:</p> <p>Guidelines for Institutional Biosafety Committees Guidelines for risk assessment of GM food and feed Guidelines for environmental risk assessment of GE plants Guidelines for conduct of confined field trials of regulated GE plants/</p>	<p>Guidelines for IBSCs, food and feed safety, environmental risk assessment, confined field trials and GE mosquitoes are in place and accepted by regulatory authorities</p>	<p><u>Risks</u> National experience of formulating guidelines not available; Delays in receiving inputs;</p> <p><u>Assumptions</u> Guidelines and manuals developed with international expertise and knowledge, and</p>

			crops Guidelines for testing and release of GE insects such as mosquitoes		revised along with the country requirement; All concerned stakeholders participate for review;
Output 2.1.3: Decision-making tools prepared for RA, RM and RC	Number of decision making tools for RA, RM and RC	No existing decision making tools available	At least 1 decision-making tool kit available for regulatory agencies with required formats for each RA, RM and RC;	Formats for decision making to be used by regulatory committees are in place	<u>Risks</u> Consensus about decision making process of RA, RM and RC and role of participating institutions not made among institutions;  <u>Assumptions</u> Decision-making process defined officially and/or legally;
Output 2.1.4: Training strategy for RA, RM and RC developed	Number of training strategy/ manuals for RA, RM and RC in place	No training strategy available for RA, RM and RC	At least, 1 training needs assessment survey to be conducted;  At least 2 training manuals for RA and RM;  1 RC strategy developed;	Training needs assessment report;  Training manual for RA and RM;  RC Strategy;	<u>Risks</u> Lack of experience in identifying critical areas to be covered by the training;  <u>Assumptions</u> International knowledge and experience also considered;

<p>Output 2.1.5: Staff of relevant institutions trained on RA, RM and RC</p>	<p>Number of individuals trained;  Number of staff designated for risk infrastructure in each institution identified;</p>	<p>Training programs were conducted in 2006, 2008, 2009 on RA at the university level;  No trainings have been specifically been conducted for in the area of RM and RC</p>	<p>At least 100 individuals (at least 30% women) trained including the members of NCCB, SCAs and other potential members/experts in RA (food and feed safety and ERA), with at least 15 trainings for the members of IBSCs and on confined field trials of GE plants (conduct and monitoring);</p>	<p>Trained officials from relevant institutions;  Certificate of training;  List of designated staff;</p>	<p><u>Risks</u> Quality of training and timelines of delivery are unsatisfactory; Staff attrition and change in personnel; Resource person is not appropriate;</p> <p><u>Assumptions</u> Training material to be jointly developed with national and international expertise Training program designed for institutional nominees at different levels;</p> <p>Appropriate individuals are identified for trainings;</p>
<p>Output 2.1.6: National and regional institutional networks strengthened to implement National Biosafety System</p>	<p>Number of international conference organized</p>	<p>The National Biosafety Framework is in place but not fully functional;</p>	<p>1 international harmonization conference organized to harmonize national guidelines, manuals, application formats and procedures with those followed by other countries in the region especially those of SAARC countries;</p> <p>National and regional network established for scaling-up;</p>	<p>Report of the regional conference/workshop;  Feed-back survey on the level of satisfaction for the outcomes;  National guidelines, manuals, application formats in place;</p>	<p><u>Risks</u> Poor inter-agency coordination at regional and national level;</p> <p><u>Assumptions</u> Strong government leadership available for the harmonization process at international/ regional levels;</p>

**COMPONENT 3: DEVELOPING TECHNICAL CAPACITY FOR DETECTION AND IDENTIFICATION OF LIVING MODIFIED ORGANISMS (LMOS) AND STRENGTHENING BIOSAFETY-RELATED INFRASTRUCTURE**

<p>Outcome 3.1: Improved capacity for detection and identification of LMOs</p>	<p>Number of detection and identification processes of LMOs within a certain time period;</p> <p>Number of designated staff;</p>	<p>Capacities in LMO detection and the requirements for the accreditation of laboratories not met for implementation;</p>	<p>At least, 70% of trained staff capable to detect and identify LMOs using upgraded instruments and guidelines developed;</p> <p>At least 20 detection and identification cases processed using improved facilities at the end of the project;</p> <p>At least 3 designated staff in each institution identified;</p>	<p>Technical report on the process records;</p> <p>An efficient LMO detection network of laboratories is established;</p> <p>Key instruments are in place in identified laboratories;</p> <p>Scientists are trained in detection and identification of LMOs;</p> <p>Concerned personnel are trained in inspection and monitoring of LMOs;</p>	<p><u>Risks</u></p> <p>Lack of mandate and active involvement of laboratories or enforcement agencies to improve the capacity;</p> <p>Staff attrition and change in personnel;</p> <p><u>Assumptions</u></p> <p>Legal backing available for the cooperation with identified laboratories and enforcement agencies but also capacity development;</p>
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<p>Output 3.1.1: Testing needs and capacities for LMO detection assessed and key public laboratories identified for upgrading and accreditation</p>	<p>Number of assessment report completed; Number of laboratories and facilities identified;</p>	<p>Industrial Technology Institute (ITI) and a private lab, Genetech are carrying out limited work in LMO detection. National Plant Quarantine Station at Colombo has a mandate to do LMO detection and has basic lab facilities and manpower; University of Peradeniya has conducted trainings on detection methodology in 2006;</p>	<p>1 stocktaking assessment report ready for capacity needs, testing requirements, facilities, infrastructure, human resources and level of expertise required for LMO detection to be carried out for Sri Lanka;  At least 3 public laboratories and 3 facilities for contained testing identified;  1 Operation and Maintenance mechanism including specifications and outline of manuals;</p>	<p>Stocktaking assessment report  Technical document for operation and maintenance of laboratories;</p>	<p><u>Risks</u> Delay in completion of the specified assessment/survey within the given timeframe;  Lack of clarity and coordination between different agencies to enable them to carry out their responsibilities;  <u>Assumptions</u> Roles and responsibilities of identified laboratories defined and agreed with criteria;  Incentives available;</p>
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<p>Output 3.1.2: Inspection plan prepared and inspectors trained</p>	<p>Number of inspection plans/guidelines prepared;</p> <p>Number of staff of enforcement agencies trained</p> <p>Number of workshops/training modules provided;</p>	<p>Food inspectors, seed inspectors, custom officials and plant quarantine officials are mandated to carry out inspection in the Act;</p>	<p>At least 1 Inspection Plan including several common examples of inspection prepared;</p> <p>At least 2 guidelines/ procedures developed for inspection and monitoring of GMOs/LMOs for use by members of NCA, customs, food inspectors, plant quarantine officers and seed inspectors;</p> <p>At least 2 Training modules for inspection and monitoring developed;</p> <p>About 10 training workshops to be conducted for food/ feed inspectors, seed inspectors and plant quarantine officials and also the customs officials;</p> <p>At least 50 staff trained for inspection and monitoring of GMOs/LMOs in place (at least 30% women);</p> <p>10 individuals of food/feed and seed inspectors and plant quarantine trained through participation in international events (at least 30% women);</p>	<p>Inspection Plan/ Guidelines and procedures for inspection and monitoring of GMOs/LMOs;</p> <p>Training modules, certificate of training;</p>	<p><u>Risks</u></p> <p>Resource person developing inspection plan not appropriate;</p> <p>Quality of training material and timelines of delivery is inappropriate;</p> <p><u>Assumptions</u></p> <p>Review functioning system in other countries;</p> <p>Inspection plan jointly developed with national and international expertise;</p> <p>Close cooperation from enforcement agencies;</p>
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<p>Output 3.1.3: Personnel trained on LMO detection and identification</p>	<p>Number of individuals trained;  Number of training modules developed;</p>	<p>Identified laboratories have staff familiar with technical requirements for LMO detection.</p>	<p>30 scientists and technical staff trained in detection labs in 3 workshops (at least 30% women);  5 individuals conducted onsite training in labs functioning in other countries;  2 Training modules for LMO detection and identification prepared;</p>	<p>Training modules;  Certificate of training;</p>	<p><u>Risks</u> Quality of training material and timelines of delivery is inappropriate; Appropriate individuals not selected for trainings; <u>Assumptions</u> Workshop program and international laboratory visit program developed with national and international expertise;</p>
<p>Outcome 3.2: Laboratories fully operational with the necessary infrastructures to carry out risk assessment, and detection of LMOs, which allow Sri Lanka to meet its obligations under the CPB</p>	<p>Number of identified laboratories operational with international standard;  Number of facilities for contained testing operational;  Annual budget allocated for operation and maintenance of laboratories;</p>	<p>The accreditation of laboratories and strengthening capacities of selected public sector laboratories are required;</p>	<p>2 public laboratories with improved infrastructure and facilities for LMO detection as per international norms and serve as central LMO research and detection lab;  1 upgraded analytical laboratory functional for compositional and nutritional analysis with state-of-the-art analytical services equipment; These laboratories are showcased as technically viable examples; Efficient accreditation process in place;</p>	<p>Institutions are strengthened with improved infrastructure and equipment.  Outcome summary report;  Annual financial report;  Record of accredited laboratories;</p>	<p><u>Risks</u> Lack of capacity to use upgraded laboratory instruments;  Lack of capacity to maintain the accredited laboratories;  <u>Assumptions</u> Detailed system demonstration with sufficient trial operations carried out;  Operation and maintenance mechanism of laboratory instruments ensured;</p>

<p>Output 3.2.1: Key government laboratories identified, established, strengthened and appropriately equipped for risk management and detection of LMOs</p>	<p>Number of laboratories and facilities assessed;  Number of identified laboratories and facilities for contained testing equipped;</p>	<p>Some laboratories underwent LMO detection with limited work;  Training programme in GM detection by ICGEB available in University of Peradeniya in association with Genetech;</p>	<p>At least 3 public laboratories and 3 facilities for contained testing identified in the stocktaking assessment survey with laboratory equipment, chemicals and reagents, manpower and improve infrastructure and facility with guidelines;  The 3 laboratories and 3 facilities are equipped for LMO detection and management as per assessment;  In total 3 Operation and Maintenance manuals for identified laboratories prepared with international standards;</p>	<p>An efficient LMO detection institutional network is established;  Guidelines for sampling methodologies of LMO detection;  Technical report on equipped laboratories and facilities;  Operation and Maintenance Manuals;</p>	<p><u>Risks</u> Delay in procurement and installation of key instruments;  <u>Assumptions</u> Specifications and required service for the laboratory instruments available prior to procurement process;</p>
<p>Output 3.2.2: Laboratories accredited by SLAB for risk assessment, LMO detection and identification based on ISO and ISTA standards</p>	<p>Number of laboratories accredited</p>	<p>SLAB is a member of the mutual recognition arrangement (MRA) and in the process of seeking membership of the international accreditation forum (IAF). These have established ISO</p>	<p>At least 2 laboratories accredited as per SLAB/ISO standards;  1 Accreditation process clarified and streamlined for replication;  At least 2 staff of the accreditation body trained internationally;</p>	<p>Laboratories accredited;  Certificated of accredited body trained;</p>	<p><u>Risks</u> SLAB not familiar with accreditation standards for GMO detection Accreditation failed;  <u>Assumptions</u> Training of SLAB personnel, guidelines, SOPs etc. in place with detection labs</p>

		standards for GMO detection in addition to ISO 17025			Accreditation conditions and procedure ensured, and training provided accordingly;
COMPONENT 4: KNOWLEDGE DEVELOPMENT, PUBLIC AWARENESS, EDUCATION AND PARTICIPATION					
Outcome 4.1: Enhanced awareness, education and public participation in decision-making on biosafety	Number of awareness raising events/campaigns with positive feedback from various stakeholders across the country;  Annual budget allocated for continuous actions for biosafety in the country;	Awareness of biosafety needs to be further enhanced to broader stakeholders strategically;	Over 20 events/ campaigns organized with At least 70% of activities received positive feedback from participants;	Outreach material (both print and electronic);  Proceedings of awareness programmes;  Post graduates trained in biosafety;  Knowledge assessment report including statistics and questionnaires of events;  Annual financial reports;	<u>Risks</u> Quality of events insufficient; Different category of audience and related needs are not identified correctly;  <u>Assumptions</u> Awareness events conducted along with the needs of target stakeholder groups; Communication strategy applied properly;  Replication mechanism in place to continue awareness raising after the project including potential funding support for the capacity building of biotechnology professionals;

<p>Output 4.1.1: Public awareness and participation strategy developed</p>	<p>Number of framework for public participation and database of stakeholders in place;</p>	<p>Public awareness workshops have been held previously.</p>	<p>1 strategy developed for facilitating public participation and mechanism for public consultation;</p> <p>1 database of concerned stakeholders for public consultation maintained;</p>	<p>Strategy document;</p> <p>Database of relevant stakeholders available;</p>	<p><u>Risks</u></p> <p>Lack of lessons-learned to identify critical areas of public participation and awareness;</p> <p>Strategy is planned in isolation and does not respond to the public needs</p> <p><u>Assumptions</u></p> <p>Lessons learned collected from the past experiences in the country as well as other countries, and strategy developed jointly with national and international expertise;</p> <p>Strategy prepared in consultation with relevant stakeholders to continue awareness raising after the project as a long term communication activity;</p>
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Output 4.1.2: Targeted awareness-raising activities implemented	Number of targeted activities accomplished;	Awareness raising programmes were conducted during the National Biosafety Framework in 2006. Since then only a few activities have been organized by the research institutions	1 E-learning tool developed on guidelines/ procedures for biosafety regulations; Primers/ brochures/ booklets/ FAQs/ calendars, glossary of terms and other outreach material developed in local languages and 2000 copies disseminated; 1 audio visual educational material on awareness of biotechnology and biosafety issues for all stakeholders; 20 awareness workshops on biosafety for relevant stakeholders conducted (at least 30% women);	E-learning tools available; Outreach material viz., primers, brochures, FAQs, etc.; Audio visual educational material available; Awareness workshop material and reports;	<u>Risks</u> Population that can be reached could be limited due to time or funds constraints; Different category of audience and related needs are not identified correctly; <u>Assumptions</u> Strong government and public/private sector support and coordination for increasing public awareness; Needs assessment results available for each target stakeholder group;
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Output 4.1.3: Curriculum, syllabus and course materials prepared for postgraduate course for biosafety, & the gaps in primary (Ordinary Level), secondary and university level education for biosafety filled through improvement of curricula.	Number of training courses developed;	The Postgraduate Institute of Agriculture (PGIA), University of Peradeniya, conducts the postgraduate course on Biosafety and now intends to start a postgraduate Diploma course on Biosafety	1 Modules/course material prepared for higher levels of education incorporation in syllabus of O and A level;  Annual budget allocated for the new course;	Modules/course material is available	<u>Risks</u> The involvement of partner institutions is limited;  <u>Assumptions</u> Incentive mechanism available;  ToR prepared;
Output 4.1.4: Information materials developed and disseminated through various media	Number of issues of the biosafety newsletter;  Number of webpages with information sources;	No dedicated mechanism for biosafety information	8 issues of Biosafety Newsletter will be circulated (six monthly);  1 website have copies of all material;	Newsletter are circulated quarterly all over the country.  Website with complete information resources	<u>Risks</u> The quality of information materials insufficient;  <u>Assumptions</u> The contents of information materials selected carefully to meet the needs of target readers;
Output 4.1.5 and Output 4.1.6 are activities related to the Monitoring & Evaluation of the project.					

**Appendix 6A: Template Questionnaire - PMU**

**TERMINAL EVALUATION JUNE 2022**

**SURVEY INTERVIEW QUESTIONS –PROJECT EXECUTION AND IMPLEMENTATION**

**PLEASE ADD LINES TO ANSWER IF NEEDED**

**Relevance**

1. Is the project and its outputs relevant given the current developments in biotechnology and biosafety in the region/globally? Please give examples from specific engagement in the project..

**Effectiveness**

1. In your opinion has the project increased the capacity to effectively implement the biosafety framework and effectively manage risks of biotechnology?

1= Not at all, 2= Somewhat, 3= Moderately, 4= Highly

1.1 Please explain with some specifics relating to your area of work

2. Are there any elements the project should have addressed but did not? Please elaborate

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.....  
.....  
.....

3. What do you consider to be the main achievements of the project for each of the following main components of the project? Please elaborate on your area of work/ expertise but answer all if possible.

4.1 Component 1- Strengthening policy, institutional and regulatory frameworks for biosafety (Biosafety Master Plan, decision-making capacity and.... )

.....  
.....  
.....  
.....

.....

4.2 Component 2- Risk assessment, risk management and risk communication systems  
(institutional strengthening, methodologies for risk assessment, training manuals)

.....

4.3 Component 3- Technical capacity for detection/identification of LMOs and  
improved biosafety related infrastructure (LMO identification, laboratory upgraded  
and training)

.....

4.4 Component 4- Knowledge development, public awareness, education and  
participation (public awareness, e-newsletter, curriculum, e-learning)

.....



4. What did the project not achieve that was expected with respect to the components you/or your institution was involved in? Please give reasons where possible.

5.1 Component 1- Strengthening policy, institutional and regulatory frameworks for biosafety (Biosafety Master Plan, decision-making capacity and .....)

.....  
.....  
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5.2 Component 2- Risk assessment, risk management and risk communication systems (institutional strengthening, methodologies for risk assessment, training manuals)

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5.3 Component 3- Technical capacity for detection/identification of LMOs and improved biosafety related infrastructure (LMO identification, laboratory upgraded and training)

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.....  
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5.4 Component 4- Knowledge development, public awareness, education and participation, e-newsletter, curriculum, e-learning)

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5. Have there been any unintended results (positive or negative) of project implementation?

Please list

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**Efficiency**

1. To what extent has the management been able to adapt to changing conditions / emerging needs to improve the efficiency and relevance of project implementation?

.....

2. How did the project respond to challenges posed by Covid-19? have partners responded to adaptations introduced by the project, especially for Covid-19?

.....  
.....

3. How would you rate the PMU's efficiency in;

3.1 Coordination & Logistics. 1) not effective 2) satisfactory. 3) very good. 4) exceptionally good

3.2 Communication including regular meetings

1) not effective 2) satisfactory. 3) very good. 4) exceptionally good

3.3 Project Management: 1) not effective 2) satisfactory. 3) very good. 4) exceptionally good

3.4 Financial Disbursement: 1) not effective 2) satisfactory. 3) very good. 4) exceptionally good

**Sustainability**

1. What do you think is the likelihood of having long term impacts of the project?

1= Not at all, 2= Somewhat, 3= Moderate, 4= Highly

Give reason for your rating

2. What can be done to maintain the long-term impacts or sustainability of project outcomes?

.....  
.....  
.....

3. What are the main risks that will affect the sustainability of project outcomes- focus on the area of work relevant to you/your organisation? E.g. financial, socio-political, institutional or environmental.

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.....  
.....  
.....

4. Has the project created 'champions' i.e individuals or institutions which can support the project outcomes after project end? YES/NO

4.1 If YES, who are they

.....  
.....  
.....  
.....

**Gender and Stakeholder involvement**

- 1. To what extent have different stakeholders been involved in project implementation?  
Please give your views.

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.....  
.....  
.....

- 2. What have been the impediments for fuller stakeholder participation? Please list.

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**Knowledge Management**

- 1. Are there lessons of this project that you think should be widely shared/disseminated ? If YES, please elaborate.

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**THANK YOU VERY MUCH FOR YOUR TIME AND EFFORT**

**Appendix 6B: Template Questionnaire - Institutional beneficiaries**

**TERMINAL EVALUATION JUNE 2022**

**SURVEY INTERVIEW QUESTIONS –INSTITUTIONS**

PLEASE ADD LINES IF MORE SPACE IS NEEDED FOR YOUR ANSWERS

**Relevance**

1. To what extent has the project responded to the needs and priorities of Sri Lanka (e.g. as relates to national development plans, national biodiversity strategies, research and development policies etc.).

Please rank 1= None at all, 2= Little, 3= Moderately, 4= Much, 5= Very much

2. Is the project objective of increasing national capacities for biosafety still relevant?

1= Not at all, 2= Somewhat, 3= Moderately relevant, 4= Very relevant, 5= Highly relevant

3. i. Was the project relevant to your institutional priorities? please rank,

1= Not at all, 2= Somewhat, 3= Moderately relevant, 4= Very relevant, 5= Highly relevant

**Please include brief examples or comments on the below ratings**

4. To what extent does the project address the key elements of the National Biosafety Framework?

1= Not at all, 2= Somewhat, 3= Moderately, 4= Very much

5. To what extent does the project address the key elements of the Biosafety Act?

1= Not at all, 2= Somewhat, 3= Moderately, 4= Very much

**Effectiveness**

1. Have there been any changes that you are aware of in policy, legal and regulatory frameworks that the project had contributed to?

.....  
.....  
.....

2. Are there any elements the project should have addressed but did not? Please elaborate

.....  
.....  
.....

3. What do you consider to be the main achievements of the project for each of the following main components of the project? Please give reasons.

1.1 Component 1- Strengthening policy, institutional and regulatory frameworks for biosafety (Biosafety Master Plan, tri-lingual national website for Biosafety (Sri Lanka Biosafety Clearing House and decision-making capacity etc.)

.....  
.....  
.....  
.....

1.2 Component 2- Risk assessment, risk management and risk communication systems (institutional strengthening, methodologies for risk assessment, training manuals)

.....  
.....  
.....  
.....

1.3 Component 3- Technical capacity for detection/identification of LMOs and improved biosafety related infrastructure (LMO identification, laboratory upgraded and training)

.....  
.....  
.....  
.....



1.4 Component 4- Knowledge development, public awareness, education and participation (public awareness, e-newsletter, curriculum, e-learning)

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.....  
.....

4. What did the project not achieve that was expected with respect to the components your institution was involved in? Please give reasons.

2.1 Component 1- Strengthening policy, institutional and regulatory frameworks for biosafety (Biosafety Master Plan, tri-lingual national website for Biosafety (Sri Lanka Biosafety Clearing House and decision-making capacity etc.)

.....  
.....  
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.....

2.2 Component 2- Risk assessment, risk management and risk communication systems (institutional strengthening, methodologies for risk assessment, training manuals)

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2.3 Component 3- Technical capacity for detection/identification of LMOs and improved biosafety related infrastructure (LMO identification, laboratory upgraded and training)

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2.4 Component 4- Knowledge development, public awareness, education and participation (public awareness, e-newsletter, curriculum, e-learning)

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.....

5. How effective was the project intervention towards improving capacity of the organisation in the following aspects:

Please rank items 3.1 to 3.4 as 1= Not at all effective, 2= Somewhat effective, 3= Moderately effective , 4= Very effective

3.1 Ownership of the Biosafety Master Plan/ institutional mechanism/ training material/equipment.....

3.2 Helping the institution to be able to provide improved services.....

3.3 Contributing to improvements in internal functioning of the institutions.....

3.4 Helping secure increased budgets to sustain project related investments.....

3.4 Helping ensure retention of technical capacity/personnel trained.....

3.5 Is there more awareness about biosafety at an institutional level?

YES/NO

6. How was project training delivered?

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.....  
.....  
.....

6.1 Were there any factors hindering provision of quality training? If so how can these be improved upon?

.....



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.....  
.....

7. Have there been any unintended results (positive or negative) of project implementation?  
Please list.....

.....  
.....

**Efficiency**

1. i. Was the project implemented in a cost-effective manner / value for money and effort from your institutional view point YES/NO

ii. Please give a brief explanation of your above answer

.....  
.....  
.....  
.....

2. i. Could it have implemented the activities better? YES/NO

ii. Please give a brief explanation of your above answer

.....  
.....  
.....  
.....

3. i. Did your institution provide co financing to project activities? YES/NO

ii. If YES, briefly describe the type of co financing

.....

.....  
.....

4. To what extent do you think the project is complementary to any other projects in the country?  
Please give a brief explanation.

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.....

5. What are the changes that have been made to ensure more cost-effective implementation  
of the project? Please list all that you are aware of.

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.....

6. Are you aware of any similar projects which have been implemented in a more cost- effective  
manner?

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.....  
.....

7. Have lessons from any previous projects been incorporated into the project design?

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.....  
.....

**Sustainability**

1. What do you think is the likelihood of having long term impacts of the project?

1= Not at all, 2= Somewhat, 3= Moderate, 4= Highly

2. What can be done to maintain the long term impacts or sustainability of project outcomes?

.....  
.....  
.....

3. What were the main risks that will affect the sustainability of project outcomes? E.g. financial, socio-political, institutional or environmental

3.1 Financial – what outputs would require additional funding after end of project?

.....  
.....  
.....

3.1.1 Are there mechanisms in place to ensure this funding is available?

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.....  
.....

3.2 Socio political – e.g how much government support is there for the project and how much cooperation from partners

.....  
.....  
.....

3.3. Institutional – e.g are there sufficient institutional mechanisms and budget to ensure support for the project outcomes after the end of the project?

.....  
.....

.....

3.3 i. Demand from stakeholders for services,

1= Low, 2= Satisfactory, 3= Moderate, 4= Good

ii. Please give a brief explanation of your above answer.

.....  
.....  
.....

4. i. Has the project created 'champions' i.e individuals or institutions which can support the project outcomes after project end? YES/NO

ii. Please give a brief explanation of your above answer.

.....  
.....  
.....

5. To what extent has the project contributed to enhance sustainability of knowledge dissemination e.g training of trainers, use of materials and other products of the project?

.....  
.....  
.....

**Factors affecting performance**

1. How often was your institution required to submit progress reports and or attend progress review meetings?

.....

2. Please rate the quality of support provided by the project

1= Low, 2= Satisfactory, 3= Moderate, 4= Good

**Gender and Stakeholder involvement**

- 1. To what extent have different stakeholders been involved in project implementation?  
1= Not at all, 2= Somewhat, 3= Moderate, 4= Very much
  
- 2. What impact has this had on project implementation?  
1= No impact, 2= Little impact, 3= Moderate impact, 4= High impact
  
- 3. What is your assessment of communication between the project and your institution?  
1= Poor, 2= Moderate, 3= Good, 4= Very good
  
- 4. What is the extent of sharing experiences and lessons with partners and other projects?  
1= Poor, 2= Moderate, 3= Good, 4= Very good
  
- 5. i. To what extent were female officers involved in the project activities?  
1= Not at all, 2= Somewhat, 3= Moderate, 4= Very much  
ii. Please give a brief explanation of your above answer  
.....  
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6. Is there a policy on gender in your institution or in your ministry and now is it implemented?

**Other issues**

What are your views on overall project execution and management?

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.....  
.....  
.....

**THANK YOU VERY MUCH FOR YOUR TIME AND EFFORT**

**Appendix 6C: Template Questionnaire - Individual beneficiaries**

**TERMINAL EVALUATION JUNE 2022**

**SURVEY INTERVIEW QUESTIONS – BENEFICIARIES**

**PLEASE INCLUDE ADDITIONAL LINES IF YOU NEED**

Name of institution.....  
Name or job title of beneficiary.....  
Your area of expertise - .....  
Number of years in service at the current institution.....  
Type of employment - Permanent/ Temporary/ Contract basis

1. Name the type of training you received from the Biosafety Project  
.....
2. The training you received is under Component 1/ Component 2/ Component 3/  
Component / Do not know (Please underline the relevant answer)
3. When did you receive training? If you received training more than once please list all
  - 3.1 Year..... Month.....Duration.....
  - 3.2 Year..... Month..... Duration.....
  - 3.3 Year..... Month..... Duration.....
4. Name the institution(s) where training was conducted (if onsite)  
.....
5. Was part of the training conducted online YES/NO
6. Was the training conducted entirely online YES/NO
7. How were you selected for training? (Please tick all that is relevant)
  - On the basis of the subject area where I work at my institution
  - Only on the basis of my seniority within the institution
  - Both on the subject area and seniority within the institution
  - Only on the basis of an application I made to the training organization (not connected to subject area or seniority)
  - Do not know



8. If you made an application as an individual (NOT NOMINATED by your institution), please state briefly WHY you made this application

.....  
.....  
.....

9. What did you gain from the training (Please rank from most important to least as given below, 1= very important, 2= important, 3= moderately important, 4= less important, 5= not important)

- a. New technical and or scientific knowledge.....
- b. New technical skills.....
- c. Ability to train others.....
- d. New administrative skills (e.g. such as procurement procedures, suppliers, chemical names etc).....
- e. New information on other institutions engaged in Biosafety issues within Sri Lanka
- f. New information on other institutions engaged in Biosafety issues outside Sri Lanka
- g. Other.....

10. Were there any post training activities planned by your institution or by the Biosafety Project YES/NO

11. If YES, please list

.....  
.....  
.....

12. i. Have you applied what you gained from the training within your current institution  
YES/NO  
ii. IF NO, please go to question number 14.

13. If YES, please state briefly how you are using the following gained from the training

KNOWLEDGE.....  
.....  
.....  
.....

SKILLS.....  
.....  
.....  
.....

ADMINISTRATIVE.....  
.....  
.....  
.....

OTHER.....  
.....  
.....  
.....

14. Was the training able to deliver what you expected from it? YES/NO

15. i. If YES please go to question 16.



ii. If NO, please explain why

.....  
.....  
.....

16. To what extent was the training relevant to your area of job?

- i. Very relevant – I use the skills and knowledge regularly in my work
- ii. Relevant – I have used the skills and knowledge a few times in my work
- iii. Not relevant – I have not used to training at all in my work
- iv. Useful to ask for a comment here – it may be that the opportunities to use the skills just has not come up yet.

17. Were the trainers competent in what they were doing YES/NO

18. Was the training of adequate duration YES/NO

19. If NO, what is the suggested duration of training ..... weeks or days

20. Any additional components that you suggest to be included in training

.....  
.....  
.....  
.....

21. Are you able to train others within your institution on what you have learnt? YES/ NO

22. If you have trained others, please give details as below

a. Type of training .....  
Dates (Year and month) .....

b. Type of training .....  
Dates (Year and month).....

c. Type of training .....  
Dates (Year and month).....

23. What are the issues that you face when trying to implement the benefits from your training (Please list in order of importance, 1= most important, 2= important, 3= less important)

- a. Issue ..... Rank.....
- b. Issue ..... Rank.....
- c. Issue ..... Rank.....
- d. Issue ..... Rank.....
- e. Issue ..... Rank.....
- f. Issue ..... Rank.....
- g. Issue ..... Rank.....

24. Do you get adequate support from your institution for you to implement the benefits of your training YES/NO

25. Please list any additional types of support that you require for better implementation of the benefits of your training

.....  
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26. Are you still employed at the same institution as the one you were when you underwent training YES/NO

27. If NO, give the name of your previous institution.....  
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28. Do you feel that these training programmes supported your career development?  
YES/NO

29. Anything else that you want to include of relevance to your training and implementation activities.....

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THANK YOU VERY MUCH FOR YOUR TIME AND EFFORT