Document of
The World Bank

Report No: ICR00003120

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IDA-43680 TF-91199)

ON A

CREDIT

IN THE AMOUNT OF SDR 2.6 MILLION
(US$3.9 MILLION EQUIVALENT)

FROM THE INTERNATIONAL DEVELOPMENT ASSOCIATION

TO BURKINA FASO

AND A GRANT

IN THE AMOUNT OF US$5.4 MILLION

FROM THE GLOBAL ENVIRONMENTAL FACILITY

TO THE WEST AFRICAN ECONOMIC AND MONETARY UNION

FOR A

WEST AFRICA REGIONAL BIOSAFETY PROJECT

February 26, 2015

Environment and Natural Resources Global Practice
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective May 30, 2014)

Currency Unit	=	CFA Franc
CFA Franc 1.00	=	US$0.0020918
US$1.00	=	CFA Franc 478.05

Senior Global Practice Director:	Paula Caballero
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Practice Manager:	Benoit Bosquet
Project Team Leader:	Emmanuel Y. Nikiema
ICR Team Leader:	Emmanuel Y. Nikiema

ABBREVIATIONS AND ACRONYMS

BCH	Biosafety Clearing House
CAS	Country Assistance Strategy
CILSS	Permanent Inter-State Committee for Drought Control in the Sahel (*Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel*)
CORAF/WECARD	West and Central African Council for Agricultural Research and Development
ECOWAS	Economic Community Of West African States
EMP	Environmental Management Plan
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
FAO	Food and Agriculture Organization
GEF	Global Environment Facility
GEO	Global Environment Objective
GMO	Genetically Modified Organisms
ICR	Implementation Completion and Results Report
IDA	International Development Association
INSAH	Sahel Institute (*Institute du Sahel*)
IP	Implementation Performance
IPR	Intellectual Property Rights
ISR	Implementation Status and Results Report
LMO	Living Modified Organisms
M&E	Monitoring and Evaluation
PAD	Project Appraisal Document
PAFASP	Agricultural Diversification and Market Development Project (*Programme d'Appui aux Filières Agro-Sylvo-Pastorales*)
PDO	Project Development Objective
WAEMU	West African Economic and Monetary Union

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A. BASIC INFORMATION			
Countries:	Burkina Faso, Benin, , Mali, Senegal, and Togo	Project Name:	West Africa Regional Biosafety Project
Project ID:	P096058, P105140	L/C/TF Number:	TF091199, IDA-43680
ICR Date:	02/26/2015	ICR Type:	Core ICR
Lending Instrument:	GEF Grant and IDA Credit	Borrower:	Grant recipient: West African Economic and Monetary Union (WAEMU) IDA Borrower: Ministry of Finance and Budget, Burkina Faso
Original Total Commitment:	GEF: US$5.4 million IDA: US$3.9 million	Disbursed Amount:	GEF: US$4.8 million (05/30/2014) IDA: US$3.4 million (05/30/2014)
Revised Amount:	-		
Environmental Category: B (partial assessment)		Global Focal Area: Biodiversity	
Implementing Agency: WAEMU - Department of Rural Development, Natural Resources and Environment (DDRE); Ministry of Environment and Ministry of Agriculture, Water Resources and Fisheries, Burkina Faso – National Biosafety Agency and Project Coordination Unit of the Agricultural Diversification and Market Development Project (PAFASP)			
Co-financiers and Other External Partners: WAEMU			

B. KEY DATES				
P105140				
Process	**Date**	**Process**	**Original Date**	**Revised / Actual Date(s)**
Concept Review:	10/06/2005	Effectiveness:	03/31/2008	10/02/2008
Appraisal:	11/10/2006	Restructuring:	12/15/2009	07/05/2011; 05/01/2012; 06/04/2013
Approval:	11/13/2007	Mid-term Review:		04/04/2011
		Closing:	06/30/2012	05/30/2014
P096058				
Process	**Date**	**Process**	**Original Date**	**Revised / Actual Date(s)**
Concept Review:	10/06/2005	Effectiveness:	03/31/2008	07/07/2008
Appraisal:	11/10/2006	Restructuring:		07/05/2011; 05/01/2012; 06/04/2013
Approval:	11/13/2007	Mid-term Review:		04/04/2011
		Closing:	06/30/2012	06/30/2013

C. RATINGS SUMMARY	
C.1 Performance Rating by ICR	
Outcome:	Moderately Unsatisfactory
Risk to Global Environment Outcome:	Significant
World Bank Performance:	Moderately Unsatisfactory
Borrower Performance:	Moderately Unsatisfactory

C.2 Detailed Ratings of World Bank and Borrower Performance			
World Bank	Ratings	Borrower	Ratings
Quality at Entry:	Moderately Unsatisfactory	Government:	Moderately Unsatisfactory
Quality of Supervision:	Moderately Satisfactory	Implementing Agency/Agencies:	Moderately Unsatisfactory
Overall World Bank Performance:	Moderately Unsatisfactory	**Overall Borrower Performance:**	Moderately Unsatisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
P105140			
Implementation Performance	Indicators	QAG Assessments (if any)	Rating
Potential Problem Project at any time (Yes/No):	Yes	Quality at Entry (QEA):	None
Problem Project at any time (Yes/No):	Yes	Quality of Supervision (QSA):	None
PDO rating before Closing/Inactive status:	Moderately Satisfactory		
P096058			
Implementation Performance	Indicators	QAG Assessments (if any)	Rating
Potential Problem Project at any time (Yes/No):	Yes	Quality at Entry (QEA):	None
Problem Project at any time (Yes/No):	Yes	Quality of Supervision (QSA):	None
PDO rating before Closing/Inactive status:	Moderately Satisfactory		

D. SECTOR AND THEME CODES		
P105140		
Sector Code (as % of total World Bank financing)	Original	Actual
Crops	25	-
General Agriculture, Fisheries, and Forestry	25	-
Agricultural Extension and Research	25	-
Information Technology	25	-
Theme Code (as % of total World Bank financing)	Original	Actual
Biodiversity	20	-
Rural Services	20	-
Nutrition and Food	20	-
Rural Non-farm	20	-
Environmental Policy	20	-

P096058		
Sector Code (as % of total World Bank financing)	Original	Actual
Crops	25	7
General Agriculture, Fisheries, and Forestry	25	-
Agricultural Extension and Research	25	-
Information Technology	25	-
Central Government Administration	-	93
Theme Code (as % of total World Bank financing)	Original	Actual
Biodiversity	20	67
Rural Services	20	-
Nutrition and Food	20	-
Rural Non-farm	20	-
Environmental Policy	20	33

E. WORLD BANK STAFF		
Positions	**At ICR**	**At Approval**
Vice President:	Makhtar Diop	Obiageli Katryn Ezekwesili
Director (Regional Integration):	Colin Bruce	Mark Tomlinson
Practice Manager:	Benoit Bosquet	Marjory-Anne Bromhead
Project Team Leader:	Emmanuel Y. Nikiema	Jean-Christophe Carret
ICR Team Leader:	Emmanuel Y. Nikiema	
ICR Primary Author:	Veruschka Schmidt	

F. RESULTS FRAMEWORK ANALYSIS

Project Development Objective (PDO) – as presented in the Project Appraisal Document (PAD): To establish an operational institutional, legal and regulatory regional biosafety framework for the regulation of living modified organisms (LMOs)[1].

Revised PDO – as presented in the Level 1 Restructuring of July 2011 (Report No: 62573-AFR): (i) Strengthen the institutional, scientific and legal capacity of the WAEMU Commission and Member States in relation to the Cartagena Protocol on Biosafety in the sub-region, and (ii) support the preparation of a draft Regional Regulatory Biosafety Framework.

Global Environment Objectives (GEO) - as presented in the PAD: To protect regional biodiversity against the potential risks associated with the introduction of LMOs into the environment.

Revised GEO – Strengthen the institutional, scientific and legal capacity of the West Africa Economic and Monetary Union Commission and Member States in relation to the Cartagena Protocol on Biosafety in the sub-region, and (ii) support the preparation of a draft Regional Regulatory Biosafety Framework.

(a) PDO Indicators – Original PDO Indicators (as presented in the PAD) and revised PDO Indicators (as presented in the Level 1 Restructuring of July 2011) are assessed against achievements at project closing in May 2014.

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Original PDO Indicators				
Indicator 1:	**Percentage of applications processed over those received for field trials of high priority crops (in conformity with the agricultural policy of WAEMU), reviewed in compliance with the regional science-based risk assessment and management procedures established by the framework.**			
Value (quantitative or qualitative)	0%	100%	-	0%
Date Achieved	11/13/2006	06/30/2012	-	07/05/2011
Comments (incl. % achievement)	Target not achieved (0%): Applications were neither received, nor processed or reviewed, because the laboratory was not operational at the end of the project. Indicator dropped at restructuring.			
Revised PDO Indicators as per the Level 1 Restructuring in July 2011				
Indicator 1:	**At least 25 percent of trained researchers and other stakeholders apply the**			

[1] The objective of the project as stated in the financing agreement is "to support the West African Economic and Monetary Union for the establishment of an operational institutional, legal and regulatory regional biosafety framework for the regulation of living modified organisms". The slight difference in the wording does not change the meaning. Similarly, there is a small difference in the PDO formulation in the PAD datasheet and the rest of the document, which, again, is not material.

	knowledge they have acquired in their activities related to biosafety by the end of the project.			
Value (quantitative or qualitative)	5%	25%	-	56%
Date Achieved	07/05/2011	06/30/2012	05/30/2014	05/30/2014
Comments (incl. % achievement)	Target fully achieved (100%): Of the 84 researchers and stakeholders who were trained in various aspects related to biosafety, 47 (56%) applied the acquired knowledge according to a survey that was undertaken in 2012.			
Indicator 2:	**A draft regional regulatory biosafety framework available by the end of the project.**			
Value (quantitative or qualitative)	No regional biosafety framework in place	A final draft available as well as stakeholders' comments and concerns	-	Final draft is available as well as stakeholders' comments
Date Achieved	07/05/2011	06/30/2012	05/30/2014	05/01/2012
Comments (incl. % achievement)	Target fully achieved (100%): The draft regional biosafety framework is available, it was signed off by the WAEMU and ECOWAS management, and consultation workshops with all stakeholders including civil society representatives were organized.			

(b) GEO Indicator

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Original GEO Indicator				
Indicator 1:	**Percentage of risk assessments incorporating measurements of: (i) presence/absence of contamination through gene transfer to wild species and concentration level; and (ii) appearance of new or disappearance of non-target organisms.**			
Value (quantitative or qualitative)	0 (regional risk assessment procedures not yet developed)	100	-	0
Date Achieved	11/13/2006	06/30/2012	-	05/30/2014
Comments (incl. % achievement)	Target not achieved (0%): Risk assessments were not conducted, as the national reference biosafety laboratory with a regional reference was not operational by the end of the project. Indicator dropped at restructuring.			

(c) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Original Intermediate Result Indicators				
Indicator 1:	**Total number of scientists and stakeholders trained in the use of the new regional risk assessment and management handbook.**			
Value (quantitative or qualitative)	0	400 scientists and stakeholders trained	-	450
Date Achieved	11/13/2006	06/30/2012	-	07/05/2011
Comments (incl. % achievement)	Target fully achieved (100%): 450 stakeholders (researchers, scientists and stakeholders) were trained in biosafety aspects and in using regional risk assessments. Indicator revised at restructuring.			
Indicator 2:	**Percentage of trained people using the regional guidelines.**			
Value (quantitative or qualitative)	0%	100%	-	0%
Date Achieved	11/13/2006	06/30/2012	-	07/05/2011
Comments (incl. % achievement)	Target not achieved (0%): It was not surveyed how many people specifically used the regional guidelines. Indicator dropped at restructuring.			
Indicator 3:	**Ratification of a regional biosafety framework by WAEMU Council of Ministers, aligned with the Cartagena Protocol on Biosafety and acceptable for the countries in the region.**			
Value (quantitative or qualitative)	0	100% of workshops for the dissemination of the regional regulation completed	-	0%
Date Achieved	11/13/2006	06/30/2012	-	07/05/2011
Comments (incl. % achievement)	Target not achieved (0%): A draft regional biosafety framework was prepared for the WAEMU and ECOWAS regions. However, consultations were ongoing and the draft is not ratified yet. Indicator dropped at restructuring.			
Indicator 4:	**Monitoring reports published by regional observatory.**			
Value (quantitative or qualitative)	0	2	-	0
Date Achieved	11/13/2006	06/30/2012	-	07/05/2011
Comments (incl. % achievement)	Target not achieved (0%): In the absence of the regional biosafety framework, the regional observatory was not established, thus no monitoring reports were published.			

	Indicator dropped at restructuring.			
Indicator 5:	**Percentage of applications reviewed and implemented in accordance with regional guidelines and procedures.**			
Value (quantitative or qualitative)	0	100	-	0
Date Achieved	11/13/2006	06/30/2012	-	07/05/2011
Comments (incl. % achievement)	Target not achieved (0%): Applications were neither received, nor processed or reviewed, because the laboratory was not operational at the end of the project. Indicator dropped at restructuring.			
Indicator 6:	**Number of comments submitted by public before decision making.**			
Value (quantitative or qualitative)	0	50	-	0
Date Achieved	11/13/2006	06/30/2012	-	07/05/2011
Comments (incl. % achievement)	Target not achieved (0%): The regional biosafety framework was neither ratified nor implemented, thus a mechanism for public participation was not developed and no comments had been received. Indicator dropped at restructuring.			
Indicator 7:	**Percentage of response from national biosafety committee and regional coordination in accordance with regional guidelines and procedures.**			
Value (quantitative or qualitative)	-	100	-	XX
Date Achieved	11/13/2006	06/30/2012	-	07/05/2011
Comments (incl. % achievement)	Target not achieved (0%): The regional biosafety framework was neither ratified nor implemented, thus no responses from the national biosafety committee and regional coordination were received. Indicator dropped at restructuring.			
Indicator 8:	**Percentage of regulators and national cotton companies trained in IPR negotiations related to crops.**			
Value (quantitative or qualitative)	0	100	-	0
Date Achieved	11/13/2006	06/30/2012	-	07/05/2011
Comments (incl. % achievement)	Target not achieved (0%): The regional biosafety framework was neither ratified nor implemented, thus no regulators and national cotton companies were trained in IPRs negotiations related to corps. Indicator dropped at restructuring.			
Revised Intermediate Result Indicators				
Indicator 1:	**At least 5 national laboratories fully equipped at the end of the project.**			
Value (quantitative or qualitative)	0	5	-	8
Date Achieved	07/05/2011	06/30/2012	05/30/2014	05/30/2014
Comments (incl. % achievement)	Target fully achieved (100%): 8 national laboratories were fully equipped at the end of the project.			
Indicator 2:	**Availability of a manual on risk assessment and management methodologies.**			

Value (quantitative or qualitative)	No manual in place	A final manual available, validated and posted on BCH central portal	-	Final manual available, validated, and posted on BCH central portal
Date Achieved	07/05/2011	06/30/2012	05/30/2014	05/30/2014
Comments (incl. % achievement)	Target fully achieved (100%): A manual on risk assessment and management methodologies was validated in September 2012 by the regional scientific committee for biosecurity, and posted on the BCH central portal.			
Indicator 3:	**At least 50 researchers trained in scientific methodologies on risk assessment and management.**			
Value (quantitative or qualitative)	0	50	50	84
Date Achieved	07/05/2011	06/30/2012	05/30/2014	05/30/2014
Comments (incl. % achievement)	Target fully achieved (100%): 84 researchers were trained in scientific methodologies on risk assessment, through trainings held in 2010 and 2012.			
Indicator 4:	**A first draft regional biosafety framework, including the institutional framework submitted for comments by stakeholders.**			
Value (quantitative or qualitative)	No regional biosafety framework in place	Draft regional biosafety framework available with stakeholders		Draft regional biosafety framework submitted to stakeholders for comments
Date Achieved	07/05/2011	06/30/2012	05/30/2014	05/30/2014
Comments (incl. % achievement)	Target fully achieved (100%): A draft regional biosafety framework, including an institutional framework was shared with UEMOA and ECOWAS member states, and civil society organizations for comments.			
Indicator 5:	**At least 300 stakeholders trained in biosafety and IPR by the end of the project.**			
Value (quantitative or qualitative)	0	300	-	450
Date Achieved	07/05/2011	06/30/2012	05/30/2014	05/30/2014
Comments (incl. % achievement)	Target fully achieved (100%): The 84 researchers who had been trained in scientific methodologies on risk assessment, trained 366 stakeholders in the UEMOA states (except for Mali and Guinea-Bissau) in biosafety.			
Indicator 6:	**At least 20 stakeholders have participated in at least one study tour by the end of the project.**			
Value (quantitative or qualitative)	0	20	-	10
Date Achieved	07/05/2011	06/30/2012	05/30/2014	05/30/2014
Comments (incl. % achievement)	Target partly achieved (50%): 10 stakeholders including 5 national biosafety agency, and 5 UEMOA representatives participated in a study tour to the USA and Canada.			

G. RATING OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO	GEO	IP	Actual Disbursements (USD millions)	
					P096058	P105140
1	06/06/2008	MU	MU	U	0.00	0.00
2	12/01/2008	MS	MS	S	0.00	0.43
3	05/28/2009	MS	MS	MS	0.29	0.43
4	12/05/2009	MS	MS	MS	0.29	0.65
5	03/14/2010	MU	MU	U	0.31	0.78
6	05/25/2010	MU	MU	MU	0.32	0.89
7	02/05/2011	MU	MU	MU	0.44	1.08
8	09/26/2011	MS	MS	MS	0.57	1.52
9	03/23/2012	MS	MS	MS	0.59	2.04
10	11/10/2012	MS	MS	MS	0.67	2.90
11	06/18/2013	MS	MS	MS	1.54	3.37
12	04/19/2014	MS	MS	S	2.12	4.72

H. RESTRUCTURING

Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions		Reason for Restructuring & Key Changes Made
		PDO	IP	GEF	IDA	
07/05/2011	Yes	MU	N/A	1.24	0.34	• Amendment of the PDO and indicators to reflect a more realistic objective • Introduction of changes in the description of the three project components in support of the revised PDO • Reallocation of proceeds • Addition of a goods category to the list of categories of eligible expenditures in the GEF Grant Agreement for the purchase of the national biosafety laboratory equipment
05/01/2012	No	MS	N/A	2.05	0.6	• Extension of closing date by twelve months to

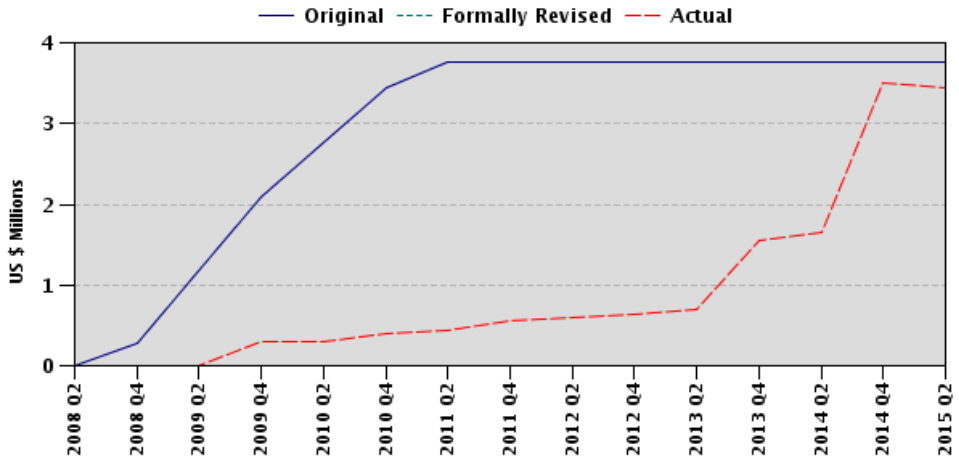
Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions		Reason for Restructuring & Key Changes Made
		PDO	IP	GEF	IDA	
						allow time to finalize the remaining project activities (06/30/2012 to 06/30/2013) • Reallocation of proceeds
06/04/2013	No	MS	N/A	N/A		• Extension of closing date by eleven months to allow time to (i) complete the construction of the regional reference laboratory in Ouagadougou; (ii) Purchase and install the equipment and consumables for the laboratory; (iii) purchase and install greenhouses for research; and (iv) provide technical control of construction of the laboratory and greenhouse. (06/30/2013 to 05/30/2014) • Reallocation of proceeds

If PDO and/or Key Outcome Targets were formally revised (approved by the original approving body), enter ratings below:

Outcome Rating	Outcome Ratings
Against Original PDO targets	Unsatisfactory
Against formally revised PDO targets	Moderately Unsatisfactory
Overall (weighted) rating	Moderately Unsatisfactory

I. DISBURSEMENT PROFILE

P105140



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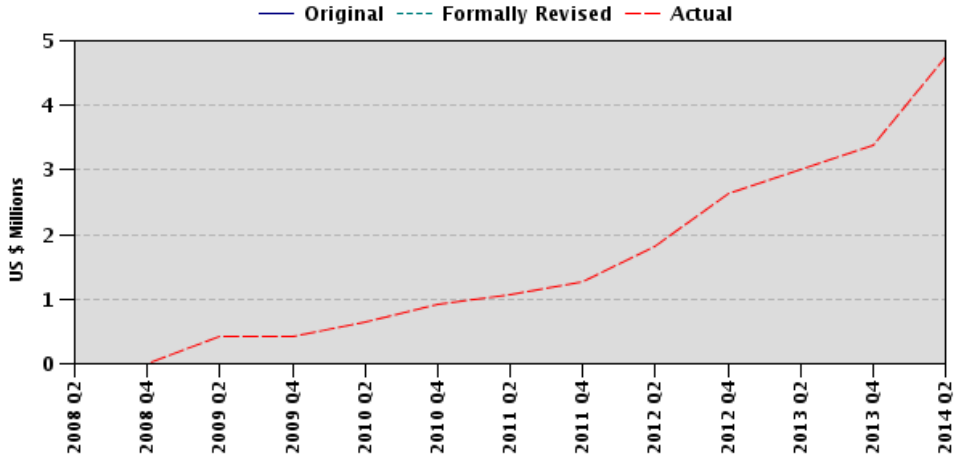

1. PROJECT CONTEXT, OBJECTIVES AND DESIGN

1.1 CONTEXT AT APPRAISAL

1. ***Country and sector background:*** The cotton sector played a critical role in the economies of the eight West African Economic and Monetary Union (WAEMU) countries,[2] where millions of households relied on cotton for their livelihood. During the three decades prior to project appraisal, the region had gained a significant market share in cotton, but falling prices and increasing market pressures made it imperative to improve the region's competitiveness in combination with seeking more favorable trade conditions. Primarily driven by insect resistance to chemical pesticides, Burkina Faso had engaged in field testing of transgenic cotton since 2003 (in partnership with the science plant industry). Scientists and government officials in Mali and Senegal, and to some extent in Benin and Togo, were subsequently interested in equally starting field trials for transgenic cotton (as well as for other transgenic food and cash crops), as agricultural biotechnology was perceived as a new opportunity to increase the productivity and competitiveness in the agricultural sector, particularly in cotton production. In addition to being a potential tool in the control of insect infestation, agricultural biotechnology in West Africa was considered having the potential to reduce the use of pesticides, increase agricultural productivity, improve food security, and expand regional competitiveness in international trade. However, due to WAEMU's common market and custom of seed sharing across national boundaries, the use of transgenic organisms carried important risks, not just for the countries, which conducted field trials, but also for the entire area.

2. WAEMU countries thus expressed a need for strong biosafety regulatory and safeguard mechanisms in order to ensure that transgenic crops, and Living Modified Organisms (LMOs) in particular, were used safely and benefitted farmers, in line with the requirements of the Cartagena Protocol on Biosafety and other international standards. The Cartagena Protocol on Biosafety is an international agreement on biosafety to protect biological diversity from the potential risks posed by Genetically Modified Organisms (GMOs), which entered into force 2003.[3] In order to comply with the Cartagena Protocol on Biosafety, signatory countries must establish or maintain means to regulate, manage or control the risks associated with the use and release of LMOs, which include risks to biodiversity and human health. Also established as part of the protocol was the Biosafety Clearing-House, an international mechanism that exchanges information about the movement of GMOs; the protocol's articles 22, 23 and 26 particularly placed emphasis on capacity building, public awareness building, and socio-economic impacts of biotechnology.

3. The World Bank financed Project is an important part of the larger WAEMU Program adopted in April 2007. The Program development objective is to establish and implement a Regional Biosafety Regulatory Framework that will enable the WAEMU member countries to meet their obligations under the Cartagena Protocol on Biosafety (CPB) and put in place the necessary social and environmental safeguards. The West Africa Regional Biosafety Project included selected components of the overall program and was funded through a Global Environment Facility (GEF) Grant in the

[2] WAEMU countries include: Benin, Burkina Faso, Mali, Senegal, Togo, Cote d'Ivoire, Guinea Bissau, and Niger.

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

amount of US$5.4 million and an International Development Association (IDA) credit to Burkina Faso in the amount of US$3.9 million[4].

4. ***Institutional background:*** Instead of proposing an exclusively national approach, the project focused on the WAEMU region to help implement the Cartagena Protocol on Biosafety. At appraisal, six of the eight WAEMU countries were parties to the Cartagena Protocol on Biosafety,[5] and all countries participated in projects aimed at developing national biosafety frameworks, which were funded by the Global Environment Facility (GEF) and implemented by the United Nations Environment Program (UNEP). Even though seven countries had completed these programs at the time of appraisal, only Burkina Faso had an operational biosafety legal framework and regulatory system in place.[6] Technical and institutional capacity in biosafety remained weak in the region, especially in the key areas of risk assessment, monitoring and regulation of biotechnology research and LMO field trials, public awareness and participation, and laboratory equipment.[7] The countries also lacked the capacity to negotiate technological fees related to intellectual property rights for transgenic crops. Without further support from development partners, the countries were considered unlikely to become fully compliant with the Cartagena Protocol on Biosafety, or to maximize their potential benefit from the technology.

5. ***Rationale for Bank involvement:*** The World Bank intended to support the project based on its experience gathered in the agricultural and rural sectors of most of the West African countries. It had undertaken a series of biosafety-related studies[8] together with an extensive catalogue of cotton sector analysis in West and Central Africa.[9] In addition, in Mali, Burkina Faso and Senegal, the World Bank was implementing projects and policy reforms on agricultural diversification, research, and extension. Its involvement included institutional reforms, support to producer organizations, strengthening of nascent food supply chains, and export promotion for agricultural products. Through this experience, the World Bank had developed constructive relationships with many of the governments and stakeholders that participated in the project. The World Bank was aware of the debate over the potential risks and benefits of these crops. The World Bank's position was to engage in a dialogue on these developments with all the interest groups in the countries, including NGOs, academia and the private sector. It was and remains an important partner for investing in new technologies while maintaining its long-standing tradition of being an honest broker of information in helping the World Bank's client countries make informed decisions about science and technology policies and investments in the agriculture sector.

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[4] References are made to the Program in this Implementation Completion and Results Report (ICR); the report, however, evaluates the IDA and GEF financed Project only.

[5] The six WAEMU countries that were parties to the Cartagena Protocol on Biosafety included Benin (May 2005), Burkina Faso (November 2003), Mali (September 2003), Niger (December 2004), Senegal (January 2004), and Togo (2004).

[6] The regulatory framework developed in Burkina Faso was the most advanced in the region and was driven by the launching of transgenic cotton field trials. In 2004, intermediary legislative measures were adopted by decree, and in 2006, the associated law was adopted by the parliament.

[7] Qualified scientists, equipment, and materials were in short supply and the skill level of the researchers, as well as the quality of the facilities available to them, was lower than in the developed world on average.

[8] *Biosafety Regulations: A Review of International Approaches*, 2003; *Briefing Paper for World Bank Management: Biosafety and Capacity Building*, 2001; and *African Agriculture and Biotechnology – Assuring Safe Use while Addressing Poverty*, 2003.

[9] *Strategies for Cotton in West and Central Africa: Enhancing Competitiveness in the 'Cotton-4' – Benin, Burkina Faso, Chad, and Mali*, 2006.

6. ***Higher-level objectives:*** The project intended to contribute significantly to the goals and strategic priorities of the GEF operational program by improving the participating countries' capacities to handle issues regarding the safe and sustainable import and use of transgenic crops and products. The project's regional approach was consistent with the GEF biosafety strategy[10] and the GEF evaluation report,[11] which promoted sub-regional cooperation as an effective means of enabling information sharing and harmonization of legal frameworks to maximize the use of institutional, financial, technical, and human resources in the region. In addition, the project intended to support GEF's third and fourth strategic biodiversity priorities targeting capacity building for implementing the Cartagena Protocol on Biosafety, and generation and dissemination of best practices addressing existing and emerging biosafety issues, respectively. The latter was intended to be supported through identifying innovative risk assessment approaches and tools for knowledge generation and sharing, and creating models for capacity building and institutional strengthening.

7. The project further intended to contribute to development goals outlined in the participating countries' national development strategies. Each Country Assistance Strategy (CAS) emphasized the importance of agricultural development for economic growth and poverty reduction.[12] A particular highlight was the need to address challenges associated with increasing productivity through diffusion of technology, at the same time ensuring sustainable natural resource management and biodiversity protection.

1.2 ORIGINAL GLOBAL ENVIRONMENT OBJECTIVE (GEO) AND KEY INDICATORS

8. ***Original GEO:*** To protect regional biodiversity against the potential risks associated with the introduction of LMOs into the environment.

9. ***Original GEO indicator:*** Percentage of risk assessments incorporating measurements of: (i) presence/absence of contamination through gene transfer to wild species and concentration level; and (ii) appearance of new or disappearance of non-target organisms.

1.3 ORIGINAL PROJECT DEVELOPMENT OBJECTIVE (PDO) AND KEY INDICATORS

10. The original PDO that was stated in the Project Appraisal Document (PAD)[13] and the IDA Credit Agreement[14] minimally differed from the one stated in the GEF Trust Fund Grant Agreement.[15] This ICR report bases its evaluation on the PDO presented in the PAD and IDA Credit Agreement. The original PDO indicators, intermediate results, and intermediate results indicators were only captured

[10] *GEF Strategy for Financing Biosafety Activities*, GEF Council June 6-9, 2006 – Agenda Item 14, GEF/C.28/5, May 11, 2006.

[11] *Final Draft of the Evaluation on GEF's Support to the Cartagena Protocol on Biosafety*, GEF Council November 8-10, 2005, GEF/ME/C.27/Inf.1/Rev.1, November 1, 2005.

[12] *Country Assistance Strategy for Benin*, Report No. 26054-BEN, July 16, 2003; *Country Assistance Strategy for Burkina Faso*, Report No. 32187, May 12, 2005; *Country Assistance Strategy for Mali*, Report No. 25663, July 7, 2003; *Country Assistance Strategy for Senegal*, Report No. 25498-SE, March 5, 2003; *Interim Country Assistance Strategy for the Republic of Cote d'Ivoire*, Report No. 24168, May 9, 2002; *Country Assistance Strategy for Togo*, Report No. 14560, June 2, 1995; *Country Assistance Strategy for Guinea Bissau*, Report No. 16568, May 12, 1997; and *Country Assistance Strategy for Niger*, Report No. 25203-NIR, January 21, 2003.

[13] *Project Appraisal Document for a West Africa Biosafety Project*, (Report No: 36383), October 19, 2007.

[14] Financing Agreement between Burkina Faso and International Development Association, Credit Number 4368-BUR, February 4, 2008.

[15] Global Environment Facility Grant Agreement between Union Economique et Monétaire Ouest-Africaine and the International Bank for Reconstruction and Development (acting as an Implementing Agency of the Global Environment Facility).

in the PAD, and not explicitly captured in the GEF Trust Fund Grant Agreement and IDA Credit Grant Agreement.

11. ***Original PDO as presented in the PAD and IDA Financing Agreement:***[16] To support the West African Economic and Monetary Union (WAEMU) for the establishment of an operational institutional, legal and regulatory regional biosafety framework for the regulation of Living Modified Organisms (LMOs).

12. ***Original PDO indicator as presented in the PAD:*** The percentage of applications processed[17] over those received for field trials and commercial release of high priority crops for the region (in conformity with the agricultural policy of WAEMU), and reviewed in compliance with the regional science-based risk assessment and management procedures established by the national reference biosafety laboratory with a regional dimension.

13. ***Original intermediate result indicators as presented in the PAD:***

    a. Component A - Intermediate result: Regional risk assessment and management methodologies designed and disseminated in the WAEMU region. Original intermediate result indicators: (1) Total number of scientists and stakeholders trained in the use of the new regional risk assessment and management handbook; and (2) percentage of trained people using the regional guidelines.

    b. Component B – Intermediate result: Institutional, legal and regulatory regional biosafety framework, taking into account Intellectual Property Rights (IPRs) related to LMOs, elaborated and monitored at the WAEMU level. Original intermediate results indicators: (3) Ratification of a regional biosafety framework by WAEMU Council of Ministers, aligned with the Cartagena Protocol on Biosafety and acceptable for the countries in the region; and (4) monitoring reports published by regional observatory.

    c. Component C – Intermediate result: Biosafety frameworks implemented in the eight beneficiary countries, taking into account the views of national stakeholders and IPR capacity built. Original intermediate results indicators: (5) Percentage of applications reviewed and implemented in accordance with regional guidelines and procedures; (6) number of comments submitted by public before decision making; (7) percentage of response from national biosafety committee and regional coordination in accordance with regional guidelines and procedures; and (8) percentage of regulators and national cotton companies trained in IPRs negotiations related to crops.

1.4 REVISED PROJECT DEVELOPMENT OBJECTIVE AND KEY INDICATORS

14. The PDO and associated indicators were revised through a Level I restructuring on July 5, 2011.[18]

15. ***Revised PDO:*** (i) Strengthen the institutional, scientific and legal capacity of the WAEMU Commission and Member States in relation to the Cartagena Protocol on Biosafety in the sub-region, and (ii) support the preparation of a draft Regional Regulatory Biosafety Framework.

[16] PDO as presented in the GEF Trust Fund Grant Agreement: To support the recipient for the establishment of an operational, institutional, legal and regulatory regional biosafety framework for the regulation of living modified organisms.

[17] A processed application can be accepted or rejected. There is a slight difference in the wording across the PAD sections; however, the meaning is the same.

[18] *Restructuring Paper on a Proposed Project Restructuring of West Africa Regional Biosafety Project*, (Report No. 62573-AFR), July 5, 2011

16. The revised PDO reflected recommendations made at the project's mid-term review to focus project activities and funds on regional and national capacity for implementing the Cartagena Protocol on Biosafety. The second objective reflected the outcome of efforts made under the project by the ECOWAS Commission, the WAEMU Commission, and Permanent Inter-State Committee for Drought Control in the Sahel (CILSS) to establish the regional biosafety framework, which was likely to remain in draft form at project closing.

17. ***Revised PDO indicators:*** (1) At least 25 percent of trained researchers and other stakeholders apply the knowledge they have acquired in their activities related to biosafety by the end of the project; and (2) A draft regional regulatory biosafety framework available by the end of the project.

18. ***Revised intermediate results and result indicators:***

    a. Component A - Intermediate result: The capacity for detection, analysis and management of biotechnology risks of WAEMU and its member states strengthened. Revised intermediate results indicators: (1) At least 5 national laboratories fully equipped at the end of the project; (2) Availability of a manual on risk assessment and management methodologies; and (3) At least 50 researchers trained in scientific methodologies on risk assessment and management.

    b. Component B – Intermediate result: A draft regional regulatory biosafety framework on biosafety available, consultations are held and stakeholders' comments and concerns documented. Revised intermediate results indicators: (4) A first draft regional biosafety framework, including the institutional framework submitted for comments by stakeholders.

    c. Component C – Intermediate result: The capacity of WAEMU Commission and its member states to implement the Cartagena Protocol on Biosafety strengthened. Revised intermediate results indicators: (5) At least 300 stakeholders trained in biosafety and IPR by the end of the project; and (6) At least 20 stakeholders have participated in at least one study tour by the end of the project.

1.5 MAIN BENEFICIARIES

19. The project's intended beneficiaries were the eight WAEMU member states (i.e., Benin, Burkina Faso, Mali, Senegal, Togo, Cote d'Ivoire, Niger and Guinea Bissau). In particular, it envisaged providing and strengthening the capacities of various stakeholders such as policy makers, enforcement officials, and scientists but also end users such as farmers in risk assessment and management of LMOs with the initial focus on transgenic cotton.

1.6 ORIGINAL AND REVISED COMPONENTS

20. The PDO was to be achieved through the implementation of three distinct components (outlined in Table 1.1). The table also shows revisions made through a Level 1 restructuring on July 5, 2011. The original components stated in the PAD [19] slightly differed in wording from those in the GEF Grant Agreement[20] and the IDA Financing Agreement.[21] This ICR bases its evaluation on the components presented in the PAD.

[19] *Project Appraisal Document for a West Africa Biosafety Project* (Report No: 36383), October 19, 2007.

[20] Global Environment Facility Grant Agreement between Union Economique et Monétaire Ouest-Africaine and International Bank for Reconstruction and Development (acting as an Implementing Agency of the Global Environment Facility).

Table 1.1: Original and Revised Components

Original Components as presented in the PAD	***Original Components as presented in the GEF Trust Fund Grant Agreement and the IDA Financing Agreement***	***Revised Components (Level 1 Restructuring July 5, 2011) – Changes highlighted***	***Justification for revisions***
Component A – Adapt and disseminate regional methodologies to assess and manage risks (Total: US$7.4 million; GEF: US$1.6 million, IDA: US$3.9 million; other financiers: US$1.9 million) a. Assess and evaluate existing tools and guidelines used or in preparation in the WAEMU countries for risk assessment and management, and compare them with recognized international methodologies. b. To establish a national reference biosafety laboratory with a regional dimension in Burkina Faso and strengthening its capacities for its eventual accreditation (using only the IDA credit) and to upgrade a network of national biosafety laboratories in the seven other WAEMU. a. Consolidate the existing tools and develop regional common approaches that meet recognized international standards in risk assessment and management, inspection, and monitoring and evaluation of LMOs, and prepare a regional manual of risk assessment and management guidelines.	***Component A*** – Adapting and disseminating regional methodologies to assess and manage risks related to living modified organisms. a. Assessing and evaluating existing tools and guidelines used or in preparation in member states for risk assessment and management, and comparing them to recognized international methodologies. b. Establishing a national reference laboratory with a regional dimension for biosafety in Burkina Faso, and strengthening its capacities for its eventual accreditation. c. Consolidating the existing tools and developing regional common approaches that meet recognized international standards in risk assessment and management, inspection, and monitoring and evaluation of LMOs.	***Component A*** – Adapting and disseminating regional methodologies to assess and manage risks to living modified organisms. a. Assessing and evaluating existing tools and guidelines used or in preparation in member states for risk assessment and management, and comparing them to recognized international methodologies. b. Increased in scope: Establishing a national reference laboratory with a regional dimension for biosafety in Burkina Faso, and <u>upgrading a network of national biosafety laboratories in the remaining seven WAEMU member states.</u> c. Consolidating the existing tools and developing regional common approaches that meet recognized international standards in risk assessment and management, inspection, and monitoring and evaluation of living modified organisms.	a. The construction of the laboratory and the purchase of required equipment was to be finalized by project closing; it would have been established but not operational. b. A detailed need assessment was carried out by WAEMU in the eight participating countries resulted in the recommendation to enhance the capacity of the national laboratories to comply with the Cartagena Protocol on Biosafety through the purchasing of basic equipment to carry out risk assessment.
Component B – Establish an institutional, legal and regulatory regional biosafety framework (Total: US$8.7	***Component B*** – Establishing an institutional, legal and regulatory regional	***Component B*** – ***<u>Preparing a draft regional regulatory biosafety framework</u>***	a. The institutional framework will not be created within the project

[21] Financing Agreement (West Africa Regional Biosafety Project between Burkina Faso and the International Development Association (Credit No: 4368-BUR), February 4, 2008.

million; GEF: US$1.7 million, IDA: US$0 million; other financiers: US$7 million. a. Prepare a regional law on biosafety according to WAEMU procedures. b. Create an institutional framework to accompany the dissemination and implementation of the legal and regulatory regional biosafety framework in the WAEMU Member States. c. Strengthen regional institution capacity building for the implementation of the Project.	biosafety framework a. Preparing a regional law and regulation on biosafety. b. Creating an institutional framework to accompany the dissemination and implementation of the legal and regulatory regional biosafety framework in the member states. c. Strengthening regional institution capacity building for the implementation of the project.	***a. Preparing a regional regulation on biosafety.*** b. Reduced in scope: ***Identifying*** an institutional framework to accompany the dissemination and implementation of the legal and regulatory regional biosafety framework in the member states. c. Strengthening regional institution capacity building for the implementation of the project.	timeframe as it depends on the adoption of the regional biosafety framework and implementation decrees, which is only expected after project closing.
Component C – Implement the biosafety frameworks and build capacity in IPRs (Total: US$8.2 million; GEF: US$ 2.1 million, IDA: US$1.2 million; other financiers: US$4.9) a. Implementing the national and, when in place, the regional, institutional, legal and regulatory biosafety framework in WAEMU Member States who have ratified the Cartagena Protocol, through support to informing, sensitizing, and strengthening capacities of the major stakeholders, especially producer organizations, on the national and regional regulations and their implications for the environment and socio-economic development.	***Component C*** – Implementing the institutional, legal and regulatory biosafety framework in member states which have ratified the Cartagena Protocol, with an initial focus on selected commodities. a. Implementing the national and, when in place, regional institutional, legal and regulatory biosafety framework in member states which have ratified the Cartagena Protocol, in both cases through support to inform, sensitize, and strengthen the capacities of the stakeholders.	***Component C – Increasing the human, institutional, legal and regulatory capacity of member states on biosafety to implement the Cartagena Protocol on Biosafety.*** ***a. Strengthen the human, institutional, legal and regulatory capacity of member states to implement the Cartagena Protocol on Biosafety through training and study tours, including on IPR.***	a. Since the regional biosafety framework would not have been adopted before closing, the effort was directed to a strong capacity building action plan that included 14 training modules on biosafety, and study tours to biosafety laboratories and agencies.

1.7 OTHER SIGNIFICANT CHANGES

Table 1.2: Other Significant Changes

Change	*Date*	*Justification*	*Approval*
Restructuring			
Extension of closing date by 12 months from 06/30/2012 to 06/30/2013. GEF: Reallocation of proceeds from the consultant services, audits, training and workshops category (US$300,000) to the goods category. IDA: Reallocation of proceeds from the works category (US$70,000) and the goods category (US$80,000) to the consultants' services and audits, the training, and the operating cost categories.	05/01/2012	To allow time to finalize the remaining project activities. GEF: To cover the additional costs related to the purchase of equipment for the national biosafety laboratories and coordination in the WAEMU member states. IDA: To finance the costs related to additional consultants, technical assistance, and training needed for the construction and accreditation process of the biosafety laboratory of Burkina Faso.	Country Director
Extension of closing date by 11 months from 06/30/2013 to 05/30/2014 IDA: Reallocation of proceeds	06/04/2013	To (i) complete the construction of the regional reference laboratory in Ouagadougou; (ii) Purchase and install the equipment and consumables for the laboratory; (iii) purchase and install greenhouses for research; and (iv) provide technical control of construction of the laboratory and greenhouse.	Country Director
Reallocation of proceeds: GEF: Addition of a goods category to the list of categories of eligible expenditures in the GEF Grant Agreement, and subsequent reallocation of proceeds from the consultant services, audits, and training (US$1,100,000), and the unallocated category (US$500,000) to the goods and operating costs categories. IDA: Reallocation of proceeds from the consultant services and audits category (US$240,000), the training category (US$430,000), and the unallocated category (US$180,000) to the works category.	07/05/2011	GEF: To allow for the purchase of equipment for eligible member states' national biosafety laboratories. IDA: To accommodate the costs incurred by the construction and equipment of a new biosafety laboratory in Burkina Faso.	Board (As part of the Level 1 restructuring to change the PDO which was approved by the Board)

2. KEY FACTORS AFFECTING IMPLEMENTATION AND OUTCOMES

2.1 PROJECT PREPARATION, DESIGN, AND QUALITY AT ENTRY

21. The project was prepared between 2005 and 2007.

22. ***Soundness of the background analysis:*** Project preparation was comprehensively informed by a participatory consultation process carried out in the participating countries, and various capacity assessments. It was further guided by a comprehensive communication strategy to reduce the risk that stakeholders could misperceive the project's objectives, and was conducted in close collaboration with other World Bank projects.[2223] As a result, project preparation outputs such as the PAD provided a comprehensive and well-informed overview of the project plans, including country-specific sector backgrounds and regulatory, policy, and institutional frameworks.

23. A broad range of stakeholder groups participated in project preparation: (i) representatives of the ministries in charge of environment, agriculture, trade, finance, and research in the WAEMU countries; and (ii) project partners such as research institutes,[24] national and regional producer organizations,[25] national biosafety committees, civil society organizations, consumer groups, and the private sector.[26] Support for WAEMU as the coordination unit was expressed in individual consultations with each of the countries' environment ministers.

24. To identify capacity weaknesses associated with plant variety protection and intellectual property rights, an intellectual property rights needs assessment was conducted,[27] as was a study that provided detailed information on the environmental effects of genetically engineered cotton, and the implementation of insect resistance management strategies in the cotton sector.[28] The relevance of a regional approach for adopting a biosafety law was tested through assessments in participating countries that specifically (i) evaluated the existing legal frameworks, institutional arrangements and

[22] WAEMU had hired a team of communication specialists with funds from the PDF-B grant to conduct a stakeholder analysis and perception-mapping exercise to better understand how the program would be perceived.

[23] The West Africa Agriculture Productivity (WAPP) financed investments and technical assistance related to research and seeds/agricultural inputs regulation to complement the project's activities, and the Agricultural Diversification and Market Development Project (Programme d'Appui aux Filières Agro-Sylvo-Pastorales – PAFASP) was in charge of implementing one of this project's components (see Section 2.2).

[24] These included the National Rural Institute (IER) in Mali, and the National Institute of Environment and Agricultural Research (INERA) in Burkina Faso.

[25] Including the National Union of Cotton Producers of Burkina Faso (UNPCB) and the Network of Peasant Organizations and Producers in West Africa (ROPPA).

[26] Project preparation meetings included: (i) Project consultations with ministries of agriculture and environment, national biosafety agencies, national agricultural research institutes, and NGOs, in Togo, Benin, Burkina Faso, Mali, and Senegal in January 2006; (ii) further project consultations with WAEMU representatives and ministry of environment in Burkina Faso in April 2006; (iii) discussions on institutional and fiduciary arrangements in Burkina Faso and Senegal in May-June 2006; (iv) meetings with the United Nations Environment Program (UNEP), the Sahel Institute (INSAH) of CILSS, ECOWAS, Food Agriculture Organization (FAO), and the West and Central African Council for Agricultural Research and Development (CORAF/WECARD) in Benin in September 2006, to assess possibilities for collaboration and co-financing; (v) consultations with various institutions and representatives from cotton producers in Burkina Faso in September 2006; (vi) meeting with the WAEMU countries' ministers of environment in November 2006 in Mali; (vii) consultations with farmer associations to obtain feedback on the Environmental and Social Management Framework (ESMF) in Burkina Faso in November 2006; and (viii) further meetings with the Burkina Faso's ministry of environment in November 2006.

[27] *Intellectual Property Rights Needs Assessment*, Derek Eaton, Wageningen University and Research Centre.

[28] *Environmental Impact of Bt-Cotton and Sustainability of the Technology through Resistance Management: Implications for West Africa*, Hector Quemada, Michigan State University.

capacity for implementing national biosafety systems, and identified weaknesses that would require capacity building; (ii) identified technical, scientific and equipment needs to undertake risk assessment and management, and evaluated the effectiveness of the national biosafety clearing houses; and (iii) assessed the institutional and financial sustainability of the biosafety systems that the project was to establish, and explored different mechanisms for long-term stability.[29] An economic impact study identifying factors that could influence the success or failure of Bt-cotton introduction, and serve as basis for future regional policies was also prepared.[30] Finally, the procurement risk for both the GEF and IDA financed activities was adequately evaluated as high. During pre-appraisal, a formal procurement capacity assessment was carried out at the Accounting Directorate (*Direction des Approvisionnements et de la Comptabilité Matière*, DACM) level, and revealed that the commission was lacking quality process documents.

25. ***Assessment of project design:*** The design built on existing experience and lessons learned from similar project interventions in Colombia and India, which were ongoing at the time and focused on biosafety capacity building. Key lessons included the importance of building public awareness and public consultations, the importance of stakeholder involvement in guiding project strategy, the substantial time and effort required to establish smooth inter-ministerial coordination mechanisms, and the benefit of a needs' assessment for training to guide the design of the capacity-building project. Further lessons that were taken into account were outlined in the GEF biosafety evaluation report, which delineated the effectiveness of its support for the implementation of the Cartagena Protocol on Biosafety. Lastly, the project built on efforts undertaken by the Sahel Institute[31] (*Institute du Sahel* or *INSAH*), which included the development of framework agreements that defined a common regulation on biosafety and conventional and genetically modified seeds in the CILSS zone.[32]

26. However, the project's design suffered from several weaknesses. The project's PDO was overly ambitious. The regional regulation on biosafety was planned to be adopted after the first year of project implementation, so that it could be implemented in the remaining years. However, the time required for consultations and negotiations associated with the preparation of the regulation was largely underestimated; consultations and negotiations turned out to be intense and required much more time than anticipated. Another factor that was not adequately assessed was the disparity in capacity across participating countries, which was much lower than originally estimated and hampered the recruitment of experts to prepare the analytical work envisaged under the project.

27. Furthermore, WAEMU's capacity to effectively implement the project proved to be wanting. WAEMU was a highly centralized institution with lengthy authorization processes, which significantly affected project implementation. An independent implementation agency could have represented a more effective arrangement.

[29] Nicholas A. Linacre, Gregory Jaffe, Regina Birner, Papa Meissa Dieng, Hoctro Quemada, and Danielle Resnick. *West Africa Biosafety Stocktaking Assessment*. International Food Policy Research Institute (IFPRI).

[30] In particular, the study analyzed: (i) expected benefits of Bt-cotton for farmers; (ii) the likely consequences on seed supply and product channels in West Africa; and (iii) the range and distribution of potential economic benefits.

[31] The Sahel Institute is a member of the Sustainable Development Solutions Network under the United Nations. It encourages and facilitates exchanges between national research systems on agricultural, population, and development issues to spur a dynamic cooperation and propose actions towards supporting productive agriculture and better management of natural resources in order to create the conditions of sustainable and competitive production.

[32] See *Project Appraisal Document for a West Africa Biosafety Project*, (Report No: 36383), October 19, 2007.

28. Finally, the sequential approach was risky and ambitious: many of the project activities were dependent on the adoption of the regulation (i.e., Original intermediate result indicators 4-8) and on the validation of the study on risk management (i.e., Original intermediate result indicators 1-2). Potential delays associated with these key activities and their subsequent impact on other project activities and overall project implementation was not adequately taken into account.

29. ***Government commitment:*** All participating countries had ratified the Convention on Biological Diversity prior to the project, and all participating countries were parties to the Cartagena Protocol on Biosafety[33] with the exception of Chad and Cote d'Ivoire. The project was officially launched in June 2009 in Bamako, Mali during which the ministers of agriculture of the WAEMU countries reconfirmed their commitment to support the implementation of the project.

30. ***Assessment of risks:*** The PAD outlined potential project risks, by particularly highlighting the importance of carefully managing potential negative perceptions associated with LMOs. However, there were several omissions both in the types of risks that were identified and in the planned risk mitigation measures. For example, even though the participation of multiple countries with different interest levels and capacity to implement the Cartagena Protocol on Biosafety was identified as a risk, the risk mitigation (i.e., assuming the common interest in cotton would facilitate regional coordination) was optimistic. Potential risks associated with extensive and lengthy consultations and negotiations in preparation of the regional biosafety framework were not considered. Neither were the collaboration challenges in view of the multiple implementing entities, nor the weak capacity in view of the specificity and innovation of the subject area.

2.2 IMPLEMENTATION

31. The project was approved by the Board on November 13, 2007, and became effective on July 7, 2008 for the IDA Credit and on October 2, 2008 for the GEF Grant. The project implementation unit responsible for coordinating the program at the regional level was hosted by the WAEMU environment department and in the beginning included a biosafety specialist as regional coordinator and a communications officer; the accountant and procurement specialist were equally part of the unit, though based in WAEMU's administrative and financial department. Burkina Faso's national biosafety agency was responsible for constructing the regional biosafety laboratory, a key component of the project, with the fiduciary aspects of this component being under the responsibility of the Agricultural Diversification and Market Development Project (Programme d'Appui aux Filières Agro-Sylvo-Pastorales – PAFASP). Close and effective collaboration across these implementing entities was therefore essential.

32. Key start-up activities began in January 2009,[34] and the project was only launched officially in June 2009. During implementation, the project experienced long delays, eventually resulting in a Level 1 restructuring in 2011, and a Level 2 restructuring in 2012, including two extensions of the closing date for a total of 23 months. Key factors affecting implementation and outcomes included:

[33] The Convention on Biological Diversity entered into force on 29 December 1993. It has 3 main objectives: (i) the conservation of biological diversity; (ii) the sustainable use of the components of biological diversity; and (iii) the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

[34] Activities included the procurement of two key studies (i.e., preparation of the regional regulation on biosafety, and the development of common approaches on biosafety risk assessments), and the preparation of the communication strategy.

- Inefficient project management slowed down project implementation: The timely compliance with effectiveness conditions was hampered due to administrative challenges within WAEMU. Further delays were caused by poor performance of staff together with interpersonal tensions among staff. Equally cumbersome was the collaboration between WAEMU and PAFASP. To improve collaboration, the units' terms of reference in the operations manual were revised in 2010 to clearly define the respective roles and responsibilities including those of the reporting managers. Together with several staffing changes at WAEMU,[35] project implementation performance subsequently gradually improved, even though some difficulties remained.

- WAEMU's institutional arrangements hampered efficient procurement and financial management: Fiduciary staff was based in WAEMU's administrative and financial department, while the rest of the project implementation unit's staff was based in WAEMU's department for rural development, natural resources, and environment. While still a part of WAEMU, the administrative and financial department lacked financial autonomy and was unable to provide effective support. The financial management and procurement procedures were highly centralized, thus requiring lengthy authorization times. In the beginning of 2010, however, the procurement specialist's contract was not extended, and WAEMU management fully assigned the fiduciary staff to the project thus strengthening the support to the project. Following the Level 1 restructuring, more efficient financial management and procurement procedures were put in place through a signing delegation from WAEMU's President to the implementing department in procurement, financial management and budget approval, withdrawal applications and use of the designated account.

- Ambitious nature of project activities: The preparation and adoption of the regional regulation on biosafety turned out to be lengthier than initially estimated, because of the disparity in capacity across participating countries, the scale up of consultations to the ECOWAS area, and the specific and challenging nature of biosafety as a policy area. Additional time for continued intensive consultations with participating countries and stakeholders was needed, as were efforts at the country-level to raise awareness and buy-in, strengthen capacity and harmonize risk assessment tools and procedures. At mid-term review (April 2011), the World Bank recommended revising the PDO to make it more focused and achievable, and to increase the focus on regional and national capacity building for implementing the Cartagena Protocol on Biosafety and harmonizing risk assessment procedures and tools. The Level 1 restructuring that followed in 2011 reflected those changes and further included a reallocation of funds. The closing date of the project was subsequently extended twice for a total of 23 months.

- The specificity and innovative nature of biosafety in the participating countries affected the identification and recruitment of technical experts needed on both legal and scientific aspects:[36] The refurbishment of an existing laboratory was delayed because of challenges associated with (i) finding qualified service providers to prepare the technical specifications for the refurbishment and equipment, and (ii) the fact that the laboratory intended to focus on both biotechnology and

[35] The procurement specialist was not renewed, the communication specialist had resigned, and an M&E specialist was recruited.

[36] The procurement process for the study on common risk assessment methodologies was unsuccessful because technical bids received were found unqualified by the evaluation committee. As a result, and based on the World Bank procurement specialist's advice, WAEMU prepared a shortlist of institutions in the regions that were considered suitable to conduct such study; eventually CORAF/WECARD was hired to prepare the study. Equally lengthy was the recruitment process for a legal consulting firm.

biosafety.[37] Ultimately, it was decided to construct a new laboratory, which was finalized by project closing. The construction of a greenhouse as part of the regional biosafety laboratory was, however, not completed.[38] Since the greenhouse is necessary for the laboratory to obtain its regional accreditation, the project team has been trying to find alternative funding mechanisms to finalize its construction (see Section 2.5).

2.3 M&E DESIGN, IMPLEMENTATION, AND UTILIZATION

33. ***M&E design:*** The design of the M&E was strong, and some of its aspects included in component B. The project's M&E plan focused on developing intermediate regional and country results indicators in accordance with the results framework, and sharing monitoring reports with stakeholders; and a steering and monitoring committee consisting of representatives from all participating countries was created prior to project effectiveness. Its terms of reference were adopted, and the first meeting took place in early 2008. In addition, a regional observatory was intended to be created to perform the essential functions of monitoring compliance with the Cartagena Protocol and evaluating the impact of agricultural biotechnology on biodiversity and on socioeconomic issues, if/when the countries adopt transgenic crops.

34. ***M&E implementation and utilization:*** The steering and monitoring committee held yearly meetings, which were used to discuss the project and to provide advice. Similarly, regular meetings were held by the national biosafety committee in Burkina Faso to provide technical advice. Quarterly progress reports were regularly produced by the project coordination unit. Until late 2010, however, there was no M&E specialist working for the project coordination unit, no results framework was being used, and no data collection system had been put in place to effectively track progress towards the project's indicator targets. The World Bank often emphasized the importance of recruiting an M&E specialist, however, due to the lengthy recruitment process (see Section 2.5), an M&E specialist was only recruited in October 2010. Furthermore, the envisaged regional observatory was never created due to the regional biosafety framework not having been implemented. Project implementation progress was monitored more effectively following the M&E specialist's recruitment and the restructuring of the project in 2011.

2.4 SAFEGUARD AND FIDUCIARY COMPLIANCE

35. ***Safeguard compliance:*** The project triggered two safeguard policies: OP 4.01 on Environmental Assessment and OP 4.09 on Pest Management.

36. The project complied with OP 4.01 on Environmental Assessment: An Environmental and Social Management Framework (ESMF) was prepared in August 2006, and updated in August 2009 to include several studies that had not been finalized in 2006. These included a study on public perception based on extensive public consultations that were conducted from May 2006 to December

[37] The PAD had called for the rehabilitation of an existing laboratory. However, during implementation it became clear that a new laboratory had to be constructed because the biotechnology/biosafety dual function of the existing laboratory was considered inappropriate.

[38] Procuring the construction of the greenhouse was equally lengthy. A first call for bids was unsuccessful due to limited responses, and the offers obtained by construction companies following a second call exceeded available project funds. Eventually following some negotiations, a suitable construction company was found and an agreement was made; however, delivery of crucial building materials was expected to take up to six months, which was considered not enough time before project closing.

2007 as part of project preparation, a capacity assessment of the institutional and regulatory framework on biosafety in West Africa, and the evaluation of the potential socio-economic impact of Bt-cotton in West Africa. Following considerable delays,[39] the ESMF was eventually validated in October 2010, locally disclosed, and published on the World Bank Infoshop in April 2011. A safeguard specialist regularly supported the project.

37. The Environmental Management Plan (EMP) for the construction of the laboratory in Burkina Faso was also completed following extensive public consultations. [40] The document was published at the national level in August 2012 and on the World Bank Infoshop in October 2012. The construction itself was supported by a safeguards consultant, who ensured compliance with the EMP.

38. The project complied with OP 4.09 on Pest Management: OP 4.09 on pest management was triggered because of the potential introduction of Bt-Cotton in Burkina Faso as this was considered to be a significant change in pest management practices. The project was not promoting or financing the introduction of any genetically modified crops or the use of any specific pest management practices. However, it was deemed prudent to address the potential Bt resistance management issues and potential secondary pest outbreaks that would have arisen as a result of the introduction of Bt-Cotton. Pest management issues were eventually addressed as part of the ESMF as it was not deemed necessary to prepare a stand-alone pest management plan.

39. ***Financial management and procurement:*** WAEMU's project implementation unit was responsible for the procurement and financial management of the program at the regional level, while fiduciary aspects associated with constructing the regional biosafety laboratory were under the responsibility of PAFASP.

40. WAEMU: Particularly prior to project restructuring, the project's procurement and financial management arrangements in WAEMU's project implementation unit were inefficient and affected project implementation to a large extent. In comparison to the rest of the project coordination unit, the responsible procurement and financial management staff were based in WAEMU's administrative and financial department and not sufficiently supporting the project.[41] In addition, WAEMU's internal financial management and procurement procedures were highly centralized (i.e., contracts had to be signed at the president's level), thus requiring lengthy authorization times and subsequently delaying project implementation. WAEMU's financial monitoring reports were regularly prepared and submitted to the World Bank, however often delayed by the need to be resubmitted due to insufficient quality. External audit reports were also often delayed and included reservations on expense justifications. Prior to project restructuring, procurement was often rated moderately unsatisfactory or unsatisfactory.

[39] Even though strong safeguard support was provided, comments provided by the World Bank on the ESMF were incorporated with a delay of more than 6 months.

[40] The EMP was validated by the Ministry of Environment in August 2012, following extensive public consultations in the form of two workshops held in March and April 2012, and a public hearing held in July 2012. Also conducted in July 2012 were awareness raising activities to inform the people living in proximity to the laboratory on biosafety aspects, waste management, and risk assessments; approximately 245 people participated.

[41] Interpersonal tensions and poor performance led to lengthy procurement procedures and inefficient financial management. Particularly, procuring a consultant for the study on regional risk assessments and management methodologies, as well as procuring the recruitment of an M&E specialist were lengthy.

41. In 2010, however, WAEMU management fully assigned the fiduciary staff to the project thus increasing the support; and following the Level 1 restructuring, more efficient financial management and procurement procedures were put in place through a signing delegation from WAEMU's president to the implementing department in procurement, financial management and budget approval, and withdrawal applications. Procurement and financial management ratings gradually improved.

42. PAFASP: PAFASP's performance was solid throughout project implementation. Availability, capacity, and performance of fiduciary staff were good, as was their communication with the Bank. Financial monitoring reports were submitted regularly and timely to the Bank's satisfaction, as were external audit reports.

2.5 POST-COMPLETION OPERATION/NEXT PHASE

43. ***Post-completion:*** As outlined in Section 2.2, the construction of a greenhouse as part of the regional biosafety laboratory was not completed at project closure. Since the construction of the greenhouse, however, is necessary for the laboratory to become fully operational and to obtain its regional accreditation, the national agency for biosafety together with the Bank has been trying to find alternative funding mechanisms to finalize its construction. Negotiations took place, and it has been agreed that the greenhouse will be constructed as part of another project – the World Bank West Africa Agricultural Productivity (WAAPP-1b) Project. It will be crucial to closely monitor further developments taking into account the importance of the greenhouse for the laboratory's overall operations. The recruitment of specialized technical and scientific staff to support the laboratory's operations has been partially completed with the remaining staff to be recruited in the fall of 2014.

44. Even though the draft regional regulatory biosafety framework was finalized in July 2014, its ratification was not achieved at project closure as a result of the lengthier than originally anticipated negotiations among the three institutions. The draft framework's ratification was planned to be accomplished before the end of 2014; however, ministerial meetings that were scheduled for mid-September only took place in the beginning of February 2015 due to an Ebola epidemic in West Africa.[42] During these meetings, the framework was validated by relevant experts and ministers, and is currently awaiting adoption by the Board of Statutory Ministers. Since the regulation's purpose and impact can only be achieved and sustained with its ratification, it will be of paramount importance to further monitor developments.

3. ASSESSMENT OF OUTCOMES

3.1 RELEVANCE OF OBJECTIVES, DESIGN, AND IMPLEMENTATION

45. ***Relevance – Substantial:*** Even though Burkina Faso remains the only WAEMU country that is currently experimenting transgenic cotton and engaging in its commercial production (against the assumptions outlined in the PAD that the WEAMU region would progressively adopt transgenic cotton and other transgenic crops), there has been an increased focus on biosafety in the sub-region. ECOWAS developed an action plan for the development of biotechnology and biosafety in the sub-

[42] Sector ministers (i.e., agriculture, environment, research, and civil society organization) and technical experts came together on February 1-5, 2015.

region, focusing on the development of a biotechnology application to enhance agricultural productivity and stimulate competitiveness, while maintaining the natural resource base and creating an enabling environment in this respect.[43] All WAEMU members ratified the Cartagena Protocol. Mali signed a biosafety law and a decree to adopt genetically engineered product-testing procedures in December 2008, and December 2010, respectively. In Senegal and Togo, biosafety laws were equally signed in 2009, Cote d'Ivoire is currently finalizing one, and Benin has recently lifted its moratorium on genetically modified organisms.

Table 3.1: Status of Biosafety Developments by Country

	Country							
	Benin	***Burkina Faso***	***Cote d'Ivoire***	***Guinea-Bissau***	***Niger***	***Mali***	***Senegal***	***Togo***
Signatory to the Cartagena Protocol of Biosafety	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ratification of the Cartagena Protocol of Biosafety	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
National Biosafety Framework	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
National Biotechnology Framework	No	Yes	No	No	No	Yes	Yes	No
Biosafety Law	No	Yes	No	No	No	Yes	Yes	Yes
Validation workshop of the draft regional regulatory biosafety framework	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

46. The project's objectives continue to be considered relevant to the participating countries' national priorities. As evidenced from the participating countries' current poverty reduction strategies,[44] emphasis is being placed on enhancing agricultural productivity and production, through for example developing and supporting new farming techniques and high-yielding varieties, or subsidizing or distributing improved seeds and agricultural inputs. Regional collaboration and sustainable management of natural resources and the environment are equally considered. Mali and Senegal's strategies particularly focus on environmental protection including the protection of biodiversity, and sustainable management of resources. The project is also consistent with the World Bank Country Partnership or Country Assistance Strategies for the participating countries, which support reducing social, economic, and environmental vulnerabilities through enhancing agricultural productivity and

[43] ECOWAS and CORAF/WECARD, 2007. Action plan for the development of biotechnology and biosafety in the ECOWAS sub region – 2007-2012. The implementation of the Plan will be coordinated by ECOWAS, while the technical activities will be carried out by the key biotechnology and biosafety players of the sub-region, particularly CORAF/WECARD, INSAH/- CILSS and their associate partners.

[44] Republic of Benin – Growth and Poverty Reduction Strategy for 2011-2015, March 2011; Burkina Faso – Strategy for Accelerated Growth and Sustainable Development for 2011-2015, June 2011; Republic of Mali – Plan for the Sustainable Recovery of Mali 2013-2014, April 2013; Republic of Senegal – National Strategy for Economic and Social Development 2013-2017, November 8, 2012; Cote d'Ivoire – Poverty Reduction Strategy, January 2009; Guinea-Bissau – Second Poverty Reduction Strategy Paper 2011-2015, June 2011; and Niger – Poverty Reduction Strategy Paper 2012-2015, April 2013.

regional cooperation.[45] The sustainable use and protection of natural resources and the environment are also considered, respectively. Lastly, the project's objectives are in line with the World Bank's Environment Strategy, which highlights the importance of biodiversity protection and conservation together with the sustainable management of natural resources;[46] and the World Bank's Regional Integration Assistance Strategy for Sub-Saharan Africa, which focus on regional infrastructure, institutional cooperation for economic integration, and coordinated interventions to provide regional public goods.[47]

47. The project's regional approach including its goal to prepare a regional regulation remains highly relevant, taking into account the WAEMU's common market (i.e., where goods including seeds can travel from one country to the other). The project's original design was, however, too ambitious. First, the time required for consultations and negotiations associated with the preparation and adoption of the regional regulation on biosafety was largely underestimated; and second, the design's sequential approach, which made several project activities dependent on the biosafety regulation's adoption, did not link the project's outputs and final outcomes very well (see Section 2.1 for more details). The revised approach was much simpler and achievable, however, again not linking the project's activities with envisaged outcomes. The revised PDO was output-oriented (i.e., targeting a draft regional biosafety regulation) and thus not suitable for measuring outcomes.

3.2 ACHIEVEMENT OF GEO

48. ***Original GEO achievement – Negligible:*** The project's Global Environment Objective (GEO) was to protect regional biodiversity against the potential risks associated with the introduction of LMOs into the environment. The GEO was not achieved since neither the project's original PDO of establishing a regional biosafety framework was achieved, nor a laboratory with regional reference was operational to measure the percentage of conducted risk assessments.

3.3 ACHIEVEMENT OF PDO

49. Taking account of the project's Level 1 restructuring in June 2011, the project has been evaluated against its original and revised PDO by measuring achievements at the time of project closing (May 2014).

50. ***Original PDO achievement – Negligible:*** The envisaged operational institutional, legal and regulatory regional biosafety framework was not established, thus the original PDO was not achieved. The assessment took the project's PDO indicator into account, which was not achieved (0 percent), and considered eight intermediate result indicators, of which one was partially (21 percent), and seven not achieved (0 percent). As already described in Section 2.1, most of the project's indicators' achievements were dependent on the adoption and implementation of the regional biosafety

[45] Country Partnership Strategy for Benin for FY13-17, (Report No: 75774-BJ), March 2013; Country Partnership Strategy for Burkina Faso for the Period FY13-16, (Report No: 78793-BF), August 21, 2013; Interim Strategy Note for the Republic of Mali, (Report No: 76233-ML), May 20, 2013; Country Partnership Strategy for the Republic of Senegal, (Report No: 73478-SN), January 18, 2013; Interim Strategy Note for the Republic of Togo for the Period 2012-2013, (Report No: 65874-TG), December 29, 2011; Country Partnership Strategy for the Republic of Cote d'Ivoire for the Period FY10-FY13, (Report No: 53666-CI), April 1, 2010; Interim Strategy Note for the Republic of Guinea-Bissau for the Period FY09-10, (Report No: 48466-GW), May 20, 2009; and Country Partnership Strategy for the Republic of Niger, (Report No: 76232 NE), March 29, 2013.

[46] Toward a Green, Clean, and Resilient World for All, a World Bank Group Environment Strategy 2012-2022, May 2012.

[47] Regional Integration Assistance Strategy for Sub-Saharan Africa, World Bank, March 18, 2008.

framework (i.e., Original Intermediate Outcome Indicators #4-8); since the framework was neither adopted nor implemented at the time of restructuring or project closure, these indicators were not achieved. See Annex 2 for details on outputs achieved.

51. ***Revised PDO achievement – Modest:*** The revised PDO of strengthening the institutional, scientific and legal capacity of the WAEMU Commission and Member States in relation to the Cartagena Protocol on Biosafety in the sub-region, and supporting the preparation of a draft Regional Regulatory Biosafety Framework was partly achieved. Even though the project achieved important outputs such as preparing the draft regional regulatory biosafety framework and substantially strengthening national capacities, project outcomes such as sustainably ensuring WAEMU and ECOWAS countries are able to protect biodiversity and the environment from the possible effects of regional trade in LMOs, are yet to be achieved (i.e., pending the regional regulation's adoption, ratification, and implementation; and the construction of the greenhouse). Nevertheless, evidence suggests that final steps such as the regulation's ratification and the construction of a greenhouse will be achieved as post-completion activities (see Section 2.5).

52. The institutional, scientific and legal capacity of the WAEMU Commission and Member States in relation to the Cartagena Protocol on Biosafety in the sub-region was strengthened to a substantial extent:

- Existing tools and guidelines for risk assessment and management that were in use or under preparation in the WAEMU member states were assessed and evaluated as part of a study conducted by the West and Central African Council for Agricultural Research and Development (CORAF/WECARD). Based on the study's results, regional common approaches that meet recognized international standards in risk assessment and management, inspection, and monitoring and evaluation of LMOs were developed.[48] A manual on risk assessment and management methodologies was finally prepared and validated in September 2012 by the regional scientific committee for biosecurity.[49] The manual is available on the central portal of the Biosafety Clearing House; regional and national workshops were held for consultations and to disseminate the manual to ensure wide stakeholders participation and ownership (Revised Intermediate Outcome Indicator #2 – 100 percent). Eventually, 84 researchers and stakeholders were trained in scientific methodologies on risk assessment and management (Revised Intermediate Outcome Indicator #3 – 100 percent), and of those 47 (56 percent) had applied the acquired knowledge at least once according to a survey that was undertaken in 2012 by the WAEMU (Revised PDO Indicator #1 – 100 percent).

- The capacity of national laboratories in the eight member states of the WAEMU was enhanced to comply with the Cartagena Protocol on Biosafety. All national laboratories were equipped for carrying out risks assessments of LMOs and conducting post release monitoring (Revised Intermediate Outcome Indicator #1 – 100 percent). The installment and proper usage of equipment in all eight member states (except Burkina Faso which is described in more detail below) was, however, reported as partial in November 2012 following a circular mission

[48] UEMOA, 2013. L'état des lieux de la mise en œuvre du protocole de Cartagena et des procédures d'évaluation et de gestion des risques lies a l'introduction des biotechnologies modernes et produits dérivés dans l'espace UEMOA.

[49] UEMOA, 2013. Manuel Régional – Des procédures d'évaluation et de gestion des risques lies l'introduction des biotechnologies modernes et produits dérivés dans l'espace UEMOA.

conducted by WAEMU.[50] In Burkina Faso, a national biosafety laboratory was newly built.[51] The laboratory was designed to develop, adapt and standardize LMO detection and LMO risk assessment methods for biotechnology being developed in or imported into the region. However, the laboratory has not begun operation, which was planned to commence in July 2014; and as described in Section 2.5, the project did not succeed in building a greenhouse (a tissue culture unit, and climatically controlled growth chambers for conducting trials in containment), required to obtain a regional accreditation. The laboratory was intended to be a national reference laboratory with a regional dimension to provide objective and transparent biosafety risk assessment support to the WAEMU member states, and to be linked with the national laboratories charged with LMO detection, monitoring, and reporting, to prevent or mitigate the uncontrolled movement of LMO seeds from Burkina Faso to its neighboring countries. Without the greenhouse, the laboratory thus cannot perform its original purpose, and without its accreditation, the laboratory's envisaged long-term financing plans are under threat.[52] In the short-term, financing is ensured by Burkina Faso's national biosafety agency.[53] The construction of the greenhouse as a post-completion activity under another World Bank project has not materialized so far (see Section 2.5).

- Stakeholders in the participating countries were sensitized through preparation of a communications strategy, establishment of a website informing on biosafety aspects, published articles, and short education clips broadcasted on national television of WAEMU member states and Africable television. The communications strategy was prepared in 2010 through national workshops and with participation of various stakeholders,[54] and eventually validated through a regional workshop from September 29 to October 1, 2011. Communication products such as brochures, booklets or posters were prepared and distributed at various workshops and meetings held by WAEMU. The region's member countries received grants, which were equally used for communication.

- A circular mission to the eight participating countries was conducted by WAEMU in December 2009, to collect information on national capacities in view of their laboratories and to identify priority needs.[55] Subsequently, an international consultant prepared a capacity building action

[50] In November 2012, a circular mission conducted by WAEMU reported the following status update in the participating countries (excluding Burkina Faso): (i) all equipment delivered; (ii) equipment fully and partly installed in three and four countries, respectively; however, adequately installed only in one country; (iii) relevant personnel was trained in all countries; and (iv) installed equipment partly used in four countries. However, at project closure, WAEMU reported that since November 2012, positive progress was further achieved (not verified by ICR).

[51] Awareness raising activities to inform the people living in proximity to the laboratory on biosafety aspects, waste management, and risk assessments were conducted in July 2012. 245 people participated.

[52] Plans outlining the financing and legal status of the laboratory were finalized in July 2013. Recurrent costs are planned to be covered by the Government in the short-term, however, by charging for the reference laboratory's services and with market mechanisms applied to the commercialization of LMOs in the medium to long term.

[53] The World Bank team had recommended the national biosafety agency to include a budget line for the laboratory when discussing its budget with the Ministry of Science and the Ministry of Finance.

[54] The communication strategy was prepared with participation of various stakeholders. A first draft of the strategy was reviewed by various stakeholders through national workshops in the eight participating countries from March 17 to April 15, 2010 (approx. 50 participants per work shop). Comments received were synthesized and incorporated in May 2010, before the document was finalized in June 2010.

[55] The mission organized national workshops, which brought together about 240 participants. The main needs identified included: strengthening the capacity of national coordination, equipment national laboratory biosafety capacity building of stakeholders through training and awareness.

plan and five regional training sessions covering 15 modules were conducted between November 2011 and May 2012 (see Annex 2 for details on the training sessions). In addition to the 84 researchers and stakeholders that were trained in scientific methodologies on risk assessment and management, 366 researchers and stakeholders across the WAEMU states were trained in various aspects related to biosafety (i.e., detection, inspection and control, risk assessment, communication on risk and awareness raising, intellectual property rights) (Revised Intermediate Outcome Indicator #5 – 100 percent).[56] Further capacity was strengthened through a 2-week study tour to the USA and Canada in April 2013. Ten representatives from the authorities in charge with biosafety (i.e., focal points of the program) and WAEMU (i.e., commissioner and experts) participated (Revised Intermediate Outcome Indicator #6 – 50 percent).

53. The preparation of a draft regional regulatory biosafety framework was substantially supported. A draft regional regulatory biosafety framework on biosafety is available, consultations were held, and stakeholders' comments and concerns were documented. During ministerial meetings held on February 1-5, 2015, the draft framework was validated by sector ministers (i.e., agriculture, environment, research, and civil society organization) and technical experts, and is currently awaiting adoption by the Board of Statutory Ministers. To sustainably ensure WAEMU and ECOWAS countries are able to protect biodiversity and the environment from the possible effects of regional trade in LMOs, the regulation's adoption and ratification remains, however, crucial and yet to be achieved. The framework's ratification is planned to be accomplished in 2015.

- A draft regional regulatory biosafety framework was prepared by a committee of experts from WAEMU, ECOWAS, and CILSS; the draft framework covers both West Africa (the ECOWAS and WAEMU areas) and Chad (Revised PDO Indicator #2 – 100 percent). The draft framework, including aspects for an institutional framework for the dissemination and implementation of the regulation, was discussed with representatives from WAEMU and ECOWAS member states and civil society organizations (Revised Intermediate Result Indicator #4 – 100 percent). Comments and concerns were documented, synthesized and incorporated as seen appropriate.[57] Certain aspects of an institutional framework have been discussed among the institutions as part of the regulatory biosafety framework. However, the overall institutional framework to accompany the dissemination and implementation of the regulation in the eight WAEMU countries is still being finalized.

54. ***Weighted average PDO – Modest:*** At restructuring in July 2011, the project had disbursed US$1.2 million of the GEF Grant (representing 25 percent of total disbursed funds of US$4.8 million), and US$0.3 million of the IDA Credit (representing 9 percent of total disbursed funds of US$3.4 million). On this basis and as illustrated by the table below, the weighted average of the project's PDO achievement is rated Moderately Unsatisfactory. Annex 2 provides a comprehensive account of qualitative and quantitative information`on outputs against both original and revised PDO and Intermediate Outcome Indicators.

[56] Trained researchers and stakeholders included 50 from Benin and Niger, respectively; 49 from Burkina Faso; 56 from Cote d'Ivoire; 26 from Senegal; and 40 from Togo.

[57] The World Bank expressed concern that the draft included overprotective measures that were not required by the Cartagena Protocol on Biosafety. It noted that these would overemphasize the risks of biotechnology and neglect the benefits (see Aide-Memoire of the mid-term review).

Table 3.2: Weighted Average PDO

		Against Original PDO	*Against Revised PDO*	*Overall*
1.	***Rating***	Unsatisfactory	Moderately Unsatisfactory	
2.	***Rating Value***	2	3	
3.	***Weight (% disbursed before/after PDO change)***	GEF: 25% IDA: 9% Total Average: 17%	GEF: 75% IDA: 91% Total Average: 83%	
4.	***Weighted value***	0.3	2.5	2.8
5.	***Final Rating***			Moderately Unsatisfactory

3.4 EFFICIENCY

55. ***Efficiency – Modest:*** The project's overall efficiency in the use of resources to achieve its objectives is rated modest, mainly because of the limited data available to demonstrate that project resources were used efficiently. Targets revised during the July 2011 project restructuring were partly achieved (see Section 3.2), with 48 percent of total originally estimated funds spent (i.e., US$11.6 million of US$24.3 million estimated at appraisal). The low percentage is mainly attributable to (i) the non-existence of cost recovery mechanisms due to the fact that the regional biosafety framework was not adopted (i.e., US$0 million of US$8.2 million estimated at appraisal); and (ii) low counterpart funding (i.e., US$2.5 million of US$5.6 million estimated at appraisal. Other main issues that constrained the project's efficiency are presented in Section 2, and included: (i) inefficient project management; (ii) inefficient institutional arrangements; (iii) an ambitious nature of project activities; and (iv) the specificity and innovative nature of biosafety, which particularly affected the construction of the green house and associated disbursements.

56. Economic and financial analysis: Total economic costs were estimated to be US$22.2 million in present value, accounting for US$24 million of investment during the first four years and then US$0.5 million of recurrent costs to sustain the regional biosafety framework. Economic benefits to the WAEMU region originally expected under the project included three kinds: (i) efficiency gains from centralizing regulations and risk assessment and management methodologies at a regional level; (ii) lower levels of technology fees from enhanced negotiations capacity; and (iii) lower risks of regional biodiversity contamination from improved risk assessment and management of safeguards and environment and health benefits through reduced pesticide use. Despite their importance, the environmental benefits accruing from lowering the risk of biodiversity contamination and reduced pesticide use (the third benefit) was not valued due to the absence of data. The two main beneficiaries in terms of the financial analysis were expected to be (i) the governments that would save on their national biosafety agency research budgets and any long-term risk management and mitigation costs, and (ii) the farmers that were assumed to pay lower technology fees if they would decide to adopt Bt-cotton. However, as a result of the fact that the two main project outcomes that were assumed in the economic and financial analysis (i.e., adoption of the operational institutional, legal and regulatory regional biosafety framework, and the creation of a national laboratory with regional reference) were not realized (e.g., the regional biosafety framework has not been adopted yet, the laboratory is still

missing the greenhouse and is thus not operational), the benefits envisaged in the economic and financial analysis were not realized as laid out in the PAD. The ICR comes to the conclusion that an economic and financial analysis would not be feasible. Similarly, the GEF incremental cost analysis cannot be verified.

57. Cost analysis: Most project funds were spent on adapting and disseminating regional methodologies to assess and manage risk, and constructing the regional biosafety framework (Component 1 – 126 percent of appraisal estimate was spent). The higher amount spent than estimated at appraisal can partly be explained by the fact that during the project's restructuring in 2011, activities such as upgrading a network of national biosafety laboratories in the remaining seven WAEMU member states were added to the activities under Component 1. Even though most of the targets under this component were achieved, their benefits are difficult to assess, particularly since the laboratory's construction was not finalized. Remaining project funds were spent on preparing the draft regional biosafety framework and building capacity (Component 2 and 3 – 14 percent and 13 percent of the appraisal estimate, respectively); their benefits are equally difficult to assess taking into account that the regional biosafety framework has neither been adopted nor implemented. When comparing actual costs of Component 2 and 3 with estimates made at the project's restructuring (i.e., US$2.0 million and US$1.7 million, respectively), calculations show 60 percent and 65 percent disbursement for Components 2 and 3.

3.5 JUSTIFICATION OF OVERALL OUTCOME RATING

58. ***Overall Outcome – Moderately Unsatisfactory:*** On the basis of the project's efficiency (modest), relevance (substantial), and PDO achievement (modest), the overall outcome is rated moderately unsatisfactory. The overall outcome rating takes into account that despite substantial implementation challenges (see Section 2), the project achieved important outputs such as preparing the draft regional regulatory biosafety framework and substantially strengthening national capacities. Important project outcomes such as the regional regulation's adoption and ratification, and the construction of the green house are yet to be achieved to sustainably ensure WAEMU and ECOWAS countries are able to protect biodiversity and the environment from the possible effects of regional trade in LMOs; however, the rating takes into account evidence that suggests that these will be achieved as post-completion activities (see Section 2.5).

3.6 OVERARCHING THEMES, OTHER OUTCOMES AND IMPACTS

59. ***Poverty impacts, gender aspects, and social development:*** The originally envisaged operational institutional, legal and regulatory regional biosafety framework was not established, and thus expected benefits that were assumed to have an impact on poverty were not materialized. For example, under the regional biosafety framework, farmers were assumed to likely pay lower technology fees if they would decide to adopt Bt-cotton, or pay less for pesticides. The project did not have specific gender aspects.

60. ***Institutional change/strengthening:*** The project strengthened the Government's institutional capacity on several levels: (i) Technical capacity of 450 stakeholders was strengthened through 15 capacity building modules that were conducted in the participating countries (i.e., on the regulation, documentation, control, and inspection of GMOs; Intellectual Property Rights, and application of the Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol

on Biosafety; communication, education, and awareness raising; assessment, management, analysis and risk identification, and decision procedures associated with LMOs, the regulation of GMOs, Intellectual Property Rights, and application of the Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety). (ii) National expertise (i.e., 84 researchers and stakeholders) was strengthened through trainings related to scientific methodologies on risk assessment and management. (iii) Representatives in charge with national biosafety gained technical knowledge during a 2-week study tour to the USA and Canada. (iv) Experience and skills were gained by the project team in managing the project, particularly in the areas of procurement and financial management, and the knowledge acquired can be easily applied to other projects and subsequently contribute to success.

61. ***Other unintended outcomes and impacts:*** No unintended outcomes and impacts were noted.

4. RISK TO DEVELOPMENT OUTCOME

62. ***Risk to the development outcome – Significant:*** The preparation of the regional regulation on biosafety turned out to be lengthier than initially estimated as additional time was needed for continued intensive consultations with participating countries and stakeholders; eventually, it took four years to harmonize positions between ECOWAS and WAEMU and to finalize a draft regulation (see Section 2.2). To sustainably ensure WAEMU and ECOWAS countries are able to protect biodiversity and the environment from the possible effects of regional trade in LMOs, the regulation's adoption and ratification is crucial and remains to be achieved. Taking the regulation's long preparation process into account, the ratification process may be equally lengthy. However, according to WAEMU, the framework's ratification is expected in 2015.

63. Less uncertain is the regional laboratory's capacity to perform its envisaged function. The laboratory was intended to act as 'executive arm' of the regulatory framework, providing objective and transparent biosafety risk assessment support for its members, and therefore needed to consist of a greenhouse for containment trials. As described in Section 2.5, Burkina Faso's national agency for biosafety has been trying to find alternative funding to complete the construction of the greenhouse as post-completion activity, and it has been agreed that the greenhouse will be constructed as part of another – the World Bank West Africa Agricultural Productivity (WAAPP-1b) Project.

5. ASSESSMENT OF WORLD BANK AND BORROWER PERFORMANCE

5.1 WORLD BANK PERFORMANCE

64. ***World Bank performance in ensuring quality at entry – Moderately Unsatisfactory:*** As noted in Section 2.1, project preparation was comprehensive and informed by an extensive consultation process carried out in the participating countries, which informed the project's design, and helped assess possibilities for collaboration and co-financing. In addition, multiple studies were commissioned to inform project preparation, and adequate capacity assessments were conducted in the participating countries to identify capacity weaknesses. As a result, project preparation outputs such as the PAD provided a comprehensive and well-informed overview of the project plans, including country-specific sector backgrounds and regulatory, policy, and institutional frameworks. However, the project's design was characterized by several weaknesses, which translated into

substantial implementation delays particularly in the beginning, and ultimately contributed to the necessity to restructure the project (see Section 2.1).

65. ***Quality of World Bank supervision – Moderately Satisfactory:*** To address the increasing project implementation delays that had started with project effectiveness, the World Bank team worked closely with the client to take corrective action. The team developed an action plan, and increased implementation support by conducting four supervision missions in 2010 together with weekly implementation support meetings (organized by the local World Bank office in Burkina Faso) to closely monitor implementation of the action plan. It further reached out to the President of the WEAMU commission for support, who subsequently agreed to personally get involved; requested the development of a capacity building plan, which was subsequently prepared by a consultant from FAO; and finally ensured the approval of a Level 1 restructuring including revision of the PDO and reallocation of funds. To specifically support the construction of a laboratory in Burkina Faso, the World Bank team conducted technical missions to help finalize the technical specifications, and extended the project's closing date for another twelve and eleven months, respectively, to compensate for delays (see Section 2.2 for details). The World Bank team could have demonstrated more pro-activity and requested a third extension to allow for the construction of the greenhouse. However, the team has helped negotiate for the greenhouse to be constructed as post-completion activity (see Section 2.5), which will now be built as part of another World Bank agricultural project.[58] It will be crucial to closely monitor further developments taking into account the importance of the greenhouse for the laboratory's overall operations.

66. ***Overall World Bank performance – Moderately Unsatisfactory:*** The project suffered from shortcomings in project design, but during project implementation the World Bank team took corrective action to help mitigate continuous project implementation delays. The overall rating considers the moderately unsatisfactory rating for performance in ensuring quality at entry, the moderately satisfactory rating for quality of supervision, and the moderately unsatisfactory rating for overall project outcome.

5.2 BORROWER PERFORMANCE

67. ***Government performance – Moderately Unsatisfactory:*** All participating countries had ratified the Convention on Biological Diversity prior to the project, and all participating countries were parties to the Cartagena Protocol on Biosafety[59] with the exception of Chad[60] and Cote d'Ivoire. During the project's official launch, the ministers of agriculture of the WAEMU countries reconfirmed their commitment to the project. During implementation, the project continued to receive support from the participating countries' governments as was evident from their commitment to remain engaged in the preparation of the draft regulatory framework, despite its cumbersome and lengthy negotiations. A steering and monitoring committee consisting of representatives from all participating countries was created prior to project effectiveness, and met regularly once per year throughout project implementation. Implementation of yearly work plans at the national levels (agreed on during the

[58] World Bank West Africa Agricultural Productivity (WAAPP-1b) project.

[59] The Convention on Biological Diversity entered into force on December, 29 1993. It has 3 main objectives: (i) the conservation of biological diversity; (ii) the sustainable use of the components of biological diversity; and (iii) the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

[60] Chad became a party to the Cartagena Protocol on Biosafety in 2007.

committee meetings) was, however, often delayed, and the project's original goal of adopting a regional regulatory biosafety framework was not achieved. Lastly, the Government's counterpart funding was lower than estimated at appraisal.

68. ***Implementing agency – Moderately Unsatisfactory:*** The performance of the different implementation agencies (i.e., WAEMU, Burkina Faso's national biosafety agency, and PAFASP) varied. While project implementation performance improved following the restructuring, performance was characterized by significant shortcomings in the beginning of the project and is therefore rated moderately unsatisfactory.

- WAEMU: As described in Section 2.2, WAEMU's performance suffered from ineffective institutional arrangements particularly on the fiduciary side, inefficient project management, and periodically insufficient commitment, which substantially contributed to project implementation delays before the mid-term review. Fiduciary and M&E performance was equally accompanied by difficulties (see Section 2.3 and 2.4). Project implementation performance improved following the project's restructuring and the implementation of corrective actions to increase the unit's efficiency.

- Burkina Faso's national biosafety agency and PAFASP:[61] The performance of Burkina Faso's national biosafety agency together with PAFASP's was solid throughout project implementation. Even though the construction of the laboratory in Burkina Faso experienced various delays, the agency's staff performed its overall function. Availability, capacity, and performance of PAFASP's fiduciary staff were solid, as was their communication with the Bank. Financial monitoring reports were submitted regularly and timely to the Bank's satisfaction, as were external audit reports.

69. ***Overall borrower performance – Moderately Unsatisfactory:*** Overall borrower performance takes into consideration both the Governments' and the implementing agencies' performance during preparation and implementation, as well as the project's outcome rating. On the basis of justification provided above, the borrower's overall performance is rated moderately unsatisfactory.

6. LESSONS LEARNED

70. Lessons learned during project implementation include the following:

Project design

- ***The number of required effectiveness conditions the borrower needs to comply with should be carefully considered.*** The borrower's slow progress in complying with the high number of effectiveness conditions resulted in delayed project effectiveness, and consequently reduced the time available for project implementation.

- ***The project's PDO and associated indicators should be carefully reviewed during project preparation and restructuring.*** A strong results framework including indicators that are directly linked to the PDO is fundamental in achieving envisaged project outcomes. Equally important,

[61] Burkina Faso's national biosafety agency was responsible for constructing the regional biosafety laboratory, a key component of the project, with fiduciary aspects of this component having been under the responsibility of PAFASP.

particularly when using different funding sources is a PDO that is consistently presented in all project documents.

- ***The majority of project activities should not be dependent on the adoption of a law (especially one related to a controversial theme such as biosafety), a political process not under the control of project activities.*** Most of the project's indicators' achievements were dependent on the adoption and implementation of the regional biosafety framework (i.e., Original Intermediate Outcome Indicators #4-8); since the framework was neither adopted nor implemented at the time of restructuring or project closure, these indicators were not achieved.

Project Preparation

- ***Project preparation time needs to be much shorter despite challenges, as priorities change, and the clients find themselves in a situation where they have to constantly catch up with events on the ground.***
- ***Both the implementing agency and the World Bank team need to be staffed with adequate technical expertise and to have efficient management structures in place from the beginning, to ensure sound project preparation and implementation.***

Project Implementation

- ***Task teams should be proactive in responding to delays that could affect PDO achievement.*** The task team could have been more proactive. It could have requested an additional project extension when it became clear that the construction of the greenhouse would not be achieved prior to project closure.
- ***The implementing agency should be affiliated with its regional institution (i.e., WAEMU); it should however, keep some independence to allow for more efficient project management.*** The implementing agency was affiliated to WAEMU, a highly centralized institution with lengthy authorization processes. Especially, WAEMU's internal financial management and procurement procedures were highly centralized (i.e., contracts had to be signed at the president's level), thus requiring lengthy authorization times and subsequently delaying project implementation.

Regional Integration Aspects and Partnerships

- ***It is important to carefully review whether a regional approach should be used for such project.*** Sufficient client demand for a regional project is fundamental to ensure effective and efficient project implementation.
- ***Before embarking on a comprehensive regional framework, carefully consider the policy context, regulatory regime and institutional set-up for each country and try to use their respective national biosafety regulation to inform the development of the regional framework.***
- ***Sufficient time should be allocated for negotiations and consultations with stakeholders when planning the preparation and adoption of a regional regulation on biosafety.*** The objective of preparing and adopting the regional regulation on biosafety by the WAEMU within one year of project implementation was unrealistic. Taking the disparity in capacity across participating countries, and the specific and challenging nature of biosafety as a policy area into account,

sufficient time should be allocated for lengthy negotiations and consultations with stakeholders. Sufficient time should equally be allocated for efforts at the country-level to raise awareness and buy-in, strengthen capacity, and harmonize risk assessment tools and procedures.

- ***Building partnerships with institutions that are specialized in biosafety could provide timely services, and help avoid project implementation delays.*** The specificity and innovative nature of biosafety in the participating countries affected the identification and recruitment of technical experts needed for the highly specialized studies and the construction of a laboratory, and ultimately delayed project implementation.

7. COMMENTS ON ISSUES RAISED BY BORROWER AND IMPLEMENTING AGENCY

71. The two implementing agencies submitted a completion report. Messages therein were incorporated into this ICR. In addition, the draft ICR was translated into French and submitted to the client for comments. Feedback received was incorporated into this final ICR. However, one comment that should be noted is that WAEMU is of the opinion that the revised targets of this project were entirely achieved (except for the revised intermediate indicator #6 which was only partially achieved).

ANNEX 1: PROJECT COSTS AND FINANCING

1. ***Project Cost by Component – All sources (in US$ equivalent)*** – as of May 31, 2014

Component	***Appraisal Estimate*** (in US$ million equivalent)[62]	***Actual/Latest Estimate*** (in US$ million equivalent)	***Actual as % of appraisal estimate***
A: Adapt and disseminate regional methodologies to assess and manage risks	7.4	9.3	126%
B: Establish an institutional, legal and regulatory regional biosafety framework	8.7	1.2	14%
C: Implement the biosafety frameworks and build capacity in IPRs	8.2	1.1	13%
Total	24.3	11.6	48%

2. ***Financing*** – as of May 31, 2014

Sources of Funds	***Type of Co-financing***	***Appraisal Estimate*** (in US$ million equivalent)[63]	***Actual/Latest Estimate*** (in US$ million equivalent)	***Actual as % of appraisal estimate***
Global Environment Facility (GEF)	Grant	5.4	4.8	89%
IDA (new funding)	Credit	3.9	3.4	87%
IDA Cr. 4195-BUR	Credit	1.2	0.9	75%
West African Economic and Monetary Union (WAEMU)	Counterpart Funding	5.6	2.5	45%
Identified financing (EC, Governments and industries through cost recovery mechanisms)		8.2	0	0%
Total		24.3	11.6	48%

[62] As presented in Annex 4 – Detailed Program Description in the PAD (Report No: 36383)

[63] As presented in the Data Sheet of the PAD (Report No: 36383)

ANNEX 2: OUTPUTS BY COMPONENT

1. Taking account of the project's Level 1 restructuring in July 2011, the following table provides a comprehensive account of qualitative and quantitative information on outputs realized against both original and revised components (achievements at the time of project closing in May 2014).

Annex Table 2.1: Outputs by Original Components as presented in the PAD

Original Components as presented in the PAD	***Outputs achieved at project closing in May 2014***
Component A - Adapt and disseminate regional methodologies to assess and manage risks. Rating: Unsatisfactory	
Intermediate result: Regional risk assessment and management methodologies designed and disseminated in the WAEMU region. a. Assess and evaluate existing tools and guidelines used or in preparation in the WAEMU countries for risk assessment and management, and compare them with recognized international methodologies. b. Establish a national reference biosafety laboratory with a regional dimension in Burkina Faso and strengthening its capacities for its eventual accreditation. c. Consolidate the existing tools and develop regional common approaches that meet recognized international standards in risk assessment and management, inspection, and monitoring and evaluation of LMOs, and prepare a regional manual of risk assessment and management guidelines.	Intermediate result: Regional risk assessment and management methodologies were designed and disseminated in the WAEMU region, however, not yet adapted as the regional biosafety framework has not been implemented yet. a. Existing tools and guidelines for risk assessment and management that were used or in preparation in the WAEMU member states were assessed and evaluated as part of a study conducted by the West and Central African Council for Agricultural Research and Development (CORAF/WECARD). Based on the study's results, regional common approaches that meet recognized international standards in risk assessment and management, inspection, and monitoring and evaluation of LMOs were developed.[64] A manual on risk assessment and management methodologies was finally prepared and validated in September 2012 by the regional scientific committee for biosecurity.[65] The manual is available on the central portal of the Biosafety Clearing House; regional and national workshops were held for consultations and to disseminate the manual to ensure wide stakeholders participation and ownership. Eventually, 450 researchers and stakeholders were trained in scientific methodologies on risk assessment and management (Original Intermediate Indicator #1– 100%).[66] It was not surveyed how many of those used specifically the regional guidelines (Original Intermediate Indicator #2 – 0%). b. In Burkina Faso, a national biosafety laboratory was newly built. The laboratory's construction and equipment was finalized in May 2014. Plans outlining the financing and discussing the legal status of the laboratory were equally developed and finalized in July 2013. The laboratory consists of a molecular biology unit and a unit for equivalent substances, to develop, to adapt and to standardize LMO detection and LMO risk assessment methods for biotechnology being developed in or imported into the region. However, the laboratory did not obtain accreditation for a national reference laboratory with a regional dimension to provide objective and transparent biosafety risk assessment support to the WAEMU member states, as the necessary

[64] UEMOA, 2013. L'état des lieux de la mise en œuvre du protocole de Cartagena et des procédures d'évaluation et de gestion des risques lies a l'introduction des biotechnologies modernes et produits dérivés dans l'espace UEMOA.

[65] UEMOA, 2013. Manuel Régional – Des procédures d'évaluation et de gestion des risques lies l'introduction des biotechnologies modernes et produits dérivés dans l'espace UEMOA.

[66] The 84 researchers and stakeholders included each 10 persons from Benin, Burkina Faso, Cote d'Ivoire, Senegal, and Togo; 11 persons each from Guinea Bissau and Niger; and finally 12 from Mali.

Original Components as presented in the PAD	*Outputs achieved at project closing in May 2014*
	tissue culture unit, and climatically controlled growth chambers for conducting trials in containment were not constructed (see section 2.2 for details). The laboratory is also not operational yet, as its operations are only planned to begin in the fall 2014. No applications have therefore been reviewed or implemented (Original PDO Indicator – 0%; Original GEO Indicator – 0%; Original Intermediate Indicator #5 – 0%). The capacity of national laboratories in the remaining seven member states of the WAEMU was enhanced to comply with the Cartagena Protocol on Biosafety. The laboratories were equipped for carrying out risks assessments of LMOs and conducting post release monitoring.[67] c. See a
Component B - Establish an institutional, legal and regulatory regional biosafety framework. ***Rating: Unsatisfactory***	
Intermediate result: Institutional, legal and regulatory regional biosafety framework, taking into account Intellectual Property Rights (IPR) related to LMOs, elaborated and monitored at WAEMU level. a. Prepare a regional law on biosafety according to WAEMU procedures. b. Create an institutional framework to accompany the dissemination and implementation o f the legal and regulatory regional biosafety framework in the WAEMU Member States. c. Set up an institutional framework[68] to accompany the dissemination and implementation of the regulation in the eight WAEMU countries. .	Intermediate result: The institutional, legal and regulatory regional biosafety framework was prepared, however, neither ratified nor implemented at WAEMU level (Original Intermediate Outcome Indicators 6, 7, and 8 – 0%, respectively. a. At the end of the project, a draft regional regulatory biosafety framework was prepared by a committee of experts from WAEMU, ECOWAS, and the CILSS; the draft framework covers both West Africa (the ECOWAS and WAEMU spaces) and Chad (see outputs achieved under revised component B for more details). b. At project closure, the ratification process of the draft framework had not been initiated, as negotiations among the three institutions had taken longer than anticipated (Original Intermediate Indicator #3 – 0%). c. Since the regional biosafety framework was neither ratified nor implemented yet, the institutional framework including an observatory has not been set up (Original Intermediate Outcome Indicator 4 – 0%). So far, crtain aspects of an institutional framework have been discussed among the institutions as part of the regulatory biosafety framework. However, the overall institutional framework to accompany the dissemination and implementation of the regulation in the eight WAEMU countries is still being finalized by WAEMU.

[67] In November 2012, a circular mission conducted by WAEMU reported the following status update in the participating countries (excluding Burkina Faso): (i) all equipment delivered; (ii) equipment fully and partly installed in three and four countries, respectively; however, adequately installed only in one countries; (iii) relevant personnel was trained in all countries; and (iv) installed equipment partly used in four countries. However, at project closure, WAEMU reported that since November 2012, positive progress was further achieved (not verified by ICR).

[68] The institutional framework was intended to consist of an observatory on modern agricultural biotechnology to monitor the impact of such technology on the environment, food and feed safety, and socioeconomic issues, in accordance with a set of key indicators developed by WAEMU and its stakeholders. If the adoption of a regional regulation would have been successful, the observatory would have had the potential to become an operational and decision-making body, responsible for LMO approvals that were handled at the national level at the time of project appraisal.

Original Components as presented in the PAD	*Outputs achieved at project closing in May 2014*
	A regional coordination unit including a biosafety specialist as regional coordinator, a communication officer, an accountant, and a procurement specialist was set up; however, its performance in executing M&E, procurement, and financial management tasks, continuously led to project implementation delays (see Section 2.2 – 2.4). A steering and monitoring committee consisting of representatives from all participating countries was created prior to project effectiveness. Its terms of reference were adopted, and the first meeting took place in early 2008. Regular yearly meetings followed thereafter and were used to discuss the project and provide advice. Equally regular meetings were held by a national biosafety committee in Burkina Faso to provide technical advice. Quarterly progress reports were also regularly produced by the project coordination unit.
Component C - Implement the biosafety framework and build capacity in IPRs. ***Rating: Unsatisfactory***	
Intermediate result: Biosafety framework implemented in the eight beneficiary countries, taking into account the views of national stakeholders and IPR capacity built. a. Support to implementing the national and, when in place, the regional, institutional, legal and regulatory biosafety framework in WAEMU Member States who have ratified the Cartagena Protocol, through support to informing, sensitizing, and strengthening capacities of the major stakeholders, especially producer organizations, on the national and regional regulations and their implications for the environment and socio-economic development.	Intermediate result: The biosafety framework was not ratified and therefore not implemented in the eight beneficiary countries. a. A circular mission to the eight participating countries with participation all three institutions (i.e., ECOWAS, WAEMU and CILSS) was conducted in December 2009, to collect information on national capacities and to identify priority needs. The mission organized national workshops, which brought together about 240 participants. The main needs identified included: strengthening the capacity of national coordination, equipment national laboratory biosafety capacity building of stakeholders through training and awareness. b. The sensitizing of stakeholders was achieved through preparation of a communication strategy, establishment of a website informing on biosafety aspects, published articles, and short education clips broadcasted on national television of WAEMU member states and Africable television. The communication strategy was prepared in 2010 through national workshops and with participation of various stakeholders,[69] and eventually validated through a regional workshop from September 29 to October 1, 2011. Its implementation and identification of communication tools was not documented. c. The regulatory and policy environment related to IPR on transgenic plants was not strengthened.

Annex Table 2.2: Outputs by Revised Components as presented in the Level 1 Restructuring (July 5, 2011)

Revised Components (Level 1 Restructuring July 5, 2011)	*Outputs achieved at the time of project closing*
Component A - Adapting and disseminating regional methodologies to assess and manage risks to living modified	

[69] The communication strategy was prepared with participation of various stakeholders. A first draft of the strategy was reviewed by various stakeholders through national workshops in the eight participating countries from March 17 to April 15, 2010 (approx. 50 participants per work shop). Comments received were synthesized and incorporated in May 2010, before the document was finalized in June 2010.

Revised Components (Level 1 Restructuring July 5, 2011)	*Outputs achieved at the time of project closing*
organisms. ***Rating: Moderately Satisfactory***	
Intermediate Result: The capacity for detection, analysis and management of biotechnology risks of WAEMU and its member states strengthened. a. Assessing and evaluating existing tools and guidelines used or in preparation in member states for risk assessment and management, and comparing them to recognized international methodologies. b. Establishing a national reference laboratory with a regional dimension for biosafety in Burkina Faso, and upgrading a network of national biosafety laboratories in the remaining seven WAEMU member states. c. Consolidating the existing tools and developing regional common approaches that meet recognized international standards in risk assessment and management, inspection, and monitoring and evaluation of living modified organisms. d. Disseminate the manual of procedures in the WAEMU region through the Biosafety Clearing Houses (BCHs).	Intermediate Result: The capacity for detection, analysis and management of biotechnology risks of WAEMU and its member states was strengthened to a certain extent. a. Existing tools and guidelines for risk assessment and management that were used or in preparation in the WAEMU member states were assessed and evaluated as part of a study conducted by the West and Central African Council for Agricultural Research and Development (CORAF/WECARD). Based on the study's results, regional common approaches that meet recognized international standards in risk assessment and management, inspection, and monitoring and evaluation of LMOs were developed.[70] A manual on risk assessment and management methodologies was finally prepared and validated in September 2012 by the regional scientific committee for biosecurity.[71] The manual is available on the central portal of the Biosafety Clearing House; regional and national workshops were held for consultations and to disseminate the manual to ensure wide stakeholders participation and ownership (Revised Intermediate Outcome Indicator #2 - 100%). Eventually, 84 researchers and stakeholders were trained in scientific methodologies on risk assessment and management (Revised Intermediate Outcome Indicator #3 – 100%).[72] Of those 47 (56%) had applied the acquired knowledge at least once according to a survey that was undertaken in 2012 by the WAEMU (Revised PDO Indicator #1 – 100%). b. In Burkina Faso, a national biosafety laboratory was newly built; however, without a regional dimension and not operational yet. The laboratory consists of a molecular biology unit and a unit for equivalent substances, to develop, to adapt and to standardize LMO detection and LMO risk assessment methods for biotechnology being developed in or imported into the region. The laboratory's construction and equipment was finalized in May 2014 and its operations are planned to begin in the fall 2014. Plans outlining the financing and discussing the legal status of the laboratory were equally developed and finalized in July 2013. The laboratory was intended to be a national reference laboratory with a regional dimension to provide objective and transparent biosafety risk assessment support to the WAEMU member states. To obtain the necessary accreditation, a tissue culture unit, and climatically controlled growth chambers for conducting trials in containment need to be part of the laboratory. These were not established by the end of the project, however, these units are planned to be built separately as

[70] UEMOA, 2013. L'état des lieux de la mise en œuvre du protocole de Cartagena et des procédures d'évaluation et de gestion des risques lies a l'introduction des biotechnologies modernes et produits dérivés dans l'espace UEMOA.

[71] UEMOA, 2013. Manuel Régional – Des procédures d'évaluation et de gestion des risques lies l'introduction des biotechnologies modernes et produits dérivés dans l'espace UEMOA.

[72] The 84 researchers and stakeholders included each 10 persons from Benin, Burkina Faso, Cote d'Ivoire, Senegal, and Togo; 11 persons each from Guinea Bissau and Niger; and finally 12 from Mali.

Revised Components (Level 1 Restructuring July 5, 2011)	*Outputs achieved at the time of project closing*
	post-completion activities (see Section 2.5). The capacity of national laboratories in the remaining seven member states of the WAEMU was also enhanced to comply with the Cartagena Protocol on Biosafety. The laboratories were equipped for carrying out risks assessments of LMOs and conducting post release monitoring (Revised Intermediate Outcome Indicator #1 – 100%).[73] c. See a d. See a
Component B - Preparing a draft regional regulatory biosafety framework. ***Rating: Moderately Satisfactory***	
Intermediate result: A draft regional regulatory biosafety framework on biosafety available, consultations are held and stakeholders' comments and concerns documented. a. Preparing a regional regulation on biosafety. b. Identifying an institutional framework to accompany the dissemination and implementation of the legal and regulatory regional biosafety framework in the member states. c. Strengthening regional institution capacity building for the implementation of the project.	Intermediate result: A draft regional regulatory biosafety framework on biosafety is available, consultations were held and stakeholders' comments and concerns were documented. a. A draft regional regulatory biosafety framework was prepared by a committee of experts from WAEMU, ECOWAS, and CILSS; the draft framework covers both West Africa (the ECOWAS and WAEMU spaces) and Chad (Revised PDO Indicator #2 – 100%). The draft framework, including a proposed institutional framework for the dissemination and implementation of the regulation, was shared with WAEMU and ECOWAS member states and civil society organizations for their review (Revised Intermediate Result Indicator #4 – 100%).Comments and concerns were documented, synthesized and incorporated as seen appropriate. The ratification of the draft framework was not achieved, as negotiations among the three institutions are still ongoing. However, the draft framework's ratification is planned to be accomplished before the end of the calendar year (see Section 2.5 for details). b. Certain aspects of an institutional framework have been discussed among the institutions as part of the regulatory biosafety framework. However, the overall institutional framework to accompany the dissemination and implementation of the regulation in the eight WAEMU countries is still being finalized by WAEMU. c. See outputs achieved under Revised Component C.
Component C - Increasing the human, institutional, legal and regulatory capacity of member states on biosafety to implement the Cartagena Protocol on Biosafety. ***Rating: Moderately Satisfactory***	
Intermediate result: The capacity of WAEMU Commission and its member states to implement the Cartagena Protocol on Biosafety strengthened. a. Strengthen the human, institutional, legal and	Intermediate result: The capacity of WAEMU Commission and its member states was strengthened to implement the Cartagena Protocol on Biosafety. a. See outputs achieved under Original Component C. In addition, a capacity building action plan was prepared, which envisaged (i) five

[73] In November 2012, a circular mission conducted by WAEMU reported the following status update in the participating countries (excluding Burkina Faso): (i) all equipment delivered; (ii) equipment fully and partly installed in three and four countries, respectively; however, adequately installed only in one countries; (iii) relevant personnel was trained in all countries; and (iv) installed equipment partly used in four countries. However, at project closure, WAEMU reported that since November 2012, positive progress was further achieved (not verified by ICR).

Revised Components (Level 1 Restructuring July 5, 2011)	*Outputs achieved at the time of project closing*
regulatory capacity of member states to implement the Cartagena Protocol on Biosafety through training and study tours, including on IPR.	regional training sessions (covering 15 modules); (ii) study tours; and (iii) short-term internships for relevant stakeholders in the Northern countries of the sub-region.[74] The five regional training sessions were conducted between November 2011 and May 2012.[75] In addition to the 84 researchers and stakeholders that were trained in scientific methodologies on risk assessment and management, further 366 researchers and stakeholders across the WAEMU states were trained in various aspects related to biosafety through these regional sessions (Revised Intermediate Outcome Indicator #5 – 100%). Further capacity was strengthened through a 2-week study tour to the USA and Canada in April 2013. Ten representatives from the national biosafety agency participated (i.e., laboratory managers) and WAEMU (i.e., commissioner and experts) (Revised Intermediate Outcome Indicator #6 – 50%). No details were reported on the internships.

[74] The capacity building action plan was prepared along recommendations made by an international consultant; see Mission Report by Dr. R.S. Sangwan, April 25, 2011, Food and Agriculture Organization (FAO).

[75] The five regional training sessions included: (i) regional workshop in Bobo-Dioulasso, Burkina Faso on biosafety, particular on methods to detect and identify Genetically Modified Organisms (GMOs) (October 28 – November 14, 2011; 36 participants from the sub-region); (ii) training session in Bobo-Dioulasso, Burkina Faso (November 28 – December 12, 2011; approximately 60 participants) on GMO regulation, documentation, control, and inspection; (iii) training session in Lomé, Togo on communication, education, sensibilization, and public participation with regard to GMOs (February 3-18, 2012; approximately 50 participants); (iv) training session in Bamako, Mali (March 12-16, 2012, approximately 80 participants) on assessment, management, analysis and risk identification, and decision procedures associated with LMOs; and (v) training session in Bissau, Guinea Bissau (April 2-6, 2012; approximately 60 participants) on the regulation of GMOs, Intellectual Property Rights, and application of the Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety.

ANNEX 3: BANK LENDING AND IMPLMENTATION SUPPORT

1. *Task Team Members*

Preparation/Supervision/ICR (Task team, specialization, and unit as outlined in the PAD)			
Name	**Specialization**	**Unit**	**Responsibility**
Bertaud, Helene	Senior Counsel	LEGAM	Legal counsel
Burckhart, Benjamin	Consultant		Project support
Carret, Jean-Christophe	Sr. Natural Resources Economist	AFCC2	Task Team Leader (LEN)
Dakpo, William	Procurement Specialist		Procurement
Dama, Agadiou	Agricultural Services Specialist	GFADR	Agricultural Services
Doucoure, Djibril	Consultant, Safeguards Specialist		Safeguards
Farouk, Maman	Communication Specialist		Communications
Faure, Adele	Summer Intern		Team support
Foley, Mary Ellen	Senior Environmental Specialist	GCCIA	Project support
Follea, Salimata	Natural Resource Management Specialist	GENDR	Project support
Henri, Lawrence	Communications Specialist		Communications
Jordy, Denis	Senior Environmental Specialist	GENDR	Task Team Leader (SPN)
Kinda, Gwladys	Program Assistant	AFMBF	Team support
Klouvi, Ayi	Sr. Agricultural Specialist		Project support
Konare, Amadou	Senior Environmental Specialist		Project support
Lagnaoui, Abdelaziz	Senior Environmental Specialist	GENDR	Project support
Li, Song	Consultant		Project support
Megnan Kolie, Ousmane	Senior Financial Management Sp.	GGODR	Financial Management
Mensah, Christian	Communication Specialist	CAFAF	Communications
Nikièma, Emmanuel	Senior Natural Resources Management Specialist	GENDR	Task Team Leader (SPN)
Naurois de, Philippe J.	Consultant	GSURR	Project support
Nebie, Ibrahim	Sr. Agricultural Extension Specialist		Project support
Panger, Galen	Summer Intern		Team support
Pehu, Eija	Advisor	GFADR	Project support
Salifou Konaté	Consultant		Team member
Schmidt, Veruschka	Strategy Officer	BPSSP	ICR Author
Sene, Emmanuel	Rural development Specialist		Team member
Sissoko, Fily	Practice Manager	GGODR	Manager
Takoukam, Patrice Talla	Lawyer		Legal Counsel
Tiendrébéogo, Mamata	Senior Procurement Specialist	GGODR	Procurement
Vaselopulos, Virginie	Sr. Program Assistant	GENDR	Team support
Yaro, Mamadou	Senior Financial Management Sp.		Financial Management

2. ***Task Team Time***

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of Staff Weeks	**USD Thousands (Including travel and consultant costs)**
Lending		
FY05	0	3,548
FY06	51	215,899
FY07	32	161,492
FY08	15	139,646
Supervision/ICR		
FY09	25	130,897
FY10	28	114,113
FY11	15	116,514
FY12	12	74,715
FY13	13	82,587
FY14	10	32,577
FY15	0	0
Total	203	1,070,988

ANNEX 4: SUMMARY OF BORROWERS ICR AND/OR COMMENTS ON DRAFT ICR

SUMMARY OF BORROWER'S ICR

1. En 2006, les Ministres en charge des questions de Biosécurité de l'UEMOA avaient exprimé, à travers la déclaration dite de Bamako, leur adhésion à l'élaboration et la mise en œuvre d'un cadre régional harmonisé de biosécurité au regard :

   - des enjeux liés à l'utilisation des biotechnologies modernes et leur impact sur l'environnement, la santé humaine et animale, les aspects socio-économiques et sur la sécurité alimentaire dans notre espace ;
   - des faibles capacités techniques, institutionnelles et réglementaires des Etats membres.

2. C'est ainsi que, dans le cadre de la mise en œuvre de la Politique Commune d'Amélioration de l'Environnement (PCAE), la Commission de l'UEMOA a adopté en 2007, un Programme Régional de Biosécurité (PRB) par Règlement N°03/2007/CM/UEMOA en Conseil des Ministres Statutaires et dont l'objectif de développement est d'élaborer et mettre en œuvre un cadre juridique communautaire de biosécurité pour permettre aux Etats membres de l'UEMOA de faire face à leurs obligations vis-à-vis du Protocole de Cartagena sur la Prévention des risques liés aux OVM.

3. Le Projet Régional de Biosécurité en Afrique de l'ouest (PRBAO) dont l'objectif de développement est de renforcer les capacités institutionnel, scientifique et juridique et d'appuyer à la préparation de l'avant-projet de règlement communautaire de biosécurité, s'inscrit dans ce cadre. Approuvé en 2007 par le Conseil d'administration de la Banque mondiale, le PRBAO dont la mise en œuvre devrait contribuer à l'atteinte des objectifs du PRB-UEMOA, est entré en vigueur en octobre 2008.

4. ***La zone d'intervention du projet:*** Le PRBAO intervient dans les Etats membres de l'UEMOA éligibles au financement actuel du FEM en dehors de la Guinée Bissau, de la Côte d'Ivoire et du Niger dont les activités ont été financées directement par l'UEMOA.

5. ***Objectifs, composantes et résultats du projet :*** Les objectifs et les résultats de départ du projet se confondaient à ceux du programme et compte tenu de la faiblesse de la probabilité d'atteindre de l'Objectif de Développement du Projet (ODP) et de l'Objectif Environnemental Global (OEG) avant la date de clôture initialement prévue pour le 30 Juin 2012, Une structuration profonde a été faite en avril 2011.

6. Les causes principales de ces difficultés étaient en partie liées à la conception du projet et à plusieurs obstacles de mise en œuvre notamment :

   - le retard de mise en œuvre de nombreuses activités ;
   - le faible niveau de décaissement : 27% pour le FEM, 13% pour l'IDA ;
   - l'adoption et la mise en œuvre d'un cadre juridique communautaire de biosécurité en quatre années avec surtout un processus hautement participatif et itératif impliquant plusieurs institutions et acteurs aux intérêts très divergents;
   - la rareté de l'expertise qualifiée dans le domaine de la biosécurité,

7. Ainsi, la mission de la revue à mi-parcours du projet tenue en avril 2011, a analysé la situation du projet et a proposé sa restructuration profonde comme ci-dessus.

8. Les objectifs et les résultats révisés du projet, issus de la restructuration ayant entraîné la révision à la baisse des ambitions du projet au regard des difficultés sont présentés dans le tableau 1. Le cadre de résultats révisé devait permette un contexte plus réaliste d'atteinte de l'objectif de développement du projet.

9. ***Coûts et financement/mobilisation des ressources:*** Ce taux d'exécution global des ressources financières établi à 57,29% est modérément satisfaisant. Toutefois, après la restructuration du Projet, le niveau d'exécution s'est nettement amélioré par rapport à l'objectif de développement révisé, atteignant le taux 100% avec des résultats satisfaisants dans l'ensemble au regard de l'état des réalisations physiques décrit ci-dessous.

10. ***Atteinte de l'objectif de développement du projet :*** En fin de parcours, le degré d'atteinte de l'objectif de développement du projet PRBAO/UEMOA, tel que restructuré et mesuré sur les bases des indicateurs de performance est satisfaisant. Le tableau 5 présente les résultats.

Résultats	Indicateurs de performances prévus	Indicateurs de performances réalisés	Niveau de réalisation
Objectif de Développement du Projet (ODP): a) Renforcer les capacités institutionnelles, scientifiques et juridiques de l'UEMOA et des Etats membres pour la mise en œuvre du Protocole de Cartagena sur la Biosécurité dans la région b) Appuyer la préparation du Draft du règlement communautaire de Biosécurité	A la fin du Projet, au moins 25% de chercheurs et acteurs formés appliquent les connaissances acquises dans leurs activités liées à la Biosécurité	- Quatre-vingt-quatre (84) chercheurs et acteurs ont été formés ; – Quarante-sept (47) chercheurs et acteurs (soit 55,95%) ont réalisé au moins une activité au cours des six derniers mois qui ont suivi la fin des formations, en utilisant au moins un des modules dispensés par les formateurs	**100%**
	A la fin du Projet, le Draft du règlement communautaire de Biosécurité est disponible	Le Draft est disponible et a fait l'objet d'échanges avec les Etats membres, les Organisations de la société civile et les pays de la CEDEAO non membres de l'UEMOA	**100%**

11. ***Etat des réalisations du PRBAO par composante et sous composante:*** L'état des réalisations du PRBAO par composante et sous composante se présente comme suit selon le tableau.

Résultats	Indicateurs de performances prévus	Indicateurs de performances réalisés	Niveau de réalisation
Composante A : Les capacités de détection, d'analyse et de gestion des risques biotechnologiques des Etats membres de l'UEMOA sont renforcées	Au moins cinq (05) laboratoires nationaux sont équipés à la fin du Projet	Huit (08) laboratoires nationaux de biosécurité ont été dotés en équipements de laboratoire et de consommables à hauteur de 1.9 milliards de francs CFA.	**160%**
	Disponibilité des méthodologies et du manuel d'évaluation et de gestion des risques	- Existence du rapport de l'étude sur l'état des lieux qui fait le point sur les méthodologies et outils scientifiques existants dans l'espace UEMOA - Existence du manuel sur les procédures d'évaluation et de gestion des risques liés à l'introduction des biotechnologies modernes et produits dérivés dans l'espace UEMOA. Il a été validé par le comité scientifique régional de biosécurité et par l'ensemble des acteurs des Etats membres de l'UEMOA.	**100%**
	Au moins cinquante (50) scientifiques sont formés sur les méthodes scientifiques d'évaluation et de gestion des risques à la fin du Projet.	- Un plan de renforcement des capacités des acteurs a permis de former quatre-vingt-quatre (84) scientifiques. Ces formations ont contribué à accroitre les capacités de détection, d'analyse et de gestion des risques biotechnologiques des Etats membres de l'UEMOA.	**168%**
Composante B : L'avant-projet de cadre juridique communautaire de biosécurité et les commentaires des parties prenantes soumis aux instances politiques de l'UEMOA	Disponibilité de l'avant-projet du cadre juridique communautaire de biosécurité intégrant le cadre institutionnel de mise en œuvre et des commentaires des parties prenantes.	- L'avant-projet de cadre juridique communautaire de biosécurité, élaboré conjointement par l'UEMOA, la CEDEAO et le CILSS et qui a impliqué (i) neuf-cent-cinquante (950) acteurs de quinze (15) Etats membres des trois institutions (ii) quatre-vingt-cinq (85) acteurs venant des Organisations de Société Civiles de dix-sept (17) pays (iii) des acteurs du secteur privé national et international - La synthèse régionale des commentaires des états et des OSC est disponible - l'étude sur le dispositif institutionnel est réalisée et les éléments du rapport ont été utilisés pour alimenter l'avant-projet de règlement communautaire de biosécurité. - en attendant l'adoption du règlement communautaire de biosécurité, les actions du projet ont contribué (i) au niveau national : à réactiver les comités nationaux de biosécurité et une coordination nationale (ii) au niveau régional : un comité d'orientation et de suivi, un comité scientifique régional de biosécurité et une unité de coordination placée au sein de la Commission de l'UEMOA. Un manuel de procédures de gestion administrative et financière régit le fonctionnement de l'unité de coordination.	**100%**

Composante C : Les capacités des Etats membres de l'UEMOA sont renforcées en vue de la mise en œuvre du PCB.	Au moins trois (300) acteurs sont formés sur la biosécurité et/ou en DPI à la fin du Projet	- Le projet a pu renforcer les capacités du de plus de 450 chercheurs et acteurs en biosécurité et a contribué à rendre opérationnelles les coordinations nationales de biosécurité des Etats membres ainsi que les laboratoires nationaux de biosécurité à travers la mise en œuvre d'un plan de renforcement des capacités a été élaboré et mis en œuvre du plan de renforcement des capacités comprenant des (i) sessions de formations reparties en 15 modules sur différentes thématiques de la biosécurité (ii) les équipements des laboratoires (iii) la mise à la disposition des Etats de fonds pour la réalisation des actions prioritaire en matière de sensibilisation et d'équipements bureautiques et informatiques. - les capacités des Etats membres en matière de droit de propriétés intellectuelles associés aux plantes transgéniques ont été renforcées à travers deux (02) formations organisées à l'endroit des douaniers et de certains acteurs nationaux	**150%**
	Au moins vingt (20) acteurs des Etats membres ont bénéficié de voyages d'étude à la fin du Projet	- Dix **(10)** acteurs ont bénéficié de voyage d'étude au Canada et aux Etats-Unis (les responsables des agences nationales de biosécurité du Benin, du Burkina, de la Côte d'Ivoire, du Mali et du Niger, un Commissaire et 4 cadres de la Commission)	**50%**

12. ***Performance du PRBAO:*** Responsable de la mise en œuvre du projet, la coordination régionale avec son équipe technique et financière s'est chargée de la gestion globale du projet. Elle a connu des débuts difficiles mais un progrès notable a été remarqué au fil du temps après la revue à mi - parcours donnant des résultats satisfaisants (voir tableau 8 relatif au récapitulatif de l'évaluation du projet).

Paramètres	**Evaluation**
Mobilisation des ressources	Modérément satisfaisant
Atteinte de l'objectif de développement du projet	Satisfaisant
Sous-composante A1 : Etat des lieux des méthodologies et procédures en vigueur	Très satisfaisant
Sous-composante A2 : Etablissement d'un laboratoire de biosécurité de référence, à vocation régionale et mise en réseau des laboratoires nationaux	Modérément satisfaisant
Sous-composante A3 : Adaptation des méthodologies en vigueur au niveau régional	Satisfaisant
Sous-composante A4 : Dissémination du manuel de procédures régionales	Satisfaisant
Sous Composante B.1 : Elaboration de la règlementation régionale	Satisfaisant
Sous composante B2 : Processus politique de ratification de l'UEMOA	Sous composante non activée
Sous composante B3 : Mise en place d'un dispositif institutionnel adéquat au sein de l'espace UEMOA	Sous composante non activée
Sous Composante B4 : Gestion et renforcement des capacités de la Commission de l'UEMOA	Satisfaisant
Sous composante C1 : Renforcement des capacités humaine, institutionnelle et réglementaire pour la mise en œuvre du cadre régional de biosécurité au niveau national	Très satisfaisant
Sous composante C2 : Information et sensibilisation du public sur le Cadre Régional de Biosécurité (CRB)	Très satisfaisant
Sous composante C3 : Renforcement de l'environnement réglementaire et politique relatif aux Droits de Propriété intellectuelle associés aux plantes transgéniques	Modérément satisfaisant

13. ***Facteurs internes et externes ayant affecté la mise en œuvre du projet :*** La genèse de ce projet, comme plusieurs projets de développement, a été marquée par des périodes difficiles, liées à des

facteurs externes et internes qui font l'objet d'une attention particulière dans ce rapport d'achèvement. Sont notés, ici les plus importants facteurs qui ont affecté le projet.

14. En tant que facteurs externes, le non-respect des engagements de certains partenaires de financement (Coopération française et Union européenne) ont réduit le niveau de mobilisation des ressources à 53,64% et diminué l'envergure de certains activités réalisées. Le caractère spécifique et innovant de la biosécurité, marqué par la quasi inexistence d'experts et de bureaux d'études compétents a été un véritable frein dans la réalisation de certaines activités du projet.

15. Une des difficultés majeures fut aussi la mise en œuvre de l'approche tripartite CEDEAO- UEMOA-CILSS qui n'a pas permis d'adopter le projet de cadre juridique communautaire de biosécurité.

16. En tant que facteurs internes, un problème de conception du projet au départ a fortement ralenti le démarrage du projet pendant plus de deux (02) ans, notamment en ce qui concerne la sous composante Aii relative à la mise en place du laboratoire nationale du Burkina à vocation régionale. L'Objectif de Développement et le plan de mise en œuvre initial ont été trop ambitieux. Les causes de ces retards sont multiples et comprennent entre autres les difficultés liées à une planification séquentielle des activités avec une interdépendance de nombreuses activités, aux disfonctionnements administratifs, aux procédures de passation des marchés, de gestion financière et de comptabilité.

17. La revue à mi-parcours avec la restructuration profonde du projet intervenue en avril 2011 et l'émergence d'un nouvel esprit d'équipe suite à des départ et nouveau recrutement, à impulser une dynamique nouvelle dans l'exécution des tâches avec un impact positif sur la mise en œuvre des activités. Ceci a permis au projet de réaliser les progrès appréciables ci-dessus énumérés.

18. ***Forces du projet :*** En termes de forces, le projet a bénéficié des atouts tant au niveau régional que national parmi lesquels on retenir :

    - l'engagement des Etats membres de l'UEMOA à se prémunir des risques liés à l'introduction des Organismes Génétiquement Modifiés et produits dérivés à travers la mise en œuvre du Programme Régional de Biosécurité ;
    - l'option prise par la Commission de l'UEMOA de faire de la biosécurité, une priorité dans ses chantiers au cours des prochaines années ;
    - la grande expérience de la Commission de l'UEMOA dans le cadre de l'harmonisation des politiques et textes règlementaires régionaux. En effet L'UEMOA développe et met déjà en œuvre des réglementations communautaires en matière de médicaments vétérinaires, des semences ainsi que des mesures sanitaires et phytosanitaires couvrant l'ensemble de l'Union ;
    - l'ancrage du projet dans les structures de la Commission de l'UEMOA et des Etats membres lui garantissant sa durabilité institutionnelle ;
    - l'existence dans l'ensemble des Etats membres de Comités Nationaux de Biosécurité ;
    - la volonté de la plupart des Etats membres d'adopter des lois sur la Biosécurité ;
    - l'implication de la CEDEAO et du CILSS dans le processus d'élaboration du règlement ;
    - l'implication de l'ensemble des acteurs dans la mise en œuvre du Projet.

19. ***Faiblesses du projet :*** L'évaluation à mi-parcours du projet notamment, tenue en avril 2011 a mis en exergue un certain nombre de difficultés qui ont abouti à sa restructuration profonde avec un cadre révisé des résultats ci-dessus présenté. On peut citer entre autres les difficultés suivantes :

- une planification séquentielle des activités avec une interdépendance de nombreuses activités ;
- la longueur des procédures nécessaires à l'aboutissement des études majeures ou l'adoption des textes qui en sont issus ;
- la rareté de l'expertise qualifiée et francophone en matière de biosécurité et la difficulté pour sélectionner des bureaux d'études dans ce domaine limitant la stratégie de « faire faire » dans le contexte du projet ;
- l'absence d'investissements matériels dans le don FEM pour le renforcement de capacités des pays (tel que les équipements de laboratoire de biosécurité);
- une évaluation des coûts du projet n'intégrant pas le renforcement des capacités des pays,
- la multiplicité des centres de décisions et les approches managériales ayant entrainé des tensions interpersonnelles et des disfonctionnements administratifs au sein de la Coordination Régionale et des coordinations nationales ;
- une lenteur dans l'exécution des activités due notamment aux procédures internes de l'UEMOA dans le domaine de la passation de marché et la gestion financière requis ; etc.

20. **Leçons apprises**

- Le caractère spécifique et innovant de la biosécurité, les difficultés liées à l'approche tripartite CEDEAO- UEMOA-CILSS et des enjeux de la biosécurité des OVM dans lesdits espaces communautaires n'ont pas permis d'adopter le projet de cadre juridique communautaire de biosécurité. Mais la disponibilité d'un avant-projet et la mise en œuvre d'une feuille de route constituent des éléments solides de base pour la poursuite du programme dans l'espace, sur lesquelles les structures de relève devraient s'appuyer pour assurer la consolidation des acquis.
- La disponibilité d'un draft du cadre juridique communautaire de biosécurité est un signal fort pour une utilisation sécurisée des produits de la biotechnologie moderne. Son adoption doit être accompagnée par des mesures fortes suivant une approche participative, itérative et harmonisée dans le but d'inclure des dispositions adaptées aux préoccupations nationales.
- Les faiblesses relevées sur les procédures de passation des marchés et de gestion financière appellent à réfléchir sur des réformes de coopération plus souples et une amélioration de la gestion financière de l'UEMOA répondant aux exigences et attentes des Bailleurs de Fonds.
- Un programme régional de renforcement de capacités mieux élaboré prenant en compte les priorités des coordinations nationales de biosécurité des pays membres de l'UEMOA pourrait permettre au PRB/UEMOA d'obtenir des impacts probants.
- Les activités d'information et de sensibilisation des populations, des institutions nationales ainsi que les organisations de la société civile sur des thématiques relatives à la biosécurité ont permis un effet positif de changement du public des Etats de l'espace sur les risques potentiels des OVM

sur l'environnement et sur les aspects socioculturels. Ce changement est un acquis pour la suite du programme.

21. **Durabilité :** Les acquis du PRBAO/UEMOA sont solides en ce qui a trait à la volonté de l'UEMOA de pérenniser le projet a travers le programme régional de biosécurité (PRB/UEMOA) dont les activités se poursuivront après la clôture grâce aux ressources propres de l'UEMOA et des financements extérieurs de l'AFD et de l'UE.

22. En termes de durabilité, plusieurs dispositions permettent de projeter la poursuite de la mise en œuvre du programme. Il s'agit notamment:

    - de l'engagement de l'UEMOA et des autres institutions sous régionales à disposer d'outils juridique, réglementaire et scientifique et d'un cadre institutionnel de mise en œuvre à travers le processus conjoint ;
    - la stabilisation du personnel et l'allocation d'un budget conséquent pour la poursuite des activités du programme ;
    - de l'engagement des Etats membres à disposer d'un cadre harmonisé de gestion de la biosécurité;
    - du renforcement des capacités des structures nationales en équipements scientifiques et techniques pour la gestion des risques biotechnologiques.

23. Dans cette perspective, les actions immédiates déjà engagées par la Commission de l'UEMOA dès la fin du PRBAO sont, entre autres :

    - la poursuite du processus d'adoption du cadre juridique communautaire de biosécurité ;
    - la poursuite du processus diffusion du manuel de procédures et directives communautaires d'évaluation et de gestion des risques ainsi que du manuel de procédures de suivi-évaluation ;
    - la poursuite de la mise en œuvre du plan de renforcement des capacités des acteurs impliqués dans la mise en œuvre tant au niveau régional que dans les Etats Membres ;
    - la poursuite de la mise en œuvre de la stratégie de communication sur la biosécurité ;
    - la mise en place d'un mécanisme pérenne d'appui au fonctionnement des laboratoires nationaux de biosécurité.

COMMENTS ON DRAFT ICR

24. The draft ICR was translated into French and submitted to the client for comments. Feedback received was incorporated into this final ICR. One comment that should be noted is that WAEMU is of the opinion that the revised targets of this project were entirely achieved (except for revised intermediate indicator #6 which was only partially achieved).

ANNEX 5: LIST OF SUPPORTING DOCUMENTS

1. ***Project documents***

- Project Appraisal Document for a West Africa Biosafety Project, (Report No: 36383), October 19, 2007
- Financing Agreement between Burkina Faso and International Development Association, Credit Number 4368-BUR, February 4, 2008
- Global Environment Facility Grant Agreement between Union Economique et Monétaire Ouest-Africaine and International Bank for Reconstruction and Development (acting as an Implementing Agency of the Global Environment Facility)
- Restructuring Paper on a Proposed Project Restructuring of West Africa Regional Biosafety Project, (Report No. 62573-AFR), July 5, 2011

2. ***Mission reports***

- Aide-Mémoire de la mission d'appui a la mise en oeuvre du PRBAO, 17 au 21 décembre 2012
- Rapport de la mission circulaire de suivi et d'évaluation des activités des coordinations nationales du programme régional de biosécurité de l'UEMOA, 22 octobre au 19 novembre 2012
- Aide-Mémoire de la mission d'appui a la mise en oeuvre du PRBAO, 6 au 9 mars 2012
- Aide-Mémoire de la revue a mi-parcours du PRBAO, 4 au 15 avril 2011
- Mission report (22 March to 30 April 2011) by Dr. R. S. Sangwan, FAO International Consultant, June 8, 2011
- Aide-Mémoire de la mission de supervision et d'appui a la mise en oeuvre du PRBAO, 14 au 15 décembre 2010
- Aide-Mémoire de la mission de supervision et d'appui a la mise en oeuvre du PRBAO, 4 au 5 novembre 2010
- Aide-Mémoire de la mission de supervision et d'appui a la mise en oeuvre du PRBAO, 5 au 9 juillet 2010
- Aide-Mémoire de la mission de supervision et d'appui a la mise en oeuvre du PRBAO, 9 au 19 mars 2010
- Aide-Mémoire - Lancement technique du 15 au 17 avril 2009
- Aide-Mémoire – Mission de suivi du don du FEM et du crédit IDA No 4368-BUR du 8 au 12 novembre 2008
- Aide-Mémoire - Mission de suivi du don du FEM et du crédit IDA No 4388-BUR, 21 janvier au 2 février 2008
- Aide-Mémoire – Mission d'évaluation FEM/Banque mondiale, du 13 au 26 novembre 2006
- Aide-Mémoire – Mission de pré évaluation du GEF/Banque mondiale, du 22 mai au 2 juin 2006

- Aide-Mémoire – Mission de préparation de la Banque moniale, du 1 au 8 avril 2006
- Aide-Mémoire – Mission de préparation du projet régional sur la biosécurité en Afrique de l'Ouest, du 8 au 26 janvier 2006

3. ***Other relevant documents***

- Biosafety Regulations: A Review of International Approaches, 2003; Briefing Paper for World Bank Management: Biosafety and Capacity Building, 2001; and African Agriculture and Biotechnology – Assuring Safe Use while Addressing Poverty, 2003.
- GEF Strategy for Financing Biosafety Activities, GEF Council June 6-9, 2006 – Agenda Item 14, GEF/C.28/5, May 11, 2006.
- Final Draft of the Evaluation on GEF's Support to the Cartagena Protocol on Biosafety, GEF Council November 8-10, 2005, GEF/ME/C.27/Inf.1/Rev.1, November 1, 2005
- Environmental Impact of Bt-Cotton and Sustainability of the Technology through Resistance Management: Implications for West Africa, Hector Quemada, Michigan State University
- Strategies for Cotton in West and Central Africa: Enhancing Competitiveness in the 'Cotton-4' – Benin, Burkina Faso, Chad, and Mali, 2006.