Reduction of risk and vulnerability to climate change in the Momposina Depression region of Colombia.

Program completion report.
January 31, 2020

1. Basic information

Title of project/programme	Reduction of risk and vulnerability to climate change in the Momposina Depression region of Colombia.
Project/Programme category	
Project period (if the project was granted an extension, include the original as well as the revised completion date)	June 28, 2012 to January 31, 2020 (original date of completion without extension March 31, 2018)
Country(ies)	Colombia
Sector(s)	Disaster Risk Reduction
Implementing entity name	UNDP
Type of implementing entity (MIE, NIE or RIE)	MIE
Executing entity(ies)	Ministry of Environment and Sustainable Development (MADS)
Amount of financing approved (USD)	Total USD 8,518,307 Amount of financing requested: 7,850,974 USD Project cycle management fee charged by the implementing entity (8.63%): 677,640.38 USD
Project contact(s)	
Date of report	July 29, 2020

2. Key milestones

AFB approval date		June/29/2012
Signing date of the IE-AFB agreement:		October/12/2012
Project/program start:		March/21/2013
Interim review date (if planned):		March/2017
	Terminal evaluation date:	March/2020

3. Project description

The objective of the project "Reduction of risk and vulnerability to climate change in the Momposina Depression region of Colombia" is to reduce the vulnerability of communities and increase the resilience of ecosystems in this region that are facing flooding and drought risks associated with climate change and variability. Its main actions will focus on the municipalities of Ayapel, San Marcos and San Benito Abad. The project has a four-component strategy, which includes:

Component one aimed at consolidating an information system on hydrological and climatological behavior at the regional level, so that the national government, regional institutions, and local governments in the region have information that allows them to know both climate and hydrological scenarios and climate variability trends. This ensures that preventive measures can be taken, which reduces vulnerability and the generation of risks of local governments and regional institutions, which, in turn, will be reflected both in planning instruments and in the implementation of adaptation measures that the project will carry out in the region.

Component two of this project aimed to improve ecological and environmental conditions. Ecological restoration of wetlands and construction of hydraulic structures will be developed as a measure to reduce the impacts of floods, contributing in the medium term to improving water dynamics as a measure of risk reduction and protection of the population of La Mojana.

Component three is aimed at strengthening agroecological practices and adaptive measures in the development of crops, which is aimed at improving food security and which contributes to reducing the vulnerability of communities to the impacts of climate change.

Component four is aimed at strengthening local capacities to face the challenges that climate change brings, both for local governments, civil society, and producer organizations. Association mechanisms and training programs will be established, and territorial, environmental and sectoral planning instruments in the region will be strengthened.

4. Results and key outcomes

Indicator	Baseline	Project goals	Project achievements
Number of poor households in the three project area municipalities vulnerable to climate-related events benefited by the project, disaggregated by the gender of the head of household.	La Mojana was seriously affected by the 2010-2011 La Niña event. Around 211,857 people (43.4% of the total population) were affected in 2010 by the floods. The three municipalities included present an Unsatisfied Basic Needs (UBN) index of 62.25%, which is well above the national average of 27.25%, indicating high levels of poverty and low levels of access to education, housing, health and basic sanitation and sewerage.	- At the end of the project, at least 54,000 people in the most vulnerable conditions (10,800 families) in the municipalities of Ayapel, San Marcos and San Benito Abad in the Momposina Depression region, with an area of 406,054 hectares, will benefit from solutions proposed by the project.	53,739 people, 29,943 women and 23,796 men (10,748 families), vulnerable to the effects of climate change, of whom 55.71% are women, in the three municipalities benefit from project activities and develop adaptation capacities. The project components have benefited the population of La Mojana in the following ways: Component 1: 44,860 people (21,928 women and 22,932 men) Component 2: 24,375 people (11,512 women and 12,862 men) Component 3: 8,312 people (3,901 women and 4,411 men) Component 4: 806 people (465 women and 341 men) and 50 public officials Of the total beneficiaries, 5,847 benefit from various components.
Number of hydro-climatological stations in La Mojana that report climate-related data as part of the national network.	- The project area has: a) two (2) automated flow stations connected to the IDEAM alert system (on the Cauca river, near the project area), b) five (5) pluviometric stations, c) two (2) weather stations, d) one (1) water level measurement station in the San Marcos lagoon and in the wetland complex, and e) one (1) water level measurement station in the San Marcos	- At the end of the project, have at least two (2) automated hydrological stations, two (2) automatic climatological stations, and five (5) automatic pluviometric stations, some with satellite transmission function.	- 11 conventional stations were replaced by automated stations, 4 of them hydrological and 7 meteorological. - Installation of 18 community limnometric measures. - IDEAM was delivered 3 INTEL SEOM E% servers, 4 workstations, and 4 laptops.

Indicator	Baseline	Project goals	Project achievements
	lagoon Ayapel and in the wetland complex.		
Number of local and regional institutions and actors that have access to information related to climate change and that then integrate it into their work.	- There is only one national tool for evaluating the effects of climate change.	- By the end of the project, at the local and regional level, direct access to information related to climate change will have increased in the three selected municipalities, as follows: a) three municipalities (Ayapel, San Marcos and San Benito Abad), b) three Municipal Risk Management Councils, c) two Departmental Risk Management Councils, d) two autonomous regional organizations (CARs), CVS and CORPOMOJANA, and e) Eleven (11) CBOs.	- Formation and updating of the committees regarding the Early Warning System (EWS). - Hydrodynamic modeling studies carried out by the Colombian Adaptation Fund were delivered to municipal, environmental, and higher education institutions within the project's area of influence. Their results were used for decision-making; for example, the relocation of a community (Santa Anita) in the municipality of San Benito Abad and the prioritization of channels for hydraulic rehabilitation in La Mojana. - Development of climate variability and climate change analysis for the La Mojana region; this information was disclosed and delivered to local authorities and grassroots organizations and has been used to improve decision-making. - Analysis of risk scenarios, shared and delivered to local authorities, CARs (representing the Organization of the Sinú and San Jorge Valleys) (CVS and CORPOMOJANA), and community associations participating in the project within the municipalities of

Indicator	Baseline	Project goals	Project achievements
			Ayapel, San Benito Abad, and San Marcos. - Comprehensive action plan for flood risk reduction. - Technical advisory services to the Sucre Governorate, CORPOMOJANA (Corporation for the Sustainable Development of La Mojana and San Jorge), (CVS (Autonomous Regional Corporation of the Sinú and San Jorge Valleys)), and the Ayapel and San Benito mayors, for the management and interpretation of the information generated by the project. - Final technical report.
Number of rural communities and local and regional institutions in the coverage area that benefit from an early warning system (EWS) that reduces the risks of extreme weather events.	There is no early warning system in the project area; the only ones are those of the Cauca River and those published by IDEAM through periodic bulletins. - CVS daily bulletins based on IDEAM reports.	- After five years, 100% of rural communities (6,440 women and 6,860 men) and local and regional institutions in the project area benefit from an EWS.	- The implementation strategy of the EWS has been developed within different communities of the municipalities of San Benito Abad, San Marcos and Ayapel. - For the EWS there are 27 organizations and 248 participants. - The construction of the Hydrometeorological Forecasting and Alerts Center facilities of La Mojana in CORPOMOJANA was completed. - Community workshops were held to update residents of the mapping of flood threats, evacuation routes, safe areas and

Indicator	Baseline	Project goals	Project achievements
			sites for the installation of minor monitoring equipment. - The operating equipment of the Hydrometeorological Forecasting and Alerts Center of La Mojana (3 computers, 1 UPS (uninterruptible power supply), 1 printer) was transferred to CORPOMOJANA. - An ABS 50W model KP-66USB megaphone was delivered to each of the 42 project communities. - The document containing technical specifications for the acquisition of the server was generated.
Percentage of households in La Mojana that benefit from infrastructure to control floods, disaggregated by the gender of the head of household	Provisional work in the Seheve area to control the floods and 146 affected families in 2010 in the towns of Sincelejito, Cecilia, and Seheve (Ayapel municipality). - Zero (0) infrastructure and 500 families affected in 2010 in the townships of El Pital, Cuenca and Las Flores (municipality of San Marcos). - Zero (0) infrastructure and 138 families affected in 2010 in the towns of Las Chispas, Pasifuere, Tosnobán, Chinchorro and El Torno (municipality of San Benito Abad). Note: The figures for the project baseline do not	At the end of the project, at least 50% of the families in the three selected municipalities benefit from infrastructure to control floods, as follows: - At least 50% of the families (1,543 men and 1,127 women) in the towns of Sincelejito, Cecilia, Rondón, Corea, Mata de Caña, Los Negritos, Cuchillo, Alfonso Lopez, Barcelona Caracolí, San Elena, and Las Marías (Ayapel municipality). - At least 50% of the families (3,323 women and 2,737 men) in the towns of El Torno,	3,586 families, including 15,603 people, of whom 7,285 are women and 8,318 are men, benefited from the hydraulic rehabilitation of the channels prioritized in the project area. Co-financing by CVS was achieved for the topographic survey and bathymetry of the San Matías channel for a value of 35 million pesos (COP). A report was generated on the analysis of alternatives for the use and management of sediments by the University of Córdoba, which details the procedure for stabilizing metals in sediments extracted from the San Matías, Pasifueres and Mosquito channels.

Indicator	Baseline	Project goals	Project achievements
	change, however, it is worth noting that they have been updated for 2012.	Campanito, Monosolo, Venice, La Mancha, Parcelas de la Gloria and Parcelas de Viloria (municipality of San Marcos) - At least 50% of families (801 women and 709 men) in the towns of Las Delicias, Pasifueres, Tosnovan and La Guaripa (municipality of San Benito Abad).	A total of about 32.35 km of channels were worked on, as follows: - Caño Pasifueres: 9.5 km - Caño Las Delicias: 8.65 km - Caño Mosquito: 10.2 km - Caño San Matías2: 13 km - A total of about 182,100 m3 of sediment was removed in the rehabilitated channels, as follows: - Caño Pasifueres: 46, 200 m3 - Caño Las Delicias: 39,900 m3 - Caño Mosquito: 56,000 m3 - Caño San Matías: 40,000 m3 - A total of 18 pedestrian crossings were built in the rehabilitated channels, as follows: - Caño Pasifueres: 9 - Mosquito channel: 2 - Caño Las Delicias: 6 - San Matías: 1 An unexpected result was the replication of the hydraulic channel rehabilitation measure in the communities of Venezuela (1.5 kms) and Las Chispas (1.2 kms) (in the municipality of San Benito Abad), in which macrophyte removal activities were carried out. A technical concept for the Sucre Governorate with guidelines for actions aimed at restoring the La Guaripa, Caracucha and

Indicator	Baseline	Project goals	Project achievements
			Bajo Puridad channel systems was created
Area (in ha) of rehabilitated wetlands that help reduce vulnerability to climate change.	- 250 hectares reforested with Acacia Magnum in 2004 along the La Quebradona stream in the Ayapel lagoon and wetland complex (Ayapel municipality). - 120 hectares reforested with oak trees in 2004, along the Muñoz, San Mateo and Trejos streams (municipality of San Marcos; most of the trees have been lost due to flooding in 2005). - No hectarage has been rehabilitated in the municipality of San Benito Abad.	At the end of the project, at least 700 hectares of the three main lagoon/wetland complex tributary systems were rehabilitated, as follows: - 550 hectares rehabilitated from the tributary system of the Ayapel swamp/wetland complex. The representative ecosystems of this sector are the San Jorge rivers that pass through the western side of the populated center of Seheve and the Cauca river, through the San Matías channel next to Sincelejito, with a wide network of drains; other important aquatic ecosystems, such as caño Viejo and Ayapel swamp stand out. The potential (affected) ecosystems selected for restoration include: Zapal Bajo del Latal, Zapal La Lucha, Caño San Matías, Zapal La Cienguita, Zapal Madre Vieja. - 75 hectares rehabilitated from the tributary system of the San Jorge river along the Santiago and Canoas stream. The representative	945 hectares of the tributary system of the three main prioritized wetland complexes for La Mojana rehabilitated in the following ways: - 200 hectares of rehabilitation for the municipality of Ayapel tributary system, under the San Jorge basin, and the tributaries of the Ayapel swamp, Viloria stream and San Matías stream, with influences from the Cauca river in extreme conditions of levee breakage. - 289 hectares of the tributary system of the San Jorge river at the height of the municipality of San Marcos in the Carate channel and the swamp complex of La Cruz, San Marcos, Pital, Cuenca and Las Flores. - 456 hectares of the tributary system of the San Benito Abad wetlands, the tributaries of Caño Rabón and the swamp complex of Cuiva, Las Tinas and Caños Pasifueres and Las Delicias. The achievement has been met in three methodological blocks: early forest rehabilitation, implementation from research of the ecology of Zapal with the implementing partner (Alexander von Humboldt

Indicator	Baseline	Project goals	Project achievements
		ecosystems of this sector are the Cienagas Cuenca or Costanera and Las Flores, Florida, although we also find small micro-basins such as the streams of La Hicotea, Los Emilianitos, Aguasclaras, Aguasprietas, Mabobo, and La Pita. - 75 hectares rehabilitated from the tributary system of the San Benito Abad wetlands. The Las Delicias and Pasifueres channels are identified as the main ecosystems and water regulators in the area. Potential (affected) sites selected for restoration include: Zapal Doña Polita, Caño Pasifueres, Zapal Los Beltrán, Zapal Boronbolo and Zapal Los Chávez.	Institute), and the implementation of measures with counterparts and community associations.
Number of local agroecological initiatives that are resilient to climate change adapted by communities (disaggregated by gender) in the project's target area.	The following are in progress in the Ayapel area: a) nine (9) test orchards built on stilts (known locally as "trojas") covering 0.86 hectares and benefiting 178 families. In the San Marcos and San Benito area, the following has been developed: a) productive corrals with twelve (12) community organizations, and b) Eighty (80) organic crops	At the end of the project, at least 7 local agroecological initiatives have been implemented in the target municipalities as follows: - 20 orchards have been built on stilts for the cultivation of vegetables and tubers (for example, onion, lettuce, yam, squash and tomato), which cover 2 hectares in the project municipalities and benefit 415	- 1,987 family gardens (orchards), with a total area of 90,872 hectares - 1,571 families with 2,660 hectares of transitory organic crops - 1220 families with a total of 2,761 hectares, sown in rice - Rural rice mills in El Pital (San Marcos), Las Chispas (San Benito) and Sincelejito (Ayapel)

Indicator	Baseline	Project goals	Project achievements
	in the river fords, which cover twenty (20) hectares.	families (996 women and 1,079 men). - 1,333 family gardens adapted to drought and flood situations that benefit the same number of families (3,370 are women and 3,295 are men). These are used for the cultivation of aubergine, tomato, sweet pepper, green beans, pumpkin, chives, cucumber, coriander, and medicinal plants. - 1,217 families established organic crops with the following varieties: corn 1,007 ha, beans 108.8 ha, pigeon pea 20 ha, plantain 14.52 ha, cassava 20.17 ha. This benefitted 6,922 men and 3,165 women. - 729.3 hectares of native rice resistant to local climatic conditions and mercury contamination, benefitting 1,217 families (6,922 men and 3,165 women). - 3 rice mills for post-harvest management, installed to store rice for periods of extreme weather, benefitting 1,423 families (3,272 women and 3,843 men).	- One fishpond in Cecilia (Ayapel) - 4 craft workshops (one per community)

Indicator	Baseline	Project goals	Project achievements
		- A fishpond that benefits 48 families, (110 women and 130 men), for the production of fish during periods of drought and mitigation of mercury contamination in fish. - A production program for natural artisan fibers that benefits 120 women from the three municipalities.	
Number of structural architectural adaptation measures carried out in the target area to reduce vulnerability to floods	- 10 educational units built on stilts in the communities of Cecilia (3), El Totumo (4), El Cuchillo (1), and La Coquera (2) (Ayapel municipality), with Ministry of Education support. - Proposal to build eight (8) classrooms in the municipality of Ayapel. - There are no adaptive housing units in the municipalities of Ayapel, San Marcos and San Benito Abad, although some designs have been developed.	At the end of the project, structural measures have been implemented in at least seventy schools and homes, as follows: - Fourteen (14) educational centers have adapted structural measures. The adaptations are aimed at providing children with water in times of drought. Benefitting (109 girls and 100 boys) - Five hundred one (501) houses have structural measures for adaptation (rainwater harvesting systems for times of drought). Benefitting 1,348 women and 1,157 men. The structures for water storage have flood risk management measures and are built above flood levels. - Eleven (11) communal buildings constructed and four	9 community centers completed (El Torno, Venecia and Cuenca in San Marcos, Pasifueres and El Chinchorro in San Benito Abad, in the department of Sucre and, El Cuchillo, Corea, Cecilia and Seheve in Ayapel, Córdoba) - 1 community center under construction, scheduled for delivery on August 31, 2020, under the responsibility of the construction company and the audit, and supervised by UNDP. - 14 educational centers with structural measures adapted to provide children with water in times of drought. -501 houses with rainwater harvesting systems for dry times

Indicator	Baseline	Project goals	Project achievements
		(4) vernacular housing models adapted to face the risks of floods.	
Number of hectares established with agro-forestry-pastoral systems in the project coverage area	- 50.7 hectares have been established with agro-forestry-pastoral systems for three users in the rural area of the municipality of Ayapel. - Zero (0) hectares in the municipalities of San Marcos and San Benito Abad.	- An additional area of 250 hectares established with the agro-forestry-pastoral system in the rural area of the project coverage area (100 hectares in the municipality of Ayapel, 75 hectares in the municipality of San Marcos, and 75 hectares in the municipality of San Benito Abad).	- 271 hectares established with agro-silvo-pastoral systems (138 producers distributed within 7 communities). - Three (3) model farms with three elevated tanks for water storage with a distribution network leading to the drinking fountains. - Seventeen (17) cows inseminated with straws of the Gyr breed. - Eleven (11) pregnant cows, for 65% effectiveness. - Fourteen (14) community monitors for biological monitoring. - Two (2) community monitors for plant and soil monitoring.
Number of public agencies and community-based organizations jointly involved in climate risk management and adaptation planning.	CARs (CVS and CORPOMOJANA) have Regional Environmental Management Plans (REMP) and Quadrennial Action Plans (QAP) to address climate change issues, but do not include strategies to reduce vulnerability nor adaptation considerations. - The Departmental Development Plans (DDP) for Córdoba and Sucre include strategic guidelines for risk management and disaster prevention, but do not refer to climate change and adaptation. - The three municipalities have Territorial Planning Plans (TPPs) and Municipal Development	- 25 community-based organizations (CBOs), including an association of female artisanal weavers, and community leaders from 3 municipalities (10 in Ayapel, 12 in San Marcos, and 3 in San Benito Abad, of which at least 3 are women) are strengthened through the creation of adaptation skills, and their communities are in coordination with local, regional, and national public organizations. - Nine (9) public institutions are strengthened and measures for adaptation to climate	- 42 communities in the three municipalities of San Marcos, San Benito Abad and Ayapel; 38 CBOs, including three (3) women's organizations (Asociación de Cuiva, Asofasan and Asocantor) and community leaders (155 rural promoters for adaptation to climate change) are strengthened. - 21 institutions from the 3 municipalities (San Marcos, San Benito Abad and Ayapel) strengthened in the implementation of adaptation and risk management tools regarding the effects of climate change, on issues related to best agro-ecological practices, the rescue of native seeds adapted to the Mojana

Indicator	Baseline	Project goals	Project achievements
	Plans (MDPs), which include strategic guidelines for risk management and disaster prevention, but only include a general mention of climate change and its effects (floods, landslides, avalanches, etc.).	change in the coverage area are promoted and coordinated with community organizations.	region, the ecological restoration of wetlands, EWSs, adaptive infrastructure and best livestock practices.
Number of local and regional plans that integrate adaptation to climate change considerations.	There are seven civil organizations (AGROPISCA, ASOPECE, ASODEPACA, ASOPESIN, ASOAGROLLERAS, ASONEGRITOS, and ASOPESPAL) in the municipality of Ayapel; however, they do not currently address the issue of adaptation to climate change. - There are eight civil organizations (FIDES, AGROMOJANA, COOAGRISANMARCOS, Comité de Mujeres, COPEVI, ACUASUCRE, Asociación de Pescadores, and SERVIPESCA) in the municipality of San Marcos; however, they do not currently address the issue of adaptation to climate change. - There are 38 civil organizations in the municipality of San Benito Abad, however, it is unknown how many are active. - There are 9 public agencies (MADS, IDEAM, CVS, CORPONOJANA, the departmental governments of Córdoba	Twelve (12) plans that incorporate climate change adaptation considerations: a) two PGARs (Solid Waste Environmental Management Plans) for CARs; b) two PACs (Quadrennial Action Plans) for CARs; c) two DDPs for departmental governments; d) three municipal POTs; and e) three municipal PDMs.	Climate change considerations have been incorporated into 11 plans: - 3 municipal development plans for Ayapel, San Marcos and San Benito Abad. - 3 land use plans for Ayapel, San Marcos and San Benito Abad. - 1 CORPOMOJANA action plan. - 1 departmental climate change plan for CVS. - 2 departmental development plans. - 1 risk management plan for San Benito. During the project, the Governor's Office and environmental authorities received support for the setting up of an agroclimatic roundtable on climate change in the Department of Sucre.

Indicator	Baseline	Project goals	Project achievements
	and Sucre, and the mayors' offices of Ayapel, San Marcos and San Benito Abad) with knowledge of climate change issues in the coverage area, but at present they are not adequately coordinated with community organizations.		
Government personnel (local, regional and national) and community members who effectively develop new techniques for reducing climate change risks (disaggregated by gender).	Basic course in emergency management for flood risks has been carried out for the communities of Cecilia, Sincelejito and Sejeve (municipality of Ayapel), Viloria (municipality of San Marcos) and Las Chispas (municipality of San Benito Abad) with the support of CARITAS - Germany, the Diocese of Sucre, Montelíbano (Sucre) and the National Social Ministry. The community has basic knowledge about ecological rehabilitation and houses, or other types of construction on stilts, but this has not been connected to having a lesser climate risk and to adaptation.	- At least 50% of the population in 11 communities (including approximately 3,170 women) in the project area; the three municipalities, the three Municipal Risk Management Councils, the two CARs, and the two Departmental Risk Management Councils (Córdoba and Sucre) have adequate knowledge of the measures for adaptation to climate change proposed in the project, including the interpretation and use of hydro-climatological information, wetland rehabilitation and conservation; agroecological practices, adaptive architecture, and their role in adapting to the impacts of climate change.	64% of the population of the forty-two (42) communities in the project's area of influence (33,084 people, of whom 59% are women) have improved their knowledge of adaptation to climate change and variability. Thirteen (13) training and educational programs have been developed to strengthen knowledge on the following topics: adapted agroecology, adapted self-construction, agroforestry systems, ecological restoration, water recovery, nursery education, organization and social cohesion, fish farming, accounting and administration, alert systems, and hydro-climatological monitoring, among others. To carry out this training, different techniques and tools have been used, such as workshops, meetings, method demonstrations, field trips, brochures, murals, film forums, and diploma courses, among others.
Lessons learned from the pilot activities in La Mojana were	- Zero (0)	- At least ten (10) lessons taught for each component of the project, including one	- Forty-two (42) lessons learned from the project shared with institutions affiliated with the National

Indicator	Baseline	Project goals	Project achievements
disseminated through the National Climate Change Policy (PNCC) and the Adaptation Learning Mechanism (MAA).		related to gender, are disseminated through the PNCC and the MAA.	Environment System and other national, regional and local institutions that deal with issues related to climate change in the country.

5. Problems, challenges and mitigation measures (environmental and social risks, the consideration of gender, and other risks)

RISK EVALUATION		
Identified risk	Actual state	Steps to mitigate risk
There is uncertainty about the local political will to incorporate adaptation measures into planning instruments.	Low	This risk was addressed by the project through constant accompaniment to strengthen climate change issues for national and regional institutions, thus achieving the incorporation of climate change considerations into planning instruments. Likewise, through the Ministry of Environment and Sustainable Development, the National Government launched in June 2017 the National Policy on Climate Change. This framework ensures that the issue of climate change is incorporated into local policies. The project focused its efforts on supporting the strengthening of the capacities of local authorities so that the problems of climate change are incorporated into administrative procedures. In this sense, training courses and the delivery of technical information to local authorities are ongoing. The authorities continue to show their commitment to the adaptation actions promoted by the project. This is evidenced by the invitation extended by the Office of the Governor of Sucre to local institutions to hold a Departmental Round Table on Climate Change. Likewise, the Department of Córdoba continues to promote the departmental round table, and local authorities have been providing support for the implementation of the project's actions.

RISK EVALUATION		
Identified risk	Actual state	Steps to mitigate risk
As a result of deforestation and conventional livestock farming practices, anthropogenic degradation continues in the region.	Low	The project addressed the mitigation of this risk with training processes for participating families that protect and conserve natural resources. Wetland recovery actions and the establishment of agroforestry systems were used to increase the level of commitment and awareness regarding the preservation of ecosystems. As a result, 108 letters of commitment were signed with the owners of the areas where the project promoted such actions, as well as the signing of 1,125 environmental and social safeguards, in which families commit to take care of the La Mojana ecosystem. Given the positive impact of the project on large producers through wetland recovery activities, agro-silvopastoral systems and flood control hydraulic works, five large producers are willing to replicate wetland restoration measures on their land. This was formalized by signing agreements for the protection of the project activity areas.
Decision-making processes are slow at local and regional levels.	Low	To generate commitments from public institutions, the project maintained direct communication with associated government agencies (National Adaptation Fund, National Planning Department (NPD), a Regional Environmental Corporation (CAR), mayor's offices, and governor's offices). Meetings were maintained with the project's advisory, technical, and management committees. The project strengthened coordination mechanisms with the different local entities. The advisory committee managed to strengthen the coordination of the institutions, thus facilitating decision-making. The creation of the project's technical and management committees were scenarios that contributed greatly to this. With the measures taken by the project, the level of risk decreased. The project's technical team transferred its base of operations to the municipality of San Marcos, thus having a workspace in the offices of the environmental authority (CORPOMOJANA), which made it possible to ensure follow-up of the processes developed with this entity.

RISK EVALUATION		
Identified risk	Actual state	Steps to mitigate risk
There is resistance on the part of some actors to the adoption of proposed measures	Low	This risk changed from medium to low, since the project managed to improve synergies with local entities through coordination and interrelated actions. The project shared information about the different adaptation measures as a way to guarantee the complete understanding of them and their implementation by the different actors who participated in the project. A closer and more fluid relationship was generated with local authorities in order to facilitate decision-making. In this sense, it was possible to work in coordination with local authorities. The creation of the committees proposed in the project ensured that decision-making be in accordance with the needs of the project, as well as the joint work of environmental authorities and local communities to incorporate ecosystem conservation measures and risk reduction strategies into their work.
Delays in the execution of financing at the regional level.	Low	To manage this risk and avoid delays, adjustments were made in the planning and operation of the project to ensure that the necessary resources were received at the times required. The project's technical and management teams ensured the correct planning of the project actions in order to avoid delays in the use of funds. Activities were carried out in relation to the follow-up processes within the implementation, planning and monitoring of actions, ensuring that information would arrive on time and disbursements would not be delayed.
The Government of Colombia does not have sufficient financial resources for the sustainability of the project's actions.	Low	The project made a great effort to involve different government institutions in the project's actions so that they could share and replicate the results and guarantee the sustainability of the project. The capacities of the following institutions were strengthened, guaranteeing the sustainability of the actions as follows: • IDEAM: expanded the meteorological and hydrological monitoring network by installing and operating automated hydrological stations and limnometric stations for stream monitoring. The inclusion of these stations within the IDEAM network guaranteed the generation of information and the maintenance of the stations. • The Humboldt Institute strengthened its capacities and knowledge within the restoration and conservation of swamp wetlands. The scientific information generated from this activity served as a reference point to intervene in other ecosystems in the country that had characteristics similar to La Mojana's.

RISK EVALUATION		
Identified risk	Actual state	Steps to mitigate risk
		• Local universities such as Cordoba, Sucre, Pontifical Bolivarian: signed agreements through the Humboldt Institute to support the restoration of wetlands and the transfer of methodologies and knowledge related to the restoration of the adaptable ecosystem. Through these actions, universities themselves can continue to implement research and restoration actions in the region. • National Adaptation Fund (NAF): the project provided support and technical assistance to the NAF as follows: 1. formulation of the La Mojana Action Plan. NAF has taken advantage of the project's experience to replicate some of the adaptation measures within the 11 municipalities of La Mojana. For example, the implementation of family gardens adapted to climatic conditions, the restoration of wetlands, (the Fund contributed USD850,000 to increase the project's restoration actions), and rainwater harvesting systems, among others. The Colombian government, through the Colombian Adaptation Fund, the Ministry of the Environment and Sustainable Development, and the Department of National Planning and other entities, have taken advantage of the project's impact to expand the adaptation measures promoted by the project, and have submitted a project proposal to the Green Climate Fund to support the 11 municipalities of the La Mojana subregion. The Colombian government, together with UNDP, obtained resources from the Green Climate Fund to replicate part of the most successful measures of the project in the 11 municipalities of La Mojana. National, regional and local governments have demonstrated their commitment to supporting these investments, which then guarantees the sustainability of the project. For its part, the University of Córdoba carried out a diploma course to train local professionals in matters related to climate change. Despite a change of government in Colombia, which produced changes in the positions of Ministry of Environment officials and members of the Steering Committee, the project was able to continue its implementation. The formulation of 3 projects submitted to National Funds was supported as a way to guarantee the sustainability of components 1 and 2's actions. The projects formulated are 'Continuity of the Forecast Center', a project about the recovery of water dynamics, and a bioengineering project. In order to continue the project's actions and extend them to all

RISK EVALUATION		
Identified risk	Actual state	Steps to mitigate risk
		municipalities in the La Mojana region, the effective execution of the Green Climate Fund project began in 2019.
Influence of the Hidroituango Hydroelectric Plant	Medium	The risk of overflow from the Hidroituango hydroelectric power plant during high rainfall seasons could cause potential floods in some communities linked to the project. Similarly, given the unexpected events that occurred in 2018, the potential risk of dam collapse was expected. Despite the fact that the project's communities are located downstream from the dam, the project's forecast and early warning center was monitoring the evolution of the condition of the dam in order to take appropriate measures in advance.
Displacement of communities to other areas.	High	This risk remained high during the project execution stage due to the presence of new armed groups in the project area, which has increased the risk of displacement. Therefore, the risk is associated with the security conditions that have been present in the area, where threats have been issued and where there has been a greater presence of armed actors and land dispossession, among other things. To manage this problem, the project strengthened its participation in the communities by incorporating more professionals who could provide more regular and closer technical assistance to families in adapting the proposed measures. These measures were effective in maintaining motivation and promoting the participation of communities within the project's actions. To ensure that security conditions do not jeopardize the development of activities, the project participated in departmental guarantee meetings, in which regional authorities participate and where periodic context analyses and preventive measures are carried out to help protect communities. In addition to this, the project maintained a permanent presence in the communities, providing technical assistance to families. During the project implementation period, no displacements or dangerous situations were reported that indicated any displacement of the population within the project's area of influence. The project continued taking measures to avoid any risks for the technical team and the communities. The actions that were carried out included greater visibility of the project's presence in the territory and the commitment of recognized social actors in the area, such as Corpoayapel, Fedearroz, Pastoral Social, and the commitment of the departmental guarantee boards, among others.

RISK EVALUATION		
Identified risk	Actual state	Steps to mitigate risk
There is weak governance and security in the region	High	This risk remained high despite having signed the peace agreement in Colombia. Security in the project area was affected by the presence of dissident groups and criminal gangs in constant conflict around disputing territorial control. To mitigate this risk, the project team strengthened its knowledge of security measures. Close communication with local communities and authorities was kept constant, so that any unsafe situation could be anticipated. During the execution of the project, it was necessary to evacuate personnel from the communities two times due to the presence of illegal groups. In 2019, the presence of illegal armed groups was heightened, especially in reference to the construction of community centers. The management of this concern was direct intervention with the support of the United Nations Security Office, with the aim of achieving greater participation of local administrations and communities and as guarantors to providing minimum security conditions for construction personnel and project equipment. As a result of this measure, community centers are still in the construction phase. The project team carried out the application of security protocols established by the UN office in Colombia and which follows UN security procedures based on national risk assessments; this includes the presence of a national security officer and training for UNDP and project staff. In addition, the project team participated in the departmental guarantee board, where there is constant monitoring of the security situation in the area. This monitoring allowed the team to have the necessary information to implement security measures in case they were necessary. In order to manage this risk, the following actions were carried out in coordination with the security office and with local counterparts in 2019: - Permanent monitoring of the security situation in the region - Generation of trust ties with the communities to obtain prior information that facilitates decision-making - Training in security measures for all personnel - Strict compliance with all security regulations for the ONU - Accountability on the contributions that the project provided to each of the communities and families - Support was provided to the SBV beneficiary associations in the transparent management of resources, training and accountability. Likewise, compliance with the requirements of law that each of the associations must meet was promoted.

RISK EVALUATION		
Identified risk	Actual state	Steps to mitigate risk
Presence of mercury in the soil and water in the area of influence, which could affect productive initiatives at the local level.	High	To address this risk, the project carried out the following actions: - A study was carried out to establish the traceability of mercury contamination. - Sharing of best practices within communities to mitigate the contamination of soil, water and crops. - An inventory of rice species that are resistant to mercury contamination was made. - An inventory of best practices was made to mitigate mercury poisoning through fish consumption. In addition to the above, the project sought to coordinate with the Colombian Adaptation Fund, CORPOMOJANA, and the University of Córdoba, so that the results of technical studies and the mitigation measures generated on heavy metal contamination were shared with the communities of La Mojana, and so that a best practices campaign could be implemented for communities to reduce their risk of contamination. For this, educational workshops were held in the project's communities of influence. Monitoring and management of mercury contamination was carried out constantly throughout the duration of the project. Some mitigation measures were also implemented in restoration areas where evidence of this metal was found; best practices developed included the application of quicklime and liquid humus to stabilize the mercury present in sediments that were somehow manipulated during rehabilitation activities.

RISK EVALUATION		
Identified risk	Actual state	Steps to mitigate risk
Periods of extreme drought caused by the presence of El Niño, in addition to the accentuated climatic vulnerability due to the transition from El Niño to La Niña.	High	This risk was addressed by the project by establishing rainwater harvesting systems for both households and communities in order to guarantee water supply for the home. Technical assistance regarding adaptation measures that benefit crops was also provided to families. This included agroforestry and mixed farming techniques, shade planting, and drip irrigation. Similarly, analyses of rainfall were carried out on the basis of information provided by the Adaptation Fund in order to obtain information that would give precise guidance to the communities on measures to be adopted. In coordination with agroclimatic groups in Sucre and Córdoba, agroclimatic bulletins that took into account regional predictions were disseminated, an action carried out in cooperation with the local authorities. In addition to the measures described above, the project focused its community work on agricultural techniques to help recover degraded soils. Soil studies were carried out to determine the requirements for applying special treatment and avoiding degradation. The project carried out a strict planning of activities in order to take advantage of the dry seasons necessary to carry out hydraulic work as well as for the construction of community centers. Similarly, planning measures were implemented so that the restoration actions corresponded to the rainy seasons. Monthly participation within the agroclimatic groups was maintained with the purpose of monitoring the climatic conditions in the region. The project also placed special emphasis on the optimal use of water, making use of handmade irrigation systems, covered with vegetation, in order to keep crops in optimal condition. To this end, talks and workshops were held on the importance of planning crops according to weather seasons.

Gender considerations:

The project "Risk Reduction and Vulnerability to Climate Change in the Momposina Depression region of Colombia" includes the participation of men and women, where 52,160 people benefited, of whom 29,226 are women and 22,934 men. Forty-two (42) communities in the project's area of influence, of which 59% are women, have improved their knowledge of adaptation to climate change and variability. Due to the strong impacts of climate events in areas

such as La Mojana, as it is a territory with the presence of constant risk factors against droughts and floods, efforts had to be made for the different communities present in the territories. These efforts adopted climate change adaptation strategies that would allow communities to reduce the vulnerability to which they have been exposed.

In this exercise, the role of rural men and women from the different communities that implemented climate change adaptation measures was important.

Both within the cultural dimension, as well as within the political, economic and social dimensions, there is unequal access based on gender and that has generated gaps and social exclusion. Understanding this situation allowed the project to reveal that the problems generated by the effects of climate change affect and manifest themselves differently in men and women; the latter having a higher level of vulnerability, which in turn is the result of latent social exclusion and inequality in each of the aforementioned dimensions.

From the beginning of the project, the role of women was considered essential to guaranteeing the resilience of the community in the region, taking into account the particular vulnerabilities faced by women who manage the impacts of climate change in their homes and communities. The project identified the potential of women to leading the communities' restoration activities; from here, capacity building strategies were designed for the management of forest nurseries and the creation of seed banks of resistant local crops.

In alliance with the University of Córdoba, women were trained to become rural promoters of climate adaptation. These women have improved the productivity, sustainability and profitability of their own farms, and have fostered the widespread adoption of practical, affordable and locally relevant smart climate techniques.

Furthermore, the project supported the country's first "platform for rural women and climate change". This platform opened spaces for women to participate and connect as part of a greater community of action. Women from La Mojana have found themselves in leadership positions and have noted gradual changes in their ways of life which have allowed them to explore new ways of relating to their families, their territories, the family economy, their communities and to other women with similar interests.

For this reason, the project fostered debates around climate change, with a gendered focus that allowed for understanding the effects and problems that affect both men and women. Not only this, but it also assumed strategies that resignified the leading role that women have, from their close relationship to nature, in the mitigation and adaptation of their territories to climate change. This gives them a privileged place to understand other ways of relating to their environment, from a perspective of protection and care.

6. Lessons learned

Adaptation lessons	Answer
What have been the lessons learned, both positive and negative, in the implementation of climate adaptation measures that would be relevant to the design and implementation of future projects / programs to improve resilience to climate change?	**Medium-term:** This project designed its intervention strategy taking into account the issues relevant to people's lives and that could be improved with the implementation of adaptation measures to climate change, such as promoting a dialogue between community proposals and technical solutions that generate greater promotion of the actions implemented. On the other hand, addressing the main problems that communities had allowed for easier progress in actions related to ecosystem issues, with ecosystem-based adaptation being the result of community-based adaptation. Projects that seek to reduce the risks and vulnerability to climate change must have the minimum technical information required for their formulation, such as a case study of climate change scenarios, prior to the definition of activities and intervention goals. Vulnerability reduction requires information, with a sufficient level of detail, of socioeconomic aspects that condition the viability for some activities, such as: the restoration of ecosystems and the social use that the community makes of them, and the design and construction of adaptive infrastructure. In the case of La Mojana, land tenure has been an unforeseen obstacle to the restoration of wetlands, the implementation of community gardens for self-consumption, and the construction of homes and schools.
	Finished project: Promote a dialogue with regional and national academic institutions, so that the information and knowledge generated by the project can be used, and can thus enrich, with scientific dissertations, the theoretical, methodological and conceptual debate around the adaptation to climate change approach. In order to facilitate the positioning of the technical approach of the project as a model for reducing vulnerability to climate change, members of regional universities should be included in the technical committees of the projects. Respect for the roles of each institution, the institutional interests that coincide with this, the generation of knowledge, the complementary technical capacities between the institutions, transparent financial management, acquisition processes with international standards, the Grant scheme, the participatory approach, the connection and leadership of women and last but not least, the professional and human commitment of all involved, have been key factors in achieving the high levels of effectiveness, impact and sustainability that the evaluation exercise has found.

Adaptation lessons	Answer
What is the potential for the climate resilience measures undertaken by the project / program to be replicated and expanded both within and outside the project area?	**Medium term**: The project systematized its experience and generated learnings that have been shared continuously. Regional universities participated in the execution of the project, not only documenting the experience, but also replicating their learnings in other municipalities. Likewise, the methodologies used for the restoration, recovery of channels and Early Warning Systems are being shared and used by the Regional Autonomous Corporations, universities, research centers and other institutions. On the other hand, the project had a communication strategy that aimed at promoting the sharing of knowledge in different areas; seeking, in a first phase, a greater collective awareness of the challenges that communities and institutions had to face regarding climate change and second, the replication and increase in scope of the measures implemented. As a result, a series of technical publications regarding the project were edited and designed, which included primers, case studies and technical notes; press management was carried out that allowed visibility of the progress of implementation within the media, visits were made by decision-makers, and content was generated for different platforms (exposure, medium, etc.). This helped to achieve greater dissemination of best practices and lessons at an international and regional level. For example, the project scaled the lessons learned in a new initiative financed by the Green Climate Fund and, based on the experience of the seed bank, El Salvador in Central America decided that it would replicate this model with its own restoration project, beginning in 2020.
	Finished project: The final evaluation of the project shows that agroforestry and pastoral activities are those that, due to their own ability to generate substantial income, have the highest probability of being maintained over the years and that they can be consolidated as productive techniques practiced by small and medium-sized ranchers. Taking into account the interventions carried out with the most vulnerable populations (rice crops and fishponds), the potential for replication in the medium and long term is also highlighted; this is as long as the communities can access resources that allow them to acquire the necessary material. Due to the high degree of appreciation and involvement expressed by its members, the final evaluation of the project shows that the field activities carried out with and in the communities have a good level of financial sustainability. This level is reflected in improvements in

Adaptation lessons	Answer
	agricultural and fisheries production that allows for the generation of additional savings for people, and in this sense, replication is guaranteed autonomously. Another intervention highly appreciated by the beneficiaries was the training provided for the associations that participated in the project on how to formulate small community projects. At the time of the final evaluation, some of these associations were already in the process of formulating new projects to manage resources before different official instances.
What have been the lessons learned, both positive and negative, in the implementation of specific adaptation interventions that would be relevant to the design and implementation of future projects / programs that implement specific adaptation interventions?	Ecosystem- and community-based adaptation is a gradual process that takes time to consolidate at the local scale. In order to establish intervention strategies, incorporating and adapting the interpretation of La Mojana as an adaptable territory, of transitions, and dynamic in time and space, took more time, but guaranteed differentiated implementation according to the particular conditions of the region. Consequently, it also guaranteed successful community adoption and sharing that is evidenced in the replication of the experiences by other communities that were not linked to the process. In a territory like La Mojana, the implementation of actions to reduce the vulnerability of the communities has been carried out gradually. This is because it was necessary to develop technical-scientific models to justify intervention actions that really had an impact and were effective, according to the geographical and social conditions of the region. Likewise, due to the training and accompaniment processes that were necessary to generate trust and commitment, the process of linking skeptical communities to the institutions was gradual. Within these training processes, another factor that influenced the delays has been the adoption of new productive, cultural, and relationship practices with the territory. The comprehensive intervention approach, with new teaching strategies and a technical, scientific, and community approach, has marked a change with respect to traditional approaches to understand the adaptive territories of the country and specifically of the region, which were previously based on the paradigm of floods as a problem to be solved with containment infrastructure. Starting from the conjuncture of the floods in 2010-2011, an opportunity was presented to rethink these old paradigms from different levels of decision-making and incidence, in such a way that the project created scenarios to intervene in the territory from a new perspective. This new perspective has, so far, proved to be more adaptive to hydrological, eco-systemic and cultural dynamics, and therefore, the rapid recovery and empowerment of the living conditions of local communities. The respect of the roles of each institution involved in the implementation of the project, the institutional interests that worked towards a common objective, the generation of knowledge, the

Adaptation lessons	Answer
	complementary technical capacities between the institutions, transparent financial management, the acquisition processes with standards international, a support system for community associations through the Grants, the participatory approach, the spontaneous involvement of women in activities, and last but not least, the professional and human commitment of all involved, proved to be factors key to achieving high levels of effectiveness, impact and sustainability.
What would you consider to be the most successful aspects for the target communities?	Being the protagonists in the implementation of adaptation measures, since the vast majority of the actions developed by the project were carried out by the communities, especially measures such as agro-silvopastoral systems, channel rehabilitation, ecosystem rehabilitation, and adaptive infrastructure.
	Participating in project decision-making through the advisory committees.
	The training of expert local nursery-people, with many of them represented by women, as well as the promotion of seed banks for horticultural production and restoration with native species, stand out as great project achievements that are highly valued by the communities.
	The rehabilitation of channels is undoubtedly one of the most important aspects for the communities - firstly because of what this measure represents to reducing their vulnerability to floods in a region like La Mojana, that is highly vulnerable to these phenomena, and secondly, because it was a measure where the communities were the protagonists.
	The constant training developed by the project was an aspect highly valued by the communities, since it allowed them to greatly improve their capacities and knowledge in the face of reducing their vulnerability to the effects of climate change.
	Another aspect of the project valued by the communities were the agro-silvopastoral systems. This measure, in addition to contributing to the rehabilitation of wetland ecosystems, allowed for the improvement of livestock productivity for the small producers in La Mojana.
What measures have been implemented to guarantee the sustainability of the results of the project / program?	The generation of knowledge based on a technical-scientific approach undoubtedly represents the base element of the project's sustainability. In fact, this allowed all the actors, including the communities, to solidly appreciate and understand the challenges that the project was facing. At the same time, this type of approach deconstructed the typical approach of channel rehabilitation that had been applied in La Mojana for many years (based on the paradigm of flooding as a threat, which provided for the construction of infrastructure such as levees and dikes) and which had no effective result for improving the living conditions of communities. In fact, over the years, some of this infrastructure has been destroyed, representing a loss of public investment. The generation of knowledge and the training of the beneficiary communities also represents a sustainability strategy. Recognizing communities as the engines of their own development and as agents of change has turned out to be a concept understood by all the actors

Adaptation lessons	Answer
	encountered during the evaluation mission. The strengthening of the associations present in the territory through the Grant schemes adds to this concept and constitutes a key instrument for managing the project; more specifically, the importance of the associations as a point of entry to the communities and as implementation support, as well as a strategic element to increase the degree of sustainability, due to the importance of the leadership of the associations to induce change. In fact, UNDP's model for project management and implementation enabled communities to be directly linked within risk management and climate change adaptation actions. The involvement and strengthening of the different institutions at the local level represented an implementation and sustainability strategy. This type of strategy is considered appropriate to obtaining a higher level of sustainability for all institutional actors in Colombia.
What measures are / could have been implemented to improve the results of the project / program?	Generating all of the necessary prior technical studies, such as hydrodynamic modeling, that allows stakeholders to access very important information, especially considering the behavior of floods, for the implementation of adaptation measures. From the beginning of the project, a clear strategy for the transfer and long-term financing of the Forecast Center by IDEAM and CORPOMOJANA should have been defined, allowing for the sustainability and ownership of the forecast center. Including members of regional universities in the technical committee of the project would have improved not only communication channels but encounters between the technical and technological transitions provided by the project, and the interests, approaches, and work trajectories of the organizations in the region. Having developed a large-scale communication strategy would have made it possible to disseminate the bulletins of the Forecast Center beyond the departmental and municipal risk management committees and the most vulnerable communities, reaching other less vulnerable communities that could have also taken advantage of the information, as well as other stakeholders in the region interested in the information.
How has the existing information / data / knowledge been used to inform the development and implementation of the project? What types of information / data / knowledge were used?	The results of the hydrodynamic modeling of La Mojana, generated by FA Colombia, was information that the project used to make decisions in the implementation of the measures, especially in relation to the behavior of floods associated with the elevation of flooding that allowed to define crop planting areas and restoration actions, also the height of the adapted vernacular infrastructures and, finally, for the prioritization of the pipes to be rehabilitated as a measure to reduce the vulnerability of communities to floods. Another source of secondary information used by the project for the implementation of the measures was taken from the municipal development plans and the CORPOMOJANA action plan, which allowed

Adaptation lessons	Answer
	for the definition, according to the land vocation, of the areas where agro-silvopastoral systems would be implemented. Furthermore, the previous studies carried out by the FA on some channels of La Mojana served as the basis for the development of the hydraulic channel rehabilitation strategy carried out by the project. For the implementation of the agro-silvopastoral systems, the information generated by the sustainable livestock strategy was taken into account, including its sustainability indicators model, led by the Colombian Livestock Federation and the experiences of AGROSAVIA, the University of Córdoba and the University of Sucre, specifically with forage species adapted to the conditions of La Mojana.
If learning objectives have been established, have they been met? Please describe.	The objective of the project in training topics was aimed at strengthening the capacity of institutions and organizations at the national, regional and local levels in order to implement climate change adaptation measures; in order to replicate the activities and lessons learned, the results were the following: - 42 communities in the three municipalities of San Marcos, San Benito Abad and Ayapel; 38 CBOs, including three (3) women's organizations (Asociación de Cuiva, ASOFASAM and ASOCAMTOR) and community leaders (155 rural promoters for adaptation to climate change) strengthened. - 21 institutions from the 3 municipalities (San Marcos, San Benito Abad and Ayapel), strengthened in the implementation of adaptation and risk management for climate change effects, on issues related to best agro-ecological practices, the rescue of native seeds adapted to the Mojana region, the ecological restoration of wetlands, EWS and adaptive infrastructure, and best livestock practices. The final evaluation of the project reflected significant compliance with the proposed results; the project benefited 64% of the population of the 42 communities within the project's area of influence and 33,084 people, of whom 59% are women, have improved their knowledge of adaptation to climate change and variability. Thirteen (13) training and education programs were developed to strengthen knowledge on the following topics: adapted agroecology, adapted self-construction, agroforestry systems, ecological restoration, water recovery, nursery work, organizational and social cohesion, fish farming, accounting and administration, EWS, and hydro-climatological monitoring, among others. To carry out the training processes, different methodological tools were used, such as workshops, meetings, demonstrations of methods, field trips, pathways to learning, brochures, murals, film forums and diploma courses.

Adaptation lessons	Answer
Describe any difficulties you have had in accessing or retrieving existing information (data or knowledge) that is relevant to the project. Provide suggestions to improve access to relevant data.	Access to hydro-climatological information in the La Mojana region within the last 30 years was one of the difficulties that the project had in accessing information, not because of refusals by the institution in charge of the management of this information in Colombia, which for this case is the Institute of Hydrology, Meteorology and Environmental Studies (IDEAM), but because of the low coverage that the region of La Mojana had in automated hydro-meteorological stations. This was a situation that represented a challenge for the project, since much of the information was not systematized and another large part did not exist, which made it difficult to develop the climatic variability analysis. With the La Mojana forecast and alert center, and the automation and installation of 11 stations for the measurement of climatic variables connected to the IDEAM network, more climate information will be available to develop analyses of forecasts and alerts; this will be useful for decision-making for different sectors of the region.
Has the identification of the learning objectives contributed to the results of the project? In what ways have they contributed?	By identifying weaknesses in issues related to climate change, climate variability, risk management, adaptation measures and community organization, the project generated different methodological tools, content and training objects, that facilitated the learning of these issues with the participating communities. In turn, this allowed for greater awareness, understanding and sharing of the adaptation measures promoted by the project.

7. Impact on Vulnerable Communities

At the community level, the project was very relevant for all the people in particular communities through the terminal evaluation identified two main dimensions of relevance: food security and productive capacity (including handicrafts). During the evaluation, it was demonstrated that the approach to create and strengthen capacities in the communities was relevant and is a key factor for the sustainability of the project itself. It is clear that the two dimensions have different impact on the communities depending on the geographical and economic conditions that characterize each community.

The project hence developed activities to foster the social and economic inclusion of the beneficiary population through various approaches and its success was demonstrated through it various results (seen particularly in Output 3) that directly contributed to reducing vulnerability to climate change.

Strong management, an approach with the community and teaching the importance of restoring ecosystems were very important. To this end, the technical team has delivered workshops, and has created community-managed seed banks as an essential measures for the wetland rehabilitation process. The training of expert local nursery workers, with many of them represented by women, as well as the promotion of seed banks for horticultural production and restoration with native species, stands out as some of the great achievements of the project and that were highly valued by the communities.

Another successful aspect of the project with communities was the the visibility of female leadership. It is worth noting the way the project has made women- who previously had no participation in their communities at all-become leaders of processes currently taking place in their communities. Additionally, they have decided to develop a rural women and climate change platform in an autonomous and free manner, which is a space where they can influence local public policies so that climate change matters are included in regional and local agendas. Being the protagonists in the implementation of adaptation measures was a highly valued aspect for the communities. This due to their participation in most of the actions developed by the project, especially measures such as agro-silvopastoral systems, channel rehabilitation, ecosystem rehabilitation and adaptive infrastructure; these added to their participation in project decision-making through the advisory committees.

The rehabilitation of channels has also been an important aspect to benefit the communities; firstly because of what this measure represents to reducing their vulnerability to floods in a region like La Mojana that is highly vulnerable to these phenomena, and secondly, because it was a measure where the communities had broad participation. Finally, agrosilvopastoral systems, this measure in addition to contributing to the rehabilitation of wetland ecosystems, allowed the improvement of the productivity of the livestock activity of small producers in La Mojana, at the end of the project it was evident that the communities on their own initiative they replicated this measure.

8. Long term institutional capacity

In the context of climate change, adaptation actions were carried out at the institutional as individual interventions. The project represented the opportunity to facilitate and articulate the efforts of many actors to implement actions at different levels of management: from national to community. This situation allowed the degree of relevance of the project to be very high for all the actors involved. According to the project's terminal evaluation, the project left an installed capacity in the institutions, especially those of national order, in terms of their interaction and management to coordinate the generation of high-level scientific and technical knowledge for decision making.

At the national level, the project has substantial strategic relevance for other institutions. In fact, the project has contributed to the establishment of the National Modeling Center of IDEAM covering a real need at the country level concerning the capacity of generating information with a high technical value. The IDEAM has carried out outside the project framework, hydrodynamic modeling of other areas of the country, replicating what has been learned through the project in its institutional work practice.

To the thematic, institutional and strategic relevance, the project also added a high degree of methodological relevance; that is to say, the implementation mechanisms guaranteed a generalized active and factual involvement of all stakeholders, and including communities (see section 3.3. "Efficiency"). It is important to highlight that hydro climatic modelling facilitated the approach of national institutions to regions and communities around issues of adaptation to climate change and risk management, since it provided a solid technical basis with detailed, adequate and relevant information to plan all project intervention actions.

The comprehensive ecological restoration model implemented through component 2.2 of the project, was the first pilot in Colombia to make large-scale lowland tropical wetlands. This exercise

was also a pioneer for Latin America and served as a platform for the implementation of a rigorous technical, scientific and participatory approach to ecological restoration. Due to its pioneering dimension, restoration is considered as an element of great relevance for the institutions involved since it laid down the approach for future research and implementation. From this point of view, the relevance for IAvH is unquestionable since it could be positioned as the first research institution that led this type of work in Colombia. Minambiente, IAvH and UNDP have taken advantage of the work done to document the experience of restoration / rehabilitation of wetlands through an institutional publication. This publication will allow the knowledge generated by the project to be publicly accessible.

9. Sustainability, scalability and replicability

The importance that the participating families gave to the project, supported by the relevance and pertinence of the adaptation measures promoted, were key factors for the sustainability of project actions; this will allow adaptation measures to be replicated and staggered, not only by the families, but at the national, regional and local institutional level. Added to the above are other aspects addressed in the implementation that will allow the project to have a horizon for the sustainability of actions, among which the following are highlighted:

- The positive results of the project allowed the management and approval of a new project financed with resources from the Green Climate Fund, which will allow the adaptation measures promoted by the project to be staggered and replicated in the 11 municipalities of the La Mojana region. This will allow for the building of capacities on adaptation to climate change on a larger scale.
- The generation of knowledge based on a technical-scientific approach undoubtedly represents the basic element of the project's sustainability. This, in fact, allowed all the actors, including the communities, to appreciate, in a solid and precise way, the challenge that the project faced. At the same time, this type of approach deconstructed the typical channel rehabilitation approach that had been applied in La Mojana for many years. This was based on the paradigm of flooding as a threat, which led to the construction of infrastructure such as dams and levees and it had no effective results for the improvement of living conditions of the communities. In fact, over the years some of this infrastructure has been destroyed, representing a loss of public investment.
- The generation of knowledge and the training of the beneficiary communities also represents a sustainability strategy. Recognizing communities as the engines of their own development and as agents of change has turned out to be a concept understood by all actors. The strengthening of the associations present in the territory through the Grant schemes adds to this concept and constitutes a key instrument for managing the project (the importance of the associations as a point of entry to the communities and support for implementation), as well as a strategic element to increase the degree of sustainability (due to the importance of the leadership of the associations to induce change). In fact, the UNDP model for the administration and implementation of the project allowed the communities to be directly linked to actions around risk management and adaptation to climate change.
- The involvement and strengthening of the different institutions at the local level represented an implementation and sustainability strategy. This type of strategy is

considered appropriate to grant a higher level of sustainability for all institutional actors in Colombia. The production of local and regional plans that integrated considerations of adaptation to climate change represents a sustainability strategy based on the achievements that the project sought to achieve.

- The project has not designed a specific strategy that addresses financial sustainability. This situation does not represent a problem in itself, due to the size of the global results, with the exception of the Forecast Center and the SAT. Although, at the time of closing, the project does not have the official long-term financing of the Forecast Center defined (by IDEAM and CORPOMOJANA), the resources obtained by CORPOMOJANA through the Environmental Compensation Fund are an alternative to solve its financing in the medium term. In addition, there is also GFC financing that guarantees continuity of operation in the medium term. In this context, it is identified that the new GCF project is key to ensuring a financial transition process for the forecast center while the official institutions of its operation (IDEAM and CORPOMAJANA) define the official mechanisms for resource mobilization that can guarantee its long-term sustainability.
- Regarding the maintenance and operation of the installed hydro-meteorological measurement stations, it is understood that they will continue to function after project closure, as they are already integrated into the IDEAM network of stations.
- Due to the high degree of appreciation and involvement expressed by its members, the final evaluation showed that the field activities carried out with and in the communities have a good level of financial sustainability. This level is reflected in an improvement in agricultural and fisheries production that allows for the generation of additional savings for people, and in this sense, replication is guaranteed autonomously. Another intervention highly appreciated by the beneficiaries was training provided for the associations that participated in the project to formulate small community projects. At the time of the evaluation, some of these associations were already in the process of formulating new projects to manage resources before different official instances.
- The final evaluation showed that agro-silvopastoral activities are those that, due to their own ability to generate substantial income, have the highest probability of being maintained over the years and that they can be consolidated as productive techniques practiced by small and medium-sized ranchers. Taking into account the interventions carried out with the most vulnerable populations (rice crops and fishponds), and as long as the communities can access resources that allow them to acquire the necessary material, the potential for replication in the medium- and long-term is also highlighted.

Other measures promoted that will contribute to the sustainability of the actions are aimed at the different alliances that the project established with public and private institutions, such as unions in the region, academia, and environmental authorities, among which the following are highlighted:

The project managed to generate great alliances with various sectors, specifically with the Arrocero-FEDEARROZ guild and the University of Sucre, where it was possible to implement 68 hectares of Creole rice and certified varieties adapted to La Mojana with the AMTEC technological package. This allowed the area to have large reductions in the use of agrochemicals, seeds, and use of water, as well as an increase in production that is reflected in a higher income for families. Through the guilds-academy-community associations alliance, a great contribution is generated for the sustainability of the measures, especially since, on the one hand, there is support in the technical assistance provided by FEDEARROZ and, on the other hand, with the academy, support is provided to implement technological measures that reduce the vulnerability of crops to the effects of climate change.

With the University of Córdoba, one of the community associations participating in the project signed an agreement to receive support in monitoring ecological restoration of wetlands actions. This agreement allowed for the generation of capacities in the communities to identify the services provided by this measure, but also for those biological indicators that show the improvement of the conditions of the areas under restoration.

In the natural fiber handicraft, where 134 women participated, coordination was achieved with Artesanías de Colombia, a mixed institution that provides support to the artisanal sector in Colombia. They provided advice to women artisans in the design and management of networks and marketing. Furthermore, Casa Caribe, a private company, supported with the promotion and sale of handicrafts.

With the National Learning Service (SENA), support was provided for the group of artisans to strengthen the administrative and financial management of the initiative, including the donation of some materials for the creation of handicrafts and support for participation in different business fairs at the local and regional level. As a result of this support, the creation of a community organization was also achieved, which will allow artisans to have an organizational structure that improves the promotion and commercialization of handicrafts, as well as the management of resources and alliances in favor of the sustainability of actions.

Finally, it is noteworthy that one of the community organizations participating in the project (ASOPASFU), participated in a national call that aimed to support other communities in the country in restoration issues. This call was made by the small donations program of GEF and UNDP, and is how ASOPASFU is selected. At the time of this report, they are providing guidance on issues of ecological restoration of wetlands in the Cienega de Zapatosa and Barbacoa communities, work that allows for the replication and staggering of the project-driven measures.

8. Project expenses

Estimated cumulative total disbursement as of March 31, 2020	**7,850,974 USD**
Add any comments on AF Grant Funds. (word limit=200)	Project Budget USD 7.850.974 Current expenditures USD 7.663.485,60 Commitments USD 188.305,39 Balance USD 117,73 Variance notes: The remaining current balance and any balance from closed PO will be given back to the donor with the closure budget revision, which will be done once the final CDR can be disclosed.

Adaptation Fund

United Nations Development Program

Annual Statement of Investment Income Earned

for the period Ending December 31, 2019

(in US Dollars)

UNDP PIMS ID	Beneficiary Country	Business Unit	Project Award ID	Project Output ID	Project Title	2011	2012	2013	2014	2015	2016	2017	2018	2019	Grand Total

Please note we did not fill in section 8 given that we received resources via ASL therefore the investment income earned is not managed from Colombia. Please let us know if you require any further information on this regard.

Manager / National Project Coordinator	
Name:	Jimena Puyana
E-mail:	Jimena.puyana@undp.org
Date:	July/31/2020
DA Government	
Name:	José Francisco Charry Ruíz
E-mail:	jcharry@minambiente.gov.co
Date:	July/31/2020
Implementing entity	
Name:	Wilber José Ramírez Campo
E-mail:	Wilber.ramirez@undp.org
Date:	July/31/2020