1. Project Data

Summary project data			
GEF project ID		3751	
GEF Agency project ID		-	
GEF Replenishment Phase		GEF-4	
Lead GEF Agency (include all for joint projects)		UNEP	
Project name		Capacity Building on Biosafety for Implementation of the Cartagena Protocol - Phase II under the Biosafety Program	
Country/Countries		India	
Region		South Asia	
Focal area		Biodiversity	
Operational Program or Strategic Priorities/Objectives		BD-SP6-Building capacity for the implementation of the Cartagena Protocol on Biosafety	
Executing agencies involved		Union Ministry of Environment and Forest, Government of India	
NGOs/CBOs involvement		None	
Private sector involvement		Biotech Consortium India Limited: secondary executing agency	
CEO Endorsement (FSP) /Approval date (MSP)		08/19/2011	
Effectiveness date / project start		05/29/2012	
Expected date of project completion (at start)		05/02/2016	
Actual date of project completion		07/02/2017	
Project Financing			
		At Endorsement (US $M)	**At Completion (US $M)**
Project Preparation Grant	GEF funding	-	-
	Co-financing	-	-
GEF Project Grant		2.72	2.62
Co-financing	IA own		
	Government	6	7.24
	Other multi- /bi-laterals		
	Private sector		
	NGOs/CSOs		
Total GEF funding		2.72	2.62
Total Co-financing		6	7.24
Total project funding (GEF grant(s) + co-financing)		8.72	9.86
Terminal evaluation/review information			
TE completion date		August, 2018	
Author of TE		Emilia Venetsanou	
TER completion date		April 2020	
TER prepared by		Ritu Kanotra	
TER peer review by (if GEF IEO review)		Molly Watts Sohn	

2. Summary of Project Ratings

Criteria	Final PIR	IA Terminal Evaluation	IA Evaluation Office Review	GEF IEO Review
Project Outcomes	HS	MS	-	MS
Sustainability of Outcomes		ML	-	ML
M&E Design		MS	-	MS
M&E Implementation		MS	-	MS
Quality of Implementation		NR	-	UA
Quality of Execution		NR	-	UA
Quality of the Terminal Evaluation Report		=	-	MS

3. Project Objectives

3.1 Global Environmental Objectives of the project:

As per the Project Document, the Global Environmental Objectives of the project was to 'build capacity so that India can utilize agricultural biotechnology to address national food needs in a sustainable manner without harming its mega biodiversity and compromising the quality of the environment' (PD, Pg. 15).

3.2 Development Objectives of the project:

As per the Project Document, the Development Objective of the project was 'to strengthen the biosafety management system in India with special emphasis on Risk Assessment and Management, Handling, Transport, Packaging and Identification of Living Modified Organisms (LMOs), Socio Economic Considerations and Public awareness, to ensure adequate protection of human health and biodiversity from potential harm arising from all Living Modified Organism-related activities' (PD, Pg. 15). The project had the following components:

Component 1 - Stocktaking assessment

Component 2 - Strengthening the legal and regulatory Framework

Component 3 - Strengthening institutional capacity

Component 4 - Human resource development

Component 5 - Information dissemination for enhancing public awareness

Component 6 and 7 - Project management and project monitoring and evaluation

Component 8 - Regional networking and cooperation

3.3 Were there any **changes** in the Global Environmental Objectives, Development Objectives, or other activities during implementation?

No.

4. GEF IEO assessment of Outcomes and Sustainability

Please refer to the GEF Terminal Evaluation Review Guidelines for detail on the criteria for ratings.

Relevance can receive either a Satisfactory or Unsatisfactory rating. For Effectiveness and Cost efficiency, a six point rating scale is used (Highly Satisfactory to Highly Unsatisfactory), or Unable to Assess. Sustainability ratings are assessed on a four-point scale: Likely=no or negligible risk; Moderately Likely=low risk; Moderately Unlikely=substantial risks; Unlikely=high risk. In assessing a Sustainability rating please note if, and to what degree, sustainability of project outcomes is threatened by financial, sociopolitical, institutional/governance, or environmental factors.

Please justify ratings in the space below each box.

4.1 **Relevance**	Rating: Moderately **Satisfactory**

The TE rated the relevance of the project as 'highly satisfactory', which is reviewed by the TE as 'satisfactory'. The project was consistent with and supportive of the national priorities of India, its Tenth 5-year plans and India's global commitments. The project was also designed to facilitated the National Biodiversity Action Plan (NBAP), 2008; National Biotechnology Development Strategy (2007); the National Environment Policy (2006), and similar other regulation and policies to support the national vision of use of biotechnology as a vehicle to uplift the livelihood of its resource poor population, improve human health and secure a clean and healthy environment. The project was also timely and relevant as it aimed to strengthen the institutional mechanism and technical capacity in order to meet the new challenges posed by modern biotechnology in India.

The project was consistent with the GEF biosafety program 'to help build the capacity of eligible countries to implement the Cartagena Protocol on Biosafety (CPB) through activities at the national, sub regional and regional levels' (PD, Pg. 11). It was also relevant to strategic programming for GEF-4 specifically in relation to Strategic Program 6: Capacity Building for the Implementation of the Cartagena Protocol on Biosafety, which was derived from the GEF strategy for financing Biosafety.

4.2 **Effectiveness**	Rating: **Moderately Satisfactory**

This TER concurs with the rating provided to the achievement of project outcomes as 'moderately satisfactory'. The project completed most of the project outputs related to **Outcome 1** on stocktaking assessment, except the output on 'assessment of the long-term funding need from GOI' about which there was no reference in the available report. Most of the outputs related to the **Outcome 2** of 'strengthening regulatory and legal framework' were also completed, except that output related to 'Living Modified Organisms (LMOs) monitored by regulatory agencies after environmental release' was partially achieved. As per the TE, putting in place a post release mechanism was a much more complex process than feasible within the scope of the project. Similarly, the 'guidelines and procedures developed for specific types of risk associated with specific traits' was also not completed.

However, the project was successful in completing all the outputs related to developing institutional capacity for Living Modified Organisms detection (**Outcome -3**) and human resource development for strategic areas as risk evaluation and strengthening enforcement mechanism at the ports of entry (**Outcome -4**). The project used a wide-ranging communication and media strategy to generate awareness amongst public but the evaluation couldn't find evidence related to its impact in terms of the

level of public involvement in Living Modified Organisms (LMO) decision-making, nor of regular open consultation meetings held on biosafety.

Component 1: Stocktaking assessment to assist in priority setting of project activities

As per the expected outputs under this component, the project facilitated needs assessment through supporting a series of meetings with different stakeholders including prospective partners and experts. This led to a baseline established (stock taking report) to capture current status of modern biotechnology and biosafety system. Other specific products included a project brief and base paper documenting the gaps between the existing system and the country obligations of Cartagena Protocol on Biosafety (CPB). Regarding the expected output of an 'an assessment of the long-term funding need from GOI', no reference was made about the achievement of this output within the timeframe of the project.

Component 2: Strengthening Regulatory and Legal Framework

Outputs related to component 2 were partially delivered. As per the expected outputs related to streamlining risk assessment and management procedures and updating emerging technologies and products (2.1), existing risk assessment and risk management guidelines were reviewed to assess India's regulatory conformity with the Cartagena Protocol on Biosafety (CPB). Eight instead of four crop specific biology documents were prepared and published, and baseline data on the presence of wild relatives were included in eight crop specific biology documents, instead of two crops target. The project also delivered guidelines for Environmental Risk Assessment (ERA) of Genetically Engineered Plants. The sub-output related to Living Modified Organisms (LMOs) monitored by regulatory agencies after environmental release was partially achieved. Although manual on post release was produced but, according to the TE, putting in place a post release mechanism was a much more complex process than feasible within the scope of the project (TE, Pg. 30). The output on socio-economic assessment (2.2) was also achieved partially. The project delivered resource document on socio-economic considerations of LMOs including a guidelines framework, methodologies for socio-economic assessment and cost benefits analysis. However, guidelines and methodologies for specific types of risk associated with specific traits, as envisaged by the ProDoc, were not delivered. All the activities related to handing, transport, packaging and identification of LMOs (Output 2.3) was also delivered satisfactorily.

Component 3: Strengthening Institutional Capacity

The project supported a feasibility study on Living Modified Organisms (LMO) detection for developing a network of laboratories. As a result, a network of four LMOs detection laboratories was established, two of which were accredited by August 2017, including one referral lab. The project developed sampling procedures and methodologies for LMO detection as well as protocols for participating laboratories and relevant agencies. A number of lab qualified staff, monitoring teams, enforcement officials, including customs benefitted from several trainings for LMO detection and maintenance of laboratory equipment organized through the project.

Component 4: Human Resource Development

All the outputs under this component were completed satisfactorily. Training modules/manuals were prepared for conducting environmental risk assessment and risk management, with training of experts in Risk Assessment and Risk Management involved in technical and scientific advisory committees and

biotech R&D developers. Training modules / manuals were prepared for monitoring field trials of Genetically Modified (GM) crops and compliance evaluation including trainings of members of monitoring teams responsible for this task. The project also completed training of customs officials and plant quarantine officials for enhanced enforcement at the ports of entry.

Component 5: Information Dissemination for enhancing public awareness

The information generated through the project on Living Modified Organisms (LMOs) was used for awareness-raising campaigns amongst public through adopting a wide range of communication strategy and media. But the evaluation did not find any assessment of the impact of the awareness generation on the attitudinal change of the general public. Moreover, available reports lack evidence on the extent to which the awareness generation increased the feedback from target groups on biosafety issues, regulation and procedures. The project was also to facilitate a mechanism to communicate regulatory decisions on LMOs to the public through updating National biosafety website including national BCH. As per the TE, only five decisions were uploaded at the time of the evaluation, last being in 2009. According to the project staff consulted during the TE, despite technical clearance, final decision related to approval of Bt Brinjal and Bt Mustard was still not made and hence not uploaded on the website. Also, as stated by the project staff, it was not obligatory for various parties involved to upload various other field trial approvals.

4.3 **Efficiency**	Rating: **Satisfactory**

This TER agrees with the rating assigned to the efficiency of the project as 'satisfactory'. The project built on the pre-existing institutional capacity acquired through the implementation of previous phase I, particularly at the level of the NEA (Ministry of Environment, Forest and Climate Change (MoEF & CC). Project also benefited from pre-existing agreements and partnerships among relevant national stakeholders promoting synergies and complementarities. The TE did not mention the reasons for delay but the project was granted a no-cost extension of 14 months (including 6-month extension for administrative closure) to allow for the completion of certain activities.

4.4 **Sustainability**	Rating: **Moderately Likely**

This TER agrees with the rating assigned to the risks to the likelihood of sustainability of the project as 'moderately likely'. The project facilitated strengthening of the already existing legal and regulatory framework through undertaking studies, developing guidelines, manual and providing trainings to the relevant staff and agencies. However, as the TE noted, India would need a streamlined single window institutional mechanism for better coordination amongst its complex array of various institutions and public-private partnership to ensure sustainability of achievements under the project. The financial sustainability could be hampered due to lack of funding as national budget allocation was not in place at the time of evaluation. Lack of public support could be another risk factor. The TE noted limited impact of various efforts made through the project for awareness generation due to still an 'adverse' public opinion towards Living Modified Organisms /Genetically Modified Organisms for agriculture in India. Different aspects of sustainability are discussed in details below:

Financial sustainability:

As pointed out in the GEF tracking tool, the national budget allocation was not in place at the time of the evaluation. Moreover, a robust public-private partnership that could possibly fulfill the financial

requirement for sustaining the project outcomes, also did not materialize. The issue of financial sustainability was not addressed adequately in any of the available project reports.

Institutional:

A conducive institutional environment was evident by India's commitment to biodiversity and biosafety, as proved by the CBD ratification in 1994 and 2003. At the time of the evaluation, India had a robust and complex net of institutions underpinning the regulatory framework at central government and state levels. The guidelines prepared under the project complemented the already existing regulatory regime that was operational and in full legal force in India. Several quality knowledge products, training manuals, and guidelines developed during the project are expected to further strengthen the enforcement of monitoring and inspection system for LMOs in India. Institutional capacity was also strengthened with support provided through the project to a network of referral laboratories, two of which were accredited for Living Modified Organisms (LMO) detection. But, as the TE noted, India having a complex net of institutions underpinning the regulatory framework for biosafety at central and state level, would need a streamlined 'single window' mechanism for effective coordination in future. It also noted that public-private partnership would need to be further strengthened to improve the likelihood of sustainability of the project outcomes in future.

Socio-political:

Political commitment towards the project is evident from the fact that India is a party to the Cartagena Protocol on Biosafety (CPB). The project had good support from relevant ministries from the Government, several competent authorities and a wide spectrum of stakeholders, who were involved throughout the project lifecycle. These stakeholders were involved through awareness generation and capacity building efforts undertaken through the project, which is likely to garner more political support in future. The project also developed primers/brochures/booklets and other outreach materials in various regional languages to introduce and explain concepts related to biosafety amongst general public. However, the TE noted limited impact of awareness generation on general public as it still held 'adverse' opinion towards Living Modified Organisms /Genetically Modified Organisms for agriculture in India. The TE also pointed out towards a lack of adequate stakeholder mapping and analysis at the project design stage, which was refuted by the project staff during the evaluation (TE, Pg. 9).

Environmental:

The available reports do not point out to any environmental risks that might impact the likelihood of sustainability of project outcomes.

5. Processes and factors affecting attainment of project outcomes

5.1 Co-financing. To what extent was the reported co-financing essential to the achievement of GEF objectives? If there was a difference in the level of expected co-financing and actual co-financing, then what were the reasons for it? Did the extent of materialization of co-financing affect project's outcomes and/or sustainability? If so, in what ways and through what causal linkages?

As per the TE, the project mobilized more than 100 percent of the total co-financing committed at the time of the project approval. The Government contributed USD 900,000 (against original commitment of USD 900,000) in the form of grants and USD 6,343,000 (against original commitment of USD 5,100,000) as in-kind support. Higher than expected in-kind contribution from the government could be due to staff

time or administrative cost charged to the project during the extension of the project by 14 months. However, none of the available reports discuss the impact of increase in co-finance

5.2 Project extensions and/or delays. If there were delays in project implementation and completion, then what were the reasons for it? Did the delay affect the project's outcomes and/or sustainability? If so, in what ways and through what causal linkages?

The project was delayed by 14 months and granted extension to allow completion of certain activities. The TE did not explain the reasons of delay and its impact on the project. However, most of the project activities were completed on time after the project was granted an extension of 14 months.

5.3 Country ownership. Assess the extent to which country ownership has affected project outcomes and sustainability? Describe the ways in which it affected outcomes and sustainability, highlighting the causal links:

As per the evidence presented in various reports, the project had a good level of support and ownership from the government. This was evident through the involvement of relevant ministries and competent authorities within the government. The project was supported by the enabling regulatory regime and materialization of more than 100% co-financing from the government.

6. Assessment of project's Monitoring and Evaluation system

Ratings are assessed on a six point scale: Highly Satisfactory=no shortcomings in this M&E component; Satisfactory=minor shortcomings in this M&E component; Moderately Satisfactory=moderate shortcomings in this M&E component; Moderately Unsatisfactory=significant shortcomings in this M&E component; Unsatisfactory=major shortcomings in this M&E component; Highly Unsatisfactory=there were no project M&E systems.

Please justify ratings in the space below each box.

6.1 **M&E Design at entry**	Rating: **Moderately Satisfactory**

The project document included results framework with key deliverables and benchmarks; costed M&E workplan encompassing a clear baseline, mid-term and final targets as well as the reporting requirements at different stages of the project. The original monitoring plan in the project document also recommended formulation of a project management and monitoring committee to provide technical support to the project staff. However, as the TE also noted, several indicators in the results framework were not SMART and some of the qualitative indicators were bit ambiguous. For instance, the indicator 'within 30 months effective post-release mechanism in place for monitoring of compliance' did not elaborate on what is considered an 'effective mechanism' as the criteria against which the progress is to be measured. Similarly, the indicator '50% increase in targeted groups' feedback' did not specify the baseline population against which the progress was to be measured. The project's monitoring system was also not designed to capture the intervention's diversified impact on different stakeholders.

6.2 **M&E Implementation**	Rating: **Moderately Satisfactory**

The meetings of the National Steering Committee (NSC) and of a Project Management and Monitoring Committee (PMMC) were instrumental to the overall monitoring and strategic steering of the project.

Similarly, annual meetings organized by the UN Environment Task Force for the national Project Coordinators and teams related to the project implementation in different countries were used for promoting exchange, mutual learning, shared self-evaluation of the project progress and problems. These mechanisms proved useful for corrective measures and adaptive management. All the PIRs were also completed on time. But the system to track progress was not very effective as some of the indicators were not SMART or insufficiently defined to support performance monitoring/impact of the project.

7. Assessment of project implementation and execution

Quality of Implementation includes the quality of project design, as well as the quality of supervision and assistance provided by implementing agency(s) to execution agencies throughout project implementation. Quality of Execution covers the effectiveness of the executing agency(s) in performing its roles and responsibilities. In both instances, the focus is upon factors that are largely within the control of the respective implementing and executing agency(s). A six point rating scale is used (Highly Satisfactory to Highly Unsatisfactory), or Unable to Assess.

Please justify ratings in the space below each box.

7.1 **Quality of Project Implementation**	Rating: **Unable to assess**

The TE did not provide a rating to the quality of project implementation.

7.2 **Quality of Project Execution**	Rating: **Unable to assess**

The TE did not assess and provide a rating to the quality of execution. The project was implemented by the National Executing Agency (NEA) - the Ministry of Environment, Forest and Climate Change (MoEF & CC). The NEA took the overall responsibility for the project and provided scientific, technical, financial and administrative support. It also worked in close collaboration with relevant government agencies, the scientific community and other stakeholders. However, at implementation level, the project involved five institutional actors namely, National Steering Committee (NSC); National Project Director (NPD); National Project Coordinator (NPC); Project Management and Monitoring Committee (PMMC) and Project Coordination Unit (PCU), the latter outsourced to a Public-Private company, Biotech Consortium India Limited (BCIL). The National Steering Committee (NSC) was set-up by the MoEF & CC to guide the process of implementation, including budget approval, and was composed of relevant Ministries.

However, the available reports do not provide a rating and assessment of the effectiveness of the institutional structure put in place for the execution of the project.

8. Assessment of Project Impacts

Note - In instances where information on any impact related topic is not provided in the terminal evaluations, the reviewer should indicate in the relevant sections below that this is indeed the case and identify the information gaps. When providing information on topics related to impact, please cite the page number of the terminal evaluation from where the information is sourced.

8.1 Environmental Change. Describe the changes in environmental stress and environmental status that occurred by the end of the project. Include both quantitative and qualitative changes documented, sources of information for these changes, and how project activities contributed to or hindered these changes. Also include how contextual factors have contributed to or hindered these changes.

The TE did not report any changes in the environmental stress or status impacted by the project.

8.2 Socioeconomic change. Describe any changes in human well-being (income, education, health, community relationships, etc.) that occurred by the end of the project. Include both quantitative and qualitative changes documented, sources of information for these changes, and how project activities contributed to or hindered these changes. Also include how contextual factors have contributed to or hindered these changes.

The TE did not report any socio-economic changes brought about by the project.

8.3 Capacity and governance changes. Describe notable changes in capacities and governance that can lead to large-scale action (both mass and legislative) bringing about positive environmental change. "Capacities" include awareness, knowledge, skills, infrastructure, and environmental monitoring systems, among others. "Governance" refers to decision-making processes, structures and systems, including access to and use of information, and thus would include laws, administrative bodies, trust-building and conflict resolution processes, information-sharing systems, etc. Indicate how project activities contributed to/ hindered these changes, as well as how contextual factors have influenced these changes.

a) Capacities

The Project focused on capacity building of institutions and their staff for Least Modified Organism (LMO) detection; prepared training modules/manual for training of custom and plant quarantine officials for enhanced enforcement at the port entry and developed methodology/procedures for LMO detection. However, as noted by the TE, impact of developing human resources capacity was not captured by the monitoring system in place for the project. If an effective monitoring system with relevant impact indicators is in place, it is possible to capture the impact of such interventions over a period of time.

b) Governance

The project made positive contributions to the regulatory regime associated with Cartagena Protocol on Biosafety (CPB) through further strengthening the institutional and technical capacity for the enforcement of Biosafety Monitoring and Enforcement Systems in India. For instance, as per the PIR (2017), the 'Guidelines for Environmental Risk Assessment of GE plants, 2016' and a 'Risk Analysis Framework, 2016' developed through the project were adopted by the Genetic Engineering Appraisal Committee (GEAC), the apex regulatory committee of India.

8.4 Unintended impacts. Describe any impacts not targeted by the project, whether positive or negative, affecting either ecological or social aspects. Indicate the factors that contributed to these unintended impacts occurring.

The TE did not report any unintended impacts.

8.5 Adoption of GEF initiatives at scale. Identify any initiatives (e.g. technologies, approaches, financing instruments, implementing bodies, legal frameworks, information systems) that have been mainstreamed, replicated and/or scaled up by government and other stakeholders by project end. Include the extent to which this broader adoption has taken place, e.g. if plans and resources have been established but no actual adoption has taken place, or if market change and large-scale environmental benefits have begun to occur. Indicate how project activities and other contextual factors contributed to these taking place. If broader adoption has not taken place as expected, indicate which factors (both project-related and contextual) have hindered this from happening.

There is no information in the available reports on the adoption of GEF initiatives at scale.

9. Lessons and recommendations

9.1 Briefly describe the key lessons, good practices, or approaches mentioned in the terminal evaluation report that could have application for other GEF projects.

The lessons listed in the TE are detailed below:

1. Root-causes analysis is one way of identifying effective remedies to potential problems in project implementation. If ignored, the root-causes of a problem may turn into bottlenecks that hinder change. The current project design lacked analysis of the levels of influence, interest and expectations of different stakeholder groups needed for the achievement of the project's expected outcome.
2. Top-down awareness generation approach may not ensure public dialogue and participation. Despite the good performance of the project in terms of achievement of activities and products, adverse public opinion was pointed out by a significant number of stakeholders consulted during the evaluation as a persisting bottleneck.
3. Human Rights and Gender Equality mainstreaming is compulsory to the UN programming, yet, the value of embracing it in biosafety remains normative and theoretical as long as biosafety projects do not foster specific human rights and gender equality aims, and do not earmark budget for this purpose.

9.2 Briefly describe the recommendations given in the terminal evaluation.

The main recommendations listed in the TE are as given below:

1. The Competent National Authority to devote efforts to build robust follow-up systems in order to measure the effects of and steer action in relation to human resources capacity development; information and public awareness.
2. The Evaluation recommended working on the harmonization of the requirements at the design and evaluation stages of the project cycle. In particular, taking action to ensure consistency between the Project Document and the 'Assessment of the Project Design Quality' guidelines developed by the Evaluation Office of UN Environment.

3. The project monitoring system developed at the design stage should ensure inclusion of SMART and verifiable indicators; promote capacity building of the relevant staff on results-based management and ensure that project budget is adequate for the requirement of an effective monitoring and evaluation delivery, including capacity building.
4. Need to invest resources to fully mainstream human rights and gender equality into project design and in the project cycle.

10. Quality of the Terminal Evaluation Report

A six point rating scale is used for each sub-criteria and overall rating of the terminal evaluation report (Highly Satisfactory to Highly Unsatisfactory)

Criteria	**GEF IEO comments**	Rating
To what extent does the report contain an assessment of relevant outcomes and impacts of the project and the achievement of the objectives?	The TE included assessment of most of the output and outcome indicators. However, the evidence related to some of the outcome indicators was not clearly presented, partially because the monitoring system followed by the project lacked sufficient indicators to capture progress against project outcomes/impact.	**MS**
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	The report is more or less internally consistent but the TE lacked adequate information and analysis of the 'quality of the implementing and executing agencies' and its resulting impact on the progress of the project	**MU**
To what extent does the report properly assess project sustainability and/or project exit strategy?	This aspect was covered in adequate details	**S**
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	Most of the lessons learned were supported by evidence.	**MS**
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The report included details related to project cost and actual co-financing used.	**S**
Assess the quality of the report's evaluation of project M&E systems:	The report provided an adequate assessment of M&E systems	**S**
Overall TE Rating		**MS**

11. Note any additional sources of information used in the preparation of the terminal evaluation report (excluding PIRs, TEs, and PADs).

The TE did not refer to any additional sources of information.