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ON A

GRANT FROM THE
GLOBAL ENVIRONMENT FACILITY TRUST FUND

IN THE AMOUNT OF US\$4.0 MILLION

TO THE

INTERNATIONAL CENTER FOR TROPICAL AGRICULTURE

FOR A

LATIN AMERICA: MULTI-COUNTRY CAPACITY-BUILDING FOR
COMPLIANCE WITH THE CARTAGENA PROTOCOL ON BIOSAFETY (BRAZIL,
COLOMBIA, COSTA RICA, PERU) PROJECT

January 28, 2013

Sustainable Development Network
Latin America and the Caribbean Region

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ABBREVIATIONS AND ACRONYMS

CGIAR	Consultative Group on International Agricultural Research
CIAT	<i>Centro Internacional de Agricultura Tropical</i> (International Center for Tropical Agriculture)
CMUs	Country Management Units of the World Bank
CORPOICA	<i>Corporación Colombiana de Investigación Agropecuaria</i> (Colombian Corporation for Agricultural Research)
EMBRAPA	<i>Empresa Brasileira de Pesquisa Agropecuária</i> (Brazilian Enterprise for Agricultural Research)
FM	Financial Management
FSP	Full Size Project of the GEF
GEF	Global Environment Fund
GEO	Global Environment Objective
GMO	Genetically Modified Organism
ICR	Implementation Completion Report of the World Bank
IP	Implementation Performance
ISR	Implementation Status and Results Report of the World Bank
LAC	Latin America and Caribbean Region of the World Bank
LMOs	Living Modified Organisms
M&E	Monitoring and Evaluation
MINAM	<i>Ministerio de Ambiente</i> (Environment Ministry), Peru
MSP	Medium Size Project of the GEF
NGOs	Non-Governmental Organizations
PAD	Project Appraisal Document
PDO	Project Development Objective
SPS	Sanitary and Phytosanitary
UCR	<i>Universidad de Costa Rica</i> (Costa Rica University), Costa Rica
UNALM	<i>Universidad Nacional Agraria La Molina</i> (National Agrarian University, La Molina), Peru
WDR	World Development Report

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LAC REGION

LATIN AMERICA: Multi-Country Capacity-Building for Compliance with the Cartagena Protocol on Biosafety (Brazil, Colombia, Costa Rica, Peru) Project

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PROJECT DATA SHEET

A. Basic Information			
Country:	Latin America	Project Name:	Latin America: Multi-Country Capacity-Building for Compliance with the Cartagena Protocol on Biosafety
Project ID:	P095169	L/C/TF Number(s):	TF-55877,TF-91844
ICR Date:	01/01/2013	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	International Center for Tropical Agriculture
Original Total Commitment:	USD 4.26M	Disbursed Amount:	USD 4.19M
Revised Amount:	USD 4.26M		
Environmental Category: C		Global Focal Area: B	
Implementing Agencies:			
Brazil: EMBRAPA			
Regional: Centro Internacional de Agricultura Tropical - CIAT			
Perú: Universidad Autónoma La Molina - UNALM			
Costa Rica - Universidad de Costa Rica - UCR			
Colombia - CORPOICA			
Cofinanciers and Other External Partners:			

B. Key Dates				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	01/26/2005	Effectiveness:	11/11/2008	11/07/2008
Appraisal:	12/11/2006	Restructuring(s):		03/17/2010 07/09/2010 12/20/2010
Approval:	03/25/2008	Mid-term Review:	07/12/2010	07/12/2010
		Closing:	06/30/2011	06/30/2012

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes:	Satisfactory
Risk to Global Environment Outcome	Moderate
Bank Performance:	Satisfactory
Borrower Performance:	Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance			
Bank	Ratings	Borrower	Ratings
Quality at Entry:	Moderately Satisfactory	Government:	Not Applicable
Quality of Supervision:	Satisfactory	Implementing Agency/Agencies:	Not Applicable
Overall Bank Performance:	Satisfactory	Overall Borrower Performance:	Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
Implementation Performance	Indicators	QAG Assessments (if any)	Rating
Potential Problem Project at any time (Yes/No):	No	Quality at Entry (QEA):	None
Problem Project at any time (Yes/No):	Yes	Quality of Supervision (QSA):	None
GEO rating before Closing/Inactive status	Moderately Satisfactory		

D. Sector and Theme Codes		
	Original	Actual
Sector Code (as % of total Bank financing)		
Agricultural extension and research	15	30
Crops	60	60
General agriculture, fishing and forestry sector	25	10

Theme Code (as % of total Bank financing)		
Biodiversity	50	50
Environmental policies and institutions	25	25
Nutrition and food security	25	25

E. Bank Staff		
Positions	At ICR	At Approval
Vice President:	Hasan A. Tuluy	Pamela Cox
Country Director:	Ede Jorge Ijjasz-Vasquez	Laura Tuck
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ICR Team Leader:	Svetlana Ognianova Edmeades	
ICR Primary Author:	Svetlana Ognianova Edmeades	

F. Results Framework Analysis

Global Environment Objectives (GEO) and Key Indicators(as approved)

The GEO of the project is to strengthen the capacity in the four participating countries to implement the Cartagena Protocol on Biosafety. Specifically, it aims to strengthen the technical capacity in knowledge generation for biosafety risk assessment and management; and strengthen the biosafety decision-making capacity.

Revised Global Environment Objectives (as approved by original approving authority) and Key Indicators and reasons/justifications

(a) GEO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	By end of project, at least 80% of participating entities in the project countries have been using the available biosafety risk assessment & risk management strategies &			

	methodologies developed by the project			
Value (quantitative or qualitative)	Un-adapted and non-specific strategies and methodologies are available.	At least 80% of participating entities in the project countries have been using the available biosafety risk assessment & risk management strategies & methodologies developed by the project		100% of participating entities in the project countries have been using the available biosafety risk assessment & risk management strategies & methodologies developed by the project
Date achieved	02/27/2008	05/12/2008		11/20/2012
Comments (incl. % achievement)	Target value has been exceeded.			
Indicator 2 :	By end of project, inter-institutional and inter-country cooperation on biosafety risk assessment among the project countries have improved through diverse mechanisms			
Value (quantitative or qualitative)	Lack of institutional mechanisms for inter-country collaboration	Interactive mechanisms implemented: - 100% of scholarships have been granted; - Two interactive meetings organized	Interactive mechanisms implemented - two interactive meetings organized	Four regional working groups (by thematic area) have been created; 2 regional level meetings were held where results were presented and information exchanged.
Date achieved	02/27/2008	05/12/2008	08/31/2010	11/20/2012
Comments (incl. % achievement)	The target value was slightly modified during the mid-term review mission and through a Level 2 restructuring. Target has been achieved.			
Indicator 3 :	By end of project, biosafety competent authorities in project countries have access to and consider useful the biosafety risk assessment tools and/or information as reference in planning and in making biosafety decisions.			
Value (quantitative or qualitative)	Biosafety Centers of Excellence exist in all project countries; Limited information available to biosafety competent authorities in planning and making biosafety decisions.	Biosafety competent authorities in project countries are using the biosafety risk assessment tools and /or information as reference in planning and in making biosafety decisions.	Biosafety competent authorities in project countries have access to and consider useful the biosafety risk assessment tools and /or information as reference in planning and in making biosafety decisions.	27 events have been held with the participation of biosafety competent authorities; more than 150 representatives of the countries' competent authorities and 500 decision makers have access to information for risk assessment.
Date achieved	02/27/2008	05/12/2008	08/31/2010	11/20/2012
Comments	The indicator was slightly modified during the mid-term review mission and through a			

(incl. % achievement)	Level 2 restructuring. Target has been achieved.
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(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	By end of project, at least 80% of participating entities in project countries have used biosafety methodologies and tools developed by the project			
Value (quantitative or qualitative)	0% (Adapted and organized specific tools and methodologies are not available)	At least 80% of participating entities in project countries have used biosafety methodologies and tools developed by the project		100% of participating entities in project countries have used biosafety methodologies and tools developed by the project
Date achieved	02/27/2008	05/12/2008		11/20/2012
Comments (incl. % achievement)	Target value has been exceeded.			
Indicator 2 :	At least 8 studies on environmental risk assessments and management, and on socio-economic impact assessments on biosafety have been completed			
Value (quantitative or qualitative)	The needed background information on biological and socio-economic components is available to initiate the studies	At least 8 studies completed		25 studies were completed: 19 in assessment and management of environmental risk and 6 in assessment of socioeconomic impact
Date achieved	02/27/2008	05/12/2008		11/20/2012
Comments (incl. % achievement)	Target value has been exceeded.			
Indicator 3 :	An adapted methodology for socio-economic impact assessments has been developed by the project and is available to project countries			
Value (quantitative or qualitative)	The needed background information on socio-economic components is available to develop the methodology	An adapted methodology is developed and available to project countries		The project developed a common methodology to assess socioeconomic impact; methodology was assessed and adapted by countries in their studies for 5 crops
Date achieved	02/27/2008	05/12/2008		11/20/2012
Comments (incl. % achievement)	Target has been achieved.			
Indicator 4 :	Management strategies and corresponding operational guidelines to minimize transgene flow and potential effects on non-target organisms have been updated for at least three crops			

Value (quantitative or qualitative)	Some needed background information on biological elements is available to initiate the strategies and guidelines	Management strategies and corresponding operational guidelines to minimize transgene flow and potential effects on non-target organisms have been updated for at least three crops		Management strategies and corresponding operational guidelines to minimize transgene flow and potential effects on non-target organisms have been updated for five crops
Date achieved	02/27/2008	05/12/2008		11/20/2012
Comments (incl. % achievement)	Target value has been exceeded.			
Indicator 5 :	By end of project, at least 4 databases established for tracking and monitoring gene flow, and for mapping distribution of crop/landrace populations in project countries for targeted crops			
Value (quantitative or qualitative)	Databases do not exist for tracking and monitoring gene flow, and for mapping distribution of crop/landrace populations in project countries for targeted crops	At least 4 databases established for tracking and monitoring gene flow, and for mapping distribution of crop/landrace populations in project countries for targeted crops		Nine databases established in project countries for targeted crops
Date achieved	02/27/2008	05/12/2008		11/20/2012
Comments (incl. % achievement)	Target value has been exceeded.			
Indicator 6 :	By end of project, biosafety competent authorities in project countries have access to and consider useful information from biosafety practitioners in for the decision making process in the implementation of CP			
Value (quantitative or qualitative)	Lack and/or uneven level of biosafety knowledge required to make an informed decision	Biosafety competent authorities in project countries are incorporating information from biosafety practitioners in for the decision making process in the implementation of CP	Biosafety competent authorities in project countries have access to and consider useful information from biosafety practitioners in for the decision making process in the implementation of CP	27 events have been held with the participation of biosafety competent authorities; more than 150 representatives of the countries 'competent authorities and 500 decision makers have access to information for risk assessment
Date achieved	02/27/2008	05/12/2008	08/31/2010	11/20/2012
Comments (incl. % achievement)	The indicator was slightly modified during the mid-term review mission and through a Level 2 restructuring. Target has been achieved.			

	Achieved			
Indicator 7 :	In each project country biosafety competent authorities and practitioners trained by experts in biosafety environmental risk assessment and management, and socio-economic impact assessments			
Value (quantitative or qualitative)	Some training activities have been carried out but vary by country	In each project country, at least 50% of biosafety competent authorities and practitioners trained by experts in biosafety environmental risk assessment and management, and socio-economic impact assessments		91 training events were held during project implementation, at the regional and national levels, in each of the participating countries
Date achieved	02/27/2008	05/12/2008		11/20/2012
Comments (incl. % achievement)	Target has been achieved.			

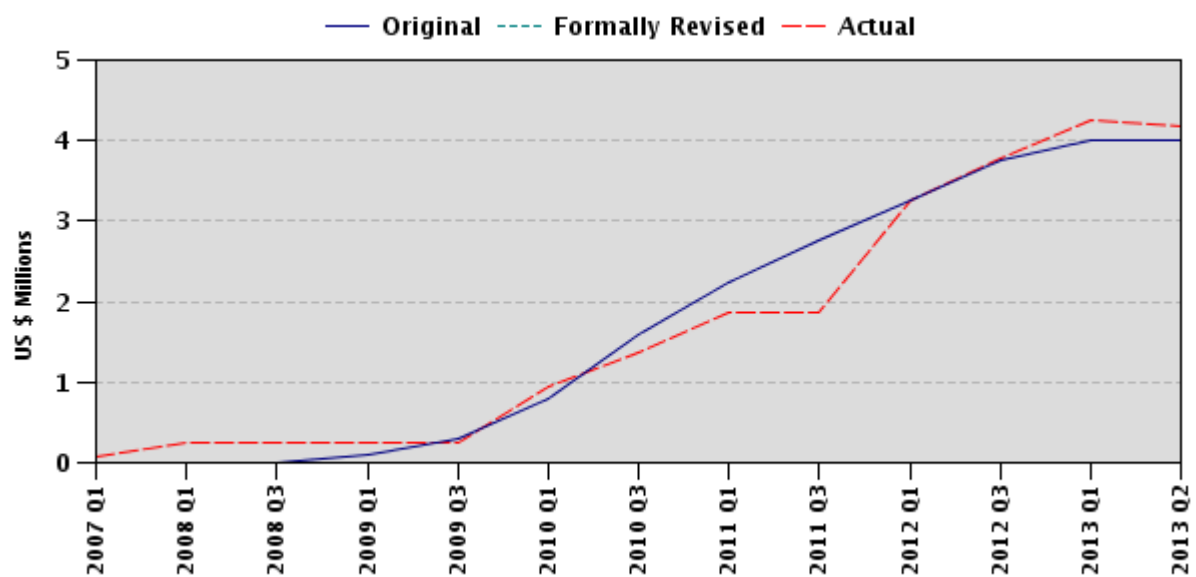
G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	GEO	IP	Actual Disbursements (USD millions)
1	12/14/2008	Satisfactory	Moderately Satisfactory	0.26
2	05/16/2009	Moderately Satisfactory	Moderately Satisfactory	0.26
3	11/17/2009	Moderately Satisfactory	Moderately Satisfactory	0.94
4	04/01/2010	Moderately Satisfactory	Moderately Satisfactory	1.36
5	02/13/2011	Moderately Satisfactory	Moderately Unsatisfactory	1.86
6	08/10/2011	Moderately Satisfactory	Moderately Satisfactory	3.27
7	06/06/2012	Moderately Satisfactory	Moderately Satisfactory	4.26
8	07/10/2012	Satisfactory	Satisfactory	4.26

H. Restructuring

Restructuring Date(s)	Board Approved GEO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		GEO	IP		
03/17/2010	N	MS	MS	1.36	Change of National Coordinating Agency in Colombia
07/09/2010		MS	MS	1.36	One year extension of closing date
12/20/2010		MS	MS	1.86	1) Retroactive change of National Coordinating Agency in Peru, and 2) Small change in the wording of several results indicators of the Project

I. Disbursement Profile



1. Project Context, Global Environment Objectives and Design

1.1 Context at Appraisal

Latin America has been adopting GMOs at a faster rate than any other region of the world. This rapid adoption rate is the commercial outcome of the manifest delivery to the region's agricultural economy of benefits linked to the initial products of biotechnology. Concern is mounting, however, about the accelerating adoption of GMOs in Latin America without sufficient and scientifically-sound biosafety¹ assessment, management, or decision-making instruments. The region is improving its capacity to implement biosafety regulations in compliance with international standards and treaties. Establishing biosafety capacity, however, is complex, not only due to the unique and difficult problems facing mega-diverse countries in addressing environmental risk, but also because of the range of technical topics involved, encompassing biological, climatic, socio-economic, health, legal and political aspects.

The World Bank's rural development strategy highlights enhancing agricultural productivity and competitiveness as key pillars for rural poverty alleviation. The WDR 2008 "Agriculture for Development" states that "An important opportunity to contribute to the pro-poor agricultural development agenda will be missed if the potential risks and benefits of transgenics cannot be objectively evaluated on the basis of the best available scientific evidence and taking into account public risk perceptions" and that "countries and societies ultimately must assess the benefits and risks for themselves and make their own decisions". In this regard, the Bank is committed to helping developing countries assess, explore, and safely use biotechnology and other new technologies when the appropriate regulatory frameworks are in place. Towards that end, the Bank has been supporting agricultural research capacity in some 30 projects since 1995. These experiences have provided the Bank unique sets of skills in supporting developing countries in the safe use of agriculture technologies. The project is consistent with the Bank's regional rural sector strategy. The LAC Region has been characterized by market-liberalizing reform and sector-led models of development, reducing barriers to competition in domestic markets and accelerating the process of trade integration with the global economy.

1.2 Original Global Environment Objectives (GEO) and Key Indicators

GEO: The GEO of the project is to strengthen the capacity in the four participating countries to implement the Cartagena Protocol on Biosafety². Specifically, it aims to strengthen the technical capacity in knowledge generation for biosafety risk assessment and management; and strengthen the biosafety decision-making capacity.

Project Structure: This GEF Full-Size Project (FSP) was regionally coordinated by CIAT (the borrower), a CGIAR Center based in Colombia, and implemented in four countries through

¹ The Cartagena Protocol on Biosafety (<http://bch.cbd.int/protocol/>) defines biosafety as "the need to protect human health and the environment from the possible adverse effects of the products of modern biotechnology". It is also understood as "addressing (or procedures and regulations for) the safe transfer, handling, and use of living modified organisms (LMOs) resulting from modern biotechnology that may have adverse effects on biodiversity as well as human health".

² The *Cartagena Protocol on Biosafety to the Convention on Biological Diversity* is an international agreement which aims to ensure the safe handling, transport and use of living modified organisms (LMOs) resulting from modern biotechnology that may have adverse effects on biological diversity, taking also into account risks to human health. It was adopted on 29 January 2000 and entered into force on 11 September 2003.

National Coordinating Agencies – CORPOICA in Colombia, UCR in Costa Rica, EMBRAPA in Brazil and UNALM in Peru. The FSP was complemented and jointly implemented with another smaller GEF Medium-Size Project (MSP) - Regional Capacity-Building for Compliance with the Cartagena Protocol on Biosafety). The MSP (US\$0.9 million GEF) was developed and jointly implemented, using the same institutional set-up as that of the FSP, to address the biosafety knowledge and capacity gap. Annex 9 provides a brief summary on the MSP objectives, components and assessment of outcomes.

Key (GEO) Indicators: The project has three GEO indicators:

1. By end of project, at least 80% of participating entities in the project countries have been using the available biosafety risk assessment & risk management strategies & methodologies developed by the project
2. By end of project, inter-institutional and inter-country cooperation on biosafety risk assessment among the project countries have improved through diverse mechanisms
3. By end of project, biosafety competent authorities in project countries are using the biosafety risk assessment tools and/or information as reference in planning and in making biosafety decisions.

1.3 Revised GEO and Key Indicators, and reasons/justification

There have been no revisions to the project GEO throughout project implementation.

During the project mid-term review (held in July 2010 in Colombia), two minor changes to two GEO indicators were recommended. These were agreed among project implementing agencies and formally approved by the World Bank through a Level 2 restructuring. These changes include:

- 1) the target values of the second GEO indicator were revised

Revised Target Values: Interactive mechanisms implemented – ~~i) 100% percent of scholarships have been granted;~~ ii) two interactive meetings organized.

Justification for the change in target values: it was the consensus that granting of scholarships was a limiting mechanism of cooperation and a broader measure, such as meetings, better reflects the project scope and objectives. Student training was undertaken by the project and it is captured by the second intermediate indicator for Component 2.

- 2) the wording of the third GEO indicator was modified

By end of project, biosafety competent authorities in project countries ~~are using~~ *have access to and consider useful* the biosafety risk assessment tools and/or information as reference in planning and in making biosafety decisions.

Justification for the re-wording: it was agreed that the project cannot impose the use of tools, but it can ensure access to tools and can evaluate their usefulness. The decision to use or not a tool is discrete to the competent authorities and therefore cannot be used to measure project performance.

1.4 Main Beneficiaries

The PAD does not identify a primary target group explicitly. The primary target group under component 1 of the project comprises the four National Coordinating Agencies and other

Participating entities³ – members of the technical/scientific communities in the participating countries. The primary target group under component 2 of the project are “biosafety competent authorities and practitioners” – comprising government officials, technical entities advising government policy, universities, NGOs, producer groups, etc. Given the public good nature of this project, the universe of indirect beneficiaries can be significant, within and outside of the geographic boundaries of the four participating countries.

1.5 Original Components

The project has two components:

1) Component 1: Strengthening technical capacity in knowledge generation for biosafety risk assessment and management (US\$3.68 million GEF) – The objective of this component is to strengthen regional technical capacity using selected, target crops (cassava, cotton, maize, potato and rice) as models for developing risk assessment, management and cost-benefit analysis methodologies for new, transgenic products.;

2) Component 2: Strengthening biosafety decision-making capacity (US\$0.32 million GEF) – The objective of this component is to implement Articles 14 (bilateral, regional and multilateral agreements and arrangements) and 22 (capacity building) of the Cartagena Protocol, specifically their emphasis on regional approaches.

1.6 Revised Components

There have been no revisions to project components throughout project implementation.

1.7 Other significant changes

There have been no changes to the design of the project nor to the funding allocations. Minor changes in implementation arrangements were addressed and reflected through two Level 2 restructurings of the project (described below). They include changes of the National Coordinating entities in Peru and Colombia.

Other changes in the context that could have had adverse impacts on project implementation include: 1) change in the National Coordinator of Costa Rica at start of project implementation; change in the Regional Coordinator (for health reasons) at project mid-term; 2) Changes in regulatory framework in Peru, with the adoption of a law (in 2011) establishing a ten year moratorium on GMOs.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

Preparation: Project preparation took a long time (3 years). The slow preparation was due to various reasons:

³ The Legal Agreement defines National Coordinating Agencies as EMBRAPA in Brazil, CORPOICA in Colombia, UNALM in Peru and UCR in Costa Rica. Participating entities are defined as any entity that will be carrying out a subproject under Component 1 of the project. Participating entities include the four National Coordinating Agencies and other institutions across the four countries. A list of all project Participating entities can be found on the project's website at www.lacbio.org

1. This was the first multi-country operation in biosafety and although lessons from country-specific biosafety operations (in Colombia and India) were taken into consideration, the participation of four countries plus an international agricultural research center required more time than usual for consultations, technical studies, distribution of responsibilities and design.
2. The topic of “biosafety” was considered a controversial topic and a high risk area of work, associated with public perception on GMOs. This required greater oversight of preparation documents, an in-depth review of project objectives and activities by all participating countries and, greater involvement of senior management in the World Bank and the GEF (the project was discussed at a Regional Operations Committee meeting before authorization for appraisal, and an information session for Board members was organized before submission to the World Bank Board of Directors).
3. Due to the controversial nature of biosafety, Mexico decided to pull out at the last moment. Since project financing was initially based on the US\$1 million contribution per country that GEF had reserved for strengthening biosafety systems, the project then had to be restructured from US\$5 million to US\$4 million. In consultation with GEF senior management, the financing of the communication and public-awareness activities (and the remaining US\$1 million) was then transferred to a GEF medium sized project (MSP) with a more regional orientation, thereby allowing the four countries to pursue the objectives outlined for the project. The MSP was then implemented jointly with the main project, and through the same implementing agency.

To address the possible perception that the project aimed to promote GMOs rather than strengthen the capacity of biosafety management, an agreement was made that project activities would be undertaken without planting GMOs, but by studying biosafety issues such as gene flow through conventional plant varieties. The agreement significantly reduced the controversial nature of the project.

Design: Project design was based on a “consortium approach” captured as a matrix with four themes⁴ in one axis and four countries in the other. This approach focused on complementarity, taking advantage of the various strengths in knowledge and capacity across the participating countries. Project activities were carried out in the four countries under each of the four themes, through 25 sub-projects focusing on five priority crops (cassava, cotton, potato, rice and maize). Country activities were the responsibility of the National Coordinators, while the technical work of the sub-projects was under the oversight of the four Thematic Leaders, one per thematic area, that were positioned at the regional level. A Committee for sub-project selection was formed (including the Regional Coordinator of the project, the National Coordinators and the Thematic Leaders) that also brought external technical expertise in the process of qualifying eligible project activities. The design ensured that countries were involved in the different themes that the project addressed and that they were well positioned to share results. The external (international) experts were an element of quality control built into the project design. Furthermore, capacity-building under the project was based on the scientific/technical evidence developed by the project.

2.2 Implementation

Restructurings: There were minor changes in implementation arrangements that were addressed through three Level 2 restructurings of the project. This was done to ensure consistency in

⁴ The project themes were 1) gene flow; 2) impact on non-target organisms; 3) use of GIS tools; 4) socio-economic analysis.

implementation with changes in country contexts. In Peru and Colombia, the project National Coordinating entities were changed from MINAM to UNALM (in Peru) and from Institute von Humboldt to CORPOICA (in Colombia). In both cases, the motivation for the change was based on the perception that the project is more closely linked to agriculture than to environment and therefore its oversight should be under the Ministries of Agriculture in both countries. In both cases, the change was formally requested by the Governments of Peru and of Colombia.

The project was also extended by one year. The motivation for the extension was based on differences in country processes and systems, which led to delays at the beginning of project implementation related to the formulation and signing of sub-contract agreements. This pushed back the beginning of the scientific/technical work of sub-projects, which affected the planting and harvesting dates of the researched crops.

Minor changes to the indicators, agreed upon during the mid-term review of the project, were also processed as part of the third restructuring package.

Mid-term: The mid-term review for the project, held in July 2010, included several external experts who provided their assessment on project progress. The consensus was that the project was making good progress, in particular in the technical (sub-project) component (Component 1). The recommendations were focused on increasing attention towards the implementation of the capacity building activities (under Component 2) as well as strengthening project management. Linked to Component 2, increased attention was suggested be given to MSP communication activities, emphasizing the need to effectively reach out to different beneficiary groups.

Actions taken to respond to recommendations: The Regional Project coordinator stepped down (for health reasons) in November 2010. With the mid-term recommendation in mind, the World Bank requested that two people shared the Regional Coordination leadership – one overseeing the technical side of project implementation, the other one being in charge of project management, administration and monitoring. This set up worked very well, ensuring continuity of technical progress and greater oversight on project management and monitoring.

With regards to the capacity building activities, as they were based on technical knowledge generated by the sub-projects of Component 1, they could be actively pursued when the results emerged towards the end of 2011. The extension of the closing date of the project allowed for capacity building activities to take place during 2012.

Model for knowledge exchange: One important element of project supervision was the rotation of missions across the different implementing countries. This model not only enabled the Bank team to visit project sites and oversee project implementation in each country, but also encouraged an exchange of knowledge among the teams of the National Coordinating agencies, as they traveled with the Bank team to the different mission locations. It also ensured greater visibility of the project as well as a two-way exchange of information through open public consultations that were organized in each country, inviting media and public to hear about the project, raise concerns or discuss issues.

2.3 Monitoring and Evaluation (M&E) Design, Implementation and Utilization

The M&E framework was developed early during project implementation adhering to the project's results framework as well as to a Communications Plan and a Capacity-Building Plan (both developed by project consultants). With the project activities implemented in 4 countries simultaneously, the monitoring process proved to be a complex (multi-dimensional –

country/theme/fiduciary) task. Added to its complexity was the more qualitative nature of project results, which made their quantification more challenging. Having a person in charge of project monitoring was a critical decision in project management. Project information was carefully collected from each National Coordinator and Thematic Leader throughout project implementation and processed in a format that enabled inputting it into the project's results framework.

2.4 Safeguard and Fiduciary Compliance

Safeguards: The project was an environmental category C operation. Environmental safeguard supervision (including supervision of pest management practices) was carried out when sub-projects began implementation (end of 2011). Field supervision was carried out in Peru and Costa Rica, with lab visits conducted in all countries. No issues were identified that raised concern or required follow-up.

Financial Management: Compliance with fiduciary requirements was challenging. Delays and inconsistencies of the financial information submitted by the countries prevented the delivery of the financial reports and external audits within the contractual date, impacting the timely transfer of funds to the countries. Delays in the presentation of financial information by one country caused delays in the overall process of preparation of the financial reports and disbursement requests. The limited allocation per country (of US\$700,000) did not encourage investments in FM capacity. The financial management risk of the project was re-assessed from Moderate during the first years of the project to Substantial in the last year.

Closer financial management supervision was taken as a mitigation measure by the World Bank. However, neither the World Bank nor CIAT could implement continuous country-specific supervision to assist with financial management issues. On the Bank side, fiduciary oversight was challenging due to the multi-country structure of project implementation (across 4 CMUs) with FM and procurement specialists from the World Bank office in Colombia having to deal with country processes and issues from 3 other CMUs. On the CIAT side, financial oversight required more time (and greater cost) than foreseen during project design. To ensure project continuity and to fill the disbursement time gaps, CIAT often "lent" resources for project implementation. Another mitigation measure taken (after the mid-term review) was the inclusion of CIAT's financial specialist in Bank missions to the implementing countries where direct interaction on financial issues was carried out between the regional and country teams. This clarified expectations and improved the fluidity of communication and delivery of reports.

Audits: The complexity of the project, associated with gathering information from four countries implementing 25 subprojects, resulted in delays in the delivery of the audits. The audit reports for the periods 2010 and 2011 were submitted⁵ 3 months after the due date, and the final audit report for the period of January to June 30, 2012 was submitted 3 months after the due date of October 30, 2012. All audit reports have been considered satisfactory by the World Bank.

⁵ The external auditors issued unqualified opinion on the project financial statements for the first three periods audited, May 2008 to December 2009, 2010 and 2011. In addition, as of December 2011, first year of subprojects' implementation, the external auditors issued unqualified opinion on the subprojects financial reports.

2.5 Post-completion Operation/Next Phase

During the closing Conference of the project, a strong demand was expressed for a follow-on project at a larger regional scale in LAC, comprising around 10 countries, including the 4 countries that implemented the current project. The implementing agency (CIAT) has expressed its desire and willingness to pursue and coordinate this larger operation. They have approached the World Bank and GEF for further information.

The need for a follow-on operation was expressed by the Vice Ministers of Environment of Costa Rica and Colombia and endorsed by Peru and Brazil. The participants from Uruguay, Mexico, Dominican Republic, Paraguay, among others openly expressed desire for their countries to be part of a larger regional initiative. While biosafety was considered a controversial issue in the past, it is gaining more attention within the context of food security and the need to have capacity for risk assessment of new technologies that could be beneficial in light of climate change pressures and rising food prices.

Sustainability of project outputs, including institutional capacity, is expected as sub-projects were implemented by established research entities in the 4 countries with project results being of relevance for their research activities and not only as outputs to the project. Retaining some of the trained personnel, however, may be a challenge, as their involvement in the project was covered by project resources. CIAT has agreed to operate and maintain the project website, which contains large amounts of well-organized information on biosafety and has become an important reference site on biosafety in the region (Annex 9 provides information on the use of the project website).

3. Assessment of Outcomes

3.1. Relevance of Objectives, Design and Implementation

Relevance of Objectives: The project objectives continue to be relevant to the context of the participating countries, and perhaps even more so than when the project was designed. In a context of rising temperatures and variability of rainfall, more and more frequent weather extremes, and increasing commodity prices and price fluctuations, there has been a greater sense of urgency among governments in ensuring food security by exploring different economic, regulatory, technological and other options. Countries are looking more towards GMO as an option for increasing agricultural production and resilience. Furthermore, sanitary and phytosanitary (SPS) rules are becoming important factors in governing agricultural trade flows and requirements for improved knowledge of potential risks. All these factors emphasize the need for strong biosafety systems as means for addressing sectoral strategies and country priorities.

The project document reported that the area cultivated with GMOs in 2004 in Latin America was 23 million hectares, representing some 30 percent of the total global area. The project document noted also that the adoption of GMOs was increasing in Latin America at a faster rate than in any other region of the world. This trend is confirmed at project completion: in 2011 the area cultivated with GMOs totaled almost 60 million hectares, covering roughly 37 percent of the surface occupied by GMOs at global level. Table 1 reports the data of commercial cultivation of GMOs in the participating countries at the beginning and the end of the project.

Table 1. GMOs cultivated at commercial level in the participating countries and their total area

Country	Genetically Modified Crops Commercialized	Total area cultivated with genetically modified crops (in hectares)		
		2007	2012	Δ%
Brazil	herbicide tolerant soybean, insect resistant and herbicide tolerant cotton, insect resistant and herbicide tolerant maize	15,000,000	31,809,000	+52.84
Colombia	insect resistant and herbicide tolerant cotton, insect resistant maize, blue carnation, blue rose (in greenhouse for export only)	28,000	108,572	+74.21
Costa Rica	insect resistant cotton, herbicide tolerant soybean (seed production for export only)	1,230	1,600	+30.08
Peru	none	0	0	0

Source: Biosafety scanner (<http://en.biosafetyscanner.org/index.php>)

The relevance of building appropriate capacities to comply with the Cartagena Protocol on Biosafety, with special reference to Article 10, remains therefore⁶. In particular, the development of participating countries' capacities to carry out biosafety risk assessment and risk assessment strategies and methodologies is crucial to minimize the risks posed to the environment by the adoption and commercial release of GMOs.

There have been changes not only in attitudes towards biosafety, but also in the underlying regulatory framework in the countries. In Colombia, Brazil and Costa Rica, biosafety is receiving greater political support as a tool for risk assessment in furthering agricultural research and development. In Peru, the adoption of a law (in 2011) establishing a ten year moratorium on GMOs has created a more adverse environment for biosafety applications. In the four countries, there has been a growing interest in engaging on biosafety by Ministries of Environment, something that was not the case at project design. This interest would need to be transformed into greater knowledge through continuous capacity-building efforts in biosafety.

The strategic role of supporting the development of science based biosafety regulatory systems has been noted in all the recent key strategic documents of both agriculture and environment departments of the World Bank. The WDR2010: Development and climate change, recognizes biotechnology's potential to improve productivity and adaptation to climate change and also notes that there is a need to establish science-based regulatory systems "so that risks and benefits can be evaluated on a case-by-case basis". The strategic goal of safe access to agricultural biotechnology is also articulated in the WDR 2008 and the Agriculture Action plan 2012-2015. Specifically on biosafety regulation, the World Bank views it as one regulatory system among others to support the transformation of the agriculture sector, and calls for further development and rationalization of science-based biosafety regulation as it co-evolves with biotechnology research on one hand and familiarity gained from large scale production on the other. The present regional project in LAC fits well into this corporate context, embracing science based risk assessment, inter-sectoral coordination and scale advantage gained through regional approach.

⁶ The Updated Action Plan for Building Capacities under Article 22 on capacity building identifies the use of regional arrangements, including centers of excellence, for implementing capacity building measures on all aspects of the Protocol. The Action Plan was recently replaced by a new "Framework and Action Plan for Capacity Building" and it too promotes regional and sub-regional approaches to capacity building.

A 2008 review⁷ states: “As the challenges of population growth, the reduction of available land and water, and the degradation of the environment have intensified; the World Bank should use its unique position and experience to intensify support for the development and deployment of agricultural biotechnology and biosafety capacity building”. The review ends with specific recommendations of strategies and technical approaches that the Bank can use to build this support.

Relevance of Design: The relevance of project design was high in several respects. Economies of scale in technical knowledge and resources across thematic areas and countries were critical for achieving desired multi-country impact. Country complementarities were explored through the different thematic areas and effectively used for capacity-building purposes. The creation of technical knowledge from Latin America for Latin America has also been a critical factor of “ownership” and success. The multi-country nature of the project has also been useful for breaking country-specific barriers to biosafety awareness-raising and engaging with a wide spectrum of opinions on biosafety.

The multi-country approach took advantage of the strong and motivated technical base in each country to raise mutual capacity levels on biosafety and by doing so, largely avoided the polemics surrounding this contentious issue. This more pragmatic approach avoided the common pitfalls to advancing the biosafety agenda in countries, and in the end arguably did more to build mutual assurances and align positions on biotechnology and biosafety. It is an interesting contrast to a regional GEF-funded biosafety project under implementation in West Africa, which seeks regulatory harmonization as a way to raise capacities to implement the Cartagena Protocol.

Relevance of implementation: Project implementation has undoubtedly been of great relevance for the generation of knowledge and the building of capacity through the 25 technical sub-projects and the many capacity-building events organized throughout the project duration. Implementation has also been critical for the dissemination of information on biosafety and raising awareness through the jointly implemented MSP project.

3.2. Achievement of Global Environmental Objectives

The project’s Global Environmental Objectives have been fully achieved. The project has made a considerable contribution to the debate on biosafety globally and regionally, as an example of a collaborative platform for generating and using technical knowledge for decision-making on biosafety within a South-South framework.

Given the capacity-building nature of the project and the public goods nature of the outputs, the clarity of the linkages between outputs and outcomes may not be as evident as in other projects with more tangible outputs. To address this issue, a stakeholder survey was carried out. In continuation, those linkages are assessed for each objective separately, with detailed information on outputs provided in Annex 2 and stakeholder survey in Annex 5:

⁷ Van der Meer, P. 2008. “ A Review of the Policies, Strategies and Technical Approaches of Agricultural Biotechnology and Biosafety Programs of the World Bank and other Development Agencies”. The World Bank. ARD Internal Paper.

- 1) *PDO 1: At least 80% of participating entities in the project countries have been using the available biosafety risk assessment & risk management strategies & methodologies developed by the project*

The project has contributed to the advancement and use of risk management methodologies (guidelines, studies, geo-spatial databases, maps, etc.) in the four participating countries for monitoring gene flow, impact on non-target organisms, visualization through GIS tools and understanding producer and consumer behavior through socio-economic analysis. Annex 2 provides a detailed overview of the specific achievements related to this PDO. They are technical in nature and represent important advancements in each thematic area.

Starting with a baseline of “un-adapted and non-specific strategies and methodologies are available”, the project first established a multi-country thematic work plan for the development of biosafety risk assessment and risk-management tools and proceeded with the development and adaptation of at least one strategy and methodology per country on biosafety risk assessment and management. This process ensured involvement of all participating entities in the process of using available strategies and methodologies, adapting them and making them more uniform. The tools were developed under the four thematic areas, which diversified the thematic base of this participation. At the end of the project, all participating entities (or 100%) are using the biosafety risk assessment & management strategies & methodologies developed by the project.

A stakeholder survey was conducted and finds that more than three quarters of respondents have participated in project capacity-building events, with 60% of respondents having utilized the tools/information/methodologies that they have learned from their participation in project events (Annex 5).

- 2) *PDO 2: Inter-institutional and inter-country cooperation on biosafety risk assessment among the project countries have improved through diverse mechanisms*

The project has contributed to strengthening the cooperation and collaboration on biosafety risk assessment across institutions and participating countries. At project start, there was an identified lack of institutional mechanisms for inter-country collaboration. The inter-institutional and inter-country collaboration was achieved at different levels – at the technical level (technical staff received capacity building through participation in training events and exchange visits), at the policy level – two regional level meetings with representatives from different institutions from participating countries and others working biosafety (held in Costa Rica in April, 2011 and in Colombia in June, 2012), at the project team level – mission rotation enabled cross-exchange of knowledge and visits from all team members to the other participating countries and their institutions. Four regional working groups (by thematic area) have been created, inter-institutional alliances have been established (e.g. in Colombia – between CORPOICA and local Universities), a professional network on biosafety has been established and a Google Earth map used by the project to map the location of all participants (on project website).

A stakeholder survey was conducted and finds that 62% of respondents have generated professional relationships with groups working in similar thematic areas of biosafety in other countries in LAC and beyond LAC thanks to the project (Annex 5).

- 3) *PDO 3: Biosafety competent authorities in project countries have access to and consider useful the biosafety risk assessment tools and/or information as reference in planning and in making biosafety decisions*

Starting with a premise that biosafety centers of excellence exist in all project countries, at project start limited information was available to biosafety competent authorities in planning and making biosafety decisions. During project implementation, 27 events have been held with the participation of biosafety competent authorities. More than 150 representatives of the countries' competent authorities and 500 decision makers now have access to information for risk assessment. With the help of the jointly implemented communications project (MSP), different dissemination strategies have been used in the participating countries to reach out to different target audiences, among them: project webpage designed and continuously updated (www.lacbiosafety.org), close to 10 videos (pod casts) developed and disseminated in Colombia (<http://www.youtube.com/user/lacbiosafety>), Brazil (<http://www.lacbiosafety.org/paises/brasil/>) and Costa Rica (video presented in movie theatres), as well as Facebook pages in some of the countries. Involvement with the media (newspapers, TV, radio) was actively done in project countries. Each country has also developed a database of stakeholders and collaborators (in Brazil it counts with 119 institutions and 1,404 surveyed people, in Colombia with 1,080 surveyed people, 367 in Costa Rica, 208 in Peru).

A stakeholder survey was conducted and the vast majority of the respondents is aware of or has access to project products and 93% considers these products to be important (with more than half considering them to be very important) (Annex 5).

3.3. Efficiency

By their very nature, capacity building and research projects do not lend themselves to conventional economic rate of return or net present value analyses. An incremental cost analysis was carried out at project preparation, and general comments on the possible economic implications of the project were made. Those are recapped and evaluated in Annex 3.

In general terms, the project has been implemented in a cost effective way, considering that many of the project objectives have exceeded their target values while using the available project resources. Cost effectiveness has been achieved through: 1) economies of scale from the multi-country nature of project activities, the generation of technical knowledge (by one country and used by all others) and its use in capacity-building events across countries; 2) generation of important co-benefits (professional networks) that are a product of the project, but not an expected result, hence, they are a positive externality of the use of project resources.

3.4. Justification of Overall Outcome Rating

Rating: Satisfactory

The overall project outcomes are rated satisfactory. The GEO remains highly relevant and has been largely achieved. In some instances, target values have been exceeded. The design was relevant for a multi-country project that focuses on technical knowledge generation and capacity-building, exploring country synergies and economies of scale. Project activities were developed by entities with strong technical/scientific capacity that will remain beyond project closure, ensuring sustainability of project actions (both in terms of capacity-building and in terms of use of generated products). The project has generated a lot of interest among the global biosafety community, as well as among non-participating countries. A strong demand for a larger regional operation has been expressed by close to 10 LAC countries and there is increasing joint interest by Ministries of Agriculture and Environment in using biosafety. This in itself is an indication of the successful implementation of the project.

3.5. Overarching Themes, Other Outcomes and Impacts

a) Poverty Impacts, Gender Aspects and Social Development

The project did not have an explicit poverty focus and therefore did not pursue a quantitative assessment of its poverty impacts. The gender dimension was not an explicit project target either, but a strong presence of women was always noted in the project training events and conferences. Women were not only participants in project activities at the technical level (in the implementation of sub-projects), but they were also beneficiaries of project activities as decision-makers.

b) Institutional Change/Strengthening

The project has been able to create a forum for technical discussion and information exchange between Ministries of Environment and Agriculture in the participating countries. During project implementation oversight of project activities was shifted from Ministries of Environment to Ministries of Agriculture (in Colombia and Peru) given the perceived risk associated with biosafety for the former in a polarized political context for GMOs. In Brazil and Costa Rica the context of discussion on biosafety was much more open and interactive among agricultural and environmental sectors. At project closure, Ministries of Environment of Colombia and Costa Rica publicly endorsed the project results during the Regional Conference and requested to be part of future projects in biosafety, a request also voiced by the Ministry of Environment of Peru and Brazil. This has demonstrated a unique ability of the project to bridge a political gap in the discussion of biosafety and establish a platform for cross-sectoral coordination at the national and regional levels.

c) Other Unintended Outcomes and Impacts

The project has generated important co-benefits in the context of biosafety. At the technical level, through project activities important professional and technical networks have been created in biosafety in LAC. The project teams (including the participating entities) have worked in close collaboration throughout project implementation and joint training events, creating a technical network on biosafety in the region. Through participation in project missions and project events, a network of biosafety decision-makers was established (from the National Technical Commissions on Biosafety of LAC countries). These networks are demand-driven and hence will be sustained beyond project closure.

Also, the project webpage constitutes a complete reference base for biosafety in Latin America and an important source of information (both technical and general) to different public groups. Such comprehensive source of information is the first one to be established in Latin America and it will remain in the public domain thanks to CIAT's willingness to maintain it.

Large portion of the technical knowledge generated by the project has been summarized in the form of studies (project intermediate result). Publication of these studies into peer-reviewed international journals can increase the project impact beyond Latin America, provide greater visibility to project results and contribute to the global debate on biosafety. The global positioning of the project is on-going with presentations of results in regional and international conferences and events.

3.6. Summary of Findings of Beneficiary Survey

The results of the survey (Annex 5) support the argument of the achievement of project objectives. The vast majority of the respondents is aware of or has had access to project products and 93% considers these products to be important (with more than half considering them to be very important). More than three quarters of respondents have participated in project capacity-building events, with 60% of respondents having utilized the tools/information/methodologies that they have learned from their participation in project events. A large share of the respondents (90%) is aware of the project's website (www.lacbiosafety.org) and of them 94% considers the contents to be useful. Interestingly, 62% of respondents report to have generated professional relationships with groups working in similar thematic areas of biosafety in other countries in LAC and beyond LAC thanks to the project. This is an important measure of the co-benefits generated by the project.

4. Assessment of Risk to Development Outcome

Rating: Moderate

The risk to development outcome will continue to be moderate based on the continued controversy that surrounds the topic of GMOs. Despite the information generated and disseminated by the project and the numerous capacity-building events, the political debate on GMOs will continue and will have an effect on the extent to which biosafety, in general, and the products of the project, in particular, will be used and mainstreamed into decision-making processes.

The sustainability of project activities is expected to be substantive, considering that those were carried out by established research organizations in the participating countries. The professional network formed through this project was demand-driven and should continue operating as a knowledge sharing mechanism. However, there is a risk of research priorities shifting away from biosafety-related research towards other areas, which depends on country-specific budgetary and research considerations.

5. Assessment of Bank and Borrower Performance

5.1 Bank

(a) Bank Performance in Ensuring Quality at Entry

Rating: Moderately Satisfactory

The Moderately Satisfactory rating is given because of the lengthy period of project preparation (3 years) and the implications that this prolonged period had on country-specific contexts and expectations, cost estimates and changes in project team compositions. The lengthy preparation period is a function of a number of factors that go beyond the Bank or client control. This a pilot project, both in terms of its scope (multi-country) and in terms of its subject-matter (biosafety). This required extensive assessments, consultations, country-specific preferences/priorities, GEF and Bank requirements to all be carefully considered and built into an effective design.

The project was designed according to lessons learned from previous similar operations (which were very limited) and has proven to work well for this type of operation with cross-thematic and cross-country engagements. However, reaching an effective design should not take 3 years and mitigation measures should be put in place to ensure a shorter period of time.

(b) Quality of Supervision

Rating: Satisfactory

Overall: Given the multi-country nature of the project, the Bank undertook its supervision missions on a rotational basis, ensuring at least one visit to each country during the life of the project. This supervision approach provided many benefits to all project participants: 1) in-country interaction with implementing agencies and other stakeholders; 2) cross-country exchange of technical and other information through visits to project sites and country research facilities; 3) on-the-ground public consultations on biosafety; 4) in-country dissemination of project activities, among others. It created a strong sense of project teamwork that would not have been possible otherwise. This was achieved despite the limited supervision resources allocated for this multi-country project.

Fiduciary: Financial management supervision proved to be challenging due to differences in the scale of engagement and reporting implied by the multi-country nature of the project. While financial management activities and oversight was required in each participant country, the Bank's financial management specialist was country-bound (in Colombia) and responsible for FM activities in Colombia, with limited knowledge on country processes for Peru, Costa Rica and Brazil. Despite this structural difficulty and the budget limitations for regional supervision, the team worked hard to ensure adequate project oversight, with the financial management specialist having to travel to Costa Rica and interacting virtually with the financial counterparts in Brazil. Direct supervision was possible for Colombia. Procurement supervision had similar limitations and procurement training was undertaken early on in project implementation for all country entities.

Safeguards: One supervision mission was carried out for oversight of compliance with environmental safeguards. It was carried out in the field (in Costa Rica and Peru) and in the lab in all participating countries. No more supervision missions were required due to the C rating of the project and the fact that sub-project activities started implementation a year late. The supervision mission did not identify any problems that would require in-depth consideration.

(c) Justification of Rating for Overall Bank Performance

Rating: Satisfactory

Despite the lengthy project preparation period and the difficulties encountered with fiduciary supervision of regional projects, the Overall Bank Performance is considered to be Satisfactory based on the effective and well performing project design for this complex project, the supervision methods used and the mitigation measures built into them to ensure adequate oversight while learning important lessons of the advantages and limitations. The co-benefits generated by the project are also very much related to both the design and the in-country visits that were inherent in the supervision approach.

5.2 Borrower

(a) Government Performance

Rating: Not applicable for this project

The modality of project implementation through National Coordinating Agencies in each country limited direct Government participation and oversight of project activities. On a case by case basis, each National Coordinating Agency can be rated satisfactory for implementing the project activities in each country. This is evidenced by the achievement of results in each country, as planned, that add to the aggregate project result that is assessed in this report. A strong collaborative environment, responsiveness and effective engagement with the project's Regional Coordinating entity (CIAT), as well as with national institutions, characterize the four National Coordinating Agencies. Each Agency has made in-kind contributions to the project and effectively promoted project activities through training events, conferences, and other professional venues and public fora.

(b) Implementing Agency or Agencies Performance

Rating: Satisfactory

Overall: This Satisfactory rating is for CIAT, the Regional Implementing Agency and the recipient of Bank disbursed resources (GEF Grant). The other country-specific participating entities are not rated separately. The Satisfactory rating is based on the continuous and dedicated commitment of CIAT for the implementation of this project. The technical oversight of this project was undoubtedly very solid, which was critical for achieving the project's objectives, as many of the results were technical/scientific in nature. CIAT was always very responsive to Bank requests and very proactive in terms of resolving issues. The Regional Coordinator travelled to Costa Rica to seek the sub-project agreement approval, which was critical for the start of activities in this country; he also mediated very effectively the change of National Coordinating Agency in Peru and Colombia, as well as differences in opinions in Peru. The identified in the mid-term review project management weakness was quickly resolved with the appointment of a second Regional Coordinator to oversee the administrative, financial and monitoring side of the project.

Fiduciary: Oversight of fiduciary aspects were similar to those encountered by the World Bank, with the difference that CIAT, as a Regional Coordinating Agency was expected to coordinate all country-specific fiduciary reports. Country-specific delays were translated into overall project delays in reporting. Involvement of a full time financial management specialist for this type of projects is an important lesson learned. Despite the delays, CIAT actively communicated with all financial counterparts to produce the required documents. Moreover, CIAT often provided own resources to cover the financial gaps caused by delays between delivery of financial reports and disbursements. Furthermore, CIAT, as part of the CGIAR, receives annual funding from the Bank much larger than the resources of this project. It was rightfully confusing to CIAT that they were asked to comply with one set of fiduciary criteria for the core Bank funding and a different one from this project funding.

(c) Justification of Rating for Overall Borrower Performance

Rating: Satisfactory

The justification is provided in the text of 5.2 (b) above.

6. Lessons Learned

6.1. Design

Project design is an effective framework for multi-country collaboration and capacity-building and proved to be an appropriate mechanism for achieving project objectives. However, it can be strengthened by the explicit inclusion of components on communications and project management and by the adequate allocation of resources for financial management and oversight.

Specific lessons are presented below:

- Project preparation should not take more than 2 years, as otherwise, country priorities change and so do buy-in and commitment.
- The matrix form of the project – where thematic areas crossed with countries – has been seen as a very effective way of partitioning the project tasks and activities and quantifying the results.
- A more parallel/simultaneous implementation of project Components may be warranted, as the current project was very much developed at a step-wise (sequenced) fashion, where activities of Component 2 depended on the results of Component 1. This led to a delay in capacity-building activities or perhaps it was envisioned that those be developed towards the end (hence the small overall project allocation to Component 2). If the latter was true, this has to be reflected in the project Results Framework, where target values for Component 2 appear for the later years of project implementation, while those of Component 1 are presented throughout.
- The project would have benefitted from having a separate Component on Project Management, where all the project management costs are explicitly captured.
- A component on communication is critical for any biosafety-related project. The current project was jointly implemented with a smaller project on communications which was essential for the success of the project, as it enabled explanation and dissemination of the project's technical results to the public. Therefore, any future project should have a specific component on Communication/Public Relations/Knowledge Exchange. This component has to have adequate financial resources and communication professionals in each country.
- To ensure that both technical and project management oversight is adequate at both the regional and national levels, it is important that project leadership has project management skills, while thematic leaders or assistants can have a more technical profile.
- To ensure project oversight, the World Bank team has to either have a “regional” FM and procurement specialists or from the onset work with a fiduciary team, where a different fiduciary specialist will be in charge of oversight of fiduciary activity in the different countries, but will be able to participate in Bank missions to ensure consistency across CMUs and country systems.
- Differences in country processes have to be carefully evaluated as they cause significant delays and increases project costs. For example, in Costa Rica legal opinions are required at different levels and it takes much longer to obtain signatures; in Brazil, all documents are required to be translated to Portuguese before they can be considered for signature (when an Operational Manual is concerned, the time and cost are significant); in Colombia, changes in the exchange rate reduced the available resources. These times and costs have to be considered in the estimation of total project costs.
- The multi-country (or regional) approach has been an effective means for exploring complementarities through collaboration – participating countries differ in their baseline biosafety capacities for both research and regulation, but this has not hindered their ability to cooperate and learn from each other.

6.2. Implementation

Continuous and active engagement of environmental and agricultural sector entities, as well as GEF focal points in each country is critical for project implementation and leverage of buy-in in the changing political economy of biosafety.

Specific lessons are presented below:

- Participation from both Ministries of Environment and Agriculture is essential both at the design consultation periods, but also during implementation, as many of the on-the-ground issues are identified when project activities start developing; this participation, also ensures continuous “ownership” and helps the project with adaptation to country contexts that evolve over time. This could be achieved by the appointment of an “observer” from say the Ministry of Environment who would participate in missions as well as can be invited to country team meetings. This will also be aligned with national biosafety frameworks that often assign shared responsibilities for biosafety to Ministries of Environment and Agriculture (which often lead to inter-institutional conflicts).
- Continuous capacity building is required by the World Bank on fiduciary processes to ensure compliance with those (this needs to be allowed for in the project cost estimates).
- Greater engagement and participation of GEF, including GEF country focal points, is warranted as it would improve coordination with other similar GEF initiatives, other GEF country and regional operations and provide a GEF context of project implementation and “ownership”.

6.3 Financial

The challenges experienced in the financial management of the project point towards the need to rethink implementation support for regional initiatives and the need for streamlining of financial management approaches.

Specific lessons are presented below:

- A regional project has to have the resources and staff that can perform adequate regional oversight of project activities. Full time regional and national coordinators are essential, but so is a full time financial specialist (at the regional level) to assist them with fiduciary aspects that arise during project implementation. The administrative costs of a regional project need to be more carefully assessed.
- Resources for two in-country visits per year should be considered within the cost structure of the project, per National Coordinator and Thematic Leader, as well as including the regional financial specialist. These are different from project management costs. They are costs of knowledge exchange and information sharing. These costs could be covered by counterpart financing.
- In-kind contributions from counterparts are sensible means of support, considering that research staff and facilities of the counterpart agencies are used for project activities. However, they are can be limiting factors in terms of financial fluidity for project implementation and mask the actual project costs. To relax this limitation, in the future it is recommended that only part of the counterpart financing be “in-kind” with up to 50% of the actual project costs for that country being provided as monetary contribution (the percentage depending on country situation). This will increase the financial fluidity of the project, ensure greater “buy-in” into project activities and establish a more effective coordination of project implementation. It would also reduce financial dependence on grant resources.

- Rethinking implementation support for regional initiatives is required to enhance performance in future projects of this nature mainly in aspects of supervision, disbursement mechanisms, and documentation of participating sub-projects, considering matters such as: assessing the risk associated with the activities to be managed by each country; having FM support to the participating entities directly from the Bank Country offices or budget the costs associated with the travel of FM specialist; conditioning subsequent transfer of funds to the participating entities to the certification of the financial information by external auditors; disbursing funds against performance of agreed indicators; conducting videoconference meetings and training.
- Streamline financial management using already agreed and implemented rules of the CGIAR in general (when CIAT or any CGIAR center is the recipient of the Grant).

7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners

(a) Borrower/implementing agencies

There is a consensus on the success of this project and a satisfaction of the achieved results by the regional and national implementing agencies participating in the project. There is also a sense of need to continue the good work and strong demand for a follow on operation. Each agency has reviewed this document and finds it satisfactory. Specific agency comments are provided in Annex 8.

Annex 1. Project Costs and Financing

a) Project Cost by Component (in USD Million equivalent)

The Project Costs by Component, as presented in the PAD:

	Components by Financiers (in US\$ '000)	GEF Financing	%	Other Cofinancing	%	Total	%
1	Strengthening Technical Capacity in Knowledge Generation for Biosafety Risk Assessment and Management	3.68	33	6.93	65	10.61	88
	1.A Strengthening of Technical Capacity for Environmental Risk Assessment and Management	3.21	33	6.38	66	9.59	80
	1.B Strengthening of Technical Capacity for Socioeconomic Impact Assessment	0.47	47	0.55	53	1.02	8
2	Strengthening Biosafety Decision Making Capacity	0.32	23	1.07	77	1.39	12
	Total PROJECT COSTS	4,000.0	33	8.00	67	12.0	100

The total final disbursed amount of the GEF grant is US\$3,927,862.91 (as presented below). The actual total resources spent by each country (as co-financing) are difficult to calculate, as they were estimated as in-kind contributions. The project implementing agency (CIAT), for example, calculates that it has incurred higher than expected costs for project management (as presented in Annex A of Annex 6 – CIAT's report). In general, the actual Total Project Costs do not deviate from the estimated US\$12 million.

Components	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Component 1	10.61		
Component 2	1.39		
Total Baseline Cost	12.00	12.00	100%
Physical Contingencies	0.00	0.00	
Price Contingencies	0.00	0.00	
Total Project Costs	12.00	12.00	100%
Project Preparation Facility (PPF)	0.00	0.26	
Front-end fee IBRD	0.26	0.26	
Total Financing Required	12.26	12.52	100%

The client's report in Annex 7 provides more financial summaries of the project.

(b) Financing

Source of Funds	Type of Co-financing	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Borrower		1.27	1.80	141.73%
Global Environment Facility (GEF)	Grant	4.00	3.93	98.25%
Local Sources of Borrowing Country	In kind	6.73	6.73	100.00%
Total		12.00	12.46	103.83%

Country	Sub-projects (US\$)	National Coordination (US\$)	MSP (US\$)	Total (US\$)
Brazil	492,700	100,000	107,300	700,000
Colombia	510,000	125,000	65,000	700,000
Peru	560,000	100,000	40,000	700,000
Costa Rica	395,178	100,000	204,822	700,000

Coordinación Nacional	Convenio No.	Descripción	Valor del Acuerdo	Ejecutado	Total Devolucion Fondos
Colombia Corpoica	C-075-10	Caribe Colombiano	150,000	148,563	1,437
		Flujo de Genes Maiz	172,600	168,477	4,123
		Socioeconomia	67,400	63,071	4,329
Colombia - Instituto Humboldt	C-074-10	GIS	120,000	101,130	18,870
SUBTOTAL SUBPROYECTOS COLOMBIA			510,000	481,241	28,759
Perú - Unalm	C-104-10	Linea de Base Molecular Flujo Genez Maiz -363-1	116,000	116,000	-
		Desarrollo de un Protocolo de Analisis Espacial - 363-2	19,101	19,101	-
		Generacion de Informacion de Base -363-3	70,000	70,000	-
		Adaptacion de Metodos y Herramientas OVM -363-4	20,000	20,000	-
Perú - CIP	C-136-10	Busquedas de evidencias de la introgresion.	117,009	117,009	-
		Generacion de Informacion de Base	138,024	138,024	-
		Desarrollo de un protocolo de analisis espacial	25,866	25,866	-
Perú Unalm	C-157-11	Adicion al subproyecto Linea de Base Molecular -363-6	30,000	30,000	-
	(Otrisi al C-104-10)	Adicion al subproyecto Generación de Información de Base - 363-5	24,000	24,000	-
SUBTOTAL SUBPROYECTOS PERU			560,000	560,000	-
Brasil - Funarbe Embrapa	C076-10	Impacto socioeconomico y ambiental	57,690	55,022	2,668
	C123-10	Organismos non Blanco	61,750	59,590	2,160
	C122-10	Flujo de Genes	59,000	57,229	1,771
	C040-11	Impacto socioeconomico y ambiental	146,710	141,913	4,797
	C041-11	Efectos del cultivo de Maiz Transgenico organismos no obj	167,550	161,256	6,294
SUBTOTAL SUBPROYECTOS BRASIL			492,700	475,011	17,689
Costa Rica - Fundevi	C144-10	Flujo de Genes del arroz cultivado.	141,380	138,960	2,420
		Generación y evaluación de un sistema de información geografica para mapear las plantaciones	27,250	26,752	498
	C145-11	Fortalecimiento de la capacidad tecnica para la estimación del potencial.	119,303	101,931	17,372
		Hymenopteran Parasitoids Associated whit Rice crops.	34,214	33,930	285
	C052-11	Monitoreo Biologico de Aves Acuaticas en Arrozales	23,031	21,110	1,921
		Impacto socioeconomico directo de la produccion de arroz	40,000	39,946	54
		Seed Dormancy Of Two Cultivars In Costa Rica.	10,000	8,337	1,663
SUBTOTAL SUBPROYECTOS COSTA RICA			395,178	370,965	24,213
TOTAL DEVOLUCION DE FONDOS SUBPORYECTOS			1,957,878	1,887,217	70,661
TOTAL DEVOLUCION DE CN COSTA RICA NO EJECUTADO					1,518
TOTAL A DEVOLVER DEL TF091844					72,179

The final disbursement status of the GEF Grant is as follows:

Description	USD
(1) Goods, Non-consultant services, Consultant's Services, Training and Operating Costs under Part 1 of the Project except as covered by category (3) below	1,988,411.72
(2) Goods, Non-consultant services, Consultant's Services, Training and Operating Costs under Part 2 of the Project	51,999.19
(3) Goods, Non-consultant services, Consultant's Services, Training financed by Subproject Grants	1,887,452.00

Total Disbursed	3,927,862.91
Cancellation value date November 30, 2012	72,137.09*
Original Grant Amount	4,000,000.00

Note: *The cancelled resources represent 1.8% of the Grant amount. The cancellation is due to planning processes in Brazil, Colombia and Costa Rica that included activities that went beyond the closing date of the project and although they were project related, they could not be implemented in time for financial closure.

Annex 2. Outputs by Component

The outputs per components and intermediate outcome indicator are summarized in the table. The client report in Annex 7 provides further more technical details on each output. All the information can also be accessed at the Project's website: www.lacbiosafety.com

Component 1: Strengthening technical capacity in knowledge generation for biosafety risk assessment and management (US\$3.68 million GEF)

The objective of this component was to strengthen technical capacity of the four partner countries, using selected crops (cassava, cotton, maize, potato and rice) as models for developing environmental risk assessment and management and socio-economic impact analysis methodologies adapted to tropical conditions, in centers of origin and diversity of major crops in the Americas. The implementation modality chosen was to fund small (appr 60K), demand-driven sub-projects proposed and implemented by participating entities. A set of criteria were developed for screening the proposals including technical capacity and relevance (gap filling,) and also criteria to promote interministerial cooperation and links to competent authorities for biosafety in the country and the region. The funded activities fell into two groups (or four thematic areas): research supporting a) environmental risk assessment and management and b) socio-economic impact assessment.

All of the Component's intermediate indicators have been achieved and four of the five have been exceeded. Among the significant contributions, the following can be singled out:

- GIS tools to map actual species distribution, with potential distribution and estimates for likelihood of gene flow. This is very helpful information for developers and regulators, especially in the centers of origin and diversity for the crops studied. However, it needs to be stressed that the level of resolution of GIS is not sufficient to guide decisions on gene-flow. Aspects in the micro-environment such as pollinators, farmer practices, presence of wild species, etc. are significant factors that need to be included. This is an important finding from the research supported.
- Sound methodologies were applied to study gene flow in potato, cassava, maize and to some extent rice. The scientists who worked on the above-mentioned three species used well-established molecular markers to identify gene flow between populations. Methodological support from the CGIAR centers of CIAT and CIP was very helpful to support high quality science for assessing gene flow in centers of origin. This was one key reason for the choice of a CGIAR center to be the coordinator of the project and the reaching out to CIP for research on potato.
- Studies on farmer behavior for retaining variety uniformity by removing any hybrids between cultivated and wild species was an important finding to indicate the importance of the farming system itself for eradicating potential hybrids.
- The studies on impact on non-target organisms selected indicator species based on their ecological functionality, which yielded useful information on how to select a surrogate species for a particular non-target organism group exposed to the GM-crop.

In terms of the socio-economic work, both the three ex-post as well as the three ex-ante impact evaluations have focused mainly on economic rather than social outcomes of the technology introduction. In two of the studies a social networking analysis (by Schiffer) tool was applied, which did address issues of influential power among stakeholders. A somewhat missed opportunity was the interaction between the farmer and the production system with the technology (e.g. removal of hybrids by farmers, etc.), which can for example have direct impact on limiting effects of potential gene flow. It is important to publish all these studies.

Intermediate Outcome Indicators	Baseline	Outputs
Component 1		
1.1 By EOP, at least 80% of participating entities in project countries have used biosafety methodologies and tools developed by the project.	0% (Adapted and organized specific tools and methodologies are not available.)	100% of participating entities ⁸ in project countries have used biosafety methodologies and tools developed by the project. Among the participating entities are EMBRAPA (in Brasil), UCR (in Costa Rica), IAvH, CORPOICA and CIAT (in Colombia), CIP and UNALM (in Peru).
1.2 At least 8 studies on environmental risk assessments and management and on socio-economic impact assessments on biosafety have been completed.	The needed background information on biological and socio-economic components is available to initiate the studies.	25 studies were completed: 19 in assessment and management of environmental risk and 6 in assessment of socioeconomic impact: 5 studies in Brazil, 4 studies in Colombia, 7 studies in Costa Rica, 6 studies in Peru and 3 studies by CIAT. Each country has also developed other non-scientific publications.
1.3 An adapted methodology for socio-economic impact assessments has been developed by the project and is available to project countries.	The needed background information on socio-economic components is available to develop the methodology.	The project developed a common methodology to assess socioeconomic impact; methodology was assessed and adapted by countries in their studies for 5 crops: for cotton in Brazil and Colombia, for rice in Costa Rica, for maize in Brazil and Peru, for potato in Peru and for cassava in CIAT.
1.4 Management strategies and corresponding operational guidelines to minimize transgene flow and potential effects on non-target organisms have been updated for at least three crops.	Some needed background information on biological elements is available to initiate the strategies and guidelines.	Management strategies and corresponding operational guidelines to minimize transgene flow and potential effects on non-target organisms have been updated for five crops: Maize and cotton (for non-target organisms) in Brazil; rice and cotton (for gene flow) in Costa Rica; maize and potato (for gene flow and non-target organisms) in Peru; cassava (for gene flow) in CIAT and Brazil
1.5 By EOP, at least 4 databases established for tracking and monitoring gene flow, and for mapping distribution of crop/landrace populations in project countries for targeted crops.	Databases do not exist for tracking and monitoring gene flow, and for mapping distribution of crop/landrace populations in project countries for targeted crops	9 databases established in project countries for targeted crops: 2 in Brazil, 3 in Colombia, 1 in Costa Rica, 2 in Peru and 1 in CIAT.

Component 2: Strengthening biosafety decision-making capacity (US\$0.32 million GEF)

Component 2 has the objective of strengthening biosafety decision-making capacity, specifically their emphasis on regional approaches (article 10 of the Cartagena Protocol) and is based on training activities for competent authorities and practitioners. The Component's intermediate indicators have been achieved.

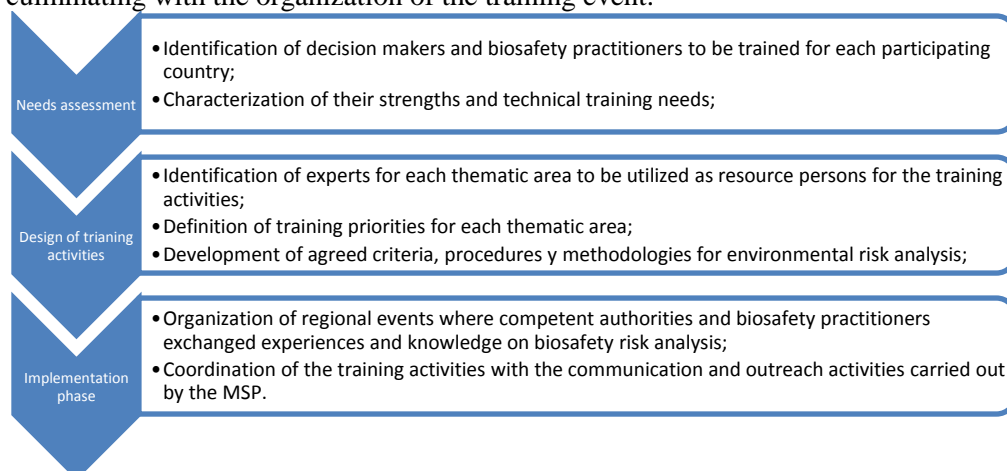
Intermediate Outcome Indicators	Baseline	Outputs
Component 2:		
2.1 EOP, biosafety competent authorities in project countries are	Lack and/or uneven level of biosafety knowledge required to make an	27 events have been held with the participation of biosafety competent authorities; more than 150 representatives of the countries' competent authorities and

⁸ The project Legal Agreement defined "participating entity" as any entity that will be carrying out a sub-project under component 1 of the project.

incorporating have access to and consider useful information from biosafety practitioners in for the decision making process in the implementation of CP	informed decision.	500 decision makers have access to information for risk assessment: Dissemination of project activities has been done with decision makers and practitioners across the different countries. Training activities specifically with competent authorities: In Brazil 4 workshops have been conducted with the participation of decision makers. In Colombia, the decision makers in environmental and agricultural area are part of the monitoring and evaluation of the subprojects further 10 workshops have been conducted with competent authorities in the various topics covered. In Costa Rica 6 trainings have been conducted with decision makers. In Peru 4 trainings with decision makers. 3 training have been held by CIAT-CR
2.2 In each project country biosafety competent authorities and practitioners trained by experts in biosafety environmental risk assessment and management, and socio-economic impact assessments	Some training activities have been carried out but vary by country.	91 training events were held during project implementation, at the regional and national levels, in each of the participating countries: 21 training activities held in Brazil, 28 in Colombia; 27 in Costa Rica and 22 in Peru, 14 CIAT-CR; 20 student training events by the project: Brazil: 6 Thesis; Colombia: 1 Thesis; Costa Rica: 3 Thesis; Peru: 7 thesis, CIAT: 3 thesis

The component has been closely linked and complemented by the activities of the jointly implemented communication MSP. There has been a degree of confusion in separating capacity-building, public awareness and training activities between Component 2 and the MSP. In particular, the development of capacities of decision makers is considered in Component 2, while public awareness activities are considered under the MSP and training of the scientists involved in research sub-projects was included as part of the component 1. This issue was identified during project implementation. Careful monitoring of project activities has been required to ensure that the quality of reporting of the project outputs is not affected by this lack of conceptual clarity and there is no double counting of results between the MSP and Component 2 of the FSP.

The methodology used in this Component started from the assessment of the needs and culminating with the organization of the training event.



The Component focused on 1) facilitating the flow of information between research institutions and decision makers within each country, taking into account the local level of capacities and 2) facilitating the interchange of knowledge between countries.

Annex 3. Economic and Financial Analysis (including assumptions in the analysis)

By their very nature, capacity building and research projects do not lend themselves to conventional economic rate of return or net present value analyses. An incremental cost analysis was carried out at project preparation, and general comments on the possible economic implications of the project were made. Those are recapped here and evaluated at project closing.

The Baseline (i.e. without project) scenario estimated little financing of capacity building within, and limited coordinated efforts among, the four participating countries. Without the project, the four countries would be expected to undertake the steps required to comply with their obligations under the Cartagena Protocol at a much slower rate, with little regional coordination and missed opportunities for economies of scale, causing inefficiencies and lowered effectiveness. CIAT, in particular, would lack adequate funding to organize regional biosafety initiatives and it is unlikely that there would be an integrated approach to exploit potential synergies. As a result, the potential biodiversity benefits of the Baseline scenario would be expected to be modest or negligible.

In the “with project” case, GEF involvement would provide the necessary incremental financing to maximize the global biodiversity conservation benefits of the project and to promote a replicable model for other countries in Latin America and throughout the world in the project’s two main areas of work: (a) biosafety capacity-building in knowledge generation for biosafety risk assessment and management; and (b) strengthening biosafety decision-making capacity. This assessment has been proven to be adequate as described in this document, with the project making an important contribution to the capacity-building and strengthening of biosafety decision-making in the context of multi-country collaboration and coordination.

Some specific assumptions made were:

- 1) It was determined that the proposed project design is an efficient one to assist the participating countries in complying with their obligations under the Cartagena Protocol. For example, technical and socio-economic analyses supported under the project will take advantage of existing field trials. This was followed through in project implementation and proved to be an effective design for cross-thematic and cross-country utilization of generated information.
- 2) It was determined that proposed project costs are in line with good practice in other biosafety, capacity building and research projects, including other GEF supported biosafety projects in Latin America and elsewhere. The assessed project costs can be considered as a minimum requirement for this type of projects, especially if co-financing is to be considered only in in-kind terms. If co-financing contributions are provided as monetary contributions, then there is greater flexibility for implementation of project activities and mitigating contingencies. Also, if the costs of project management, monitoring and evaluation and knowledge exchange are adequately reflected in the project costs estimates, those would have to be higher than the current total project costs figures.
- 3) While difficult to quantify using conventional financial models, the existence values of biodiversity and genetic resources may be measured through alternative valuation methods that are rapidly gaining acceptance. In this context, enhanced biosafety capacity could help countries choose to disapprove or modify GMO proposals if they decide the risks to the biodiversity resources are too high. In sum, the enhanced biosafety capacity supported by the proposed project would be economically beneficial by helping countries in their decision to approve GMO proposals (and capture the potential economic gains) or disapprove them (and avoid the potential economic losses). The project has developed methodologies and has provided access to risk assessment tools to help with that.

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Matthew McMahon	Lead Agriculturist	LCSAR	TTL
Wilhelmus Janssen	Lead Agriculturist	LCSAR	TTL
Indira Ekanayake	Senior Agriculturist	LCSAR	Technical Advice
Jocelyn Albert	Senior GEF Coordinator	LCSEN	Technical Advice
Dinesh Aryal	Operations Officer	LCSEN	Operational and Technical Advice
Jose M. Martinez	Procurement Specialist	ECSO2	Procurement
Jeanette Estupinan	Financial Management Specialist	LCSFM	Financial Management
Teresa Roncal	Operations Analyst	LCSAR	Operational Advice
Juan Martinez	Sr. Social Specialist	LCSSO	Social Safeguards
Jorge Kamine	Sr. Counsel	LEGLA	Lawyer
Supervision/ICR			
Svetlana Edmeades	Senior Agricultural Economist	LCSAR	TTL
Luz Zeron	Financial Management Specialist	LCSFM	Financial Management
Teresa Roncal	Operations Specialist	LCSAR	Operational Advice
Abdelaziz Lagnoui	Sr. Environmental Specialist	LCSEN	Env. Safeguards
Santiago Rene Torres	Procurement Specialist		Procurement
Andrea Pape-Christiansen	Consultant	AES	Communications

Note: Information on other team members can be found in the PAD (p. 90) (for preparation/lending) and in project ISRs (for supervision)

(b) Staff Time and Cost

A GEF Preparation Grant for US\$260,000 (TF055877) was approved in August 2005 and used for project preparation by the recipient (CIAT on behalf of the four project countries – Brazil, Colombia, Costa Rica and Peru). Bank budget used for preparation was a little over US\$282,000 (see table below). The total preparation cost of the project (GEF and Bank Budget), in thousands, amounted to US\$542.83.

Budget used for project supervision, in thousands, reached US\$380.59.

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	USD Thousands (including travel and consultant costs)
Lending		
FY05		3.58
FY06		94.67
FY07		124.50
FY08		60.08
Total:		282.83
Supervision/ICR		

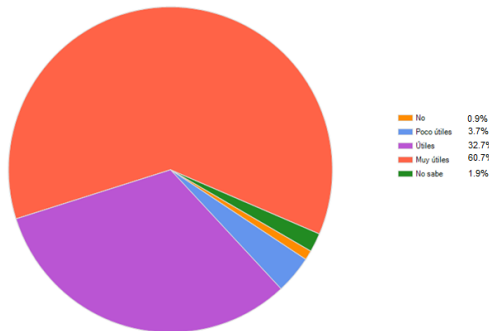
FY07		3.84
FY08		7.40
FY09		77.99
FY10		83.97
FY11		82.25
FY12 (project extension)		103.38
FY13 (preparation of ICR)		21.76
Total:		380.59

Annex 5. Beneficiary Survey Results

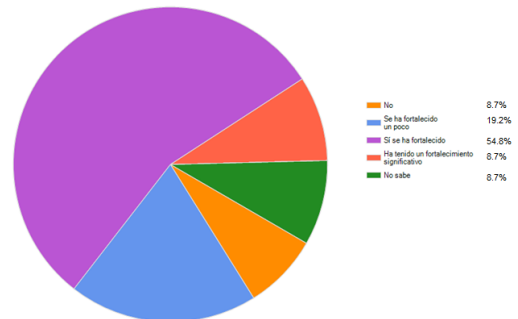
An online survey was carried out in December 2012 to seek the anonymous opinions of project beneficiaries of project relevance and impact (beneficiaries are defined in Section 1.4 of this report). To capture the public nature of the project (and related spillover effects), representatives from non-participating countries were also surveyed, along with project beneficiaries from the four participating countries (Peru, Costa Rica, Brazil and Colombia).

The survey was sent by e-mail to 280 people of whom 110 responded. The list of 280 was formulated using country databases on stakeholders and decision makers developed by the project. The aggregate results from those 110 responses are presented below.

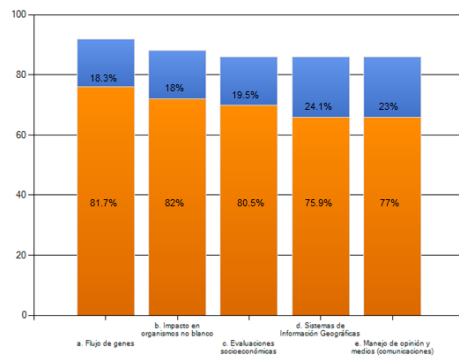
Usted considera que los productos generados por el proyecto LAC Biosafety son útiles para el trabajo que su institución desarrolla (Elegir solo una opción, y por favor explique su respuesta en la caja abajo antes de pasar a la siguiente pregunta)



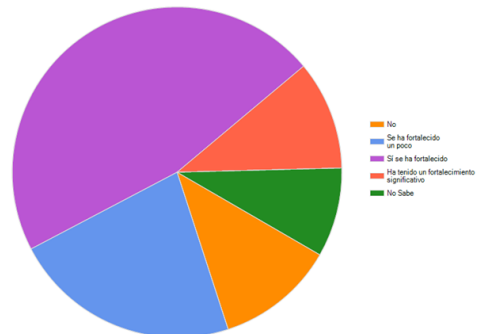
En la Valoración y manejo de riesgo en bioseguridad para el medio ambiente y metodologías para la valoración del impacto socioeconómico (Elegir una sola opción):



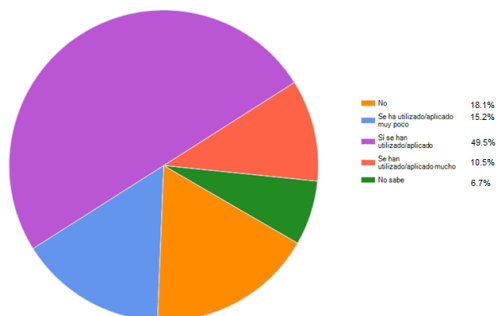
Alguien de su grupo/institución o usted ha asistido a capacitación o eventos de socialización de herramientas/productos/resultados del proyecto LAC-Biosafety en alguna de las siguientes áreas (Pueden seleccionar mas de una opción):



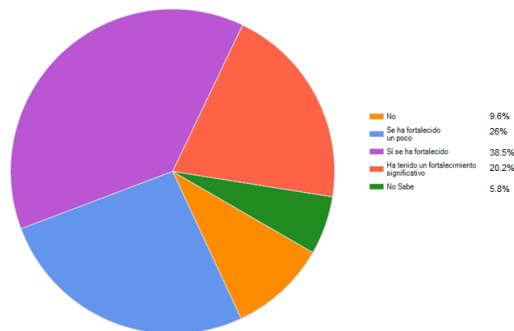
En la toma de decisiones (Elegir una sola opción):



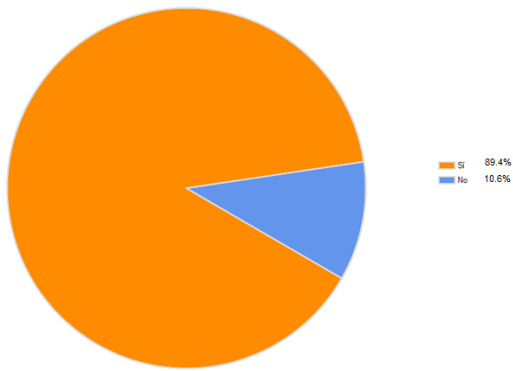
Ha utilizado/aplicado usted o en su institución las herramientas/información/metodologías que recibió durante las capacitaciones/eventos (Elegir solo una opción)



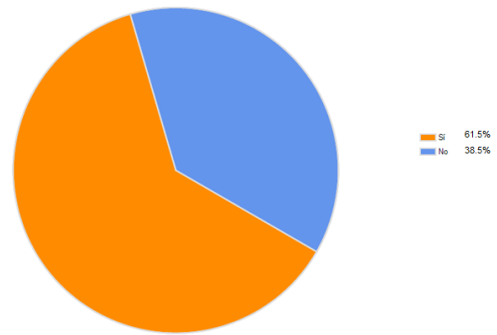
En la capacidad de aumentar la diseminación del conocimiento en bioseguridad al público (Elegir una sola opción):



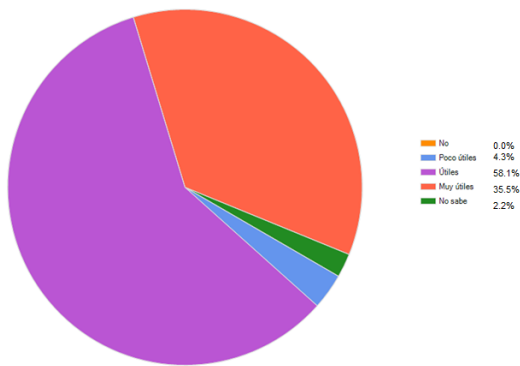
Conoce usted la página Web del proyecto LAC-Biosafety?



Usted ha generado relaciones con grupos que trabajan en áreas relacionadas con bioseguridad en otros países de la región o fuera de ella A través del proyecto LAC-Biosafety?



Le han parecido útiles los contenidos de la página Web?



Annex 6. Borrower's Report



CENTRO INTERNACIONAL DE AGRICULTURA TROPICAL – CIAT -

NOVIEMBRE 20 DE 2012

IMPLEMENTATION COMPLETION MEMORANDUM (ICM)

Este reporte fue elaborado por la Coordinación Regional del Proyecto (CR) y recoge los resultados obtenidos durante la etapa de implementación del proyecto. Para su elaboración se tuvieron en cuenta los comentarios de las Coordinaciones Nacionales de Brasil, Colombia, Costa Rica y Perú.

(a) Proceso de Diseño e Implementación del Proyecto:

• ***Preparación y Diseño :***

1. El proyecto regional fue una iniciativa pionera, resultado de un esfuerzo conjunto de instituciones nacionales e internacionales, con el propósito de fortalecer la capacidad técnica en bioseguridad de los países participantes (Brasil, Colombia, Costa Rica y Perú), y enfocado en generar una capacidad para la toma de decisiones informadas en el marco del Protocolo de Cartagena en Bioseguridad (PCB).
2. Debido a lo controversial del tema, la preparación del Proyecto tomó un tiempo muy extenso (3 años), esto implicó significativos cambios en el contexto y situación de los países participantes.
3. Una de las consecuencias de esta situación fue el retiro de México como país ejecutor del Proyecto, y por lo tanto requirió la reestructuración del mismo.
4. Debido a lo extenso de la preparación se presentaron fracturas en la comunicación entre los proponentes y pérdida de memoria referente a puntos álgidos contemplados en el proyecto.
5. Es indispensable tener en cuenta para el diseño de un proyecto regional los sistemas administrativos y jurídicos, los cuales pueden afectar los tiempos de respuesta de las instituciones participantes causando retrasos en la fase de implementación.

• ***Implementación del Proyecto:***

1. Se trabajó en forma integrada entre los países participantes a través de sus Coordinadores Nacionales (CN), y entre los investigadores en cada área de estudio con sus Líderes Temáticos (LT). Esta estrategia fue muy positiva y permitió la integración en los diferentes niveles, llevando al cumplimiento de los objetivos planteados.
2. La implementación tuvo retrasos y demoras, atendiendo a la complejidad de la participación de múltiples instituciones en los 4 países participantes. A continuación se citan algunos de estos inconvenientes: (i) diferencias estructurales entre las instituciones participantes, el CIAT (Centro Internacional de Agricultura Tropical) y el Banco Mundial (BM) (asimetría institucional) en sistemas administrativos y jurídicos, (ii) niveles variables de experiencia de los diversos implementadores, (iii) diferencias de percepción y avance del tema en cada país, (iv) requerimientos no contemplados como la traducción de los documentos (caso Brasil) para poder realizar acuerdos y contratos, y (v) dificultad en la comunicación entre la CR y las CN en cuanto a procesos administrativos y financieros. Se recomienda tener en cuenta estos aspectos para el diseño de futuros proyectos.

3. Se consideraron Coordinadores Nacionales, de alto perfil en la parte técnica, pero no administrativa. Se recomienda considerar en futuros proyectos regionales coordinadores administrativos para una mejor implementación.
4. Para mayor compromiso institucional y sostenibilidad a futuro del Proyecto, es importante que los CNs tengan una dedicación de tiempo completo al Proyecto y la institución asuma como contrapartida parte de su costo.
5. Se destaca el esquema de trabajo por áreas temáticas, el cual generó: (i) interacción entre los investigadores, (ii) creación de redes en cada área, (iii) desarrollo de herramientas y metodologías comunes, (iv) intercambio y nivelación de los grupos en temas de bioseguridad y (v), el fortalecimiento del recurso humano como el mayor activo y resultado del proyecto.
6. La demora en la aprobación y firma de acuerdos de subejecución de los subproyectos, llevó a disminuir el tiempo de implementación de los mismos y requerir adecuar los objetivos comprometidos. Así mismo, efectos climáticos como la ola invernal en Colombia y otros países, afectó el inicio de las siembras y la toma de datos en campo, retrasando la ejecución de algunos de los estudios planteados.
7. El impacto del retraso en el inicio de los estudios, llevó a solicitar la extensión del Proyecto. Su aprobación dinamizó el desarrollo del Proyecto y permitió llevar a su finalización en forma positiva.
8. Para Colombia la revaluación del peso afectó el presupuesto, ya que éste se presentó cuándo el dólar estaba a COL\$2.900 y en el momento de ejecución se encontraba a COL\$1.750, lo que requirió revisión de actividades.
9. Se realizaron cambios en indicadores debido a que fueron definidos sin tener en cuenta que su cumplimiento requería del compromiso de instituciones (Autoridades Competentes) que no participaban directamente en el proyecto y sobre las cuales no había control por parte del Proyecto.
10. A pesar de las dificultades y retrasos al inicio del proyecto, el balance final es muy positivo dado que, no solamente se cumplieron todos los objetivos comprometidos, sino que se superaron las metas.
11. La evaluación de Medio Término permitió identificar diversos problemas en la implementación del Proyecto que afectaban su desarrollo, y dar soluciones a los mismos. Se ajustaron indicadores, se solicitó la extensión, se identificaron subproyectos que no contaban con las condiciones requeridas para su implementación y se solucionaron problemas administrativos.
12. Fue importante contar con la presencia de la CR visitando los países y las respectivas CN, ya que muchos de los trámites legales para firmas de acuerdos que estaban trabados se solucionaron con reuniones presenciales entre el CR y los actores involucrados en las decisiones en las Coordinaciones Nacionales y las entidades participantes respectivas
13. Por otra parte, el hecho que los países hayan tenido el 97% del presupuesto disponible en sus cuentas a diciembre de 2011, permitió que se diera una dinámica de flujo de dinero para atender de manera oportuna las necesidades de los subproyectos en la forma que estas fueran apareciendo, esto teniendo en cuenta que algunas actividades definitivamente son impredecibles, en especial, en algunos casos cuando se trata de trabajos de investigación con seres vivos y estos son afectados por el medio ambiente.
14. Fue de suma importancia contar con una persona dedicada al seguimiento y cumplimiento del marco de monitoreo de resultados, permitiendo de esta manera tener una información actualizada de acuerdo a la línea de tiempo de implementación del proyecto.

(b) **Componentes y resultados:**

Componente 1: Fortalecimiento de la capacidad técnica en generación de conocimiento para valoración y manejo de riesgo en bioseguridad		
Objetivo	Indicadores originales/ Productos comprometidos	Resultados - Productos finales (Ver www.lacbiosafety.org)
Fortalecer la capacidad técnica de los países del proyecto para desarrollar metodologías para la valoración y manejo de riesgo en bioseguridad para el medio ambiente y metodologías para la valoración del impacto socio económico.	Por lo menos el 80% de las entidades participantes en los países del proyecto han usado las metodologías y herramientas en bioseguridad desarrolladas por el proyecto	El 100% de las entidades participantes en los cuatro países utilizaron las metodologías y herramientas desarrolladas a nivel regional y estas fueron adaptadas a las necesidades particulares. Algunos ejemplos: En Brasil la Empresa Brasileira de Pesquisa Agropecuária (Embrapa), en Costa Rica la Universidad de Costa Rica (UCR), en Colombia el Instituto Alexander von Humboldt (IAvH) y la Corporación Colombiana de Investigación Agropecuaria (Corpoica), en Perú el Centro Internacional de la Papa (CIP), el INIA y la Universidad Nacional Agraria La Molina (UNALM) y el CIAT
	Al menos 8 estudios en evaluación y manejo de riesgo ambiental y sobre evaluación de impacto socio han sido terminados	25 estudios planteados y aprobados fueron finalizados: 19 en evaluación y manejo de riesgo ambiental (Flujo de genes, GIS -Geographic Information System- y No Objetivo) y 6 sobre evaluación de impacto socio económico Brasil 5 estudios: 1 en flujo de genes, 2 en organismos no objetivo y 2 en impacto socioeconómico. Colombia 4 estudios: 1 en flujo de genes, 1 en GIS, 1 en organismos no objetivo y 1 en impacto socioeconómico. Costa Rica 7 estudios: 4 en flujo de genes, 1 en GIS, 1 en organismos no objetivo y 1 en impacto socioeconómico. Perú 6 estudios: 3 en Flujo genes, 1 en GIS, 1 en organismos no objetivo y 1 en impacto socioeconómico. CIAT 3 estudios: 1 en Flujo de genes, 1 en organismos no objetivo y 2 en impacto socioeconómico.
	Una metodología para la evaluación de impacto socio económico ha sido desarrollada por el proyecto y está disponible para todos los países participantes.	El proyecto desarrolló una metodología común para evaluar el impacto socioeconómico que fue evaluada y adaptada por los países en sus estudios. En algodón en Brasil y Colombia; en arroz en Costa Rica, en maíz en Brasil y Perú, en papa en Perú y en yuca en el CIAT.
	Se han actualizado las estrategias de manejo y las pautas operacionales correspondientes, para minimizar el flujo transgénico y los efectos potenciales en organismos no objetivo para por lo menos tres cultivos.	En 5 cultivos se actualizaron las estrategias de manejo y pautas operacionales para minimizar el flujo génico y los efectos potenciales en organismos no objetivo. Maíz-algodón – organismos no objetivo (Brasil) Arroz y algodón – flujo de genes (Costa Rica), Algodón – flujo de genes y organismos no objetivo – (Colombia) Maíz – papa – flujo de genes y organismos no objetivo (Perú) Yuca – flujo de genes – (CIAT y Brasil).
	Establecidas por lo menos 4 bases de datos para rastreo y monitoreo de flujo de genes, y para trazar distribución de poblaciones del cultivo / cultivos en los países del proyecto para los cultivos objetivo.	Establecidas 9 bases de datos: Brasil (2) 1 en organismos no blanco (Mendley site - www.mendley.com) y 1 en flujo de genes y organismos no blanco en maíz Colombia (3), 1 de distribución de algodón del dpto. de Córdoba, Sucre y de caracterización del sistema de producción maíz-algodón en el Caribe Colombiano, y 1 de la persistencia y expresión de las proteínas Cry y 1 en elaboración de relaciones tróficas del sistema de producción maíz-algodón Costa Rica (1) mapa de riesgo con base a la ubicación de los cultivo de arroz comercial y arroz silvestre. Perú (2) mapas de distribución: 1 en Maíz y 1 en Papa CIAT (1) Base de datos de mapas de distribución potencial de materiales silvestres para yuca en Colombia.

Componente 2: Fortalecimiento de la capacidad en la toma de decisiones en bioseguridad		
Objetivo	Indicadores originales/ Productos comprometidos	Resultados - Productos finales (www.lacbiosafety.org)
Capacitar a las autoridades competentes y a los técnicos en evaluación de riesgo ambiental relacionada con OGM y en evaluación de impacto socioeconómico de los OGM	Las autoridades competentes en los países del proyecto están utilizando tienen acceso y consideran útiles las herramientas en evaluación de riesgo y para en información como referencia en la toma de decisiones en bioseguridad.	<p>27 actividades con la participación de Autoridades Competentes fueron organizadas por las CN en sus países y la CR :</p> <p>Brasil: 4 talleres con tomadores de decisiones y 7 representantes de las autoridades competentes de Brasil participaron en los eventos realizados por la CR</p> <p>En Colombia los tomadores de decisión del sector Ambiental y Agrícola son parte de la implementación y evaluación de los subproyectos desarrollados. Adicionalmente, se organizaron 10 talleres con autoridades competentes en varios temas de bioseguridad.</p> <p>En Costa Rica se realizaron 6 eventos con participación de tomadores de decisión</p> <p>En Perú se realizaron 4 eventos en bioseguridad con la participación de autoridades competentes.</p> <p>El CIAT-CR organizó 3 eventos a nivel regional con participación de Autoridades competentes.</p> <p>Durante la Conferencia Regional de Bioseguridad en Cartagena, Colombia, se hizo un curso preconferencia dirigido a tomadores de decisiones, autoridades competentes y personal de investigación, contando con 43 participantes, contando con los cuatro países del proyecto, además de Guatemala, México, República Dominicana, Cuba y Ecuador.</p>
	En cada país del Proyecto, las autoridades competentes en bioseguridad y los practicantes han sido capacitados por expertos en valoración y manejo de riesgo al medio ambiente y en valoraciones del impacto socioeconómico.	91 actividades de capacitación fueron realizadas durante la implementación del Proyecto. Algunas a nivel Regional y otras a nivel nacional en cada uno de los países participantes: En Brasil, 21 actividades de capacitación; en Colombia 28 actividades; en Costa Rica 27 actividades y en Perú 22 actividades y 14 organizadas por la CR-CIAT (ver www.lacbiosafety.org)

(c) Alcance de los Objetivos del Proyecto (PDO):

El objetivo del Proyecto fue el fortalecimiento de la capacidad en bioseguridad en los cuatro países participantes para implementar el Protocolo de Cartagena (PC) en bioseguridad, mediante el fortalecimiento de la capacidad científica y técnica en la generación de conocimientos para la evaluación y gestión de riesgos, y de la capacidad para la toma de decisiones en bioseguridad.

1. Los objetivos han sido cumplidos y algunos indicadores se han sobrepasado. Los resultados y productos presentados en los informes técnicos de los estudios realizados (www.lacbiosafety.org), en los informes de cada una de las Coordinaciones Nacionales y el listado de eventos en capacitación y socialización realizados durante la implementación del Proyecto indican que se cumplieron los objetivos y se superaron las metas.
2. Se generaron redes de especialistas (página web de LACBiosafety: <http://www.lacbiosafety.org/herramientas/>), se incrementó el intercambio de experiencias, se generó capacidad técnica, y generación de herramientas a nivel regional en evaluación de riesgo. Las entidades participantes en las cuatro áreas temáticas (Flujo de genes, GIS, efecto sobre organismos no blanco e impacto socioeconómico), trabajaron armonizando metodologías a nivel regional, para adaptarlas y utilizarlas en sus investigaciones a nivel nacional. En algunos casos dos o tres países utilizaron metodologías similares. Como resultado se tienen disponibles en los cuatro países (en los cultivos modelo seleccionados) estrategias de manejo y metodologías en evaluación y gestión de riesgos de cultivos genéticamente modificados. Aunque los objetivos comprometidos fueron alcanzados, y en

algunos estudios de forma muy exitosa, se presentaron limitantes en algunas áreas temáticas afectando la armonización, comunicación e intercambio entre pares. A pesar de ello la percepción general de los investigadores participantes es positiva.

3. Las metodologías y protocolos desarrolladas para la evaluación y manejo de riesgos están disponibles para uso de las Autoridades Competentes en cada país en la toma de decisiones en bioseguridad. Para ello se realizaron diversos eventos para su socialización. Sin embargo, se requiere definir un espacio que permita tener disponible la información y demás productos a nivel regional, esto permitirá a futuro ampliar las redes de especialistas regionales, el intercambio de conocimiento e información y la divulgación de los productos y resultados obtenidos.

Se generaron Co-beneficios adicionales a los objetivos planteados:

1. Ampliación del alcance del Proyecto gracias a la visibilidad generada por las diferentes reuniones: la presentación de resultados del proyecto en la Conferencia Centroamericana de Bioseguridad en San José (Costa Rica) y en la Conferencia Regional de Bioseguridad en Cartagena (Colombia), ambas reuniones organizadas y financiadas por el proyecto. Estas reuniones llevaron entre otros, a generar interés entre países no participantes (inclusive de México), de desarrollar propuestas similares, tener disponibles para su uso las herramientas generadas y poder interactuar en las redes de expertos que se articularon.
2. Se generaron metodologías comunes y armónicas entre los países (mediante reuniones y cursos presenciales), y entusiasmo por el tema en jóvenes investigadores, algunas universidades y productores agrarios, fortaleciendo redes institucionales.
3. En Costa Rica se destacan co-beneficios ambientales, debido a los datos generados en uno de los proyectos de flujo de genes en arroz, surgió la iniciativa para elevar el estatus de protección del Humedal Medio Queso debido a que se identificó como único lugar en el país con presencia de arroz silvestre *O. glumaepatula* y que adicionalmente era visitado por aves en vías de extinción.
4. La consolidación de una red de expertos en América Latina en áreas de flujo de genes, sistemas de información geográfica, organismos no blanco y socioeconomía, que ya sirven de puntos de referencia y consulta en términos de bioseguridad de la biotecnología es un resultado de interés para la región y otros países incluyendo Europa; http://www.gmcc13.org/pg44_Scientific_Advisory_Committee_.
5. En el caso de Colombia, los trabajos conjuntos del Instituto Humboldt y el CIAT permitieron actualizar registros de especies silvestres de yuca que hacía 30 años no habían sido renovados. Se describieron poblaciones de especies silvestres de arroz que antes no habían sido descritas y que ahora pueden ser incluidas en los estudios de riesgo para flujo de genes.

(d) Sostenibilidad:

1. El proyecto ha logrado articular una red de pares en cada área estudiada a través de los estudios realizados y de la página web, entre los países participantes (Centros de Origen y Biodiversidad) que a futuro tiene el compromiso de continuar interactuando en forma armonizada y generando conocimientos en bioseguridad para la región.
2. Para cada país la sostenibilidad se presenta en forma diferente:
 - (i) En Brasil se manifiesta en los productos obtenidos, y su uso por parte de los investigadores o de los tomadores de decisión. Es así como capacitaciones realizadas, talleres o socializaciones de resultados del proyecto han llevado a generación de nuevos proyectos y desarrollos.
 - (ii) En Costa Rica el principal aporte del Proyecto fue la generación de la herramienta de evaluación de riesgo para Organismos Genéticamente Modificados en general, que será implementada por la CTNBio (Comité Técnico Nacional de Bioseguridad) en sus procedimientos.
 - (iii) En Perú, la participación en actividades técnicas de practicantes, el fortalecimiento de capacidad técnica de estudiantes a través de los subproyectos, la capacitación de personal del INIA (Instituto Nacional de Investigación Agrícola - autoridad competente del sector agrícola), del Ministerio de Agricultura (MINAG) y del grupo técnico de bioseguridad del Ministerio del Ambiente (MINAM y la disponibilidad de las herramientas generadas por el Proyecto para las Autoridades Competentes) permitirán su sostenibilidad en el tiempo.

- (iv) En Colombia, el haber integrado a las Autoridades Competentes desde el inicio del Proyecto y dentro de algunos de los subproyectos permitió la apropiación de los resultados, las autoridades competentes consideran los desarrollos muy valiosos y de amplia utilización, y solicitaron su profundización.
3. En cuanto a la sostenibilidad financiera o política no se puede determinar, ya que el financiamiento de actividades a mediano o largo plazo depende de cada uno de los países, de sus intereses políticos en el tema y sus prioridades. No obstante, durante la Conferencia Regional de Bioseguridad en Cartagena se evidenció la necesidad de seguir adelante con este proyecto y la necesidad y solicitud manifestada por otros países de participar en proyectos similares a este, teniendo en cuenta que los resultados obtenidos son de importancia para la región.

(e) Desempeño Institucional:

1. El Banco Mundial realizó un seguimiento constante y efectivo del proyecto durante todo su desarrollo, el cual orientó y facilitó realizar los ajustes requeridos, tanto en las actividades como en el manejo de recursos. La Misión de Evaluación Mid-Term fue muy conveniente para ajustar y orientar las actividades de fortalecimiento y corregir problemas. Todas las Misiones realizadas fueron un espacio de discusión para la revisión, complementación y planeación requeridos para el cumplimiento de los compromisos del proyecto. El seguimiento permanente y el apoyo recibido del Banco Mundial permitieron en varios casos solucionar situaciones urgentes, así como para acelerar procesos administrativos. El equipo del Banco fue fundamental para el buen resultado del Proyecto.
2. Brasil: El BM fue mas un socio que un intermediario financiero, su experiencia fue esencial para llevar al Proyecto por la dirección correcta. Que Embrapa fuera la Coordinadora Nacional, favoreció la articulación de los subproyectos a nivel nacional, permitió el manejo financiero adecuado por su estructura y favoreció la interacción con las entidades gubernamentales. Sin embargo, el lapso tan grande de tiempo (2004/2005 a 2010) entre la presentación de la propuesta y el inicio del proyecto cambió las prioridades de investigación, afectó la financiación y articulación de equipos teniendo que reorganizarse de nuevo lo planteado.
3. Costa Rica: Al inicio del Proyecto se subestimó el tema administrativo y sus diferencias en cada país. Se buscó uniformidad entre todos, error que generó demoras. Durante la ejecución se fueron solucionando estos problemas. El CIAT y la CR siempre estuvieron disponibles para dar soluciones y aclarar los temas que se requirieran en cada institución.
4. Colombia: Colombia (Corpoica) presentó inconvenientes de comunicación con la unidad de apoyo financiero del CIAT que generaron dificultades lo cual se debe evitar a futuro. La coordinación técnica del proyecto por parte del CIAT, fue muy asertiva, impulsó la innovación y la generación de conocimientos, el trabajo colectivo, gestionó permanentemente el desarrollo del proyecto sin protagonismo, de manera cordial pero firme, lo cual en pocas ocasiones se puede lograr. El diseño de coordinación por áreas temáticas, fue otro buen logro del proyecto, en buena parte la dinámica de trabajo y fortalecimiento de la capacidad, se debió a este esquema. La identificación de puntos críticos durante el desarrollo del proyecto y las posibles soluciones, se reflejaron en que todos los países integrantes del proyecto pudieron finalizar los subproyectos propuestos, también en que las metodologías con que los desarrollaron fueron similares, extrapolables, y extensivas, lo cual demuestra la bondad de un trabajo regional bien propuesto y coordinado. El equipo del Banco fue fundamental para el buen resultado del Proyecto.
5. Perú: La modalidad de que la CN estuviera en una institución no política (IBT-UNALM) fue la acertada por la percepción del tema en el Perú. El desempeño del BM, del CIAT y de las CN ha sido satisfactorio al adoptar la flexibilidad necesaria para adaptar este tipo de Proyectos a los requerimientos del BM

(f) Lecciones aprendidas:

- El tiempo entre la presentación de la propuesta de un proyecto de este tipo y su implementación es muy extenso. Se genera dispersión de los proponentes, cambios en financiación, pérdida de investigadores participantes y cambios en políticas institucionales..
- Para Proyectos de participación de varios países e instituciones, tener en cuenta las diferencias administrativas entre estos, y programar más tiempo para la articulación administrativa, tener claras las vías de comunicación entre integrantes, y evitar el cambio de personal clave en la implementación. Estas situaciones causan efectos nocivos en los cronogramas planteados.
- Los procesos y requerimientos del Banco Mundial son muy rígidos para proyectos de naturaleza científica que requieren más flexibilidad.
- No es posible comprometerse a que las Autoridades Competentes usen las herramientas generadas en el proyecto para sus procesos de toma de decisión. El Proyecto únicamente permite el fortalecimiento técnico institucional, facilita espacios de articulación, y genera herramientas en bioseguridad que quedan disponibles para las Autoridades Competentes.
- La estrategia referente al intercambio entre los investigadores de los países participantes, a través de visitas, debates, trabajo presencial y virtual en grupo, permitió y potenció el intercambio de ideas, conocimientos y metodologías, entre otros, lo cual aceleró el desarrollo de los subproyectos, especialmente en países que mostraban dificultades para el arranque.
- Para las fechas de finalización del Proyecto es importante tener planeado el pago a personal para elaboración de informes posterior a la fecha de cierre, y tener posibilidades mediante alguna excepción acordada, del pago de publicaciones.

Desde la perspectiva financiera:

Fase de Diseño del proyecto

Consideramos que los siguientes aspectos deben ser tenidos en cuenta durante esta Fase:

- Incluir en la distribución presupuestal del Recurso Humano la dedicación del 100% de un Asistente Financiero (ver tabla 1 del Anexo A)
- Incluir detalles Administrativos y Financieros (conocimiento de políticas, procesos, tramitología de documentos ante las diferentes áreas del Banco, capacitación para todos los países ejecutores con relación a los procedimientos del Banco y a su plataforma, entre otros)
- Incluir en el presupuesto los costos de las Auditorías tanto para el Ejecutor como para cada País. Ver parágrafo 2
- Iniciar el proyecto con la oportunidad requerida para prever fluctuaciones en la moneda local frente a la moneda en que es aprobado el proyecto por parte del Banco
- Incluir en el presupuesto el costo de los desplazamientos a las misiones teniendo en cuenta que se trata de un proyecto regional. Calcular el costo de los desplazamientos del personal clave por parte de cada país, así como de la Revisora Financiera del Banco. Relación costo-beneficio
- Presupuestar el costo de la reunión de lanzamiento del proyecto (desplazamientos de personal del Banco así como del personal clave de cada país). Ver parágrafo 1 del Anexo A
- Contemplar los costos de implementación de un proyecto regional
- Una vez se de inicio al proyecto se debe contar con la versión final del Manual Operativo para garantizar el buen desarrollo del proyecto, la claridad de los procesos, los documentos legales a firmarse entre el Ejecutor y los países participantes, así como los formatos exigidos por el Banco

Fase de implementación del proyecto

Los siguientes puntos deben ser contemplados durante la ejecución del proyecto:

- Aceptar la política actual de costos institucionales del Centro (ver tabla 2 del Anexo A)

- Contar con la colaboración y el cumplimiento en la entrega de la información financiera necesaria por parte de los países al CIAT, lo que se traduce en el cumplimiento por parte del CIAT al cronograma de reportes exigido por el Banco
- Todos los países que participan en el proyecto deben consultar de forma permanente el manual de operaciones del proyecto, esto agiliza los procesos y el diligenciamiento de los múltiples formatos que deben enviarse al Banco
- Divulgación constante de los cambios a las políticas del Banco
- Este tipo de proyecto regionales debe establecer una periodicidad para los reportes financieros de seis meses para facilitar la consecución de la información y su consolidación por parte del Ejecutor
- Presupuestar las prórrogas a la vigencia inicial planteada para el proyecto, pues éstas sugieren un costo que debe ser calculado y reconocido por el Banco. Ver tabla 3 del Anexo A
- Flexibilidad del Banco para efectuar redistribuciones presupuestales (cambios entre líneas de un mismo Acuerdo de Donación)
- Evaluar la necesidad de la actualización constante del Manual Operativo y su aplicabilidad al finalizar el proyecto.
- A manera de resumen general el proyecto FSP contó con una financiación de US\$4.000.000 (4 millones de dólares), de los cuales se ejecutaron US\$3,927,821 dólares y se devolvieron fondos por valor de US\$ 72,129 dólares.
- Debido a diferentes situaciones planteadas anteriormente en este documento en la sección de implementación del proyecto, los países devolvieron los fondos de subproyectos no ejecutados (ver tabla del anexo A)

Aspectos Positivos para resaltar:

El desarrollo de este proyecto regional nos permitió interactuar con personas de otros países, afianzar vínculos para futuros proyectos.

Para el CIAT este proyecto ha sido considerado como un proyecto piloto que nos permitió ganar experiencia y conocimiento para futuras financiaciones del Banco.

Anexo A

Parágrafo 1.

No tener presupuesto para la reunión de lanzamiento conllevó a efectuar ajustes presupuestales durante la ejecución del proyecto.

El costo de las Misiones no presupuestadas ascendió a us\$124,000.

Parágrafo 2.

La falta de una línea presupuestal para cargar el costo de las Auditorías Externas durante la vida del proyecto, generó disminuciones en el presupuesto de otras líneas presupuestales, lo que se traduce en un recorte de las actividades planteadas inicialmente.

Tabla 1. Cálculo del costo de un Asistente Financiero 100% dedicado al proyecto

Descripción	2009	2010	2011	2012	Total
Costo anual Asistente Financiero	25,000	25,000	25,000	25,000	100,000
El Proyecto solo reconoció	30%	30%	30%	0%	22%
	7,417	7,417	7,417	-	22,250

El Banco solo aceptó el 30% durante los 3 primeros años del proyecto. Debido a la demanda de información financiera requerida por el Banco, a la cantidad de formatos, a los múltiples seguimientos que se deben efectuar con los demás países, el proyecto requiere de la dedicación de un Asistente 100%.

Tabla 2. Cálculo del costo institucional para el proyecto vs lo recuperado

Descripción	Acuerdo Vr. USD		Vr. Costos USD	
	FSP	MSP	Recuperado	No Recuperado
Valor Total Proyecto	4,000,000	900,000		
Fondo para socios (CNs y Subproyectos)	2,404,000	430,000		
Fondos administración y Comunicación CIAT	1,596,000	470,000		
Costos Institucionales				
Overhead 18%	225,122	68,415	210,000	83,537
R&TS 9%.	103,267	31,383	-	134,650
Pass Through 5%	120,200	21,500	-	141,700
IT, Facilities, Public Area	143,295	28,659	-	171,954
Total Institutional Costs	591,884	149,957	210,000	531,841

El Banco Mundial sólo aceptó una recuperación de costos del orden del 5%, situación que genera un subsidio por parte del CIAT al proyecto por valor de us\$531,841.

Tabla 3. Cálculo de la Extensión sin Costo planteada en el proyecto por 12 meses

Extensión del Acuerdo TF91844 FSP	
Detalle	Valor USD
Personal CIAT apoyo al proyecto	183,000
Consultoría Gerencia del proyecto	99,167
Consultoría para socioeconómica	110,500
Consultoría apoyo administrativo	55,250
Auditoria	15,000
Lideres temáticos	15,000
Misiones	30,000

CNs (Cuatro países)	141,900
Costos Institucionales	223,216
Total Acuerdo TF91844	873,033
Extensión del Acuerdo TF092071 MSP	
Detalle	Valor USD
Personal CIAT apoyo al comunicaciones	30,000
Consultoría para comunicaciones	65,167
Operaciones	20,000
Costos Institucionales	40,648
GRAN TOTAL	155,815

Tabla 4. Recursos no ejecutados en el acuerdo TF091844

País	Valor Acuerdo	Valor Ejecutado	Total Devolución Fondos al Banco
Subproyectos Colombia	510,000	481,241	28,759
Subproyectos Perú	560,000	560,000	-
Subproyectos Brasil	492,700	475,011	17,689
Subproyectos Costa Rica	395,178	370,965	24,213
Coordinación Costa Rica	304,822	303,304	1,518
Total fondos a reintegrar acuerdo TF091844			72,179

Annex 7. Today's Page Article on the Project

Doing Biosafety in Latin America and the Caribbean



The Bank supports biotechnology and biosafety

December 14, 2012—By 2050, there will be more than nine billion people in the world. To feed this many, global agricultural production must increase by a 70 percent with little increase in available land and water. Quite a feat.

A potential solution to this need is biotechnology—the use of living systems and organisms to develop products in agriculture and food production. In China, for instance, disease-free sweet potatoes based on tissue culture on 500,000 hectares in Shandong Province have led to yield increases of 30–40 percent.

But one form of biotechnology—genetically modified organisms—remains controversial. GMOs involve the transferring of one or more genes to a crop plant and have raised concerns about food safety and the environment.

Where does the Bank stand on this? Our [Agriculture Action Plan](#) says that “the new tools of biotechnology can potentially deliver significant yield gains to address our global food challenges.” But [we also know](#) that science-based regulatory systems for human health and environmental safety are essential to evaluating risks and opportunities. In other words, the Bank supports biosafety.

How? We help develop the capacity of countries to assess the potential risks and benefits of transgenic crops. We support the development of transparent biosafety regulations, and we help our clients manage their adoption and use.

Take for example the [LAC biosafety project](#) in Brazil, Colombia, Costa Rica, and Peru. Focusing on five important crops—cotton, rice, maize, potato and cassava— the Bank and GEF funded project strengthened those countries’ technical capacity for biosafety risk assessment and management as well as their biosafety decision-making capacity according to the Cartagena Protocol on Biosafety.

Entered into force in 2003 and ratified by 56 countries, the protocol is the only international environmental agreement that is concerned exclusively with modern biotechnology and the potential risks of GMOs.



The Bank is helping to improve technical capacity for biosafety risk assessment and management and biosafety decision-making in Latin America.

Latin America has been adopting GMOs at a faster rate than any other region, representing 32 percent of the total global area of transgenic crops in 2010.

"One of the most important achievements was to unify our protocols and tools, while retaining the uniqueness of each country," says Gerardo Gallego, the CIAT-based regional project coordinator, of the 66 institutions which participated across the four countries.

Gustavo Fonseca, GEF team leader of Natural Resources summarizes: "This project showed that the Cartagena Protocol is the tool of choice for the safe use and handling of GMOs. The LAC-biosafety project is a perfect example of a project that leverages strong results from the funds invested."

As a result of the project, the participating countries know now how to monitor GMOs and how to avoid cross-pollination between GMO and non-GMO maize, potato, rice, and cassava. The countries learned to measure the impact of GMOs on the environment, including on the genetic variability of local species. The project also helped the participants to assess the profitability of their farms, as well as the costs and benefits of introducing GMOs.

"The successful completion of the project is highly relevant to the World Bank as it sets an example for our role in fostering scientific exchange and capacity building in biosafety," comments Eija Pehu, science advisor in the Agriculture and Environmental Services Department.

"Our biodiversity team can learn a lot from the methodologies developed in the research that the project supported," adds Mary-Ellen Foley from the Climate Policy and Finance Department. Thanks to the project, the National Biosafety Commission of Costa Rica now considers adopting the biosafety risk methodology developed by the project team as the national standard.



For an interactive map of LAC biosafety project partners and their contacts check out www.lacbiosafety.org/herramientas

"In addition, the project established a platform for South-South learning and knowledge exchange and facilitated the creation of a community of practice on biosafety in Latin America," says Svetlana Edmeades, the project task team leader at the Bank. In Brazil, the project activities mushroomed into a network of more than 100 participating and collaborating organizations, ensuring that the work on biosafety continues.

The project used modern methods in its communications efforts as participating countries launched Facebook pages, Youtube videos, and TV and radio broadcasts to disseminate biosafety information. "Through these efforts and stakeholder consultations, we succeeded in communicating science-based information and in positioning the participating research institutions as trustworthy sources of knowledge on the topic of biosafety," explains Andrea Pape-Christiansen, a World Bank team member. In Costa Rica, the public outreach campaign resulted in a clear increase in requests for biosafety information and speaking engagements from the project team at the University of Costa Rica.

"All in all, lessons from this project will be valuable inputs to other regional biosafety initiatives currently under way in Central America and [West Africa](#)," concludes Jaime Cavalier, senior biodiversity specialist at the GEF.

Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders

Comments from CIAT (Regional Coordinating Agency of Project):

CIAT as an implementing agency of the project and responsible for the Regional Coordination, considers that this project had substantial and important contributions in 1) strengthening capacity in biosafety in the four participating countries to implement the Cartagena Protocol on Biosafety, 2) consolidating the scientific and technical capacity for risk assessment and management, and 3) generating the capacity for major biosafety decisions in Latin America.

LAC-Biosafety created two wider institutional benefits as well. First, the project enabled GEF and the World Bank to create new institutional synergies around support for the development of national biosafety capacity, and, second, it laid the groundwork for a wider regional effort in LAC.

CIAT is satisfied with the results of the project. The solid scientific work of LAC-Biosafety centered on a series of practical questions, to which national decision makers must have answers if they are to address biosafety issues effectively. The project managed to integrate the work of environmental and agricultural institutions in four countries with different range of expertise, technical and managerial capacities. The project also managed to establish new mechanism for sharing experience across the four countries. A network of researchers and world-class institutions is now in place and serve as sources of consultation and support to resolve and / or advice in situations of importance in terms of biosafety.

The lessons learner during the project will allow the formulation of additional approaches to expand the knowledge acquired to more countries in the region. During the closing process and presentation of the project results at the Regional Conference on Biosafety in Colombia, June 2012, invited countries from the region expressed the need and strong interest of participating in an initiative of this magnitude to implement technologies for analysis, risk detection and monitoring of LMOs, in crops of importance to the region of Latin America and the Caribbean. Their positive comments as well as the amount and quality of scientific information presented made it clear that the stage is set for a broader regional effort. Equally important were the lessons learned on how to coordinate institutions in countries with different expertise in legal and contractual matters.

The project benefited from the support of the World Banks project manager and experts specially in the area of communication and knowledge sharing. Their inputs allowed the project to improve and strengthen this area.

Comments from EMBRAPA (National Coordinating Agency for Brazil)

From Brazil's coordination point of view the participation in the LAC Biosafety project was an important experience on regional-research-building and a nice opportunity to share knowledge and expand networking. The main difficulties faced were on implementation of the project because of the multitude of documents which demanded translation in order to be signed, allied with short time available to execute all activities, especially MSP and IPs.

But, on the other hand, many lessons were learned from such unforeseen difficulties which will be very useful for other upcoming cooperation projects.

Among the outcomes of the project it was realized by Brazil's researchers-participants on LAC Biosafety - that Brazilian regulators and decision-makers (on Biosafety issues) are much more aware of the well organized "biosafety-research-group" (strengthened by the LAC Biosafety project experience) and will interact and use more effectively the reports, publications and advise of such group of experts. This is an intangible result that is, in the country-case, as important as many tangible outputs reported.

Comments from UCR (National Coordinating Agency for Costa Rica):

El proyecto Lac-Biosafety logró fortalecer las relaciones entre la academia y los tomadores de decisión en términos de Bioseguridad en cultivos transgénicos. Se fomentó la participación de autoridades políticas en el tema. Dicha interacción ha mostrado frutos pues varios tomadores de decisión identificaron especialistas en diferentes áreas del conocimiento que podrán ser punto de referencia como consulta. Al ser un proyecto multicomponentes, profesionales en las diferentes áreas se lograron organizar para brindar productos específicos en el tema de Bioseguridad en cultivos transgénicos.

Desde el punto de vista de aporte a tomadores de decisión y al público general, el proyecto en Costa Rica logró figurar en los medios de comunicación e incentivar la discusión sobre la tecnología de los transgénicos en Costa Rica. Prueba de ello fueron las capacitaciones, entrevistas en medios escritos y audiovisuales durante el proyecto. Varios investigadores han sido llamados para ofrecer sus opiniones ante la Comisión Técnica Nacional en Bioseguridad para la toma de decisiones. Se logró transmitir los principales objetivos a agricultores de diferentes zonas del país pues nos trasladamos hasta dichas regiones.

Difícil fue la interacción con ONGs a pesar de que se les invite a todas las actividades, en donde finalmente participaron en menos de un 3% de las reuniones. Considero que se logró reafirmar que el trabajo realizado por los investigadores fue objetivo por los resultados obtenidos y las recomendaciones planteadas. Finalmente, el punto de mayor interés fue entregar una herramienta para la toma de decisiones a la CTNBio que trataré de implementarse para cualquier solicitud de eventos transgénicos presentes y futuros.

Comments from UNALM (National Coordinating Agency for Peru):

En el Perú la generación de conocimientos científicos y técnicos en apoyo a la toma de decisiones en bioseguridad y capacitación en las herramientas necesarias empieza con el Proyecto LAC-Biosafety. Se ha logrado resultados e información útil para los tomadores de decisiones en bioseguridad que además justifican e incentivan su profundización. Es así que ya se está trabajando al presente en un proyecto auspiciado por el Ministerio de Agricultura para complementar en unos pocos meses sobre la base de los productos y herramientas logrados en el Proyecto LAC-Biosafety una Línea de Base para los cultivos de maíz y papa, (posteriormente algodón y papayo), con fines de regulación, para la liberación de OVM al ambiente, exigida por una reciente Ley de Moratoria.

El Proyecto LAC-Biosafety ha logrado el fortalecimiento en la Universidad Nacional Agraria La Molina de la capacidad técnica de un grupo académico que podrá continuar con la generación de conocimientos científicos en apoyo a los tomadores de decisiones en bioseguridad, así como el fortalecimiento de la interacción con la Autoridad Nacional Competente en Bioseguridad del sector Agricultura (INIA) y el apoyo científico del Centro Internacional de la Papa para tales propósitos.

En colaboración con el Programa de Doctorado en Agricultura Sustentable de la Escuela de Post Grado de la Universidad Nacional Agraria La Molina se está estableciendo un Curso-Módulo de 40 horas lectivas sobre Bioseguridad y Biotecnología Moderna en el cual se transmiten los conocimientos científicos, información y herramientas logrados en el proyecto. Este curso viene siendo ampliamente solicitado.

Se ha logrado articular y coordinar una red con los países participantes en este Proyecto Regional con un compromiso de poder seguir a futuro esta interacción complementaria y armonizadora en la bioseguridad de países Centros de Origen y de Megabiodiversidad.

Lo resaltado anteriormente, lo expuesto en el informe y las publicaciones próximas muestran al Proyecto LAC-Biosafety como altamente exitoso y necesaria una segunda fase.

Comments from CORPOICA (National Coordinating Agency for Colombia):

Colombia por iniciativa del Instituto Colombiano Agropecuario ICA, inicia oficialmente la creación de capacidad en materia de bioseguridad, en 1998 con la promulgación de la resolución 3492/98 que reglamenta y establece el procedimiento de introducción, liberación y comercialización de OGMs y de la

expedición del acuerdo 0013 de 1998, el cual crea el Consejo Técnico Nacional CTN BIO, instancia asesora con respecto a la producción, introducción liberación y comercialización de OGMs.

El fortalecimiento normativo, llegó a su climax entre 2004 y 2007, con la implementación del proyecto Desarrollo de capacidades para implementar en Colombia el protocolo de Cartagena, el proyecto además de fortalecer el marco normativo, amplió el conocimiento sobre las formas de realizar la evaluación de riesgo en diferentes latitudes, no obstante, las autoridades nacionales y otros grupos de interés tales como los centros de investigación y las ONGs consideraron importante tener mayores elementos de juicio para valorar la bioseguridad de las tecnologías OGM, los cuales deberían focalizarse en las condiciones ambientales que nos son propias. Estas preocupaciones y el impulso de uno de los centros de investigación preocupados por el tema, el Centro Internacional de Agricultura Tropical CIAT, gestó e implementó entre 2009 y 2012, el Proyecto LAC-Biosafety, proyecto que de acuerdo con las opiniones de los Ministerios del Ambiente y Agricultura, las Corporaciones Autónomas Regionales, las Universidades, las ONGs y los productores agropecuarios, en términos de creación de metodologías e instrumentos para la valoración del riesgo fue absolutamente creativo y útil para realizar una evaluación ambiental acotada a nuestras condiciones ambientales, así como para hacer una evaluación socioeconómica clara y detallada del valor de la tecnología para los diferentes actores en la cadena de valor agropecuaria. El enfoque ecosistémico para realizar las valoraciones fue aplaudido por los diversos actores, de igual forma las ventajas de la tecnología y la distribución de los beneficios de la misma a lo largo de la cadena de valor trajeron cuestionamientos que deben ser revisados concienzudamente y caso por caso por los tomadores de decisiones, llámense autoridades nacionales competentes o productores, ya que el equilibrio ambiental debe complementarse con el socioeconómico, especialmente para determinados nichos donde las tecnologías no pueden expresar todo su potencial.

El proyecto a través de las universidades involucradas y por supuesto de Corpoica y del CIAT, contribuyó con la formación de estudiantes de pregrado, de Master y gestó la formación de doctorados, tanto a nivel central como local, que seguramente formarán parte de los futuros tomadores de decisiones en bioseguridad; además creó alianzas con las universidades del Brasil, Costa Rica y con la Conabio de México.

Finalmente, es importante tener en cuenta que los logros alcanzados pueden desdibujarse si no trabajamos en una fase de cimentación de las metodologías, tres años de desarrollo permitieron crear y difundir, una segunda fase debe consolidar y ajustar los resultados conseguidos, por tanto y con la ayuda del Banco Mundial, del GEF e indiscutiblemente del CIAT, estamos dispuestos a gestionar y trabajar para conseguir la financiación de una segunda fase.

Annex 9. Information on the MSP project

Latin America: Communication and Public Awareness Capacity-Building for Compliance with the Cartagena Protocol on Biosafety

Project Development Objective:

The objective of the MSP is to strengthen communication and public awareness capacity on biosafety in Latin America in general and in Brazil, Colombia, Costa Rica and Peru in specific. The objective will be achieved through the implementation of a robust communication plan along with a knowledge management plan and a regional conference.

PDO Indicators:

1. A strengthened, consistent and constructive dialogue with key stakeholders on the Cartagena Protocol is in place.
2. By EOP, biosafety competent authorities in project countries have access to and consider useful the biosafety risk assessment tools and information as reference in making biosafety decisions.

Project Components:

Component 1 – Communication Strategy (Total USD 0.93 million of which USD 0.43 million GEF): The objective of this component is to strengthen public awareness on biosafety and effectively communicate the project objectives and outcomes to the general public.

Component 2 – Regional Technical Knowledge Sharing (Total USD 0.69 million of which USD 0.32 million GEF): The objective of this component is to strengthen the knowledge sharing among regional countries.

Component 3 – Regional Conference (Total USD 0.35 million of which USD 0.20 million GEF): The objective of this component is to share the outcomes of the two CIAT led projects (FSP and MSP) and of other ongoing biosafety capacity building projects widely in the region through a regional conference.

Key Factors Affecting Implementation and Outcomes

Lessons learned:

The complementary role that the MSP was to play to the FSP (for capacity building efforts in media interaction, and in biosafety communication) could have been made clearer to the MSP teams from the beginning; expectation was raised in thinking that the MSP would mainly communicate and disseminate FSP results, when in fact the FSP needed the entire project duration to develop these harmonized biosafety standards and tools. The initial intent and focus of the MSP on dissemination of FSP *results* was successfully shifted to the MSP playing a crucial complementary and parallel role by filling identified biosafety and GMO related knowledge gaps of identified stakeholder groups.

Implementation:

Successful implementation features of the projects (the FSP and the MSP) were:

- Workplans were developed in parallel to allow timely support of MSP to FSP activities
- In 3 of the 4 countries, the MSP teams were professional communication units embedded in the research organizations of the FSP partners, this set-up contributed to the success and sustainability of the FSP
- Joint FSP and MSP missions facilitated interaction of MSP and FSP teams among the 4 countries;
- Rotating missions: the project rotated the supervision missions through the 4 countries, allowing project partners to visit the partner organizations, project location and facilities of FSP and MSP partners and experience the work first hand in the country context;
- supporting and technical staff was invited on the missions to allow exchange at the activity level between the 4 countries.
- The face to face interaction between the research teams and the MSP at events and on project missions staff tightened the mutual understanding of their work and needs
- regional MSP coordination unit housed at CIAT

Assessment of Outcomes

In the context of a skeptical and in some cases negative public perception of GMOs, as well as the limited technical knowledge of decision makers, the MSP was instrumental in addressing these two constraints and fostered a broad, science based, informed debate about the topic of GMOs and biosafety.

Component 1: The communication strategy focused MSP interventions and a wide range of stakeholders have a clear idea of the FSP project objectives and of the importance of biosafety.

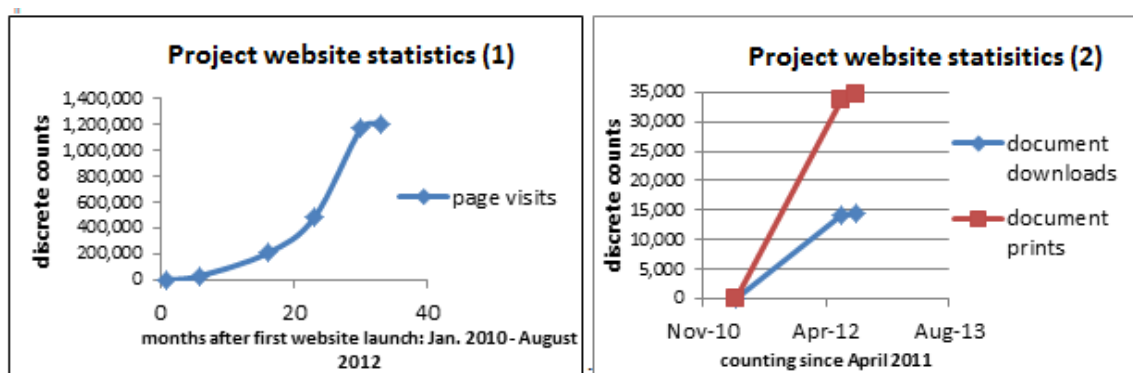
Stakeholder groups were identified and included media and journalism associations, politicians, opinion leaders, NGOs, academia, professional associations involved in the issue, public institutions, and farmer groups. A total of almost three-thousand individuals surveyed through online questionnaires and in depth interviews in the 4 countries to identify knowledge gaps, and to inform product design and targeting. A large variety of communication products and outlets were used, from information leaflets and posters, to the launching of facebook pages in Brazil and Costa Rica, drafting of media releases, the production of 5 project videos with the help of Corpoica in Colombia that were posted on the project website, as well as Youtube clips and TV commercials in Costa Rica and in Brazil, a movie theater spot in Costa Rica, and radio broadcasts and podcasts on the subject of biosafety in Colombia. Costa Rica also issued an electronic newsletter on the FSP activities, and Colombia developed an interactive web based questionnaire on biosafety issues that was adopted by the other countries.

Public consultation meetings were organized by the MSP in all 4 countries during which the FSP teams presented and discussed the relevance of the biosafety assessment tools, as well debated general concerns towards GMOs expressed by the stakeholder audience. The MSP team was involved in the wide dissemination of the invitations, including to the media, they served as discussion facilitators, disseminated project information materials, and jointly with the FSP issued media releases and managed interviews. The public outreach campaign resulted in an increase of requests for information and speaking engagements by stakeholder groups from the FSP project teams on the subject of biosafety and the role of GMOs in agricultural development. The most notable success is reported in Costa Rica, where CTNBio, the national biosafety authority, has been briefed about the project progress in several carefully designed presentations, designed and rehearsed with the help of MSP team coaching, and is considering to adopt the FSP developed biosafety assessment methodology as their national standard.

Component 2: Regional technical knowledge sharing and biosafety risk communication and media interaction capacity building

The MSP teams worked closely with the FSP to translate the technical approach and sub-project results of the FSP into a language accessible to non-scientists and provided just in time support to inform decision makers and ministry personal of project progress at 4 regional workshop events. The MSP developed training course materials, some of which are being picked up by academia and used to enhance biotechnology curricula in Peru and Brazil. In addition the four countries unilaterally engaged in numerous FSP driven regional events in which the MSP team used the opportunity to disseminate the project information. In Costa Rica, the MSP team accompanied the FSP team on their field work to better understand and to cover the activities for communication products. This also was reported in Colombia where the MSP team went along to farmer association meetings.

CIAT housed the regional MSP coordination unit, which designed and managed the project website, and successfully ‘branded’ the project through the design of a project logo for all project materials that were adopted by the FSP. The site counted almost 35,000 document prints and 15,000 downloads over 16 months, and steeply rising site visits accumulated over 33 months to more than 1.1 million (figure 1 and 2 summarize the statistics). The website also included a secure internal communication space and document exchange service which facilitated exchange of documents among project teams and trusted partners. CIAT agreed to maintain the website until the end of 2012 and then to migrate its content to one of their institutional websites.



The project capacity building efforts were comprehensive. They focused on the science producers, who want the significance of their technical work to be understood better, as well as on the media as recipients of science results, to enhance their comprehension of the science and its potential. Capacity building for more effective biosafety risk communication and media relations was organized by the MSP team and focused on the FSP teams, as well as other researchers and decision makers (eg representatives of the Ministry of Environment, as was the case in Colombia and Peru). A total of 70 researchers were trained in biosafety risk communication in Brazil, and more than 60 in Peru. Members of the media were trained as well, for example 40 Embrapa communication specialists in Brazil, and a group of 67 journalists received training in biosafety and GMO issues at a regional training in Colombia.

Component 3: Regional Conference underlines regional interest and networking potential

The MSP country teams and the regional MSP coordination unit worked closely with the FSP team leaders and successfully developed the conference presentations and final reports, and helped consolidate the FSP results of the 4 countries and to ensure that the technical language and result details were translated to a language relevant to the audience of decision makers and ministry representatives. The strong coordination and cooperation between the communication team (MSP) and the research teams (FSP) strengthened the institutions capacity and reputation – both for the research quality and its reputation among stakeholders for a science based approach to biosafety risk communication. The value of the cooperation was explicitly pointed out in the FSP presentations at the final regional conference, where they attributed the effective targeting and delivering communication products and reaching a wide and varied audience to the efforts of the MSP partners. Participants from the ministries of agriculture and of environment commended the FSP for having involved communication professionals in successfully raising the issue of biosafety in their countries. Interest in a next project phase was discussed, and ministry officials stressed the importance of making communication and public outreach a key component of such future biosafety project efforts.

Sustainability and public good character:

The project had a country and regional level networking effect – more than 66 institutions from the 4 participating countries were officially involved in the FSP and MSP project activities. And the informal network grew much larger, in Brazil for example, the project activities mushroomed into a network of more than 100 participating and collaborating organizations, the networking benefited from the MSP stakeholder communication and outreach activities and besides scientific and academic institutions, it also includes media partners, communication specialists, farmer organizations and professional organizations. A similarly broad network was established in all 4 countries that will ensure continuation of work on the subject of biosafety. The stakeholder database that was created by the MSP can be expanded to facilitate future communication and outreach of information and news on the subject of biosafety.

The project created a public good in leaving behind a cohort of staff and students trained in biosafety risk communication in each country, which forms a regional community of practice and a source of expertise that the countries (and the region) can now call and built upon.