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GLOBAL ENVIRONMENT FACILITY TRUST FUND

IN THE AMOUNT OF US$5.0 MILLION

TO THE

INTERNATIONAL CENTER FOR TROPICAL AGRICULTURE

FOR A

LATIN AMERICA: MULTI-COUNTRY CAPACITY-BUILDING IN BIOSAFETY

MARCH 16, 2006

CURRENCY EQUIVALENTS

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FISCAL YEAR

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ABBREVIATIONS AND ACRONYMS

ARI	Advanced Research Institutions
BCH	Biosafety Clearing House
CAFTA	Central American Free Trade Agreement
CARICOM	Caribbean Community and Common Market
CAS	Country Assistance Strategy
CBD	Convention on Biological Diversity
CENARGEN	Food and Technology Research Center (EMBRAPA)
CGIAR	Consultative Group for International Agricultural Research
CIAT	International Center for Tropical Agriculture
CIBCM	Center for Cellular and Molecular Biology Research
CIBIOGEM	Commission on Biosafety and Genetically Modified Organisms (Mexico)
CIDA	Canadian International Development Agency
CONABIO	National Commission for Knowledge and Use of Biodiversity (Mexico)
CONAM	National Environment Council (Peru)
CP	Cartagena Protocol
CPAA	Genetic Resources and Biotechnology Research Center (of EMBRAPA)
DFID	United Kingdom Department for International Development
EMBRAPA	Brazilian Company for Agricultural Research
EU	European Union
FTAA	Free Trade Area of the Americas
GEF	Global Environment Facility
GIS	Geographic Information System
GMO	Genetically-modified Organism
GTZ	German Technical Cooperation Company
IABIN	Inter-American Biodiversity Information Network
IARC	International Agricultural Research Centers
IDB	Inter-American Development Bank
IPR	Intellectual Property Rights
ICA	Colombian Institute of Agriculture
INBio	National Institute for Biodiversity (Costa Rica)
LAC	Latin America and the Caribbean
LMO	Living Modified Organism
M&E	Monitoring and Evaluation

NAFTA	North America Free Trade Agreement
NC	National Coordinator
OECD	Organization for Economic Cooperation and Development
PCU	Project Coordination Unit
PDF-B	Project Development Facility-Block B
PMC	Project Management Committee
RTC	Regional Thematic Coordinator
SC	Steering Committee
STAP	Scientific and Technical Advisory Panel
USAID	United States Agency for International Development
WB	World Bank

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LATIN AMERICA
Latin America: Regional Capacity-Building in Biosafety

CONTENTS

A. STRATEGIC CONTEXT AND RATIONALE

This document describes a proposed biosafety capacity-building operation in five Latin American countries, grant-funded by a full-sized GEF contribution of US$5.0 million channeled through the Colombia-based, International Center for Tropical Agriculture (CIAT), and with an estimated total budget of US$15.7 million. The global objective is to contribute to the ability of Brazil, Colombia, Costa Rica, Mexico and Peru to implement the Cartagena Protocol (CP) on Biosafety, by improving the institutional capacity of agriculture and environmental ministries as well as specific, biosafety-related agencies in the five participating countries, to implement their national biosafety regulations in compliance with the CP. The project would ensure an adequate level of protection in the area of the transfer, handling and use of transgenic crops in centers of crop biodiversity. Departing from other, ongoing biosafety projects in Colombia and India,[1] the proposed project is multi-country in scope, would generate standardized, science-based mechanisms and methodologies for biosafety risk, cost and benefit assessment, and project them in organized, accessible form - as an integral part of project activities - to competent authorities, biosafety practitioners, organized civil society and the general public (Annex 1).

1. Country and Sector Issues

Latin America has been adopting Genetically Modified Organisms (GMO) at a faster rate than any other region of the world, the commercial outcome of the manifest delivery of economic benefits for the agricultural economy of the region, by the initial products of biotechnology. Just under half of all countries currently growing commercial, transgenic crops are in this region and in 2004, Latin America grew 30% (23 million hectares) of the total global area of transgenic crops, second only to the United States (48 million ha). Concern is mounting about the accelerating adoption of GMO in Latin America without sufficient, scientifically-sound, biosafety assessment, management or decision-making instruments and over the fact that this region is falling behind in its capacity to implement biosafety regulations in compliance with international standards and treaties.

Biodiversity Significance: Tropical Latin America and the Caribbean (LAC) Region are among the world's richest areas of biodiversity as recognized by the Convention on Biological Diversity (CBD), harboring the center of origin of landrace/weedy/and wild relatives[2] of many important crops. Around one-third of all crop plants grown world-wide were domesticated from the biodiversity of this region. Mesoamerica, the Andean region and the Amazon were the centers of origin or diversification of maize, beans, potato, sweet potato, tomato, cassava, groundnut, pineapple, cotton, cacao and chili pepper, among others. All five countries selected for project participation – Brazil, Colombia, Costa Rica, Mexico and Peru – contain centers of mega-biodiversity, as defined by the CBD.

Potential, negative impact on biodiversity of the accelerating, unregulated use of GMOs could have major, medium- and long-term implications for the regional and global environment, for human/animal health, and for international trade and competitiveness. Health and environmental concerns are reflected in widespread public mistrust of GMO crops. Few areas of technology reflect greater stakeholder involvement in shaping law and regulation. But, other pragmatic realities are driving this situation. The global economy has prompted the formation of trading blocs (in Latin America currently Mercosur, Andean Pact, CARICOM, CAFTA and NAFTA, with FTAA[3] under negotiation) which are shaping regional commerce, with implications for the fate of biotechnology-derived products per se, and for the export aspirations, opportunities and expansion of countries still lacking capacity to comply fully with the CP.

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[1] Capacity-building for the Implementation of the Cartagena Protocol on Biosafety in Colombia (P077171); and GEF Biosafety Project – India (P079865).

[2] Landrace plants are older, often farmer-developed strains of a species, ideally-suited to the environment where they live, and bred through traditional methods of natural selection without the influence of modern breeding practices.

[3] CARICOM (Caribbean Community and Common Market); CAFTA (Central American Free Trade Agreement); NAFTA (North American Free Trade Agreement); FTAA (Free Trade Area of the Americas).

Despite their biodiversity, importance in the global biosafety arena and expanding commercial cultivation of transgenic crops, LAC countries have received little attention, in contrast to Asia and Africa which have received major funding from the developed world in recent years to establish functional biosafety systems (e.g., USAID is currently supporting two mega-projects on biosafety for these regions valued at about US$30 million each). Establishing biosafety capacity in the LAC region is complex due to the unique and difficult problems facing mega-diverse countries in addressing environmental risk, and the range of technical topics and research areas involved which encompass the biological, socio-economic, health, legal and political. This situation, together with the latest developments in international agreements on biosafety designed to protect biodiversity, the environment and animal/human health, and to regulate trans-boundary movement and use of these crops, creates an urgent and relatively high-risk situation which needs to be addressed at the national and regional levels.

Participating Countries: The five countries participating in this project have demonstrated sustained, substantive commitment to the project since its initiation, pooling funds for co-financing at the PDF-B stage, and providing Letters of Endorsement from the GEF Focal Points. Criteria for country selection included: (a) high levels of biodiversity of important crops and their wild relatives; (b) geographic distribution of wild/weedy relatives of economically important crops; (c) levels of development and implementation of biosafety policy including active GEF-funded projects and World Bank projects in agriculture and rural development; (4) complementary research strengths and expertise related to implementing the Cartagena Protocol; and (e) potential, strategic, future role they might play in biosafety management in their respective sub-regions. All five countries had already developed and implemented biosafety legal frameworks prior to the Cartagena Protocol and all have either ratified the CBD (Annex 1, Table 1) and the Cartagena Protocol (Brazil, Colombia, Mexico, Peru), or are in the process of ratification (Costa Rica) (Annex 1, Table 2).

Cartagena Protocol: The Cartagena Protocol (CP) was adopted in 2000 as a supplementary agreement to the Convention on Biological Diversity (CBD) of 1992, and entered into force on September 11, 2003 after ratification by 56 countries. In the case of LAC countries, 80% of the Andean, 50% of Central American countries (Annex Table 1a), Brazil and Mexico have also ratified the protocol. The protocol seeks the safe transfer, handling and use of living modified organisms (LMOs, also commonly known as transgenic crops or GMOs) to prevent adverse effects on the conservation and sustainable use of biological diversity, also taking into account the risks to human health, and focusing on the trans-boundary movement of these crops.

Although the CP Protocol sets a framework for the biosafety aspects of all living organisms resulting from modern biotechnology, the most important field of application in the near-term is the biosafety of agricultural crops modified by modern biotechnology. Quality implementation of the Protocol has a direct impact on the agricultural innovation and technology transfer policies of developing/evolving agricultural economies such as the partner countries in this proposal, and for the global economy and environment. Capacity building in the technical aspects of risk assessment remains a major area of concern of the CP[4]. Human resource development, database development, baseline information about crops (especially in mega-diversity areas) and expertise in methodologies for risk assessment are cited explicitly by the CP as priority areas for development.

Project Strategy: Acknowledging CP compliance requirements and biosafety technical weaknesses identified by target country representatives during PDF-B execution, and given the paramount importance of prompt action, the project will address key capacity issues in biosafety risk assessment and management, cost-benefit and impact assessment, and knowledge dissemination, within a period of three years. The institutional vehicle will be a strategic collaboration between the five selected LAC countries, represented by competent entities with complementary expertise, knowledge and experience serving as Centers of Excellence, and as models of best practice with potential to influence

[4] Report of the Ad Hoc Technical Expert Group on Risk Assessment, December 2005, Rome, Italy

biosafety behavior in other parts of Latin America. Partner countries agree that a multi-country approach is likely to be more cost effective, achieve more rapid impact, and be more sustainable than alternative methods, since it would both utilize and enhance existing country capacity. The project paradigm is thus built on centers of biodiversity in the Andean and Meso-american regions and on maximizing economies of scale by exploiting the comparative advantages of participating countries and entities as either Net Donors/Providers (NP) or Net Recipients (NR) of capacity, within the project's multi-country structure.

The International Center for Tropical Agriculture (CIAT, Colombia-based) is both project grant partner and implementing agency, with the international and regional reputation and well-established technical and convening capacity for the proposed multi-country project. CIAT will collaborate with the following national-level agencies (Centers of Excellence): EMBRAPA (Brazilian Agricultural Research Enterprise, Ministry of Agriculture, Brazil); Ministry of Agriculture, Colombia; CIBCM (Center for Cellular and Molecular Biology Research, University of Costa Rica); CONABIO (National Commission for Knowledge and Use of Biodiversity, Ministry of Environment, Mexico); and CONAM (National Environment Council, Ministry of Environment, Peru), with linkages already defined and agreed in principle with other, prominent research entities in each country. Additional partnerships to leverage both expertise and funding are under discussion or contemplated with other prominent entities/groups (see Section C). See also Annex 6 for implementation arrangements.

Working in an integrated manner through the participating countries and their respective Centers of Excellence, the project would create a competent pool of regional biosafety technical personnel and practitioners, establishing standardized, quality biosafety databases, and methodologies for biosafety management and socio-economic cost-benefit assessment using as models five, selected transgenic crops – maize, potato, cassava, cotton and rice.[5] Most databases, methodologies and systems/programs generated by the project would be based on the adaptation of existing knowledge rather than original creation, with the exception of certain data generated from research (not GEF-funded) with the model crops. Knowledge generated from project actions would be communicated through training and outreach to competent authorities and practitioners, opinion-makers, the private sector, civil society including producer organizations and environmental interests, and the general public. The goal is better-informed decision-making, greater understanding of biotechnology and biosafety based on objective, scientific information, and a more balanced, less alarmist public discourse.

2. Rationale for Bank Involvement

In the comparatively new field of biosafety, the Bank has already accumulated significant, initial experience as implementation agency for GEF on capacity-building pilot projects related to the "National Biosafety Facility" (NBF) in Colombia and India, and is currently assisting preparation of a GEF regional biosafety operation in West Africa.[6] The Bank has also had extensive involvement spanning several decades with the Consultative Group on International Agricultural Research (CGIAR), of which CIAT is a regional affiliate, and has an important role as facilitator and neutral party in the biosafety arena. Biosafety is now embedded in the policies and strategies of many countries where the Bank has significant investment portfolios in agriculture, environment and related sectors and thus, biosafety issues are assuming increasing prominence in those portfolios. More generally, the Bank's broad experience in providing knowledge support on policy issues (agricultural policy, trade policy, intellectual property rights issues and international convention compliance) validates its role as a partner in upgrading national biosafety capacity in the five countries.

[5] Selected on the basis of: (a) regional economic importance and socio-economic needs; (b) centers of diversity of maize, cassava and potato are in this region; (c) relative commercial weight of crops developed by the public and private sectors, respectively; (d) need for collaboration on knowledge generation and gaps in smart breeding for output traits (mostly private sector) versus input traits (public sector); and (e) potential implications for local/regional biodiversity.

[6] Proposed GEF West Africa Regional Biosafety Project (Benin, Burkina Faso, Mali, Senegal and Togo).

Many countries in Latin America have the advantage of already having established regulatory frameworks but there is a clear need to strengthen safeguards. The participating countries themselves acknowledge that their biosafety legal frameworks for the regulation, management and deployment of LMO, while crucial, are not enough. Technical, legal, policy and political obstacles are hindering their full compliance with the CP. The countries defined these obstacles during project formulation as weak technical capacity in biosafety risk assessment and risk management, and biosafety cost-benefit analysis, as well as inadequate availability and dissemination of science-based, accessible information to support planning and policy-making on biosafety and to temper widespread public concern about transgenic crops.

3. Higher level objectives to which the project contributes

The project supports the sector development strategies and agendas of the five participating countries (Annex 1). Further, Country Assistance Strategies (CAS) for the five partners show marked similarity across development pillars and sector goals, and both direct and indirect consonance with the proposed project (see Annex 1): [7]

Brazil: As cited by the CAS (2003), the economic and social context of Brazil creates a mandate for growth based on equity and sustainability, supported by improved productivity, stronger institutional capacity, and a focus on key environmental focal points including sustainable use and conservation of the rainforest biome. Technological innovation supporting the welfare of all Brazilians, but especially the poorest, is sought. An explicit goal of government's agricultural strategy is to provide incentives for the development and adoption of technological solutions for production and export expansion.

Mexico: Tacitly acknowledging that recent economic growth has been largely predicated on mining natural resources, leading to environmental degradation and what are becoming binding constraints on external competitiveness, the CAS (2002) and Government's National Development Plan focus on the challenges of building a competitive agricultural sector and implementing the country's trade and biosafety obligations.

Colombia: The CAS (2002) cites the peace agenda as the mandate for forging ahead with Government's reform program including the environmental and social sectors, with focused support for rural development and natural resources management. Government's agricultural strategy rests on preparing the sector to take on the challenges of regional/global trade agreements, strengthening the science, technology and innovation components of agricultural production, and responding to global demand while guaranteeing the conservation and protection of biodiversity and ecosystems.

Costa Rica: CAS (2004) pillars support government's emphasis on strengthening trade and competitiveness, the economic diversification agenda and continuing the country's pioneering leadership in environmental management. Government remains firmly committed to preserving biodiversity through progressive environmental policies.

Peru: The Peru CAS (2002) supports government's programs and institutional reforms for renewing growth and reducing poverty, while strengthening emphasis on partnerships with IDB and the Andean Development Corporation to advance its strategic pillars: increased competitiveness, greater social equity and public sector reform. Government's agricultural strategy calls for incentives, modern agricultural technologies and shifting to higher-value, intensive agriculture. Peruvian biodiversity law requires that biosafety be factored into all related policies, planning and sector programs.

[7] **Brazil**: latest CAS 27043, November 10, 2003; **Mexico**: latest CAS 23849, April 23, 2002 ; **Colombia**: latest CAS 25129, December 24, 2002 and CAS Progress Report 32999, September 9, 2005; **Peru**: latest CAS 24205, August 19, 2002 and CAS Progress Report 30292, November 9, 2004; and **Costa Rica**: latest CAS 28570, April 20, 2004.

The project is also consistent with the Bank's regional rural sector strategy[8]. 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. Agriculture is one of the sectors where integrating environment and economic policies is most obvious. The strategy recommends intensifying smallholder agriculture and increasing productivity, ensuring sustainable management of the resource base on which smallholders depend and providing better risk management tools. The strategy notes explicitly that the GEF should continue to play an instrumental role in facilitating better mainstreaming between conservation and development; promote donor coordination, develop channels for communication and consultation with other potential partners, and seek partnerships to learn, to transfer experiences and to develop common ground on approaches, among partners.

GEF Operational Program Goal

The proposed project fits within the GEF focal area on Biodiversity and the GEF Operational Program (OP) 13 on Conservation and Sustainable use of Biological Diversity Important to Agriculture. The project would improve country institutional capacity to manage the safe and sustainable use of transgenic crops and derivatives of agricultural importance (key crops in their region of origin), and to conserve newly-created genetic resources, thereby improving the quality and health of the global environment. Further, due to the cross-cutting nature of the biosafety issue, the project also fits under OP1 Arid and Semi-arid Zones, OP2 Coastal, Marine and Freshwater Ecosystems, OP3 Forest Ecosystems, and OP4 Mountain Ecosystems.

The project is also consistent with the GEF Biodiversity Strategic Priority no. 3 on Capacity-Building for Implementation of the Cartagena Protocol on Biosafety in supporting the development and/or strengthening of the national biosafety clearing house (BCH), biosafety knowledge generation and validation, training and capacity building, and promoting public awareness and a stronger biosafety policy environment. CP Article 22 asks that parties cooperate in capacity building with an emphasis on scientific and technical training in the proper, safe management of biotechnology, in the use of risk assessment and risk management for biosafety, and the enhancement of technological and institutional capacities in biosafety. Indeed, the basis for financial assistance to countries through the GEF is to build capacity to implement the CP.[9]

B. PROJECT DESCRIPTION

1. Lending Instrument

The proposed project will be grant-funded by a full-sized US$5.0 million GEF contribution. Additional, special project funding (counterpart funds) of approximately US$10.7 million will be channeled through CIAT. The proposed total project budget is estimated at US$15.7 million. The latter amounts will be verified during project preparation.

2. Project Global Environmental Objective and Key Indicators

The project will support implementation of the Cartagena Protocol (CP) on biosafety, by improving the institutional capacity of agriculture and environmental ministries as well as specific, biosafety-related agencies in the five participating countries, to implement their national biosafety regulations in compliance with the CP.

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[8] Reaching the Rural Poor in Latin America and the Caribbean Region, World Bank report no. 24530, July 31, 2002.

[9] The project will also support, towards the end of its implementation, Strategic Priority 4 , Generation and Dissemination of Best Practices for addressing current and emerging biodiversity issues, having identified and adapted innovative approaches and tools for risk assessment, databases for knowledge-sharing on biosafety, and produced science-based materials for training and communication purposes.

This will be indicated by increased institutional effectiveness for implementing the Cartagena Protocol in centers of crop diversity in the Project's participating countries, reflected for example, in:

- Existence of clearly-defined institutional mechanisms for administering biosafety including defined responsibilities in biosafety within each national institution/agency and designated technical specialists and personnel;
- Sustainability of biosafety frameworks and project-established methodologies as indicated by annual budgets allocated to project-targeted biosafety institutions and agencies;
- Functioning mechanisms established to promote inter-institutional and inter-country collaboration on biosafety, among the five participating countries; and
- Existence of standardized risk assessment, risk mitigation and emergency response mechanisms used by project targeted institutions and agencies and collaboratively between participating countries.

3. Project Components

The project has three components: (a) Strengthening technical capacity in knowledge generation for biosafety risk assessment and management; (b) Strengthening biosafety decision-making capacity; and (c) Public awareness on biosafety for communicators, opinion-makers and the general public (Annex 4). The costs of each component and subcomponent are summarized in Table 1 and described in detail thereafter.

Table 1: Project Cost by Component and Source (US$'000)

COMPONENT	GEF		Other		Total	
	Amt.	%	Amt.	%	Amt.	%
A. Strengthening Technical Capacity in Knowledge Generation for Biosafety Risk Assessment and Management						
1. Strengthening of Technical Capacity for Environmental Risk Assessment and Management	3,737.9	35.4	6,280.2	63.5	10,558.1	67.1
2. Strengthening of Technical Capacity for Socioeconomic Impact Assessment	305.3	13.9	1,890.0	17.6	2,195.3	13.9
Subtotal	4,043.2	31.7	8,710.2	81.6	12,753.4	81.0
B. Strengthening Biosafety Decision Making Capacity	563.3	33.6	1,115.0	10.3	1,678.3	10.7
C. Public Awareness on Biosafety for Communicators, Opinion Makers,and the General Public	393.5	30.0	920.0	8.6	1,315.5	8.3
Total Project Costs:	**5,000.0**	**31.8**	**10,745.2**	**68.2**	**15,745.2**	**100.0**

Budget allocations for project regional coordination including project Monitoring and Evaluation (M&E) are mainstreamed within Component 1, subcomponent 1.1. Allocations are defined in detailed project cost tables but not shown in summary cost tables, as above. Total costs of regional coordination of the project are estimated at US$0.6 million. See also C3 and Annexes 7 and 8 for reference to project coordination activities and specifically to monitoring and evaluation.

Component 1: Strengthening technical capacity in knowledge generation for biosafety risk assessment and management (US$4.04 million GEF)

The objective of this component is to strengthen regional technical capacity using selected, target crops (cassava, cotton, maize, potato and rice)[10] as models for developing risk assessment,

[10] These crops were chosen because they all are economically important in the region. Moreover, the centers of diversity of maize, cassava and potato are also in the region. GM Cotton is already grown by regional farmers, thereby offering the best opportunity for ex-post analyses and for monitoring methodology testing. Several GM versions of rice are under development for potential release in the region.

management and cost-benefit analysis methodologies for new, transgenic products. The following subcomponents will be financed:

1.1 Strengthening technical capacity for environmental risk assessment and management
1.2 Strengthening technical capacity for socio-economic cost-benefit assessment

Expected outputs include: (a) adapted databases for tracking and monitoring gene introgression/persistence, and for mapping the distribution of crops/landrace/weedy, wild populations; (b) crop management strategies and operational guidelines to minimize transgene flow; (c) adapted, standardized methodologies for large-scale monitoring of gene flow; (d) regionally-adapted and standardized methodology for evaluating effects on non-crop (non-target) organisms; and (e) adapted methodologies and tools for socio-economic impact assessment of LMOs in the tropics and for analyzing potential costs and benefits of LMOs in centers of biodiversity.

Component 2: Strengthening biosafety decision-making capacity (US$0.56 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. It will build biosafety capacity for decision-making entities (competent authorities) and for practitioners (public and private research community) using the knowledge generated by this project in a collaborative effort across the region. The project will finance the following sub-components:

2.1 Training in environmental risk assessment, management and communication for competent authorities and practitioners
2.2 Training in socio-economic cost/benefit assessment for competent authorities and practitioners

Expected outputs include: (a) decision-making entities (competent authorities, implementing entities of national biosafety frameworks) and practitioners (e.g., agricultural science professionals, transgenic crop developers and users) trained and proficient in the core principles and application of biosafety assessment and biosafety management; (b) competent authorities and practitioners trained to understand and use common methodologies to conduct cost-benefit assessment of biosafety products for planning purposes.

Component 3: Training in biosafety for communicators and opinion-makers to improve public awareness (US$0.39 million GEF)

The objective of this component is to promote public awareness and stimulate informed public debate on biosafety based on quality information generated by specialists in target countries, through the mechanism of engaging national research organizations, policy-makers, communicators and opinion-makers, based on comprehensive information linking biosafety and biotechnology.

The project will finance communications specialists to develop information materials on biosafety and information campaigns and to insert them into the public debate/discourse at various levels, e.g., through press briefings with national science writers/journalists and other opinion-makers.

Expected outputs include: (a) audience-tailored, science-based information modules, toolkits and awareness-building tools prepared by communications specialists, based on knowledge generated under Component 1 and targeted to social communicators and opinion makers with a broad public audience; and (b) delivery of science-based information through various media, to targeted audiences.

4. Lessons Learned and Reflected in Project Design

Lessons learned from the implementation of other GEF projects (Annex 2) are reflected in specific elements of project design:

Consultative preparation and implementation: Rapid, effective project initiation and execution is related directly to substantial investment during preparation and beyond, in consultation, representative/inclusive decision-making and inter-country coordination of the project strategy and design. *Project design and implementing arrangements are the result of an intensive, multi-country and institutional consultative process initiated in 2004 and with specific activities and implementation arrangements designed to build and maintain a consultative methodology and procedures throughout implementation (and beyond).*

Biosafety alliances: Successful implementation and sustainability depend on the project establishing alliances which support sound biosafety policies, to avoid its isolation from "secular" authorities and interests. Similarly, the scope and complexity of emerging regional economic development activities and externalities related to trade and other policies – upon which biosafety impinges in many ways – call for outreach which includes diverse players with capacity to influence events/attitudes. *The project includes science-based training, using professionally-prepared modules, for public competent authorities and practitioners in biosafety; and information campaigns targeting opinion-makers and civil society (*Annex 4*).*

Sustainability: Longer-term sustainability of project outcomes and compliance with the CP depend *inter alia*, on training programs which maintain biosafety capacity over time, keep biosafety as a prominent issue of national and global significance in the public mind and which ensure its incorporation in national development priorities and planning. *The project fosters regional collaboration and learning within and between diverse country authorities and institution* (Annex 4).

Public awareness-building and outreach: Distorted information in the public domain on biotechnology and biosafety tends to stoke controversy by stifling informed public discussion. Awareness-building is a critical activity, but even more, building core expertise in technical and scientific matters through longer-term programs is what will ultimately preserve the biosafety agenda and ensure compliance with the CP. *Project training brings biosafety innovation and risk under the same roof as essential elements of the biosafety discussion, and finances methodologies for injecting science-based knowledge into higher-level decision-making and public debate* (Annex 4).

Institutional arrangements: More complex institutional arrangements – the outcome of a regional approach involving five countries - require that the institutional assessments defined during project preparation be deepened and refined during execution. Synergies among stakeholders in dynamic institutional circumstances are not always predictable. Stakeholder engagement is required throughout implementation to increase impact and leverage funding. Further, experience shows that an adaptive management approach between the PCU, working groups/committees, the Bank and national entities is required, using for example, working groups organized by theme, and revolving, needs-based participation. *Project design captures these lessons in the implementation arrangements. The project will be executed by CIAT, working in collaboration with designated centers of excellence in the five countries, and managed by a Project Management Committee (PMC) comprising key representatives of CIAT and designated National Coordinators (NC) from each r country, the latter working according to thematic areas reflecting respective national strengths and needs, with each thematic area having a Regional Thematic Coordinator (RTC)* (Annex 6).

Information-sharing systems: Intensive investment in information sharing system and mechanisms paid dividends under the GEF Mexico biodiversity project, resulting in all government agencies with project involvement following the same set of objectives and working at similar levels of expertise. The focus of shared information in this case has been on how different agencies carry out risk

assessment and how they interact with decision-makers in agriculture and environment in a coordinated fashion to release LMO into the environment. *Project implementation arrangements and the nature of component activities (C1, C2 and C3) are designed to foster information sharing of standardized approaches and methodologies, and of high quality, science-based information to regulate the introduction of LMO.*

Other findings and recommendations from biosafety operations are also instructive and consistent with the capacity-building focus and design elements of this project. The GEF Council in November 2005, discussing "Elements of a Biosafety Strategy," stressed regional approaches with CIAT as the fulcrum for overseeing project coordination between established, specialized agencies with complementary skills and track records, and the importance of ensuring consistency with and collaboration between, other bilateral and multilateral biosafety efforts (USAID, IDB, UNEP). Similarly, the GEF Evaluation Office in January 2006 found that fragmentation of assistance and coordination, weak capacity in implementing countries, the need for information "toolkits"" which are responsive to country needs and consistent with the CP, and unequal commitment to biosafety between science institutions and governments, were all issues hindering compliance with the CP.[11] Project design takes account of these lessons and recommendations.

5. Alternatives considered and reasons for rejection

- No project: Rapidly expanding adoption of transgenic crops in Latin America without systematic risk and impact assessment, safety management and tracking/monitoring systems, creates an urgent situation in a region which is among the richest biodiversity areas of the world.

- Separate projects in the five countries: Scale, cost and time inefficiencies, lost opportunities for collaboration and exploitation of comparative advantage and complementary skills, and potential lack of sustainability reduce the viability of this approach.

- Single country project as regional demonstrator: This approach would require major, long-term investment to reach International Standards (IS) and multidisciplinary technical capacity, unacceptable given the rapidly-evolving biosafety situation, scale inefficiencies and lost opportunities.

C. IMPLEMENTATION

1. Partnership arrangements (if applicable)

The project is built on partnerships between countries and scientific institutions to exploit to the extent possible, economies of scale and time, and complementary expertise. Partner agencies at the national level are: National Agricultural Research Corporation (EMBRAPA, Ministry of Agriculture) Brazil; Ministry of Agriculture, Colombia; University of Costa Rica; National Commission for Knowledge and Use of Biodiversity (CONABIO, Ministry of Environment), Mexico; and National Environmental Council (CONAM, Ministry of Environment), Peru. The relative country strengths and respective areas of contribution are detailed in Annex 6 and Table 6.1.

Project principals also recognize the potential for leveraging expertise, longer-term sustainability and/or additional funding from partnerships with the US Department of Agriculture (USDA), the Environmental Protection Agency (EPA), the Animal and Plant Health Inspection Service (APHIS), and the US Food and Drug Administration (FDA); with Cornell and Iowa State Universities; and with prominent research/scientific and oversight institutions in Argentina (CONABIA), Canada (Canadian Food Inspection Agency) and Africa (AfricaBIO). The project is also actively seeking to attract USAID support, both financial and scientific, based on its experience in biosafety operations in Asia and Africa. Collaboration with the United Nations Development Program (UNDP) and United

[11] Evaluation of GEF's Support of the Cartagena Protocol on Biosafety, Jarle Harstad, GEF Evaluation Office, January 31, 2006.

Nations Environment Program (UNEP) are also potential sources of input. The nature of the project and its strategic objectives suggest a good fit with potential donors such as the Rockefeller Foundation, CIAD, the European Union (EU), DFID and GTZ. Project activities deemed outside the scope of GEF funding (e.g., food safety evaluation) may fit well with the programs of several of these donors.

2. Institutional and implementation arrangements

The project would be implemented over three years, with the grant partner and implementing agency being the Colombia-based Center for Tropical Agriculture (CIAT) working in an integrated manner through a consortium of partner countries and their respective Centers of Excellence, building institutional alliances to leverage complementary skills in evaluating and managing transgenic crops and their products. Each Center of Excellence will engage other, national, competent entities in GMO technology, as needed. The consortium approach provides an opportunity to increase biosafety knowledge and exchange information and experiences among countries at different levels of engagement with transgenic crops while providing a forum to share knowledge generated by project activities.

The project will be supervised by a Project Management Committee (PMC) comprising key CIAT representatives and the designated National Coordinators (NC) of each partner country. The PMC will have an approval role in the flow of funds and reporting to the donor, and oversee the execution of thematic areas under Component 1. The PMC will also have an approval role in operational planning, administration, budget, annual plans and monitoring project progress.

Within CIAT, day to day project implementation will be the responsibility of the existing Projects Office, an operational unit responsible for interface with all projects and donors, and working with the CIAT Directors of Finances and Administration. These arrangements would be supplemented by hiring three incremental professionals (full-time manager, M&E specialist and administrative assistant). Project operations will also be supported day to day by established CIAT technical professionals. CIAT will monitor progress, prepare planning materials, provide administrative support, handle budget preparation and the auditing of financial statements, and allocate project funds through the Project Management Committee, according to approved work plans. Responsibility for national-level execution in partner countries will reside with the National Coordinators under Letters of Understanding with their institutions. (See Annex 6)

3. Monitoring and evaluation of outcomes/results

The framework for monitoring and evaluation (M&E) of project outcomes and results will be fully-developed by the Project Appraisal date. This framework takes into account that a well-designed system is critical to ensure timely and successful implementation of the Project, and to enhance its impact for the beneficiaries by the systematic and periodic analysis of lessons learned, and their effective dissemination. Project monitoring and evaluation would be the responsibility of CIAT. Performance indicators have been established for the Project and its components, and are presented in the Results Framework in Annex 3. The M&E system is based on a cascade of goals, purposes, results, and activities where higher-order activity, that is, components, become the purpose of the lower order, that is, the subcomponents. This approach will ensure the tracking of all activities to the developmental objective of the Project. The Project Monitoring Committee (PMC) will assist in keeping the national interests within the framework of implementation progress. The Project design includes baseline determinations and performance (milestones) indicators to monitor the implementation of the plan. Such monitoring will consist of an internal evaluation at the component level, and one at the Project level. Monitoring will be based on periodic reports.

By using a management information system (MIS) and the financial management system, Project activities will be kept on track and potential problems identified and appropriately addressed. CIAT

will design the MIS for M&E, and reporting formats for each component and national office according to the target annual performance objectives and monitoring indicators shown in Annex 3. Quarterly reports will cover progress in implementation, and milestones in the use of Project funds and impact. Quarterly technical and financial reports will be consolidated by CIAT into bi-annual progress reports to be submitted to the Bank within two months of the end of each six-month reporting period. These bi-annual reports will also include an implementation plan and activity program for the subsequent six months of the reporting period. A midterm review will assess the overall progress of the Project. The lessons learned and recommendations for any needed improvements would be used in restructuring or realigning Project plans. Post-project impact assessments will be conducted to improve quantitative assessment of the Project outcome.

4. Sustainability and Replicability

Institutional Sustainability: The multi-country strategy and structure, exploiting the technical experience and complementary expertise of each country and its Centers of Excellence, are expected to bolster institutional sustainability. The planned international consortium of national partners collaborating with International Agricultural Research Centers (IARC) and Advanced Research Institutions (ARI) is a realistic and workable mechanism to build biosafety capacity in the region. The consortium will be expected to establish database integration/sharing, and set standards and protocols to be adopted and enforced through collaboration. The development and strengthening of the biosafety database (web-enabled), shared among partners and others is part of the strategy to improve sustainability of the project's activities and outcomes beyond its lifetime. Incentives to sustain institutional buy-in and participation will continue to be explored during project Appraisal and implementation.

Financial Sustainability: The regional operational model is expected to create medium-term economies of scale in implementing the CP. Involvement of international agencies in the project is a potential opportunity for garnering their longer-term financial support. The consortium approach also improves the fund-raising prospects of a group of countries versus a single country and reduces intra-regional competition and duplication of effort. In addition, the project provides a base from where LAC regional biosafety capacity can be strengthened. Constructing active fund raising capacity in the partner countries, as well as effective partnerships with other stakeholders and donors, are expected to boost financial sustainability. In addition, within the legal framework and based on IPR regulatory framework potential, incentive mechanisms to promote sustainable stakeholder/country buy-in will be explored during the project Appraisal and implementation phases.

Replicability: The strategy of developing and strengthening the capacity of Centers of Excellence in the partner countries is expected to strengthen regional biosafety knowledge bases for the sub-regions, based on their agro-ecological and social needs. Further, the consortium will have, by end-project, established and tested knowledge-sharing mechanism(s) for replication of regional and sub-regional experiences. Methodologies and tools developed by the project will be designed for easy transfer and trained technical personnel will be available within the region. The regional approach also provides a better foundation for replicating similar biosafety operations in other countries of the region. The lessons learnt under this regional project both during project preparation and implementation would be used in other proposed World Bank-supported regional projects for biosafety (e.g., current proposed GEF project for West Africa and those in the pipeline for other regions in Africa and Asia/Oceania).

5. Critical risks and possible controversial aspects

Risks	Mitigation Measures	Risk Range
Modification of Cartagena Protocol: Liability and Redress Agreement to be reviewed in 2007.	In the event of problems implementing the Project according to agreed work plans due to changes in international/national agreements, CIAT in consultation with the PMC and	***Moderate***

Cartagena Protocol to have five-year review in 2008.	World Bank/GEF, would develop alternatives depending on the status of the CP. Even in the worst-case (without-CP) scenario, building country capacity for risk assessment, management, communication and cost-benefit analysis remains a top priority and would proceed.	
Focus and coherence: Participation of multiple countries with differing interests/capacity to implement Cartagena Protocol, and participation of multiple entities within each country, could complicate implementation.	Initial selection of entities will be based on expertise, complementarities and work record as entry points for each country to guarantee project commitment and execution. Governance arrangements include a Project Management Committee with representatives of partner countries to avoid predominance of some countries and ensure that participating entities focus on project objectives and outputs.	***Modest***
Deficient performance of project partners: Deficient or slower-paced performance of project partners may affect sequencing of project activities and financing.	CIAT, in consultation with the PMC and World Bank/GEF would develop an alternative action plan for recouping country performance, and pace of project execution. Funds will flow to CIAT in the first instance, not individual countries, permitting control over the flow of funds vis a vis performance.	***Modest***
Changed commitment to project objectives: Electoral change in a partner country resulting in biotechnology rejection might shift broad support away from the project.	CIAT, in consultation with the PMC and World Bank/GEF, would develop a strategy consistent with project objectives and activities, to educate new administration in project goals and methodologies.	***Modest***
Costa Rica has not ratified the Cartagena Protocol: Continued lack of ratification of the CP by Costa Rica at the onset of project implementation, may force its withdrawal from the project.	CIAT, in consultation with the World Bank/GEF, will reformulate the work plan and re-distribute deliverables among the country and institutional partners.	***Modest***

6. Loan/credit conditions and covenants

Preparation of a Project Operational Manual and Training Plan will be conditions of Negotiations. There are no conditions of Effectiveness.

Legal covenants will pertain to: (a) inter-institutional agreements between CIAT and the national collaborating agencies, defining their respective responsibilities under the project; and (b) monitoring and evaluation system designed/operational.

D. APPRAISAL SUMMARY

1. Economic and financial analysis

The nature of this project presents certain difficulties for a formal economic analysis, but the methodology and assumptions for such an analysis are being explored and results/analysis will be included in the PAD by the Appraisal Date. Meanwhile, the cost-effectiveness of the multi-country approach to capacity-building can be considered in the context of project design alternatives considered and rejected. In a without-project scenario, the rapidly expanding adoption of transgenic crops without systematic risk and impact assessment, safety management and tracking/monitoring systems entails significant risks and costs for countries which are among the world's richest in biodiversity and with national strategies and aspirations for expanding agricultural production and trade, and for reducing poverty. Similarly, a scenario involving five separate country projects has serious implications in terms of scale, cost and time inefficiencies, lost opportunities for collaboration and exploitation of comparative advantage and complementary skills, and potentially weak sustainability. The third scenario – using one country as regional demonstrator – would require major, long-term investment to reach International Standards (IS) and multi-disciplinary technical capacity, an unacceptable option given the rapidly evolving biosafety situation.

Incremental Cost Analysis.

The proposed GEF Project is a stand-alone operation totaling US$15.7 million, comprising requested financing of US$5.0 million from GEF, approximately US$9.3 million from the five participating Governments, and US$1.4 million from CIAT. As shown in the Incremental Cost Analysis (Annex 15), the Baseline scenario for the five countries sees very little financing of capacity building and no coordinated efforts in the region. Without the project, the five countries would undertake the needed steps at a much slower rate, with little regional coordination and missing opportunities for economies of scale, causing inefficiencies and modest effectiveness. CIAT in particular, would lack funding to organize regional biosafety initiatives and there would be no integrated approach to exploit potential coordination synergies. Potential biodiversity benefits would be modest or negligible.

The GEF alternative scenario would see the Colombian-based CIAT, as both grant partner and implementing agency, coordinating the activities of the five countries to create a competent pool of regional biosafety technical personnel and practitioners and to develop standardized, comprehensive biosafety databases and methodologies for biosafety management and socio-economic cost-benefit analysis. Integrating and standardizing countries' technical/analytical biosafety capacity at a regional level would be both innovative and cost-effective. The activities developed would be created specifically as models for replication to apply to other transgenic crops and countries to ensure the project could be scaled up to provide comprehensive biosafety improvements throughout the region. The project includes information dissemination activities designed to promote replication which in turn would improve biodiversity conservation in hotspots in Latin America, improved human health from safer agricultural development, better nutrition and avoided negative consequences of GMO.

GEF involvement would provide crucial incremental financing to maximize the global biodiversity conservation benefits of the project and to ensure that this would form a model for replication throughout Latin America. GEF support of US$5.0 million is expected to leverage additional financing of US$10.75 million comprising: (a) biosafety capacity-building in knowledge generation for biosafety risk assessment and management (Component 1) of US$8.86 million; (b) strengthening biosafety decision-making capacity (Component 2), of US$0.97 million; and (c) building public awareness on biosafety for communicators, opinion-makers and the general public (Component 3), of US$0.92 million.

2. Technical

The technical approach is innovative in attempting to integrate and standardize country biosafety technical/analytical capacity at a regional level, and for integrating science as a pillar of policy- and decision-making and the broader public debate, based on difficulties frequently observed in achieving that integration. The stress on technical capacity-building responds directly to intentions of the Biodiversity Convention (Art. 19). The proposal departs from recent, similar, regional projects in putting more emphasis on science-based/technical peer learning between participating countries, and a more inclusive approach to the essential technical and other linkages between biosafety and biotechnology assessment, for regional agriculture.

3. Fiduciary

CIAT will be responsible for managing the fiduciary aspects of the project through its Projects Office and Financial and Administrative departments. Principle financial and accounting responsibilities will include: (a) maintaining accounting records; (b) processing disbursements; (c) preparing project financial statements in accordance with World Bank guidelines; (d) managing bank accounts; (e) managing financial information systems; (f) preparing and submitting Quarterly Financial Monitoring Reports (FMR), and (g) preparing and submitting withdrawal applications.

Financial

A Financial Management Assessment (FMA) of CIAT was carried out during preparation of the PDF-B grant and conducted in accordance with OP/BP 10.02 and the Guidelines for the Assessment of Financial Management Arrangements in the World Bank Financed Projects. The assessment concluded that CIAT has sufficient capacity to manage project financial matters and administer loan funds. The FMS will review financial arrangements/content before Appraisal.

The Bank would disburse the proceeds of the grant into a Special Account in US dollars in the name of CIAT. For individual countries' subprojects and national coordination, CIAT will transfer funds to the respective national coordination unit to make eligible payments. CIAT will prepare Financial Monitoring Reports (FMR) for submission to the Bank semiannually within 45 days of each such period (i.e., by August 15 and February 15). The FMR will serve as the basis for the annual audit of financial statements. At least one financial management supervision mission will be conducted each FY,and a Bank Financial Management Specialist will review the annual audit reports and the semi-annual FMR. The proposed GEF grant would be disbursed over a period of three and one half years, with Effectiveness expected on January 15, 2007 through the end of the third quarter of FY2010, with project Completion Date expected on January 15, 2010 and Grant Closing Date of July 15, 2010.

Procurement

A procurement capacity assessment of CIAT will be carried out before Appraisal.

4. Social

Stakeholder Involvement

Stakeholder involvement has been a core element of the debate on biosafety since the first wave of biosafety regulations emerged in the 1990s. There is probably no area of technology where stakeholder involvement is more deeply embedded in regulations and legislation. Given the ramifications of compliance with the CP, biosafety capacity-building per se, and the public controversy surrounding GMO crops, the stakeholder universe is broad and this is reflected in the reach of the project's knowledge generation and dissemination objectives and functions. The immediate target audience for this project is the national agricultural innovation system (NAIS), public authorities and civil society (including environmental interests, farmer groups, producer organizations and community organizations) in the participating countries, with the international organizations as regional facilitators. Stakeholder engagement is seen as an evolving, continuous and adaptable process, responsive to immediate and longer-term circumstances.

Project development was initiated through a dialogue on national biosafety issues between the relevant country ministries and/or their agencies, and CIAT. This dialogue revealed that, despite biosafety legal codes, technical capacity to implement the CP was weak and variable in and between countries. This launched the CIAT-coordinated consultative process involving, among other activities, a series of courses on biosafety for biosafety committee members, and in-country capacity analyses to define major bottlenecks, the most glaring of which was found to be the lack of science-based assessment methodologies and processes. Countries also expressed concern about the trans-boundary movement of GMOs and their need to have confidence in neighboring countries, which led to a series of meetings between representatives of ministries of agriculture, social protection and health, and decisions about who would be the country project focal points. While the courses conducted by CIAT included civil society representatives with divergent views about GMO/biosafety, the general discussion leading to project preparation focused particularly on responding to the needs expressed by country authorities responsible for planning, decision-making and management of the biotechnology/biosafety spectrum.

In terms of design, the project will focus on the key elements for successful stakeholder engagement which tend to fall by the wayside in the rush to participate in the discourse. The project will ensure that stakeholder engagement, broadly defined, is improved by promoting the twin ideas of technical excellence and quality of information in biosafety risk assessment and management. Much of the information publicly available now has no scientific basis, which has tended to confuse perceptions of biosafety and biotechnology and increase the element of controversy.

5. Environment

The project's global environmental objective is to support implementation of the Cartagena Protocol on Biosafety, by improving institutional capacity of agriculture and environmental ministries as well as specific biosafety-related agencies in the five participating countries, to implement their national biosafety regulations in compliance with the CP. This would ensure an adequate level of protection in the field of the transfer, handling and use of transgenic crops in centers of crop diversity. The project is thus expected to have positive environmental impacts if implemented as planned and would have no significant, adverse environmental effects during implementation.

6. Safeguard policies

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP/GP 4.01)	[ ]	[x]
Natural Habitats (OP/BP 4.04)	[ ]	[x]
Pest Management (OP 4.09)	[ ]	[x]
Cultural Property (OPN 11.03, being revised as OP 4.11)	[ ]	[x]
Involuntary Resettlement (OP/BP 4.12)	[ ]	[x]
Indigenous Peoples (OD 4.20, being revised as OP 4.10)	[ ]	[x]
Forests (OP/BP 4.36)	[ ]	[x]
Safety of Dams (OP/BP 4.37)	[ ]	[x]
Projects in Disputed Areas (OP/BP/GP 7.60)*	[ ]	[x]
Projects on International Waterways (OP/BP/GP 7.50)	[ ]	[x]

The Quality Assurance Team (QAT) recommended a Category "C" rating in its review of the Project Concept Note (January 27, 2005) and this rating was re-confirmed by the Quality Enhancement Review (March 7, 2006). The project's explicit goal is to reduce the environmental risks of modern biotechnology through activities designed to build capacity to implement the CP. The project will not finance the planting of genetically-modified crops. The project does not trigger the Indigenous Peoples Policy (OD 4.20) since project activities do not impinge negatively on their physical and material wellbeing.

7. Policy Exceptions and Readiness

The proposed project does not require any exception from IBRD or GEF policies. The fiduciary arrangements will be in place by Appraisal. All key project staff are expected to be mobilized prior to project Effectiveness. Adequate monitoring and evaluation capacity will be established prior to Effectiveness. This project complies with all applicable Bank and GEF policies.

* By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas

Annex 1: Country and Sector or Program Background

LATIN AMERICA: Regional Biosafety Capacity-Building Project

Latin America has adopted Genetically Modified Organisms (GMO) at a faster rate than any other region of the world and this is progressing without sufficient, scientifically-sound biosafety decision-making, assessment or management instruments. Some 41% of all countries currently growing commercial, transgenic crops are in this region.[12] In 2004, Latin America grew 30% (23 million hectares) of the total global area of transgenic crops, second only to the United States (48 million ha). Rapid growth is the outcome of the manifest delivery of economic benefits for the agricultural economy of the region, by the initial products of biotechnology.[13] However, public perceptions of and indeed, the broad public debate about biotechnology and its products, reflects widespread mistrust. The discourse tends to be poorly informed in scientific terms, fostering an emotionally charged atmosphere and in many countries, outright rejection of GMO products.

***Biodiversity*:** Tropical Latin America and the Caribbean (LAC) Region are among the richest biodiversity areas of the world as recognized by the Convention on Biological Diversity (CBD), harboring the center of origin of landrace/weedy/wild relatives[14] of many important crops. Around one-third of all crop plants grown world-wide were domesticated from the biodiversity of Tropical America. Mesoamerica, the Andean region and the Amazon were the centers of origin or diversification of maize, beans, potato, sweet potato, tomato, cassava, groundnut, pineapple, cotton, cacao, and chili peppers, among others. All five countries selected for project participation – Brazil, Colombia, Costa Rica, Mexico and Peru – have major centers of mega-biodiversity, as defined by the CBD. The potential, negative impact on biodiversity of the accelerating and unregulated use of GMOs could have major, medium- and long-term implications for the regional and global environment, and for human and animal health.

Despite their biodiversity, importance in the global biosafety arena and expanding commercial cultivation of transgenic crops, LAC countries have received little attention, in contrast to Asia and Africa which have received major funding from the developed world in recent years to establish functional biosafety systems (e.g., USAID is currently supporting two mega-projects on biosafety for these regions valued at about US$30 million each). Latin America is already falling behind in its capacity to implement biosafety regulation in compliance with international standards and treaties, and with associated international trade implications.

This situation, together with the latest developments in international agreements on biosafety designed to protect the environment and animal/human health, and to regulate trans-boundary movement and use of these crops, creates an urgent and relatively high-risk situation which needs to be addressed at the national and regional levels. Urgency also stems from pragmatic, market realities. The global economy has resulted in the formation of trading blocs[15] which are shaping regional commerce including the fate of biotechnology-derived products. Establishing biosafety capacity in the LAC region is complex due to the diversity of technical topics and research areas involved which encompass the biological, socio-economic, health, legal and political arenas.

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[12] A transgenic crop plant contains a gene/genes which have been artificially inserted instead of the plant acquiring them through pollination. The inserted gene sequence (known as *transgene*) might come from another, unrelated plant, or from a completely different species. Plants containing transgenes are often called genetically modified or GM crops, although in reality all crops have been genetically-modified from their original wild state. Several commercially important crops such as maize, soybean, tomato, cotton, potato and rice have been utilized for incorporating transgenic traits; the traits targeted for genetic transfer to plants could be classified broadly as herbicide tolerance, insect resistance, disease resistance, product quality improvement, and ability to grow in harsh environments.

[13] Based on 8 years of data since the first, large scale dissemination of this technology (in Argentina), economic impact studies have shown a significant benefit at the farm level as well as at the level of national farming economies (Trigo et al. 2003)[13].

[14] Landrace plants are older, often farmer-developed strains of a species, ideally-suited to the environment where they live, and bred through traditional methods of natural selection without the influence of modern breeding practices.

[15] In Latin America, currently Mercosur, Andean Pact, CARICOM, CAFTA and NAFTA, with FTAA under negotiation.

Cartagena Protocol: The Cartagena Protocol (CP) was adopted in 2000 as a supplementary agreement to the Convention on Biological Diversity (CBD) of 1992, and entered into force on September 11, 2003 after ratification by 56 countries. All five project countries had developed and implemented a biosafety framework prior to the Cartagena Protocol and all have either ratified the CBD (Annex 1, Table 1) and the Cartagena Protocol (Brazil, Colombia, Mexico, Peru), or are in the process of ratification (Costa Rica) (Annex 1 Table 2).

The protocol seeks the safe transfer, handling and use of living modified organisms (LMOs, also commonly known as transgenic crops or genetically-modified organisms, GMOs) to prevent adverse effects on the conservation and sustainable use of biological diversity, also taking into account the risks to human health, and focusing on the trans-boundary movement of these crops. It establishes an "Advance Informed Agreement" (AIA) procedure for ensuring that countries are provided with prior written notification and the information needed – health, environmental, socio-economic - to make informed decisions before agreeing to the first importation of material intended for introduction into the environment. Assessment of transgenic crops is usually done case-by-case, requiring an interdisciplinary approach.

Compliance with the CP and global trade norms requires an established national capacity as well as technical assessment and research methodologies and protocols for environmental and health safety analyses, all of which tend to be weak in developing countries. The safety dossiers of commercial transgenic crops are usually generated in temperate environments, requiring their subsequent validation in the tropics since population and environmental dynamics are different and sometimes more complex. In regard to human health, OECD formulated guidelines in 1993 that were adopted internationally for the safety assessment of transgenic crops, based on the concept of *substantial equivalence*, i.e., that food derived from transgenic crops can be compared with the appropriate conventional counterpart. While not officially part of the "*Codex Alimentarius* Commission" structure, FAO and WHO have provided expert scientific advice on general food safety aspects of foods derived from transgenic crops since 1991.

Protocol Priorities: Human resource development, database development, baseline information about crops (especially in mega-diverse areas) and expertise in methodologies for risk assessment are identified by the CP as priority areas for development. Although the CP sets a framework for the biosafety aspects of all living organisms resulting from modern biotechnology, the most important field of application in the near-medium term is the biosafety of agricultural crops modified by modern biotechnology. Quality implementation of the CP has a direct impact on the agricultural innovation and technology transfer policies of developing agricultural economies such as the partner countries in this proposal, and for the global economy and environment. Capacity building in the technical aspects of risk assessment remains a major area of concern of the CP[16].

Partner Countries: The five regional participants were selected for the following reasons: (a) high levels of biodiversity of important crops and their wild relatives as well as lesser-known crops with high food or trade value; (b) geographic distribution of wild/weedy relatives of economically important crops such as maize, beans, rice potato, sweet potato, tomato, cassava, groundnut, pineapple, cotton, cacao and chili peppers, among others; (c) relative levels of development and implementation of biosafety policy including active GEF-funded projects and World Bank projects in agriculture and rural development; (d) complementary research strengths and expertise related to implementing the Cartagena Protocol; and (e) potential, strategic, future role they might play in biosafety management in their respective sub-regions (Mexico for North America, Costa Rica for Central America, Colombia and Peru for the Andean Region, and Brazil for the Southern Cone).

[16] Report of the Ad Hoc Technical Expert Group on Risk Assessment, December 2005, Rome, Italy

The following summarizes for each participating country, aspects of the agriculture sector, governments' strategic direction and CAS pillars, and background on biosafety. [17]

Brazil: The past decade has seen Brazil consolidate its position as a front-ranking agricultural producer and major food supplier to international markets, the benefits of currency devaluation, low production costs, rapid technological advances and domestic/foreign investment in expanded productive capacity. Brazil is a highly competitive exporter of soybean, soy meal, sugar, poultry, beef, coffee, tobacco and orange juice. Government has dramatically expanded support to the sector in recent years. Brazil is one of the few countries in the world with capacity to significantly expand farmland. An important element of government's current agricultural strategy is to provide incentives for the development and adoption of the latest technology to expand production and exports.

More broadly, as delineated in the 2003 Country Assistance Strategy (CAS), the economic and social context in Brazil mandates a strategy for growth based on equity and sustainability, supported by improved productivity, stronger institutions, and a focus on key environmental focal points including sustainable use and conservation of the rainforest biome. Innovation supporting the welfare of all Brazilians, but especially the poorest, is targeted. Government's Multi-year Plan 2004-2007 known as "Brazil for Everyone" calls, *inter alia,* for greater harmony between development and the environment, and for managing natural resources as a critical element in reducing poverty, since natural resources constitute up to 80% of the assets of the poor especially in the North and Northeast regions of the country, and the preservation and controlled use of the natural resource base is linked directly to equity and sustainability.

Brazil has the highest biodiversity of any country on earth and is already facing the ecological consequences of continuous expansion of the agricultural frontier. In general terms, Brazil has adopted precautionary policies towards the approval of GM crops for release, despite the fact that significant public investment is going into their development; and in certain crops such as soybean, a relatively high proportion of material used is transgenic, as high as 100% in some states such as Rio Grande do Sul. The cautious approach is attributed to strong pressure from environmental groups in Europe and Japan towards the planting of such crops by developing, exporter countries such as Brazil; the precautionary tone of the Cartagena Protocol concerning trans-boundary movement of GMO; and donor assistance, which has tended to focus more on biosafety risks than the potential advantages of such crops.

Brazil revised its first national biosafety law (Law 8.974/95 of 1995), substituting Law 11.105/05 approved in March 2005, which differs from the initial framework by separating biosafety risk analysis and technical capacity responsibilities of the National Biosafety Committee (CTNBio) from the political and socio-economic decisions now taken by a commission of nine Ministers of State involved in GMO approval and commercial release. The new law is expected to reduce ideological disputes, and facilitate the deployment of LMO/GMO technology following approval for environmental release and for human/animal consumption, with proper environmental and health safeguards. The National Focal Point remains the Ministry of Foreign Affairs.

Mexico: Agriculture in Mexico represents some 5% of GDP having declined in the last 30 years as the industry and service sectors grew. About 28 million people, about one-quarter of the population, live and work in rural, largely agricultural areas. Improved efficiency and increased use of capital-intensive production techniques have increased agricultural output but Mexico remains a diverse mix of the modern and intensely traditional. Mexico is a major participant in global agricultural trade. Exports of food products to all countries exceeded US$10.5 billion in 2004. The USA is Mexico's largest trading partner buying some 85% of Mexican exports (mostly fruit and vegetables - produced in complementary growing seasons - and alcohol) and supplying about 70% of Mexican agricultural

[17] **Brazil**: latest CAS 27043, November 10, 2003; **Mexico**: latest CAS 23849, April 23, 2002; **Colombia**: latest CAS 25129, December 24, 2002 and CAS Progress Report 32999, September 9, 2005; **Peru:** latest CAS 24205, August 19, 2002 and CAS Progress Report 30292, November 9, 2004; and **Costa Rica**: latest CAS 28570, April 20, 2004.

imports. Government's agricultural programs reflect the heterogeneity of the sector and are designed primarily to address perceived gaps and bottlenecks in the agricultural economy, especially financial.

Mexico's current National Development Plan tacitly acknowledges that recent economic growth has in large part been predicated on "mining" natural resources and in the absence of a coherent approach to environmental protection, has contributed significantly to environmental degradation. Water, forestry, biodiversity and air quality have been depleted to foster growth, which "green" national accounting estimates costs Mexico some 10% of GDP annually. It is becoming a binding constraint on the country's external competitiveness, ability to access new markets and attract foreign investment, among others. As a member of the WTO, OECD and NAFTA, Mexico is now compelled to upgrade environmental standards and compliance mechanisms due to the negative global externalities from degrading production. Such degradation also represents a vicious cycle for the poor since depletion is their only means of survival in the absence of markets, public services, infrastructure and better alternatives.

Mexico has a complex position in the international biosafety panorama. It is the only member of NAFTA to have ratified the Cartagena Protocol and must implement its provisions. Further, Mexico is the Center of Origin and Diversity (COD) of maize, the principal staple food of Mesoamerica. Large asymmetries with its NAFTA partners and the need to meet its commercial agreements, put Mexico in a difficult situation with respect to biodiversity conservation; government faces implementation challenges in regard to both its trade and biosafety obligations. Mexico's new law (May 2005) on Biosafety and Genetically Modified Organisms, regulates through the Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA), Environment and Natural resources (SEMARNAT) and Health (SALUD), all activities related to LMO. These mandates are legally-binding with respect to permits for release of LMO into the environment. Mexico's national focal point is the Inter-Secretarial Commission on Biosafety and Genetically Modified Organisms (CIBIOGEM), integrating the Ministries of Agriculture, Health, Environment, Finance, Commerce and Education, and the National Council for Science and Technology. CIBIOGEM's creation greatly expanded the inclusiveness of the biosafety debate in Mexico.

Colombia: Agriculture remains the foundation of the Colombian economy even though its growth has slowed since the 1980s, a function of lower world commodity prices, rising input costs, under-investment and greater regional competition for export markets. Coffee is the principal agricultural crop but its export position was overtaken by petroleum in the mid-1990s. The country's varied climate and topography permit cultivation of diverse other crops including cacao bean, sugarcane, cotton, bananas and cut flowers, the latter an important success story in government's diversification push. Prominent food crops include rice, beans, cassava, potato and plantain. The private sector, considered well-managed and capable of expanding agricultural output, has since the 1970s assumed most of the responsibility for research, training, credit, processing and marketing activities; producer groups have remained a major force in sector coordination of agricultural policies and programs.

Government's current agricultural strategy rests on preparing the sector to take on the challenges of regional/global trade agreements by: improving producer support mechanisms; restructuring the sector to increase productivity to international standards; promoting the creation of new, technology-based sectors and strengthening the science, technology and innovation components of agricultural production; and, responding to global demand while guaranteeing the maintenance, protection and sustainable development of existing ecosystems/biodiversity and the broader environment.[18] Government's peace agenda has been the driving force behind recent national development plans and implies forging ahead with the established reform program in, among others, the environmental and social sectors, with focused support for rural development and natural resources management. Government's strategy calls for mainstreaming environment in key sectors of the economy.

[18] National Strategy for Strengthening Trade-Related Capacities, Ministry of Trade, Industry and Tourism, Colombia, August 2003.

Government has demonstrated commitment to biosafety issues, as a lead country in formulating and signing the Cartagena Protocol, by implementing institutional, legal, environmental and public information measures since 1991, including under the 1998 law on Biosafety and Genetically Modified Organisms (LBOGM), creating a National Technical Advisory Biosafety Committee, and corresponding regulations for the introduction, production, release and trading in agriculture and livestock GMO. The Ministry of Agriculture, through the Colombian Agricultural Institute (ICA) authorizes the use, manipulation, export and import of LMO for agriculture, fishery, commercial forestry and agro-industry. When the LMO is for environmental use, responsibility is with the Ministry of Environment and Territorial Development, and in the case of food and health, with the Ministry of Social Protection. This law also specifies the legally-binding mandates with respect to permits for releasing LMO into the environment.

Costa Rica: The economy of Costa Rica depends on agriculture, tourism and electronics with principal agricultural products being coffee, banana, beans, potato, beef and timber. The country faces the challenges of exploring the nexus between agriculture and the environment. The CAS pillars support Government's strategic emphasis on strengthening trade and competitiveness, the economic diversification agenda and continuing the country's pioneering leadership on environmental management. The Ministries of Agriculture and Environment are strongly committed to finding solutions to stimulate productive, sustainable agriculture which reduces poverty among smallholders and incorporates conservation practices fully integrated into rural landscapes. To date, Costa Rica has been exceptionally successful in exploiting the linkages between environmental protection and poverty reduction, e.g., setting aside 25% of land to protected areas and putting in place innovative ways to pay its citizens for good environmental practices.

Government is demonstrably committed to preserving biodiversity though progressive environmental policies. The country is a global leader on the environmental and has developed markets for global and local environmental services, contributing to rural development, fostering conservation of biodiversity, preservation of forest eco-systems on private land, and the production and sale of environmentally friendly products. Costa Rica established in 1990 a National Technical Commission on Biosafety under the Phytosanitary Protection Law 7664 and its regulations, administered by the Ministry of Agriculture and Livestock. The authorized plantation of GM crops in Costa Rica is permitted only for seed production; crops per se, have not yet been released for commercial production or for the production of human/animal food. However, Costa Rica has invested significant resources in GMO development and accumulated substantial knowledge on their management, sees itself as a leader in the region and sees GMO technology as having major potential economic, social and environmental benefits.

Peru: Agricultural production in Peru has lagged population growth. Output per capita started to decline in the 1950s, rose to its former levels again by 1970, then fell steadily through the 1980s and on. This was accompanied by a decline in the share of agricultural production being exported. Only 2.8% of potentially arable area is actually used for agriculture. The main commercial crops are coffee, sugarcane, cotton and rice. Potato, corn, barley, wheat, manioc, sweet potato, fruit and vegetables are grown by small producers using traditional, subsistence methods. Some 35% of the total workforce is in agriculture. Although in aggregate, production per capita fell, a few important products stood out, e.g., rice output increased 8% per year in the 1980s and 1990s as well as poultry and egg production, which grew at similar rates. The Ministry of Agriculture has interpreted these positive results as indicative more generally, of what could be done with better incentives and modern agricultural technologies. The Peru CAS supports government's programs and institutional reforms for renewing growth and reducing poverty, while strengthening emphasis on partnerships with IDB and the Andean Development Corporation to advance its strategic pillars which include increased competitiveness with greater social equity.

In biosafety specifically, the Peruvian Government's National Strategy for Biodiversity (approved September 2001) requires that biosafety considerations be factored into all related policies, planning and sector programs, and stipulates the development of mechanisms to regulate the manipulation of

genetic resources, promoting biotechnology as an important tool for both the development and control of living modified organisms (LMO). Further, legislation currently before the Peruvian Congress explicitly justifies support to biotechnological innovation on grounds of national food security; global export competitiveness; prudent utilization of Peru's mega-biodiversity, moving away from extensive agriculture/de-forestation to higher-value, intensive agriculture; increasing nutritional value and health properties of food crops and other plant materials; and industrial, pharmaceutical and soil recuperation applications.

Project Strategy

The availability of a functioning legal biosafety framework for the regulation, management and deployment of LMOs is undoubtedly a core strength of participating countries, but this is clearly not enough. Each country is facing certain capacity limitations and obstacles - technical, legal, policy and political – which hinder its ability to comply fully with CP requirements. In consultations leading to project formulation, partner countries/stakeholders consistently identified as priorities, strengthening technical capacity in risk assessment and risk management of new transgenic products and in disseminating technically sound and understandable information, both to support planning and policy-making on biosafety and to dispel widespread misunderstanding concerning the nature and risks of transgenic crops.

This project departs from other, current biosafety operations in Colombia, India and elsewhere by adopting a regional approach, generating standardized mechanisms for assessing biosafety risks and benefits, and projecting critical findings - as an integral part of project activities - to diverse interest/influence groups. The project's immediate, target audience is the national agricultural innovation system (NAIS), competent authorities (as defined by the CP) and practitioners, as well as civil society (producer and environmental interests, community organizations) and the broad, general public. It targets both the public and private sectors in the rural and urban domains. It is expected that, at completion of this three-year capacity-building project, all five countries will have a more transparent and predictable regulatory environment, and sufficient capacity and effective coordination between the responsible agencies/entities to assess and manage risks, costs and benefits associated with the use and trans-boundary movement of LMO. Further, the project concentrates GEF funds in the areas of risk assessment and management as these are considered vital to implementing an intensive, well-targeted communication campaign.

The institutional vehicle will be a regional, strategic collaboration between five selected LAC countries, represented by competent entities/centers of excellence with complementary expertise serving as centers of knowledge/experience, and models of best practice with potential to influence biosafety behavior in other parts of LAC. Given the issues involved and the rapidity with which the situation is evolving, the partner countries agree that a regional approach is likely to be more cost effective, achieve more rapid impact, and be more sustainable than alternative methods, since it would both utilize and enhance existing regional capacity. The project paradigm is thus built on centers of biodiversity in the Andean and Meso-american regions and on maximizing economies of scale by exploiting the comparative advantages of participating countries and entities as either Net Donors/Providers (NP) or Net Recipients (NR) of capacity, within the project's regional structure.

The proposed project would support implementation of the CP by creating a competent pool of regional biosafety technical personnel and practitioners, establishing high quality biosafety databases, methodologies for biosafety management and socio-economic cost-benefit assessment using as models five transgenic crops – maize, potato, cassava, cotton and rice – selected based on: (a) economic importance in the region and local socio-economic needs; (b) the relative commercial weight of crops developed by the private and public sectors, respectively; (c) the need for collaboration on knowledge generation and gaps in smart breeding for output traits (mostly private sector) versus input traits (public sector); and (d) the potential implications for local and regional biodiversity.

Most databases, methodologies and systems/programs generated by the project would be based on adaptation of existing knowledge rather than the creation of new, with the exception of certain data generated from research with the model crops. Knowledge generated from these actions would be disseminated and communicated through training and outreach to competent authorities and practitioners, the private sector, civil society including environmental interests and the general public, the goal being more informed, science-based decision-making, and a more balanced, less alarmist, public discourse. Experience demonstrates the urgent need for a balanced presentation of science-based knowledge which informs the public about biotechnology/biosafety *risks* per se, and the corresponding risk management measures devised by competent authorities and biosafety practitioners.

***Proposed Working Arrangements*:** The project will strengthen and consolidate the technical capacity of participating countries' key biosafety institutions (Ministries of Agriculture, Environment and Health, and other relevant agencies – depending on the country) as reflected in and consistent with, their national development plans and strategies, laws and policies. The project will generate lessons on how to initiate or implement a regional coordination mechanism and network for biosafety, thereby ensuring compliance with the CP while gaining efficiencies in risk assessment and management, avoiding duplication among countries, and channeling scarce resources and efforts to specific regional needs and priorities.

To achieve this, the project will work in an integrated way through a consortium of partner countries and their respective "Centers of Excellence" (CE), building institutional alliances to leverage complementary skills in evaluating and managing transgenic crops and their products. Each CE will engage other national, competent entities in GMO technology, as needed. The consortium approach provides an opportunity to increase biosafety knowledge and exchange information and experiences among countries at different levels of engagement with transgenics while providing a forum to share knowledge generated by the various project activities. This multi-country project will complement and build on the experiences of ongoing GEF-funded biosafety projects in Colombia and outside the region in India, from other Bank-supported agriculture and rural development projects, from the development of Biosafety Clearing House (BCH) facilities in the LAC region, and from biosafety efforts by other agencies such as the Inter-American Development Bank (IDB), USAID and other organizations (Annex Tables 1.1 and 1.2).

***Institutional Overview for Implementation*:** The International Center for Tropical Agriculture CIAT) is both project grant partner and implementing agency, with the international and regional reputation and well-established technical and convening capacity for the proposed multi-country project. CIAT will collaborate with national-level Centers of Excellence in the five partner countries: EMBRAPA (Ministry of Agriculture, Brazil); Ministry of Agriculture, Colombia; CIBCM (University of Costa Rica); CONABIO (Ministry of Environment, Mexico); and CONAM (Ministry of Environment, Peru). A Project Management Committee comprising CIAT representatives and the designated National Coordinators, will supervise the project. The implications of biotechnology and biosafety cross sectors and boundaries; no single ministry/entity can be solely responsible for decision-making on biosafety issues. Further, capacity development must be sustainable. The most efficient institutional framework, and the one likely to be achieved more rapidly, entails upgrading the skills and knowledge of existing technical and other personnel through training and information sharing among prominent, specialist entities and proactive communication of findings to the broader sphere of interests. As mentioned above, all five country partners have "Centers of Excellence" with complementary competencies needed to comply with the CP. Relative strengths and needs are summarized below and in Table 1.4 and Annex 6.

***Brazil**:* The Brazilian Agricultural Research Corporation (EMBRAPA - *Empresa Brasileira de Pesquisas Agropecuarias*) through its Genetic Resources and Biotechnology Research Center (CPAA) and Food and Technology Research Center (CENARGEN) and collaborators, has the expertise, premium facilities and the know-how to conduct food/feed safety (laboratory and field evaluations) and Intellectual Property Rights (IPR) analysis, which meet international standards.

Capacity-building is needed in biosafety planning and monitoring, and regional interaction mechanisms to improve socio-economic, risk-benefit analysis (Annex 6 and Table 6.1).

***Colombia*:** The *Institute von Humboldt* has outstanding facilities and capacity to establish biodiversity database systems[19], maintains the Biodiversity Clearing House and coordinates the ongoing GEF/World Bank biosafety project. The Colombian Institute of Agriculture (ICA) has expertise in conducting risk assessment of transgenic crops on non-target organisms. However, the Colombian system would gain from more systematic, broader analysis of biosafety risk assessment and management, and from training of key technical institutions/personnel in risk-benefit impact analysis.

Costa Rica: The *Centro de Investigación en Biología Celular y Molecular* (CIBCM) of the University of Costa Rica, has experience in plant genetic engineering, mapping and molecular description of wild and weedy relatives of crops, gene flow analysis, and analytical methods for food safety analysis. The *Instituto Nacional de Biodiversidad* (INBio) has specific capacity in the definition and recording of its native biodiversity. Risk assessment and management are key weaknesses which the project would address.

***Mexico**:* CIBIOGEM (Commission on Biosafety and Genetically-Modified Organisms) is the first entity to attempt implementing a food and environmental safety monitoring system at the national level in Latin America and other project partners can benefit from this capacity. The National Commission for the Knowledge and Use of Biodiversity (CONABIO) has developed biodiversity databases and an LMO Information System. CONABIO and INE have risk assessment methodologies in place.[20] Mexico would benefit from training in gene flow and its impacts within the context of an open agricultural system, and in more complex aspects of risk assessment and management/monitoring.

Peru: While biosafety capacity is modest in Peru, it is a key country in the region for its biodiversity of important food crops and presence of wild relatives. The *Consejo Nacional del Ambiente* (CONAM), with the collaboration of the *Universidad Nacional Agraria*, La Molina, the *Instituto Nacional de Salud,* the *Instituto del Mar del Peru*, and the *Instituto de Investigaciones de la Amazonía Peruana,* will collaborate with other participating country CE to build biosafety risk assessment and management expertise/capacity (Annex 6, Table 6.1).

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[19] Setting up of the national database is currently funded through GEF World Bank project

[20] In addition, the GEF-UNDP Biosafety Project has trained some 350 field technicians, around 50 decision-makers, 35 lab technicians, farmer groups and NGOs.

Table 1.1: Status of Biosafety in Participating Countries

Country	Initiation	Legal Framework	Revised Version	Problems of Implementation
BRAZIL	1988: First seminar on Biosafety	1995: First National Biosafety Law (8.974)	2005: New National Biosafety Law (11.105)	Bioinformatics to support database management. Surveillance and oversight training for Ministerial personnel. Checklist for risk analysis of animal and microbes.
COLOMBIA	1992-93: ICA Reorganization and creation of CORPOICA	1994: Regulatory and operational analysis of OGM (decree 1847) 1995: Regulations for introduction of food derived from LMOs (decree 3075) 1998: National Technical Committee on plant biosafety 2001: National Technical Council of animal biosafety 2002: Biosafety Law 740 2005: Decree 4525	2005: Revised legal framework with a new decree governing the implementation of Cartagena Protocol and Focal Points	Differing interpretations of the biosafety legal framework within government. Need strengthened technical capacity to perform risk assessment and management analysis as required by law. Insufficient coverage of Biosafety issues at the local level.
COSTA RICA	1990: National Technical Commission on Biosafety (CTNB) created under Phytosanitary Protection Law and its regulations.	1991: GMO activities initiated only for the productions of seeds by private companies and public institutions for research purposes.	na	Need to improve the technical capacity on assessment and Biosafety management. Cartagena protocol was accepted by the Foreign Affairs Committee at the Congress in 2002. The protocol should be ratified.
MEXICO	1990: National Committee for Agricultural Biosafety (CNB)	1990: Experimental release of transgenic plants 1994: Plant Health Law, defines role of a Biosafety Committee 1997: The General Health Law on issues of Public Health revised 1999: National Focal Point for Biosafety in place	2005: New law on Biosafety and Genetically-Modified Organisms.	New National Biosafety Law still in process of implementation Need for more permanent human resources
PERU	1995: First meeting on Biosafety	2003: Law and rules in force 2005: National Biosafety Framework established	2006: New legislation currently before Congress.	Operational rules for competent national authorities in process of approval.

Table 1.2: Eligibility of Participating Countries for GEF

Country	Parties to Cartagena Protocol	Convention on Biological Diversity	Eligibility for GEF Funding Categories
Brazil	Entry into force	Entry into force, *Ratified on* 28 February, 1994	Eligible for CBD & CP funding
Colombia	Entry into force	Entry into force, Ratified on 28 November 1994	Eligible for CBD & CP funding
Costa Rica	Not yet ratified	Entry into force, Ratified on 26 August 1994	Eligible for NBF development and National BCH establishment only
Mexico	Entry into force	Entry into force, Ratified on 11 March 1993	Eligible for CBD & CP funding
Peru	Entry into force	Entry into force, Ratified on 7 June 1993	Eligible for NBF development, CBD & CP funding

CP – Cartagena Protocol; CBD – Convention on Biological Diversity; BCH – Biosafety Clearing House

Table 1.3: Participating Country Status - Cartagena Protocol on Biosafety

Country	Signing	Accession	Ratification	Entry into Force
Brazil	--	24 Nov. 2003	--	22 Feb. 2004
Colombia	24 May 2000	--	20 May 2003	11 Sep. 2003
Costa Rica	24 May 2000	--	--	--
Mexico	24 May 2000	--	27 Aug. 2002	11 Sep. 2003
Peru	24 May 2000	--	14 April 2004	13 July 2004

Table 1.4. Comparative Country Strengths/Needs in Biosafety

COUNTRIES	STRENGTHS		NEEDS	
	Legal Framework	**Technical Capacity**	**Legal Framework**	**Technical Capacity**
BRAZIL	New Biosafety Framework in line with implementing Cartagena Protocol	Qualified human resources and Centers of Excellence with interdisciplinary competences	Lack of mechanisms in place for implementation of the new law	Regional interaction to improve the risk assessment and management that it already in place Planning and monitoring analysis Regional interaction to improve socio-economic analysis
COLOMBIA	A revised legal Framework with a new decree governing for implementation of Cartagena Protocol and Focal Points	Experience on Biosafety evaluation for research and commercial GMOs deployment	--	Research in risk assessment and risk management Generation of applicable biosafety knowledge Research/training in food safety and socio-economic impact
COSTA RICA	A Legal Framework in relation to Environmental Safety and Genetic Resources A Legal Framework in relation to Environmental Safety in agriculture and Genetic Resources (Biodiversity Law)	Qualified human resources and Centers of Excellence with interdisciplinary competences including GIS, biological sciences and gene flow analysis	No food safety regulation No legal framework that protects the IPR derived form bio-technological innovation	Training in risk assessment and management Generation of applied Biosafety knowledge Training in food safety and socio-economic impact assessment, public awareness & IPR
MEXICO	New Biosafety Framework in line with implementing Cartagena Protocol	Inter-institutional and Interdisciplinary Center of Excellence node in place, for biology and GIS analysis in coordination with government	Lack of mechanisms in place for implementation of the new law	Training in gene flow and its impacts, within the context of an open agricultural system Training in risk management (monitoring)
PERU	National Biosafety Framework in place	Some human resource capacity in line with Biosafety needs	Mechanisms in place for implementation of the law in process of approval	Imperative need for training in risk assessment and risk management

		Strong collaboration with IARC and ARI		Generation of applied Biosafety knowledge Training in food safety, socio-economic impact assessment, public awareness & IPR

Annex 2: Major Related Projects Financed by the Bank and/or other Agencies

LATIN AMERICA: Regional Capacity-Building in Biosafety

Sector Issue	Project	Latest Supervision PSR Rating	
Bank Financed: Agriculture/Rural Development		**Implement. Progress (IP)**	**Develop. Objective (DO)**
To change the agricultural research culture of Colombia in accordance with Government policies on decentralization of technological development and privatization of Colombian agriculture with emphasis on transfer of agricultural technologies to small farmers.	*Name:* Agriculture Technology Development Project *Loan No.: 3871 (PRONATTA)* ***Status: Closed*** ***Project ID: P006880; IBRD US$51 million;*** ***Project Total Cost: US$74 million;*** ***Board Approval: April 20, 1995;*** ***Effectiveness: August 25, 1995;*** ***Closing Date: December 31, 2003;*** ***ICR: June 15, 2004; TTL: Matthew McMahon;*** ***Implementing agency: MARD***	**S**	**S**
To generate income, create employment and promote social cohesion of poor rural communities in an economically and environmentally sustainable manner through the development and implementation of a demand-driven, productive partnership scheme with the private sector.	*Name: Alianzas Productivas* (Productive Partnerships Support Project). ***Loan No.: 70970;*** ***Status: Active;*** ***Project ID: P041642; IBRD: US$32 million*** ***Project Total Cost: US$52.32 million;*** ***Board Approval: January22, 2002;*** ***Effectiveness: May 15, 2002;*** ***Closing Date: September 30, 2007;*** ***TTL: Pierre Werbrouck;*** ***Implementing agency: MARD***	**S**	**S**
To develop a replicable methodology for the establishment and operation of a Peasant Enterprise Zone, PEZ (*Zona de Reserva Campesina*), in areas of colonization affected by violence and illicit activities, and of prototype actions to protect rainforest reserves and nearby indigenous territories.	*Name: Zonas de Reserva Campesina* – LIL (Peasant Enterprise Zones Development Project). ***Loan No.: 4367;*** ***Status: Closed;*** ***Project ID: P053243 IBRD: US$5 million*** ***Project Total Cost: US$6.5 million;*** ***Board Approval:06/15/1998;*** ***Effectiveness:09/30/1998;*** ***Closing Date: December 31, 2003;*** ***TTL:Natalia Gomez;*** ***Implementing agency: MARD***	**S**	**S**
To contribute to the development objective of the Foundation to Conserve the Biological and Cultural Diversity of the Sierra Nevada and to use its natural resources in a sustainable manner, developing and testing in at least three regions a participatory methodology and operational mechanisms for promoting sustainable management of production and natural systems.	*Name: Sierra Nevada de Santa Marta*-LIL (Sierra Nevada Sustainable Development Project). ***Loan No. 7016;*** ***Status: Active;*** ***Project ID: P057326; IBRD: US$5 million*** ***Project Total Cost: US$6.25 million*** ***Board Approval: May 2, 2000;*** ***Effectiveness: August 16, 2000;*** ***Closing Date: December 15. 2005;*** ***TTL: Maria Elena Castro-Munoz;*** ***Implementing agency: National Planning Department-Fundación Pro Sierra Nevada***	**S**	**S**

To improve access to quality basic education in rural areas by supporting a decentralized system of educational management, building public-private sector partnerships at the departmental level to manage and finance subprojects and strengthening local planning activities at municipal and institutional levels, supporting the development of social capital, through fostering school-community relationships and introducing appropriate classroom methodologies.	*Name: Mejoramiento de la Educación Básica Rural (Rural Education Project). APL I;* ***Loan No. 7012;*** ***Status: Active;*** ***Project ID: P050578; IBRD: US$20 million*** ***Project Total Cost: US$40 million;*** ***Board Approval: April 11, 2000;*** ***Effectiveness: December 20, 2000;*** ***Closing Date: June 30, 2005;*** ***TTL: Carlos Rojas;*** ***Implementing agency: Ministry of Education (MEN).***	**S**	**S**
To develop the operational capacity of the Consortium, the citizens' network and other to reduce poverty and increase peaceful coexistence in the Magdalena Medio Region based on the detailed design and implementation of an ambitious ten-year, community-led, multi-sector development program to support the growing implementation capacity of communities and local authorities.	*Name: Plan de Paz, Magdalena Medio II* – LIL (2nd. Magdalena Medio Regional Development Project). ***Loan No. 70780;*** ***Status: Closed;;*** ***Project ID: P057692; IBRD: US$5 million*** ***Project Total Cost: US$6.35 million*** ***Board Approval: September 27. 2001;*** ***Effectiveness: November 21, 2001;*** ***Closing Date: May 28, 2004;*** ***TTL: Elsie Garfield;*** ***ICR: November 11, 2004; TTL: Jairo Arboleda;*** ***Implementing agency: NPD.***	**S**	**S**
GEF Grants Administered by the World Bank			
To help consolidate Colombia's national capacity for the implementation of the Cartagena Protocol on Biosafety, strengthening the legislative framework and operational mechanisms for biosafety management in Colombia; building capacity and establishing an operational system for risk assessment and monitoring; establishing the biosafety database system and Biosafety Clearinghouse Mechanism; supporting centers of excellence and a network for research, risk assessment, and monitoring; and establishing the Project Coordinating Unit.	*Name: Capacity building for the implementation of the Cartagena protocol; GEF TF052187;* ***(Medium-size project); US$1 million (w/PDF A);*** ***Status: Active;*** ***Project ID.: P077171;*** ***Project Total Cost US$4.478,123 million*** ***Executing Agency:*** Instituto von Humboldt***, Ministry of Environment, through the Project Coordinating Unit.***	**S**	**S**
To consolidate Mexico´s national capacity for the implementation of the Cartagena Protocol on Biosafety	*Name: Capacity building for the implementation of the Cartagena protocol; GEF* ***Status: Active;*** ***Project ID.: P0 ……..*** ***Project Total Cost US$ million*** ***Executing Agency: ……***		
Other Development Agencies			

To support entrepreneurial development of small rural enterprises in an equitable and sustainable manner, providing technical and financial services to strengthen and develop rural businesses	*Name: Desarrollo Microempresa Rural-PADEMER* (Rural Micro-enterprise Development Program) ***Loan No.: I-426-CO;*** ***Status: Ongoing;*** ***FIDA: US$16 million (11 million SDR);*** ***Project Total Cost: US$25.95 million*** ***Board Approval: Nov. 9, 1996;*** ***Responsible agency: MADR***
To strengthen the institutional capacity of governmental institutions, community groups, as well as private and nongovernmental organizations in the Pacific coast region of Colombia, leading to sustainable improvement in the living conditions and income levels of the region's population; providing technical and financial support to Government's Pacific Coast regional development program, to strengthen local public, private and nongovernmental institutions, encourage civic awareness and cultivate the skills of community organizations facilitating a more active role in local affairs; provide training in the techniques of land-use planning for sustainable utilization and management of renewable natural resources, improving the quality of, and access to, health care, education, sanitation, rural electrification, telecommunications and transportation, supporting investigation, assessment and dissemination of information regarding sustainable use of renewable natural resources.	*Name:* Plan Pacifico (Pacific Coast Sustainable) IDB***: US$50 million*** ***Project Cost: US$71.4 million*** ***Board Approval: July6, 1994;*** ***Closing Date: May 2004;*** ***Executing agency: Local government entities (38 municipalities and four departments), coordinated by the National Planning Ministry (DNP).***
Organization of American States (OAS) Strengthen national skills for assessment and management of risks of biotechnology food products, and build public awareness of benefits of these foods in Chile, Colombia and Peru, to promote sustainable use with adequate protection.	*Name: Biosafety Regulations in Latin America and the Caribbean within the Framework of the International Biosafety Protocol.* *OAS: US$83,000* *Executing agency: CamBioTec, Chile (general coordinator)*
Brazil	
To develop and implement Biosafety protocols; to establish a scientific network for interdisciplinary communication; to establish an expedite mechanism for reviewing and identifying methodologies for risk assessment	***Name: BioSeg 2003-2007*** ***US$3.5 million*** *Ministry of Agriculture/Embrapa and the Ministry of Science and Technology/FINEP*
Colombia	
To strength educational and communication in Biosafety	*Name: Strengthening educational and communication on Biosafety in Colombia 2004-2006* *US$50,000* *GTZ/Colombia National University*
Costa Rica	
To revise to National Biosafety Framework of Costa Rica to comply with the Cartagena Protocol	*Name: Development of a National Biosafety Framework for Costa Rica GEF-UNEP* *US$ 195.000*
Mexico	
To evaluate the potential effects of a eventual introduction of transgenic maize-landraces into Mexican agriculture	*Name: A multi disciplinary approach for evaluation of potential risks and benefits associated with the use of Biotechnology-improved maize landraces in Mexican rural communities 2001-2005* *Rockefeker Foundation* *US$ 424,900*
To further develop some of the activities initiated during the "Capacity Building for Implementation of the Cartagena Protocol" Project	*Name: Strengthening of institutional and technical capacities for the decision making process 2005-2007* *CIBIOGEM* ***US$ 966,900***
Peru	

To Prepare of a National Biosafety Framework in accordance with the relevant provisions of the Cartagena Protocol on Biosafety.	***Name: Development of the National Biosafety Framework for Peru*** *UNEP/GEF* *US$ 148.4000*
To establish a functional BCH	***Name: The implementation of BCH*** ***UNEP/GEF in preparation***
International Center for Tropical Agriculture (CIAT)	
	Name: Harvest Plus Biofortification Project *US$ 25 million*
	Name: Biofortification Latin American Regional Project ***$*** 20 million Canadian Dollars
	Name: Tropical White Fly Integrated Pest Management (IPM) Project: *US$ 7 million*
	Name: Gene Flow Project on Beans and Rice *Euros 1.2 million* *1 CGIAR Center, 3 LAC-NARS and 2 ARIs.*

*Development Objective/Implementation Performance Ratings: HS = Highly satisfactory; S = Satisfactory; U = Unsatisfactory; HU = Highly unsatisfactory.

Annex 3: Results Framework and Monitoring
LATIN AMERICA: Regional Capacity-Building in Biosafety

Global Environmental Objective	Project Outcome Indicators	Use of Project Outcome Information
GEO: Support implementation of the Cartagena Protocol (CP) on biosafety by improving the institutional capacity of agriculture and environmental ministries as well as other, specific, biosafety-related agencies in the five participating countries, to implement their national biosafety regulations in compliance with the CP.	• Existence of clearly-defined institutional mechanisms for administering biosafety including defined responsibilities in biosafety of each national institution/agency designated technical specialists and personnel • Sustainability of biosafety frameworks and project-established methodologies as indicated by annual budgets allocated to biosafety-related institutions and agencies • Functioning mechanisms established to promote inter-institutional and inter-country collaboration on biosafety and the environment, among the five participating countries • Existence of standardized risk assessment, risk mitigation and emergency response mechanisms used by project targeted institutions and agencies and between participating countries. • Greater awareness and understanding of biosafety on the part of communicators, opinion-makers and the general public, using science-based information generated by the project.	• Assessment at end-project of extent to which participating countries have improved capacity to fulfill requirements of national biosafety regulations and comply with the CP • Assessment of potential for multiplier/replication effects on other neighboring, non-participant countries • Longer-term assessment by competent authorities of the impact of participating countries compliance with CP, on agricultural trade opportunities and performance. • Leveraging improved public understanding of biosafety issues to promote more inclusive decision-making and planning based on national socio-economic priorities

Intermediate Outcomes	Intermediate Outcome Indicators	Use of Intermediate Outcome Monitoring
Outcome One : Strengthening technical capacity in knowledge generation for biosafety risk assessment and management	**Outcome One :** • About 45 studies on environmental risk-benefit assessment and management and 5 studies on socio-economic impact, conducted on the selected project crops (cassava, maize, potato, rice and cotton). • Standardized biosafety risk assessment and management methodologies established and operational in designated institutions/agencies in all five countries, for the five selected project crops. • Five functioning databases, accessible to competent authorities and specialist practitioners in targeted country institutions and other biosafety-related agencies, for tracking and monitoring gene flow and for mapping crop/landrace populations of the five selected project crops.	**Outcome One :** • Building longer-term country collaboration through joint activities based on standardized methodologies and procedures • Results of studies being systematically fed into methodology development/design processes • Databases being used regularly for GMO application and approval processes. • Institutional technical staff with evolving capacity to conduct risk assessment and management analyses, using project-generated methodologies.

	• Five crop-specific, standardized methodologies for assessment and monitoring of potential effects on non-crop (non-target) organisms, adapted to the LAC region	
Outcome Two: Strengthening biosafety decision-making capacity	**Outcome Two :** • Five technical Toolkits (one per selected crop) on risk/benefit assessment and management of LMOs in the tropics, adopted by all targeted country institutions for science-based decision-making. • Number of enrollments by targeted authorities/practitioners in project-sponsored biosafety training courses, annually. • About 550 international and national courses, seminars and workshops for targeted authorities, practitioners and stakeholders on biosafety/environmental risk-benefit assessment and management of LMOs in the tropics.	**Outcome Two :** • Input into Mid-term Review on overall project implementation and needed adjustments to design and/or processes. • Update training course content and methodology based on user feedback • Prepare inventory of biosafety decisions taken and timeliness, as measure of component effectiveness • Toolkits transmitted/delivered to targeted authorities and practitioners
Outcome Three: Public awareness on biosafety for communicators, opinion makers and the general public	**Outcome Three:** • One video and corresponding booklet on biosafety, including risk assessment and management, and cost-benefit methodologies in accessible language, for communicators, opinion-makers and general public • Two surveys grouping the five countries, to measure changes in public perceptions of biosafety and biotechnology (baseline survey at project outset and follow-up survey conducted at end-project), using tested, available survey methodologies. • Number and type of information campaigns for opinion-makers, producers, environmental interests and general public, over project period • Biosafety Clearing Houses (BCH) in all five countries, and central Montreal-BCH, have information depositories and websites with accessible, science-based information on biosafety using knowledge generated by the project.	**Outcome Three:** • Training tools for systematic transmission to targeted communicators, opinion-makers and general public • Use of surveys to ensure that information being transmitted to targeted audiences is appropriate as indicated by degree of change in perceptions and understanding • Determine if BCH depositories are adequately serving public and specialist information needs

Proposed Arrangements for Results Monitoring

		Target Values				Data Collection and Reporting		
Project Outcome Indicators	**Baseline**	**YR1**	**YR2**	**YR3**	**YR4**	**Frequency and Reports**	**Data Collection Instruments**	**Responsibility for Data Collection**
Global Environmental Objective								
1. Existence of clearly-defined institutional mechanisms for administering biosafety including defined responsibilities in biosafety of each national institution and agency designated technical specialists and personnel 2. Sustainability of biosafety frameworks and project-established methodologies as indicated by the budget allocated to biosafety-related institutions and agencies 3. Functioning mechanisms established to promote inter-institutional and inter-country collaboration on biosafety, among the five participating countries 4. Existence of standardized risk assessment, risk mitigation and emergency response mechanisms between project targeted	Investment for NBF, BCH implementation projects in two countries. Quality of national biosafety systems is uneven between the five countries. All countries, except Peru, already have field releases under national systems. Uneven institutional capacity among countries for biosafety activities. Immediate need to improve institutional capacity for risk assessment and management,	Implementation arrangements (national and inter-country) in place and target institutions briefed and ready. Prepare operational plans. Initiate all component activities (C1, C2 and C3).	Implementing Work Program described below. Initiate discussions and activities on biosafety risk issues with international collaborators.	Implement the Work Program described below.	Implement Work Program described below. Review and post-project stock-taking.	Quarterly, Annual and Mid-Term progress reports. Mid-term Review Report Implementation Completion Report (final year) End-Project report by CIAT with country and institutional inputs on experiences, lessons and sustainability	Progress reports – quarterly, annual and mid-term. M&E Reports WB supervision reports (ISR) Databases, maps, publications, websites, manuals and courses. Ex-post analysis and reporting	National Coordinators (NCs) Regional Component Coordinators (RCCs) CIAT Projects Office WB Task Team Leader

institutions and agencies and between participating countries	cost-benefit analysis, and communications . Centers of Excellence in biosafety exist in all project countries. Biosafety policy environment between countries is uneven and not well-informed.							
Intermediate Outcome Indicators								
Component 1: 1. About 45 studies on environmental risk-benefit assessment and management and 5 studies on socio-economic impact, conducted on the selected project crops (cassava, maize, potato, rice and cotton). 2. Standardized biosafety risk assessment and management methodologies established and operational in designated institutions and agencies in all five countries, for the five selected project crops. 3. Five functioning databases, accessible to competent authorities and specialist practitioners in targeted country	Data methods, strategies and skills exist in Centers of Excellence, but little or no standardization. Legal and regulatory frameworks for biosafety exist in each of the five countries but uneven institutional implementation capacity, especially on technical safeguards. GMO application processing is	Data methodologies and strategies compiled and reviewed based on existing knowledge, adapted to LAC conditions.	Selected, adapted methodologies and strategies tested and dissemination process initiated.	Best practice methodologies introduced and consolidated within target biosafety institutions and agencies. All planned databases established, accessible and operational for the five project crops, in all five countries.	Standardized methodologies and strategies validated, published and promoted.	Quarterly, annual and Mid-Term progress reports Mid-term Report (from Mid-Term Review activities) Implementation Completion Report (Final Year) End-Project report by CIAT with country and institutional inputs on experiences,	Progress reports – quarterly, annual and mid-term. M&E Reports WB supervision reports (ISR) Databases, maps, publications, websites, manuals and courses. Ex-post analysis and reporting	National Coordinators (NCs) Regional Component Coordinators (RCCs) CIAT Projects Office WB Task Team Leader

institutions and other biosafety-related agencies, for tracking and monitoring gene flow and for mapping crop/landrace populations of the five selected project crops. 4. Five crop-specific, standardized methodologies for assessment and monitoring of potential effects on non-crop (non-target) organisms, adapted to the LAC region	slow in all five countries and lacking in science-based, uniform criteria, methodologies for approval or rejection.					lessons and sustainability		
Component 2: 1. Five technical Toolkits (one per selected crop) on risk/benefit assessment and management of LMOs in the tropics, adopted by all targeted country institutions for science-based decision-making. 2. Number of enrollments by targeted authorities and practitioners in project-sponsored biosafety training courses, annually. 3. About 550 international and national courses, seminars and workshops for targeted authorities, practitioners and stakeholders on biosafety/environmental risk-benefit assessment and management of LMOs in the tropics.	Uneven decision-making capacity in major biosafety institutions and agencies in all five countries, for the safe handling, transfer and use of the targeted transgenic crops Senior authorities and technical specialists responsible for GMO processing and decision-making lack organized,	Evaluate existing materials and develop Training Plan Solicit and select professional trainers to assist seminar/course development and delivery	Initiate implementation of Training Plan including toolkit development, initiation of annual training seminars and courses, and practive efforts to promote enrollment of key biosafety authorities and practitioners.	Implement all elements of the Training Plan	Evaluate Training Plan including through systematic feedback from participants	Quarterly, annual and Mid-Term progress reports. Mid-Term Review Report End-project Implementation Completion Report (ICR) End-Project report by CIAT with country and institutional inputs on experiences, lessons and sustainability	Progress reports (quarterly, annual and mid-term) M&E Reports WB supervision reports (ISR) Publications; Website placement of information and data; Manuals; Training materials; (course books, CDs and	National Coordinators (NC) Regional Component Coordinators (RCC) CIAT Projects Office

	modern knowledge and databases to execute their responsibilities.						audio-visuals).	
Component 3: 1. One video and corresponding booklet on biosafety for communicators, opinion-makers and general public. 2. Two surveys grouping the five countries, to measure changes in public perceptions of biosafety and biotechnology (baseline survey at project outset and follow-up survey conducted at end-project), using tested, available survey methodologies. 3. Number and type of information campaigns for opinion-makers, producers, environmental interests and general public, over project period. 4. Biosafety Clearing Houses (BCH) in all five countries, and central Montreal-BCH, have information depositories and websites with accessible, science-based information on biosafety using project knowledge.	Weak, science-deficient information base for communicators, opinion-makers and the general public in all five countries. Poor quality media coverage of biosafety issues promoting distorted public discourse. Available information unsuitable for targeted audiences. Limited science-based information available in non-technical, accessible language.	Develop Communications Plan using communications professionals and standardized, available methodologies Exploit available inventories of materials and methods Initiate Baseline Survey of public attitudes and perceptions to biosafety and biotechnology and collate/input results. Design video and booklet with assistance of communications professionals	Develop and test information dissemination tools, methods and materials. Initiate dissemination as project results emerge and are incorporated in messages and materials. Develop new materials in non-technical language and initiate test promotion and dissemination. Initiate transmission and deposit of project-generated knowledge to country BCHs, Montreal BCH, and establish BCH websites.	Conduct follow-up survey of public attitudes and perceptions to biosafety and biotechnology Prepare video and booklet based on project-generated information, with professional assistance. Initiate press briefings with national science writers and journalists, and other opinion-makers.	Evaluate impact on target groups of project communications strategy and materials Collate and disseminate feedback to competent authorities and practitioners	Quarterly, annual and Mid-Term progress reports. Mid-Term Review Report End-project Implementation Completion Report (ICR) End-Project report by CIAT with country and institutional inputs on experiences, lessons and sustainability	Progress reports (quarterly, annual and mid-term) M&E Reports WB supervision reports (ISR) Publications; Website placement of information and data; Manuals; Training materials; (course books, CDs and audio-visuals).	National Coordinators (NC) Regional component coordinators (RCC) CIAT Projects Office

Annex 4: Detailed Project Description
LATIN AMERICA: Regional Capacity-Building in Biosafety

Project Global Environment Objective

The global environmental objective of the project is to support implementation of the Cartagena Protocol (CP) on biosafety by improving the institutional capacity of agriculture and environmental ministries as well as specific, biosafety-related agencies in the five participating countries, to implement their national biosafety regulations in compliance with the CP.

To achieve this objective, the project will strengthen and consolidate partner countries' national technical capacity to safely transfer, handle and use living modified organisms resulting from modern biotechnology with potential for adverse effects on the conservation and sustainable use of biological diversity, in line with biosafety priorities reflected in respective national development plans, national laws and policies, and other legal instruments for biosafety. The project will use complementary capacity already existing in Centers of Excellence in the participating countries and establish a sustainable, collaborative, regional effort in thematic areas related to biosafety. The outcome is expected to be a more uniform and higher standard of technical capacity across the region derived from pooling best practices in biosafety from these mega-diverse countries.

Strategic Overview

Principal criteria for selecting Brazil, Colombia, Costa Rica, Mexico, and Peru were: (a) high levels of biodiversity of important crops and their wild relatives; (b) geographic distribution of wild/weedy relatives of economically important crops; (c) levels of development and implementation of biosafety policies (including active GEF-funded projects and World Bank projects in agriculture and rural development); (d) complementary expertise related to implementing the Cartagena Protocol; and (e) potential future strategic role they could have on biosafety in their respective sub-regions.

The five partner countries had already established functioning, legal biosafety frameworks for the regulation, management and deployment of LMO, prior to implementing the Cartagena Protocol. All have ratified the Convention on Biological Diversity and all have ratified the Cartagena Protocol (Brazil, Colombia, Mexico, Peru), or are in the process of doing so (Costa Rica). The discussion on the biosafety of LMO commenced in all participating countries by the late 1980s (Brazil, Mexico) or the early 1990s (Colombia, Costa Rica, Peru). However, each country has diverse needs and bottlenecks at the technical, legal, policy and public awareness level that prevent full implementation of the CP. In the many consultations leading up to project formulation, the participating countries consistently identified the importance of strengthening technical capacity for comprehensive risk assessment and management of new transgenic products including environmental, socio-economic, food/feed safety and knowledge dissemination aspects.

Policy makers and regulators, practitioners and other stakeholders in all five countries need a science-based, efficient decision-making process for assessing the biosafety of biotechnology products, drawing on international biosafety experience[21] as well as on country-specific analysis of local needs in tropical environments characterized by the presence of high crop biodiversity for staple crops. Such science-based decision-making processes must be consistent with national environmental, agricultural, social and innovation policies. This requires analytical tools to support decision-making based on rational, risk- and

[21] More than 20,000 experimental field releases and over 30 large scale commercial product releases have been approved under national biosafety regulations worldwide, a large majority in temperate regions in developed countries.

cost-benefit assessment. Finally, knowledge dissemination and public awareness-building are essential components of any biosafety policy or strategy. They require an inclusive approach to communication, including capacity building among the core participants in the biotechnology/biosafety domain (government agencies/authorities, biotech practitioners) to improve their capacity to engage in and influence the public debate about both biotechnology and biosafety.

Effective capacity building can be achieved by using and disseminating the experience of key national institutions in each country, strengthened through collaboration with the IARC and ARI partners. Capacity-building expertise in certain themes will also be leveraged through the contributions of specialized institutions outside the project region[22], to ensure that in-country capacity development remains fully abreast of international developments in this field. The project will thus initiate its programmed components/activities by exploiting the complementary capacity already existing in the region and specific institutions, strengthening it, and establishing a coordinated, collaborative set of mechanisms for longer-term utilization as a reference for other countries in Latin America. This regional approach, building on existing capacity and programs in each country, is potentially more sustainable, cost effective and rapid in its impact and is expected to lead to a *regional biosafety platform* supporting implementation of the CP.

Project Management and Components

As detailed in Annex 6, the project will be supervised by a Project Management Committee (PMC), comprising key representatives of CIAT and a National Coordinator (NC) from each country. Each NC will have a substitute to ensure continuity of project implementation and institutional involvement. The role of the NCs will be to ensure that institutions from each country participate as agreed in the different components and sub-components under their responsibility. Each component will include participants from all countries, some as Net Providers (NP) of information, some as Net Receivers (NR), indicative of their relative strengths, experience and track record in any particular activity. Each component will have a Regional Thematic Coordinator (RTC) whose task is to ensure delivery of the results for a project component or sub-component.

The project will address key biosafety issues through the following components: (a) Strengthening technical capacity in knowledge generation for biosafety risk assessment and management; (b) Strengthening biosafety decision-making capacity; and (c) Public awareness on biosafety for communicators, opinion-makers and the general public, outlined and justified below.

Component 1: Strengthening technical capacity in knowledge generation for biosafety risk assessment and management (US$4.04 million GEF)

The objective of this component is to strengthen technical capacity of the five partners, using selected target crops (cassava, cotton, maize, potato and rice)[23] as models for developing risk assessment, management and cost-benefit analysis methodologies for new transgenic products. This component will finance the following activities: (a) strengthening technical capacity for environmental risk assessment and management; and (b) strengthening technical capacity for socio-economic cost/benefit assessment. The technical output of these activities will be widely disseminated in accessible form, through activities programmed under project Components 2 and 3.

[22] For example, India has a leading project on gene flow in rice, and South Africa has a standard-setting stakeholder association (AfricaBio) for public awareness and public communication.

[23] These crops were chosen because they all are economically important in the region. The centers of diversity of maize, cassava and potato are also in the region. GM Cotton is already grown by farmers in the region, thereby offering the best opportunity for ex-post analyses and for monitoring methodology testing. Several GM versions of rice are under development for potential release in the region.

Principal outcomes of financed activities are expected to include: (a) About 45 studies on environmental risk-benefit assessment and management and 5 studies on socio-economic impact, conducted on the selected project crops (cassava, maize, potato, rice and cotton); (b) Standardized biosafety risk assessment and management methodologies established and operational in designated institutions and agencies in all five countries, for the five selected project crops; (c) Five functioning databases, accessible to competent authorities and specialist practitioners in targeted country institutions and other biosafety-related agencies, for tracking and monitoring gene flow and for mapping crop/landrace populations of the five selected project crops; and (c) Five crop-specific, standardized methodologies for assessment and monitoring of potential effects on non-crop (non-target) organisms, adapted to the LAC region (see Annex 3).

(a) Strengthening technical capacity for environmental risk assessment and management.

This sub-component will develop baseline information, tools, strategies and methodologies for assessment, monitoring and management of gene flow in crop-biodiversity (using the five project crops as models), and the potential effects on non-crop (non-target) organisms.

In activities related to *gene flow*, national Centers of Excellence in the project countries and CIAT will pool resources and best practices to assess and monitor the gene flow in crop-biodiversity by: (a) compilation and generation of baseline data for tracking and monitoring gene introgression/persistence of novel traits in crop-biodiversity; (b) generation and testing the use of GIS-referenced databases for mapping the distribution of crop/landraces/weedy/wild populations, and gene flow analysis; (c) adaptation and regional standardization of methodology for large scale monitoring of gene flow; and (d) development of crop management strategies and operational guidelines to minimize trans-gene flow.

In activities related to the potential *effects on non-crop (non-target) organisms*, national centers of excellence and CIAT will carry out the following: (a) adaptation and regional standardization of methodologies for evaluating effects on non-target organisms; and (b) development of crop management strategies and operational guidelines to minimize effects on non-crop (non-target) organisms; and (c) national coordination.

Information on the genetic structure of native biodiversity of the project model crops is available in the literature, but this knowledge is dispersed. Compiling this information into a useful database will be an output of this component. A GIS-referenced database is useful for determining the distribution of wild and weedy relatives as an input in biosafety decision-making and in post-commercial release monitoring.

Gene Flow: Many studies of gene flow and introgression for various crop plants have been conducted and reported in the ecological literature (e.g. Ellstrand, 2003; den Nijs, et al., 2004), but standardized methodologies have not been established. Large scale screening studies for gene flow are relatively few because of the difficulty of conducting them. Similarly, there is a lack of standardized methodologies for non-target organisms. Monitoring of LMO genes resulting from large scale (commercial) crop releases is possible using standard methods which are commercially available.[24]

For decisions about field trials of transgenic crops, regions where risk of crossing to wild relatives is minimal will be identified. For decisions about commercial release, the extent to which transgenic crops might interact with their sexually compatible wild relatives would be one of the considerations in a risk

[24] Standardized testing tools for almost all GMOs which have been released commercially are available from specialized companies such as GeneScan (http://www.gmotesting.com/), Strategic Diagnostics (http://www.sdix.com/) and others.

assessment/decision. A searchable database containing this basic information will be produced and will be a valuable tool in environmental risk assessment and for disseminating best practice.

Many different approaches have been used, and several new ones are being developed, to prevent or restrict gene flow from transgenic plants. Widely used approaches today include spatial and temporal isolation, and the use of male sterility. The project will evaluate these tools for gene flow control in the five target crops in the environmental and agricultural context of the participating countries. It is not intended to do experimental work with these approaches, but rather to validate approaches. The current status of such approaches in each crop and their ability to work in the field (as proven by scientific literature) will be assessed.

Non-target organisms: The subject of unintended effects on non-target organisms will be studied by using existing insect-, herbicide- and (if available) disease-resistant crops. The study will include a review of the considerable literature already available on the subject, and will design experiments which extend the evaluation to the high-biodiversity environments in the participating countries, with the goal of providing decision-makers with locally developed and relevant information.

Operational guidelines exist for the safe conduct of field trials as well as for assessment of environmental risk, but all of them were developed outside Latin America. Perhaps the oldest and most widely used is the publication, "Recombinant DNA Safety Considerations", (OECD, 1986). Since then, various countries including the United States, (USDA, 1991) have developed guidelines for conducting field trials. This component will therefore adapt, develop and apply guidelines for the five main project crops to the context and environment of Latin America.

For countries likely to take the lead in and be responsible for activities under Component 1, see Annex 4, Table 4.1 and Annex 6, Table 6.1.

(b) Strengthening of technical capacity for socio-economic impact assessment

The objective of this sub-component stems directly from provisions of the Cartagena Protocol, to improve understanding of the socio-economic costs and benefits associated with the use of transgenic crops in tropical Latin America and to improve the capacity of countries in the region to carry out assessments of economic costs and benefits of LMOs.

The partners from the project countries and CIAT will conduct the following activities: (a) adapt existing methods and tools for socio-economic impact assessment of LMOs to the specific environment of the tropics; and (b) develop skills for analyzing the potential costs and benefits of LMOs in centers of crop diversity.

It is unlikely that a standard socio-economic assessment methodology will be appropriate for all countries given that the decisions countries face will differ depending on the specific GMO product and the social, economic and environmental characteristics of the country (Falck-Zepeda et al, 2003). Nonetheless, countries with similar characteristics will benefit from having standard methods for carrying out impact assessments that will allow them to share results, especially among countries with limited human and financial resources in this field.

The potential costs and benefits of genetic modifications of the five project crops in the five target countries will also be analyzed. Specific types of impacts to be assessed will be determined in collaboration with the national level project participants. Differences by agro-ecological zone, and by farmer and consumer characteristics will also be taken into account. The results per se, will be valuable inputs to policy-making, and will also serve as examples of how assessments can be done and as a

baseline against which to monitor future progress in the case of GMO deployment. Many of the methods for assessing these GMO impacts are not substantially different from those used to assess other agricultural technologies and can therefore be applied directly if data are available.

In some cases, it may be necessary to develop or adapt existing methods. The need for methods development will be determined via consultations with partners. Some data used for assessing costs/benefits of GMOs are the same as those used for assessing conventional agricultural technologies, but in many cases, especially those involving environmental impacts or consumer acceptance issues, additional data may be required. The project will compile inventories of the types of data and information necessary for socio-economic analysis of GMOs, and to the extent possible, actual data sets that partners and others can use. For environmental and economic analysis, spatially disaggregated data will be most appropriate. During the course of the project, the capacity of national partners to conduct such analyses will be built both via training and via participation in the analyses.

The technical and methodological products/use of Component 1 are likely to include: (a) publication in refereed papers and on-line availability through CIAT project Website (linked to national Websites) of regional baseline data for tracking and monitoring gene introgression/persistence of novel traits in relevant crop biodiversity; (b) GIS databases and maps showing distribution of crop/landrace/weedy/wild populations sent to national competent authorities in partner countries and available on Project Website; (c) standardized methodologies for large-scale monitoring of gene flow in the project crops, with guidelines for practitioners and competent authorities validated and published; (d) publication of crop management strategies and operational guidelines to minimize transgene flow; and (e) operating guidelines and manuals for the non-target component of risk assessments produced and made available to practitioners and competent authorities in project countries and the wider LAC region. (Annex 1, Table 1(a); Annex 3; Annex 6, Table 6.1).

Component 2: Strengthening biosafety decision-making capacity (US$0.56 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. It will build biosafety capacity for decision-making entities (competent authorities) and for practitioners (i.e. public and private research community), through participatory scientific and technical training on risk assessment, risk management and risk communication, using the knowledge generated in this project in a collaborative effort across the region. This is important because most if not all current materials available on these subjects are externally-sourced, not generated from regional/local biotechnology and biosafety experiences and conditions.

The project will finance: (a) training in environmental risk assessment, risk management and risk communication for competent authorities and practitioners; and (b) training in socio-economic cost/benefit assessment for competent authorities and practitioners.

A key feature of sub-component (a) is that it will allow all core participants in the regulatory process to work on the basis of standardized, tested procedures and similar level of technical expertise. Core participants include the implementing bodies of national biosafety frameworks (i.e. national biosafety committees) and the biotechnology R&D community (i.e. transgenic crop developers, plant breeders, other relevant agricultural science professionals, especially those working in public sector research). A high quality decision-making process on the biosafety aspects of environmental release of transgenic crops is only possible if all these groups are equally proficient in the principles and application of biosafety assessment and biosafety management. More uniform and higher quality participation will also bolster confidence in the system on the part of other stakeholders (e.g., consumers, environmental interests).

Training under this component will be provided at the regional, national and sub-national levels, exploiting the expertise derived from this and other GEF-funded projects. Special attention will be given to strengthening wherever possible, international cooperation and regional standard-setting. The project will identify the key decision-makers and practitioners to be trained, initially by projecting best existing practice, and subsequently by using systematically the outcomes of Component 1. A key output will be science-based briefing documents in accessible, non-technical language for non-specialist members of national authorities.

Training on socio-economic cost/benefit assessment (sub-component (b)) will strengthen the capacity for and promote a common approach to, this type of assessment. The project will evaluate existing materials, identify gaps and propose course development plans, produce, test, evaluate and disseminate courses deemed through review to be of high quality. Key decision-makers and practitioners working with socio-economic issues will be contacted and introduced to the objectives of the project to secure their participation in training courses. The project will also provide them with the outcomes of the socio-economic analysis component (1.2) of the project. See Table 1(b) for responsible partners/entities.

Key outcomes are expected to include: (a) Five technical Toolkits (one per selected crop) on risk/benefit assessment and management of LMOs in the tropics, adopted by all targeted country institutions for science-based decision-making; (b) Enrollments by targeted authorities and practitioners in project-sponsored biosafety training courses, annually; and (c) About 550 international and national courses, seminars and workshops for targeted authorities, practitioners and stakeholders on biosafety/environmental risk-benefit assessment and management of LMOs in the tropics, over the project period (see Annex 3).

Component 3: Training in biosafety for communicators and opinion makers to improve public awareness (US$0.39 million GEF).

The objective of this component is to promote public awareness and stimulate informed public debate on biosafety based on quality information generated by specialists in target countries, through the mechanism of engaging national research organizations, policy makers, communicators, and opinion makers, based on comprehensive information linking biosafety and biotechnology.

This component will finance communication specialists to develop communication strategy/plans, develop and test information materials on biosafety, and information campaigns to insert science-based messages into the public debate/discourse at various levels, e.g., through press briefings with national science writers/journalists and other opinion makers, information events, publications and other media. Impact evaluation activities, i.e., measuring the effectiveness of these activities using standard media assessment methods, would also be financed.

In the public awareness component, the project will actively seek a paradigm shift in the public debate, by linking biosafety to biotechnology at every opportunity. This is not the case today and it has created parallel realities, in which the potential benefits of biotechnology and its potential risks (including biosafety and socio-economic uncertainties) are debated separately. In trying to unite these disparate (but complementary) elements in the public debate and in the policy process, the project follows the original intention of the Biodiversity Convention, article 19, which links the benefit potential of biotechnology and the need for safety in its deployment. The component seeks to ensure that communicators, opinion-makers and the broad public (including civil society interests) have better access to more balanced, science-based information in all project countries through the media and other information intermediaries. Currently, available information is unsuitable for an informed discourse and coverage is poor (Table 1(c)).

Expected outcomes of this component include: (a) One video and corresponding booklet on biosafety for communicators, opinion-makers and the general public; (b) Two surveys grouping the five countries, to measure changes in public perceptions of biosafety and biotechnology (baseline survey at project outset and follow-up survey conducted at end-project), using tested, available survey methodologies; (c) Information campaigns for opinion-makers, producers, environmental interests and general public, over the project period; and (d) Biosafety Clearing Houses (BCH) in all five countries, and central Montreal-BCH, establish information depositories and websites with accessible, science-based information on biosafety using project knowledge (see Annex 3).

Annex 4: Table 1

COMPONENT 1. STRENGTHENING TECHNICAL CAPACITY IN KNOWLEDGE GENERATION FOR BIOSAFETY RISK ASSESSMENT AND MANAGEMENT						
	BRAZIL	**COLOMBIA**	**COSTA RICA**	**MEXICO**	**PERU**	**CIAT**
C.1.1 STRENGTHENING OF TECHNICAL CAPACITY FOR ENVIRONMENTAL RISK ASSESSMENT AND MANAGEMENT						
C.1.1.1 Assessment and monitoring of gene flow in crop-biodiversity						
Compilation and generation of baseline data for tracking and monitoring of gene introgression/persistence of novel traits in crop-biodiversity	**C, M, P**	**C, P**	**R**	**M**	**P**	**nr**
Generation and use of GIS-referenced databases for mapping distribution of crop/ landraces/weedy/ wild populations and gene flow analysis	**C**	**M, P, A**	**R**	**M**	**nr**	**C, M, R, A**
Adaptation and regional standardization of methodology for large scale monitoring of gene flow	**M, A**	**M, A**	**R**	**M, A**	**nr**	**M, R, A**
Development of crop management strategies and operation guidelines to minimize transgene flow	**M**	**nr**	**R**	**M**	**nr**	**C, M, R, A**
C.1.1.2 Assessment and monitoring of potential effects on non-crop (non-target) organisms						
Adaptation and regional standardization of methodology for evaluating effects on non-target organism	**M**	**M**	**nr**	**M, A**	**nr**	**A**
Development of crop management strategies and operation guidelines to minimize effects on non-crop (non-target) organisms	**M, A**	**nr**	**R**	**M**	**nr**	**A**
C.1.2 STRENGTHENING OF TECHNICAL CAPACITY FOR SOCIO-ECONOMIC IMPACT ASSESSMENT						
	BRAZIL	**COLOMBIA**	**COSTA RICA**	**MEXICO**	**PERU**	**CIAT**
Adaptation of methods and tools for socio-economic impact assessment of LMOs in the tropics	**A**	**M**	**nr**	**M, A**	**nr**	**A, M**
Development of analytical skills for analysis of potential benefits and cost of LMOs in centers of crop-diversity	**M**	**nr**	**R**	**M**	**nr**	**M, R**

Net Receiver (nr)	**Net Provider/ Receiver**	**Net Provider**	C = cassava; M = maize; P = potato; R = rice; A = cotton

Annex 4: Table 2

COMPONENT 2. STRENTHENING BIOSAFETY DECISION MAKING CAPACITY						
	BRAZIL	**COLOMBIA**	**COSTA RICA**	**MEXICO**	**PERU**	**CIAT**
C.2.1. Training on environmental risk assessment, management and communication for competent authorities and practitioners						
C.2.2. Training on socio-economic benefit/ cost assessment for competent authorities and practitioners						

Annex 4: Table 3

C.3. PUBLIC AWARENESS ON BIOSAFETY FOR COMMUNICATORS, OPINION MAKERS AND THE GENERAL PUBLIC						
	BRAZIL	**COLOMBIA**	**COSTA RICA**	**MEXICO**	**PERU**	**CIAT**
C.3.1. Development of information package and awareness building on biosafety for social communicators and opinion makers						
C.3.2. Compilation of science based information on biosafety for dissemination to the general public						

Net Receiver (nr)	**Net Provider/ Receiver**	**Net Provider**

Annex 5: Project Costs

Latin America: Regional Capacity-Building in Biosafety

Table 5.1: Summary of Estimated Project Costs (US$'000)

Project Components	Local	Foreign	Total
1. Strengthening Technical Capacity in Knowledge Generation for Biosafety Risk Assessment and Management			
1.1 Strengthening of Technical Capacity for Environmental Risk Assessment and Management	8,728.8	1,588.8	10,317.6
1..2. Strengthening of Technical Capacity for Socioeconomic Impact Assessment	2,056.6	121.4	2,178.0
Subtotal:	10,785.4	1,710.1	12,495.6
2. Strengthening Biosafety Decision-Making Capacity	1,390.6	256.6	1,647.2
3. Public Awareness on Biosafety for Communicators, Opinion-Makers, and the General Public	620.1	654.1	1,274.2
Total Baseline Costs	**12,796.1**	**2,620.9**	**15,417.0**
Physical Contingencies	149.4	9.9	159.3
Price Contingencies	123.0	45.9	169.0
Total Project Costs	**13,068.5**	**2,676.6**	**15,745.2**

[1]Identifiable taxes and duties are US$1.0 m, and the total project cost, net of taxes, is US$14.7 m. Therefore, the share of project cost net of taxes is 93.5 percent.

Table 5.2: Components by Financier (US$ '000)

	GEF		CIAT		BRAZIL		MEXICO		COLOMBIA		COSTA RICA		PERU		TOTAL	
COMPONENTS	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**
1. Strengthening Technical Capacity in Knowledge Generation for Biosafety Risk Assessment and Management																
1.1 Strengthening of Technical Capacity for Environmental Risk Assessment and Management	3,737.9	35.4	1,265.0	12.0	2,600.0	24.6	450.0	4.3	1,055.2	10.0	1,350.0	12.8	100.0	0.9	100,558.1	67.1
1.2 Strengthening of Technical Capacity for Socioeconomic Impact Assessment	305.3	13.9	50.0	2.3	495.0	22.5	1,300.0	59.2	45.0	2.0	-	-	-	-	2,195.3	13.9
Subtotal Strengthening Technical Capacity in Knowledge Generation for Biosafety Risk Assessment and Management	4,043.2	31.7	1,315.0	10.3	3,095.0	24.3	1,750.0	13.7	1,100.2	8.6	1,350.0	10.6	100.0	0.8	12,753.4	81.0
2. Strengthening Biosafety Decision Making Capacity	563.3	33.6	50.0	3.0	840.0	50.1	-	-	35.0	2.1	150.0	8.9	40.0	2.4	1,678.3	10.7
3. Public Awareness on Biosafety for Communicators, Opinion Makers,and the General Public	393.5	30.0	50.0	3.8	720.0	54.8	-	-	110.0	8.4	-	-	40.0	3.0	1,313.5	8.3
TOTAL PROJECT COSTS	**5,000.0**	**31.8**	**1,415.0**	**9.0**	**4,655.0**	**29.6**	**1,750.0**	**11.1**	**1,245.2**	**7.9**	**1,500.0**	**9.5**	**180.0**	**1.1**	**15,745.2**	**100.0**

Annex 6: Implementation Arrangements

Latin America: Regional Capacity-Building in Biosafety

Implementation Overview

The implementing agency and grant partner will be the International Center for Tropical Agriculture (CIAT). Collaborating agencies at the national level will be: **Brazil** - National Agricultural Research Corporation (EMBRAPA, Ministry of Agriculture); **Colombia** - Ministry of Agriculture; **Costa Rica** - University of Costa Rica; **Mexico** - National Commission for Knowledge and Use of Biodiversity (CONABIO, Ministry of Environment); and **Peru** - National Environmental Council (CONAM, Ministry of Environment). CIAT (Colombia-based) will be responsible for project coordination, monitoring project progress, preparation of planning materials, administrative support, budget preparation, auditing of project financial accounts/statements at the project level and for ensuring that project activities are sustainable.

CIAT will be in charge of day-to-day coordination of the project through its Project Unit and supported by its existing Administrative, Financial, Procurement and Human Resources Units. The project will be supervised by a Project Management Committee (PMC) comprising CIAT and the National Coordinators (NC) from all partner countries. The PMC will oversee the technical execution of the selected thematic areas and, will have an approval role in operational planning, administration, budget, annual plans and for monitoring project progress.

The project is grant-funded by a full-sized US$5.0 million GEF contribution. Additional, special funding will be channeled through CIAT (approximately US$10.7 million). The proposed total project budget is estimated at US$15.7 million. CIAT will conclude a legal agreement with the World Bank (the implementing agency for GEF) to administer grant funds. The Funds will be disbursed through a special account at CIAT, who will then allocate funds to the Offices of respective National Coordinators in each country for transfer to the National Entities participating in the project, for the implementation of subprojects. For details of financial management and procurement arrangement see Annexes 7 and 8, respectively.

Institutional Analysis

All five partner countries have centers of excellence with pre-existing expertise in biosafety (Table 6.1).

Brazil: The National Agricultural Research Corporation (EMBRAPA - *Empresa Brasileira de Pesquisas Agropecuarias*), through its Genetic Resources and Biotechnology Research Center (CPAA) and Food and Technology Research Center (CENARGEN) and other collaborators, has expertise, premium facilities and the know-how to conduct environmental risk assessment, food/feed safety assessment and Intellectual Property Rights (IPR) analysis, which meet international standards.

Colombia: the Ministry of Agriculture is currently the coordinator of the National Biosafety Council of Colombia, with a mandate to evaluate and decide on GMOs in agriculture. The Colombian Institute of Agriculture (ICA) is a technical institute in the Ministry of Agriculture and serves as technical advisor on biosafety to the government, conducts and supervises field evaluations, and has expertise in conducting gene flow analysis and risk assessment of transgenic crops on non-target organisms. The *Institute von Humboldt* has outstanding facilities and capacity to establish a specialized biodiversity database[25], maintains the Biodiversity Clearing House and coordinates the current GEF/World Bank biosafety project in Colombia, supporting implementation of the Cartagena Protocol.

[25] Setting up of the national database is currently funded through GEF World Bank project

Costa Rica: The *Centro de Investigación en Biología Celular y Molecular* (CIBCM, Center for Molecular and Cellular Biology) of the University of Costa Rica has experience in plant genetic engineering, mapping and molecular characterization of wild and weedy relatives of crops, gene flow analysis and use of food safety analysis methods. The *Instituto Nacional de Biodiversidad* (INBio, National Biodiversity Institute) has capacity in the characterization and indexation of its native biodiversity.

Mexico: The Ministry of Agriculture in Mexico has 16 years of experience in the field release of genetically modified crops. The National Commission for the Knowledge and Use of Biodiversity (CONABIO) has established a biodiversity database expert system and Living Modified Organisms Information System (SIOVM). Universities have developed socio-economic impact assessment (potato, cotton and corn). CONABIO and INE have risk assessment methodologies in place. The GEF-UNDP Biosafety Project had trained more than 350 field technicians, around 50 decision-makers and 35 laboratory technicians, NGO representatives and farmers' groups on risk management and monitoring.

Peru: Biosafety capacity is modest in Peru but it is a key country in the region in terms of its biodiversity of important food crops and presence of wild relatives. The *Consejo Nacional del Ambiente* (CONAM, National Environment Council), with the collaboration of the *Universidad Nacional Agraria*, La Molina, the *Instituto Nacional de Salud,* the *Instituto del Mar del Peru*, and the *Instituto de Investigaciones de la Amazonía Peruana,* has the capacity to set up effective capacity building programs in biosafety taking advantage of the experience of other project participants such as INIA and CIP.

CIAT: As the project coordinator, CIAT (based in Colombia) offers leadership and convening capacity, as well as up-to-date transgenic technologies (transformation, laboratory and field evaluation), molecular genetic analysis, environmental risk research, impact assessment, geographic information system capacity and facilities, and capacity building on biosafety. CIAT has the international and regional reputation as well as well-established management capacity for a multi-country project such as the one proposed here. A precedent for this type of collaboration managed by CIAT was the *GEF Coral Reef Targeted Research and Capacity-Building for Management Project (P078034)*. Some current multi-donor and regional projects led by CIAT are described in Annex 2. CIAT has a good track record in seeking matching funds from donors for its projects and has contacted donors such as USAID who is considering a contribution to this project.

The coalition of country capacities brings many complementarities to the project, but significant gaps remain in the areas of environmental/food/feed biosafety research, risk assessment, monitoring, tracking and management, ex-ante and ex-post impact assessment, limited human resources trained in biosafety, and effective mechanisms for delivery of information to and engagement of, civil society. The above-mentioned centers will be the project's port of entry to each country, and will serve as nodal points to extend the expertise at the national level and later, at a sub-regional level.

Table 6.1. Project Partnership Institutions and their Strengths

Institution	Strength
Brazil: EMBRAPA (lead), through CPAA and CENARGEN **Contacts:** • Deise Capalbo, Environment Biocontrol Laboratory, EMBRAPA • Maria Jose Amstalden Sampaio - Biosafety and IP policy, EMBRAPA Headquarters.	• Genetic engineering technologies • Food/ feed safety analysis • National Biosafety Network in place • IPR analysis. • Cassava: baseline for monitoring introgression, GIS, • Rice: baseline for monitoring introgression, GIS • Maize transgenic field trials • Cotton: transgenic field trials • Transgenic field trials for a broad range of crops • Broad experience in product development in agricultural crops.

Colombia: Ministries of Agriculture (lead) and Environment, Institute von Humboldt and ICA **Contacts:** • Maria Hercilia Bonilla, Coordinator genetic resources, Ministry of agriculture • Ana Luisa Díaz. National Coordinator of the Colombian Agricultural Biosafety Committee. ICA • Fernando Gast, Director, Instituto von Humboldt	• Establishment of biodiversity database expert system. • Environmental risk assessment of GMOs on non-target organisms. • Cotton: non-target effects, socio-economic analysis, transgenic field trials • Cassava: baseline for monitoring introgression • Maize: gene flow analysis, baseline for monitoring, transgenic field trials
Costa Rica: CIBCM (University of Costa Rica)(lead), INBIO, Ministry of Agriculture **Contacts:** • Ana Mercedes Espinoza, Head of the Plant Genetic Engineering Program CIBCM-University of Costa Rica • Ana Sittenfeld. Director International Affairs Office, University of Costa Rica	• Genetic engineering technologies • Mapping, characterization and indexation of native biodiversity • Gene flow analysis • IPR • Rice: baseline for monitoring, GIS, gene flow analysis, transgenic field trials • Approved experimental releases of several other crops (for seed production)
Mexico: CONABIO (lead), Ministry of Agriculture, CIBIOGEM **Contact:** • Maria Francisca Acevedo, (CONABIO) • Amanda Galvez, UNAM	• Food and environmental safety monitoring system at the National level. • Establishment of biodiversity database expert system. • Agricultural Risk Assessment for Mobilization, Imports and Field Test of transgenic crops. • Socio-economic impact assessment. • Maize: baseline database for monitoring, GIS, socio-economic analysis • Cotton: transgenic field trials • Transgenic field trial experience with over 20 crop species.
Peru: CONAM (lead), Universidad Nacional Agraria, La Molina, Instituto de Investigaciones de la Amazonía and CIP **Contact:** • Enrique N. Fernández-Northcote, Nacional Coordinator on Biosafety, Consejo Nacional del Ambiente (CONAM) • William Roca, Head Genetic Resources. International Potato Center. Lima, Peru	• Modest capacity on biosafety. • Key country in the region in terms of level of biodiversity of important food crops and presence of wild relatives. • Potato: baseline for monitoring, CIP brings: • Generation and testing of transgenic potatoes and sweet potatoes • Biosafety issues concerning potato and sweet potato • Gene flow analysis in potato, • Assessment, maintenance and management of potato biodiversity, • Potato LMO related socio-economic analysis. •
CIAT (Cali, Colombia) **Contacts:**	• Genetic engineering technologies (generation, laboratory and field evaluations). • High through-output genetic molecular analysis (gene

• Zaida Lentini, Coordinator Transgenic Research and Chair of Biosafety Committee • Joe Tohme, Head Biotechnology Research Unit.	detection and expression profiles). • Environmental risk assessment research (gene flow, impact on target/ non-target organisms). • Socio-economic impact assessment analysis. • Geographic information system capacity and facilities for various species • Experience related to the Ex-situ collection of cassava and rice in LAC • Capacity building on biosafety for govt. officials, journalists, etc… • Cassava: baseline for monitoring introgression, GIS, socio-economic analysis, transgenic field trials • Rice: gene flow analysis, large scale screening, socio-economic analysis, transgenic field trials • Cotton: non-target effects, • Maize: gene flow analysis, non-target effects

Other Potential Partners

- United States Department of Agriculture (USDA), USDA Animal Plant Health Inspection Service (APHIS), Environmental Protection Agency (EPA), US Food and Drug Administration (FDA),
- Cornell University
- ISU (Iowa State University)
- Health Canada, the Canadian Food Inspection Agency
- CONABIA (Argentina)
- Public Research & Regulations Initiative (PRRI)
- AgBIOS
- AfricaBIO

The project will seek to attract USAID funding to strengthen its technical capacity and to benefit from USAID's experience in other biosafety initiatives in Asia and Africa. Additional inputs will be sought from GEF/World Bank projects in biosafety in Colombia and India, and from the United Nations Development Program (UNDP) and the United Nations Environment Program (UNEP).

Other potential candidate donors include the Rockefeller Foundation, CIDA, EU, DFID and GTZ. Arrangements are in train to approach these donors. The nature of the project and its strategic objectives make it a good fit with the funding objectives of these institutions. In particular, the components of the activities which have been identified as being outside the scope of GEF funding (e.g. strengthening of food safety evaluation) are a natural fit with the programs of several of these donors. The same is true for the environmental and socio-economic components of the project, as well as the public awareness and communication components.

Implementation Arrangements

CIAT is the recipient of the GEF grant. The Grant Agreement will be drawn up between the World Bank for GEF and CIAT. CIAT will execute this Project with the lead collaborating national institutions (Table

6.1) of each country (see Annex 2) based on Letters of Understanding (LOU) which will be signed between CIAT and these institutions.

Project management and technical activities will be structured in a matrix, with country management unit and respective national coordinators on one axis and thematic areas (components) on the others axis, as follows:

Figure 6.1: Project Organizational Setup

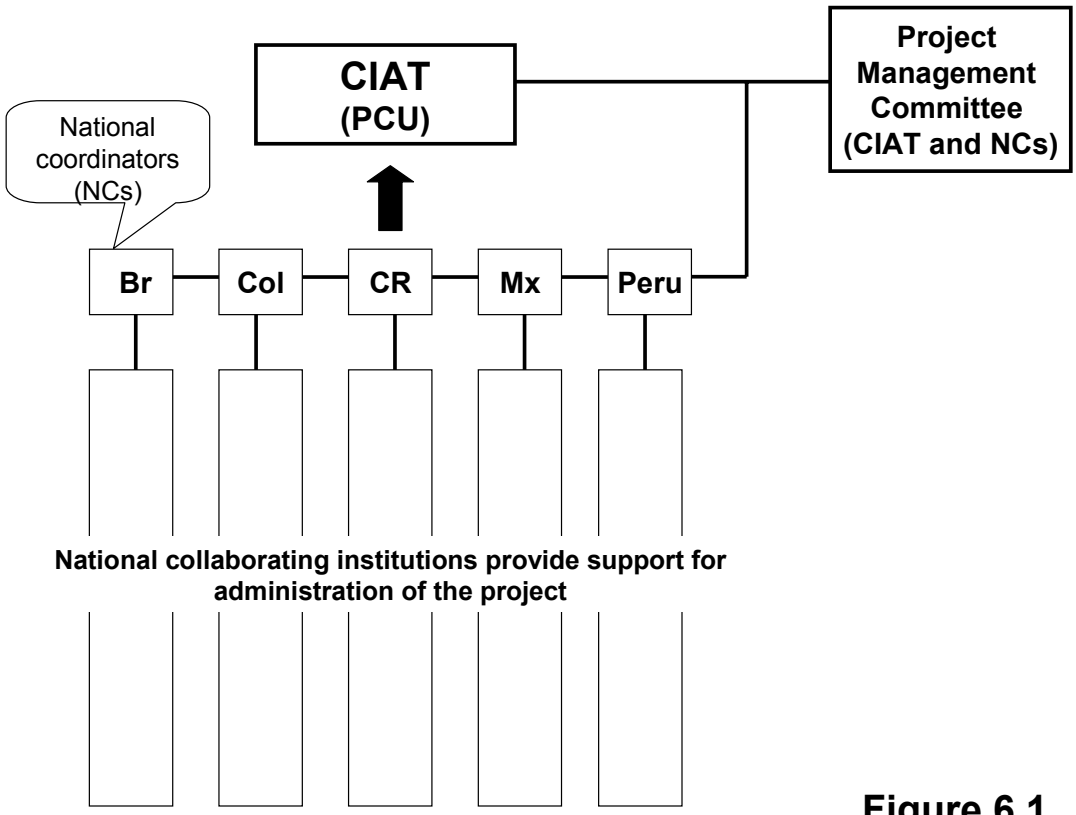


Figure 6.1

The project will be supervised by a **Project Management Committee** (PMC), composed of CIAT and the **National Coordinators** (NC) from all project countries. The role of the PMC is to oversee the technical execution of the different thematic areas. The PMC will also have an approval role in operational planning, budgets, annual plans and the monitoring of project progress.

The existing Projects Office in CIAT will hire a full time project coordinator, a technical specialist with responsibility for M&E and an administrative assistant. This group will be responsible for day-to-day management and technical support for the project, as follows: monitoring progress, preparation of planning materials, administrative support, budget preparation, auditing financial reports at the project level and for taking necessary steps to ensure sustainability of the relevant project activities. The Projects Unit will be responsible for allocating funds according to approved work plans. Responsibility for execution at the national level will reside with the NCs under the umbrella of Letters of Understanding (LOU) with their institutions.

The collaborating institutions in each country will select their National Coordinators (NC) on the basis of their expertise and familiarity with the project, particularly during the PDF-B phase. The NC will be confirmed by the National GEF Focal Point. Each NC will have an alternate to ensure continuity for project management and technical meetings. The role of the NCs will be to ensure that institutions from each country participate as agreed within the PMC for the different components and sub-components of the project. Each NC is responsible for the delivery of audited financial and technical reports at the country level, for quality control of the inputs and outputs from participants of that country, and for reporting to CIAT.

Project Technical Management

Project Management Committee: Project technical oversight will be the responsibility of the Project Management Committee (PMC), to be chaired by the Project Coordinator and to consist of the NCs from all five countries. The PMC will be responsible for review and approval of all work plans, resource allocation and supervision and monitoring of project activities. The preparation of the annual Work Plan will be an iterative process whereby the RTCs propose regional plans for their theme, and the NCs review those proposals in light of available resources and national priorities, before submitting them for final approval to the PMC.

The NCs will participate in the PMC, and be responsible for consolidating their participation in different thematic areas, and for ensuring that their participation in these areas reflects their national needs and strengths. They will also be responsible for monitoring execution of the project within their country and for reporting to the PMC.

Countries have identified areas of national strength and areas of need. Since this project is designed to exploit complementary country strengths, country participation in each component or subcomponent as a net knowledge donor/provider, net recipient or a mixture of both is described in a matrix format in Annex 4 to ensure non-duplication of funding for the same activity. Each project component and sub-component will be executed by participants from all countries, some as Net Providers (NP) of information and/or knowledge; some as Net Receivers (NR) (see Annex 4).

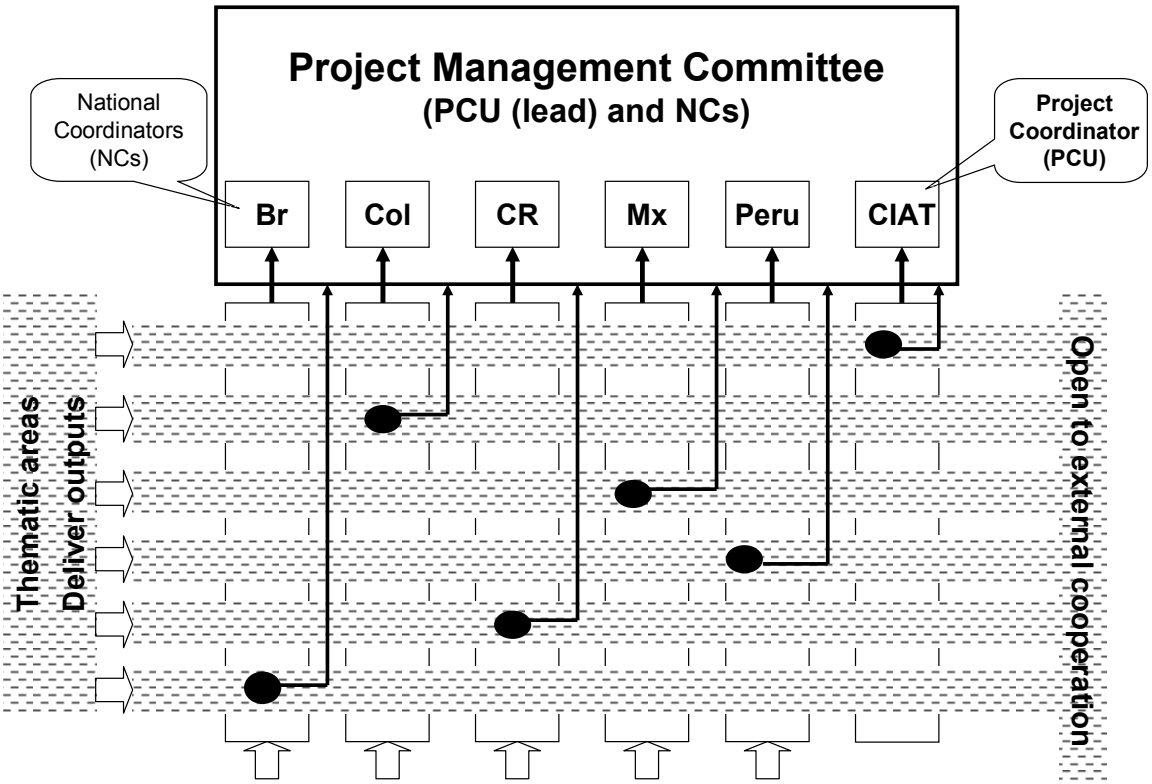
CIAT, in addition to assuming technical leadership, project coordination and M&E of all project activities, will be involved in the technical execution of the following project components: (a) strengthening of technical capacity for environmental risk assessment and management; (b) strengthening of technical capacity for socio-economic impact assessment; (c) training in environmental risk assessment, management and communication for competent authorities and practitioners; (d) training in socio-economic benefit/cost assessment for competent authorities and practitioners; and (e) compilation of science-based information on biosafety for dissemination to the general public.

Thematic Areas: Each thematic area will have a **Regional Thematic Coordinator (RTC),** chosen from among the five partner countries according to their strengths at the outset of project implementation. His/her task is to propose regional work plans in their thematic area, as well as playing an advisory role to the PMC and to the participating countries. RTCs will report regularly on progress in individual thematic areas to the PMC, thereby allowing the latter to take needed action in a timely manner. The regional work plans will be devised in such a way as to promote intensive cooperation between the country participants.

The project will attempt to systematically promote direct horizontal cooperation between national participants in a given thematic area, to maximize regional dissemination of learning and best practice. The thematic area teams will be encouraged to invite expert groups from other countries, both within the region and outside, to join them and share their expertise (provided they bring their own funding to the

activity). This open network structure at the level of individual thematic areas is expected to stimulate the search for and dissemination of, best practices in each area.

Figure 6.2: Thematic Area Responsibilities



National collaborating institutions provide support for implementation of the technical program

Figure 6.2

Internal Coordination (Procurement, Financial Management and Information Exchange)

Procurement

CIAT will have the overall responsibility for procurement for project activities, and each country NC will oversee procurement associated with activities in that country. For details refer to Annex 8.

Financial Management

Project Funds will be disbursed through a special account at CIAT who will then allocate funds to the Offices of respective NC in each country and transfer funds to National Entities for implementation of subprojects. For details of financial management arrangements, see Annex 7.

Information Exchange

CIAT is the depository of all information, technical, management and financial reports at the project level, provided by the NCs and the RTCs. Each country NC is the depository of all national project information and is responsible for maintaining records. Selected information may be published on a project website, which is hosted by the CIAT website. The project will create an intranet to facilitate information exchange within the project.

Intellectual Property Rights

The project is expected to deliver a number of outputs which are subject to various types of intellectual property rights (IPR), e.g., authors' rights, patents, trademarks, logos, knowledge, products, methodologies, databases (including β-versions) and other forms of intellectual property. All partners and subcontractors commit through Letters of Understanding (LOU) to freely and continuously share the outputs on which they have acquired such rights, with all other project partners and funding donors, while respecting authorship. Subcontractors commit to transfer all IPR they may obtain as part of their activities in this project, to the contractor.

Implementation Risks

***Critical risk*:** Modification in the Cartagena Protocol L and R (liability and redress) agreement in 2007, and five-year review of the CP, in 2008. In the event of problems for implementing the project according to agreed work plans due to changes either of International/National agreements, CIAT in consultation with the PMC and World Bank/GEF would develop alternatives, depending on the status of the CP. Even in the worst-case scenario (without-CP), building country capacity for risk assessment, management, communication and cost-benefit analysis remains vitally important and would proceed.

***Critical risk*:** Costa Rica has not ratified the Cartagena Protocol by the onset of project implementation, forcing its withdrawal from the project. Should this occur, CIAT in consultation with the PMC and World Bank/GEF, will reformulate the project work plan and re-distribute deliverables among the remaining partners.

Critical risk: Loss of focus and coherence. The participation of multiple countries with different interests and capacities to implement the CP, and participation of multiple institutions within each country could make project implementation difficult. To counteract these risks, the following mitigation measurements will be taken: (a) Initial selection of entities will be based on expertise, complementarities and work record of key countries/ institutions as entry points for each country to guarantee project commitment and execution; and (b) Governance arrangements will include a Project Management Committee with representatives from the partner countries to foster common approaches and ensure that participating entities focus on project objectives and outputs.

Critical risk: Deficient or slower-paced performance of project partners may affect sequencing of project activities and financing. In this event, CIAT in consultation with the PMC and World Bank/GEF would develop an alternative action plan for recouping country performance, and the pace of project execution. Further, Funds will flow to CIAT in the first instance, not individual countries, permitting control over the flow of funds vis a vis performance.

Critical Risk: Electoral change in a partner country may result in biotechnology rejection, shifting support away from the project. In this event, CIAT, in consultation with the PMC and World Bank/GEF, would develop a strategy consistent with project activities and objectives, to educate new administration in project goals and methodologies.

Monitoring and Evaluation

The framework for the monitoring and evaluation (M&E) of outcomes and results will be fully developed by the Project Appraisal date. This framework takes into account that a well-designed system is critical to ensure timely and successful implementation of the Project, and to enhance its impact for the beneficiaries by the systematic and periodic analysis of lessons learned, and their effective dissemination. Project monitoring and evaluation would be the responsibility of CIAT. Performance indicators have been established for the Project and its components, and are presented in the Results Framework in Annex B. The M&E system is based on a cascade of goals, purposes, results, and activities where higher-order activity, that is, components, become the purpose of the lower order, that is, the subcomponents. This approach will ensure the tracking of all activities to the developmental objective of the Project. The PMC will assist in keeping the national interests within the framework of implementation progress. The Project design includes baseline determinations and performance (milestones) indicators to monitor the implementation of the plan. Such monitoring will consist of an internal evaluation at the component level, and one at the Project level. The monitoring will be based on periodic reports.

By using a management information system (MIS) and the financial management system, Project activities will be kept on track and potential problems identified and appropriately addressed. CIAT will design the MIS for M&E, reporting formats for each component and national office according to the target annual performance objectives and monitoring indicators shown in Annex B. The quarterly reports will cover the progress in implementation, and milestones in the use of project funds and impact. Quarterly technical and financial reports will be consolidated by CIAT into bi-annual progress reports to be submitted to the Bank within two months of the end of each six-month reporting period. These bi-annual reports will also include an implementation plan and activity program for the subsequent six months of the reporting period. A midterm review will assess the overall progress of the Project. The lessons learned and recommendations for any needed improvements would be used in restructuring or realigning the Project plans. Post-project impact assessments will be conducted to improve quantitative assessment of the Project outcome.

Data would be generated using a bottom-up approach, from the sub-projects, through the National Coordinators, to CIAT. CIAT would provide standardized formats and templates for the different reports except for those which are the responsibility of the Bank. The project will have the following monitoring and evaluation instruments:

- Annual operational plan, procurement plan and training plan
- Semi-annual progress reports
- Semi-annual financial reports
- Twice yearly: World Bank supervision missions
- Annual progress reports
- Annual financial reports
- Mid-Term Review
- Implementation Completion Report

At the project level, M&E responsibilities are as follows: (a) ***CIAT's Projects Office:*** responsible for preparing the reporting calendar, formats and templates, maintaining compliance with calendar and format, collating and synthesizing at the project level, delivering reports to the WB, identifying any departures from the plan and bringing these to the attention of the Bank and suggesting solutions; (b) ***National Coordinators:*** responsible for collating elements at national level for all the reports called for by CIAT's Projects Unit, identification of departures from plan (reporting to CIAT, proposing solutions); (c)

Regional Thematic Coordinators*:* responsible for preparing the data for all reports, early warning on problems (including proposals for solutions).

The project will establish an M&E system consistent with the GEF program guidelines and the Bank's operational standards. It will be presented to the Bank before Appraisal and constitute part of the Operational Manual. See additional M&E conceptual details in Section C3.

Annex 7: Financial Management and Disbursement Arrangements

LATIN AMERICA: Regional Capacity-Building in Biosafety

Financial Management Assessment

A Financial Management Assessment (FMA) of CIAT was carried out during preparation of the PDF-B grant and conducted in accordance with OP/BP 10.02 and the Guidelines for the Assessment of Financial Management Arrangements in World Bank Financed Projects. The assessment concluded that CIAT has sufficient capacity to manage project financial matters and administer loan funds.

Organization/Staffing

Details of the project's implementation structure, workflows and staffing have already been described in Annex 6. The financial unit of CIAT would be responsible for maintaining the project financial management arrangements, as follows: (a) request and analyze monthly project financial information from the countries' national coordinators; (b) prepare financial reports and Statements of Expenditure (SOE) for the Bank's disbursement; (c) prepare the financial monitoring reports (FMRs); (d) prepare monthly reconciliations of the Special Account and submit a copy to the Bank along with the withdrawals request; (e) prepare administrative, financial, and accounting procedures necessary to account project transactions and financial information reports; (f) support the project manager in the administrative and inter-institutional coordination process necessary for project implementation; (g) support the requests for contracts, payments, (h) prepare and send to the Bank for no objection, the terms of reference for external audits along with the short list for auditor selection; (i) attend and disseminate the auditors' project requirements and recommendations; (j) support regular and periodic monitoring and evaluation (M&E) of the project; (k) practice internal control over all the operations executed in the different components of the project, in particular those related to disbursements, withdrawals from the Loan Account, and transfers to the subprojects and national coordinators; (l) participate in the preparation of the Project Annual Investment Plan, indicating the Bank financing each component; and (m) preserve and classify project information to facilitate audits and ex post reviews by the Bank.

Internal Controls

The internal control system of the project would incorporate the policies and procedures established by CIAT in order to achieve the objectives and targets of the project and assure its efficient execution, including incorporation of administrative policies, safeguard of goods, prevention and detection of fraud and errors, complete and timely presentation and registration of financial transactions, and reliable financial information.

The procedures for the internal control system would ensure that: (a) the procurement process has followed the procedures established in the grant agreement and the project's operational manual; (b) documents files are reliable and functional; (c) the project is executed according to administrative processes and legally and fiscally valid norms; (d) the financial and accounting system supplies information according to established accounting norms, is accessible to users, supplies adequate information for audits, and provides reliable and suitable information; (e) the financial accounts are periodically and effectively done and secure systems are used to control the deposits and disbursement of funds; and (f) the Project has established the procedures for planning and monitoring its activities, including procurement of goods, works, and consultants, and the projection of cash flow of loan and local counterpart funds.

External Audit

The annual financial statements, SOEs, and deposits and withdrawals from the Special Account (Project accounts) would be audited each year by an independent auditing firm hired by CIAT under terms and conditions satisfactory to the Bank. In addition to the annual financial statements conforming to the International Standards of Auditing (IFAC Standards), the audit report would include comments on the accuracy and propriety of all expenditures, project management, eligibility for financing in terms of the project's legal agreements, and standards of record keeping and internal controls related to the foregoing, and on the extent to which supporting information could be relied upon as a basis for requesting disbursements from the loan using FMRs. Audit reports and related statements would be submitted to the Bank within six months of the end of the Borrower's fiscal year.

Written Procedures

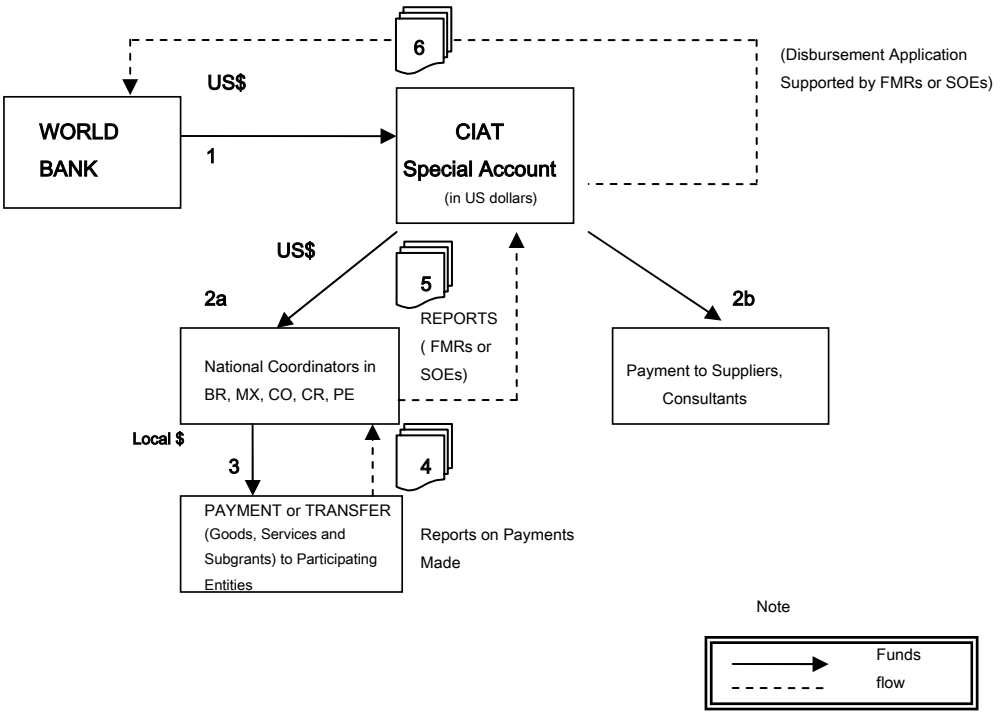
Project financial procedures will be described in the Operational Manual (OM), which will define the roles and responsibilities of the project coordinating group, MADR, and the funds administrator who will be involved in project implementation. The OM will be submitted to the Bank before negotiations and will include among other financial procedures: (a) accounting policies and procedures including basis of accounting; (b) cash flow charts with detailed processes; (c) reporting requirements of the funds administrator, (d) formats and instructions of the Financial Monitoring Reports (Res. 380, 2002 and other related regulations); (e) internal control procedures including criteria and procedures for processing payments; (f) records management, and (g) audit arrangements.

Accounting and Information Systems

As part of the FM assessment, the Bank reviewed the accounting and information systems to be used for the project.

Funds Flow and Cash Management

The Bank would disburse the proceeds of the loan into a Special Account in US dollars in the name of the CIAT. For the countries' subprojects and national coordination, CIAT will transfer funds to the national coordinators to make eligible payments.



Financial and Management Reporting.

CIAT will prepare Financial Monitoring Reports (FMRs). These FMRs will be submitted to the Bank semiannually within 45 days after the end of each such period (i.e. by August 15 and February 15). The FMRs will serve as a basis for the annual audit of financial statements.

Financial Management Risk.

FM risk in this project is considered to be **Moderate**.

Disbursement Arrangements

New Eligibility Policy. The project incorporates the Bank's new policy on eligibility for Bank financing. This policy was approved by the Bank Board of Directors on April 13, 2004. To implement the policy, the Country Financing Parameters for Colombia, Brazil, Costa Rica, Mexico and Peru were approved by the LCR Regional Vice President.

The proposed GEF grant would be disbursed over a period of three and a half years, from Effectiveness which is expected on January 15, 2007 through the end of the third quarter of FY 2010, with the Project Completion Date expected on January 15, 2010, and a Grant Closing Date of July 15, 2010.

The following table summarizes, by component/subcomponent, the agreement on the amount of the Grant, the use of funds, and when the Bank will recognize expenditures, for the activities to be financed with Grant funds.

Component/subcomponent	Responsible	Description (use)	Recognition of Expenditures
1. Strengthening Technical Capacity in Knowledge Generation for Biosafety Risk Assessment and Management 1.1 Strengthening Technical Capacity in Environmental Risk Assessment and Management	CIAT and Participating Entities in Brazil, Mexico, Colombia, Peru, Costa Rica	Consultants, training, operating costs of National Coordinators and subprojects of Participating Entities	Upon payment to consultants and suppliers, and transfers to Participating Entities (in tranches) for subprojects
1.2 Strengthening Technical Capacity in Socioeconomic Impact Assessment	Idem	Consultants, training, and subprojects of Participating Entities	Upon payment to consultants and suppliers, and transfers to Participating Entities (in tranches) for subprojects
2. Strengthening Biosafety Decision Making Capacity	Idem	Training (workshops, fellowships, courses, seminars, consultation meetings) for authorities and practitioners on biosafety	Upon payment to suppliers, consultants, and travel and per diem to trainees
3. Public Awareness in Biosafety for Communicators, Opinion Makers, and the General Public	Idem	Consultants and non-consultant services for publication of material to disseminate biosafety information and project results	Upon payment to suppliers and consultants
4. Regional Coordination.	CIAT	Goods, consultants, training and operating costs for regional coordination and project monitoring and evaluation	Upon payment to consultants and suppliers of goods and services

The proceeds of the grant would be disbursed against eligible expenditures, as indicated in Table A.7.1.

Table A.7.1: Allocation of Grant Proceeds

Expenditure Category	Amount in US$ Million	Financing Percentage
1. Goods, Consultants, Training, and Non-Consultant Services	1.20	100
2. Subprojects	2.90	100
3. Operating Costs	0.75	100
5. Unallocated	0.15	-
Total	**5.00**	**-**

Disbursement Mechanisms and Documentation. While it is contemplated that disbursements at the beginning of the project could be made on the basis of the traditional transaction-based mechanism, given the nature of this project and that the bulk of disbursements for the subprojects (which represents approximately 58% of total project) are processed in tranches in accordance with the financing agreements with the participating entities, and to facilitate alignment of the project request for disbursements with the financial reports and allocated budget, the Bank team deems it appropriate to evaluate in the near future the possibility of transitioning this project from traditional disbursements to report-based disbursements.

Irrespective of the disbursement mechanism to be implemented for this project and to facilitate project implementation, the project will have access to funds advanced by the Bank to a Special Account in US dollars for processing disbursements for eligible expenditures under project activities. Funds deposited into the Special Account as advances (depending on the disbursement mechanism) will follow the Bank's disbursement operating policies and procedures established for each mechanism as described in the Grant Agreement and in the Disbursement Letter, as the case may be.

Transaction-based disbursements. In this case, an authorized allocation for advances made into the Special Account will be established. The authorized allocation for the account will be equal to 10% of the grant amount, and the project could request such advance as needed once the grant is declared effective. Once the initial deposit has been provided, CIAT will submit subsequent withdrawal applications requests for replenishments to the Special Account on a monthly basis. All withdrawal applications will be fully supported by appropriate supporting documentation (i.e. invoices, receipts, and any other evidence of payment) except for those expenditures for contracts not subject to prior review and for which the Bank has approved the use of Statement of Expenditures (SOEs), as referred to in the Legal Agreement and the Disbursement Letter. CIAT will be responsible for preparing and submitting withdrawal applications to the Bank. All supporting documentation of withdrawal applications (including those for which SOEs are used) should be retained at its central location and be available for review by the Bank supervision missions and independent auditors.

Use of Statements of Expenditure (SOEs). Grant withdrawal applications will be supported by SOEs for all expenditures not requiring the Bank's prior review: Grants for subprojects will be disbursed following financial terms of the subproject agreements. SOEs for these grants will be supported by payments transfer to the participating entities implementing the subprojects.

Report-based Disbursements: In the event that withdrawals of grant proceeds are made using Report-based Disbursements, the Bank will deposit into the Special Account an amount which the Bank has determined, based on the reports submitted (FMRs and additional reports for disbursement purposes) that are required to finance eligible expenditures during the next two periods (no more than 6 months) following the reporting period of such FMRs. The borrower should submit withdrawal applications as follows:

(a) Initial Withdrawal Application: A request for withdrawal of grant funds using the appropriate form (1903 b) provided by the Bank, along with the project's expenditures forecast for the next two reporting periods; and
(b) Subsequent Withdrawal Applications: A request for withdrawal of grant funds using the appropriate form (1903 b) provided by the Bank, along with the FMRs for the period ended, the Special Account Activity Statement (including Bank statement), and any other applicable Summary Statement of Special Account Expenditures, and forecast for next two reporting periods.

As with the case of transaction-based disbursements, direct payments to consultants and service providers, and reimbursement to CIAT for pre-financed Bank's share of project expenditures will be available to the borrower and set out in the Disbursement Letter.

Financial Management Action Plan

The most important actions that need to be carried out are the completion of the Operational Manual, and the Terms of Reference for the audit arrangements for project effectiveness.

Supervision Plan.

At least one financial management supervision mission will be conducted each FY, and a Bank Financial Management Specialist will review the annual audit reports and the semi-annual FMR.

Annex 8: Procurement Arrangements

LATIN AMERICA: Regional Capacity-Building in Biosafety

General

Procurement for the proposed project would be carried out in accordance with the World Bank's "Guidelines: Procurement under IBRD Loans and IDA Credits" dated May 2004; and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, and the provisions stipulated in the Legal Agreement. The general description of various items under different expenditure categories is described below. For each contract to be financed by the Grant, the different procurement methods or consultant selection methods, estimated costs, prior review requirements, and time frame are agreed between the Recipient and the Bank project team in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

Procurement Summary

The total cost of the Project is US$15.7 million, which includes US$5.0 million of GEF financing. The Project components are the following: (a) **Component 1 -** Strengthening of Technical Capacity in Knowledge Generation for Biosafety Risk Assessment and Management (GEF financing US$4.04 million) would include laboratory material, agricultural inputs, technical assistance, non consultant services, small equipment, tools and logistics expenses to be procured under subprojects that will be implemented by scientific research institutions in Brazil, Colombia, Costa Rica, Mexico and Peru; (b) **Component 2** – Strengthening of Biosafety Decision Making Capacity (GEF financing US$0.56 million) which will finance training activities on environmental risk assessment and management, and on socioeconomic benefit/cost assessment for authorities and practitioners; and (c) **Component 3** – Public Awareness on Biosafety for Communicators, Opinion Makers and the General Public (GEF financing US$0.39 million) to support communication and awareness programs with the development of information packages on biosafety for social communicators and opinion makers and compilation of biosafety information for dissemination to the general public through publications, brochures, poster, CDs, DVDs and other materials/media.

The project will be managed by a Project Management Committee composed of CIAT as the Regional Coordinator and a National Coordinator from each country (Brazil, Colombia, Costa Rica, Mexico and Peru). CIAT will be responsible for procurement of the regional activities and have the overall responsibility for supervision of procurement activities and subprojects carried out by Participating Entities in each country through the National Coordinators.

The methods to be used for procurement of goods and services under the project are described below with estimated amounts, and summarized in Table A. Table B suggests thresholds to be used in the Procurement Plan and the Operational Manual for the various procurement methods.

Procurement of Goods (US$0.01 million)

Goods and non-consulting services contracts to be procured under this project would include computer and office equipment for the regional coordination unit, and eligible non-consultants services for preparation of dissemination material on biodiversity under the public awareness component. Neither International Competitive Bidding (ICB) nor National Competitive Bidding (NCB) methods are expected. Contracts for eligible goods and non-consulting services estimated to cost less than US$50,000 per

contract may be procured using shopping procedures based on a sample request for quotations from at least three qualified suppliers.

Selection of Consultants (US$0.26 million)

Firms. With exception of the external auditing firm no consultant contracts with firms are expected. The auditing firm will be selected following Least Cost Selection procedures (LCS).

Individuals. Individual consultants will be hired to provide technical advisory and project support and evaluation services and will be selected through comparison of qualifications of at least three qualified candidates, in accordance with provisions in Section V of the Consultant Guidelines.

Training (US$0.56 million)

Training to be financed under the proposed project includes courses, seminars, workshops, consultation meetings and fellowships for dissemination and capacity building. The Bank will finance logistical and travel expenses, per diems of trainers and trainees, and training material using administrative procedures acceptable to the Bank.

Operating Costs (US$0.8 million)

Operational costs will include reasonable expenditures to carry out the project such as travel and per diem costs for project staff and personnel commissioned under the national coordination units, utilities, communication expenses including Internet connectivity, maintenance of facilities and equipment; consumable materials and supplies; logistics and project support services, promotion material, taxes, and reasonable overhead expenditures incurred by the regional coordination unit and the national coordinating units using administrative procedures acceptable to the Bank.

Subprojects (US$2.98 million)

Subprojects consist of field trials in specialized thematic areas that will include scientific experiments, compilation and generation and testing of data, standardization of methodologies, and development of operational guidelines for the management of genetic modified organisms (GMOs). Expenditures to be financed under these subprojects include agricultural inputs and services, field tools, lab material and supplies, lab testing services, research fellowships, and operating costs of Participating Entities. Eligibility and selection criteria for subprojects would be described in the Operational Manual. Procurement under subprojects will follow commercial practices acceptable to the Bank.

2. Assessment of Agency Capacity to Implement Procurement

A Procurement Capacity Assessment of CIAT will be carried out before appraisal of the project. CIAT will prepare a General Procurement Plan for project implementation which provides the basis for the procurement methods. This plan would be reviewed and agreed by project appraisal. The final Procurement Plan will be updated in agreement with the Project Management Committee annually or as required to reflect the actual project implementation needs and improvements in institutional capacity. Consistent with new Bank policies, all procurement related information would be included in the Procurement Plan and the Grant Agreement would refer to the Procurement Plan.

Frequency of Procurement Supervision. In addition to the prior review supervision to be carried out from Bank offices, the capacity assessment of the Implementing Agency will recommend the number of supervision missions and post reviews required for the project.

3. Details of the Procurement Arrangement involving international competition

Goods and Works and non-consulting services.

(a) List of contract Packages which will be procured following ICB and Direct contracting: Not expected.

Consulting Services.

(a) List of Consulting Assignments with short-list of international firms: Not expected

(b) Selection of consultants (firms) for assignments estimated to cost above US$100,000 equivalent, and any single source contract will be subject to prior review by the Bank.

(c) Short lists composed entirely of national consultants: Short lists of consultants for services estimated to cost less than US $200,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

(d) Procurement Plan will reflect which contracts with individual consultants must be subject to Bank's Prior Review.

Annex 9: Economic and Financial Analysis

LATIN AMERICA: Regional Capacity-Building in Biosafety

As recommended by the Quality Enhancement Review Meeting (QER), the project team will explore the appropriate methodology and assumptions for a formal economic analysis to be prepared prior to Appraisal.

The cost-effectiveness of the multi-country approach to capacity-building can be considered in the context of project design alternatives considered and rejected. In a without-project scenario, the rapidly expanding adoption of transgenic crops without systematic risk and impact assessment, safety management and tracking/monitoring systems entails significant risks and costs for countries which are among the world's richest in biodiversity and with national strategies and aspirations for expanding agricultural production and trade, and for reducing poverty. Similarly, a scenario involving five separate country projects has serious implications in terms of scale, cost and time inefficiencies, lost opportunities for collaboration and exploitation of comparative advantage and complementary skills, and potentially weak sustainability. The third scenario – using one country as regional demonstrator – would require major, long-term investment to reach International Standards (IS) and multi-disciplinary technical capacity, an unacceptable option given the rapidly evolving biosafety situation.

Annex 10: Safeguard Policy Issues

LATIN AMERICA: Regional Capacity-Building in Biosafety

The project's global environmental objective is to contribute to implementing the Cartagena Protocol on Biosafety, reducing the environmental risks of modern biotechnology with positive impact on global biodiversity. The project is thus expected to have positive environmental impacts if implemented as planned and would have no significant, adverse environmental effects during implementation.

The Quality Assurance Team (QAT) recommended a Category "C" rating at its review of the PCN (January 27, 2005) and this was re-confirmed by the Quality Enhancement Review Meeting (March 7, 2006). As designed, this project is limited to research, technical assistance, and capacity-building activities and would not trigger OP 4.01 (Environmental Assessment) or other environmental safeguards. The project will not finance the planting of genetically-modified crops (GMO). In addition, the project does not trigger the Indigenous Peoples Policy (OD 4.20) since project activities do not impinge negatively on their physical and material wellbeing and could actually benefit them.

Safeguard Policies that Might Apply

Safeguard Policies Triggered	Yes	No	TBD
Environmental Assessment (OP/BP 4.01)		X	
Natural Habitats (OP/BP 4.04)		X	
Forests (OP/BP 4.36)		X	
Pest Management (OP 4.09)		X	
Cultural Property (OPN 11.03)		X	
Indigenous Peoples (OD 4.20)		X	
Involuntary Resettlement (OP/BP 4.12)		X	
Safety of Dams (OP/BP 4.37)		X	
Projects on International Waterways (OP/BP 7.50)		X	
Projects in Disputed Areas (OP/BP 7.60)		X	

Target date for the Quality Enhancement Review, at which time the PAD-stage ISDS would be prepared: March 7, 2006.

Annex 11: Project Preparation and Supervision

LATIN AMERICA: Regional Capacity-Building in Biosafety

	Planned	Actual
PCN review	January 26, 2005	January 26, 2005
Initial PID to PIC	July 30, 2006	
Initial ISDS to PIC	July 30, 2006	
Appraisal	July 15 2005	
Negotiations	July 17 2005	
Board/RVP approval	October 2006	
Planned date of effectiveness	January 15 2007	
Planned date of mid-term review	November 15 2008	
Planned closing date	July 15 2010	

Key Institutions Responsible for Preparation of the Regional Project:

Implementing agency*:* CIAT, Cali, Colombia
Brazil: EMBRAPA Environment Biocontrol Laboratory, Jaguariuna/SP, Brazil
Colombia: Ministerio de Agricultura, Dirección de Desarrollo Tecnológico y Protección Sanitaria, Bogota, Colombia
Costa Rica: University of Costa Rica, San José, Costa Rica
Mexico: CONABIO, Tlalpan, Mexico
Peru: CONAM, Lima, Peru

Project Preparation Grant Received:

A GEF PDF B grant for US$260,000 (TF055877) was received and used for project preparation by the recipient (CIAT on behalf of the 5 project countries—Brazil, Colombia, Costa Rica, Mexico, and Peru to contract consulting services for the following preparation activities:

(a) Consultation and selection of crops, traits/genes of interest, issues, and target areas;

(b) Assessment of methodologies, geographic information systems (GIS) tools, and expert systems assisted by GIS for generating a GIS-referenced target crops and landrace, weedy wild relative distribution database, national capacity to manage GIS, existing pilot mapping populations of target crops;

(c) Diagnosis of current regional status and needs on biosafety guidelines, regulatory systems, implementing agencies, clearing house mechanisms, list of regional and national facilities, human resource expertise, research groups with international standards etc.;

(d) Assessment of available methodologies and needs to develop/adapt large scale screening, management practices, and long-term monitoring on environmental safety;

(e) Assessment of methodologies and available models, needs for development/adaptation to conduct economic valuation of benefits/risks associated with transgenic crops/products;

(f) Diagnosis of existing capacity and capacity building needs on GIS, ex-ante/ex-post analyses, economic impact assessment, field trials, and benefit/risk assessment/management associated with benefit/risk assessment of transgenic crops and products; and

(g) Diagnosis of existing initiatives and needs for public awareness associated with benefit/risk assessment of transgenic crops and products; and (h) comprehensive baseline study for the documentation of best practices and overall project execution, monitoring and evaluation.

The training activities conducted successfully were: (a) general consultation meeting for consensus building and donor and regional conservation organizations meeting held in October 2005 in CIAT and (b) project document preparation meeting in February 2006 in CIAT, Cali, Colombia.

The grant was successfully executed by the Project Implementing Agency, CIAT. All planned outputs were completed and the national and international consultants' performance was satisfactory, with significant knowledge generation, assistance to identify gaps in biosafety and implementation of the Cartagena Protocol, and sharing of innovative technologies among the five project client countries and CIAT. Both the client and stakeholders benefited from workshops and knowledge transfer activities.

Bank Staff and Consultants Who Worked on the Project Included:

Name	Title	Unit
Matthew A. McMahon	Lead Agriculturist (TTL)	LCSER
Indira J. Ekanayake	Senior Agriculturist	LCSER
Teresa M. Roncal	Operations Specialist	LCSER
Jocelyn Albert	Senior GEF Coordinator	LCSEN
Jeanette Estupinan	Financial Management Specialist, Colombia Country Office	LCOAA
Jose M. Martinez	Procurement Specialist	LCOPR
Anna Roumani	ET Consultant	LCSER
Luis Fernando Rios	JPA, Colombia Country Office	LCOAA
Maribel Cherres	Program Assistant	LCSES
Regis Thomas Cunningham	Senior Finance Officer	LOAG3
Antonio S. Davilla-Bonazzi	Portfolio Officer/Loan Accounting officer	LOAG3
Gustavo Castro F. Raposo	Finance Analyst	LOAG3
C. Izquierdo-Gonzalez	Finance Assistant	LOAG3
Willy De Greef	Consultant-International	-
Esperanza Torres Rojas	Consultant-Colombia	-
Victor Manual Nunez Zarante	Consultant-Colombia	-
Luciano Di Ciero	Consultant-Brazil	-
tba	Senior Counsel	LEGLA
tba	Legal Associate	LEGLA
tba	Safeguards Specialist/ Environmental Specialist	
tba	Safeguards Specialist/Senior Social Scientist	

Bank funds expended to date on Project preparation:

1. Bank resources: FY05- US$3,576.50; FY06 – US$52,932.84; Total (FY05+FY06) – US$56,509.34; Expected expenses - US$ 68,000.00
2. GEF PDF B grant funds: TF055877 US$260,000; Disbursed US$..... (up to Feb 14, 06) [PDF-B Co-financing: US$240,000
3. Total: US$ 328,000 estimated

Estimated Approval and Supervision costs:

1. Remaining costs to approval: US$ 30,000
2. Estimated annual supervision cost: US$ 80,000

Annex 12: Documents in the Project File

LATIN AMERICA: Regional Capacity-Building in Biosafety

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2. Acevedo F. and Galvez A.2006. Annex 2: Major related projects financed by the Bank and/or other agencies.

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4. Acevedo F. and Galvez A. 2006. Annex 5. Project Cost.

5. Acevedo F. and Galvez A. 2006. Annex 6. Implementation arrangement.

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7. Acevedo F. and Galvez A. 2006. Annex 17. Maps.

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Annex 13: Statements of Loans and Credits

LATIN AMERICA: Regional Capacity-Building in Biosafety

BRAZIL

			Original Amount in US$ Millions						Difference between expected and actual disbursements	
Project ID	FY	Purpose	IBRD	IDA	SF	GEF	Cancel.	Undisb.	Orig.	Frm. Rev'd
P077187	2004	GEF 6L-Building IABIN (Inter-Am Biod)	0.00	0.00	0.00	6.00	0.00	5.26	0.70	0.00
P068121	2002	GEF 6L-Guarani Aquifer Project	0.00	0.00	0.00	13.40	0.00	11.42	10.53	0.00
P072979	2002	GEF 6L-Silvopastoral Integr Ecosyst Mgt	0.00	0.00	0.00	4.50	0.00	2.17	3.70	0.00
		Total:	0.00	0.00	0.00	23.90	0.00	18.85	14.93	0.00

LATIN AMERICA
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

			Original Amount in US$ Millions						Difference between expected and actual disbursements	
Project ID	FY	Purpose	IBRD	IDA	SF	GEF	Cancel.	Undisb.	Orig.	Frm. Rev'd
P081436	2006	BR-Bahia Poor Urban Areas Integrated Dev	49.30	0.00	0.00	0.00	0.00	49.30	0.00	0.00
P082142	2006	BR-Ceara Multi-sector Social Inclus Dev	149.00	0.00	0.00	0.00	0.00	85.38	0.67	0.00
P052256	2006	BR-MG Rural Poverty Reduction	35.00	0.00	0.00	0.00	0.00	35.00	0.00	0.00
P050761	2006	BR-Housing Sector TAL	4.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00
P090041	2006	BR ENVIRONMENTAL SUST. AGENDA TAL	8.00	0.00	0.00	0.00	0.00	7.94	0.00	0.00
P093787	2006	BR (CRL2) Bahia State Integ Proj Rur Pov	54.35	0.00	0.00	0.00	0.00	54.35	0.00	0.00
P089440	2006	BR-Brasilia Environmentally Sustainable	57.64	0.00	0.00	0.00	0.00	57.64	0.00	0.00
P075379	2005	BR GEF-RJ Sust IEM in Prod Landscapes	0.00	0.00	0.00	6.73	0.00	6.75	0.00	0.00
P076924	2005	BR-(Amapa) Sustainable Communities	4.80	0.00	0.00	0.00	0.00	4.80	0.97	0.00
P078716	2005	BR(CRL1)Prog Growth for Housing	502.52	0.00	0.00	0.00	0.00	502.52	0.00	0.00
P088009	2005	BR GEF-Sao Paulo Riparian Forests	0.00	0.00	0.00	7.75	0.00	6.43	0.13	0.00
P069934	2005	BR-PERNAMBUCO INTEG DEVT: EDUC QUAL IMPR	31.50	0.00	0.00	0.00	0.00	30.84	8.44	0.00
P082328	2005	BR-Integ.Munic.Proj.-Betim Municipality	24.08	0.00	0.00	0.00	0.00	22.45	3.46	0.00
P087711	2005	BR Espirito Santo Wtr & Coastal Pollu	36.00	0.00	0.00	0.00	0.00	33.14	12.45	0.00
P083533	2005	BR TA-Sustain. & Equit Growth	12.12	0.00	0.00	0.00	0.00	12.06	2.25	0.00
P086525	2005	BR PRGM. FISCAL REF - SOCIAL SEC REFORM	658.30	0.00	0.00	0.00	0.00	658.30	658.30	0.00
P080830	2004	BR Maranhao Integrated: Rural Dev	30.00	0.00	0.00	0.00	0.00	30.00	10.37	0.00
P087713	2004	BR (CRL1) Bolsa Familia 1st APL	572.20	0.00	0.00	0.00	2.86	366.45	36.41	0.00
P083013	2004	BR Disease Surveillance & Control APL 2	100.00	0.00	0.00	0.00	0.00	89.74	28.69	0.00
P060573	2004	BR Tocantins Sustainable Regional Dev	60.00	0.00	0.00	0.00	0.00	57.40	26.40	0.00

P070827	2003	BR-2nd APL BAHIA DEV. EDUCATION PROJECT	60.00	0.00	0.00	0.00	0.00	17.30	13.27	0.00
P074777	2003	BR-Municipal Pension Reform TAL	5.00	0.00	0.00	0.00	0.00	4.71	4.71	1.71
P058503	2003	GEF BR Amazon Region Prot Areas (ARPA)	0.00	0.00	0.00	30.00	0.00	20.87	25.83	0.00
P076977	2003	BR-Energy Sector TA Project	12.12	0.00	0.00	0.00	0.00	12.00	8.10	0.00
P054119	2003	BR BAHIA DEVT (HEALTH)	30.00	0.00	0.00	0.00	0.00	22.52	13.35	0.00
P080400	2003	BR-AIDS & STD Control 3	100.00	0.00	0.00	0.00	0.00	55.95	22.67	0.00
P049265	2003	BR-RECIFE URBAN UPGRADING PROJECT	46.00	0.00	0.00	0.00	0.00	43.93	18.26	0.00
P073192	2002	BR TA Financial Sector	14.50	0.00	0.00	0.00	0.00	9.48	9.48	0.00
P043869	2002	BR SANTA CATARINA NATURAL RESOURC & POV.	62.80	0.00	0.00	0.00	0.00	43.31	16.35	0.00
P051696	2002	BR SÃO PAULO METRO LINE 4 PROJECT	209.00	0.00	0.00	0.00	0.00	149.01	145.15	31.66
P055954	2002	BR GOIAS STATE HIGHWAY MANAGEMENT	65.00	0.00	0.00	0.00	0.00	18.88	18.88	8.17
P057653	2002	BR- FUNDESCOLA IIIA	160.00	0.00	0.00	0.00	0.00	113.62	32.94	0.00
P057665	2002	BR-FAMILY HEALTH EXTENSION PROJECT I	68.00	0.00	0.00	0.00	0.00	27.75	27.75	0.00
P060221	2002	BR FORTALEZA METROPOLITAN TRANSPORT PROJ	85.00	0.00	0.00	0.00	0.00	111.47	84.02	0.00
P066170	2002	BR-RGN 2ND Rural Poverty Reduction	22.50	0.00	0.00	0.00	0.00	4.93	5.43	0.00
P070552	2002	GEF BR PARANA BIODIVERSITY PROJECT	0.00	0.00	0.00	8.00	0.00	5.29	7.37	0.00
P059566	2001	BR- CEARA BASIC EDUCATION	90.00	0.00	0.00	0.00	0.00	50.06	50.06	10.05
P073294	2001	BR Fiscal & Fin. Mgmt. TAL	8.88	0.00	0.00	0.00	0.00	6.74	6.13	0.00
P050881	2001	BR PIAUI RURAL POVERTY REDUCTION PROJECT	22.50	0.00	0.00	0.00	0.00	2.83	2.83	0.91
P050880	2001	BR Pernambuco Rural Poverty Reduction	30.10	0.00	0.00	0.00	0.00	2.07	2.07	-0.97
P050772	2001	BR LAND-BASED POVRTY ALLEVIATION I (SIM)	202.10	0.00	0.00	0.00	58.13	123.06	125.14	0.00
P039199	2000	BR PROSANEAR 2	30.30	0.00	0.00	0.00	6.40	17.38	23.78	17.38
P006449	2000	BR CEARA WTR MGT PROGERIRH SIM	136.00	0.00	0.00	0.00	0.00	51.31	51.31	28.35
P050776	2000	BR NE Microfinance Development	50.00	0.00	0.00	0.00	10.23	9.80	20.03	0.00
P035741	2000	BR NATL ENV 2	15.00	0.00	0.00	0.00	6.00	1.93	7.93	5.61
P048869	1999	BR SALVADOR URBAN TRANS	150.00	0.00	0.00	0.00	32.00	47.02	79.02	0.00
P006474	1998	BR LAND MGT 3 (SAO PAULO)	55.00	0.00	0.00	0.00	10.00	25.11	35.26	0.48
P042565	1998	BR PARAIBA R.POVERTY	60.00	0.00	0.00	0.00	0.00	0.56	0.56	-1.30
P043420	1998	BR WATER S.MOD.2	150.00	0.00	0.00	0.00	125.00	19.33	144.30	11.94
P043421	1998	BR RJ M.TRANSIT PRJ.	186.00	0.00	0.00	0.00	27.78	53.70	81.48	43.67
P038895	1998	BR FED.WTR MGT	198.00	0.00	0.00	0.00	40.00	27.61	67.61	23.20
P037828	1996	BR (PR)R.POVERTY	175.00	0.00	0.00	0.00	10.00	5.23	15.23	-1.44
		Total:	4,887.61	0.00	0.00	52.48	328.40	3,219.25	1,954.84	179.42

BRAZIL
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
	ABN AMRO REAL	98.00	0.00	0.00	0.00	5.87	0.00	0.00	0.00
2005									
2005	ABN AMRO REAL	98.00	0.00	0.00	0.00	5.87	0.00	0.00	0.00
2001	AG Concession	0.00	30.00	0.00	0.00	0.00	29.07	0.00	0.00
2002	Amaggi	21.43	0.00	0.00	0.00	21.43	0.00	0.00	0.00
2005	Amaggi	30.00	0.00	0.00	0.00	15.00	0.00	0.00	0.00
2002	Andrade G. SA	23.83	0.00	10.00	13.64	23.83	0.00	10.00	13.64
2001	Apolo	6.82	0.00	0.00	0.00	4.32	0.00	0.00	0.00
2005	Aracruz	50.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00
1998	Arteb	20.00	0.00	0.00	18.33	20.00	0.00	0.00	18.33
1999	AutoBAn	19.48	0.00	0.00	12.94	19.48	0.00	0.00	12.94
1998	BSC	1.12	0.00	0.00	0.44	1.05	0.00	0.00	0.44
2001	Brazil CGFund	0.00	20.00	0.00	0.00	0.00	7.20	0.00	0.00
1994	CHAPECO	10.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00
1996	CHAPECO	1.78	0.00	0.00	5.26	1.78	0.00	0.00	5.26
2002	CN Odebrecht	0.00	0.00	20.00	0.00	0.00	0.00	20.00	0.00
2003	CPFL Energia	0.00	40.00	0.00	0.00	0.00	40.00	0.00	0.00
1996	CTBC Telecom	6.00	8.00	0.00	0.00	6.00	8.00	0.00	0.00
1997	CTBC Telecom	0.00	6.54	0.00	0.00	0.00	6.54	0.00	0.00
1999	Cibrasec	0.00	3.28	0.00	0.00	0.00	2.91	0.00	0.00
2004	Comgas	45.00	0.00	0.00	45.00	12.50	0.00	0.00	12.50
2005	Cosan S.A.	50.00	5.00	15.00	0.00	0.00	5.00	15.00	0.00
	Coteminas	0.00	1.84	0.00	0.00	0.00	1.84	0.00	0.00
1997	Coteminas	3.75	1.25	0.00	0.00	3.75	1.25	0.00	0.00
2000	Coteminas	0.00	0.18	0.00	0.00	0.00	0.18	0.00	0.00
1980	DENPASA	0.00	0.52	0.00	0.00	0.00	0.48	0.00	0.00
1992	DENPASA	0.00	0.06	0.00	0.00	0.00	0.06	0.00	0.00
	Dixie Toga	0.00	0.35	0.00	0.00	0.00	0.35	0.00	0.00
1998	Dixie Toga	0.00	10.36	0.00	0.00	0.00	10.36	0.00	0.00
1997	Duratex	2.71	0.00	3.00	1.14	2.71	0.00	3.00	1.14
2005	EMBRAER	35.00	0.00	0.00	145.00	35.00	0.00	0.00	145.00
1999	Eliane	17.07	0.00	13.00	0.00	17.07	0.00	13.00	0.00
1998	Empesca	5.00	0.00	10.00	0.00	5.00	0.00	10.00	0.00
2000	Fleury	5.14	0.00	6.00	0.00	5.14	0.00	6.00	0.00
2004	Fleury	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1998	Fosfertil	3.79	0.00	0.00	12.05	3.79	0.00	0.00	12.05
1998	Fras-le	4.67	0.00	9.99	0.00	4.67	0.00	6.69	0.00
1994	GAVEA	0.00	0.00	2.75	0.00	0.00	0.00	2.75	0.00

2005	GP Capital III	0.00	15.00	0.00	0.00	0.00	0.89	0.00	0.00
	GP Cptl Rstrctd	0.00	2.41	0.00	0.00	0.00	2.33	0.00	0.00
2001	GPC	0.00	0.00	9.00	0.00	0.00	0.00	9.00	0.00
1997	Guilman-Amorim	20.06	0.00	0.00	23.95	20.06	0.00	0.00	23.95
1998	Icatu Equity	0.00	5.79	0.00	0.00	0.00	4.45	0.00	0.00
1999	Innova SA	5.04	5.00	0.00	11.21	5.04	5.00	0.00	11.21
1980	Ipiranga	0.00	5.32	0.00	0.00	0.00	5.32	0.00	0.00
1987	Ipiranga	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
2006	Ipiranga	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	Itaberaba	0.00	2.28	0.00	0.00	0.00	2.28	0.00	0.00
2000	Itau-BBA	17.14	0.00	0.00	0.00	17.14	0.00	0.00	0.00
2002	Itau-BBA	80.60	0.00	0.00	0.00	48.46	0.00	0.00	0.00
1999	JOSAPAR	7.57	0.00	7.00	0.00	2.57	0.00	7.00	0.00
2005	Lojas Americana	35.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
1992	MBR	0.00	0.00	10.00	0.00	0.00	0.00	10.00	0.00
2002	Macae	31.07	0.00	10.00	25.00	31.07	0.00	10.00	25.00
2002	Microinvest	0.00	1.25	0.00	0.00	0.00	0.82	0.00	0.00
	Net Servicos	0.00	15.87	0.00	0.00	0.00	15.87	0.00	0.00
2002	Net Servicos	0.00	2.33	0.00	0.00	0.00	2.33	0.00	0.00
2005	Net Servicos	0.00	7.37	0.00	0.00	0.00	7.37	0.00	0.00
1994	Para Pigmentos	4.30	0.00	9.00	0.00	4.30	0.00	9.00	0.00
1994	Portobello	0.00	0.75	0.00	0.00	0.00	0.75	0.00	0.00
2000	Portobello	4.97	0.00	7.00	0.00	4.97	0.00	7.00	0.00
2002	Portobello	0.00	1.15	0.00	0.00	0.00	1.15	0.00	0.00
2000	Puras	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
2003	Queiroz Galvao	29.17	0.00	10.00	0.00	19.17	0.00	10.00	0.00
2004	Queiroz Galvao	0.60	0.00	0.00	0.00	0.08	0.00	0.00	0.00
2006	RBSec	0.00	1.51	0.00	0.00	0.00	1.51	0.00	0.00
	Randon Impl Part	2.80	0.00	3.00	0.00	2.80	0.00	3.00	0.00
1997	SP Alpargatas	3.33	0.00	0.00	0.00	3.33	0.00	0.00	0.00
2003	SP Alpargatas	30.00	0.00	0.00	0.00	15.00	0.00	0.00	0.00
1997	Sadia	4.78	0.00	3.00	30.32	4.78	0.00	3.00	30.32
1997	Samarco	4.50	0.00	0.00	0.00	4.50	0.00	0.00	0.00
1998	Saraiva	2.31	2.40	0.00	0.00	2.31	2.40	0.00	0.00
2003	Satipel	0.00	0.00	10.00	0.00	0.00	0.00	10.00	0.00
2000	Sepetiba	26.51	0.00	5.00	0.00	11.51	0.00	5.00	0.00
1999	Sudamerica	0.00	7.35	0.00	0.00	0.00	7.35	0.00	0.00
2001	Synteko	14.14	0.00	0.00	0.00	14.14	0.00	0.00	0.00
1998	Tecon Rio Grande	3.99	0.00	5.50	4.95	3.99	0.00	5.50	4.95
2004	Tecon Rio Grande	8.10	0.00	0.00	8.10	4.05	0.00	0.00	4.05
2001	Tecon Salvador	3.10	1.00	0.00	3.55	3.10	0.77	0.00	3.55
2003	Tecon Salvador	0.00	0.56	0.00	0.00	0.00	0.55	0.00	0.00
2004	TriBanco	10.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
2002	UP Offshore	11.60	9.51	0.00	30.00	0.00	2.51	0.00	0.00
2002	Unibanco	22.75	0.00	0.00	0.00	22.75	0.00	0.00	0.00
2004	Unibanco	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total portfolio:	1,032.02	215.23	179.24	390.88	558.38	177.89	175.94	324.33

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic.
2000	BBA	0.01	0.00	0.00	0.00
1999	Cibrasec	0.00	0.00	0.00	0.00
2006	Ipiranga II	0.00	0.00	0.00	0.10
2002	Banco Itau-BBA	0.00	0.00	0.00	0.10
2004	TermoFortaleza	0.06	0.00	0.01	0.11
2006	Suzano Petroquim	0.00	0.00	0.00	0.14
	Total pending commitment:	0.07	0.00	0.01	0.45

Mexico:

			Original Amount in US$ Millions						Difference between expected and actual disbursements	
Project ID	FY	Purpose	IBRD	IDA	SF	GEF	Cancel.	Undisb.	Orig.	Frm. Rev'd
P091695	2006	MX Modernization Water & Sanit Sector TA	25.00	0.00	0.00	0.00	0.19	24.81	0.00	0.00
P085593	2006	MX (APL I) Tertiary Educ Student Ass	180.00	0.00	0.00	0.00	0.00	180.00	9.49	0.00
P088732	2006	MX Access to Land for Young Farmers	100.00	0.00	0.00	0.00	0.75	99.25	14.00	0.00
P088728	2006	MX (APL1) School-Based Management Prog	240.00	0.00	0.00	0.00	0.00	240.00	12.00	0.00
P074755	2005	MX State Judicial Modernization Project	30.00	0.00	0.00	0.00	0.00	30.00	2.00	0.00
P085851	2005	MX Basic Education Dev Phase III	300.00	0.00	0.00	0.00	1.61	146.94	-76.46	0.00
P088080	2005	MX Housing & Urban Technical Assistance	7.77	0.00	0.00	0.00	0.00	7.64	3.02	0.00
P089865	2005	MX-(APL1) Innov. for Competitiveness	250.00	0.00	0.00	0.00	0.00	248.75	2.08	0.00
P087152	2004	MX (CRL1)Savings & Rurl Finance(BANSEFI)	75.50	0.00	0.00	0.00	0.38	37.30	-24.95	0.00
P035752	2004	MX Irrigation & Drainage Modernization	303.03	0.00	0.00	0.00	0.00	187.69	-4.34	0.00
P080149	2004	MX Decentralized Infrastructure Developm	108.00	0.00	0.00	0.00	0.00	79.73	4.07	0.00
P035751	2004	MX Community Forestry II (PROCYMAF II)	21.30	0.00	0.00	0.00	0.00	16.12	4.29	0.00
P070108	2003	MX Savings & Credit Sector Strengthening	64.60	0.00	0.00	0.00	0.00	18.01	7.88	0.00
P059161	2003	GEF MX-Climate Measures in Transport	0.00	0.00	0.00	5.80	0.00	2.15	5.53	0.00
P077602	2002	MX Tax Admin Institutional Development	52.00	0.00	0.00	0.00	0.00	13.14	9.10	0.00
P065988	2002	GEF MX Consolidat.Prot Areas (SINAP II)	0.00	0.00	0.00	16.10	0.00	4.08	15.38	0.00
P060908	2001	GEF MX-MESO AMERICAN CORRIDOR	0.00	0.00	0.00	14.84	0.00	12.02	10.61	4.42
P063463	2001	METHANE CAPTURE & USE AT A LANDFILL	0.00	0.00	0.00	6.27	0.00	0.08	6.27	6.06
P065779	2001	MX FEDERAL HIGHWAY MAINTENANCE PROJ.	218.00	0.00	0.00	0.00	0.00	5.73	5.73	0.00
P066321	2001	MX: III BASIC HEALTH CARE PROJECT	350.00	0.00	0.00	0.00	0.00	266.67	167.87	16.89
P066674	2001	GEF MX-Indigenous&Community	0.00	0.00	0.00	7.50	0.00	3.19	6.34	0.00

		Biodiversity								
P060718	2000	GEF MX ALTERNATIVE ENERGY	0.00	0.00	0.00	8.90	0.00	0.37	8.90	7.98
P049895	1998	MX HIGHER ED. FINANCING	180.20	0.00	0.00	0.00	0.00	23.20	25.52	0.00
		Total:	2,505.40	0.00	0.00	59.41	2.93	1,646.87	214.33	35.35

MEXICO
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
1998	Ayvi	3.57	0.00	0.00	0.00	3.57	0.00	0.00	0.00
	BBVA-Bancomer	16.04	0.00	0.00	0.00	16.04	0.00	0.00	0.00
1995	Baring MexFnd	0.00	1.14	0.00	0.00	0.00	1.14	0.00	0.00
1999	Baring MexFnd	0.00	1.41	0.00	0.00	0.00	1.41	0.00	0.00
1998	CIMA Puebla	3.25	0.00	0.00	0.00	3.25	0.00	0.00	0.00
2005	CMPDH	14.50	0.00	0.00	0.00	10.00	0.00	0.00	0.00
2006	Carlyle Mexico	0.00	20.00	0.00	0.00	0.00	8.08	0.00	0.00
	Chiapas-Propalma	0.00	0.97	0.00	0.00	0.00	0.97	0.00	0.00
2001	Compartamos	1.00	0.66	0.00	0.00	1.00	0.66	0.00	0.00
2004	Compartamos	16.03	0.00	0.00	0.00	16.03	0.00	0.00	0.00
2002	Coppel	27.86	0.00	0.00	0.00	27.86	0.00	0.00	0.00
2005	Coppel	35.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	Corsa	4.64	3.00	0.00	0.00	4.64	3.00	0.00	0.00
2005	Credito y Casa	21.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	DTM	19.17	0.00	0.00	0.00	19.17	0.00	0.00	0.00
2001	Ecomex	4.25	0.00	0.25	0.00	2.25	0.00	0.25	0.00
2000	Educacion	5.41	0.00	0.00	0.00	3.81	0.00	0.00	0.00
2005	FINEM	15.56	0.71	0.00	0.00	0.00	0.00	0.00	0.00
1997	Fondo Chiapas	0.00	3.14	0.00	0.00	0.00	0.00	0.00	0.00
1998	Forja Monterrey	4.64	3.00	0.00	4.64	4.64	3.00	0.00	4.64
2001	GFNorte	97.81	0.00	0.00	0.00	47.81	0.00	0.00	0.00
1996	GIBSA	8.11	0.00	0.00	27.29	8.11	0.00	0.00	27.29
1996	GIRSA	0.00	0.00	0.71	0.00	0.00	0.00	0.71	0.00
2000	GIRSA	25.71	0.00	0.00	34.29	25.71	0.00	0.00	34.29
2005	GMAC Financiera	124.18	0.00	0.00	0.00	10.14	0.00	0.00	0.00
1998	Grupo Calidra	5.33	6.00	0.00	1.67	5.33	6.00	0.00	1.67
2004	Grupo Calidra	23.41	0.00	0.00	0.00	22.67	0.00	0.00	0.00
1989	Grupo FEMSA	0.00	0.02	0.00	0.00	0.00	0.02	0.00	0.00
1997	Grupo Minsa	4.77	0.00	0.00	7.16	4.77	0.00	0.00	7.16
1996	Grupo Posadas	1.60	4.77	0.00	0.00	0.00	4.77	0.00	0.00
1999	Grupo Posadas	0.00	0.00	10.00	0.00	0.00	0.00	10.00	0.00
1998	Grupo Sanfandila	4.58	0.00	0.00	1.50	4.58	0.00	0.00	1.50
	Grupo Su Casita	0.00	8.85	0.00	0.00	0.00	8.85	0.00	0.00

2000	Innopack	0.00	15.00	0.00	0.00	0.00	15.00	0.00	0.00
	Interoyal	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
2003	Lomas de Real	50.05	0.00	20.00	101.25	48.76	0.00	20.00	101.25
1998	Merida III	25.44	0.00	0.00	54.76	25.44	0.00	0.00	54.76
2003	Mexmal	0.00	0.00	1.30	0.00	0.00	0.00	1.30	0.00
1995	Mexplus Puertos	0.00	0.55	0.00	0.00	0.00	0.55	0.00	0.00
1999	Mexplus Puertos	0.00	0.25	0.00	0.00	0.00	0.25	0.00	0.00
1999	NEMAK	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
2003	Occidental Mex	26.40	0.00	0.00	35.20	26.40	0.00	0.00	35.20
	Occihol	0.00	9.99	0.00	0.00	0.00	9.99	0.00	0.00
2003	POLOMEX S.A.	5.29	0.00	0.00	0.00	5.29	0.00	0.00	0.00
2000	Pan American	0.00	3.19	0.00	0.00	0.00	3.19	0.00	0.00
2002	Puertas Finas	9.75	0.00	0.00	0.00	9.75	0.00	0.00	0.00
2002	Qualita	0.00	0.00	3.50	0.00	0.00	0.00	3.50	0.00
2000	Rio Bravo	44.88	0.00	0.00	49.83	44.88	0.00	0.00	49.83
2004	SSA Mexico	45.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00
2000	Saltillo S.A.	31.69	0.00	0.00	36.02	31.69	0.00	0.00	36.02
2000	Servicios	6.37	1.52	0.00	5.54	6.37	1.52	0.00	5.54
2004	Su Casita	16.97	0.00	0.00	0.00	16.97	0.00	0.00	0.00
2005	Su Casita	52.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	TMA	1.24	0.00	3.16	4.29	1.24	0.00	3.16	4.29
2003	TMWC	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2005	UNITEC	31.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	Valle Hermoso	51.75	0.00	20.00	106.35	51.16	0.00	20.00	106.35
	ZN Mexico II	0.00	10.00	0.00	0.00	0.00	8.43	0.00	0.00
1998	ZN Mxc Eqty Fund	0.00	1.69	0.00	0.00	0.00	1.69	0.00	0.00
	Total portfolio:	889.38	95.87	58.93	469.79	554.33	78.53	58.92	469.79

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic.
2001	Ecomex	0.00	0.00	0.00	0.00
2003	Mexmal	0.00	0.00	0.01	0.00
2003	Polomex	0.00	0.00	0.00	0.00
2005	Coppel II	0.01	0.00	0.01	0.00
2000	Educacion	0.00	0.00	0.00	0.00
2001	GFNorte-CL	0.00	0.00	0.00	0.10
2005	Centro Espanol	0.01	0.00	0.00	0.00
2006	Mexico MBS CEF	0.03	0.00	0.00	0.00
2005	Pan American 2	0.00	0.00	0.00	0.00
2005	Sanfandila (R)	0.00	0.00	0.00	0.01
1998	Cima Hermosillo	0.00	0.00	0.01	0.00
	Total pending commitment:	0.05	0.00	0.03	0.11

Colombia:

Project ID	FY	Purpose	Original Amount in US$ Millions				Cancel.	Undisb.	Difference between expected and actual disbursements	
			IBRD	IDA	SF	GEF			Orig.	Frm. Rev'd
P089443	2006	CO Social Safety Net Project	86.40	0.00	0.00	0.00	0.00	86.40	0.01	0.00
P082520	2006	CO Sustainable Development Inv Project	7.00	0.00	0.00	0.00	0.00	7.00	0.00	0.00
P088857	2005	CO (CRL2) TAL to support the 2nd PSAL	2.00	0.00	0.00	0.00	0.00	1.77	0.84	0.00
P082973	2005	CO APL1-Water & Sanit. Sector Support	70.00	0.00	0.00	0.00	0.00	70.00	17.33	0.00
P082429	2005	CO-(APL1)Disaster VulnerabilityReduction	260.00	0.00	0.00	0.00	0.00	259.87	1.15	0.00
P082167	2005	CO Agricultural Transition Project	30.00	0.00	0.00	0.00	0.00	27.00	-2.44	0.00
P051306	2004	CO 1st APL PEACE AND DEV	30.00	0.00	0.00	0.00	0.00	25.54	9.70	0.00
P082466	2004	CO Integrated Mass Transit Systems	250.00	0.00	0.00	0.00	0.00	178.00	-8.00	0.00
P077757	2004	CO: CUND/MARCA EDUCATION QUALITY IMPROVE	15.00	0.00	0.00	0.00	0.00	12.75	4.05	0.00
P074726	2003	CO Bogota Urban Services Project	100.00	0.00	0.00	0.00	0.00	55.12	35.45	0.00
P074138	2003	CO-Higher Education - Improving Access	200.00	0.00	0.00	0.00	0.00	118.89	16.01	0.00
P041642	2002	CO PRODUCTIVE PARTNERSHIPS	32.00	0.00	0.00	0.00	10.00	11.64	13.01	0.36
P065937	2002	CO WATER SECTOR REF ASSISTANCE PROJECT	40.00	0.00	0.00	0.00	0.00	22.29	21.04	0.00
P057369	2002	CO Judicial Resolution Improvement Prj.	5.00	0.00	0.00	0.00	1.10	1.03	2.50	1.40
P063317	2001	GEF CO-HIGH ANDES	0.00	0.00	0.00	15.00	0.00	5.41	13.03	0.00
P040109	2001	CO PUBLIC FINANC. MANAGEMENT PROJECT II	35.47	0.00	0.00	0.00	0.00	19.13	19.13	0.00
P057326	2000	CO SIERRA NEVADA SUSTAINABLE DEVELOPMEN	5.00	0.00	0.00	0.00	0.00	0.35	0.33	-0.42
P050578	2000	CO RURAL EDUCATION	20.00	0.00	0.00	0.00	0.00	5.37	5.37	0.00
P044140	2000	CO CARTAGENA WTR SUPPLY & SEWERAGE ENV.	85.00	0.00	0.00	0.00	0.00	43.39	43.39	0.00
		Total:	1,272.87	0.00	0.00	15.00	11.10	950.95	191.90	1.34

COLOMBIA
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

FY Approval	Company	Committed				Disbursed			
		IFC				IFC			
		Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
2003	AAA	18.24	0.00	0.00	0.00	18.24	0.00	0.00	0.00
2002	BCSC	0.00	7.00	0.00	0.00	0.00	7.00	0.00	0.00
2002	Bavaria	0.00	30.00	0.00	0.00	0.00	30.00	0.00	0.00
2001	CHMC	24.73	8.85	2.16	0.00	4.28	4.02	2.16	0.00
2004	Cartones America	20.73	0.00	0.00	0.00	18.73	0.00	0.00	0.00
2004	Carvajal S.A.	35.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00

2001	Cementos Caribe	2.70	0.00	0.00	5.18	2.70	0.00	0.00	5.18
	Corfinversiones	0.00	3.56	0.00	0.00	0.00	3.56	0.00	0.00
2003	DAVIVIENDA I	20.23	0.00	0.00	0.00	20.23	0.00	0.00	0.00
2002	Inversura	0.00	15.00	0.00	0.00	0.00	15.00	0.00	0.00
2002	Omimex Oil	22.50	0.00	5.00	0.00	3.20	0.00	5.00	0.00
1996	Promigas	0.63	0.00	0.00	0.00	0.63	0.00	0.00	0.00
2002	Proteccion	0.00	10.00	0.00	0.00	0.00	10.00	0.00	0.00
	SIE	0.00	0.20	0.00	0.00	0.00	0.20	0.00	0.00
2002	SIG	49.00	0.00	0.00	0.00	49.00	0.00	0.00	0.00
	Total portfolio:	193.76	74.61	22.16	5.18	117.01	69.78	7.16	5.18

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic.
2001	CHMC	0.00	0.02	0.00	0.00
2004	Bancafe	0.00	0.02	0.00	0.00
2003	DAVIVIENDA I	0.00	0.00	0.01	0.00
2004	Carvajal S.A.	0.00	0.00	0.02	0.00
2005	Colpatria Tier 2	0.02	0.02	0.00	0.00
2006	WWB Facility COL	0.02	0.00	0.00	0.00
	Total pending commitment:	0.04	0.06	0.03	0.00

Costa Rica:

			Original Amount in US$ Millions						Difference between expected and actual disbursements	
Project ID	FY	Purpose	IBRD	IDA	SF	GEF	Cancel.	Undisb.	Orig.	Frm. Rev'd
P057857	2005	CR EQUITY AND EFFICIENCY OF EDUCATION	30.00	0.00	0.00	0.00	0.00	30.00	1.17	0.00
P073892	2002	CR-Health Sector Strengthening & Moderni	17.00	0.00	0.00	0.00	3.00	12.42	12.85	10.63
P052009	2000	CR ECOMARKETS	32.63	0.00	0.00	0.00	0.00	4.10	4.10	0.00
P061314	2000	GEF CR-ECOMARKETS	0.00	0.00	0.00	8.00	0.00	0.63	8.00	0.00
		Total:	79.63	0.00	0.00	8.00	3.00	47.15	26.12	10.63

COSTA RICA
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
2001	Aeropuerto IJS	33.29	0.00	0.00	78.64	24.62	0.00	0.00	57.57
2005	Banco Banex	40.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00
2003	Cuscatlan Costa	0.00	0.00	5.00	0.00	0.00	0.00	5.00	0.00
2002	Gutis	7.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00
1994	Hidrozarcas	0.00	0.00	0.65	0.00	0.00	0.00	0.65	0.00
2001	INTERFIN	8.75	0.00	0.00	0.00	8.75	0.00	0.00	0.00
2004	INTERFIN	15.00	0.00	5.00	0.00	15.00	0.00	5.00	0.00
1999	Superunidos	19.38	0.00	0.00	0.00	6.38	0.00	0.00	0.00
	Total portfolio:	123.42	0.00	10.65	78.64	80.75	0.00	10.65	57.57

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic.
	Total pending commitment:	0.00	0.00	0.00	0.00

Peru:

			Original Amount in US$ Millions						Difference between expected and actual disbursements	
Project ID	FY	Purpose	IBRD	IDA	SF	GEF	Cancel.	Undisb.	Orig.	Frm. Rev'd
P088809	2005	PE Inst. Capacity for Decent. TAL	8.80	0.00	0.00	0.00	0.00	8.64	0.13	0.00
P082625	2005	PE Vilcanota Valley Rehab & Mgmt Project	4.98	0.00	0.00	0.00	0.00	4.98	0.00	0.00
P082588	2005	PE (APL2)Agric Research and Extension	25.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00
P078953	2005	PE-(CRL1)ACCOUNT. F/ DECENT. SOC.SCTR	7.80	0.00	0.00	0.00	0.00	6.22	-1.58	0.00
P074021	2004	PE LIMA TRANSPORT PROJECT	0.00	0.00	0.00	7.93	0.00	7.52	8.23	0.00
P073438	2004	PE Justice Services Improvement	12.00	0.00	0.00	0.00	0.00	12.00	7.75	0.00
P035740	2004	PE LIMA TRANSPORT PROJECT	45.00	0.00	0.00	0.00	0.00	42.88	42.88	0.00
P068250	2003	GEF PE PARTICIPATORY MGMT PROT AREAS	0.00	0.00	0.00	14.80	0.00	10.39	2.26	0.00
P065256	2003	PE NATIONAL RURAL WATER SUPPLY AND	50.00	0.00	0.00	0.00	0.00	47.42	18.92	0.00
P077788	2003	PE Trade Facil. and Prod. Improv. T. A.	20.00	0.00	0.00	0.00	0.00	18.97	9.97	0.00
P081834	2003	PE Lima Water Rehab Add'l Financing	20.00	0.00	0.00	0.00	0.00	19.30	9.45	0.00

P055232	2003	PE- Rural Education	52.50	0.00	0.00	0.00	0.00	48.49	1.49	0.00
P065200	2001	GEF PE Indigenous Management Prot. Areas	0.00	0.00	0.00	10.00	0.00	4.46	1.28	0.00
P044601	2001	PE SECOND RURAL ROADS PROJECT	50.00	0.00	0.00	0.00	0.00	19.22	14.82	0.00
P062932	2000	PE-HEALTH REFORM PROGRAM	80.00	0.00	0.00	0.00	0.00	8.90	-18.10	-18.10
		Total:	376.08	0.00	0.00	32.73	0.00	284.39	97.50	- 18.10

PERU
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
2000	Agrokasa	3.60	0.00	0.00	0.00	3.60	0.00	0.00	0.00
1999	Alicorp	0.00	0.00	20.00	0.00	0.00	0.00	20.00	0.00
2005	Corp. Drokasa	7.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	EDYFICAR	3.00	0.00	0.00	0.00	1.50	0.00	0.00	0.00
2002	FTSA	7.50	0.00	1.50	0.00	7.50	0.00	1.50	0.00
2003	Global MEF	0.00	0.00	4.00	0.00	0.00	0.00	0.50	0.00
2002	Gloria	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002/03	ISA Peru, SA	0.20	0.00	0.00	0.00	0.12	0.00	0.00	0.00
2001	Inka Terra	5.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00
2004	Interbank-Peru	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002/03/05	Interseguro	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00
2000/04	Laredo	0.30	0.00	0.00	0.00	0.08	0.00	0.00	0.00
1998	Latino Leasing	2.01	0.00	0.00	0.00	2.01	0.00	0.00	0.00
2002	MIBANCO	1.33	0.00	0.00	0.00	1.33	0.00	0.00	0.00
1999	Milkito	5.50	0.00	3.50	0.00	3.50	0.00	3.50	0.00
2005	Miraflores	10.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00
2003	Norvial S.A.	18.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1998	Paramonga	13.01	0.00	0.00	10.98	13.01	0.00	0.00	10.98
2001	Peru OEH	9.40	0.00	0.00	0.00	5.40	0.00	0.00	0.00
1994	Peru Prvtzn Fund	0.00	7.90	0.00	0.00	0.00	7.90	0.00	0.00
1993/96/00/01	Quellaveco	0.00	0.75	0.00	0.00	0.00	0.72	0.00	0.00
1999	RANSA	6.25	0.00	0.00	0.00	6.25	0.00	0.00	0.00
2003	TIM Peru	70.00	0.00	0.00	0.00	70.00	0.00	0.00	0.00
2001	Tecnofil S.A.	4.50	2.00	0.00	0.00	4.50	2.00	0.00	0.00
2001	UPC	5.50	0.00	0.00	0.00	5.50	0.00	0.00	0.00
2005	USMP	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1993/99	Yanacocha	10.00	0.00	0.00	20.00	10.00	0.00	0.00	20.00
	Total portfolio:	256.60	11.25	29.00	30.98	149.30	10.62	25.50	30.98

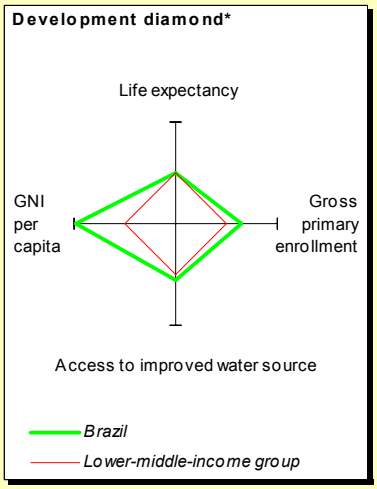
		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic.
2004	CMAC Arequipa	0.01	0.00	0.00	0.00
2005	Drokasa PCG	0.00	0.00	0.00	0.00
2004	EDYFICAR	0.00	0.00	0.00	0.00
2004	UPC II	0.00	0.00	0.00	0.00
	Total pending commitment:	0.01	0.00	0.00	0.00

Annex 14: Countries at a Glance

LATIN AMERICA: Regional Capacity-Building in Biosafety

A. Brazil

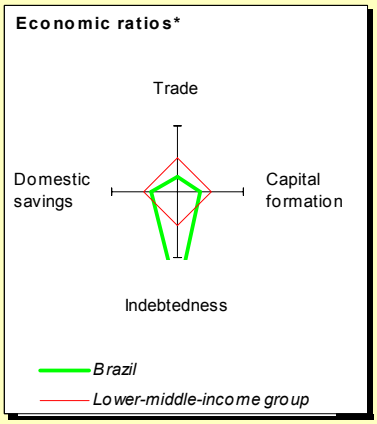
POVERTY and SOCIAL	Brazil	Latin America & Carib.	Lower-middle-income
2004			
Population, mid-year *(millions)*	178.7	541	2,430
GNI per capita *(Atlas method, US$)*	3,090	3,600	1,580
GNI *(Atlas method, US$ billions)*	552.7	1,948	3,847
Average annual growth, 1998-04			
Population *(%)*	1.2	1.4	1.0
Labor force *(%)*	1.5	0.9	0.7
Most recent estimate (latest year available, 1998-04)			
Poverty *(% of population below national poverty line)*	22	..	..
Urban population *(% of total population)*	83	77	49
Life expectancy at birth *(years)*	69	71	70
Infant mortality *(per 1,000 live births)*	33	28	33
Child malnutrition *(% of children under 5)*	..	..	11
Access to an improved water source *(% of population)*	89	89	81
Literacy *(% of population age 15+)*	86	89	90
Gross primary enrollment *(% of school-age population)*	148	123	114
Male	153	126	115
Female	144	122	113



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

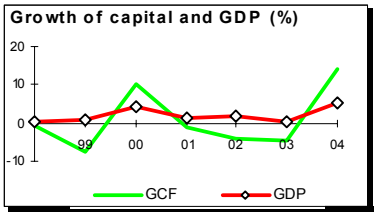
	1984	1994	2003	2004
GDP *(US$ billions)*	209.0	546.2	505.7	604.0
Gross capital formation/GDP	15.7	22.1	19.8	21.3
Exports of goods and services/GDP	13.5	9.5	16.4	18.0
Gross domestic savings/GDP	21.4	22.5	23.4	25.8
Gross national savings/GDP	..	21.3	20.4	25.8
Current account balance/GDP	-0.1	-0.3	0.8	1.9
Interest payments/GDP	4.5	1.1	2.9	2.1
Total debt/GDP	49.7	27.9	46.6	35.2
Total debt service/exports	45.4	31.2	65.2	45.4
Present value of debt/GDP	..	..	50.2	..
Present value of debt/exports	..	..	292.1	..

	1984-94	1994-04	2003	2004	2004-08
(average annual growth)					
GDP	2.0	2.1	0.5	5.2	3.5
GDP per capita	0.2	0.8	-0.7	4.0	2.4
Exports of goods and services	6.1	8.7	7.9	18.0	1.9



STRUCTURE of the ECONOMY

	1984	1994	2003	2004
(% of GDP)				
Agriculture	11.5	9.9	10.2	10.4
Industry	45.7	40.0	39.9	40.0
Manufacturing	33.9	23.7	11.1	..
Services	42.8	50.2	50.0	49.6
Household final consumption expenditure	70.4	59.6	56.7	55.4
General gov't final consumption expenditure	8.3	17.9	19.9	18.8
Imports of goods and services	7.9	9.2	12.8	13.4



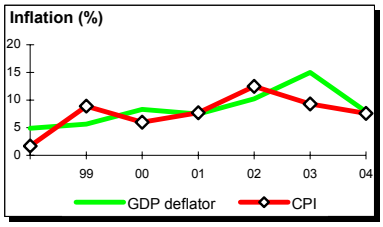
	1984-94	1994-04	2003	2004
(average annual growth)				
Agriculture	2.2	4.1	5.5	5.3
Industry	0.7	1.6	-1.0	6.2
Manufacturing	-0.7	1.2	2.7	..
Services	2.6	1.7	-0.7	-5.5
Household final consumption expenditure	1.3	1.0	-3.3	4.3
General gov't final consumption expenditure	4.8	2.8	12.7	0.7
Gross capital formation	3.7	0.8	-4.5	14.3
Imports of goods and services	7.1	2.0	-1.9	14.3

Note: 2004 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

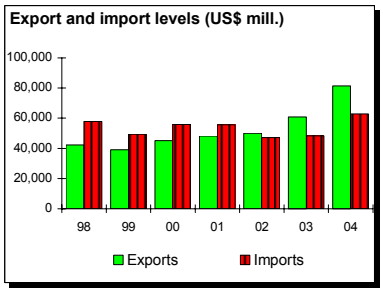
PRICES and GOVERNMENT FINANCE

	1984	1994	2003	2004
Domestic prices				
(% change)				
Consumer prices	192.1	2,075.9	9.3	7.6
Implicit GDP deflator	212.8	2,239.1	15.0	7.9
Government finance				
(% of GDP, includes current grants)				
Current revenue	9.1	18.6	23.7	..
Current budget balance	-1.4	-15.8	3.0	..
Overall surplus/deficit	-1.9	..	3.8	..



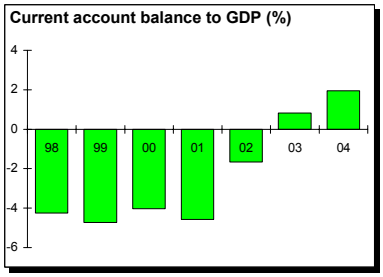
TRADE

	1984	1994	2003	2004
(US$ millions)				
Total exports (fob)	27,004	43,545	60,832	81,466
Coffee	1,771	2,500	3,456	4,759
Soybeans	2,570	4,135	4,290	5,395
Manufactures	14,530	27,891	39,653	52,948
Total imports (cif)	13,917	33,079	48,291	62,809
Food	..	2,014	924	1,058
Fuel and energy	7,345	2,339	6,579	10,317
Capital goods	2,151	12,690	10,350	12,132
Export price index *(2000=100)*	85	99	97	108
Import price index *(2000=100)*	45	70	76	90
Terms of trade *(2000=100)*	188	141	128	120



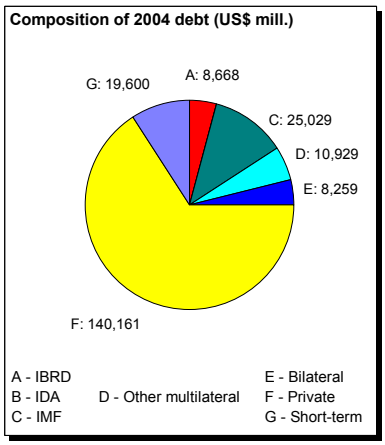
BALANCE of PAYMENTS

	1984	1994	2003	2004
(US$ millions)				
Exports of goods and services	28,938	46,702	83,531	109,059
Imports of goods and services	17,595	40,131	63,668	80,069
Resource balance	11,343	6,571	19,863	28,990
Net income	-11,472	-10,848	-18,552	-20,520
Net current transfers	10	2,588	2,867	3,268
Current account balance	-119	-1,689	4,178	11,738
Financing items (net)	5,488	9,037	-15,651	-15,377
Changes in net reserves	-5,369	-7,348	11,473	3,639
Memo:				
Reserves including gold *(US$ millions)*	11,995	38,806	49,296	52,935
Conversion rate *(DEC, local/US$)*	6.72E-10	0.6	3.1	2.9



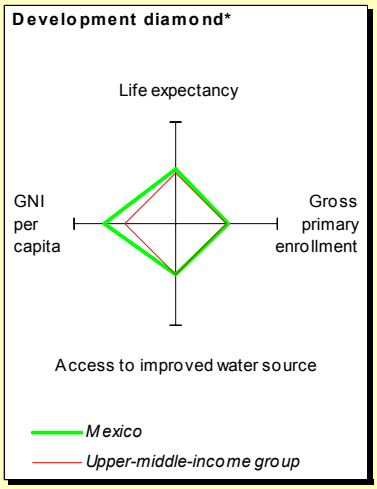
EXTERNAL DEBT and RESOURCE FLOWS

	1984	1994	2003	2004
(US$ millions)				
Total debt outstanding and disbursed	103,863	152,433	235,431	212,646
IBRD	3,969	6,311	8,588	8,668
IDA	0	0	0	0
Total debt service	13,710	15,940	56,718	50,992
IBRD	669	1,883	2,010	1,843
IDA	0	0	0	0
Composition of net resource flows				
Official grants	41	69	82	..
Official creditors	1,536	-2,293	-2,272	-2,788
Private creditors	4,550	4,671	316	-17,738
Foreign direct investment (net inflows)	1,594	3,072	10,144	..
Portfolio equity (net inflows)	0	7,280	2,973	..
World Bank program				
Commitments	306	1,024	1,150	1,215
Disbursements	1,300	640	1,291	1,447
Principal repayments	332	1,346	1,633	1,564
Net flows	968	-706	-342	-116
Interest payments	338	537	377	280
Net transfers	631	-1,242	-719	-396



B. Mexico

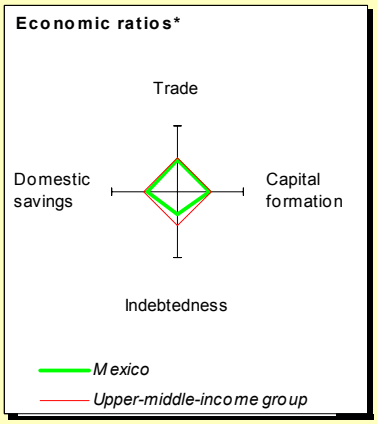
POVERTY and SOCIAL	Mexico	Latin America & Carib.	Upper-middle-income
2004			
Population, mid-year *(millions)*	103.8	541	576
GNI per capita *(Atlas method, US$)*	6,790	3,600	4,770
GNI *(Atlas method, US$ billions)*	704.9	1,948	2,748
Average annual growth, 1998-04			
Population *(%)*	1.4	1.4	0.8
Labor force *(%)*	2.5	0.9	-0.9
Most recent estimate (latest year available, 1998-04)			
Poverty *(% of population below national poverty line)*	18	..	..
Urban population *(% of total population)*	76	77	72
Life expectancy at birth *(years)*	74	71	69
Infant mortality *(per 1,000 live births)*	23	28	24
Child malnutrition *(% of children under 5)*	8	..	..
Access to an improved water source *(% of population)*	91	89	93
Literacy *(% of population age 15+)*	90	89	91
Gross primary enrollment *(% of school-age population)*	110	123	106
Male	111	126	108
Female	110	122	106



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

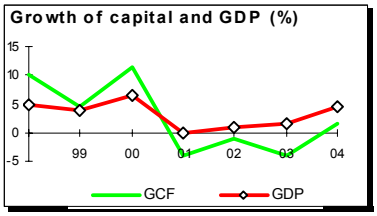
	1984	1994	2003	2004
GDP *(US$ billions)*	175.6	421.7	639.1	676.5
Gross capital formation/GDP	19.9	21.9	20.6	21.3
Exports of goods and services/GDP	17.4	16.8	27.8	30.1
Gross domestic savings/GDP	27.7	17.1	19.0	19.9
Gross national savings/GDP	22.7	14.9	19.3	20.8
Current account balance/GDP	2.4	-7.0	-1.3	-1.1
Interest payments/GDP	6.4	2.1	1.8	1.6
Total debt/GDP	54.0	32.9	22.0	20.8
Total debt service/exports	45.1	25.7	17.6	15.0
Present value of debt/GDP	..	..	24.6	..
Present value of debt/exports	..	..	80.7	..

	1984-94	1994-04	2003	2004	2004-08
(average annual growth)					
GDP	2.7	3.3	1.4	4.4	3.0
GDP per capita	0.8	1.8	-0.1	2.9	1.6
Exports of goods and services	6.0	9.6	2.7	11.5	4.1



STRUCTURE of the ECONOMY

	1984	1994	2003	2004
(% of GDP)				
Agriculture	9.4	6.0	3.9	4.1
Industry	34.9	26.8	25.8	26.4
Manufacturing	22.7	18.7	18.0	18.1
Services	55.7	67.2	70.3	69.5
Household final consumption expenditure	63.1	71.4	68.6	68.5
General gov't final consumption expenditure	9.2	11.5	12.4	11.7
Imports of goods and services	9.6	21.6	29.5	31.9



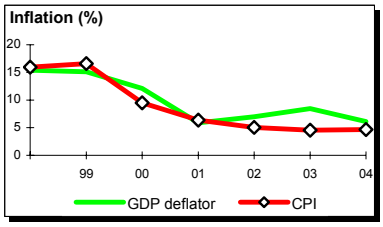
	1984-94	1994-04	2003	2004
(average annual growth)				
Agriculture	0.8	1.9	3.5	4.0
Industry	3.3	3.3	-0.2	3.8
Manufacturing	3.5	3.6	-1.3	3.8
Services	2.7	3.3	1.9	4.6
Household final consumption expenditure	3.6	3.7	2.3	5.5
General gov't final consumption expenditure	2.2	1.2	0.8	-1.2
Gross capital formation	5.6	4.8	-4.2	1.5
Imports of goods and services	14.8	10.6	0.7	10.2

Note: 2004 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

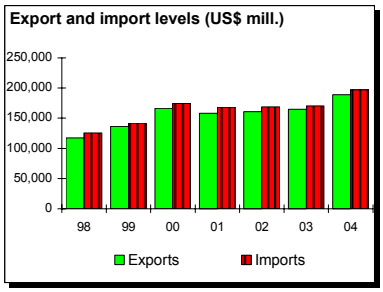
PRICES and GOVERNMENT FINANCE

	1984	1994	2003	2004
Domestic prices				
(% change)				
Consumer prices	65.4	7.0	4.5	4.7
Implicit GDP deflator	59.1	8.5	8.5	6.1
Government finance				
(% of GDP, includes current grants)				
Current revenue	31.2	22.7	23.2	23.2
Current budget balance	-1.2	3.3	2.2	3.1
Overall surplus/deficit	-6.4	-0.3	-0.7	-0.3



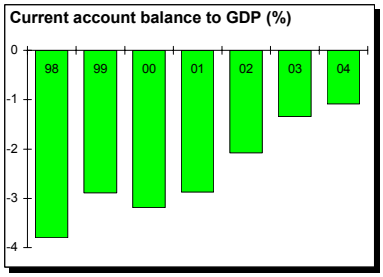
TRADE

	1984	1994	2003	2004
(US$ millions)				
Total exports (fob)	29,100	60,882	164,923	189,159
Oil	16,601	7,445	18,654	23,706
Agriculture	1,461	2,678	4,664	5,421
Manufactures	10,499	50,402	141,087	159,093
Total imports (cif)	15,916	79,346	170,546	197,247
Food	..	..	..	..
Fuel and energy	..	..	..	..
Capital goods	2,573	13,322	20,205	22,599
Export price index *(2000=100)*	114	90	105	117
Import price index *(2000=100)*	77	93	103	108
Terms of trade *(2000=100)*	148	97	102	108



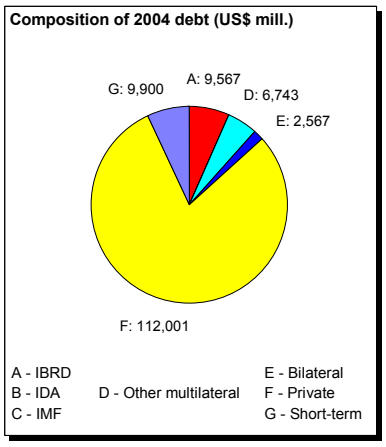
BALANCE of PAYMENTS

	1984	1994	2003	2004
(US$ millions)				
Exports of goods and services	33,926	71,184	177,299	201,911
Imports of goods and services	21,028	91,616	187,680	215,372
Resource balance	12,898	-20,432	-10,380	-13,460
Net income	-10,076	-13,012	-12,082	-10,938
Net current transfers	1,361	3,782	13,858	17,044
Current account balance	4,183	-29,662	-8,604	-7,355
Financing items (net)	-2,034	12,463	18,437	11,416
Changes in net reserves	-2,149	17,199	-9,833	-4,061
Memo:				
Reserves including gold *(US$ millions)*	7,355	6,300	59,027	64,204
Conversion rate *(DEC, local/US$)*	0.2	3.4	10.8	11.3



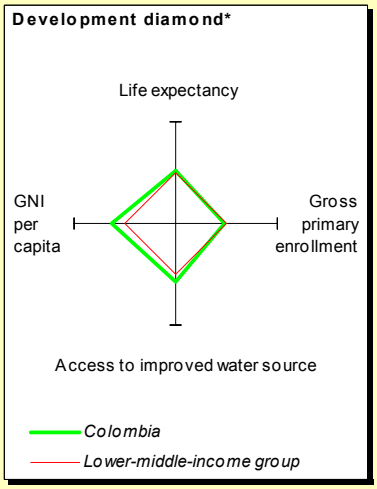
EXTERNAL DEBT and RESOURCE FLOWS

	1984	1994	2003	2004
(US$ millions)				
Total debt outstanding and disbursed	94,830	138,545	140,391	140,778
IBRD	2,852	13,038	10,717	9,567
IDA	0	0	0	0
Total debt service	16,960	20,076	34,279	33,568
IBRD	485	1,989	1,972	2,499
IDA	0	0	0	0
Composition of net resource flows				
Official grants	27	47	..	..
Official creditors	832	-583	-372	-182
Private creditors	791	5,296	-418	1,578
Foreign direct investment (net inflows)	390	10,973	12,625	17,377
Portfolio equity (net inflows)	0	4,084	..	..
World Bank program				
Commitments	576	2,380	888	621
Disbursements	682	942	1,258	767
Principal repayments	253	1,065	1,359	1,976
Net flows	430	-123	-101	-1,209
Interest payments	233	924	613	524
Net transfers	197	-1,046	-714	-1,733



C. Colombia

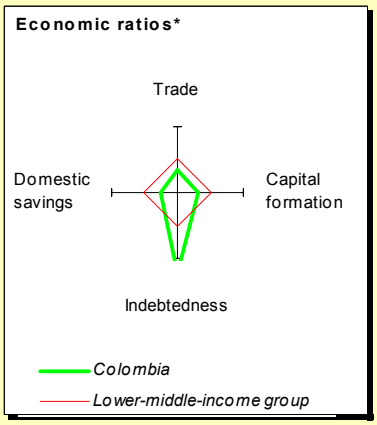
POVERTY and SOCIAL	Colombia	Latin America & Carib.	Lower-middle-income
2004			
Population, mid-year *(millions)*	45.3	541	2,430
GNI per capita *(Atlas method, US$)*	2,010	3,600	1,580
GNI *(Atlas method, US$ billions)*	90.9	1,948	3,847
Average annual growth, 1998-04			
Population *(%)*	1.7	1.4	1.0
Labor force *(%)*	2.5	0.9	0.7
Most recent estimate (latest year available, 1998-04)			
Poverty *(% of population below national poverty line)*	52	..	..
Urban population *(% of total population)*	77	77	49
Life expectancy at birth *(years)*	72	71	70
Infant mortality *(per 1,000 live births)*	18	28	33
Child malnutrition *(% of children under 5)*	7	..	11
Access to an improved water source *(% of population)*	92	89	81
Literacy *(% of population age 15+)*	92	89	90
Gross primary enrollment *(% of school-age population)*	110	123	114
Male	111	126	115
Female	110	122	113



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

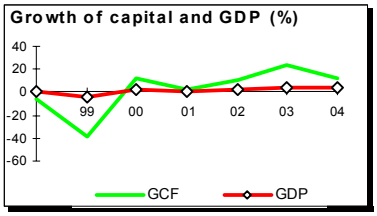
	1984	1994	2003	2004
GDP *(US$ billions)*	38.3	81.7	80.1	97.7
Gross capital formation/GDP	19.0	25.5	18.2	18.8
Exports of goods and services/GDP	11.9	15.0	20.4	20.8
Gross domestic savings/GDP	18.4	19.6	16.0	17.4
Gross national savings/GDP	15.2	21.2	15.8	16.8
Current account balance/GDP	-5.4	-4.5	-1.7	-1.2
Interest payments/GDP	2.5	2.1	3.1	2.5
Total debt/GDP	31.5	26.9	46.2	38.6
Total debt service/exports	33.8	45.3	53.7	39.0
Present value of debt/GDP	..	..	45.3	..
Present value of debt/exports	..	..	225.1	..

	1984-94	1994-04	2003	2004	2004-08
(average annual growth)					
GDP	4.3	1.6	4.1	4.1	4.0
GDP per capita	2.3	-0.3	2.4	2.5	2.5
Exports of goods and services	9.4	4.2	3.5	10.2	4.4



STRUCTURE of the ECONOMY

	1984	1994	2003	2004
(% of GDP)				
Agriculture	17.8	16.1	12.1	11.5
Industry	34.0	31.4	29.3	30.7
Manufacturing	22.6	16.1	14.2	14.3
Services	48.2	52.5	58.6	57.8
Household final consumption expenditure	70.6	65.7	63.4	62.2
General gov't final consumption expenditure	11.0	14.7	20.6	20.4
Imports of goods and services	12.5	20.9	22.7	22.3



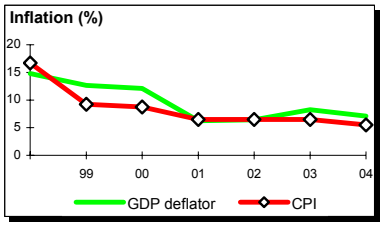
	1984-94	1994-04	2003	2004
(average annual growth)				
Agriculture	2.2	-0.2	2.5	1.5
Industry	4.2	-0.3	6.4	4.7
Manufacturing	2.4	0.2	3.5	4.2
Services	4.2	5.5	3.3	4.1
Household final consumption expenditure	4.1	1.0	2.4	4.0
General gov't final consumption expenditure	5.4	4.9	0.6	3.3
Gross capital formation	5.1	-3.2	23.6	12.4
Imports of goods and services	10.5	0.0	9.7	16.7

Note: 2004 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

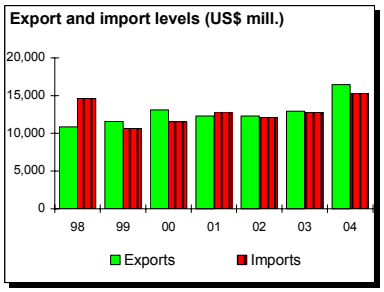
PRICES and GOVERNMENT FINANCE

	1984	1994	2003	2004
Domestic prices				
(% change)				
Consumer prices	16.0	22.6	6.5	5.5
Implicit GDP deflator	22.2	45.4	8.2	7.1
Government finance				
(% of GDP, includes current grants)				
Current revenue	7.8	11.6	13.7	14.4
Current budget balance	-1.2	1.5	-4.6	-4.9
Overall surplus/deficit	-2.6	-1.4	-5.3	-5.4



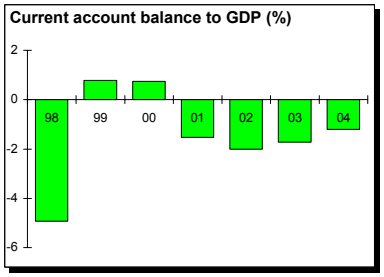
TRADE

	1984	1994	2003	2004
(US$ millions)				
Total exports (fob)	3,728	8,816	12,946	16,464
Coffee	1,765	1,990	809	949
Petroleum	480	1,313	3,383	4,180
Manufactures	638	2,803	4,924	6,616
Total imports (cif)	4,492	11,927	12,792	15,324
Food	207	923	1,417	1,554
Fuel and energy	468	308	239	262
Capital goods	1,587	5,072	3,671	4,110
Export price index *(2000=100)*	6	38	41	42
Import price index *(2000=100)*	6	37	41	39
Terms of trade *(2000=100)*	105	102	98	108



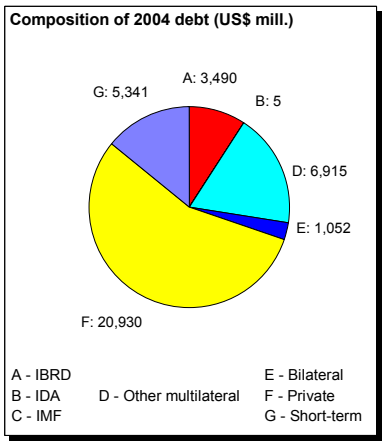
BALANCE of PAYMENTS

	1984	1994	2003	2004
(US$ millions)				
Exports of goods and services	4,557	10,630	14,845	18,700
Imports of goods and services	5,407	13,914	16,114	19,333
Resource balance	-850	-3,284	-1,269	-633
Net income	-1,537	-1,453	-3,446	-4,193
Net current transfers	309	1,069	3,333	3,647
Current account balance	-2,078	-3,668	-1,382	-1,179
Financing items (net)	2,470	3,474	1,566	-1,362
Changes in net reserves	-392	194	-184	2,541
Memo:				
Reserves including gold *(US$ millions)*	..	7,862	10,920	13,537
Conversion rate *(DEC, local/US$)*	100.8	826.5	2,877.7	2,628.6



EXTERNAL DEBT and RESOURCE FLOWS

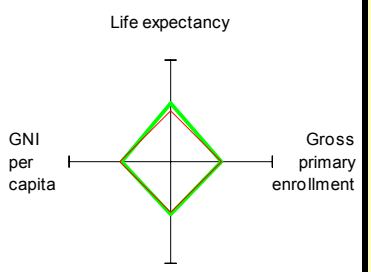
	1984	1994	2003	2004
(US$ millions)				
Total debt outstanding and disbursed	12,039	21,940	36,997	37,733
IBRD	1,578	2,629	3,241	3,490
IDA	19	12	5	5
Total debt service	1,623	5,570	8,645	7,863
IBRD	274	1,054	357	407
IDA	1	1	1	1
Composition of net resource flows				
Official grants	15	45	104	0
Official creditors	618	-467	2,052	84
Private creditors	748	2,284	-1,315	-1,297
Foreign direct investment (net inflows)	584	1,446	1,746	0
Portfolio equity (net inflows)	0	478	-52	0
World Bank program				
Commitments	740	159	1,115	582
Disbursements	462	310	987	455
Principal repayments	153	837	212	256
Net flows	308	-527	775	199
Interest payments	121	218	146	152
Net transfers	187	-745	629	47



D. Costa Rica

POVERTY and SOCIAL	Costa Rica	Latin America & Carib.	Upper-middle-income
2004			
Population, mid-year *(millions)*	4.1	541	576
GNI per capita *(Atlas method, US$)*	4,670	3,600	4,770
GNI *(Atlas method, US$ billions)*	19.0	1,948	2,748
Average annual growth, 1998-04			
Population *(%)*	1.8	1.4	0.8
Labor force *(%)*	2.3	0.9	-0.9
Most recent estimate (latest year available, 1998-04)			
Poverty *(% of population below national poverty line)*	..	..	..
Urban population *(% of total population)*	61	77	72
Life expectancy at birth *(years)*	79	71	69
Infant mortality *(per 1,000 live births)*	8	28	24
Child malnutrition *(% of children under 5)*	..	..	..
Access to an improved water source *(% of population)*	97	89	93
Literacy *(% of population age 15+)*	96	89	91
Gross primary enrollment *(% of school-age population)*	108	123	106
Male	108	126	108
Female	107	122	106

Development diamond*

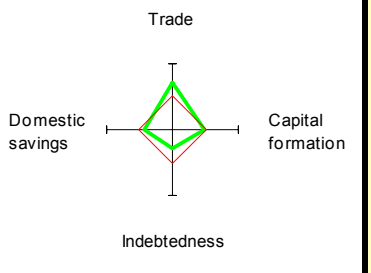


KEY ECONOMIC RATIOS and LONG-TERM TRENDS

	1984	1994	2003	2004
GDP *(US$ billions)*	3.7	10.6	17.5	18.4
Gross capital formation/GDP	22.7	20.0	20.1	20.8
Exports of goods and services/GDP	34.4	35.6	46.5	44.7
Gross domestic savings/GDP	23.1	14.5	18.2	18.8
Gross national savings/GDP	15.7	14.6	14.5	17.2
Current account balance/GDP	-7.7	-4.9	-5.5	-5.2
Interest payments/GDP	6.7	1.8	1.5	..
Total debt/GDP	109.3	37.0	31.0	..
Total debt service/exports	32.9	12.8	9.9	..
Present value of debt/GDP	..	..	33.4	..
Present value of debt/exports	..	..	68.4	..

	1984-94	1994-04	2003	2004	2004-08
(average annual growth)					
GDP	4.8	4.4	6.5	4.2	3.0
GDP per capita	2.0	2.4	4.9	2.7	1.6
Exports of goods and services	10.3	7.6	12.5	-4.8	6.0

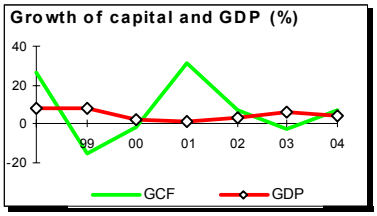
Economic ratios*



STRUCTURE of the ECONOMY

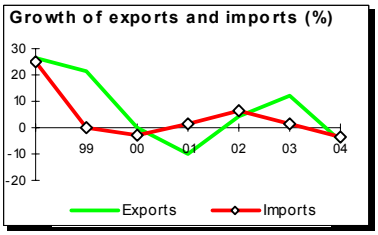
	1984	1994	2003	2004
(% of GDP)				
Agriculture	24.9	13.4	8.8	8.7
Industry	34.5	29.6	28.7	28.5
Manufacturing	26.4	21.7	21.2	21.0
Services	40.6	57.1	62.5	62.8
Household final consumption expenditure	61.3	71.7	67.3	71.4
General gov't final consumption expenditure	15.6	13.8	14.5	9.7
Imports of goods and services	34.0	41.1	48.5	46.7

Growth of capital and GDP (%)



	1984-94	1994-04	2003	2004
(average annual growth)				
Agriculture	4.1	3.0	7.4	2.8
Industry	4.4	5.0	8.0	3.3
Manufacturing	4.5	5.1	8.7	3.3
Services	5.1	4.5	5.8	3.7
Household final consumption expenditure	4.8	2.9	2.9	3.4
General gov't final consumption expenditure	2.3	2.2	-0.2	8.1
Gross capital formation	8.9	6.2	-2.6	6.8
Imports of goods and services	10.5	5.3	1.7	-3.3

Growth of exports and imports (%)



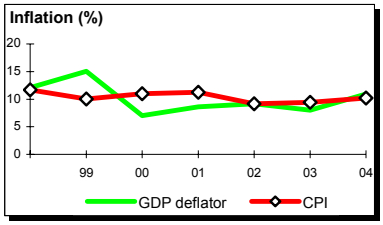
Note: 2004 data are preliminary estimates.

This table was produced from the Development Economics LDB database.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will

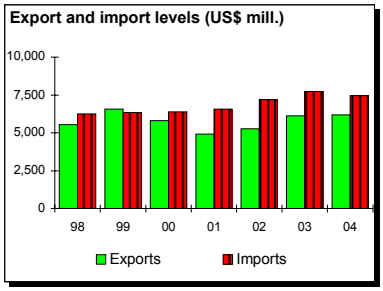
PRICES and GOVERNMENT FINANCE

	1984	1994	2003	2004
Domestic prices				
(% change)				
Consumer prices	12.0	13.5	9.4	10.2
Implicit GDP deflator	16.7	15.5	8.0	10.9
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	..	21.9	21.9
Current budget balance	..	..	-0.9	-0.8
Overall surplus/deficit	..	..	-5.1	-5.5



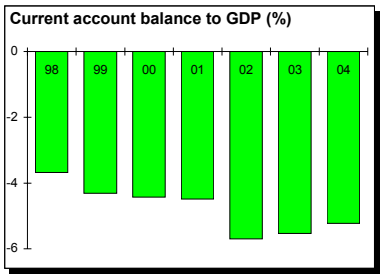
TRADE

	1984	1994	2003	2004
(US$ millions)				
Total exports (fob)	969	2,882	6,125	6,177
Coffee	267	308	194	..
Bananas	251	561	553	..
Manufactures	256	1,551	4,715	4,710
Total imports (cif)	1,070	3,816	7,723	7,445
Food	157	614	926	..
Fuel and energy	162	236	446	..
Capital goods	209	679	1,421	1,461
Export price index *(2000=100)*	11	49	129	140
Import price index *(2000=100)*	10	45	138	146
Terms of trade *(2000=100)*	108	108	94	96



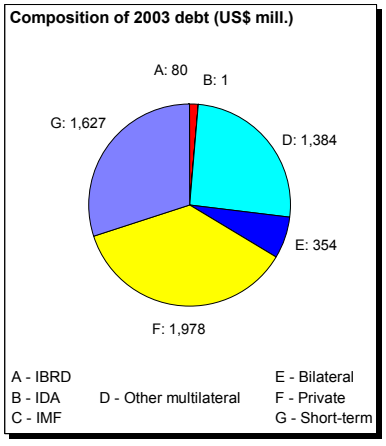
BALANCE of PAYMENTS

	1984	1994	2003	2004
(US$ millions)				
Exports of goods and services	1,252	3,815	8,177	8,318
Imports of goods and services	1,263	4,348	8,508	8,684
Resource balance	-11	-533	-331	-366
Net income	-302	-143	-849	-805
Net current transfers	32	155	213	211
Current account balance	-281	-520	-967	-960
Financing items (net)	277	526	1,307	810
Changes in net reserves	4	-6	-340	150
Memo:				
Reserves including gold *(US$ millions)*	-12	594	1,601	1,451
Conversion rate *(DEC, local/US$)*	44.5	157.1	398.7	437.9



EXTERNAL DEBT and RESOURCE FLOWS

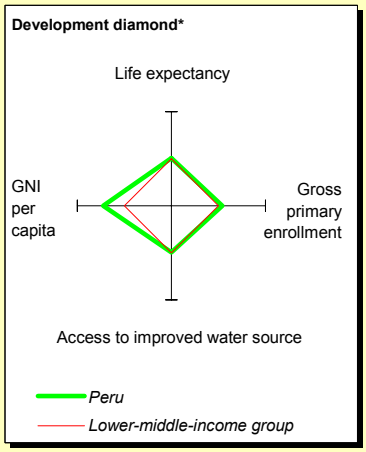
	1984	1994	2003	2004
(US$ millions)				
Total debt outstanding and disbursed	3,999	3,909	5,424	..
IBRD	191	323	80	..
IDA	4	3	1	..
Total debt service	425	507	841	..
IBRD	33	83	24	..
IDA	0	0	0	..
Composition of net resource flows				
Official grants	108	35	24	..
Official creditors	126	-8	94	..
Private creditors	-23	-61	265	..
Foreign direct investment (net inflows)	56	298	577	..
Portfolio equity (net inflows)	0	0	0	..
World Bank program				
Commitments	0	0	0	..
Disbursements	36	11	7	..
Principal repayments	18	56	18	..
Net flows	18	-46	-12	..
Interest payments	15	27	6	..
Net transfers	3	-72	-18	..



Note: This table was produced from the Development Economics LDB database. 8/25/05

E. Peru

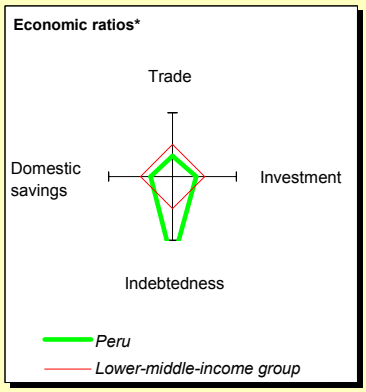
POVERTY and SOCIAL	Peru	Latin America & Carib.	Lower-middle-income
2003			
Population, mid-year *(millions)*	27.1	534	2,655
GNI per capita *(Atlas method, US$)*	2,140	3,260	1,480
GNI *(Atlas method, US$ billions)*	58.2	1,741	3,934
Average annual growth, 1997-03			
Population *(%)*	1.5	1.5	0.9
Labor force *(%)*	2.8	2.1	1.2
Most recent estimate (latest year available, 1997-03)			
Poverty *(% of population below national poverty line)*	49	..	..
Urban population *(% of total population)*	74	77	50
Life expectancy at birth *(years)*	70	71	69
Infant mortality *(per 1,000 live births)*	30	28	32
Child malnutrition *(% of children under 5)*	7	..	11
Access to an improved water source *(% of population)*	80	86	81
Illiteracy *(% of population age 15+)*	15	11	10
Gross primary enrollment *(% of school-age population)*	121	129	112
Male	122	131	113
Female	121	126	111



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

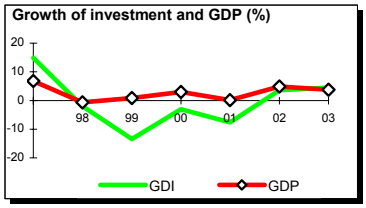
	1983	1993	2002	2003
GDP *(US$ billions)*	19.1	34.8	56.5	60.6
Gross domestic investment/GDP	24.3	19.3	18.8	18.8
Exports of goods and services/GDP	19.7	12.5	16.5	17.7
Gross domestic savings/GDP	24.5	15.4	18.0	18.9
Gross national savings/GDP	..	12.9	17.2	17.5
Current account balance/GDP	-6.8	-6.6	-2.0	-1.8
Interest payments/GDP	2.4	2.2	2.0	2.1
Total debt/GDP	59.3	67.7	49.8	49.3
Total debt service/exports	34.0	59.4	32.5	23.8
Present value of debt/GDP	..	..	52.7	..
Present value of debt/exports	..	..	286.4	..

	1983-93	1993-03	2002	2003	2003-07
(average annual growth)					
GDP	-0.7	3.4	4.9	3.8	4.4
GDP per capita	-2.7	1.6	3.2	2.2	2.8
Exports of goods and services	1.0	8.4	7.2	5.0	6.8

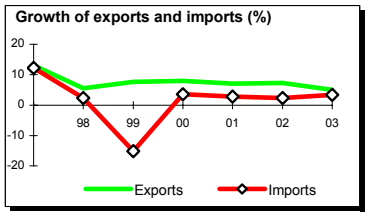


STRUCTURE of the ECONOMY

	1983	1993	2002	2003
(% of GDP)				
Agriculture	8.6	8.2	9.5	9.3
Industry	35.2	25.3	26.0	26.5
Manufacturing	30.3	16.2	14.8	14.6
Services	40.1	57.3	54.9	54.6
Private consumption	64.3	76.5	71.7	71.0
General government consumption	11.2	8.0	10.3	10.1
Imports of goods and services	19.5	16.3	17.3	17.6



	1983-93	1993-03	2002	2003
(average annual growth)				
Agriculture	1.4	5.2	6.0	1.5
Industry	0.3	2.6	6.6	5.4
Manufacturing	-0.3	2.6	4.0	2.1
Services	-1.5	3.5	4.0	3.1
Private consumption	-0.8	3.0	4.7	3.1
General government consumption	-1.6	3.8	-0.8	2.9
Gross domestic investment	1.5	1.0	3.5	4.5
Imports of goods and services	2.6	3.7	2.3	3.3

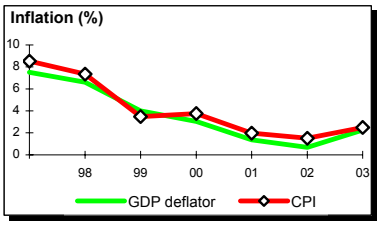


Note: 2003 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

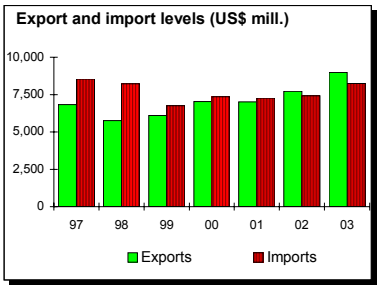
PRICES and GOVERNMENT FINANCE

	1983	1993	2002	2003
Domestic prices				
(% change)				
Consumer prices	110.8	48.6	1.5	2.5
Implicit GDP deflator	104.0	47.1	0.7	2.2
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	13.6	14.4	15.0
Current budget balance	..	0.1	-0.3	0.0
Overall surplus/deficit	..	-3.6	-2.1	-1.8



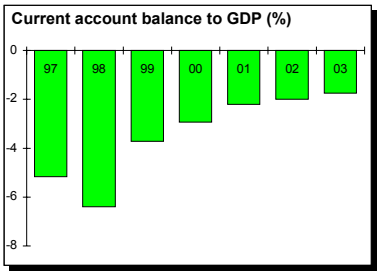
TRADE

	1983	1993	2002	2003
(US$ millions)				
Total exports (fob)	..	3,516	7,723	8,986
Copper	..	658	1,187	1,261
Fishmeal	..	542	823	742
Manufactures	..	1,007	2,256	2,602
Total imports (cif)	..	4,123	7,417	8,255
Food	..	476	546	564
Fuel and energy	..	321	975	1,377
Capital goods	..	1,143	1,842	1,984
Export price index *(1995=100)*	..	79	82	88
Import price index *(1995=100)*	..	88	99	104
Terms of trade *(1995=100)*	..	89	83	84



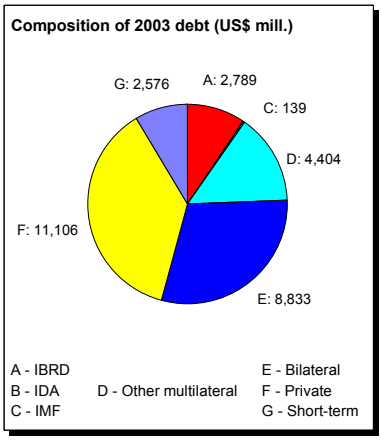
BALANCE of PAYMENTS

	1983	1993	2002	2003
(US$ millions)				
Exports of goods and services	3,726	4,353	9,267	10,664
Imports of goods and services	3,687	5,535	9,947	10,864
Resource balance	39	-1,182	-680	-200
Net income	-1,130	-1,619	-1,491	-2,082
Net current transfers	-219	508	1,043	1,221
Current account balance	-1,310	-2,293	-1,127	-1,061
Financing items (net)	1,276	2,702	2,112	1,657
Changes in net reserves	34	-409	-985	-596
Memo:				
Reserves including gold *(US$ millions)*	0	3,842	9,989	10,662
Conversion rate *(DEC, local/US$)*	1.63E-6	2.0	3.5	3.5



EXTERNAL DEBT and RESOURCE FLOWS

	1983	1993	2002	2003
(US$ millions)				
Total debt outstanding and disbursed	11,342	23,578	28,105	29,847
IBRD	527	1,369	2,609	2,789
IDA	0	0	0	0
Total debt service	1,307	2,758	3,379	2,547
IBRD	68	1,057	304	278
IDA	0	0	0	0
Composition of net resource flows				
Official grants	95	236	164	..
Official creditors	400	668	273	-7
Private creditors	913	178	749	1,184
Foreign direct investment	38	759	2,156	1,317
Portfolio equity	0	1,226	-9	..
World Bank program				
Commitments	211	392	100	474
Disbursements	77	975	146	344
Principal repayments	28	574	163	163
Net flows	49	401	-17	181
Interest payments	40	483	141	115
Net transfers	9	-82	-158	66



Annex 15: Incremental Cost Analysis

LATIN AMERICA: Regional Capacity-Building in Biosafety

Overview

The project's **global environmental objective** is to support implementation of the Cartagena Protocol (CP) on biosafety by improving the institutional capacity of agriculture and environmental ministries as well as specific, biosafety-related agencies in the five participating countries, to implement their national biosafety regulations, in compliance with the CP.

This will be achieved through the following components:

1. **Strengthening technical capacity in knowledge generation for biosafety risk assessment and management** including: 1.1 Strengthening of technical capacity for environmental risk assessment and management; and 1.2 Strengthening of technical capacity for socioeconomic impact assessment.
2. **Strengthening biosafety decision making capacity**
3. **Increasing public awareness on biosafety for communicators, opinion-makers and the general public**

These components will: (a) improve the countries' decision-making in line with international obligations; (b) lead to more responsible use of products of biotechnology in agriculture, while maintaining high and consistent standards of environmental protection in centers of biodiversity; and (c) improve regional decision-making, policy making and biodiversity protection in the project countries.

The principal expected outcomes of the project are therefore:

- Clearly-defined institutional mechanisms for administering biosafety including defined responsibilities in biosafety within each national institution/agency and designated technical specialists and personnel;
- Sustainable biosafety frameworks and project-established methodologies as indicated by annual budgets allocated to targeted biosafety-related institutions and agencies;
- Functioning mechanisms established to promote inter-institutional and inter-country collaboration on biosafety and the environment, among the five participating countries; and
- Standardized risk assessment, risk mitigation, cost-benefit assessment and emergency response methodologies and mechanisms used by project targeted institutions and agencies, and participating countries to manage the use, handling and transfer of GMO.
- Greater awareness and understanding of biosafety on the part of communicators, opinion-makers and the general public, using science-based information generated by the project.

The GEF Alternative would achieve these objectives and outcomes at an incremental cost of US$ 15.745 million of which US$ 5 million is being requested from the GEF.

Context and Broad Development Goals

The project is a grant-based, GEF operation in five Latin American countries, Brazil, Colombia, Costa Rica, Mexico and Peru. These countries were selected based on criteria related to the scale of their use of Genetically Modified Organisms (GMOs), the level of their development of biosafety policy and their

importance in terms of biodiversity. The project would ensure that major biosafety-related institutions and agencies in these countries will be able to implement the basic objectives of the Cartagena Protocol, including the assessment, management and monitoring of the potential risks posed by transgenic crops including risks to the conservation and sustainable use of biodiversity and risks to human health. It would thus provide significant global environmental benefits in terms of conservation of globally significant biodiversity.

The project builds on other biosafety activities managed by the Bank and being carried out in India and Colombia. It would provide sustainable benefits in terms of biosafety that could also be replicated in further countries in the region, particularly under the guidance of the International Center for Tropical Agriculture (CIAT) – the proposed recipient of the grant and also the implementing agency. This is particularly significant as Latin America – and these countries in particular – have adopted the use of Genetically Modified Organisms at a faster rate than any other region in the world and, also, as Latin America – and these countries in particular – are the centre of origin of many important agricultural crops and harbor many landrace/weedy/wild relatives of these, the conservation of which is important for future crop-breeding.

Despite the significance of the five project countries and the region in terms of biodiversity, the Latin America and Caribbean Region generally has received relatively little attention regarding biosafety in comparison to the Africa and Asia regions. In addition, recent developments in international agreements on biosafety, increasing use of GMOs in these countries and increasing global movement of GMOs also make such a project all the more important. This project is therefore a priority for the region.

Baseline scenario

The baseline scenario for the five countries sees very little going towards capacity building and no coordinated efforts in the region. Without this project, the countries will undertake the necessary steps at a much slower rate and with little regional coordination and consequently greatly reduced efficiency and effectiveness. In particular, CIAT would not have funding to put towards organizing regional biosafety initiatives and there would be no integrated approach to take advantage of the potential synergies of coordination. It is also very unlikely that best-practice guidelines would be developed or that future replication within countries or within the region would occur.

The baseline scenario therefore sees the countries in the region very slowly developing their own methods without taking advantage of the economies of scale and without maximizing the potential biodiversity conservation benefits that could be achieved through such activities.

Costs of the Baseline Scenario.

The costs of the baseline activities for each country are given below, disaggregated by activities that contribute to each component of the project.

Component 1 Strengthening technical capacity in knowledge generation for biosafety risk assessment and management

In the absence of this project, CIAT would invest US$3.66 million for: mapping distribution of crops; gene flow analysis and monitoring; crop management for minimizing transgene flow; evaluating and minimizing effects on non-target organisms; socio-economic impact assessment of LMOs in the tropics; and cost-benefit analysis for LMOs in centers of crop-diversity.

CIAT would also invest US$0.09 million for coordination of international projects that enable promotion and supervision of activities both in-country and across countries.

The Mexican government is currently spending US$5.6 million on strengthening biosafety technical capacity in Mexico.

The Brazilian government is currently spending US$6.46 million on strengthening biosafety technical capacity in Brazil.

The Colombian government is currently spending US$4.0 million on strengthening biosafety technical capacity in Colombia.

International organizations are spending about US$0.12 million in workshops regarding biosafety in Peru.

In Costa Rica, the Ministry of Agriculture financed an amount of US$0.03 million to strength technical capacity on environmental biosafety in order to review a National Biosafety Framework for based on the Cartagena Protocol on Biosafety.

Academic institutions strengthen technical capacity in Costa Rica by providing matching funds to financed research projects related to environmental biosafety for mapping distribution of weedy and wild rice species and gene flow analysis. This funding is approximately US$2.41million over the life of the project. In addition, academic institutions have invested approximately US$0.1 million as investments in socio-economic studies that relate to the baseline for the GEF-WB project.

The total amount of baseline funding going towards this component is therefore **US$ 22.47 million.**

Component 2 Strengthening biosafety decision-making capacity

In the absence of this project, CIAT would invest US$0.70 million for: training on environmental risk assessment for competent authorities and practitioners; and training on socio-economic and cost-benefit assessment for competent authorities and practitioners.

The Mexican government is currently spending US$0.22 million on strengthening decision-making capacity in Mexico.

The Brazilian government is currently spending US$0.11 million on strengthening decision-making capacity in Brazil.

There are currently no baseline activities occurring or planned regarding strengthening decision-making capacity in Colombia.

The Peruvian government is currently spending US$0.22 million on strengthening decision-making capacity in Peru.

Costa Rica's National Executive Agency (NEA): National Committee of Biosafety has spent US$0.195 million preparing, evaluating and reviewing a National Biosafety Framework for Costa Rica based on the Cartagena Protocol on Biosafety for strengthening decision-making capacity in Costa Rica. Furthermore, an investment of US$0.045 from the Ministry of Agriculture has been spent on capacity building in decision-making of competent authorities.

The total amount of baseline funding that would contribute to the objectives of this component is therefore **US$1.49 million.**

Component 3 Increasing public awareness on biosafety for communicators, opinion makers and the general public

There are currently no baseline activities occurring or planned regarding increasing public awareness on biosafety in Mexico.

The Brazilian government is currently spending US$0.02 million on increasing public awareness on biosafety in Brazil.

There are currently no baseline activities occurring or planned regarding increasing public awareness on biosafety in Colombia.

There are currently no baseline activities occurring or planned regarding increasing public awareness on biosafety in Peru.

An amount of US$0.5 million is being co-financed by the University of Costa Rica for increasing public awareness on biosafety.

The total amount of baseline funding that would contribute to the objectives of this component is therefore **US$ 0.7 million.**

The total cost of the Baseline scenario for the entire project would therefore be US$24.66 million. GEF.

GEF Alternative scenario

The alternative scenario would see the Colombian-based CIAT, as both grant partner and implementing agency, coordinating the activities of the five countries to create a competent pool of regional biosafety technical personnel and practitioners and to develop standardized, comprehensive biosafety databases and methodologies for biosafety management and socio-economic cost-benefit analysis. This approach would be innovative and cost-effective in that it would integrate and standardize countries' technical/analytical biosafety capacity at a regional level. The activities developed would be specifically created as models for replication to apply to further crops and countries in order to ensure the project could be scaled up to contribute to providing comprehensive biosafety improvements throughout the region. The project includes specific actions for dissemination of information in order to lead to this replication.

This would achieve a greater understanding of biotechnology and biosafety within the countries involved and better informed decision-making. This would also lead to replication in other countries and the global environmental consequences would be improved biodiversity conservation in hotspots in Latin America – and particularly improved conservation of race/weedy/wild relatives of agriculturally important crops – and improved human health through increasing safe development of agriculture both for providing increased nutrition and avoiding possible negative consequences of growing Genetically Modified Organisms.

The GEF involvement would provide crucial incremental financing to maximize the global biodiversity conservation benefits of the project and to ensure that this would form a model for replication throughout the region.

Costs of the GEF alternative

The following presents the disaggregated costs that would be paid by the various institutions to fund the four components of the GEF alternative scenario.

Component 1 Strengthening technical capacity in knowledge generation for biosafety risk assessment and management

The GEF would contribute US$4.043 million to strengthen technical capacity for environmental risk assessment and management and socio-economic cost/benefit assessment.

CIAT would contribute US$1.315 million to strengthen technical capacity for environmental risk assessment and management and socio-economic cost/benefit assessment.

Mexico would contribute US$1.75 million towards: assessment and monitoring of potential effects on non-crop (non-target) organisms; adaptation of methods and tools for socio-economic impact assessment of LMOs in centers of crop diversity; and development of analytical skills for analysis of potential benefits.

Brazil would contribute US$3.1 million towards: assessment and monitoring of gene flow, assessment and monitoring of potential effects on non crop (non target) organisms; adaptation of methods and tools for socio economic impact assessment of LMOs in centers of crop diversity; and development of analytical skills for analysis of potential benefits.

Colombia would contribute US$1.10 million towards compilation and generation of baseline data for tracking and monitoring gene introgression persistence of novel traits in crop biosafety in cassava and potato; generation and use of GIS reference databases for mapping distribution of crops; adaptation and regional standardization of methodologies for evaluating effects on non target organisms; and development of analytical skills for potential benefits and costs of LMOs in centers of crop diversity.

Peru will contribute US$0.10 million towards assessment and monitoring of potential effects on non-crop (non target) organisms.

Costa Rica will contribute US$1.35 million towards adaptation and regional standardization of methodologies for large scale monitoring of gene flow; development of analytical skills for analysis of potential risks and benefits of LMOS, adaptation of methods and tools for socio-economic impact assessment of LMOs and evaluation of effects on non-target organisms.

The total additional cost of the GEF Alternative scenario for this component would therefore be **US$12.9 million with US$4.04 million.**

Component 2 Strengthening biosafety decision-making capacity

The GEF would contribute US$0.56 million to build biosafety capacity for decision-making entities (competent authorities) and for practitioners (i.e. public and private research community), through participatory scientific and technical training on risk assessment, risk management and risk communication.

CIAT would contribute US$0.05 million towards training on environmental risk assessment and socioeconomic impact assessment for competent authorities and practitioners.

Brazil would contribute US$0.84 million towards training on environmental risk assessment and socioeconomic impact assessment for competent authorities and practitioners.

Colombia would contribute US$0.04 million towards training on environmental risk assessment and socioeconomic impact assessment for competent authorities and practitioners.

Peru would contribute US$0.04 million towards training on environmental risk assessment and socioeconomic impact assessment for competent authorities and practitioners.

Costa Rica will contribute US$0.15 million towards training on environmental risk assessment and socioeconomic impact assessment for competent authorities and practitioners.

The total additional cost of the GEF Alternative scenario for this component would therefore be **US$1.53 million.**

Component 3: Increasing public awareness on biosafety for communicators, opinion makers and the general public

The GEF would contribute US$0.39 million to finance communication specialists to develop communication strategy/plans, develop and test information materials on biosafety, and information campaigns to insert science-based messages into the public debate/discourse at multiple levels.

CIAT would contribute US$0.05 million towards development of information packages, and compilation of science-based information on biosafety for dissemination to general public.

Brazil would contribute US$0.72 million towards development of information packages, and compilation of science-based information on biosafety for dissemination to general public.

Colombia would contribute US$0.11 million towards compilation of science-based information on biosafety for dissemination.

Peru would contribute US$0.04 million towards compilation of science-based information on biosafety for dissemination.

The total cost of the GEF Alternative scenario for this component would therefore be **US$1.31 million.**

The total cost of the GEF Alternative scenario for the entire project would therefore be US$15.745 million of which US$ 5 million is being requested from the GEF.

Incremental Costs

The incremental cost – the additional cost above the baseline scenario (US$ 24.66 million) – is US$15.745 million. This would be financed partly by a US$5.0 million GEF grant and partly by US$10.745 million co-financing to work towards providing global environmental benefits. These global environmental benefits would be sustainable and would be scaled up through replication in further areas of biosafety within the five countries and throughout the region, thus producing significant additional benefits. The matrix below summarizes the baseline and incremental expenditures during the five-year project period.

Attachment 1: Incremental Cost Matrix

Cost Category	US$ Million	Domestic Benefit	Global Benefit
Component 1: Strengthening Technical Capacity in Knowledge Generation for Biosafety Risk Assessment and Management			
Baseline	**US$22.47**	Existing capacity is weak and, due to lack of institutional capacity and government commitment, technical capacity within the countries will grow slowly and with reduced efficiency and effectiveness. Domestic benefits will be limited.	Lack of government commitment and heavy dependence on scientific consultative committees means that institutional and technical capacity within the countries is small. Without this project, the situation is unlikely to change significantly and technical capacity will continue to grow only slowly and in an uncoordinated manner. Furthermore, it will not be oriented towards achieving global benefits. Global benefits will therefore be very small.
With GEF Alternative	**US$35.37**	Demonstrated compliance with international commitments under the Cartagena Protocol will enable increased trade and growth of the agricultural sector.	Technical capacity will be strengthened efficiently and effectively through regional integration and coordination for carrying out risk assessment and socio-economic cost-benefit assessment. The GEF, and other, incremental financing will finance the activities that relate to achieving global environmental benefits and will particularly be used to orient aspects of the risk assessment and cost-benefit analysis to take account of globally significant biodiversity. Having an emphasis on standardization and producing replicable models and disseminating these, the consequences will include sustained improvements in the ability of the countries and the region to ensure conservation of globally significant biodiversity.
Incremental	***US$12.9***		
Comp 2: Strengthening Biosafety Decision-making Capacity			
Baseline	**US$1.49**	Decision-making capacity within the countries will continue to be weak and only grow slowly and in an uncoordinated manner. Domestic benefits will be limited.	Decision-making capacity within the countries will continue to be weak and only grow slowly and in an uncoordinated manner. In particular, it will not be oriented towards achieving global benefits. Global benefits will therefore be very small.
With GEF Alternative	**US$3.02**	Demonstrated compliance with international commitments under the Cartagena Protocol will enable increased trade and growth of the	Decision-making capacity of competent authorities will be strengthened efficiently and effectively through providing training in risk assessment, risk management, risk communication and socio-economic cost-benefit assessment. The GEF, and other, incremental financing will finance the activities that relate to achieving global

		agricultural sector.	environmental benefits and will particularly be used to orient aspects of the risk assessment and cost-benefit analysis to take account of globally significant biodiversity. The training given here and lessons learned will be made available through CIAT to the entire region and the results will therefore be sustained improvements in the ability of the countries and the region to ensure conservation of globally significant biodiversity.
Incremental	***US$1.53***		
Comp 3: Public Awareness on Biosafety for Communicators, Opinion Makers and the General Public			
Baseline	**US$0.7**	Public awareness within the countries will continue to be influenced by partial and inaccurate information. Domestic benefits of this will be limited.	Public awareness within the countries will continue to be influenced by partial and inaccurate information. Accurate information regarding links to biodiversity will be particularly hard to obtain and global environmental benefits of this will therefore be limited.
With GEF	**US$2.01**	Increased understanding will contribute to increased consumer confidence and improve trade and growth in the agricultural sector.	Raising public awareness is a key area where global environmental benefits can be realized through orienting information towards including coverage of global biodiversity issues. Accordingly, GEF incremental financing will finance activities towards developing public awareness of the issues relating to biosafety and biodiversity conservation including in information campaigns, public debates, press-briefings, publications and other media.. This will be efficiently achieved through taking advantage of economies of scale able to be achieved by using the CIAT to organize this centrally. The information and other lessons learned generated here will be made available through CIAT to the entire region and the results will therefore be sustained improvements in the ability of the countries and the region to ensure conservation of globally significant biodiversity.
Incremental	***US$1.31***		
	Total Baseline: US$24.66 million		
	Total GEF Alternative: US$40.405 million		
	Total Incremental Costs: US$15.745 million of which US$5.0 million is requested from the GEF		

Annex 16: STAP Roster Review

LATIN AMERICA: Regional Capacity-Building in Biosafety

Reviewer: Dr. Ariel Alvarez Morales (Research Specialist, Center for Research and Advanced Studies, Department of Genetic Engineering, Guanajuato Campus, Mexico - March 6, 2006).

The document presented describes a proposed biosafety capacity-building operation in five Latin American countries, grant-funded by a full-sized GEF contribution of US$5.0 million channelled through the Colombia-based, International Center for Tropical Agriculture (CIAT), and with an estimated total budget of US$12.9 million.

"The global objective is to contribute to the ability of Mexico, Brazil, Colombia, Peru and Costa Rica to implement the Convention on Biological Diversity (CBD) and the Cartagena Protocol (CP) on biosafety to reduce the environmental risks of modern biotechnology, ensuring an adequate level of protection in the area of transfer, handling and use of transgenic crops in centers of crop biodiversity."

The proposed project is regional in scope, and pretends to generate standardized, science-based mechanisms and methodologies for biosafety risk, cost and benefit assessment, and project them in organized, accessible form - as an integral part of project activities - to competent authorities, biosafety practitioners, organized civil society and the general public.

COMMENTS

It is mentioned in the document that "In 2004, Latin America grew 30% (23 million hectares) of the total global area of transgenic crops, second only to the United States (48 million ha). This rapid growth is the logical outcome of the manifest delivery of economic benefits for the agricultural economy of the region, by the initial products of biotechnology". However, this statement fails to recognize that it is only Argentina, not an adherent to the CP, the sole contributor to this significant percentage of transgenic crop adoption in the area.

Nevertheless, this fact indicates that the rest of Latin America has lagged behind considerably, and this is, at least in part, due to the lack of an efficient biosafety framework in the rest of the countries capable of addressing the issues required to responsibly commercialize GMOs. In this respect, no doubt the five countries involved in the present proposal could benefit significantly by implementing a sound mechanism to efficiently address the responsibilities derived from their national legal systems as well as the responsibilities acquired with the international community.

RESPONSE (IA & EA): *In 2005, the total area of transgenic crops grown in Latin America and the Caribbean (LAC) accounted for 28.8 million hectares (32% of the total from 6 countries relative to the global area of 90 million ha). Of the 28.8 million ha in LAC, 17.1 million ha were in Argentina (59%), 9.4 million ha in Brazil (33%), 1.8 million ha in Paraguay, 0.3 million ha in Uruguay, 0.1 million ha in Mexico, and about 0.05 million ha in Colombia and Honduras (Clive James. ISAAA Brief Report 34 Global Status of Commercialized Biotech/GM Crops: 2005). Therefore transgenic crop production includes not only Argentina but also CP compliant countries. A retrospective analysis of the increase in number of countries and the area of GM crops grown from 2000 to 2005, indicate that while in 2000 LAC grew 10 million ha just in Argentina (23% of the global area), by 2005 LAC region grew 32% of the global area (9% increase) in 7 countries, while Brazil was the third principal adopter after US and Argentina, followed by Canada and China. The increase in adoption of transgenic crops (mainly*

soybeans) in Brazil did not follow a step-wise mechanism due to the lack of an efficient biosafety framework resulting in a rapid non-authorized introduction as a response to pressure from farmer groups which then triggered the authorization process. This project aims to facilitate the establishment of an efficient biosafety framework in the participating countries by strengthening the technical capacity for a science-based decision process in order to implement the already existing legal framework in these countries and allowing them to comply with International Treaty commitments in particular the implementation of the Cartagena Protocol.

It is also necessary to recognize that mega diverse countries face unique and difficult problems when addressing potential environmental risks. This again is the case of the five countries presenting the proposal.

In support of this proposal it is necessary to acknowledge that there is unquestionable capacity, quality and professionalism involved in the participating institutions, both in terms of infrastructure and human resources. The proposal seems sound and well balanced between the countries and between the proposed activities. However, I have two major concerns about the projection of the results obtained in terms of the future sustainability of a practical and efficient biosafety framework in the countries involved.

MAJOR CONCERNS

It is repeatedly mentioned in the proposal that the project will finance training in environmental risk assessment, risk management and risk communication for competent authorities. Who are they going to train? In most of these countries the different Ministries or Secretaries rely heavily on consultative committees for reviewing requests to release GMOs, and provide an opinion that most often is the result of a scientific exercise that includes risk assessment, without anyone being a professional risk assessor, although some of them may have an in-depth knowledge about risk assessment.

Nevertheless, the scientists that are members of such consultative committees can only devote a small fraction of their time to these activities and very often they are unable to participate as often as would be required. To have a regulatory system that is based on scientific data, as this is the fundamental base of a risk assessment, without a capable group of professional full-time risk assessors and risk managers does not seem congruent.

The training of academics, field technicians, laboratory technicians, etc., is important, however, these people would not be involved in the most important aspects that the CP demands. Among other activities:

Reviewing risk assessment data presented as part of request for trans-boundary movement or field releases of LMOs.
Reviewing or proposing risk management measures.
Writing scientifically sound decision documents.
Providing accurate information to the BCH in compliance to the CP

Furthermore, the professional risk assessors and risk managers from the different government entities- such as agriculture, environment and health- should be the persons responsible for maintaining the links and communication between the corresponding entities in the five countries involved in the proposal.

I do not see in the proposal any reference to this issue. I do not know how many full-time professional risk assessors are there in each country, or how many full-time government professionals will be trained to fulfil this role.

Are there enough of these people in the appropriate offices within governments to ensure continuity and an efficient and prompt response to the demands of the CP? If not, is there a commitment of the governments to provide or open new positions for these people? How many? When?

Without the involvement and decisive commitment of the government entities involved I cannot see how this project can achieve their main goals. One can see in the table describing the "Status of Biosafety in participating Countries" that in some cases work in this area began as early as 1988, with Peru being the late entry in 1995. So the experience these countries have in Biosafety ranges from around 17 to 10 years. Why they have not put in place yet an efficient system to regulate GMOs?

I am convinced one of the major problems has been the lack of government commitment and the heavy dependence on scientific consultative committees to do the work government officials should be doing on a full-time base, with the cooperation of the scientific consultative committees. If this situation is not resolved to begin with, there is not going to be enough capacity building, database support or scientific data obtained if there is not an adequate end-user.

RESPONSE (IA & EA): *The project fosters regional collaboration between diverse country participants and finances training for biosafety practitioners and competent authorities, standardization and sustainability of methodologies and mechanisms being the primary objective (Annex 4 of the PAD). In the description of* ***Component 2: Strengthening biosafety decision-making capacity:*** *it is indicated that the project will build biosafety capacity for decision-making entities (competent authorities) and for practitioners (i.e. public and private research community), through participatory scientific and technical training on risk assessment, risk management and risk communication, using the knowledge generated by biosafety practitioners in this project from* ***Component 1: Strengthening technical capacity in knowledge generation for biosafety risk assessment and management)*** *in a collaborative effort across the five countries.. The Core participants include the implementing bodies of national biosafety frameworks (i.e. national biosafety committees) and the biotechnology R&D community (i.e. transgenic crop developers, plant breeders, and other relevant agricultural science professionals, especially those working in public sector research). The project seeks to establish efficient mechanisms of communication and cooperation between those providing the technical assistance (generating biosafety information) and those responsible for the decision making process, instead of just concentrating on training of the National authorities as other initiatives has done with very limited impact. Because of lack of resources the National competent authorities are incapable of conducting the proper technical assessment themselves in a proper manner. The project proposes to strengthen the capacity that already exist in the countries and benefit from multi-country collaboration to facilitate science-based analysis and decision-making. The commitment of the Governments of each participating project country is clear since in all cases, the National competent authority for the biosafety decision process is involved in addition to the main National Technical Institutions used as a reference for the science based process (Table 6.1 from the PAD), and as indicated by the corresponding country GEF Focal Point endorsement letters.*

Another point that seems important to me, and that to a certain extent is a consequence of the problem mentioned above is that, in these countries biosafety authorities are usually reactive, and very seldom proactive. The fact that this proposal wants to focus only on plant LMOs is worrying:

"Although the CP Protocol sets a framework for the biosafety aspects of all living organisms resulting from modern biotechnology, the most important field of application in the near-medium term is the biosafety of agricultural crops modified by modern biotechnology……Human resource development, database development, baseline information about crops (especially in mega-diversity areas) and expertise in methodologies for risk assessment are cited explicitly by the CP as priority areas for development"

I need to disagree with the idea that agricultural crops modified by modern biotechnology are the most important in the near-medium term. These are the present! And the near and medium term challenges will be crops producing pharmaceuticals, transgenic fish, and transgenic arthropods. Therefore I see the need to include these areas in the training program proposed rather than waiting to have the first proposals for release of these types of LMOs on the desk of the regulator and then starting to think about how to address these issues.

RESPONSE: *The project Global Objective is to support implementation of the Cartagena Protocol (CP) on biosafety, reducing the environmental risks of modern biotechnology, with positive impact on global biodiversity. Plants producing pharmaceuticals are outside the scope of the CP, which are regulated by other International Treaties, thus will not be addressed by this project. In the case of transgenic animals although recognized as important in the LAC countries, currently are still under early experimental phases with no clear evidence of commercialization in the near future. The legal framework regulating these organisms is not present or is in a preliminary stage in the participating countries. In contrast, all 5 participating countries already have a legal framework for regulating transgenic plants, have some experience in their implementation and because of that, have been able to identify the main bottlenecks to fulfill this task. Due to broader adoption of such transgenic crops, these countries have increased pressures to comply with the CP where technically sound and safe trans-boundary movement of crop plants will be the main asset. Although the broad scope of transgenic organisms and the need of their proper regulation is recognized, the dilution of the limited resources requested in the project beyond plants will compromise the quality, impact and sustainability of the deliverables outputs.*

RECOMMENDATIONS

R.1. The project, as presented, can be of great value to the involved countries and to the whole region, and such efforts should be given high priority in terms of finance. I believe the project should be financed but the project should seriously consider as a priority the training of personnel from the different government entities involved to produce professional risk evaluators/risk managers, and the governments should clearly state their commitment to this effort by providing appropriate personnel or to make available the minimum number of required positions.

R.2. Further, training should not be constrained to plant issues but should open up to include animals and plants producing pharmaceuticals.

Annex 17: Maps

LATIN AMERICA: Regional Capacity-Building in Biosafety

Maps to be prepared