

Document of
The World Bank

Report No: ICR00001946

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IBRD-72930)

ON A

LOAN

IN THE AMOUNT OF

US\$260 MILLION

TO THE

REPUBLIC OF COLOMBIA

FOR A

NATIONAL DISASTER VULNERABILITY REDUCTION PROJECT

(FIRST PHASE APL)

June 9, 2014

Sustainable Development Department
Mexico and Colombia Country Management Unit
Latin America and the Caribbean Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective February 4, 2014)

Currency Unit = Colombian Peso
US\$ 1.00 = COP\$ 2,046.50

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

APL	Adaptable Program Loan
CAR	<i>Corporación Autónoma Regional</i> , Regional Government Body
CAT DDO	Catastrophic Deferred Drawdown Option
CEPAL	<i>Comisión Económica para América Latina y el Caribe</i>
CLOPAD	<i>Comités Locales para la Prevención y Atención de Desastres</i>
CONPES	<i>Consejo Nacional de Política Económica y Social</i> , National Council of Social and Economic Policy
DDT	Dirección de Desarrollo Territorial
DGPAD	<i>Dirección General de Prevención y Atención de Desastres</i>
DNP	<i>Departamento Nacional de Planeación</i> , National Planning Department
DRIS	Disaster Risk Information System
DPL	Development Policy Loan
DRM	Disaster Risk Management
ECLAC	Economic Commission for Latin America and the Caribbean
ECOPETROL	<i>Empresa Colombiana de Petróleos</i>
ESW	Economic Sector Work
FEMA	U.S. Federal Emergency Management Agency
FM	Financial Management
GFDRR	Global Facility for Disaster Reduction and Recovery
GoC	Government of Colombia
GPC	Contingency Planning Group
IBRD	International Bank for Reconstruction and Development
ICR	Implementation Completion and Results Report
IDB	Inter-American Development Bank
IDEAM	<i>Instituto de Hidrología, Meteorología y Estudios Ambientales</i> , Institute of Hydrology, Meteorology and Environment Studies
IGAC	<i>Instituto Geográfico Agustín Codazzi</i>
INGEOMINAS	<i>Instituto Colombiano de Geología y Minería</i> , Institute of Geology and Mining
INVIAS	<i>Instituto Nacional de Vías</i> , National Institute of Roads
ISR	Implementation Supervision Report

MADS	<i>Ministerio de Ambiente y Desarrollo Sostenible</i> , Ministry of Environment and Sustainable Development
MAVDT	<i>Ministerio de Ambiente, Vivienda y Desarrollo Territorial</i> , Ministry of Environment, Housing and Territorial Development
MHCP	<i>Ministerio de Hacienda y Crédito Público</i> , Ministry of Finance and Public Credit
MI	<i>Ministerio del Interior</i> , Ministry of Interior
MTR	Mid-Term Review
MVCT	<i>Ministerio de Vivienda, Ciudad y Territorio</i> , Ministry of Housing, Cities and Territory
N/A	Not Applicable
NDP	National Development Plan
PAD	Project Appraisal Document
PDM	<i>Plan de Desarrollo Municipal</i> , Municipal Development Plan
PDO	Project Development Objective
PIU	Project Implementation Unit
PNGRD	<i>Plan Nacional de Gestión de Riesgo de Desastres</i> , National DRM Plan
PNPAD	National Plan for Disaster Prevention and Response
POA	<i>Plan Operativo Anual</i> , Annual Operations Plan
POMCA	Watershed Land Use and Management Plan
POT	<i>Plan de Ordenamiento Territorial</i> , Territorial Land Use Plan
RF	Results Framework
SECO	Swiss State Secretariat for Economic Affairs
SGC	<i>Servicio Geológico de Colombia</i> , Geological Services of Colombia
SIGPAD	National Disaster Risk Information System developed under UNGRD
SNPAD	<i>Sistema Nacional para la Prevención y Atención de Desastres de Colombia</i> , National System for Disaster Response and Prevention
SNGRD	<i>Sistema Nacional para la Gestión del Riesgo de Desastres</i>
TA	Technical Assistance
UNGRD	<i>Unidad Nacional para la Gestión del Riesgo de Desastres</i> , National Unit for Disaster Risk Management
WB	World Bank

Vice President:	Jorge Familiar Calderon
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Sector Manager:	Anna Wellenstein
Project Team Leader:	Michel Matera
ICR Team Leader:	Van Anh Vu Hong

COLOMBIA
National Disaster Vulnerability Reduction Project (First Phase APL) *

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* Name of the project as it appears in the Loan Agreement. The Project Appraisal Document refers to the project as the “Natural Disaster Vulnerability Reduction Project”. The Bank information system refers to the project as “Disaster Vulnerability Reduction Project First Phase APL”.

DATA SHEET

A. Basic Information			
Country:	Colombia	Project Name:	Disaster Vulnerability Reduction First Phase APL
Project ID:	P082429	L/C/TF Number(s):	IBRD-72930
ICR Date:	06/09/2014	ICR Type:	Core ICR
Lending Instrument:	APL	Borrower:	GOVERNMENT OF COLOMBIA
Original Total Commitment:	USD 260.00M	Disbursed Amount:	USD 102.76M
Revised Amount:	USD 102.76M		
Environmental Category: B			
Implementing Agencies:			
Ministry of Finance and Public Credit			
Ministry of Housing, Cities, and Territory			
Ministry of Environment and Sustainable Development			
Cofinanciers and Other External Partners:			

B. Key Dates				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	06/26/2003	Effectiveness:	11/29/2005	11/29/2005
Appraisal:	10/19/2004	Restructuring(s):		05/21/2009 03/12/2010 12/13/2011 05/10/2012 07/11/2013
Approval:	05/10/2005	Mid-term Review:		
		Closing:	12/31/2011	12/15/2013

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

C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)			
Bank	Ratings	Borrower	Ratings
Quality at Entry:	Moderately Satisfactory	Government:	Moderately Satisfactory
Quality of Supervision:	Moderately Satisfactory	Implementing Agency/Agencies:	Moderately Satisfactory
Overall Bank Performance:	Moderately Satisfactory	Overall Borrower Performance:	Moderately Satisfactory

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

D. Sector and Theme Codes		
	Original	Actual
Sector Code (as % of total Bank financing)		
Flood protection	35	14
General agriculture, fishing and forestry sector	16	
General education sector	6	1
General public administration sector	23	4
Information technology		15
Roads and highways	20	
Rural and Inter-Urban Roads and Highways	20	66
Theme Code (as % of total Bank financing)		
Natural disaster management	100	100

E. Bank Staff		
Positions	At ICR	At Approval
Vice President:	Jorge Familiar Calderon	Pamela Cox
Country Director:	Gloria M. Grandolini	Isabel M. Guerrero
Sector Manager:	Anna Wellenstein	Jose Luis Irigoyen
Project Team Leader:	Michel Matera	Tova M. Solo
ICR Team Leader:	Van Anh Vu Hong	
ICR Primary Author:	Isabel Kreisler Moreno	

F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document)

The PDO from the PAD is to "strengthen national and local disaster risk management capacity". The PDO from the Loan Agreement is to "assist the Borrower in the strengthening of its national capacity for reducing the fiscal vulnerability to national disasters and mitigate the negative impact of possible effects derived from such disasters". The analysis will be based on the PDO of the Loan Agreement.

Revised Project Development Objectives (as approved by original approving authority)

N/A

(a) PDO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	% of municipalities have prepared hazard risk management programs			
Value (quantitative or Qualitative)	10	20% or 210	58% or 632	75% or 824
Date achieved	11/29/2005	10/17/2011	12/13/2011	08/31/2013
Comments (incl. % achievement)	The Results Framework of the Project was developed around the PDO of the PAD: "strengthening national and local disaster risk management capacity". 130% achievement. (Baseline shown as 0 until the 12th ISR approved in 2010).			

(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	% of the SNPAD integrated to DRIS			
Value (quantitative or Qualitative)	0	100%		14%
Date achieved	09/06/2005	10/17/2011		08/31/2013
Comments (incl. % achievement)	14% achievement.			
Indicator 2 :	% of municipalities are educated, trained and aware of hazard risk reduction			
Value (quantitative or Qualitative)	No baseline	60%	100% or 1,098	95% or 1,044
Date achieved	05/19/2005	10/17/2011	12/13/2011	08/31/2013

Comments (incl. % achievement)	95% achievement. Initially (and until the 2011 restructuring), the indicator was "% of municipalities received guidelines and/or workshops for hazard risk reduction" (cf. PAD)			
Indicator 3 :	(i) National policy defining Gov. responsibility in disaster management & reconstruction; (ii) Resettlement policy guidelines for settlements in high risk zones; (iii) 2 policy proposals by DGR to update 1988 Law 46 & 1989 Decree Law 919. (Measure is Y/N)			
Value (quantitative or Qualitative)	N	Y	Y	Y (Partial)
Date achieved	05/19/2005	10/17/2011	12/13/2011	08/31/2013
Comments (incl. % achievement)	Partial achievement. Initially, the indicator was simply (i). Then the 2010 restructuring changed it to simply (ii). Finally, the 2011 restructuring proposed (i) (ii) and (iii).			
Indicator 4 :	% of municipalities have received in-depth environmental education for risk awareness			
Value (quantitative or Qualitative)	No baseline	30%	10% or 112	6% or 68
Date achieved	05/19/2005	10/17/2011	12/13/2011	08/31/2013
Comments (incl. % achievement)	61% achievement. Initially (and until the 2011 restructuring), the indicator was "% of municipalities are educated, trained and aware of hazard risk reduction" (cf. PAD)			
Indicator 5 :	Policy recommendations to reduce Government risk exposure developed ("Policy Guidelines for Financial Protection Mechanisms against Disasters") and final action plan adopted by MHCP by the end of the project. (Measure is Y/N)			
Value (quantitative or Qualitative)	N	Y		Y
Date achieved	05/19/2005	10/17/2011		08/31/2013
Comments (incl. % achievement)	100% achievement.			

G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	11/01/2005	Moderately Satisfactory	Moderately Satisfactory	0.00
2	05/12/2006	Satisfactory	Satisfactory	11.68
3	12/12/2006	Satisfactory	Satisfactory	13.85
4	01/29/2007	Satisfactory	Satisfactory	31.57
5	06/11/2007	Satisfactory	Satisfactory	32.05
6	12/14/2007	Satisfactory	Satisfactory	35.09
7	06/12/2008	Satisfactory	Satisfactory	40.88
8	11/19/2008	Satisfactory	Moderately Satisfactory	41.28

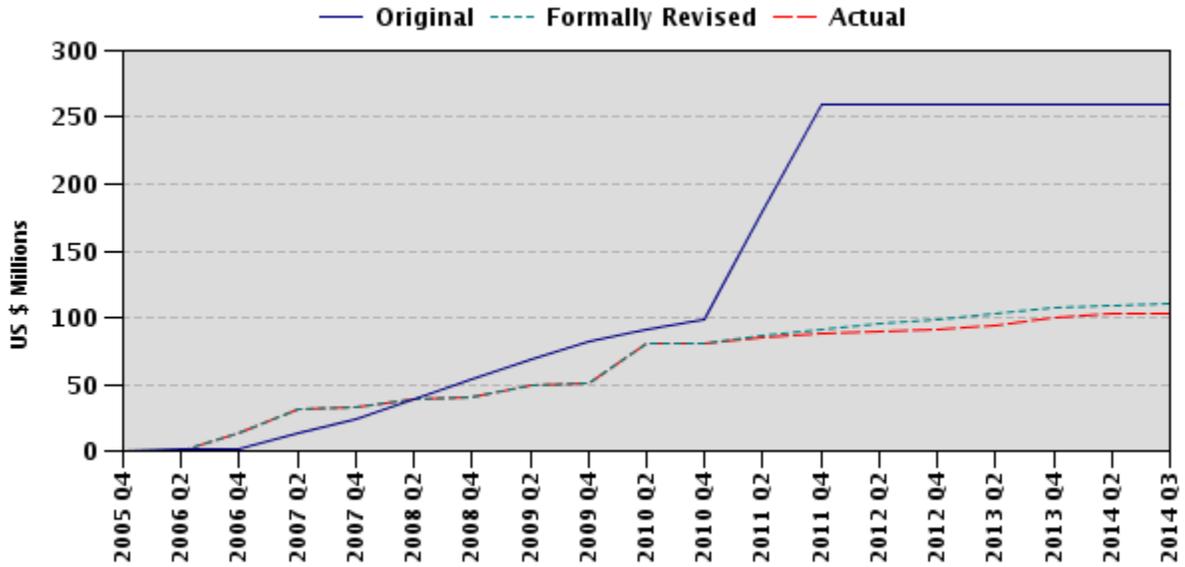
9	05/12/2009	Satisfactory	Moderately Satisfactory	50.51
10	07/22/2009	Satisfactory	Moderately Satisfactory	50.51
11	01/22/2010	Satisfactory	Satisfactory	80.98
12	10/05/2010	Satisfactory	Satisfactory	82.88
13	06/28/2011	Satisfactory	Satisfactory	87.55
14	02/13/2012	Satisfactory	Satisfactory	89.77
15	10/03/2012	Satisfactory	Satisfactory	94.19
16	04/24/2013	Satisfactory	Satisfactory	97.29
17	11/28/2013	Satisfactory	Satisfactory	102.92

H. Restructuring (if any)

Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
05/21/2009	N	S	MS	50.51	Cancel the US\$150 million contingent credit part, which the Borrower had replaced with the DRM DPL-Cat DDO (Board approval in Dec. 2008).
03/12/2010	N	S	S	80.98	(i) Restructure the project with a request from the Borrower to reallocate US\$5.5 million with the purpose of intensifying the technical assistance to municipalities, and increasing the support to modernize seismic and volcanologic monitoring network; (ii) Clarify and propose changes to the Results Framework.
12/13/2011	N	S	S	89.77	(i) Reallocate US\$16.13 million from disbursement Category 2 to 1; (ii) Extend closing date by 20 months; (iii) Increase the Special Account Quota for Category 1 from US\$2 million to US\$4.5 million; and (iv) Propose changes to the Results Framework (indicators and targets).
05/10/2012	N	S	S	91.63	Re-issue a revised amendment letter (because the Bank had not received a countersigned copy of the amendment letter

Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
					reflecting the approved changes proposed in the 2011 restructuring within the established time frame of 90 days and the offer of the amendment was withdrawn), with additional changes regarding the implementation arrangements for Part D, taking into account the new Government structure.
07/11/2013	N	S	S	99.79	Extend the closing date by 3.5 months to complete project evaluation and financial audit. Revised closing date approved was Dec. 15, 2013.

I. Disbursement Profile



1. Project Context, Development Objectives and Design

1.1 Context at Appraisal

1. **Country context.** Colombia is highly prone to natural disasters due to its location straddling the Andean mountain region and Pacific “belt of fire”. Beyond this geomorphological exposure, **Colombia’s vulnerability to natural hazards** is exacerbated by a high rate of urbanization and by the location of major cities in areas of risk. Climatic variability is also likely to increase and further aggravate the country’s exposure to floods, erosion, landslide and drought. This level of vulnerability was already high at Appraisal (from a wider historical overview, Colombia had been hit by a disaster of national scale once every four to six years).
2. Loss and damage resulting from the impacts of extreme natural events (compromising livelihoods, provision of services, public infrastructure, and also macroeconomic stability) had mostly been absorbed by the State with a growing share of the national budget being conceded – thus posing a serious **threat to the fiscal sustainability of the country and its development plans.**
3. **Sector Context.** Colombia had made **policy progress in the DRM agenda** before the project. To make its strategy fully effective, further development was needed and the Government requested the Bank’s support for a 10-year program to reduce disaster vulnerability at the national level and in key municipalities.
4. Following the recommendation from the Economic Sector Work (ESW) carried out by the Colombian Government and the World Bank (WB) in 2002 analyzing earthquake vulnerability and the potential for insurance coverage, the Ministry of Finance and Public Credit (MHCP) established a Contingency Planning Group (GPC) with the purpose of developing a **strategy to cover financial catastrophic risk exposure.** The ESW found the penetration of risk transfer mechanisms in both public and private sectors to be relatively shallow while State fiscal vulnerability to disaster risk was relatively high. Furthermore, the short-term fiscal balance of the State would be severely affected, should a natural disaster occur in any of Colombia’s major cities, since it would have to finance reconstruction needs precisely at a time when national income would drop.
5. Following the ratification of the National Plan for Disaster Prevention and Response (PNPAD), the Government encouraged line agencies and state-owned companies to carry out risk analysis, and identify and implement measures to mitigate vulnerability to disasters in **lifeline infrastructure**, an area where damages can be associated with high costs in lives and productivity.
6. **Rationale for Bank’s assistance.** The Bank and the Government of Colombia (GoC) have built a **long-lasting partnership** since the late 1990s, with the Bank playing a prominent role in financing DRM and reconstruction programs (US\$265 million dedicated to disaster reconstruction over the three decades preceding Appraisal).
7. Regarding risk reduction, the Bank has **regional expertise** and the projects in Honduras, Nicaragua and Saint Lucia had pioneered methodologies for integrating risk

analysis and reduction measures (as economic investments) into urban and regional development planning. This experience had already been assimilated by the Colombian Ministry of Environment, Housing and Territorial Development (MAVDT) in its program to support the municipalities in mainstreaming risk analysis in land use planning and in the Municipal Development Plans (PDMs).

8. Finally, the Bank's **knowledge in the area of residual risk and financial contingency planning** had significantly been contributing to the policy dialogue concerning Government usage of risk transfer instruments to protect fiscal resources and to smooth expenditures generated from catastrophic losses.

1.2 Original Project Development Objectives (PDO) and Key Indicators *(as approved)*

9. **The PDO of the Loan Agreement** is “to assist the Borrower in the strengthening of its national capacity for reducing the fiscal vulnerability to national disasters and mitigate the negative impact of possible effects derived from such disasters”. **The PDO found in the Project Appraisal Document (PAD)** and in the Results Framework is “to strengthen national and local DRM capacity”. It is part of an overall program objective of “[reducing] the fiscal vulnerability of the State to adverse natural events by strengthening national capacity to manage disaster risk and by reducing vulnerability in key municipalities which combine high exposure to disaster risk and high contributions to national income and productivity” (cf. PAD).

10. **The lending instrument** conceived was an Adaptable Program Loan (APL) composed of three phases, the first one (APL1) corresponding to the project subject to evaluation in this Implementation Completion and Results Report (ICR). The overall program would address national concerns through APL1, and reach at least two metropolitan areas (of the four that are critical to the national economy and considered most vulnerable to disasters) through APL2 and APL3.

11. **The ICR will assess achievement of results against the PDO of the Loan Agreement, based on the Results Framework (RF) found in the PAD.** The RF was developed around the PDO of the PAD and relied on the following outcome indicators: (a) Policy statement or CONPES issued by the Government, defining the responsibility of the State for covering losses generated by natural disasters; (b) Key municipalities have prepared risk reduction investment plans.

1.3 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification

12. The PDO remained unchanged during project implementation. The **indicators** slightly changed over the course of the 2010 and 2011 restructurings (including for the CONPES outcome indicator which was taken out as it was reflected in the intermediate indicator for Component C). The targets were formally revised, without affecting the scope of the project but expanding the reach of activities under Components A, B, C and D.

1.4 Main Beneficiaries

13. According to the PAD, the primary beneficiary was the national Government, responsible for DRM and for providing support to the local level. APL1 was designed to focus on supporting the national institutions, and the **direct beneficiaries** were: the National System for Disaster Response and Prevention (SNPAD), the National Planning Department (DNP), MAVDT, MHCP, and technical agencies such as the Institute for Hydrology, Meteorology and Environment Studies (IDEAM), the Institute of Geology and Mining (INGEOMINAS, later renamed as SGC for Geological Services of Colombia), the National Unit for Disaster Risk Management (UNGRD), the state-owned enterprise ECOPETROL and the National Institute of Roads (INVIAS). The **indirect beneficiaries** were municipal authorities across the country (benefiting from services provided by the national institutions), and the communities and vulnerable groups located in areas particularly exposed to natural hazards.

1.5 Original Components (as approved in PAD)

14. The project consisted of **five components** corresponding to the five lines of action promoted by the Government, and followed three disbursement categories¹: Component A for Disaster Risk Identification (US\$6.2 million under Category 1); Component B for Disaster Risk Reduction (US\$102.5 million under Category 1 and 2); Component C for Institutional Development (US\$0.8 million under Category 1); Component D for Awareness and Preparedness (US\$0.2 million under Category 1); and Component E for Risk Financing (US\$150.3 million under Category 1 and 3).

1.6 Revised Components

15. Project implementation started in 2006, with an original loan amount of US\$260 million and an expected implementation period of 4.5 years. The project was restructured five times over its final 8 year duration, with a final loan amount of US\$110 million. The table below provides additional details (to Section H of the Data Sheet) on the major revisions that consisted in cancellations of subcomponents and re-allocations of funds.

Original subcomponent	Type of revision	Justification	Effect on outcomes/targets
Subcomponent E.2. Disaster Emergency Assistance	Cancelled in 2009 (US\$ 150M) requiring Board approval (obtained in December 2008) <i>-Opportunistic change-</i>	In light of fiscal space constraints, a DRM DPL Cat DDO (<i>Development Policy Loan with a Catastrophic Deferred Drawdown Option</i>) appeared as a better instrument to reduce the fiscal vulnerability of the Government than the contingency component initially conceived.	Project outcomes and indicators were based on capacity building aspects of the project, so these remained unchanged. The use of a Cat DDO favored the expected results under Component E, since in case of a national disaster, WB funds would swiftly become available. Note that an ICR for the DPL Cat DDO was completed on July 30, 2012, and assessed a few indicators that were similar to the ones used for this project. The ICR processes for that DPL and for this project are disconnected, and the DPL results had no impact on this ICR.

¹ Category 1: Goods, Works, Services, Training and Operating Costs under Components A, B.1, B.3, C, D and E.1: commonly referred to as "Investments"; Category 2: Goods, Works, Services with respect to Risk Reduction Investments under Components B.2: commonly referred to as "Cost recognition"; and Category 3: Critical Imports for disaster emergency assistance under Component E.2.

Original subcomponent	Type of revision	Justification	Effect on outcomes/targets
Subcomponent B.2a. Support of Local Disaster Mitigation Investments Through the National Revenue Sharing Program	Cancelled/Funds reallocation in 2009 (approx. US\$61M) <i>-Corrective change-</i>	The national Government did not have a suitable mechanism to oversee risk reduction investments (at a contractual level) carried out by municipalities or territorial entities. Hence, it was advised that funds initially allocated to subnational institutions be cancelled and re-allocated to Subcomponent B.2.b (Support of Disaster Risk Reduction Investments in Lifeline Infrastructure).	Subcomponent B.2a was not captured by the Results Framework; hence, the effect on outcomes/targets could not rigorously be traced (see Section 2.2 for discussion).
Re-categorization of Subcomponent B.2b. Support of Disaster Risk Reduction Investments in Lifeline Infrastructure. Affecting Subcomponents of A, B and D	Re-allocation of funds from Category 2 to Category 1 (effective in March 2010 and in May 2011) US\$5.5M+6M <i>-Opportunistic change-</i>	During the Mid-Term Review it was identified that the executing entities of Category 1 had already executed 78% of their funds and were projecting to execute beyond the US\$10M initially allocated. To enlarge the reach of the project activities and have more municipalities benefiting from TA and more investments to better equip national institutions, supporting these investments was considered a better use of the project's funds than the recognition of costs of national infrastructure agencies, as initially conceived under Category 2. An early response and efficient implementation by the executing entities of Category 1 (e.g.: MAVDT, DPAD, INGEOMINAS, IDEAM) was seen as an opportunity to further improve outcomes and impacts of the project. In parallel, the executing entities of Category 2 (ECOPETROL, INVIAS) had experienced administrative burden following Bank's rules for the recognition of costs.	Capacity building and TA for an enhanced DRM at national and local level resulted from this revision. The scope of activities did not change, but the reach was enlarged and, hence, the positive impact of the project was expanded. Target outcome indicators were revised to more ambitious ones, particularly regarding the number of municipalities benefiting from technical support and training in DRM. Capacities from national executing agencies could also be enhanced through the outputs expected from the new investments (e.g.: upgrading of equipment and information systems, technical studies/ expert consultancies).
Re-categorization of Subcomponent B.2b Support of Disaster Risk Reduction Investments in Lifeline Infrastructure. Affecting Subcomponents A.1, A.2, B.1, B.3, C.1, C.2, D and E1.	Re-allocation of funds from Category 2 to Category 1 (effective in December 2011) US\$16.13M <i>-Opportunistic change-</i>	(Same rationale as previous)	The final project outcome targets were set as: <ul style="list-style-type: none"> • (UNGRD) 58% municipalities with hazard risk management plans • (MVCT) 100% municipalities are educated, trained and aware in hazard risk management • (MADS) 112 municipalities have received environmental education for risk awareness

1.7 Other significant changes

16. The Borrower requested an **extension of the closing date** twice, as the executing entities needed more time to achieve the objectives (especially with more funds to disburse under Category 1). The first one was approved in 2011, and the second one in 2013 for a “partial” extension only, to complete the audit and evaluation of the project. Overall, it was extended by 23.5 months, from December 31, 2011 to December 15, 2013.

17. An increase in the **Special Account Quota** for Category 1 (from US\$2 million to US\$4.5 million) was made possible through the May 2012 Restructuring, facilitating project implementation and the possibility to have an increased annual budget (and more activities planned for the fiscal year).

18. In May 2012, **Implementation Arrangements of the project were revised** to acknowledge the division of MAVDT into the Ministry of Housing, Cities and Territory (MVCT) and the Ministry of Environment and Sustainable Development (MADS). It was decided that MVCT would be responsible for overall project implementation and management, and in particular for all activities under Category 1, with MADS as a sub-

executing agency for Component D.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

19. The project was mostly designed by DNP who managed the project preparation grant and received technical support from the Bank. Due to the intricate agendas of DNP as well as fiscal and time constraints, the consultation process during the design phase was relatively limited. A number of workshops were organized and each executing entity was entrusted with specific tasks, but most lacked a general understanding of the overall program rationale, objectives and strategy. Considering the cross-cutting nature of DRM and the complexity of the project implementation arrangements, **further engagement and coordination of relevant stakeholders during the design phase** may have led to a smoother implementation phase and more impacts.

20. **Context at preparation phase.** The Government operated at the time under the pressure of a national financial crisis, and a very limited fiscal space was allocated to national, sector and subnational institutions to ensure the delivery of results committed in the National Development Plan (NDP). The main driver at design phase was the urgent need to address the challenge caused by this fiscal vulnerability and to set a policy framework that would coordinate disaster risk prevention measures from the national to the sector and subnational levels.

21. **Choice of lending instruments and implementation modalities.** The project sought to respond to the GoC's needs by pioneering fiscal support at a time when experience in this area did not exist in the region and executing modalities to this end (such as Cat DDO and Payment4Results) were not in place yet. An innovative mix of implementation options was designed and materialized in a large contingency component under Component E), in the cost-recognition arrangement for ECOPETROL and INVIAS (under Component B) and in a close alignment of the project's RF to the indicators of the NDP. Such a bold design would eventually deliver positive lessons and have a groundbreaking demonstrative effect at regional level. However, such an ambitious and innovative approach would also have to learn from its own experience, with no reference point, and as a consequence the project had difficulties and high transaction costs during implementation.

22. **Choice of implementation agency.** Despite its command in the design (and supervision) of the project, DNP remains a planning and coordinating institution with no implementation mandate. The *Unidad Nacional para la Gestión del Riesgo de Desastres* (UNGRD) did not exist at Entry, and the former *Dirección General de Prevención y Atención de Desastres* (DGPAD) was the national institution with a DRM mandate, but it lacked technical, procurement and financial management (FM) capacities to take on the coordination of the project. MHCP lacked the mandate and experience in DRM activities other than those directly related to fiscal management. It was therefore decided that MAVDT, who had some experience in DRM and in managing multilateral credit, would lead the implementation.

23. **Critical risks and possible controversial aspects.** The program's overall objectives and the priority setting were strategic, relevant and timely, but the circumstances at that time were complex and risky, and the decisions made towards the project design may have underestimated that context, eventually leading to a complicated implementation scheme. The new operation responded to the Government's challenge and ambition, but the institutional framework was not ready for it yet. Technical capacities and leadership, as well as conducive incentive schemes were missing. ECOPETROL and INVIAS were not convinced by the added-value of the cost-recognition modality (as opposed to DNP and MHCP who promoted it). During implementation, it was difficult for the executing entities concerned by that modality to follow the requirements. It was even impossible for the municipalities targeted under Subcomponent B.2a (that eventually had to be cancelled). These flaws were not identified or not adequately factored into the design, and had an impact on project implementation.

24. **Environmental and Cultural Property safeguards** were triggered at Entry and appropriate safeguard instruments were developed in anticipation of potential issues arising from Components A and B. Small works at municipal level were expected to have possible adverse effects, but that environmental risk was classified as "low".

2.2 Implementation

25. The project was restructured several times to address the implementation challenges and adjust the design to an evolving context and a changing demand from the GoC. The major changes were described in Section 1.6.

26. **The main factors contributing to the implementation challenges derived from the design phase.** The complexity of the project, the large number of executing entities and institutional roles, the multiple implementation modalities, all contributed to increasing delays and transaction costs for MAVDT and the other implementing agencies. For the latter, the Bank's rules and procedures were new and, at times, conflicting with national administration rules. After a certain adjustment period, some executing entities (MVCT, MADS, SGC, IDEAM, MHCP) have acknowledged and valued the training and institutional support brought by the project, and today feel prepared to manage future IBRD operations.

27. Other factors that had a significant impact on the implementation phase were: (i) there was **no technical coordinator** within the Project Implementation Unit (PIU); (ii) the Technical Reference Group conceived during the design phase was **never effectively established**, and specific consultancies rather were contracted on an *ad-hoc* basis; and (iii) the 8 years of implementation came with a **high staff turnover** within the project executing entities, which made the Bank's training efforts less effective in the long term, and coordination and communication amongst the partner entities even more challenging.

28. **Factors under Government control.** As of 2010, the **Government led by President Juan Manuel Santos** embraced the DRM agenda and accelerated the adoption of the new legal framework supported by Component C of the project. DRM was mainstreamed into the new NDP 2010-2014 and its indicators, sending a strong political message to sectoral and subnational institutions.

29. The 2011 internal restructuring of the Government with the **division of MAVDT** into MVCT and MADS, each keeping a “territorial department” and both responsible for mainstreaming hazard and risk evaluation, had an impact on the coordination of the project and increased the fragmentation of national efforts that the project was seeking to consolidate in risk monitoring, identification and management. MVCT kept the technical responsibility for addressing DRM in territorial planning (in the Territorial Land Use Plans or POTs) while MADS was in charge of regulating the environment (e.g.: through the Watershed Land Use and Management Plans or POMCAs). Meanwhile, the responsibility for having DRM plans developed at the different levels belonged to UNGRD. This institutional change may have affected the outcomes and efficiency of some investments under Subcomponents B.1 and B.3 aiming to support risk reduction at subnational level.

30. **External factors.** Colombia was severely impacted by the “**La Niña**” phenomena during 2010-2011. Recorded as one of the most devastating natural disasters in Colombia in decades, massive flooding and landslide events across the country left a dramatic account of loss and damage (with nearly 4 million people affected and an economic loss estimated at over US\$6 billion). The impact of such an extreme weather event also had an eye-opening effect over the population and decision-makers, more and more aware of the need for further action and enhanced planning to reduce the country’s vulnerability to natural disasters. At the policy level, “La Niña” had a catalyzing effect and disaster risk prevention became a priority for decision-makers, from the highest levels of the national Government to the local authorities. This context bolstered the success of certain project outcomes derived from Component D on awareness and preparedness, Component C on institutional strengthening for DRM, and Component E on the development of a risk financing strategy. “La Niña 2010 marked a turning point in terms of the institutional engagement in DRM” (quoted from a public Official from the GoC).

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

31. **Design.** The project outcome indicators were more process- than result-oriented. Although the expectations from APL1 were placed at the national level and the activities were implemented by national institutions, the indicators were designed for impacts to be measured at the municipal level. The M&E Framework was largely determined by the project’s alignment with the NDP, and the result was a set of indicators that could only partially capture the variety of outputs and outcomes delivered by this complex operation.

32. **Implementation.** The set of indicators was never substantially revised to reflect the changes and new directions followed by the project over the course of implementation. Only the targets were upgraded.

33. **Utilization.** The M&E Framework served as an efficient tool to track progress of capacity building activities at the subnational level. In particular, it helped identify during the Mid-Term Review (MTR) the good progress of TA provision to municipalities and the appetite from local authorities: funds were subsequently re-categorized and the reach of technical backstopping activities was expanded. However, the Framework lacked indicators to monitor the quality of the outputs and outcomes, for instance the quality of data collection itself, or the level of integration of information (relevant to risk

identification) from different databases.

34. The Bank conducted regular supervision missions and the M&E Framework was populated in a timely manner (in the bi-annual Implementation Supervision Reports or ISRs). Nevertheless, all the M&E exercises (ISRs, MTR and ICR) have suffered from a weak M&E Framework that was not able to capture all the outputs or their quality. On the GoC's side, in addition to the RF from the PAD, MAVDT and DNP requested the executing entities to report annually on sub-indicators from the NDP.

2.4 Safeguard and Fiduciary Compliance

35. **Safeguard** instruments addressing the two policies triggered at Entry were developed in a timely manner and no major issue arose during implementation. The Involuntary Resettlement policy was never triggered, but a Resettlement Plan was developed in 2005 under the APL2 (Bogotá-specific) and also served as such for APL1 where no issue arose during implementation.

36. **FM arrangements** were in place and effective during the project. MVCT provided the required financial information in a consolidated, accurate and timely manner. Based on the project supervision reports, the external audit reports (produced, for the 2006 to 2011 reports, by the *Contraloría General de la República* who decided to stop auditing the project afterwards), and the way the improvement plans were implemented, it can reasonably be assumed that project funds were used for the intended purposes. As of February 2014, the external audit for 2012-2013 was not conducted yet (the hiring process was underway by GoC, who will use its own funds).

37. Overall, Bank's **procurement** rules were complied with. However, the procurement processes suffered from: (i) the high turnover of staff; (ii) significant delays in the hiring processes due to Government changes and elections; and (iii) the high number of executing entities and the lack of a consolidated procurement plan for the project, in addition to the frequent changes in the procurement plans. These difficulties became a real challenge for both the Borrower and the Bank, who developed some strategies together to address it. The PIU was strengthened with a team of highly qualified specialists, and focal points (on procurement issues) were established in each of the sub-executing entities. Trainings were conducted *in situ* for the PIU, as well as for, *inter alia*, SGC, IDEAM, and progress was gradually achieved.

2.5 Post-completion Operation/Next Phase

38. In light of the success of APL1, the Borrower and the Bank are currently discussing a potential **follow-up project to APL1** that would be a second phase to the national DRM program (Phase II). Both parties have undertaken evaluation processes to assess project outcomes, and consulted with relevant stakeholders to draw lessons learned from Phase I and see how a second phase could: contribute to the sustainability of the outcomes from Phase I, further strengthen the ownership by the GoC and non-government stakeholders, further build on technical aspects and innovation, and further improve governance.

39. **Institutional setting under the new legal framework.** DNP played a critical convening role during the design, implementation and evaluation of Phase I. Its knowledge, vision and leverage capacity over sector Ministries and subnational entities, should be capitalized for Phase II, yet without undermining stance and leadership of the institution expected to be responsible for the implementation. Under the *Ley 1523*, UNGRD is in charge of leading the National DRM Plan (PNGRD) and associated Fund. UNGRD has gained political stance: what used to be a General Directorate under the Ministry of the Interior is today an independent Unit directly attached to the Presidency. Yet, the PNGRD's "Programmatic Component" was not approved in time during Phase I and UNGRD therefore still needs to achieve its institutional strengthening plan (including adequate staffing) and to develop and implement an operational framework in order to be able to convene, manage and technically supervise Phase II.

40. **Select interventions.** The approach for Phase II may be to focus the efforts by selecting key sectors and institutions and designing target interventions to deliver even more effective and sustained impacts (from a technical point of view). At sector level, some line-Ministries will need to be prioritized. At subnational level, an area to explore relates to the *Corporaciones Autónomas Regionales* (CARs) who have the mandate to ensure disaster risk reduction at regional level and to lead environmental actions in key areas (such as integrated watershed management). During Phase I, some have proved to have a real added-value in facilitating DRM interventions at subnational level. Besides their specific mandate, CARs' proximity to the municipal level may constitute an asset to channel technical support and resources, and to enhance the integration of hazard and risk management into territorial planning at local level.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

Rating: **High**

41. The relevance of reducing the State's physical and fiscal vulnerability to natural disasters as a contribution to national development objectives remains high. Most of the investments in DRM made by national entities over the duration of the project were funded by APL1. In turn, national entities' efforts were oriented to enhance the support provided to municipalities. This way, **the project anticipated and addressed the institutional needs** to better host the new policy and legal framework for DRM.

42. **The PDO remains relevant today** even though the national context has evolved significantly. The Bank's assistance strategy has also been updated with the development and use of new instruments for fiscal vulnerability reduction. Implementation modalities were flexible enough to adapt to changing national circumstances and project components were adjusted to remain relevant to development strategies and priorities.

3.2 Achievement of Project Development Objectives

43. The project has achieved its development objective. As captured by the PDO overall outcome indicator, 75% (824) of municipalities have developed hazard risk management plans or integrated DRM into their land use plans. This reflects a **30%**

overachievement of the expected outcome. Colombia also has a new DRM regulatory and policy framework, introducing a conceptual shift from a post-disaster response approach to an integrated management of disaster risk. The capacities of local and national institutions to understand and manage risk and to reduce vulnerability to natural disasters have been strengthened. Decision-making on policies and investments are today better informed from DRM perspectives. The following table reflects the level of achievement by project Component (against revised targets and amounts).

Component	Outcome indicator and Target (as in Restructuring Paper of December 2011)	Result	Level of achievement	Amount allocated (US\$M and share of total project cost)
Overall	58% (632) of municipalities have hazard risk management program.	75% (824 municipalities)	Target was exceeded (130% achievement)	110.0 or 100.0%
Component A: Risk Identification	100% of the SNPAD integrated to DRIS (SIGPAD). i.e. 7 information sharing agreements with SNPAD entities legalized / 7 conventions scheduled.	Only 1 agreement for information sharing has been effectively articulated with IDEAM. Other institutions' information databases relevant to risk identification and monitoring are not integrated into SIGPAD)	Target was partially achieved (14% achievement)	22.0 or 20.0%
Component B: Disaster Risk Reduction	At least 100% (1,098) of municipalities are educated, trained and aware of hazard risk reduction.	95% (1,044 municipalities)	Target was achieved (95% achievement)	82.0 or 75.0%
Component C: Institutional Development	<ul style="list-style-type: none"> • National policy defining Government responsibility in disaster management and reconstruction. • Preparation of two policy proposals by DGR (updating Laws 46 of 1988 and Decree Law 919 of 1989). • National DRM Plan prepared and issued through Decree. 	<ul style="list-style-type: none"> • A new Law (<i>Ley 1523/2012</i>) establishes the regulatory framework for DRM and mandates the development of a National DRM Plan (PNGRD). • The "General Component" of the National DRM Plan has been developed. • The "Programmatic Component" of the National DRM Plan is under development. 	Target was partially achieved	4.0 or 3.6%
Component D: Awareness and Preparedness	112 municipalities (or 10%) have received in-depth environmental education for risk awareness.	68 municipalities (or 6%)	Target was partially achieved (61% achievement)	0.7 or 0.6%
Component E: Risk Financing	Policy Guidelines for "Financial Protection Mechanisms against Disasters" and final action plan adopted by MHCP by the end of the project.	By the end of 2013, MHCP published the document "Colombia: Policy Strategy for Public Financial Management of Natural Disaster Risk", and defined some policy objectives and priorities.	Target was achieved	0.9 or 0.8%

44. Annex 2 provides detailed information on the outputs per Component and contributions to PDO, while the following paragraphs simply intend to give a summary.

45. **Component A.** The national **DRM information system (SIGPAD)** developed under UNGRD does not meet the outcome expectation. SIGPAD has been developed as an online information sharing platform mainly focusing on emergency response, while this tool was initially conceived as an open information management system, able to integrate scientific, geographical and other relevant data, assess vulnerability, draw risk maps, capture risk mitigation activity and stockpile best practice in order to facilitate knowledge management and enhance coordination for more effective disaster risk prevention and recovery. Of the list of seven institutions that were expected to be integrated into SIGPAD, only one (IDEAM) has.

46. Nevertheless, the indicator used fails to capture some of the most outstanding investments, such as the modernization of the National Volcanological and Seismic Monitoring Network through **SGC**, with a 50% increase in the number of volcanoes

monitored and 70% increase in the number of automatic stations installed. This upgrading process allowed for a larger coverage of monitored areas, improved data collection and hazard mapping, a 24/7 monitoring of seismic and volcanologic earthquake activity and real time warnings with dissemination of emergency information.

47. **IDEAM** has also expanded the coverage of its hydrometeorological stations network and upgraded its equipment and information systems. Although the regional coverage is not complete yet, the early warning system has significantly improved and is widely consulted by national, sectoral and subnational stakeholders. About 70% of the set targets (to improve risk mapping for flooding, landslide and fire hazards) were reached; the dissemination of information and provision of knowledge management tools today facilitate risk identification at regional and local levels. Nevertheless, the need to produce guidelines that can help develop hazard/risk mapping at subnational levels, and maps that can be used at the local level, persists (the level of details was successfully downscaled to a minimum of 1:100,000 during the project, but not to 1:50,000 as expected for some of maps).

48. **Component B. TA to strengthen local DRM capacities** was delivered, ensured by MVCT (1,007 municipalities were assisted and 542 Action Plans were developed) and by UNGRD (674 municipalities were assisted and 624 Municipal Plans for Risk Management were developed). MVCT benefited from the support from the regional CARs, which facilitated a swift implementation of activities, enhanced the project's impacts and contributed to the sustainability of outcomes at municipal level. In addition, both MVCT and UNGRD produced knowledge management tools (such as risk assessment guidelines, methodologies, contingency plans for instance in the water and sanitation sector). Municipalities have widely acknowledged the relevance and added-value of the support provided through the project as well as the need for more in-depth and continuous TA on DRM at local level.

49. Component B also sought to support disaster risk reduction investments in two sectors with relevance to the national interest: transport and energy supply, with the state-owned enterprises **INVIAS** and **ECOPETROL** respectively. They included studies and designs for disaster risk reduction, risk mitigation works, reinforcement and retrofitting of existing infrastructure, all executed under the cost-recognition modality. By 2012, 100% of the US\$72.4 million allocated to those activities were disbursed, with 74% corresponding to INVIAS' investments (mostly in post-disaster reconstruction of the primary road network) and 26% to ECOPETROL's (primarily in structural reinforcement of infrastructure to improve resistance to seismic events).

50. **Component C.** The **National DRM Law (Ley 1523)** that passed in 2012 and the **“General Component” of the PNGRD** in 2013 constitute the highlights of Component C. The TA delivered by the project provided guidance to develop an institutional and policy reform that had a transformational impact on the conception of disaster management at the national level. GFDRR (Global Facility for Disaster Reduction and Recovery) funds facilitated consultancies and knowledge products related to the project, as well as the policy dialogue. This included the development of a national risk management analysis for Colombia (CCDRMA, particularly in collaboration with DNP) published in June 2012 and serving as a critical piece of information and input to the

PNGRD and ongoing institutional reforms.

51. Yet, UNGRD struggled to operationalize the PNGRD. The “**Programmatic Component**” of the Plan (expected to be an output) was significantly delayed due to difficulties with procurement and internal management at UNGRD, and the funds that were expected to be channeled through the DRM National Fund did not flow within the lifetime of the project.

52. ***Component D.*** The expected outcomes were not reached. The *Curriculum* for a *Diploma* on Environmental and Disaster Risk Management was developed and used as the basis for DRM awareness-raising and training at the local level, but only 68 municipalities effectively benefited from this output. MADS made the educational materials available to regional and local civil society organizations as well as to Academia to facilitate dissemination and continuity of awareness-raising activities, but **financial resources were not secured** to ensure the sustainability of the outcomes.

53. ***Component E.*** The target under this component was achieved: MHCP has developed the Colombian Policy Strategy for Public Financial Management of Financial Risk. While some outputs and targets (agreed over the 2011 Restructuring) such as the modeling and estimation of financial contingencies associated with natural disaster risk, were not fully delivered, others such as a study on catastrophe risk insurance mechanisms to provide financial coverage to the inventory of State-owned property buildings, as well as some collateral products from the project (like the design of a Cat Swap seismic risk parametric insurance) have provided essential inputs to the financial Strategy. These outputs have set the basis for further analytical work undertaken by the GoC and continued policy dialogue and collaboration with the Bank, to **develop a more ambitious risk-financing framework and further explore risk transfer mechanisms**.

3.3 Efficiency

54. The investment planning process in Colombia includes by law an economic and cost-benefit analysis for any project requiring public funding. This assessment is part of an overall evaluation ensuring the viability of the proposal based on technical, economic, environmental and social grounds. Besides, the **cost-benefit methodology developed for this particular project** was based on the following: “(i) assessment of annual losses of exposed public properties and infrastructure to arrive at expected damage loss figures from which the fiscal cost of projected natural disasters would be gauged; (ii) assessment of damage reduction achieved based on specific risk mitigation/prevention measures; and (iii) comparison of the cost of risk mitigation investments for the selected works” (cf. PAD). These assessments were supposed to be conducted annually on select structural and nonstructural mitigation measures financed by the project. However, no assessment was carried out. Furthermore, most of the structural mitigation measures that could have been followed up and documented were cancelled during implementation (in particular, the US\$61 million Subcomponent B.2a for Municipal Risk Mitigation Investments), and the project was largely left with only nonstructural TA activities.

55. It is **impossible to assess the remaining structural measures** (i.e., the investments through ECOPETROL and INVIAS based on a cost-recognition approach)

against damage reduction: there was no technical oversight to guide the investment decisions and no reporting requirement from the corresponding executing entities. Based on the data initially provided in the PAD, the “probable maximum loss” (from a natural adverse event) has been reduced by at least 50% by retrofitting select buildings and infrastructure. **Assessments on nonstructural measures could in principle be carried out.** However, the lack of data and accurate information linking activity to damage reduction in this particular project render it an impossible feat. Based on the data initially provided in the PAD, the US\$9.8 million under Component B were used to enhance land use allocation/control and identification of hazard prone areas and limits on their use and incentives, will give the beneficiary municipalities the possibility to reduce by 25 times the potential damages they would bear by not being aware of the stakes related to land use and natural disaster risk and doing nothing.

56. Aside from these assessments, it is possible though to justify: **(i) the economic rationale** of the project and show the causal chain that linked project objectives/activities and ultimate outcomes it influenced, as described throughout Section 3.5 and shown by the significant increase in DRM investments in general when comparing the numbers for the period 2001-2005 preceding the project, and 2006-2010 (2010 being the year of the last set of data found in the report “*Análisis de la gestión del riesgo de desastres en Colombia, BM-Colombia, GFDRR*”, 2012): investments at the national level are multiplied by 3 at least, and up to 10 if split per priority area (governance) and 76 if split per entity (IDEAM); **(ii) the public rationale**, given the Government’s fiscal constraints at Entry and need for “liquidity funds”, and the key role the Government had and has to play in the development and mainstreaming of the DRM agenda; **(iii) the added-value from the WB**, already engaged in DRM through the Partnership Strategy and multiple past and ongoing operations, and bringing in an innovative and long term approach through a 10-year program spanning a wide range of structural and nonstructural activities.

3.4 Justification of Overall Outcome Rating

Rating: **Satisfactory**

57. **The PDO proved opportune** to achieve the country’s development objectives. The institutional reforms it promoted immediately proved their relevance when the country was hit by La Niña. **Important policies and tools were delivered** and have contributed to advancing the DRM agenda in Colombia. This is true at the institutional level (with the new legal framework for DRM and the direct dependence of UNGRD on the Presidency), the national level (with the improved technical capacities of some institutions), and the local level (with the better understanding of vulnerability factors by the municipalities across the country). **The PDO was overachieved** and the project delivered positive “collateral benefits” over the 8 years of implementation.

58. **Some shortcomings were also identified.** The complexity of project design and management arrangements made implementation challenging and did compromise the timely delivery of some of the outputs. Additionally, the new UNGRD would need to be further strengthened to be able to operationalize the PNGRD and deliver its mandate. At the local level, despite the delivery of TA (trainings and tools) in DRM, municipalities are not ready yet to lead risk identification, mitigation and response.

59. **In conclusion, the project was efficient** in so far as it was successful and has, in a challenging context, overachieved the expected targets. The ambitious design and the bold implementation modalities attached to this project have eventually delivered transformational results in Colombia and drawn relevant and timely lessons for the DRM community of practice in the Latin America and Caribbean region.

3.5 Overarching Themes, Other Outcomes and Impacts

(a) Poverty Impacts, Gender Aspects, and Social Development

60. The project promoted risk identification and prevention measures expected to deliver benefits to the **poorest population groups** – generally more vulnerable to natural disasters. Mainstreaming DRM tools in local development planning (as achieved in 95% of the municipalities) will prevent damage to physical infrastructure and housing, and secure DRM tracked investments (or mitigate risks of losing them against other sectors).

61. The project supported hard investments in the retrofitting of key infrastructure ensuring essential services (such as transport and energy supply). It contributed this way to **reducing the risk of macroeconomic loss and impact on social development** in the event of an adverse natural disaster.

62. The sustainability of social programs in Colombia is usually compromised by the financial shocks from natural disasters. The project has contributed to reducing the fiscal vulnerability of the State with the development of risk transfer mechanisms. Those will guarantee the budget stability that is necessary to ensure business continuity at the Government level, provision of public services and swift mobilization of funds to provide post-disaster response and adequate assistance to the most affected populations. **National budget investments into social and development programs will be better protected.**

(b) Institutional Change/Strengthening

63. Over its 8 years of implementation (from 2006 to 2013), the project has contributed to major institutional changes with regard to DRM, with the adoption of the *Ley 1523*, and the capacity building within the institutions. **At the national level:** (i) IDEAM and SGC have strengthened their technical and managerial capacities; (ii) the establishment of UNGRD, placed directly under the Presidency and with the mandate to ensure effective leadership and coordination of DRM action across national, sectoral and subnational entities, constitutes a milestone to uplift disaster risk prevention as a national policy priority; (iii) MHCP has been able to reduce fiscal vulnerability through the development and use of risk retention and risk transfer instruments. **At the local level:** (i) municipal authorities, local committees for disaster management and communities have been sensitized and have strengthened their DRM understanding; (ii) TA provided by MVCT and UNGRD has been acknowledged as a valuable contribution by local institutions, and the increasing demand for further technical support shows a new institutional commitment with long-term risk mitigation agendas by local authorities (before the project, contingency planning or post disaster recovery was the usual approach to support provision at municipal level); (iii) today, the national institutions who participated in the project are able to provide TA for risk mapping and risk reduction.

(c) Other Unintended Outcomes and Impacts (positive or negative)

64. In the field of **risk transfer mechanisms**, the GoC has gained substantial knowledge. In connection with the national strategy for risk financing, MHCP has made significant progress in the design of a seismic risk parametric insurance (Cat Swap) using SGC data and GFDRR/CAPRA² technical support (leveraging the Bank's assistance).

65. The GoC through DNP is now capable and committed to track and **report DRM investments per year** per administrative division (at the national, departmental and municipal levels), per priority area (e.g.: governance, knowledge & information, education, risk reduction), and per entity (e.g.: Ministry, National Institution).

66. A National DRM Fund has been established under the National Policy to promote investments in DRM and contribute to capacity development at territorial and sectoral levels.

3.6 Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops

67. The GoC also lead their own evaluation process and hired the local firm *Econometría* to assess the project. The main results and conclusions from *Econometría's* report are detailed in Annex 6 and summarized as follows: (i) Approval of the *Ley 1523* in 2012; (ii) Establishment of UNGRD; (iii) Strengthening of the risk monitoring and early warning systems of SGC and IDEAM; and (iv) Progressive transformation of disaster management at the local level. The institutional analysis led to the main conclusion that despite the paradigm shift in DRM, the conditions required to effectively implement the policy are not ready yet, especially at the local level. An example is the critical lack of integration of the information into the (risk) studies, either from IDEAM, SGC, the CARs, or from regional and municipal authorities. The analysis also highlighted the lack of technical and management support to the executing entities (especially without the establishment of the Technical Reference Group), and subsequently of adequate budget.

4. Assessment of Risk to Development Outcome

Rating: **Moderate**

68. ***Factors contributing to the sustainability of outcomes.*** Executing entities have developed **knowledge management products** adapted to different local contexts and going beyond the project's timeframe and thus bringing long term benefits to the municipalities and local authorities, the regional and local stakeholders in general including the civil society (e.g.: methodological guidelines for municipal hazard risk plans, training and awareness-raising materials, new *Curriculum*).

69. Certain "Sectors" today in Colombia are able to take measures to address natural disaster risk prevention and mitigation, including some of the executing entities who have

² CAPRA is an information platform to enhance decision-making in risk management across various sectors. See Box 5 in Annex 2 for more details.

developed existing or new competences throughout the project and strengthened their technical and administrative capacities to carry out DRM activities. Even though these measures need to be further informed (by analytical knowledge) and integrated into an operational DRM framework coordinated and overseen by a transversal institution (expected to be UNGRD), **the capacities do exist in some of the line-Ministries and Government entities** (in terms of decision-making, implementation, human resources, etc.) and are an important factor contributing to the sustainability of outcomes.

70. **Part of the investments will be followed up by the executing entities themselves.** For example, SGC and IDEAM have secured financial resources to either complete the activities initiated under the project (e.g.: risk-mapping) or continue with the modernization and expansion of the networks of monitoring stations and information management systems.

71. Similarly, some have secured and dedicated financial resources to the **maintenance of their equipment.** For instance, as of the *Ley de Regalías*, SGC benefits from a regular 2% share of State revenue from mining activity, in addition to other incremental budgets. These funds will ensure routine and upgrading activities as well as regular maintenance of the installations.

72. **Factors impinging on the sustainability of outcomes.** The evaluation team identified an **over-reliance on external consultants** for technical assignments. A capacity development approach, promoting technical skills and training in-house staff within the institutions, may have further contributed to the sustainability of the project's outcomes (particularly under Components A and B). While the better-established institutions (SGC, IDEAM or INVIAS) have managed to retain their technical teams, **the staffing situation at UNGRD is more uncertain.** For instance, it appeared that only two staff members were familiar with the use of the integrated database system expected to manage data for disaster risk prevention at the national level.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry

Rating: **Moderately satisfactory**

73. The operation's design was bold and did introduce innovative approaches, but this came along with a challenging level of complexity that would have required nurturing coordination mechanisms and implementation arrangements since formulation (beyond what was accomplished). Technical capacities were assumed without an *ex-ante* assessment of the strengths and weaknesses of the national, sector and subnational institutions, and **the large scope of the project** unfortunately limited the development of institutional capacities.

74. The **cost-recognition modality** associated with the disbursement Category 2 for the national infrastructure agencies and municipalities effectively created some fiscal space for MHCP, but it also came with some risks that were not identified nor mitigated

at Entry. INVIAS' investments were supervised by MHCP who had no technical capacity to ensure that risk mitigation criteria were guiding the choice of investments. DNP had no mechanism (complying with the requirements for Bank's statement of expenses) to account for disaster mitigation investments at the municipal level, and therefore the local level DRM subcomponent had to be cancelled along implementation.

75. **Project indicators** were designed to be aligned with the NDP as requested by the GoC, but the RF was not conceived as a tool that would facilitate management and monitoring of such a complex operation.

76. **The implementation arrangements** added layers of complexity and processing time for a set of institutions that were not familiar with Bank rules and procedures. The transaction costs for MVCT and the sub-executing entities were high, and, frequently, technical staff had to be mobilized for administrative and FM tasks.

(b) Quality of Supervision

Rating: **Moderately satisfactory**

77. Despite the discrepancies in the PDO statements (in the PAD and Loan Agreement), the drawbacks of the RF and the several restructurings of the project, the objectives and indicators were never formally revised (only the targets were). Over the 8 years of implementation, very little corrective action was undertaken, rendering **project supervision and evaluation more difficult**.

78. Nevertheless, **the Bank was proactive, flexible and responsive** in identifying, addressing and resolving implementation issues. Both the Borrower and the Bank showed considerable adaptation capacities that allowed the Project to reach the expected outcomes and even beyond for some, as well as a number of positive "collateral effects".

79. The 2008 **MTR** made a good diagnosis of challenges and bottlenecks, and recommended actions and ways forward which were effectively implemented. The re-categorizations were an opportunity to expand the reach of TA activities to national institutions and local authorities. Corrective measures to address the lack of coordination were taken. MAVDT strengthened its management capacity and the PIU provided better support to the sub-executing entities after the MTR.

80. ISRs were produced in due time. The project had four Sector Managers and four Task Team Leaders, and project supervision could only partially rely on the use of the RF. This may explain why supervision relied significantly on the Borrower (which actually had been suggested as a risk mitigation measure in the PAD) and on policy dialogue. A closer and more "hands-on" **supervision of technical aspects** by the Bank though may have enhanced project outcomes to some extent. There were some missed opportunities of better guiding the investments (e.g.: in the case of INVIAS).

(c) Justification of Rating for Overall Bank Performance

Rating: **Moderately Satisfactory**

81. Overall, the Bank took a bold approach at different stages of the project cycle. It

sought for innovation at the design phase, and new implementation modalities were tested and delivered lessons learned at the regional level. It sought solutions to address the Borrower's challenges and needs during implementation and the project delivered outcomes beyond expectations.

5.2 Borrower Performance

(a) Government Performance

Rating: **Moderately Satisfactory**

82. The GoC sought implementation modalities that would increase MHCP's fiscal space and DNP's margin for maneuver. The **cost-recognition modality** under Component B satisfied these goals, but the Borrower failed to identify the institutional constraints associated with this arrangement, which turned out to be burdensome for ECOPETROL and INVIAS, and impossible to implement for municipalities.

83. **MVCT and DNP** both played a key role in the success of the project. DNP not only drove the design phase, but it has also shown a very active interest in the implementation and evaluation phases, solving problems and ensuring project monitoring against the NDP and the Annual Operations Plan (POAs). MVCT was given overall responsibility for implementation and took on the management of a complex operation. It was a challenge to lead and coordinate all the executing entities' activities, but MVCT made a significant effort to upgrade its institutional, management and technical capacities to be able to orchestrate them all and bring the project to a successful conclusion.

84. The GoC was responsive to the recommendations made in the periodic ISRs and the MTR undertaken by the Bank. It was proactive, searching for solutions to unlock bottlenecks and to keep up with implementation. Project supervision missions were usually a joint effort between the Borrower and the Bank, with MVCT endorsing the responsibility for ensuring that follow-up actions are implemented. Overall, the GoC showed **strong ownership and commitment** to the project.

(b) Implementing Agency or Agencies Performance

Rating: **Moderately Satisfactory**

85. The project had 9 different entities involved in implementation: 2 direct executing agencies (MVCT and MHCP), 1 supporting agency (DNP), and 6 sub-executing entities (MADS, UNGRD, SGC, IDEAM, INVIAS and ECOPETROL). Furthermore, some of them had to implement activities in coordination with regional and municipal entities. Some lacked the general vision of the project and focused on their parcel of expertise and responsibilities endorsed in the POAs. Only towards the end of the project was the coordination of actions and project components more consistent. Most encountered **difficulties** with complying with Bank rules especially during the first half of the implementation phase. The Procurement and FM ratings (given to the executing entities by the Bank in ISRs) remained "Moderately Satisfactory", mostly due to untimely procurement planning and delays in audit exercises. During the ICR mission, several executing entities (in particular SGC who delivered outstanding results beyond expectations, IDEAM and MVCT) expressed that they now felt substantially trained and

ready to run similar Bank operations and take on the direct execution of a potential follow-up phase.

86. Despite the complexity of implementation arrangements, the executing entities were **able to adapt** to the changes, jointly **disburse 93.6% of the loan and deliver results beyond the expected outcomes**. Some benefited from extra-funds for specialized TA (mostly from GFDRR) and/or managed to secure regular budget allocations to sustain the investments.

(c) Justification of Rating for Overall Borrower Performance

Rating: **Moderately Satisfactory**

87. Considering the project's ambition and complexity, the satisfactory rate of disbursement and the overachievement of the expected outcomes, the overall Borrower's performance is rated Moderately Satisfactory.

6. Lessons Learned

88. ***Lessons learned particularly relevant to a follow-up operation.*** There is existing demand at the municipal level for in-depth and continuous technical support for risk mitigation actions. Several aspects may need to be considered to address this challenge in the future: **(1) The need to strengthen risk identification and analysis**, fundamental to any further step in DRM, and starting with an **assessment** of the strengths and weaknesses, the skills and resources, and the investment and implementing capacities of the entity to be supported. At the local level, the evaluation highlighted **three types of municipalities** corresponding to three levels of understanding and capacities: (i) the more enhanced municipalities (such as Medellín) with significant resources and capacities are able to develop, update and turn their hazard risk management plans into mitigation actions; (ii) less enhanced municipalities are able to develop substantial plans and actions, but still show weaknesses on key issues such as the consultation process and the dialogue that is necessary with the population during the risk/vulnerability analysis, the prioritization of actions, etc.; (iii) lastly, the “small” municipalities (in terms of size, but most importantly in terms of capacities) do not have the competences or resources to develop such plans or to even engage in a bidding process to contract the specialized services of the private sector; **(2) The option to tap the potential role that the CARs** could play in coordinating DRM actions at the regional level and facilitating the reinforcement of DRM capacities at the municipal level; **(3) The need to strengthen communication flows and coordination mechanisms** between the national, regional and local levels, and to develop context-specific guidelines for risk identification and management tools. This would ensure that the national specialized agencies provide adequate support to the regions, which in turn can respond to the demand from the municipalities for technical and institutional support. Such framework should be aligned with the “Programmatic Component” of the PNGRD, and specific guidance for regional and local institutions should be developed within the plan.

89. Local authorities often see the issue of lack of funds (to implement actions recommended in the municipal hazard risk management plans) as a serious drawback for enhanced DRM action at the local level. The operationalization of the National Fund

(supposed to channel funds for risk mitigation actions) was delayed and the municipalities could not have access to it during project implementation. This **lack of financing and investment capacity at the local level** may have impinged on more tangible outcomes from the project. Because of the disconnect between the TA provided to local institutions and their actual (in)capacity to finance follow-up actions, the assistance provided for risk identification and vulnerability reduction tools had a limited impact on investment decisions at the municipal level. In this sense, the cancellation of the municipal investments (under Component B) removed an incentive for municipalities to bring risk mitigation theory into practice. For the follow-up operation, it may be relevant for the GoC to explore how other countries with similar challenges have managed to channel funds for DRM at the local level.

90. Similarly to how SGC's data helped MHCP develop seismic risk parametric insurance, IDEAM's work has the potential to contribute to the **development of climate risk parametric insurance tools**. Such tools could be supported in a follow-up operation, and furthermore, use the successful experience from other countries in that area.³

91. An **in-depth institutional assessment as well as the preparation of a capacity development plan** for UNGRD would help define the institutional and implementation arrangements for a potential Phase II.

92. In terms of efficiency of implementation arrangements and day-to-day operations, there is room for improvement: there were too many executing entities, all relying on the lead PIU for support and supervision, with high transaction costs for all parties, and unnecessary delays in the delivery of outputs. **Alternative arrangements** were suggested by the national stakeholder institutions and the Bank during the ICR missions: (i) facilitating direct execution arrangements for executing entities who are prepared for it, (ii) training the executing entities' FM and procurement experts on Bank rules and procedures and facilitating direct Bank supervision with those (as opposed to having an intermediate PIU filter the processes and manage communications), and (iii) reinforcing the Bank's support on operational issues and strengthening the PIU with the addition of specialized staff dedicated to facilitating all the operations and processes.

93. In terms of M&E, the project demonstrated the limits of a quantitative RF. It highlighted the critical need to design, from Entry, some indicators and/or an M&E system that can capture the outcomes produced by the project (through the quality of the outputs first). This includes the need to constantly assess the RF against the original PDO throughout implementation, and make the necessary adjustments to best capture the project's impacts.

94. **Broader lessons learned (potentially also relevant to the sector and other countries)**. There was a good **synergy between this IBRD operation and GFDRR grants**, targeting specific areas of TA and delivering extra-outcomes and positive impacts around the project. MHCP was able to explore risk transfer mechanisms for seismic risk

³ Initiatives such as the "Regional Insurance Facility for Central America" supported by the IDB, or the "Integrated Risk Management and Agriculture Insurance" supported by CEPAL are some examples (see references in Annex 9).

in Colombia thanks to the TA from GFDRR/CAPRA combined with outputs and data delivered by SGC under the project. Although not formally linked to the IBRD credit, GFDRR funds operated as a “top-up” investment for TA, facilitating the project’s implementation and the delivery of some outputs under Components C and E. The Bank has also been working with GFDRR/CAPRA to support the integration of probabilistic risk information into other policy-making processes⁴, and the development of a methodology to take inventory of urban settlements in high risk areas (through the provision of TA to MVCT for the latter). This experience, as well as similar ones in other countries in the region, show the added-value of IBRD and GFDRR partnership for both institutions and far and foremost for the Client.

95. At the broader regional level, Colombia has emerged as an **icon in terms of DRM**. It has successfully adopted (by Law) an integrated DRM approach; it has mainstreamed DRM in land use planning (through the POTs); it has one of the most (if not the most) sophisticated seismic/volcanologic monitoring system in the region; and as a participating country in the Hyogo Framework for Action, its average score of progress is amongst the highest (cf. data from the 2011 Global Assessment Report). Honduras and Jamaica for instance have developed DRM operations based on the Colombian experience, particularly by using a comprehensive approach to disaster risk reduction.

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

96. The ratings proposed for the project in the ICR were endorsed by the GoC and the executing entities during the “ICR Presentation and Validation Workshop” held in Bogotá (on April 29th, 2014). The main issues raised by the Borrower during the Workshop are summarized below, while Annex 7 provides further details.

97. *Details on results (minor).* IDEAM and MADS provided further details about the completion of certain activities and achievement of results.

98. *Factors that affected Project implementation.* The GoC and the executing entities identified the need to thoroughly assess their institutional capacities (both technical and managerial) before taking on the responsibility for managing Multilateral Bank loans and implementing such ambitious operations. The responsibilities are significant and need high commitment from the executing entities: it is therefore fundamental to assess their engagement upfront and the efforts needed against the added-value of the operation(s). Furthermore, despite the operational trainings delivered by the WB, the impact of those was compromised by the high turnover of staff, and all too often, technical staff had to be mobilized for administrative/managerial tasks to ensure timely implementation.

99. *Further lessons learned.* The executing entities suggested the WB strengthen its support throughout implementation not through capacity building and trainings “only”, but also through the establishment of a dedicated support-unit that would facilitate compliance of operations and processes with WB rules (especially related to

⁴ See Box 5 in Annex 2 for more details.

procurement) and be in direct contact with the executing entities. This support-unit should be staffed with Colombian nationals with knowledge and expertise in both national and WB rules. Additionally, the operational trainings delivered by the WB should not be limited to the staff members specifically hired to help implement the project within the executing entities, but it should also be open to the GoC and executing entities' personnel in general.

Annex 1. Project Costs and Financing

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

Components	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
DISASTER RISK IDENTIFICATION	6.18	22.00	356%
RISK REDUCTION	102.46	82.00	19%
INSTITUTIONAL DEVELOPMENT	0.78	4.00	513%
RISK PREVENTION AND AWARENESS	0.17	0.70	418%
RISK FINANCING	150.29	0.90	6%
Total Baseline Cost	260.00	110.00	42%
Physical Contingencies	0.00	0.00	0.00
Price Contingencies	0.00	0.00	0.00
Total Project Costs	260.00	110.00	42%
Front-end fee PPF	0.00	0.00	.00
Front-end fee IBRD	0.00	0.00	.00
Total Financing Required	0.00	109.88	

(b) Financing

Source of Funds	Type of Cofinancing	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Borrower		0.00	0.00	0%
International Bank for Reconstruction and Development		260.00	110.00	42%

Annex 2. Outputs by Component

The table here below completes the description of project components and eligible disbursement categories, as approved in the PAD and as summarized in Section 1.5.

Component A: Disaster Risk Identification (US\$6.2 million)

This component aims to strengthen SNPAD's capacity for comprehensive action in two areas: (1) technical capacity for risk monitoring at the national level through the upgrading of outmoded hydrologic, seismic, and volcanic detection and forecasting systems, and (2) integrated national system for managing and sharing information on DRM. The two subcomponents are:

- Subcomponent A.1. [Category 1] Disaster Risk Information System (DRIS)*
- Subcomponent A.2. [Category 1] Improving Information Gathering*

Component B: Disaster Risk Reduction (US\$102.5 million)

This component aims to strengthen risk analysis for municipal and sector development plans, support ongoing disaster reduction investments, and provide TA for improving the effectiveness of local risk reduction measures. The project supports risk reduction at sector and subnational levels by making financing available for investment in risk reduction at local government level and for sector agencies focusing on lifeline infrastructure. In addition, the project aims to strengthen capacity to improve effectiveness of these investments through: (i) improved monitoring of the risk reduction investments; (ii) the promotion of comprehensive planning for risk reduction at local and sector levels; and (iii) TA programs aimed at local governments. Component B has three subcomponents:

- Subcomponent B.1. [Category 1] Risk Analysis for Municipal Development Plans*
- Subcomponent B.2. [Category 2] Investments in Disaster Risk Mitigation*
 - Subcomponent B.2a. Support of Local Disaster Mitigation Investments through the National Revenue Sharing Program*
 - Subcomponent B.2b. Support of Disaster Risk Reduction Investments in Lifeline Infrastructure*
- Subcomponent B.3. [Category 1] Strengthening Local Capacity for Risk Management*

Component C: Institutional Development (US\$0.8 million)

This component aims to strengthen SNPAD's capacity and to broaden its mandate to include risk reduction and risk transfer. It aims to strengthen its financial and institutional capacity to coordinate, monitor and evaluate a comprehensive disaster risk reduction program, while also supporting MAVDT's capability to manage the disaster vulnerability reduction program. Component C has two subcomponents:

- Subcomponent C.1. [Category 1] Strengthening of National Disaster Management System*
- Subcomponent C.2. [Category 1] Project Management*

Component D: Awareness and Preparedness (US\$0.2 million)

This component aims to support emergency preparedness activities, emergency and contingency planning, and programs to improve risk awareness. Activities carried out include education in disaster management and the preparation of emergency response plans. Component D has three subcomponents:

- Subcomponent D.1. [Category 1] Environmental Education for Risk Awareness*
- Subcomponent D.2. [Category 1] Emergency Preparedness*
- Subcomponent D.3. [Category 1] Emergency and Contingency Planning*

Component E: Risk Financing (US\$150.3 million)

The objective of this component is to promote and strengthen the use of risk financing instruments to reduce the financial vulnerability of the State. Natural disaster risks that cannot be totally eliminated are addressed by establishing a comprehensive strategy of risk retention/financing at State level. The program included a contingent loan facility in case of national emergency. Component E has two subcomponents:

- Subcomponent E.1. [Category 1] Development of Risk Financing Strategies*
- Subcomponent E.2. [Category 3] Disaster Emergency Assistance*

1. *A general account of overall achievements under each of the five components of the project is included in Section 3.2 of the ICR. This annex is not an exhaustive description of each of the outputs, but rather an extended analysis of those outputs under subcomponents of the project that have produced particularly relevant results and contributed to delivering project outcomes, even beyond what was initially expected. Outcome indicators as in the PAD have only partially captured the achievements of the project. Therefore, this annex will seek to further explore products or process results that have contributed in a special way to enhancing the institutional capacities for DRM in Colombia.*

COMPONENT A

2. *The outcome indicator for Component A sought to measure the degree of integration of databases from national agencies managing information relevant to DRM into the National Disaster Risk Information System (SIGPAD). By the end of the project, only IDEAM's database was successfully integrated into SIGPAD; this way, the project indicators showed poor results for Component A. Yet, the several re-categorizations that occurred during project implementation were critical to achieve outstanding results under Subcomponent A.2 (Improving Information Gathering) that were not captured by the M&E Framework. Thanks to the leadership of SGC, impact results of the project were particularly positive and relevant in improving the seismic and volcanologic knowledge by upgrading SGC's national networks.*

IMPROVED RISK KNOWLEDGE BY UPGRADING THE NATIONAL SEISMIC AND VOLCANOLOGICAL NETWORKS

3. **SGC (formerly INGEOMINAS)** is the Institute in charge of monitoring geophysical risks and the seismic and volcanological activity in the country. Starting in the 80s, Colombia has systematized the analysis of seismic and volcanologic parameters as a basis for hazard and risk mapping. SGC's networks include the National Seismological Network for seismic events, the National Accelerometers Network for strong motion earthquakes, and specific networks to monitor the activity of the most active volcanoes. Each of these networks has been upgraded through the project's investments, thus significantly improving SGC's capacity to identify and monitor risk at national level.

4. ***The National Seismological Network (RSNC: Red Sismológica Nacional de Colombia).*** The RSNC was established in 1994 with 15 satellite stations. Shortage of funds for maintenance and upgrading of this network contributed to a rapid decrease of the number of operational stations. By the late 90s, the coverage rate and SGC's capacity to identify, analyze and monitor seismic activity, were largely insufficient. The project contributed to fill the gaps SGC was facing, by financing investments to upgrade and upscale the RSNC. In 2002, the RSNC had 18 satellite short-period stations. By 2013, the RSNC had an installed capacity of 49 satellite stations: 14 short-period stations and 35 broadband stations. **This combination of both types of stations makes it possible today able to register all kinds and magnitudes of earthquakes, thus improving SGC seismic activity records and hazard analysis.** Figure 1 here below shows an increase of

the capacity to record seismic activity from 1993 to 2012. Moreover, the coverage rate has improved, and stations are being installed in difficult areas too (areas with difficult access). Figure 2 shows the situations in 2008 and 2013, comparing the coverage rates over the country. The project also contributed to upgrading communication systems (data acquisition and processing), and the stations are today all able to send real-time information to the Operations Center located in Bogotá.

Figure 1 – Increase in the seismicity recorded from 1993 to 2012.

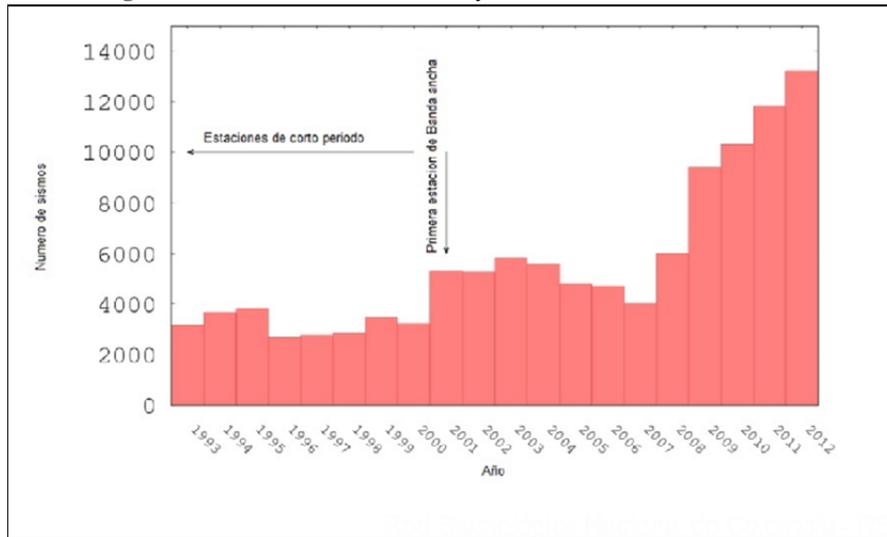
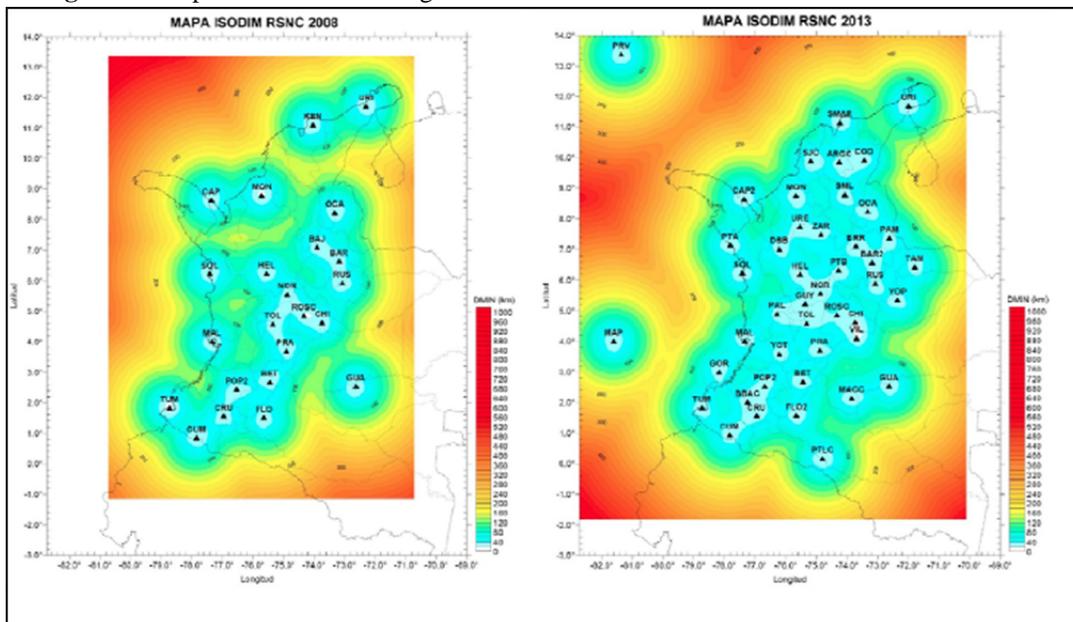


Figure 2 – Expansion of the coverage: influence area of installed stations in 2008 and in 2013

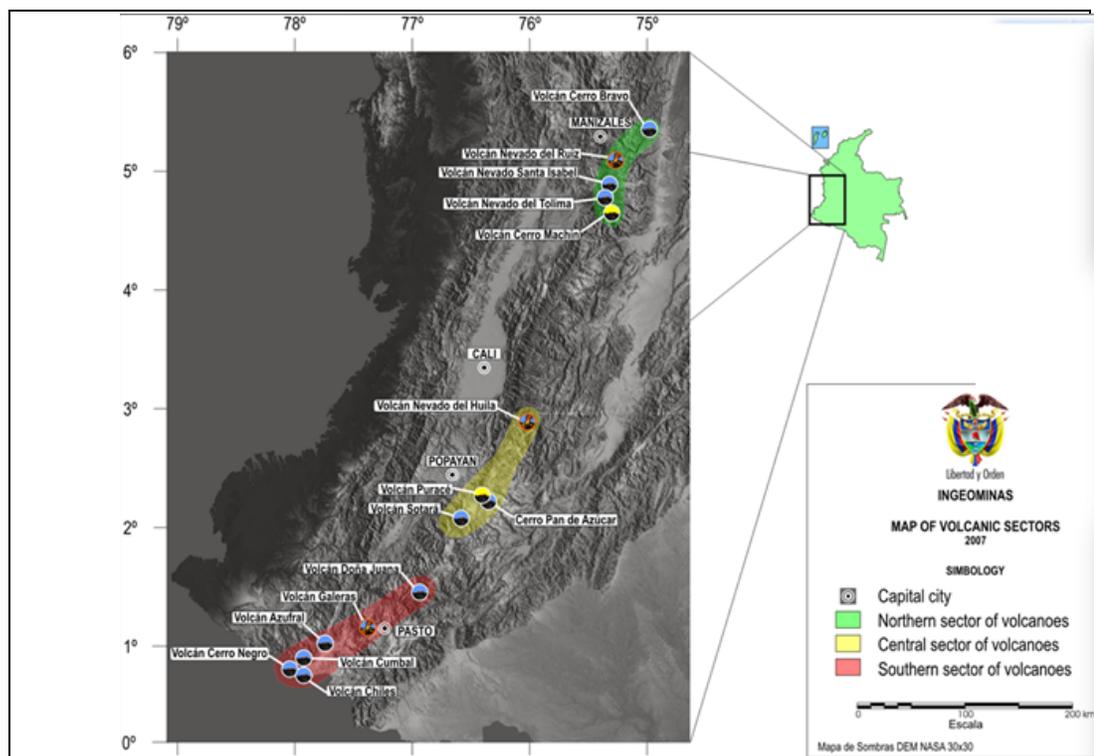


5. **The National Accelerometers Network (RNA: Red Nacional de Acelerógrafos).** In the 90s, Colombia started to develop its RNA network to be able to record strong motion data from earthquakes over the country. These data is fundamental to analyze seismic risk and inform building codes. Through the project, SGC was able to upgrade

the RNA, currently counting 100 accelerometers (27 of them with real-time recording systems and 73 for in-site data collection). The RNA provided data that were used to upgrade national seismic hazard maps and inform the new National Code for Seismic Building (2010).

6. **Volcanological Stations Network.** Colombia has 21 active volcanoes. Over the last two decades, despite the efforts made to equip SGC appropriately to be able to monitor those volcanoes, there was slow and insufficient progress: in 1986, the *Nevado del Ruiz* was the first volcano to be monitored; in 1990, four volcanoes were monitored in total; and in 2007, eight. By the end of the project in 2013 Colombia was able to monitor 14 volcanoes, monitored by a network of 503 stations (236 telemetric ones and 267 non-telemetric). The project financed equipment that enabled SGC to monitor data on 22 different parameters, while in 2006 only 13 variables were measured. Additional parameters currently recorded include: thermometer data, magnetometer data and gravimetric data that are sent by telemetric stations to three new volcanological observatories located in Manizales, Pasto and Popayán. **The coverage rate and sensing capacity of the network has significantly improved and SGC is today able to monitor the activity of the most active volcanoes in the country.** Figure 3 shows the coverage of the volcanological network in 2013.

Figure 3 – Colombia’s volcanological network in 2013



7. **Colombia is currently much better prepared to monitor volcanological risk and manage disaster situations, thanks to an enhanced early warning system to alert local communities, inform SNGRD and support national and subnational authorities in the decision-making process.** During project implementation, several crisis situations

occurred with the activities of volcanoes *Galeras* (2007-2011), *Nevado del Huila* (2007-2009), *Machín* (2007-present), *Sotará* (2012-present), *Cumbal* (2012-present) and *Nevado del Ruiz* again (2010-present). SGC consistently managed to collect and analyze the data and trigger early warning systems to prepare local communities. As a result, the number of victims from mudflows after seismic and volcanological events has decreased.

8. SGC's data have also informed land use planning and municipal DRM plans.

9. **Colombia has today one of the most complete seismic and volcanological networks in Latin American countries.**

IMPROVED RISK KNOWLEDGE BY UPGRADING HYDROMET DATA MANAGEMENT SYSTEMS

10. **IDEAM** is the Institute in charge of monitoring hydro-meteorological risks in the country. The national network of hydro-meteorological stations and the data management systems were upgraded with the project's investments, thus improving IDEAM's capacity to identify and monitor risk at the national level and enhance early-warning systems.

11. The project also supported risk mapping activities at the national level, to identify and map areas at risk of fire, landslides and floods. The scale for geomorphological maps was brought down to 1:100,000. Figures 4 and 5 show some work in progress in that field.

Figure 4 – Geomorphological mapping showing critical areas (risk of landslides, vulnerability) (1:100,000)

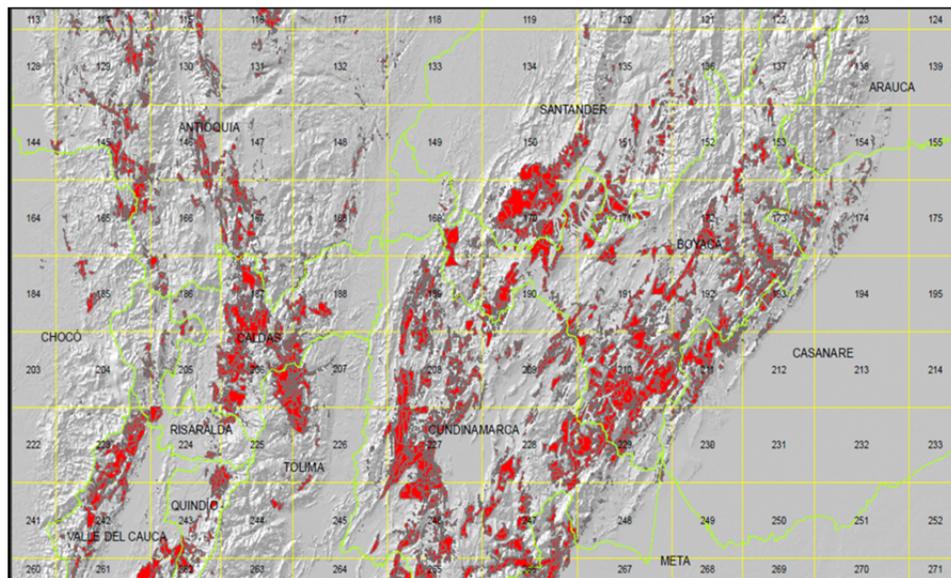
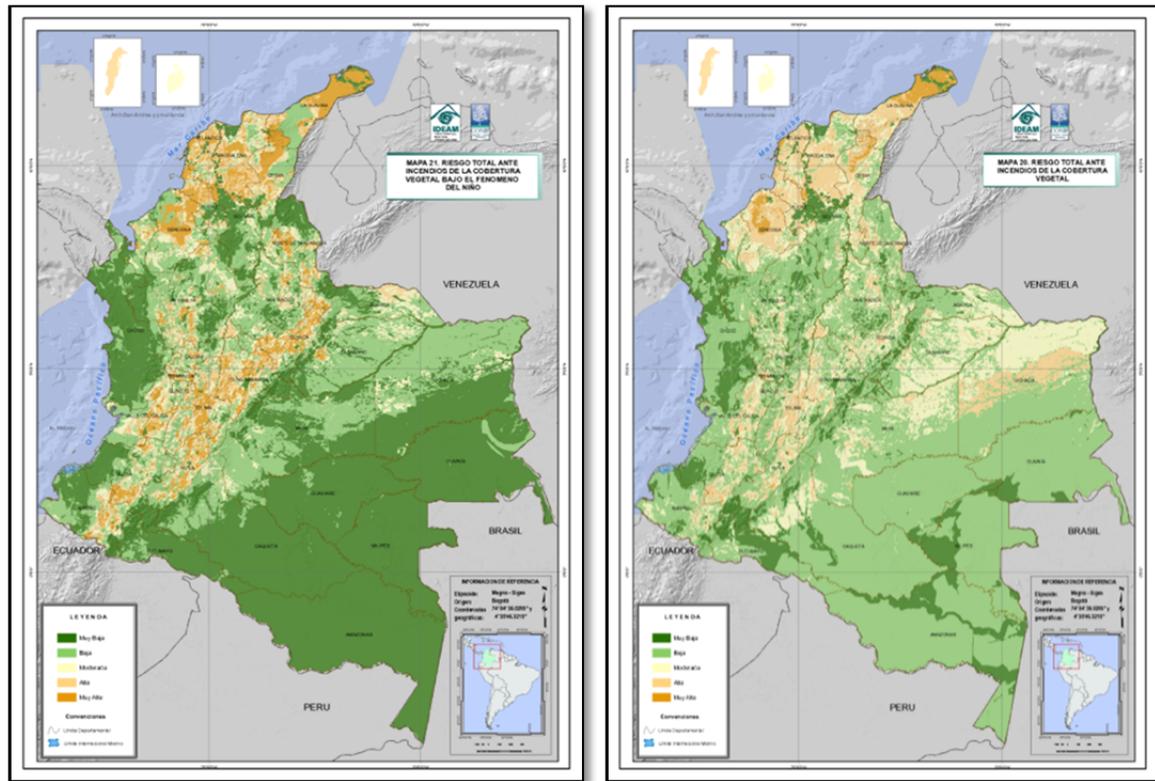


Figure 5 – National zoning map for fire-risk, based on 2009 data (1:500,000)



Fire-risk under normal temp. and rainfall conditions

Fire-risk under El Niño conditions

12. Colombia can today rely on information of higher resolution (both spatially and temporally), enhanced methodologies and data management software to manage disaster risk. However, the activities planned under the project were not entirely completed, and considering the increase of the risk of hydro-meteorological events, the need to continue strengthening IDEAM’s institutional capacities remains.

COMPONENT B

13. *Under Component B, the project sought to capitalize on the enhanced technical capacities of national institutions and provide training and technical assistance (TA) to subnational authorities in DRM to achieve vulnerability reduction at the local level. By the end of the project, 95% (1,044 municipalities) of Colombian municipalities have benefitted from capacity building in DRM. As captured by the project outcome indicators, the project target was delivered. Beyond the numbers, other relevant outputs and process outcomes were achieved and deserve some closer attention.*

ENHANCED CAPACITIES FOR DISASTER RISK REDUCTION AT SUBNATIONAL LEVEL

14. In Colombia, municipalities are the key institutions for territorial management and therefore considered to be part of the main actors in the risk management system. Mainstreaming DRM into municipal planning and investment decisions is one of the drivers to enhance the country’s capacity to reduce vulnerability. The working

assumption is that, if risk is managed through adequate planning at the local level, resources will be available and optimized so that investments can be made in a timely and appropriate way.

15. At the start of the project, land use planning in light of risk management was relatively new in Colombia and progress made to this regard at municipal level was uneven. Obstacles persist, such as a low level of awareness of risk scenarios, a lack of knowledge of hazards and vulnerabilities, a lack of coordination between land use, development and investment plans, and weak mechanisms to monitor and oversee the implementation of the territorial land use plans (POTs). Integration of DRM into local planning tools still is a challenge in Colombia, but significant process outcomes were achieved through the project. Box 1 here below provides further information about the baseline in DRM capacity at local level at the start of the project.

Box 1. Assessment of institutional capacities at municipal level to mainstream DRM in land use and development planning (at the start of project implementation)
Lack of disaster risk information and technical studies at appropriate scales.
Conceptual problems regarding the notions of hazard, vulnerability and risk.
Low technical capacity for the identification, evaluation and categorization of hazards in the territory.
Weak knowledge by local actors of the different methodological guidelines to assess and mainstream disaster risk into land use planning.
Low consistency between risk analysis at diagnostic phase and formulation/regulation phases of POT.
Lack of tools to guide DRM actions (knowledge, risk reduction, and disaster management) within development planning, policy design and investment decisions
Low articulation of entities at territorial, sectoral, national and local levels, impinging on the integration of risk management into zoning and land use planning.

16. In this context, under Component B, MVCT sought to support local and regional territorial entities in the integration of hazards and disaster risks into territorial planning processes, and make DRM factors relevant in decision-making. On the other hand, UNGRD sought to strengthen the capacities of the departmental and municipal levels to deliver their DRM mandates. MVCT delivered its support to municipalities through training, workshops, TA, pilot studies on hazards and risks in critical areas of the country, the development of action plans to integrate DRM into POTs (planned for 12 years), and the development of methodological guidelines⁵. UNGRD delivered its support to municipalities and departments for risk management at subnational level through training, workshops, TA, meetings with Local and Regional Committees of DRM, the development of risk management local plans and municipal emergency and contingency plans, the integration of DRM into the PDMs (planned for 4 years and serving as an input

⁵ “La Gestión de Riesgos, un tema de Ordenamiento Territorial. Ruta para la toma de decisiones (MAVDT, 2006)” and “Planes de Acción para la Incorporación de la Gestión del Riesgo en los POT” (MAVDT, 2006)

to the POTs), as well as the publication of methodological guidelines⁶. Box 2 here below shows the impact result of all these activities based on the project outcome indicators.

Box 2. Component B, Project impacts based on outcome indicators
<p>Expected outcome: Local and sector capacity for risk reduction improved.</p> <p>Target indicators proposed: At least 100% (1,098) of municipalities are educated, trained and aware of hazard risk reduction.</p> <p>Main outcomes: By August 31st 2013, a total of 1,044 municipalities have received assistance in risk management from MVCT + UNGRD, reaching a percentage of 95% of the goal.</p>

17. Beyond the project indicators, TA delivered other positive results at the municipal and departmental levels, including:

(a) The local authorities and populations realized the importance of integrating hazards and risk into planning processes. The project supported the development of knowledge on risk, including a better identification of the causes and consequences from natural and socio-natural *phenomena*. The society then became more and more aware of its own responsibility to mitigate the generation and accumulation of risk, and to bring together the efforts to address the different risk factors (general and specific), through a preventive and a corrective approach.

(b) Hazards and risk management components are included in the POTs. Action plans and/or context specific studies were developed as a result of the remarkable effort from MVCT to check on the status of municipalities' POTs with regard to the consideration of hazards and risk. A capacity assessment of local institutions on DRM was undertaken, allowing for a more effective and demand-driven support to be provided for the development of future POTs. The actions plans also served as a flexible tool for the municipalities to monitor and assess hazards and risk management components of their POTs. At the end of the project, municipalities had access to methodological guidelines on how to use the information on hazards and risks and integrate risk management in POTs and development plans.

(c) The project gave a dynamic vision of risk and hazard management together with land use, and project results can guide decision-makers in prioritizing investments for risk management in land use planning processes, linking those with other instruments such as municipal development plans. These are supposed to turn disaster management policy into practice, guiding the investments to execute mitigation actions. Furthermore, the project increased the

⁶ "Guía Municipal para la Gestión del Riesgo" (UNGRD, 2012); "Actualización de la Guía metodológica para la formulación de los PLECs" (UNGRD, 2010); and "Guía Metodológica: Plan Escolar para la Gestión del Riesgo" (UNGRD, 2010).

technical competences of the local officials in charge of conducting hazard assessments and of updating the information (exposure to risks, both for the communities and infrastructure).

(d) Municipalities can now reach out to the national and regional authorities for technical support on risk management and territorial planning.

COMPONENT C

18. *The outcomes expected under Component C were central to the impact and sustainability of the project. In 2012 a new Decree-Law (Ley 1523) established the regulatory framework for DRM and mandated the development of a National DRM Plan. The “General Component” of it was developed in 2013 (currently under revision), while its “Programmatic Component” is still under development. The formal targets of Component C were only partially achieved, but the institutional process and the visible shift in how Colombian national and subnational authorities and the civil society address risk today are notable and deserve some closer analysis.*

INSTITUTIONAL AND CONCEPTUAL DEVELOPMENT TOWARDS INTEGRATED DRM

19. Despite Colombia’s long history of developing institutional responses⁷ to the challenges that natural disasters pose to the development of the country, the new conceptual approaches to DRM often failed to permeate the Government practices. The operationalization of risk reduction policies, by-nature cross-cutting sectors and territories, demanded to overcome a long-standing “passive-reactive” approach to disaster management. Before the project, Colombia had no national policy on integrated DRM.

20. Since 1988, Colombia has had a National System for Disaster Prevention and Response (SNPAD) that has been considered as a model in Latin America. Although in recent years significant efforts had been made to review and update the SNPAD, at the start of the project the system was still inconsistent with new realities of the national context. What had initially led to the creation of the SNPAD were: economic and social impacts, loss and damage from natural disasters and the need to mobilize resources for recovery after the occurrence of extreme events. Further progress was made with the formulation of the National Plan for Disaster Prevention and Response (PNPAD) in 1998, introducing a broader conceptual approach going beyond recovery, but in practice, comprehensive interventions and mitigation of risk remained very limited. The need to articulate the SNPAD with other frameworks encompassing land use planning such as the National Environmental System (SINA) or the National Strategy for Adaptation to Climate Change were additional reasons for institutional reform. The need to revisit the SNPAD in light of evolution of DRM concepts and practice was finally felt and the GoC requested the assistance from the Bank to reinforce its national capacities for integrated DRM. Box 3 here below summarizes the institutional framework for DRM before the start of the Project.

⁷ A National System for Disaster Prevention and Response was developed in 1985, a National Plan for Disaster Prevention and Response was approved in 1999 and a first CONPES Document dates from 2001.

Box 3. Assessment of institutional capacities at national level for DRM in Colombia (at start of the Project)
The SNPAD regulatory framework had not been revised since 1989.
At national level, the institutional approach to DRM was mostly reactive and focused on protection and emergency management. There was limited coordination amongst different national and subnational institutions and functions were often duplicated.
Some progress had been made in integrating risk management into development planning (PNPAD and Development Plans). Yet, DRM commitments in the plans were rarely executed, nor were there effective indicators or end-goals established.
The former Directorate for Risk Management (current UNGRD) had multiple functions and large responsibilities, but it had limited leverage capacity over line-Ministries and subnational authorities and it operated mostly as an Advisory body.

21. Implementation of Component C has arguably delivered **the most important outcome of the Project**, with the development and approval of the **National Policy and a National System for DRM** (as established by *Ley 1523*, April 2012). In line with this new regulatory framework, UNGRD further sought to articulate the restructuring of the SNPAD, by adopting a more comprehensive approach to risk management, establishing new structures and functions for the different subnational levels, and ensuring a more explicit alignment with the Constitution of 1991, oriented towards sustainable development.

22. Between 2008 and 2010, **an institutional diagnosis of the SNPAD** was conducted to identify strengths and weaknesses, develop an organizational plan, and provide recommendations for **new areas responding to DRM dimensions**. In 2010, an initial proposal for a National Policy on DRM was drafted and the regulatory framework and management tools of the SNPAD were updated through the new *Ley 1523* that was enacted in 2012. **By 2013, a version of the National Plan for DRM** was ready, with a finalized **“General Component”** promoting the participation of multiple actors from local, regional, and national Governments, as well as from social sectors (currently under review). Box 4 here below outlines the main impact results under Component C, based on the project’s outcome indicators.

Box 4. Project impacts under Component C based on outcome indicators
Expected outcome: Institutional capacity for DRM strengthened
Outcome indicators proposed:
(i) National policy defining Government responsibility in disaster management and reconstruction
(ii) Preparation of two policy proposals by UNGDR, to update Law 46 of 1988 and Decree Law 919 of 1989.
(iii) Resettlement Policy Guidelines for Settlements in High Risk Zones to be issued
Main outcomes: By August 31 st 2013 the targets were mostly reached through:
✓ National Policy for DRM, as approved within Law 1523 of April 24, 2012
✓ National System for DRM, as approved within Law 1523 of April 24, 2012
✓ National Plan for DRM (“General Component”) developed and enacted through Decree 1974 of September 2013
✓ 80% progress in the formulation of Policy Guidelines for Settlements in Risk Zones

23. The project's most salient impact results in relation to the development and strengthening of the institutional framework for DRM are the following:

(a) A new institutional framework for DRM at national level with a modern and clear vision of risk management, that is integrated and multi-dimensional. The National Policy on DRM and the National Plan for DRM were developed based on a broader understanding of risk reduction and its multi-dimensions, rather than on the former vision of disaster or calamity response. This new approach facilitates the mainstreaming of DRM into land use and territorial planning and contributes to applying the principles of sustainable development.

(b) The notion of DRM has gained political stance, particularly since the episode of La Niña⁸, and is now integrated as a guiding principle into National Development Plans. DNP is consistently stressing the need for both a short and long term strategy to reduce the impacts of natural disasters on the population and the economy.

(c) The Government has made risk management as a State policy and seeks to overcome imbalances in the DRM System through the adjustment of the regulatory and institutional frameworks. A National Unit for DRM (UNGRD) was established, directly under the Presidency to manage this process.

(d) A National Fund for DRM has been established under the National Policy to encourage investments in DRM action and contribute to capacity development at territorial and sectoral levels. The former National Calamity Fund was reconstituted as a Fund for Risk Management to articulate and co-finance priority actions for DRM at different levels.

24. Despite the progress made under Component C, **UNGRD may still need some capacity building to fully take on its responsibilities as the lead institution for the national DRM System.** Emergency response remains a priority for UNGRD, while risk reduction and integrated approaches should be applied extensively. UNGDR would still need to gain political leverage and technical capacity to promote and fully deploy DRM approaches and be able to influence strategic policy and investment decisions at national, territorial, and sectoral levels.

⁸ Close to 5% of the national territory was flooded (IGAC, IDEAM, DANE, 2011). UNGRD estimated that 3.7 million people were affected and about 15,300 houses were destroyed. According to CEPAL-BID (2012), economic loss was as high as COP\$2.1 trillion (0.4% PIB-2010) and the total damage was estimated at COP\$11.2 trillion, or over US\$6.1 billion. Most damaged sectors were: housing (4%), infrastructure (38%), social services and public management (11%), and productive sectors (7%).

COMPONENT D

25. *Component D mainly focused on mechanisms to raise awareness and on piloting approaches to integrate DRM into environmental education at local level. The most significant outputs under this component were the design of a Diploma on Environmental and Risk Management that targeted public officials at municipal level, and the formulation of pilot projects at community and school level to promote the links between environmental education and management and DRM.*

26. **For the *Diploma*, MADS developed a methodology⁹ with technical guidelines and tools to active interact with and mobilize the community, and capitalize on indigenous knowledge and existing practice of environmental and risk management** in different contexts. This way, local communities had the opportunity to systematize knowledge and promote local exchange. At the same time, the approach sought to promote participation of local communities and the civil society in decision-making processes.

27. The *Diploma's curriculum* was developed around five thematic areas: (i) environmental education for integrated risk management; (ii) risk management and sustainable development at territorial level; (iii) water as an element of life and risk factor; (iv) evaluation, communication and risk management; (v) project management in the context of environmental risk management.

28. **Pilot projects for environmental risk management at local level were initially developed in the framework of “Institutional Education Projects” at school level.** Through those, specific interventions at the field level were promoted and, at the same time, ways of working and deeper reflections were triggered amongst the pedagogic community. The same dynamic was sought with the pilot initiatives for environmental education, through which communities, civil society organizations and local groups conceived and managed small projects at the local level to raise awareness and promote conflict resolution in areas relevant to environmental risk management.

29. **The engagement strategy was successful and more municipalities than initially planned were attracted by the project, with a wide participation of both municipal authorities and civil society groups.** In 2008, public officials from 8 municipalities in the Huila department benefited from the *Diploma*. In 2009, the training program was extended to Tolima where 11 municipalities joined. From 2010, about 20 municipalities each year were selected to participate. By 2013, more than 45 municipalities from Risaralda, Valle del Cauca, Magdalena and Bolívar benefited from the program. Adjustments of the *Diploma curriculum* were made to be tailored specifically to the local context and useful for future training. In 2013, municipalities from Caldas were selected to participate but the adequate budget had not been secured by

⁹ The full document (*Diseño y ejecución del Diplomado en Gestión Ambiental del Riego con aplicación piloto en 11 municipios del Sur del Huila en el marco del Componente D del Programa de Reducción de la Vulnerabilidad Fiscal del Estado ante Desastres Naturales (crédito BIRF 7293.CO)*), is available at: http://www.guadalupe-huila.gov.co/apc-aa-files/32653537373465383362633462353034/Diplomado_Gesti_n_del_riesgo.pdf

MADS (from the loan) that last year of project implementation. In conclusion, between 2008 and 2012, 68 trainings based on the *Diploma* were delivered (through the loan) and about 2,127 local decision-makers took part. Over 20 projects on environmental risk management have been supported by the project and over 200 different editions of the environmental risk management guidelines have been published, responding to local socio-economic and environmental contexts.

COMPONENT E

30. *After the cancellation of the Disaster Emergency Assistance, Component E mainly sought to develop a strategy to cover the residual risk of natural disasters and to reduce the fiscal vulnerability of the State. By the end of the project, the Government published the “Colombia Policy Strategy for Public Financial Management of Natural Disaster Risk”. This end-product implied the achievement of the project’s outcome target under Component E, but the process towards it delivered more outputs that are worth analyzing.*

DEVELOPMENT OF A RISK FINANCING STRATEGY FOR COLOMBIA

31. **The project sought to assist the Government in managing the fiscal vulnerability of the State through four main action lines:** (i) the establishment of a clear accountability framework defining the scope and modalities of state interventions in the occurrence of natural disasters; (ii) the development of risk transfer tools to engage with private insurance markets; (iii) the optimization of existing insurance programs for public assets in the country; and (iv) the development of a cost-effective financial strategy to reduce the residual risk of the State.

32. A first study on the insurance options for the State¹⁰ was commissioned and catalogued State property, buildings and public assets. The risk assessment exercise also involved the collection and analysis of data related to the probability of occurrence of natural disasters in order to establish the “Probable Maximum Losses”. The need for a collective approach to insuring public buildings was the main conclusion of the study. As part of the recommendations suggested, MHCP sought for TA for the design of a comprehensive strategy, including the lines of action defined within the project.

33. During project preparation, a series of studies funded by the Government of Japan made it possible for DNP to demonstrate the extent to which national development goals were compromised by the State’s fiscal vulnerability. The 2010-2014 National Development Plan (PND)¹¹ established that MHCP would support the management of fiscal risk resulting from natural disasters, within the broader context of macroeconomic stability and fiscal balance. Article 220 of the PND further established that MHCP would be in charge of designing a strategy to reduce the State’s fiscal vulnerability to natural disasters. In this context, MHCP sought external technical support.

¹⁰ “Implementación de mecanismos de aseguramiento de los inmuebles propiedad de la nación que permitan su protección financiera frente al riesgo catastrófico” (ERN, 2007).

¹¹ “Prosperity for All”, Law 1450 of 2011

34. In 2011, with the financial support from the Swiss State Secretariat for Economic Affairs (SECO) and GFDRR, the Bank facilitated TA to MHCP for the design and implementation of the national financial strategy. A specific program to reduce the financial vulnerability of the State to natural disasters was implemented and contributed to improving the State's financial capacity to respond in the aftermath of natural disasters, while protecting the long-term fiscal balance.

35. In 2012 and 2013, MHCP made significant progress in designing a comprehensive strategy for the financial management of disasters. The Ministry identified three priority policy areas for assessing, reducing, and managing fiscal risk from natural disasters: (i) identification and understanding of fiscal risk due to natural disasters; (ii) financial management of disaster risk, including the implementation of innovative financial instruments; and (iii) catastrophe risk insurance for public assets. As the Strategy was being developed, the GoC implemented parallel activities in these three areas to improve its financial capacity to respond to emergencies and to mitigate long-term fiscal impacts from disasters. With World Bank support, MHCP launched the "Colombia: Policy Strategy for Public Financial Management of Natural Disaster Risk" in December 2013. The document was presented in a national Forum jointly hosted by MHCP and UNGRD.

36. **The development of this financial risk management strategy and the activities implemented along the process, have contributed to enhancing the national capacities for DRM.** Furthermore, Colombia is currently developing risk mitigation and risk transfer tools (e.g.: Cat Swap for seismic risk) that will further contribute to reducing the fiscal vulnerability of the State and being financially better prepared in the occurrence of future natural disasters.

Box 5. CAPRA at a Glance

CAPRA is an information platform to enhance decision-making in risk management across various sectors. Through the application of probabilistic risk assessment principles to threats, CAPRA allows to measure and compare different types of risks, and to develop sector-specific applications for risk management. CAPRA is a joint project of the Central America Coordination Center for Natural Disaster Prevention, the United Nations International Strategy for Risk Reduction, and the World Bank in collaboration with the national authorities of Central America.

The Bank has been working with GFDRR/CAPRA to support the integration of probabilistic risk information into other policy-making processes. GFDRR grants supported the use of CAPRA in four different processes to assist decision-making: (1) the development of a seismic risk assessment in Pereira to inform education, health and housing portfolios, (2) the development of a risk assessment for the Galeras Volcano to inform the housing sector; (3) a technical workshop to develop institutional capacities in floods risk assessment of National Agencies, and (4) a technical workshop on seismic risk analysis for local agencies of the Pasto municipality. The joint effort has also been supporting the development of a methodology to take inventory of urban settlements in high risk areas, through the provision of TA to MVCT.

Annex 3. Economic and Financial Analysis

1. The cost-benefit methodology developed for this project was based on the following: “(i) assessment of annual losses of exposed public properties and infrastructure to arrive at expected damage loss figures from which the fiscal cost of projected natural disasters would be gauged; (ii) assessment of damage reduction achieved based on specific risk mitigation/prevention measures; and (iii) comparison of the cost of risk mitigation investments for the selected works” (cf. PAD).

2. These assessments were supposed to be conducted annually on select structural and nonstructural mitigation measures financed by the project. However, no assessment was carried out. Furthermore, most of the structural mitigation measures that could have been followed up and documented were cancelled during implementation (in particular, the US\$61 million Municipal Risk Mitigation Investments under Subcomponent B.2a), and the project was largely left with only nonstructural TA activities.

3. It is impossible to assess the remaining structural measures (i.e., the investments through ECOPETROL and INVIAS based on a cost-recognition approach) against damage reduction: there was no technical oversight to guide the investment decisions, and no reporting requirement from the corresponding executing entities. Nevertheless, based on (i) the data provided in the PAD suggesting that retrofitting a US\$100,000 building at a cost of US\$1,000 should reduce the “probable maximum loss” (from a natural adverse event) from US\$10,000 to US\$3,000 or in a more conservative way by 50 percent,¹² and (ii) the US\$72.2 million disbursed by INVIAS and ECOPETROL (for retrofitting works on *NSR-98-Group IV* “indispensable” classified buildings of the National Seismic Regulation)¹³, an estimated US\$361.0 million loss was avoided (“probable maximum loss” reduced from US\$722.0 million to US\$361.0 million).

4. Assessments on nonstructural measures could in principle be carried out. However, even though there is a database at the national level collecting damage reduction data and tracking investments in DRM, the lack of data and accurate information linking activity to damage reduction in this particular project render it an impossible feat. The PAD intended to consider two forms of nonstructural measures addressing risk mitigation: (a) enhancing disaster preparedness and early warning systems (to save lives), on which Components A and D were focusing; and (b) enhancing land use allocation/control and identification of hazard prone areas and limits on their use and incentives. The associated investments amounted to a total of US\$32.5 million: US\$22.7 million for (a) (amounts of Components A and D) and US\$9.8 million for (b) (amount of Component B minus the US\$72.2 million of INVIAS and ECOPETROL). Based on the Benefits-to-Investment-Ratio of 25 provided in the PAD, characterizing the effectiveness of Land Use Plans when they are used to “reduce growth rate by half”

¹² The more detailed reference given in the PAD (in its Annex 9) is that retrofitting buildings at costs running from 1.8 to 3.4 percent of total building value for residential buildings and from 2.0 to 3.8 percent of total building value for commercial buildings should reduce “probable maximum loss” (from a natural adverse event) by 50 percent.

¹³ Information from *Econometría*'s report.

(compared to a ratio of 0 when they are used to “do nothing”), it can be assumed that the US\$9.8 million that were spent for (b) will give the beneficiary municipalities the possibility to reduce by 25 times the potential damages they would bear by not being aware of the stakes related to land use and natural disaster risk and doing nothing.

5. In practice, conducting a proper cost benefit analysis to assess a mitigation activity’s expected net benefits (discounted future benefits less discounted costs) proves difficult. A few results found in the literature help put the efficiency of the investments made under the project in perspective. A study that applied cost benefit analysis methodologies to a statistical sample of approximately 5,500 mitigation grants from the U.S. Federal Emergency Management Agency (FEMA) for earthquake, flood and wind hazards shows that the overall benefit-cost ratio for these grants was about 4 to 1. The ratio, however, varied from 1.5 for earthquake mitigation to 5.1 for flood mitigation.¹⁴ Other analyses focusing on flood and drought hazards in South Asia show that return rates of mitigation investments are particularly robust for lower-cost, local interventions that reduce risks associated with high frequency but low magnitude events,¹⁵ and that should be a driver for the development and investment plans at the local level. Finally, the investment planning process in Colombia includes by law an economic and cost-benefit analysis for any project requiring public funding. This assessment is part of an overall evaluation ensuring the viability of the proposed project based on technical, economic, environmental and social grounds. This information was nevertheless never collected from the Borrower during project implementation and neither was it possible to obtain it during/after the ICR mission.

6. Aside from these assessments and information, it is possible to justify:

(i) The economic rationale of the project and show the causal chain that linked project objectives/activities and ultimate outcomes it influenced, as described throughout Section 3.5 of the main text. The numbers in the following Table, calculated from the “*Análisis de la gestión del riesgo de desastres en Colombia*” (2012)¹⁶, also show the shift brought by the project, with significant increases in the DRM investments: total investments in DRM at the national level were multiplied by 3.8 for the period 2006-2010 (when the project started until the year of the last set of data found in that report) compared with the preceding period 2001-2005, and the same observation can be made for investments per area (governance, knowledge and information, education, reduction, disaster management) or per entity (e.g.: IDEAM, SGC, INVIAS and MAVDT). (Note that these calculations were possible thanks to the database developed and maintained by DNP with the tracking and reporting of DRM investments per year.)

¹⁴ Adam Rose et al. “Benefit Cost Analysis of FEMA Hazard Mitigation Grants”. December 2006.

¹⁵ Marcus Moench and the Risk to Resilience Study Team. “Understanding the Costs and Benefits of Disaster Risk Reduction under Changing Climatic Conditions.” Working Paper 9, October 2008.

¹⁶ This refers to an analytical work financed by WB/GFDRR: “*Análisis de la gestión del riesgo de desastres en Colombia; Un aporte para la construcción de políticas públicas. BM-Colombia, GFDRR*” (2012).

		Cumulated investments from 2001 to 2005 (in US\$)	Cumulated investments from 2006 to 2010 (in US\$)	Increase (multiplying effect)
Total investments in DRM at the national level		460,827,530	1,733,489,220	3.8
Total investments in DRM at the national level by priority area	Governance	189,631	2,047,282	10.8
	Knowledge & Information	15,910,610	44,170,745	2.8
	Education	87,445	603,056	6.9
	Reduction	96,991,853	421,908,441	4.3
	Disaster Management	347,647,990	1,264,759,697	3.6
Examples of investments in Knowledge & Information per entity	IDEAM	144,715	11,088,530	76.6
	INGEOMINAS (SGC)	1,342,618	25,576,029	19.0
	INVIAS	33,138	1,227,503	37.0
	MAVDT	290,164	631,079	2.2

(ii) The public rationale, given the Government’s fiscal constraints at Entry and need for “liquidity funds”, and the key role the Government had and has to play in the development and mainstreaming of the DRM agenda;

(iii) The added-value from the World Bank, already engaged in DRM through the Country Partnership Strategy and multiple past and ongoing operations, and bringing in an innovative and long term approach through a 10-year program spanning a wide range of structural and nonstructural activities.

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Anna Wellenstein	Sector Leader	LCSFP	
Fabio Arjona	Consultant	LCSUW	
Daniel J. Boyce	Sr. Financial Mgmt. Specialist	LCOAA	
Eduardo Brito	Sr. Counsel	LEGLA	
Elena Correa	Sr. Social Scientist	LCSEO	
Enrique Pantoja	Peer Reviewer	SACBA	
Eugene Gurenko	Sr. Insurance Specialist	OPD	
Fabio Arjona	Environmental Specialist	LCSUW	
Francis Ghesquiere	Sr. Urban Specialist	LCSFU	
Jeannette Estupiñán	Financial Mgmt. Specialist	LCOAA	
John Pollner	Lead Financial Sector Specialist	LCSFF	
José C. Joaquín Toro L.	Disaster Mgmt. Specialist	LCSFU	
José M. Martínez	Procurement Specialist	LCSEO	
Joseph Formoso	Sr. Financial Officer	LOAG3	
Juan D. Quintero	Sr. Environmental Specialist	LCSN	
Margaret Arnold	Peer Reviewer	TUCHM	
Osmar E. Velasco L.	Consultant	LCSUW	
Rosa Elena Bellido	Language Program Assistant	LCSO	
Luz Meza-Bartrina	Sr. Counsel	LEGLA	
Tova Solo	Sr. Disaster Mgmt. Specialist	LCSFU	
Supervision/ICR			
Alden Rivera Montes	Consultant	LCSUW	
Ana Campos García	Sr. Disaster Risk Mgmt. Specialist	LCSDU	
Ana F. Daza	Language Program Assistant	LCSDU	
Ana María Torres	Consultant	LCSUW	
Cecilia María Balchún	Consultant	CTDRM - HIS	
Carolina Díaz Giraldo	Consultant	LCSDU	
Celso Saúl Alfaro A.	Consultant	LCSUW	
Daniel J. Boyce	Manager, Financial Management	LCSFM	
Diana M. Rubiano V.	Consultant	LCSDU	
Diomedes Berroa	Lead Specialist	OPSOR	
Eric Dickson	Sr. Urban Specialist	LCSDU	
Fernando Ramírez C.	Sr. Disaster Risk Mgmt. Specialist	LCSDU	
Francis Ghesquiere	Manager	GFDRR	
Jeannette Estupiñán	Sr. Financial Mgmt. Specialist	LCSFM	
José C. Joaquín Toro L.	Sr. Disaster Risk Mgmt. Specialist	ECSUW	
José M. Martínez	Sr. Procurement Specialist	ECO2	
Joseph Paul Formoso	Sr. Finance Officer	CTRLA	
Manuel A. Vargas M.	Lead Financial Mgmt. Specialist	MNAFM	
Maricarmen Esquivel	Consultant	LCSUW	

Michel Matera	Sr. Disaster Risk Mgmt. Specialist	LCSDU	
Natalia Cecilia Bavio	Finance Analyst	CTRLN	
Niels B. Holm-Nielsen	Lead Disaster Risk Mgmt. Specialist	LCSDU	
Osmar E. Velasco L.	Consultant	LCSUW	
Patricia Kelly	Program Assistant	FFSFT	
Rosa Elena Bellido	Language Program Assistant	LCSSO	
Rosemary Bendeck	Consultant	LCSUW	
Santiago René Torres	Procurement Specialist	LCSPT	
Tova Solo	Sr. Disaster Mgmt. Specialist	LCSUW	
Ulrich Cedric Myboto	Consultant	LCSUW	

(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	USD Thousands (including travel and consultant costs)
Lending		
FY03	9.56	40.91
FY04	36.43	251.00
FY05	42.82	177.24
Total:	88.91	469.15
Supervision/ICR		
FY05	3.28	11.54
FY06	26.65	152.82
FY07	21.52	125.36
FY08	19.16	111.91
FY09	11.53	121.06
FY10	15.98	94.94
FY11	14.87	114.23
FY12	19.90	134.74
FY13	15.83	102.61
FY14	12.87	64.37
Total:	161.59	1,033.58

Annex 5. Beneficiary Survey Results

N/A

Annex 6. Stakeholder Workshop Report and Results

1. The GoC commissioned the consulting firm *Econometría* to undertake an external evaluation of the project. The ICR mission was coordinated so that the initial findings from that evaluation could be shared with the Bank and the final report sent shortly after (early December 2013). The final report was transmitted to the Bank on January 14, 2014. There was no formal workshop held by the Stakeholder but a videoconference was organized on February 11 to share the findings from *Econometría* with the Bank and participation from most executing entities. They are summarized in this Annex.

2. *Main results from the project, contributing to the expected outcome:*¹⁷

- Approval of *Ley 1523/2012*;
- Establishment of the National Unit for DRM (UNGRD);
- Strengthening of the risk monitoring and early warning systems of SGC and IDEAM;
- Progressive transformation for disaster management at local level;
- PAD's expected outcomes and targets accomplished and overcome.

3. *Main conclusions from the institutional analysis:*¹⁸

- The institutional capacities of the National System for DRM (SNGRD) were strengthened between 2006 and 2013. At the national level, risk identification was improved, and at the local level DRM was mainstreamed in planning processes;
- Despite an undeniable paradigm shift in DRM, there is still a long way to go, especially at territorial level, where risk studies that integrate information from IGAC, IDEAM, INVIAS, SGC, CARs, and regional and municipal authorities need to be developed;
- Some executing entities missed guidance, direction and management support during implementation, which led to a budget planning below the needs of the program;
- Other executing entities planned to execute more resources than what they were used to but failed to strengthen their in-house capacity for implementation;
- In several occasions programmatic commitments were not met and resources were only partially executed;
- In general, institutions resisted change, in particular with respect to the application of rules and procedures of the Multilateral Bank in areas such as procurement. This led to implementation delays and the need for training schemes;
- In some cases, the executing entities were not equipped for the project implementation. The necessary staff with the necessary skills were not available;
- Other than the PIU, the need for coordination mechanisms that would articulate the different project components was not addressed during project design. The Technical Reference Group conceived to this end, was never established.

¹⁷ Extracts from the presentation given by *Econometría*.

¹⁸ Extracts from the presentation given by *Econometría*.

Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR

COMMENTS ON THE DRAFT ICR

Provision of details on project results

1. *IDEAM* insisted on having the specific progress made on early warning and flooding scenarios reported in the ICR, as well as the overall progress made in terms of institutional capacities strengthening within the Institute.
2. *MADS* insisted on having the efforts made by the Ministry to strengthen the CARs and their DRM and planning capacities, reported in the ICR. *MADS* wanted to make sure that: the numbers associated with the results under Component D add up (number of benefiting municipalities); the ICR well describes the *Diploma Curriculum* developed by the Ministry; the ICR also reports the extension of training and awareness-raising activities to 22 additional municipalities (thanks to materials developed under the project but through another source of funding). *MADS* emphasized their commitment to the long-term objectives of the project. They have mainstreamed DRM in their macro-projects and sustainability strategies, aiming at strengthening the sector.

Factors affecting implementation

3. *DNP* addressed the difficulties experienced by the executing entities in complying with the Bank operational procedures (related to procurement in particular) and the need for each of them to take on the responsibilities such loan and associated project entail. Despite the availability of resources offered by the loan, the fiscal margin over the last few years, and their initial commitment to the project, some executing entities failed to plan and allocate adequate budgets to implement their parts of project activities to completion.
4. *SGC* pointed at the frequent “administrative bottlenecks” technical staff had to deal with (and resolve) in addition to their own workload in order to guarantee the timely implementation of project activities. *SCG* and several other executing entities addressed the difficulty of meeting both the national procurement requirements for public expenditure (to be audited by the national *Contraloría General de la República*) and the WB rules. Furthermore, the high turnover of staff within the institutions (particularly managing all the legal and administrative aspects, rather than the technical ones) over the lifetime of the project did have an impact on its implementation. It is also likely to have a negative impact on the sustainability of the results achieved.
5. *MVCT* pointed at the difficulty of finding the right profile for taking on the technical coordination, on a day-to-day basis, of such a complex and multifaceted operation. According to *MVCT*, before an executing entity can take on the responsibility of managing any future WB operation, its institutional capacities should be strengthened. During project implementation, it was challenging for *IDEAM* and *SCG* for instance to form and keep a team of dedicated staff able to manage and follow up project activities.

Inputs to lessons learned

6. ***DNP's specific comments.*** (i) “La Niña” phenomena strengthened the political commitment at the national level to mainstream DRM into development plans (e.g.: through POMCA). Yet, the application of risk mitigation measures can increase the investment cost by up to 80 percent: therefore, special funds associated with DRM still need to be mobilized. (ii) Both the GoC and the executing entities should undertake an institutional assessment of their needs and capacities before they embark on this kind of operations.

7. ***SGC's specific comments.*** (i) National institutions should undertake an analysis of opportunities and implications brought by such large operations funded by Multilateral Banks. They should embark on the implementation of the project only if the objectives contribute to the institutional goals and priorities. (ii) How could the Bank rules and procedures better accommodate the national procurement requirements? The proposed answer from SGC is to have a dedicated “support-unit” staffed with national procurement experts familiar with both the national rules and the WB procedures. This unit would provide assistance both ways, “translating” WB and national procurement rules both ways. This would free up the technical agencies from the administrative/managerial workload they experienced throughout the project. Such a unit would also contribute to ensuring business continuity as it would be a central unit, with fewer chances of staff turnover than within all the national institutions combined. (iii) The high staff turnover observed during the lifetime of the project within the national institutions showed the limitations of the “capacity building strategy” applied by the Bank.

8. ***MVCT's specific comments.*** (i) MVCT concurs with the “support-unit” concept: it would directly depend on the WB with the exclusive purpose of facilitating the operations during implementation, including resorbing operational bottlenecks (especially linked to procurement issues). (ii) MVCT expressed their concern related to delays in Bank’s responses that would delay the procurement processes and compromise the GoC’s budget allocations following an annual plan (*vigencia*). Despite the constant availability and diligence of the Bank’s task team, this occasionally happened, and the idea of having the Task Team Leader backed up by another person entitled to make decisions equally (e.g.: provide No-objections) was raised. (iii) MVCT insisted on the fundamental commitment from the executing entities to timely deliver the project, ensure the quality of supervision and performance of in-house staff, including guaranteeing the availability of a procurement specialist(s). MVCT expressed a request to open up the capacity building activities (especially for procurement) to in-house staff in addition to “project staff”.

VALIDATION OF RATINGS PROPOSED IN THE ICR

9. All ratings were validated by the GoC and the executing entities. The comments below were collected directly from the Workshop participants, who were divided in two groups (*Grupo 1* and *Grupo 2*) and asked to discuss the ratings and summarize their discussions in a chart provided upfront. Their comments appear in *italic* below.

Rating #1. CALIFICACIÓN SOBRE CUMPLIMIENTO DE OBJETIVOS

Definición: La medida en que los objetivos más relevantes de la operación fueron alcanzados de manera eficiente.

Criterios establecidos: Relevancia de los objetivos, Cumplimiento y Eficiencia

Gradiente de calificación:

Altamente satisfactorio	No hubo deficiencias en la consecución de los objetivos de la operación, ni en su eficacia o relevancia.
Satisfactorio	Hubo deficiencias menores
Moderadamente satisfactorio	Hubo deficiencias moderadas
Moderadamente insatisfactorio	Hubo deficiencias significativas
Insatisfactorio	Hubo grandes deficiencias

Calificación propuesta en el ICR: **SATISFACTORIO** (justificaciones en las p 9-15 del ICR)

El GoC/las EE están de acuerdo con la calificación propuesta? *SI*

Por qué motivos? (en función de criterios establecidos).

GRUPO 1:

Los participantes manifiestan estar de acuerdo con la calificación de SATISFACTORIO, dada por el Banco Mundial, teniendo en cuenta que hubo deficiencias menores, que no impactaron en el cumplimiento de objetivos del proyecto, por parte de las Entidades Ejecutoras (EE). Resaltando que en la posibilidad de una nueva fase, se debe tener en cuenta las falencias identificadas para tomar los correctivos.

GRUPO 2:

Desde el SGC se considera que los logros del proyecto evidencian un cumplimiento en el objetivo general, a pesar de la deficiencia que se tuvo que sortear con no tener unos indicadores que permitieran evaluar de manera más pertinente. Si se hubieran establecido unos indicadores para cada objetivo y para cada entidad se hubiese podido evidenciar mejor los resultados.

Se aclara que los objetivos, algunos con indicador y otros sin indicador, dejaron entrever un grado de cumplimiento asociado a los “efectos colaterales”. En algunos casos el indicador sí estaba claramente definido pero no se lograron resultados altamente satisfactorios.

El hecho de que las metas no se hubiesen cumplido totalmente, justifica que la calificación sea SATISFACTORIO, y que las deficiencias menores se vean reflejadas en el no cumplimiento del 100% de las metas.

Rating #2. CALIFICACIÓN SOBRE SOSTENIBILIDAD DE RESULTADOS

Definición: Se define la sostenibilidad en función de los riesgos existentes (en el momento de la evaluación) que puedan comprometer el mantenimiento de los resultados del proyecto

Criterios establecidos: los riesgos pueden ser de índole: Técnica; Financiera; Económica; Socio- política; Medioambiental; Gubernamental/Institucional; Exposición a desastres.

Gradiente de calificación, el riesgo puede ser considerado como:

- Nulo o despreciable
- Moderado
- Significativo
- Alto

Calificación propuesta en el ICR: **MODERADO** (justificaciones en las p 15-16 del ICR)

El GoC/las EE están de acuerdo con la calificación propuesta? *SI*

Por qué motivos? (en función de los criterios establecidos)

GRUPO 1:

Los participantes concluyen estar de acuerdo con la calificación de Moderada.

GRUPO 2:

- UNGRD: se da continuidad a los proyectos y se incorporan a los planes de acción. El proceso de reestructuración de la entidad hace que desde sus directrices misionales se pueda dar un direccionamiento a los proyectos. No obstante durante el proceso de reestructuración (de SNPAD a UNGRD) de la entidad se descapitalizó el cuerpo técnico debido a que la mayoría equipo de proyecto dependía en gran medida de consultores que no renovaron sus contratos.

- INVIAS: Es incierta la continuidad, se han creado áreas y grupos específicos para la gestión del riesgo que antes no existían, pero depende del interés de la dirección del sector.

- MHCP: han acumulado experiencia con este crédito. Se requiere que exista un acompañamiento por parte de la institución para que la experiencia lograda no se pierda y pueda tener continuidad. La sugerencia es que desde el momento en que se esté negociando el crédito, todas las EE participen en la negociación para saber qué medidas se deben tomar. La participación del DNP es imprescindible.

- *IDEAM: considera que estos proyectos conllevan a repensar las estructuras de cada entidad: tema de escalas, demandas de las regiones (evidenciadas por los resultados del proyecto y las expectativas creadas).*

- *SGC: los requerimientos y demandas en el área de conocimiento del riesgo (escalas y resoluciones para el uso de la información, etc.) deberán obtener respuesta desde direccionamiento metodológico del nivel nacional, quien determina qué se hace y cómo se hace. Las instituciones no pueden hacer todo, las necesidades son diferenciadas (Ej.: los enfoques de los consultores vs las necesidades de la población local). En ese sentido es importante que los resultados alcanzados se capitalicen para las instituciones y entidades.*

- *MVCT: todas las entidades hemos logrado una concientización con relación a la gestión del riesgo, lo que imprime sostenibilidad resultados obtenidos sean pensados de aquí en adelante y esto asegura su sostenibilidad.*

Rating #3. CALIFICACIÓN SOBRE EL DESEMPEÑO DEL BANCO MUNDIAL

Definición: La medida en que los servicios ofrecidos por el Banco Mundial aseguraron la calidad en el diseño de la operación y apoyaron la ejecución efectiva a través de una supervisión adecuada para el avance hacia los objetivos del proyecto.

Criterios establecidos:

- Calidad de servicios en la fase de diseño: identificación, preparación y formulación del proyecto

- Calidad de servicios en la fase de supervisión: la identificación proactiva de oportunidades y resolución de amenazas al proyecto

Gradiente de calificación:

Altamente satisfactorio	No hubo deficiencias en la calidad de los servicios prestados (diseño/ supervisión)
Satisfactorio	Hubo deficiencias menores
Moderadamente satisfactorio	Hubo deficiencias moderadas
Moderadamente insatisfactorio	Hubo deficiencias significativas
Insatisfactorio	Hubo grandes deficiencias

Calificación propuesta en el ICR:

Diseño: **MODERADAMENTE SATISFACTORIO** (justificación en p16 del ICR)

Supervisión: **MODERADAMENTE SATISFACTORIO** (p17 del ICR)

Global: **MODERADAMENTE SATISFACTORIO** (p17 ICR)

El GoC/las EE están de acuerdo con la calificación propuesta?

Diseño: *SI*

Supervisión: *SI*

Global: *SI*

Por qué motivos? (en función de criterios establecidos)

GRUPO 1:

Con relación a la calificación se advierte que la responsabilidad del diseño del proyecto era recaía sobre del Gobierno Nacional. El Banco Mundial debe profundizar aún más en el apoyo técnico a las entidades ejecutoras. El grupo está de acuerdo con la calificación de “moderadamente satisfactorio”.

GRUPO 2:

- Desde el proyecto hubo una apuesta importante en colocar a diferentes entidades ejecutoras a trabajar para un objetivo común. Desde esa perspectiva, y a pesar de las falencias de diseño y planificación, se alcanzaron resultados y las instituciones se pusieron en marcha al servicio del proyecto.

- Frente al tema de capacitaciones que haga el BM es importante que dichas capacitaciones sobre normas BM se socialicen de manera más amplia para que no quede solo en unas cuantas personas. El riesgo siempre es que algunas capacitaciones se pierden si quien las recibe no continúa en las entidades. El compromiso que debería establecerse es que quien reciba capacitaciones las replique al interior de las entidades.

Rating #4. CALIFICACIÓN SOBRE EL DESEMPEÑO DEL PRESTATARIO

Definición: La medida en que el prestatario (incluyendo el Gobierno así como las Entidades Ejecutoras) han asegurado la calidad en la preparación y ejecución y han cumplido con los acuerdos convenidos para la consecución de los objetivos del proyecto.

Criterios establecidos: El desempeño del prestatario se califica evaluando dos dimensiones:

-El desempeño del Gobierno (central y/o local según aplique)

-El desempeño de las EE

Los criterios relevantes incluyen: la identificación de oportunidades en el diseño y mecanismos de resolución de amenazas y la promoción de medidas de sostenibilidad.

Gradiente de calificación:

Altamente satisfactorio	No hubo deficiencias en el desempeño del GoC/EE
Satisfactorio	Hubo deficiencias menores
Moderadamente satisfactorio	Hubo deficiencias moderadas
Moderadamente insatisfactorio	Hubo deficiencias significativas
Insatisfactorio	Hubo grandes deficiencias

Calificación propuesta en el ICR:

Gobierno: **MODERADAMENTE SATISFACTORIO** (justificación en p17 del ICR)

Entidades Ejecutoras: **MODERADAMENTE SATISFACTORIO** (p18 del ICR)

Global: **MODERADAMENTE SATISFACTORIO** (p18 del ICR)

El GoC/las EE están de acuerdo con la calificación propuesta?

Gobierno: *SI*

Entidades Ejecutoras: *SI*

Global: *SI*

GRUPO 1:

Los participantes coinciden en ratificar la calificación global de Moderadamente satisfactorio, resaltando el apoyo dado por el Gobierno Nacional y el Congreso de la República (Expedición de la ley 1523 de 2012) y los gobiernos territoriales. Destacan la necesidad de mejorar la parte gerencial y de coordinación al interior de las instituciones.

GRUPO 2:

- Según MHCP, quien debe revisar la ejecución del proyecto es DNP. MHCP se hace responsable del crédito, pero la ejecución debe ser seguida por el DNP. MHCP cumplía el papel de administradora del crédito, y además cumplía con otra responsabilidad: la ejecución de una componente del proyecto (la relacionada con la estrategia financiera) cuyo porcentaje era menor en relación con el total del crédito.

- MVCT: el ministerio necesita un grupo grande de consultores para la capacitación y asistencia técnica a los municipios. El problema se presenta al justificar esto ante MHCP y ante DNP en términos de contratación de personal externo. Sin embargo, el fortalecimiento institucional depende de la contratación de consultores. Los dos grandes temas que aborda el ministerio tienen implicaciones políticas y sociales: el tema de vivienda y el tema de agua potable y saneamiento. Desde la perspectiva del DNP y MHCP, en la programación de los recursos para los techos presupuestales se prioriza la inversión en subsidios de vivienda. La discusión presupuestal se debe dar en presencia de los técnicos para que la justificación de la contratación de consultores tenga el peso y la validez para la asignación de los recursos.

Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders

N/A

Annex 9. List of Supporting Documents

- *Análisis de la gestión del riesgo de desastres en Colombia; Un aporte para la construcción de políticas públicas.* BM-Colombia, GFDRR. (2012).
- *Evaluación institucional y de resultados del Programa de reducción de la vulnerabilidad fiscal del Estado frente a desastres naturales (APL-1); Informe final.* Econometría Consultores, MVCT. (Diciembre de 2013).
- *Evaluación del crédito BIRF 7293-CO proyecto “Actualización instrumental del Sistema Sismológico y Vulcanológico Nacional”.* Servicio Geológico de Colombia (SGC, 2013).
- *Valoración de daños y pérdidas - Ola invernal en Colombia 2010-2011.* CEPAL, BID, DNP (2012).
- *Áreas afectadas por inundaciones 2010-2011. Reporte final.* IGAC, IDEAM, DANE (2011).
- *Retención y transferencia del riesgo sísmico en Colombia. Evaluación preliminar de una posible estrategia financiera y del mercado potencial.* Universidad de los Andes- Centro de Estudios sobre Desastres y Riesgos (CEDERI), BM, DNP (2002).
- *Estrategia Financiera para disminuir la vulnerabilidad del Estado ante la ocurrencia de un desastre natural.* Subdirección de Riesgo, Dirección General de Crédito Público y Tesoro Nacional, MHCP (2012).
- *La Gestión de Riesgos, un tema de Ordenamiento Territorial. Ruta para la toma de decisiones* (MAVDT, 2006); *Planes de Acción para la Incorporación de la Gestión del Riesgo en los POT* (MAVDT, 2006).
- *Guía Municipal para la Gestión del Riesgo* (UNGRD, 2012); *Actualización de la Guía metodológica para la formulación de los PLECs* (UNGRD, 2010); and *Guía Metodológica: Plan Escolar para la Gestión del Riesgo* (UNGRD, 2010).
- Prosperity for All, Law 1450 of 2011
- *Implementación de mecanismos de aseguramiento de los inmuebles propiedad de la nación que permitan su protección financiera frente al riesgo catastrófico* (ERN, 2007).
- Marcus Moench and the Risk to Resilience Study Team. “Understanding the Costs and Benefits of Disaster Risk Reduction under Changing Climatic Conditions.” Working Paper 9, October 2008.
- Adam Rose et al. “Benefit Cost Analysis of FEMA Hazard Mitigation Grants”. December 2006.
- 2011 and 2013 Global Assessment Reports on Disaster Risk Reduction.
- Natural Disasters Insurance Facility for Central America and the Caribbean. IDB (2012).
- Information on the IBD-financed “Regional Insurance Facility for Central America” can be found at <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=35128760>.
- Information on the CEPAL-financed “Integrated Risk Management and Agricultural Insurance” can be found at <http://www.eclac.cl/publicaciones/xml/9/51609/Gestionintegralderiesgos.pdf>.
- Information on the *Diplomado* developed by MADS can be found at http://www.guadalupehuila.gov.co/apc-aa-files/32653537373465383362633462353034/Diplomado_Gesti_n_del_riesgo.pdf.

- Internal documents listed in the table below:

Document Name	Document Date	Report Number	Document Type
<u>Colombia - Disaster Vulnerability Reduction First Phase APL : P082429 - Implementation Status Results Report : Sequence 17</u>	11/28/2013	ISR12501	Implementation Status and Results Report
<u>Colombia - Disaster Vulnerability Reduction First Phase APL : P082429 - Implementation Status Results Report : Sequence 16</u>	4/24/2013	ISR10046	Implementation Status and Results Report
<u>Colombia - Disaster Vulnerability Reduction First Phase APL : P082429 - Implementation Status Results Report : Sequence 15</u>	10/3/2012	ISR7874	Implementation Status and Results Report
<u>Colombia - Disaster Vulnerability Reduction First Phase APL : P082429 - Implementation Status Results Report : Sequence 14</u>	2/13/2012	ISR5683	Implementation Status and Results Report
<u>Colombia - Disaster Vulnerability Reduction First Phase APL : P082429 - Implementation Status Results Report : Sequence 14</u>	2/13/2012	ISR5683	Implementation Status and Results Report
<u>Colombia - Disaster Vulnerability Reduction First Phase APL : P082429 - Implementation Status Results Report : Sequence 13</u>	6/28/2011		Implementation Status and Results Report
<u>Colombia - Disaster Vulnerability Reduction First Phase APL : P082429 - Implementation Status Results Report : Sequence 12</u>	10/5/2010		Implementation Status and Results Report
<u>Official Documents- Amended Disbursement Letter for Advance P448-AR</u>	11/27/2012		Disbursement Letter
<u>Official Documents- Fourth Amendment to the Loan Agreement for Loan 7293-CO</u>	5/16/2012		Agreement
<u>Amendment to the Loan Agreement for Loan 7293-CO Ref. Cross-Debarment Conformed</u>	9/30/2010		Agreement
<u>Loan Agreement, L7293-CO Conformed</u>	10/4/2005		Loan Agreement
<u>Colombia - Natural Disaster Vulnerability Reduction and First Adaptable Program Loan Project : restructuring</u>	7/11/2013	RES11363	Project Paper
<u>Colombia - Generando sinergias para la reducción del riesgo de desastres en el nivel local</u>	1/1/2013	75253	Working Paper
<u>Colombia - Programa de Reduccion de la Vulnerabilidad Fiscal del Estado ante Desastres Naturales : mision de supervision - Diciembre 5 al 8 de 2012</u>	12/8/2012	77052	Aide Memoire
<u>Generando sinergias para la reduccion : del riesgo de desastres en el nivel local</u>	6/1/2012	75254	Working Paper
<u>Data sheet</u>	5/14/2012	67872	Project Paper
<u>Main report</u>	5/10/2012	67872	Project Paper
<u>Main report</u>	3/1/2012	70103	Other Public Sector Study
<u>Resumen Ejecutivo</u>	3/1/2012	70103	Other Public Sector Study
<u>Data sheet</u>	12/15/2011	65654	Project Paper
<u>Main report</u>	12/13/2011	65654	Project Paper
<u>Analysis of disaster risk management in Colombia : a contribution to the creation of public policies - executive summary</u>	1/1/2011	74786	Working Paper
<u>Main report</u>	1/1/2011	70103	Other Public Sector Study
<u>Data sheet</u>	3/18/2010	53147	Project Paper
<u>Main report</u>	3/12/2010	53147	Project Paper
<u>Plan de contrataciones y adquisiciones : procurement plan</u>	2/9/2010	55676	Procurement Plan
<u>Colombia - Plan de adquisiciones : procurement plan</u>	1/1/2010	56463	Procurement Plan

Document Name	Document Date	Report Number	Document Type
<u>Colombia - Natural Disaster Vulnerability Reduction and First Adaptable Program Loan Project : restructuring</u>	5/21/2009	49007	Project Paper
<u>Marco de politica y metologica de reasentamientos de poblacion localizada en zonas de alto riesgo no mitigable rondas de cuerpos de agua</u>	7/1/2005	RP901	Resettlement Plan
<u>Colombia - Natural Disaster Vulnerability Reduction Project</u>	4/11/2005	30123	Project Appraisal Document
<u>Colombia - Disaster Vulnerability Reduction Project</u>	7/8/2004	AC734	Integrated Safeguards Data Sheet
<u>Colombia - Disaster Vulnerability Reduction Project : environmental assessment</u>	3/1/2004	E909	Environmental Assessment
<u>Colombia - Disaster Vulnerability Reduction Project</u>	10/24/2003	AC367	Integrated Safeguards Data Sheet
<u>Colombia - Disaster Vulnerability Reduction Project</u>	7/3/2003	AB128	Project Information Document
<u>Colombia - Disaster Risk Management Development Policy Loan with a Catastrophic Risk Deferred Drawdown Option</u>	7/30/2012	ICR2275	Implementation Completion and Results Report
<u>Colombia – Second Disaster Risk Management Development Policy Loan with a Catastrophic Risk Deferred Drawdown Option</u>	2012		Project Appraisal Document
<u>Capital District of Bogota with the Guarantee of the Republic of Colombia – Bogota Disaster Vulnerability Reduction Project in Support of the Second Phase of the Disaster Vulnerability Reduction</u>	2006		Project Appraisal Document

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