

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

COLOMBIA

**ADAPTATION TO CLIMATE IMPACTS IN WATER REGULATION AND SUPPLY
FOR THE AREA OF CHINGAZA–SUMAPAZ–GUERRERO
(CO-G1002)**

PROJECT IDENTIFICATION FORM (PIF)

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PROJECT IDENTIFICATION FORM (PIF) ¹

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND:SCCF

PART I: PROJECT IDENTIFICATION

Project Title:	Adaptation to Climate Impacts in Water Regulation and Supply for the Area of Chingaza - Sumapaz - Guerrero		
Country(ies):	Colombia	GEF Project ID: ²	
GEF Agency(ies):	IADB (select) (select)	GEF Agency Project ID:	
Other Executing Partner(s):		Submission Date:	2011-09-26
GEF Focal Area (s):	(select)	Project Duration (Months)	60
Name of parent program (if applicable): ➤ For SFM/REDD+ <input type="checkbox"/>		Agency Fee (\$):	453,000

A. FOCAL AREA STRATEGY FRAMEWORK³:

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
CCA-1 (select)	Outcome 1.1 Mainstreamed adaptation in broader development frameworks at country level and in targeted vulnerable areas	Output 1.1.1 Adaptation measures and necessary budget allocations included in relevant frameworks	SCCF	300,000	500,000
CCA-1 (select)	Outcome 1.2 Reduced vulnerability in development sectors	Output 1.2.1 Vulnerable physical, natural and social assets strengthened in response to climate change impacts, including variability	SCCF	300,000	500,000
CCA-2 (select)	Outcome 2.1 Increased knowledge and understanding of climate variability and change-induced threats at country level and in targeted vulnerable areas	Output 2.1.1 Risk and vulnerability assessments conducted and updated	SCCF	550,000	400,000
CCA-2 (select)	Outcome 2.2 Strengthened adaptive capacity to reduce risks to climate-induced economic losses	Output 2.2.2 Targeted population groups covered by adequate risk reduction measures	SCCF	350,000	500,000
CCA-3 (select)	Outcome 3.1 Successful demonstration, deployment, and transfer of relevant adaptation technology in targeted areas	Output 3.1.1 Relevant adaptation technology transferred to targeted groups	(select)	2,815,000	20,000,000
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)	Others		(select)		

¹ It is very important to consult the PIF preparation guidelines when completing this template.

² Project ID number will be assigned by GEFSEC.

³ Refer to the reference attached on the [Focal Area Results Framework](#) when filling up the table in item A.

	Sub-Total		4,315,000	21,900,000
	Project Management Cost ⁴	SCCF	215,750	1,400,000
	Total Project Cost		4,530,750	23,300,000

B. PROJECT FRAMEWORK

Project Objective: Strengthen the hydrological buffering and regulation capacity of the upper watershed of Chingaza-Sumapaz-Guerrero that supplies drinking water to the Bogota metropolitan area and the adjoining rural municipalities						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Cofinancing (\$)
1. Knowledge management Transfer of information and knowledge on climate impacts on water regulation in the Corridor to local communities and other stakeholders as a basis for a more effective hydrological management	Inv	1.1 Detailed information available on the vulnerability of high Andean forests and mountain wetlands (páramos) to climate variability and change in their ability to supply water to Bogotá and surrounding regions 1.2 Adaptive structure of the respective ecosystems defined	1.1 Climate change scenarios downscaled to reflect changes in high mountain ecosystems and páramos 1.2 Vulnerability of the high Andean ecosystems (above 2600 meters asl) to climate variability and change analyzed on a scale 1/25,000 with respect to their capacity to supply and regulate water focusing on the priority areas defined by the evaluation of hydrological risk 1.3 Monitoring system developed and available to track the impact of the adaptation measures aiming to reduce the vulnerability of the region to climate variability and to changes in the water cycle 1.4 Workshops and training sessions of successful adaptive management experiences to the baseline programs	SCCF	550,000	1,400,000
2. Adoption of adaptation measures to address impacts of climate variability and change on the hydrological balance of prioritized areas	Inv	2.1 Land use and watershed management in prioritized areas at sub-national and local levels apply climate adaptation measures which better match supply and demand of water between cultivated and (eco-) systems 2.2 Strengthened	2.1 Areas for water regulation, recharge and supply restored and consolidated in regions which are highly strategic for reducing the vulnerability to inundation or under-supply of water, exacerbated by climate variability and change 2.2 Three gender-sensitive	SCCF	3,465,000	20,500,000

⁴ GEF will finance management cost that is solely linked to GEF financing of the project.

		institutional capacity to facilitate the design and implementation of adaptation measures and their proper incorporation into land use and watershed management plans, at subnational and local levels	<p>pilot projects designed and developed to increase water regulation capacity through re-vegetation, improved engineering in critical water supply areas</p> <p>2.3 Climate resilient management practices and adaptation measures in local production systems adopted by farmers resulting in sustainable water use in agro systems as well as in the improvement of food security and quality of life</p> <p>2.4 Land use planning tools have incorporated specific adaptation actions to reduce vulnerability to climate change impacts in priority areas to guarantee ecosystem services including water supply and regulation</p> <p>2.5 Municipal organizations and regional environment agencies (CARs) trained in climate change risk management and adaptive measures</p>			
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Sub-Total					4,015,000	21,900,000
Project Management Cost ⁵				SCCF	200,750	1,400,000
Total Project Costs					4,215,750	23,300,000

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)

Sources of Cofinancing	Name of Cofinancier	Type of Cofinancing	Amount (\$)
Other Multilateral Agency (ies)	IADB	Hard Loan	11,400,000
Others	Empresa de Acueducto y Alcantarillado de Bogota, EAAB, Bogota water utility	Grant	10,000,000

⁵ Same as footnote #3.

Other Multilateral Agency (ies)	IADB	Grant	900,000
National Government	Japan (JAXA)	In-kind	500,000
Local Government	Regional Environmental Agency CAR	Grant	500,000
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
Total Cofinancing			23,300,000

D. GEF/LDCF/SCCF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (a)	Agency Fee (b) ²	Total c=a+b
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
Total Grant Resources				0	0	0

¹ In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table

² Please indicate fees related to this project.

PART II: PROJECT JUSTIFICATION

A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

A.1.1 The GEF focal area/LDCF/SCCF strategies:

The proposed project will support the implementation of adaptation measures designed to address the consequences of climate change in the water supply and hydrological regulation functions provided by high-mountain wetlands and ecosystems of the *Chingaza-Sumapaz-Guerrero* corridor. These ecosystems and wetlands are the main drinking water source to the Bogota metropolitan area and its adjoining rural communities. The natural water regulation function of these ecosystems is expected to be seriously affected by changes in the intensification of the water cycle (higher indices of rainfall concentration and lengthening of drought periods), reduced wetness in upper layer of soil, higher evaporation rates, higher soil and lower troposphere temperatures, and shifting of altitudinal dew points. All of these physical changes are reducing the capacity of the ecosystems to maintain a regulated water cycle and water storage capacity.

The project is consistent with the three (3) objectives of the Focal Area Strategic Framework of the SCCF, namely, (CCA-1) Reducing vulnerability to climate variability and change at local, national and regional level, (CCA-2) Increase adaptive capacity to respond to the impacts of climate change and (CCA-3) Promote transfer and adoption of adaptation technology associated to these high-mountain ecosystems and wetlands. In particular, the project will help to increase the understanding of climate change impacts on the water supply and regulation capacity of these ecosystems and to disseminate key climate-related information to all relevant stakeholders for its incorporation in local sustainable resources management plans. Moreover, it will strengthen the capacity of local communities and ecosystems in the area to cope with observed and anticipated effects of climate change through the deployment of specific adaptation measures. The proposed program will contribute to mainstream adaptation in relevant land-use and watershed management plans and strengthen the adaptive capacity particularly of the agro-forest sector to maintain water supply in the region despite the impacts of climate change and variability. The high vulnerability of the Bogotá and Corridor ecosystems and water supply has been documented “inter alia” through Colombia’s Second National Communication to the United Nations Framework Convention on Climate Change (UNFCCC)⁶.

A.1.2. For projects funded from LDCF/SCCF: the LDCF/SCCF eligibility criteria and priorities:

As a member of the UNFCCC, Colombia is eligible for receiving financial support for interventions in climate change adaptation that are integrated into development activities. In addition, the adaptation measures to be implemented through the project are in line with priority adaptation activities identified in Colombia’s Second National Communication to the UNFCCC (see A.2), as well as with national and regional programs in rural development, poverty reduction, food security, climate change and risk reduction. This project will contribute to the objectives of the

⁶ Second National Communication of Colombia to the UNFCCC, 2010

National Development Plan (2010-2014) which includes the implementation of the national policy on climate change and the recently approved *Institutional Strategy for the articulation of climate change policy and actions in Colombia*. The proposed activities therefore fully comply with the SCCF eligibility criteria.

- A.2. National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NIPs, PRSPs, NPFE, etc.:

The Second National Communication submitted by Colombia to the UNFCCC indicates that between 2011- 2040 70% of the High Mountain area in the territory of Colombia will be affected by potential high or very high impacts of climate change, especially increases in temperature and consequently a retreat of existing glaciers and a loss in the net storage of water both in glaciers and mountain wetlands. It classifies high mountain ecosystems and wetlands as extremely vulnerable and therefore calls for urgent action specifically related to: (i) increased research, (ii) improved land use planning, (iii) reduction of the vulnerability of water resources, (iv) increased adaptive capacity of vulnerable communities and (v) inter-institutional coordination of policies and programs. The National Development Plan 2010-2014, in its revised version of 2011, specifically addresses the importance of conserving water resources, adequate land use planning as well as adaptation to climate variability. It especially mentions the *Páramos* (*high-mountain* wetlands) and upper watersheds as territorial regions which need to receive particular attention. In general, the Plan underlines the great importance to develop the institutional capacity capable of managing a regionally and sectorally integrated territorial planning to conserve ecosystems that provide services indispensable for societal well-being, such as water supply.

The project is also in line with policies related to the conservation of biodiversity which are being formulated for the Bogota and the *Chingaza-Sumapaz-Guerrero* Corridor Area. Strategy 5 specifically refers to activities that need to be implemented in order to mitigate and adapt to climate change in the context of biodiversity conservation to ensure long-term productivity. In general, the experiences gained from the proposed project will contribute to the development of the National Adaptation Plan identified in the Climate Change CONPES⁷ (*Concejo Nacional de Política Económica y Social*), which will direct the formulation of current and future projects and programs to better deal with climate extremes and enhance long-term climate resilience.

B. PROJECT OVERVIEW:

- B.1. Describe the baseline project and the problem that it seeks to address:

The baseline for the proposed project is built by two complementary programs. The first is Bogota Water Utility Company's (EAAB, for its Spanish acronym) participatory *Program for the conservation and restoration of mountain wetlands in the area of Chingaza and Sumapaz*; and the second is IDB's program *Water Supply and Sanitation Services for Rural and Semi-Urban Areas*, with the Ministry of

⁷ CONPES: National Council of Economic and Social Policies

Environment, Housing and Territorial Development (MAVDT), currently under preparation.

1) Program for the conservation and restoration of mountain wetlands in the area of Chingaza and Sumapaz: This US\$60 million baseline activity, out of which US\$10 million are directly linked as baseline activity, targets conservation from a biodiversity and environmental services perspective but does not address or include the climate change perspective. The program aims to promote integrated conservation and restoration processes of wetlands near Bogota, through inter alia, physical, biotic, social, cultural, hydraulic, and urban interventions to provide environmental services to the city and its inhabitants, as well as prevent the deterioration and degradation of these natural areas for the urban environment in which they are. Some of the activities included in the project are: (i) environmental and social management education, (ii) sustainable production systems, (iii) research, ecological restoration and farm management, (iv) basic sanitation in the municipalities of this region. The SCCF funded activity will enable the baseline project to incorporate the climate dimension during its implementation.

2) Water Supply and Sanitation Services for Rural and Semi-Urban Areas Program: This program will invest US\$60 million to reduce existing gaps in water and sanitation supply coverage in rural and peri-urban areas identified in the National Development Plan (2010-2014) as well as in the strategy of the Departmental Water Plans. It gives priority to communities living in areas with high levels of poverty, where the demand for the supply of basic needs such as water and sanitation is increasing but currently not met. About \$11.4 million are linked to the SCCF project as a baseline activity. The program will be implemented in five (5) states, namely Bolivar, Cordoba, Antioquia, Nariño and Cauca. Two of these provinces include piedmont areas that are representative of the water regulation problems to be addressed under the SCCF-funded activity.

IDB Water supply and sanitation program aims at improving the living conditions of about 300,000 inhabitants in 300 rural localities and approximately 9,000 households in semi-urban areas that currently lack functional water supply and sanitation systems. It is estimated that about 40% of total project cost will be located in piedmont areas and subject to the same dynamic change in the ecosystem induced by the consequences of climate change. The lessons learned, activities on capacity building, knowledge obtained and investments made with SCCF funding with respect to anticipated changes in the water regulation cycle will be used to support the inclusion of adaptation concerns in the design and implementation of activities to be funded under the loan. The loan and the SCCF-funded activities will thus be closely coordinated.

The loan program will consist of the following components: (i) Investment in infrastructure construction and/or expansion of water supply projects and sanitation in rural communities, and household interlinkages in urban areas of extreme poverty, and advocacy and community education, if required (\$ 44 million); (ii) Community development and preparation of integrated projects of rural water and sanitation as well as household interlinkages in urban areas (\$ 6 million); (iii) Institutional

strengthening of national, municipal and regional entities and review of the regulatory framework (\$ 2 million); and (iv) The design and installation of sustainable service delivery schemes (\$ 3 million). The project has committed to incorporate climate issues in the design of delivery systems. It is anticipated that the lessons and experiences gained under the SCCF-funded activity will be disseminated to influence the design of delivery systems in piedmont areas. This dissemination will result in the design of climate resilient delivery systems in particular as to the impacts of climate in the regulation of the hydrology of water supply areas. The Ministry of Environment, Housing and Territorial Development (MAVDT), will serve as executing agency of the overall program, while each integrated project will be executed through the municipalities in their respective communities, in close coordination with the Ministry of Agriculture and Rural Development to align the program with the rural housing policy, and with other areas of interest to the MAVDT.

Climate variability and change will be one major factor to influence the ability to guarantee the long-term balance between supply and demand of water in the region of the program. Studies conducted by the Institute of Hydrology, Meteorology and Environmental Studies (IDEAM) recorded a net temperature increase of 0.2 to 0.3 ° C per decade during the 1961-1990 period and a decrease in monthly rainfall of 2 to 3 mm per decade for some of the high mountain areas in Colombia (IDEAM 2001). A variation of this type is likely to generate significant changes in the structure and hence ecological functionality of about 70% of these ecosystems. With the help of JAXA and the MRI of Japan, an analysis was conducted of the probable intensification of rainfall periods (R5XD) and the extension of drought periods (CDD) in the country. Significant increase in both indices has been projected during the current century, likely to result in a reduction in the water regulation function of water storage systems in mountains.

Furthermore, climate change scenarios suggest a positive trend in the noted records for the Bogota region and the conservation corridor. These scenarios predict increasing minimum temperatures in large parts of the country and especially in the *Sabana de Bogotá*. With respect to precipitation, the scenarios predict that high intensity rainfall (thunderstorms or other types of precipitation extremes) will increase in most of the Andean region. Reduction of high intensity rainfall will only occur in isolated areas of the *Sabana de Bogotá*. The predicted changes put the population of around 10 million inhabitants, located in the *Sabana de Bogotá* and the conservation corridor linking the *Páramo de Guerrero*, and the National Parks of *Chingaza* and *Sumapaz*, under conditions of high vulnerability, since its sustainability depends largely on the water of the surrounding mountains not only as a means to provide drinking water but also for hydroelectric, agricultural and industrial purposes.

Thus, it will be indispensable to adequately take these changes into account when designing the planned infrastructure and water supply schemes within the baseline project. However, although the program is planned to be related to the Integrated Water Resources Management and Climate Change program of the MAVDT, no specific adaptation measures have been included in the project so far. The reason for this is the limited available information on how exactly climate variability and change will impact water supply and regulation resources in the country.

- B. 2. Incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

The proposed SCCF intervention will support adaptation measures which will be key for the establishment of sustainable water and sanitation systems in the long-term. The SCCF project will finance activities that complement the actions undertaken by the EAAB in the conservation of wetlands by adding the overlay of addressing the consequences of climate change. This additional consideration will result in a modification and addition of areas of conservation and management from the viewpoint of anticipated loss of regulation as well as areas that are subject to hydrological risks induced by the intensification of extreme events. The SCCF will provide investments and resources to address these additional considerations, originally not included under the baseline activities. The result will be a a more resilient set of conservation management and adaptation measures that together will contribute to ameliorate the impacts of climate in the water supply system in the area.

In addition, the experiences gained in the area of the SCCF project and the EAAB baseline activity will be deployed to influence the design of delivery systems in rural areas located in the area of influence of mountain wetlands and paramos, under the IDB funded activity (hard loan). Through the use of information gained and lessons learned, the proposed SCCF program will put the stakeholders of the second baseline activity in the position to include the dimension of climate change in the design of new water supply systems in rural, peri-urban and urban areas around the Chingaza-Sumapaz-Guerrero region. The proposed project will also cover the additional investment costs when adjusting or designing water storage and supply systems in response to the observed and projected changes in weather extremes, more frequent heavy precipitations, longer drought periods, and increased likelihood of fire events, in the entire project area.

As the proposed intervention is designed to reduce the net impact of climate consequences on the water supply, it includes an important component of knowledge generation on how current land use activities influence the vulnerability of the water cycle to climate variability. The project will also help prioritize areas where adaptive measures should be implemented within land use and watershed management plans.

The project includes an integrated approach that includes restoration and protection of critical areas from a climate perspective, combined with more traditional adaptation efforts. These measures are considered additional in the context of existing practices and regulations that center conservation and restoration concerns exclusively on the protection of biodiversity and ecosystem assets. The overlay of climate concerns in the protection and restoration of mountain ecosystems would not be undertaken in the absence of this SCCF-funded intervention. Experiences in the deployment of specific adaptation measures to address observed and anticipated impacts of climate change on the hydrological cycle at the local scale will be used by the baseline project to inform the design of its activities at the national scale (IDB hard loan).

Specifically, the SCCF funds will be invested in the following components:

Component 1: Knowledge management: This component will include the transfer of information and knowledge on climate impacts on water regulation in the Corridor to local communities and other stakeholders as a basis for a more effective hydrological management. It will address the following activities:

- a) Downscaling of climate change scenarios in order to reflect changes in high mountain ecosystems including wetlands and *páramos*
- b) Analysis of the high Andean ecosystems´ (above 2,600 meters above sea level) vulnerability to climate variability and change on a scale of 1:25.000 especially investigating the capacity of these ecosystems to supply and regulate water and focusing on the priority areas defined by the evaluation of hydrological risk
- c) Development and installation of a monitoring system in order to track the impact of the adaptation measures aiming at reducing vulnerability of the region to climate variability and to changes in the water cycle

Component 2: Adoption of adaptation measures to address impacts of climate variability and change on the hydrological balance of prioritized: Under this component strategic adaptation measures that will directly address the net effect of climate variability and change in water regulation and storage will be financed in three prioritized areas. For instance, by increasing the buffering capacity of mountain wetlands and restoration, the net effects of flood events and drought periods will be ameliorated. Maintaining water retention in the wetlands and upper watersheds will in turn contribute to maintain soil moisture, and reduce the likelihood of fire events. Said adaptation measures will benefit approximately 350 households or 1,750 individuals and will contribute towards the conservation of areas already identified as critical from a hydrological risk perspective. Specifically, they will be instrumental for: (1) the hydrologic attenuation of peak flows, (2) the reduction on surface run-offs, (3) the avoidance of gully erosions as they serve as a hydrological control, (4) an infiltration increment, (5) the reduction of nutrient removal and transport to water courses.

Concrete activities will be deployed in three (3) prioritized areas and shall include: (i) Development of restoration activities and establishment of connectivity of natural ecosystems, (ii) adoption of climate resilient land-use management practices in local production systems by farmers, aimed at reducing vulnerability posed by climate change on local hydrological conditions, (iii) design and implementation of restoration activities and/or improved engineering to increase the water regulation capacity, (iv) redesign and modification of hydraulic works in critical water supply areas to increase water storage capacity. These activities altogether will contribute towards a sustainable water use in agro systems as well as in the improvement of food security and quality of life.

In addition, this component will also strengthen the institutional capacity of the region to design, implement and manage adaptation measures especially with regard to incorporating those into land- use and watershed management plans at sub-national and local levels. This will be implemented using the Adaptive Territorial Ecological Structure or "EETA" introduced by INAP for municipal land use and watershed

management plans. The EETA has been defined as a geographical network of spaces that support essential ecological processes necessary to guide adaptation beyond mere biodiversity conservation and towards the maintenance of ecosystem structure and functioning. The main EETA objective is to maintain ecological and ecosystem integrity on the long run. It includes all relevant structural elements of the landscape to ensure the conservation and recovery of high mountain ecosystems and *Páramos*, which are highly vulnerable to Climate change, such as water cycle regulation, water quantity and quality maintenance, groundwater recharge, reduction of risks and natural hazards and erosion control and also the adaptation actions required to maintain water regulation. Specific activities include workshops and training of municipal organizations in climate change risk management and adaptive measures.

The transfer of technology for the activities described above will include the following mechanisms: (i) the establishment of collaborative partnerships between key stakeholders with the common purpose of enhancing technology transfer, (ii) design of technology transfer plans, (iii) dissemination of technology information through targeted workshops and/or discussion groups. The involvement of the local governments and the incorporation of these actions in the EETA will ensure long-term sustainability.

The design and implementation of adaptation measures will include the following activities to make sure gender issues are properly address in the project:

- (i) *Gender-Sensitive Vulnerability Analysis*: Vulnerability assessments – with a particular focus on gender – will be carried out at the regional, community and household levels. This analysis will identify gender differences and gaps, as well as point to causal drivers. This process will generate actionable findings be useful for project staff, local partners and government counterparts engaged in data collection, project design and policymaking.
- (ii) *Gender Sensitive Project Design*: Gender disaggregated data on risk and vulnerability will be utilized in the project design. Participatory methods and gender-sensitive sampling strategies will be used to elicit input from community members (women and men) in pilot project design. Men and women will be consulted separately. Field assessment and planning teams will include female interviewers. Pilot projects will include gender-sensitive objectives, targeting strategies, outputs and indicators. Project assumptions will be gender differentiated.
- (iii) *Building Capacity to understand and respond to the unique needs of women and men*: The project team will identify practical organizational measures to support integration of gender into analysis, pilot program design, evaluation research, and post-project use of project results.
- (iv) *Gender-Responsive Monitoring and Evaluation Systems and Instruments*: To ensure that lessons learned are internalized by partners and disseminated, a robust M&E system will be implemented. The system will employ a mixed-method approach utilizing both quantitative indicators and participatory methods to capture gender differences in exposure to hazards and resilience. The M&E system will assess how the pilot projects will impact men and women differently, as well as household and community gender relations.

- B.3. Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF). As a background information, read "Mainstreaming Gender at the GEF.":

The specific benefits of the project will include an improvement in the reliability of water supply which will directly impact food security and quality of life of the communities in the area of influence of the project. Furthermore, the activities of the project will result in improved adaptive capacity of the communities directly affected as the planning and investment activities will be undertaken with their full participation. More widely, improved water regulation capacity in the surrounding wetlands and high Andean forests, surrounding the metropolitan area of Bogota, are expected to result in better supply conditions, reducing the long-term marginal costs of investments to maintain and secure a stable water supply for the region. The region includes 11 rural municipalities as well as peri-urban and urban areas in the metro area of Bogota. The direct beneficiaries are the inhabitants (landowners or farmers), communities, and institutions of the region, who will participate in the corridor development. Indirect beneficiaries are the people of Bogota and other neighboring municipalities. Most beneficiaries will be located downstream as they will reap the benefits from a better regulation system once the adaptation measures are implemented. Some beneficiaries are in the same area of the intervention and are part of the communities in the area of the project that will benefit in the longer term from improved water supply.

- B.4 Indicate risks, including climate change risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks to be further developed during the project design:

1) Lack of commitment by the Regional Environment agency (CAR), Ministry of Environment (MAVDT) and local communities to contribute to the program. This risk will be mitigated by ensuring in the design phase of the project that local institutions such as the CAR, the Bogota's Water Utility (EAAB) and other strategic actors are consulted and participate in all stages of project design and implementation. Existing capacities of strategic local actors to contribute to project objectives will be assessed during project design. Activities to ensure their active participation will be structured according to the level of capacity required to guarantee project's sustainability.

2) Local communities do not adopt the sustainable management schemes or do not support them. To mitigate this risk, during project preparation actions will be undertaken for strengthening capacity of local actors, including the execution of consultative workshops and environmental education and awareness sessions, so that technology transfer and strengthening of local processes are facilitated. Likewise, progress is expected in the generation of local agreements between the environmental authorities, local communities, institutions and sectors regarding the implementation of adaptation measures.

- B.5. Identify key stakeholders involved in the project including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable:

The main institutional stakeholders are the Environmental Authorities (Ministry of Environment, Housing and Territorial Development, National Parks, Autonomous Regional Corporations: CAR, Corpoguvio, Corporinoquia, Cormacarena, District Department of Environment), research institutes (IDEAM, *Instituto* Alexander von Humboldt) and the Governorate of Cundinamarca and Meta. The MAVDT is expected to coordinate the actions of the baseline project with the proposed SCCF-funded intervention. Other key stakeholders at the local level will include grassroot communities, community action boards and those responsible for land use planning instruments. In addition, municipalities and their planning agencies (mayors, municipal councils, etc), joint committees for the management of watersheds and shared ecosystems are considered relevant. These CSOs will actively participate in the design, validation and implementation of the specific interventions through workshops and public consultations as required.

- B.6. Outline the coordination with other related initiatives:

The project will be related to other regional initiatives, including: 1) the "Regional Comprehensive Plan on Climate Change of the Capital Region Bogotá-Cundinamarca - PRICC", which has been developed within the framework of a partnership between the Government of Cundinamarca, Bogotá's municipal government and the District Department of Environment; 2) the initiative "We are Water" promoted by TNC, the regional Water Utility, and National Parks; 3) the biodiversity policy for the District and the lines of connectivity adopted by the District Department of Environment; and 4) hydrologic modeling studies in the conservation corridor led by Conservation International. These ongoing studies and processes will generate important information as input to the present project. In the case of PRICC, an institutional framework for joint action on mitigation and adaptation to climate change in the capital region is being defined and will be used by the SCCF-funded project.

The project provides an additional insight into baseline activities by bringing in the climate overlay, which would not be considered in the absence of the SCCF resources.

In addition, the proposed project will benefit significantly from experiences gained from the Integrated National Adaptation to Climate Change Program, INAP which has been carried out by the Government of Colombia through IDEAM and Conservation International-Colombia, and with the participation of other government institutions, during the years 2006 to 2010. The proposed project will help scale-up the successful adaptation actions of INAP in a larger area.

Valuable information to the proposed project will also be provided by a project carried out by Conservation International-Colombia, in partnership with the Water and Sewerage Company of Bogotá, between 2008 and 2010. Within this project a planning

process was prepared in which biophysical and socio-economic information of the *Chingaza-Sumapaz-Guerrero Corridor* area was consolidated and updated in order to derive a comprehensive proposal for improved land management with regard to water and biodiversity protection.

C. DESCRIBE THE GEF AGENCY'S COMPARATIVE ADVANTAGE TO IMPLEMENT THIS PROJECT:

C.1 Indicate the co-financing amount the GEF agency is bringing to the project:

The IDB is currently implementing a comprehensive and ambitious climate agenda with emphasis on adaptation measures. This effort is being supported by the recent capital increase which has established the goal of allocating 25% of all new resources to the different aspects surrounding climate change, and more broadly sustainability. The agenda includes the development of adaptation activities targeting some of the most pressing consequences of climate change in the region, such as impacts on water regulation and supply, impacts on fisheries, on ecosystem integrity and biodiversity, impacts on coastal settlements and infrastructure and others.

Within the country, the IDB has a solid presence in the area of water and sanitation. The SCCF resources will be complemented with IDB financing through the Water Supply and Sanitation Services for Rural and Semi-Urban Areas project in the amount of US\$60 million. Of these funds, US\$20 million will contribute directly to the objectives of the proposed SCCF project. The Water Supply and Sanitation Services for Rural and Semi-Urban Areas project has been designed to address water access gaps for rural and urban populations. The proposed GEF funding will nicely fit into this baseline intervention by adding adaptation considerations to the issue of water supply. In addition, the IDB is bringing an MOU with JAXA to bear on the access to remote sensing information to the area.

C.2 How does the project fit into the GEF agency's program (reflected in documents such as UNDAF, CAS, etc.) and staff capacity in the country to follow up project implementation:

The proposed project fits into the Climate Change Strategy, recently adopted by the IDB and responds to the priorities established as part of its Ninth Capital Replenishment, which call for a significant increase in the deployment of financial and technical resources in the field of climate change. Specifically, the proposed project fits within IDB Integrated Climate Change Strategy (ICCS) approved by the Board of Directors on March 2011. The project is consistent with the strategic lines for Bank intervention 1) *Strengthen the knowledge base on climate change*, 2) *Strengthen institutions and private and public sector capacity to address climate change*, 3) *Scaled-up investments, addressing financial gaps and leveraging private sector investments*.

Furthermore, the project is also consistent with IDB Country Strategy for Colombia, in which adaptation to climate change has been identified as an overriding issue following priorities set in the national Development Plan (2010-2014) and recently approved *Institutional Strategy for the articulation of policy and climate change actions in Colombia*. **Specific competitive advantages of IDB in the LAC region** are: i) Strong presence in the LAC region with over **50 years** of sector experience and a large


portfolio of investments >US\$ 10 billion disbursed per year ([IDB Annual Report, 2010](#)), ii) Commitment to finance Climate Change, Sustainable Energy and Environmental Sustainability projects as a significant part of its portfolio: **25% target of all operations by 2015**; iii) A very active and long-dated engagement on the climate change issue in the region; and iv) a strong presence of management and technical staff working in country offices and strongly engaged with public and private sector clients from early programming to project execution.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

- A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Carlos Castaño Uribe	Viceminister of Environment	MINISTRY OF ENVIRONMENT, HOUSING AND TERRITORIAL DEVELOPMENT	09/01/2010

- B. GEF AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with GEF/LDCF/SCCF policies and procedures and meets the GEF/LDCF/SCCF criteria for project identification and preparation.					
Agency Coordinator, Agency name	Signature	DATE (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Michael Collins, IDB-GEF Executive Coordinator		(09/26/2011)	Walter Vergara/ Alfred Grunwaldt	202-6231895	vvergara@iadb.org alfredg@iadb.org

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SAFEGUARD POLICY FILTER REPORT

This Report provides guidance for project teams on safeguard policy triggers and should be attached as an annex to the PP (or equivalent) together with the Safeguard Screening Form, and sent to ESR.

1. Save as a Word document. 2. Enter additional information in the spaces provided, where applicable. 3. Save new changes.

PROJECT DETAILS	IDB Sector	ENVIRONMENT AND NATURAL DISASTERS-AIR POLLUTION CTRL & CLIMATE CHANGE
	Type of Operation	Technical Cooperation
	Additional Operation Details	
	Investment Checklist	Generic Checklist
	Team Leader	Grunwaldt, Alfred Hans (ALFREDG@iadb.org)
	Project Title	Adaptation to Climate Impacts in Water Regulation and Supply area of Chingaza
	Project Number	CO-G1002
	Safeguard Screening Assessor(s)	Grunwaldt, Alfred Hans (ALFREDG@iadb.org)
	Assessment Date	2012-02-17
	Additional Comments	Investment Grant financed by GEF, outside the STAR, specifically the Special Climate Change Fund (SCCF) for adaptation projects.

SAFEGUARD POLICY FILTER RESULTS	Type of Operation	Investment Grants	
	Safeguard Policy Items Identified (Yes)	The Bank will make available to the public the relevant Project documents.	(B.01) Access to Information Policy– OP-102
		Does this project offer opportunities to promote gender equality or women's empowerment through its project components?	(B.01) Gender Equality Policy– OP-270
	The operation is in compliance with	(B.02)	

		environmental, specific women's rights, gender, and indigenous laws and regulations of the country where the operation is being implemented (including national obligations established under ratified Multilateral Environmental Agreements).	
		The operation (including associated facilities) is screened and classified according to their potential environmental impacts.	(B.03)
		Other environmental and social sustainability issues that the Project Team considers to be a risk for this operation. (e.g. wood sourced from Amazon rainforest).	(B.04)
		Consultations with affected parties will be performed equitably and inclusively with the views of all stakeholders taken into account, including in particular: (a) equal participation of women and men, (b) socio-culturally appropriate participation of indigenous peoples and (c) mechanisms for equitable participation by vulnerable groups.	(B.06)
		The Bank will monitor the executing agency/borrower's compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations.	(B.07)
		Suitable safeguard provisions for procurement of goods and services in Bank financed projects may be incorporated into project-	(B.17)

		specific loan agreements, operating regulations and bidding documents, as appropriate, to ensure environmentally responsible procurement.	
Potential Safeguard Policy Items(?)		An Environmental Assessment is required.	(B.05)
		Environmental or culturally sensitive areas, defined in the Policy as critical natural habitats or critical cultural sites in project area of influence (please refer to the Integrated Biodiversity Assessment Tool for more information).	(B.09)
Recommended Action:		Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PP (or equivalent) and Safeguard Screening Form to ESR.	
Additional Comments:			

ASSESSOR DETAILS	Name of person who completed screening:	Grunwaldt, Alfred Hans (ALFREDG@iadb.org)
	Title:	
	Date:	2012-02-17

SAFEGUARD SCREENING FORM

This Report provides a summary of the project classification process and is consistent with Safeguard Screening Form requirements. The printed Report should be attached as an annex to the PP (or equivalent) and sent to ESR.

1. Save as a Word document.
2. Enter additional information in the spaces provided, where applicable.
3. Save new changes.

PROJECT DETAILS	IDB Sector	ENVIRONMENT AND NATURAL DISASTERS- AIR POLLUTION CTRL & CLIMATE CHANGE
	Type of Operation	Technical Cooperation
	Additional Operation Details	
	Country	COLOMBIA
	Project Status	
	Investment Checklist	Generic Checklist
	Team Leader	Grunwaldt, Alfred Hans (ALFREDG@iadb.org)
	Project Title	Adaptation to Climate Impacts in Water Regulation and Supply area of Chingaza
	Project Number	CO-G1002
	Safeguard Screening Assessor(s)	Grunwaldt, Alfred Hans (ALFREDG@iadb.org)
	Assessment Date	2012-02-17
	Additional Comments	

PROJECT CLASSIFICATION SUMMARY	Project Category: B	Override Rating:	Override Justification:
	Conditions/ Recommendations		Comments:
			<ul style="list-style-type: none"> • Category "B" operations require an environmental analysis (see Environment Policy Guideline: Directive B.5 for Environmental Analysis requirements). • The Project Team must send to ESR the PP (or equivalent) containing the Environmental and Social Strategy (the requirements for an ESS are described in the Environment Policy Guideline: Directive B.3) as well as the Safeguard Policy Filter and Safeguard Screening Form Reports.

	<ul style="list-style-type: none"> • These operations will normally require an environmental and/or social impact analysis, according to, and focusing on, the specific issues identified in the screening process, and an environmental and social management plan (ESMP). However, these operations should also establish safeguard, or monitoring requirements to address environmental and other risks (social, disaster, cultural, health and safety etc.) where necessary.
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	Identified Impacts/Risks	Potential Solutions
<p>SUMMARY OF IMPACTS/RISKS AND POTENTIAL SOLUTIONS</p>	<p>Minor or moderate conversion or degradation impacts to natural habitats (such as forests, wetlands or grasslands).</p>	<p>Ensure Proper Management and Monitoring of the Impacts of Natural Habitat Loss: A Biodiversity Management Plan (BMP) should be prepared that defines how impacts will be mitigated (roles and responsibilities, monitoring, budget, etc.) and could be incorporated in the ESMP. Depending on the financial product, the BMP should be referenced in appropriate legal documentation (covenants, conditions of disbursement, etc.). Confirmation should be obtained from competent experts that they are confident that the plan can mitigate impacts and also that the relevant authorities have approved the BMP.</p>
	<p>The Project might impact critical cultural sites, or significantly affect non-critical cultural sites</p>	<p>Protection of Cultural Sites: Where impacts to critical cultural sites are anticipated, the borrower shall take, acceptable to the project team, measures to mitigate such impacts and integrate into the project's ESMP. Where noncritical cultural sites are significantly impacted, appropriate measures to protect, mitigate, or compensate the noncritical cultural sites need to be integrated into the ESMP. Projects likely to encounter chance finds, should develop and implement specific procedures to handle chance finds occurrences, integrated into the project's ESMP. Category A projects should include in their EIA, when applicable, an analysis of the archeological potential of the areas of direct influence, and, as necessary, propose chance find procedures, based on internationally accepted practices.</p>

ASSESSOR DETAILS	Name of person who completed screening:	Grunwaldt, Alfred Hans (ALFREDG@iadb.org)
	Title:	
	Date:	2012-02-17

Social and Environmental Strategy

The proposed project will support the implementation of adaptation measures designed to address the consequences of climate change in the water supply and hydrological regulation functions provided by high-mountain wetlands and ecosystems of the *Chingaza-Sumapaz-Guerrero* corridor. These ecosystems and wetlands are the main drinking water source to the Bogota metropolitan area and its adjoining rural communities. The natural water regulation function of these ecosystems is expected to be seriously affected by changes in the intensification of the water cycle (higher indices of rainfall concentration and lengthening of drought periods), reduced wetness in upper layer of soil, higher evaporation rates, higher soil and lower troposphere temperatures, and shifting of altitudinal dew points. All of these physical changes are reducing the capacity of the ecosystems to maintain a regulated water cycle and water storage capacity.

Specifically, the SCCF funds will be invested in the following components:

Component 1: Knowledge management: It will address the following activities:

- a) Downscaling of climate change scenarios
- b) Analysis of the high Andean ecosystems´ (above 2,600 meters above sea level)
- c) Development and installation of a monitoring system.

Component 2: Adoption of adaptation measures to address impacts of climate variability and change on the hydrological balance of prioritized: The following criteria will be use in the selection of adaptation measures: (a) actions contribute to strengthen the natural regulatory capacity of the watershed; (b) are fully consistent with the region’s efforts to reestablish the biological corridor linking Chingaza, Sumapaz and Guerrero; (c) adaptation measures contribute to the construction of the community vision for their landscape; (d) the proposed measures are financially viable for the land holder, even in the absence of the project; (e) there will be no interventions in protected areas; (f) only environmentally sound land use practices will be promoted; (g) activities will reduce vulnerability of vulnerable peoples, including women, children and the elderly; and, (h) allocation of land to the production of public goods are financially compensated. Concrete activities will be deployed in three (3) prioritized areas and shall include: (i) Development of restoration activities and establishment of connectivity of natural ecosystems, (ii) adoption of climate resilient land-use management practices in local production systems by farmers, aimed at reducing vulnerability posed by climate change on local hydrological conditions , (iii) design and implementation of restoration activities and/or improved engineering to increase the water regulation capacity, (iv) redesign and modification of hydraulic works in critical water supply areas to increase water storage capacity. These activities altogether will contribute towards a sustainable water use in agro systems as well as in the improvement of food security and quality of life. In addition, this component will also strengthen the institutional capacity of the region to design, implement and manage adaptation measures

especially with regard to incorporating those into land- use and watershed management plans at sub-national and local levels.

It is not anticipated that the activities to be financed in this program will have negative direct social or environmental effects. On the contrary, the project is expected to create environmental and social benefits. The project will provide concrete experiences on specific adaptation measures focused on land use change that will: (i) foster the wellbeing of local populations, (ii) increase the resilience of the water supply to Bogota and nearby municipalities and (iii) contribute to the restoration of (promote adjustments fully compatible with rebuilding and connecting) the biological corridor connecting Chingaza – Sumapaz – Guerrero.

The proposed interventions might bring undesirable environmental damage if poorly implemented, carelessly executed and selected against the keen interests of the local communities it seeks to benefit. Nonetheless, the proposed interventions are classified as minor works aiming at benefiting approximately 350 households or 1,750 individuals and contributing towards the conservation of areas already identified as critical from a hydrological risk perspective.

Expected environmental impacts

At this time the specific areas of intervention have not been defined, and the final selection will only be accomplished with and in direct consultation with the local communities. But the typology of the interventions is well known, although adjustments and refinement will be necessary to incorporate climate change considerations and the needs for monitoring and evaluation. The following guideline for the preparation of the ESMP has been prepared:

Component	Environmental issues and impacts	Elements of the Environmental Management Plan
<i>Formulation of adaptation programs</i>		
Evaluation of GCC impacts on high mountain ecosystems through a participatory process with communities. The interventions will be implemented by the communities under the guidance of the Project Implementation Team.	Due to the characteristics of this component, based on the definition of action programs and on the scientific evaluation of aspects related to climate change in high mountain areas, no direct or indirect negative environmental effect is likely to arise during the implementation of this component.	Key elements of the detailed formulation and design of site-specific adaptation interventions are the identification of potential environmental and social impacts, their characterization, and the definition of specific actions to improve, prevent, and control adverse outcomes. There are no institutional capacity issues as most participating agencies are associated with projects aiming at the preservation of the environmental services and water

Component	Environmental issues and impacts	Elements of the Environmental Management Plan
		natural regulation in particular.
<i>Implementation of pilot adaptation measures</i>		
<p>(i) Development of restoration activities and establishment of connectivity of natural ecosystems,</p> <p>(ii) adoption of climate resilient land-use management practices in local production systems by farmers, aimed at reducing vulnerability posed by climate change on local hydrological conditions ,</p> <p>(iii) design and implementation of restoration activities and/or improved engineering to increase the water regulation capacity,</p> <p>(iv) redesign and modification of hydraulic works in critical water supply areas to increase water storage capacity.</p>	<p>Impacts are localized and limited to the sites where each pilot measure for climate change adaptation is implemented. In all cases the impact is positive because the measures are aimed at mitigating identified and documented problems caused by GCC impacts, favoring environmental best practices.</p> <p>The proposed intervention will be monitored and evaluated on a regular basis. The frequent visits would allow spotting social and / or environmental distress and act upon it.</p>	<p>During project implementation participating agencies have chosen to assure safeguard compliance through a well-defined and detailed monitoring plan.</p> <p>Given the small size of the proposed interventions, and their pilot or experimental nature, the country's existing standards and procedures are rated acceptable and in agreement with the Bank's Safeguard Policy and Directive B.5</p> <p>Community involvement should be sought, not only to disclose the environmental and social assessments, but as a means to improve the accountability of those implementing the pilots. Adequate reporting of all social and environmental activities with community involvement is encouraged.</p>
<i>Monitoring and evaluation systems</i>		
<p>The project will support the design and implementation of the corresponding monitoring and evaluation systems in order to analyze the effectiveness of the adaptation measures adopted under the project framework.</p>	<p>No significant impacts are expected because this component will only monitor and evaluate those measures implemented through the Project and will not have any direct or indirect effect on the environment.</p>	<p>It is recommended that the M&E system specifically include environmental indicators to assess pilot environmentally induced impacts, most of which are expected to be positive.</p>

The environmental analysis and the ESMP will discuss these issues in more detail and will include a “chance findings” methodology to take provisions for any cultural/archeological site that could be found during project implementation in accordance to B.05 policy directive. Additionally an Environmental and Social Analysis (ESA) will be developed and should be ready by the analysis mission; basis for this ESA are presented in the table above. It will follow recommendations established under B.05 policy directive.

INDEX OF COMPLETED AND PROPOSED SECTOR WORK

Topic	Description	Expected date	References and hyperlinks to Technical files
Water and Sanitation			
Water Supply and Sanitation in Rural Areas	The objective of Loan CO-L1105 (Rural Water Supply and Wastewater Management Program) is to increase the coverage of water supply and wastewater management in rural communities. It is expected that the program will take care of 300 poor localities and benefit about 300,000 inhabitants who at the present time do not have these services. The areas of intervention for the Rural Water Supply and Sanitation Program include all the Colombian territory, specifically regions and localities with particular environmental and social characteristics. However, the program will first start in Antioquia, Bolivar, Cordoba, Cauca and Nariño regions. Two of these provinces include piedmont areas that are representative of the water regulation problems to be addressed under the SCCF-funded activity.	2012 approved	
Mechanisms to finance ecosystem conservation, management and protection in mountain areas: Bogota Watershed Conservation Financial Mechanism Aqua-fund	The objective of the Bogota Watershed Conservation Financial Mechanism (CO-T1216), an Aqua-Fund project, is to generate a financial mechanism to invest on ecosystem conservation, management and protection of Bogota and neighbor municipalities' watersheds. The project will finance studies for the diagnosis of the main activities/contributors to the hydric river basins; characterization of specific problems of the river basin; summary of environmental policies applicable to the relevant authorities and governmental bodies; and necessary studies for the structuring of the Fund. Activities include: (i) Definition of erosion and hydrogeological processes; (ii) Generation of tools to prioritize investments; (iii) Financial Mechanism, legal and administrative feasibility; (iv) Communication strategy, environmental education and community participation. The counterpart is the <i>Empresa de Acueducto y Alcantarillado de Bogotá</i> .	2009 approved	
Integrated and Adaptive Management of Water Resources	Through this KCP, (CO-T1272), IDB is helping to develop a strategy for water resources management with a focus on "integrated and adaptive," meaning that it complements the integrated water resources management component (IWRM, which focuses on the hydrological, social, economic, institutional and ecosystem aspects) with elements of adaptation to climate change, through unique analysis done at national scale in Colombia. Expected results include: 1- National Strategy for Integrated and Adaptive Management of Water Resources, 2- Water Information System created and made compatible with the National Environmental System (SINA), 3- monitoring and evaluation system designed. The strategy developed by this KCP will improve governance in the water and sanitation sector in Colombia, which has been identified by the Ministry of Environment as a critical issue for the country.	2011 approved	
Adaptation to climate change			
Program to support the	The general objective of the program (CO-L1063, PBL) is to support the design and	2009	

development of a Climate Change Agenda	implementation of a Climate Change Adaptation and Mitigation Strategy for Colombia. The Program will identify and put into effect a strategy and institutional framework that will improve climate change indicators being developed for the energy, transport, agriculture, forestry and biofuels sectors, as well as for the prevention and mitigation of natural disasters.	approved	
Study the Economic Impacts of Climate Change at the national level	This technical cooperation (CO-T1125) supports the Government of Colombia in the elaboration of a study on the Economic Impacts of Climate Change to serve as an input for the national Climate Change Agenda. The project components are to: i) design and implement sectoral studies for the estimation of the economic impacts of climate change in Colombia, ii) analyze climate variability and generate information regarding the costs of natural disasters, iii) identify adaptation measures (including a cost-benefit analysis) for priority sectors; and iv) strengthen the capacity of the technical team at the Planning Department (DNP) to model climate variability and the economic impacts of climate change, and strengthen its coordination capacity to integrate all the institutions involved.	2011 approved	
Strengthening the Ministry of Environment's technical and institutional capacity in climate change related issues	This Technical Cooperation (CO-T1126) is helping to strengthen the institutional capacity of the Government of Colombia, through its Ministry of Environment and Sustainable Development (MADS), in climate change related activities. Project components include: 1) institutional strengthening of the MADS, 2) evaluation and development of climate change mitigation and adaptation initiatives, 3) development and dissemination of guidelines for the inclusion of the climate change variable into the governmental planning process, and 4) promotion of low-carbon activities in different sectors.	2010 approved	
Institutional strengthening of the IDEAM, including improving current mechanisms used for generating and communicating key climate information.	Technical Cooperation (CO-T1150) is supporting Colombia's climate change adaptation agenda by strengthening the Institute of Hydrology, Meteorology, and Environmental Studies (IDEAM). The TC consists of basically four components: 1) improvement of current mechanisms for production, analysis and exchange of information, between the IDEAM and key sectors; (2) development of an adaptation strategy for a priority sector; 3) implementation of a monitoring protocol for the water and CO2 cycle in high mountain ecosystems; 4) institutional strengthening of IDEAM.	2010 approved	
Support the design of the new Ministry of Environment and Sustainable Development	Advisory Service to help the Government of Colombia develop the institutional framework of the new Ministry of Environment and Sustainable Development (MADS), in order to ensure integrated management of natural resources and to address climate change (CO-T1243). The TC has two main objectives: 1) help design a new Ministry of the Environment and Sustainable Development (MADS) that focuses on its three fundamental pillars: a) protection and sustainable management of water resources; b) conservation and sustainable use of biodiversity; and c) adaptation to climate change and sustainable habitats. 2) Establish mechanisms so that environmental policy becomes a cross-sectoral and a priority topic. Activities include, among others: Development of a best practice guide on topics related to green and sustainable markets, land use planning, and assessment of the role of the National Environmental Information System (SINA), including the mapping of relevant	2011 approved	

	actors. This initiative is a continuation of the 2007-2010 Colombia Bank country strategy, which had as an objective "promoting sustainable development through environmental and risk management." The strategy calls for, <i>inter alia</i> , the institutional strengthening of the Ministry of Environment and SINA, integrated management of water resources, conservation of biodiversity, mitigation of environmental degradation, a strategy for climate change adaptation, and vulnerability reduction.		
Support the preparation of the Colombian Sustainable Energy Finance Program (C-SEF)	The objective of this Technical Cooperation (CO-T1309) is to develop a market study to support the preparation of the investments that will be part of both the Colombian Sustainable Energy Finance Program (C-SEF), to be implemented with Bancoldex. The study will perform a comprehensive assessment of the energy efficiency market in Colombia, comparing it with relevant international experiences and including aspects such as the institutional and legal framework, investment environment, contracting schemes, and barriers and lessons learned, among others. Additionally the TC will provide additional human and economic resources to facilitate the coordination of the several tasks to be performed for the C-SEF Program preparation and implementation. The C-SEF will contribute to the Country Strategy by supporting the enterprise development, promoting the incorporation of socially and environmentally responsible practices in enterprises, and promoting the innovation and technological development.	2012 expected	
Management of natural resources and disasters			
Disaster Risk Management and Climate Change Adaptation Program	The Disaster Risk Management and Climate Change Adaptation Program (CO-L1103) is the first operation in a series of two programmatic loans (PBP) aimed at supporting the Government of Colombia in the implementation of a process of legal and institutional reforms in disaster risk management and climate change adaptation. The goal is to contribute to the strengthening and modernization of the legal, institutional and public policy framework for disaster risk reduction and climate change adaptation, in line with the objectives and goals of the National Development Plan.	2011 approved	
Magdalena Watershed Biodiversity-Sustainable Management (GEF)	Through the project Magdalena Watershed Biodiversity-Sustainable Management (CO-G1003), the IDB is helping in the conservation and sustainable management of biodiversity through restoration of ecosystems, implementation of conservation actions in priority habitats, design and implementation of tools and methodologies to improve water biodiversity resource management, improved governance and strengthening of local capacity. The project supports the Strategy's Natural Risk Management priority to include risk vulnerability and management into the planning and design of public policies and instruments. By improving the conservation of natural ecosystems and providing tools for the appropriate management of water resources, it is expected that the outputs of this GEF project will make a significant contribution to the Bank's goals in Colombia. Expected results for the Project are: (i) creation and sustainable management of at least 20 new protection areas; (ii) at least ten updated watershed management using risk management and biodiversity criteria; (iii) improved biodiversity habitats in at least 5,000 ha; and (iv) implemented long term monitoring system.	2013 expected	

Support for Agricultural Innovation	The Support for Agricultural Innovation program (CO-L1114) will provide direct support to small producers to partially cover the costs of implementing new technologies. The overall objective of the program is to improve farm incomes of eligible producers. Beneficiaries of the program will comprise of at least 10,000 small farmers concerned with new technology.	2013 expected	
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