

Adapting to
CLIMATE CHANGE
through Integrated
water management
IN PANAMA

INCEPTION
REPORT

JULY 2018

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I. Adapting to Climate Change Through Integrated Water Management in Panama Program Resume

Located in the Central American isthmus, Panama is considered a highly vulnerable country to climate change impacts. Panama experiences a series of extreme weather events including intense and protracted rainfalls, windstorms, floods, droughts, wildfires, earthquakes, landslides, tropical cyclones, tsunamis and ENSO/El Niño-La Niña events. In parallel, Panama is considered one of the countries with the largest water resources, approximately 35,000 m³ of renewable freshwater resources per capita. This abundance scenario is relative, since it hides a series of regional and seasonal limitations, specifically those limitations associated to the area known as the “Arco Seco”, the most arid region of the country. The relative water abundance scenario (current and future) has not escaped the existence of serious conflicts due to competition for water use that tend to worsen, in quantity and intensity. The Chiriquí Viejo river watershed currently represents one of the areas with higher conflict level among the different groups of water users for hydropower generation and agricultural livestock production.

This relative water abundance scenario and increasing conflicts it's aggravated by climate variability and extreme weather events, mainly droughts and floods, where users and authorities have a lack of means and information to face them timely and effectively. According to statistical and meteorological records, since year 2004 there has been an increase in frequency of extreme events in the country, and the hydro meteorological are the ones that have affected more different ecosystems, as well as the most vulnerable population in several priority watersheds at the national level.

Water security is now recognized as a global security challenge. It has also been recognized that water, food, energy and climate form a nexus. The impact of climate change on water security is accepted as an important issue. Climate change is disrupting the global water cycle and will increase the frequency and severity of disasters. The Intergovernmental Panel on Climate Change (IPCC) 5th Assessment predicts more frequent and more severe droughts, floods and storms, intensified glacier melting and sea level rise, all of which will cause and contribute to increasing numbers of disasters worldwide and Panama is not the exception.

Panamá is probably one of the best examples at the global scale of a water driven country. Water management is key for the country's socioeconomic and environmental operation. It's key for the operation of the canal, backbone of nation's economy, which sustains logistics, transportation and financial services, pillars of the national economy. Potential complementary sectors such as power and tourism, are also directly related to water

management, both for using the resources and ecosystem services (water supply, scenic beauty, recreational uses, others). From this perspective, water resource management is the base of the country's economic, social and environmental sustainability. Water management in Panama takes place based on an integrated water resources management approach and watershed approach, without taking into consideration neither the climate change dimension nor risk management, which have, in the case of the Republic of Panama, a hydro-meteorological origin.

The people of Panama need access to accurate information and sound advice on how best to respond to this challenge, through adaptation and mitigation efforts. This Adaptation Program, based on water management to advance towards climate change adaptation, seeks to fulfill this need and serve as a national baseline to systematically address, monitor and evaluate adaptation to climate change at the national and local scales.

This Adaptation Program aims to address this condition by situating water management at the center of the adaptation efforts, promoting climate resilience and vulnerability reduction through enhancing food and energy security, based on an integrated water resources management approach that highlights the water-energy-food-climate change adaptation nexus. To do this, the Program will focus efforts in two river watersheds -Chiriquí Viejo and Santa María-; both prioritized in light of its water resources, its importance for energy and food production at a national scale, and the existence of unsolved conflicts among water users. Concrete adaptation measures will be implemented through climate proof water management, productive initiatives based on the climate smart agriculture approach in prioritized sites accordingly to social and climate vulnerability. Complementary actions include: fully operational EWSs, analysis to promote renewable energy and EBA activities and financial sources to fund the initiatives; an adaptation knowledge platform based in development of adaptation skills in different sectors, systematization of lessons learned in adaptation projects, and a national system for climate data to monitor hydro meteorological activity as well as the effectiveness of adaptation efforts.

The overall objective of this programme is to establish climate resilience water management to enhance food and energy security at the national level, including an integrated and community-based approach in the Chiriquí Viejo and Santa Maria Watersheds. Specifically, the programme will be addressing the following objectives: a) Increasing climate change and variability adaptation capacity in agriculture, livestock and energy production sectors; b) establishing climate resilient water management instruments with integrated and community based approach; c) strengthening local national capacity for monitoring and decision making to reduce and respond to risks associated to climate change; and d) raising awareness and establish a knowledge exchange platform to respond to and to reduce impacts of climate related events.

The adaptation programme is fully aligned with public policy priorities defined by the national government, particularly the National Integrated Water Resources Management Plan 2010-2030 (PNGIRH by its acronym in Spanish) and the recently approved Water Security National Plan 2015-2050 "Water for all" (WSNP). At the national level, the convergence in time of the current Adaptation Program with efforts to implement the WSNP, an Energy Plan 2015-2050, and the National Pact for Agriculture, offers a unique momentum for developing synergies opportunities between mitigation and adaptation agendas, for conservation and restoration of ecosystem services relevant to the population and agriculture, through the proposed Adaptation Program.

The Programme includes globally accepted adaptation practices and methods such as the ecosystem-based adaptation, vulnerability analysis and non-regret adaptation measures to promote concrete adaptation activity in particularly vulnerable geographical areas of the country; fully operational EWSs; irrigation projects, among other concrete adaptation actions. In parallel, by addressing the water-food-energy-climate change nexus, the Program aims to provide knowledge to improve the decision-making process to grant water rights based on climate data, helping to strengthen water governance in areas with unsolved social conflicts among users.

The proposal presents an Integrated Approach to Climate Change Adaptation by:

Implementing an "inter-sectorial" approach, as opposed to interventions solely designed from one sector perspective. This is what we have named as the "water-food-energy-climate nexus approach", which is being implemented in the country for the first time at a national scale.

1. The programme aims to deliver results, in parallel, at the national / local / sectorial scale. In this regard, projects/activities included in the programme that will be implemented at a local scale -watershed or sub-watershed- have been designed ensuring that "knowledge products" will be generated to support adaptation knowledge expansion and facilitate replication in other geographical areas of the country. Examples of national scale deliverables are: a new national map for agriculture and livestock production based in climate and water management data; technical document with recommendations to improve the water concession processes, considering climate change data. Local scale products include installation and operation of EWS, irrigation systems, agroforestry systems, among others. Sectorial scale products generated include, for example, promotion of the Microfinance for ecosystem-based adaptation approach, a brand-new concept to Panamanian financial sector.
2. The programme is based in a complementary/synergy approach, providing in the ground implementation linkages/opportunities to 3 current national scale planning

processes: the water security national plan; national energy programme and national pact for the agriculture sector. Using the climate change dimension debate, the programme will serve as a "think tank" to promote/discuss synergies among these processes, which are being conducted currently, mainly with a sectorial perspective.

3. The programme presents a balanced menu of capital/technology/equipment intensive processes (National System of Climate Data); on the ground adaptation activity (for ex: EWSs and EBA measures); influencing long term/national scale public policy (recommendations to update water granting process for hydropower generation by producing technical documents based on climate dimension; new national zoning map for agriculture production, among others.

For the reasons mentioned above, the proposed Adaptation Programme for Panama is conceived as a transformational process for the country, that will strengthen adaptive capacity at all levels, contributing to the popularization of adaptation knowledge and installing adaptation measures at a larger scale, which is currently nonexistent, due to a logic of isolated/sectorial projects.

II. Establishment of the Office Program and Initial Activities

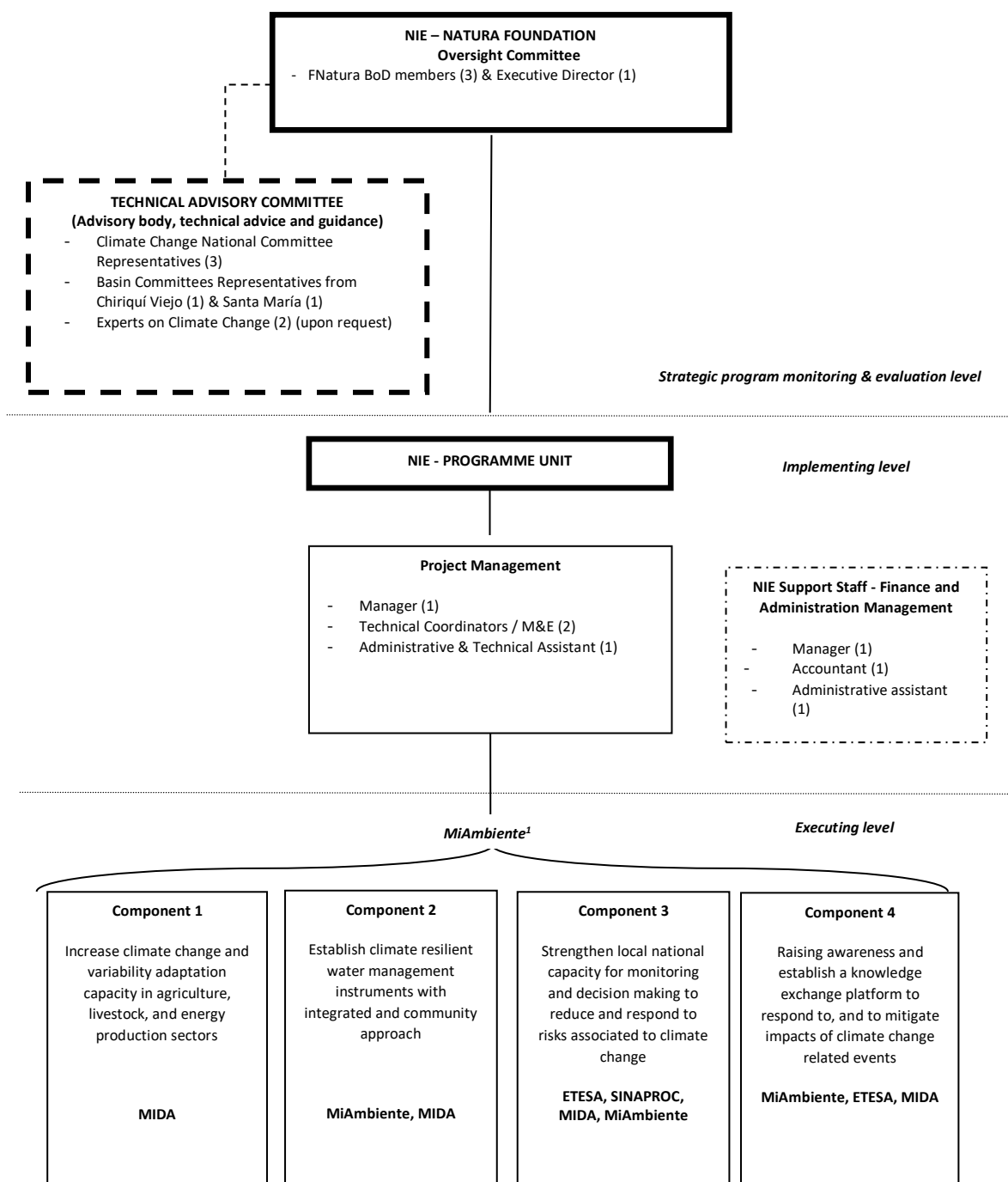
The Establishment of the Office Program by Fundación NATURA as NIE was installed in January, 2018 with the hiring of the Program Manager, the Technical Coordinator and the Accounting Assistant.

The strategic committee integrated by three members of the director's board and the CEO of Fundación NATURA. This Committee will strategically be monitoring the program, with the final purpose of follow the accomplishment of terms and acquired contractual agreements by Fundación NATURA as NIE accordingly with institutional arrangements in the execution level presented with the Program document.

For part of the Ministry of Environment of Panama, Panama Designated Authority to the Adaptation Fund and the Fundación NATURA as National Implementing Entity, the hiring of the Project Coordinator and a Technic- Administrative Assist, Since April, 2018.

It was established the implementation structure for the management of the program, as it shows in the following variant of the program document. On Request of the Ministry of

Environment, the Project Coordinator will coordinate the technical part of the program with all the Executing Entities, always under the leadership of Fundación NATURA¹.



¹The FA will be requested to indicate the roles of the Designated Authority and the National Implementing Entity to define the execution structure at the coordination level.

The Responsible party for outcomes of the respective project component is depicted below:

Component	Responsible Party
Increase climate change and variability adaptation capacity in agriculture, livestock, and energy production sectors	<ul style="list-style-type: none"> • Ministry of Agricultural Development (MIDA)
Establish climate resilient water management instruments with integrated and community based approach	<ul style="list-style-type: none"> • Ministry of Environment (MiAmbiente) • Ministry of Agricultural Development
Strengthened local-national capacity for monitoring and decision making to reduce and respond to risks associated with climate change	<ul style="list-style-type: none"> • Electric Transmission Company (ETESA) • National Civil Protection System (SINAPROC) • Ministry of Agricultural Development • Ministry of Environment
Rise awareness and establish a knowledge exchange platform to respond to, and mitigate impacts of climate-related events from local and national scope	<ul style="list-style-type: none"> • Ministry of Environment • Ministry of Agricultural Development • Electric Transmission Company

It began with the formation of the Tech-Adviser Committee with the assignment of three principal members and three alternates of the National Committee on Climate Change.

III. The Cooperation Agreement Signing between Fundación NATURA and Executing Entities

The Cooperation Agreement Signing between Fundación NATURA, Ministry of Environment of Panama and the Ministry of Agriculture Development, was in June 5, 2018. The Cooperation Agreement sign between the Electric Transmission Company (ETESA) and Fundación NATURA, was at June 6, 2018.

In these events participated:

- President and representant of the Directors Board of Fundación NATURA
- Director and Special Project Manager of Fundación NATURA
- General Secretary and Technical Secretary of the Ministry of Agriculture Development
- General Secretary and Climate Change Department Manager of the Ministry of Environment
- General Manager and Hydrometeorology Department Manager of ETESA.

With the cooperation agreement sign of the *Adapting to Climate Change Through Integrated Water Management Program in Panama* get started.

IV. Workshop of the Program Inception

Fundación NATURA as National Implementing Entity, in coordination with the Ministry of Environment of Panama, perform two program presentations, with the final purpose of reach a large quantity of key actors and possible beneficiaries in a more intimate and direct way in each one of the prioritized river watersheds.

In each prioritized watershed the program presentation, was divided in three (3) events:

- Reunion with the watershed committee, that are regional multisectoral entities that answer to necessities in the environmental management that exist in every river watershed, whose members are main actors from public and private section and includes people that work and lives in the area. the watershed committee are the entities in charge of the start up plans of watershed manage that are directed in natural resources conservation and protection in each watershed.
- Presentation of the program with the participation of interested ministry representants, non-governmental and producers.
- Field trip with the Executing Entities deputies.

1. Inception Workshop - River Watershed of Chiriquí Viejo

- a) Watershed Committee: it was realized in the installations of the Ministry of Health of Panama, dated in Chiriquí, the June 6, 2018. With the attendance of 29 members of the committee.

The representatives of the National Implementing Entity and the Panama Designated Authority, Vilna Cuéllar and Israel Torres, presented the Program in the Committee Reunion in Chiriquí Viejo River Watershed, after the presentation, the representatives requested the committee to choose a representative and a deputy for the tech- assist committee of the program.

- b) Launch and Program start up workshop: it was realized in June 7, 2018 in the Bambito Hotel, with the attendance of 66 people, between key actors, non-governmental organizations, communities' agriculture producers and different ministry personnel representative.

The main goal of the workshop was to present Natura Foundation duties as National Implementing Entity, the four components of the Program *Adapting to Climate Change Through Integrated Water Management in Panama and the responsibilities*

of the Executing Entities. Through each exposition, the speakers generated a participation mechanism for the audience looking forward to incorporated learned lessons and good practices in the Project implementation areas and also to have a role interchange with Program implementation associates.

The welcome words was in charge of Yilka Aguirre, representative of the National Designated Authority of the Adaptation Fund in Panama and the Regional Administrator of the Ministry of Environment, Carlos Araújo, in representation of the town hall of Chiriquí Province and Patricio Bosques member of the Strategic Committee of the Adaptation Fund Program and member of the board of Natura Foundation

Consecutively, a technical presentation of the program was given to the attendants, which was in charge of Vilna Cuéllar, in quality of Nacional Implementing Entity Manager Program, Israel Torres, Project Coordinator from the Environment Ministry of Panama, Fernando Ortega, in representation of the Agriculture Development Ministry and Diego González, Hydrometeorology Manager of ETESA.

In the Annex 1, order of the day, list of attendants and PowerPoint presentation used in the Program Presentation. The watershed committee and participants launch and program start up workshop asked questions which are described in the Annex 2.

A video about the Adaptation Fund was Show. Ver <https://youtu.be/cXBILUSFn84> VIDEO.

- c) Field Trip: In the area of Renacimiento, the technicians from the local Agriculture Development Ministry Agency, Ministry of Environment Program team and Fundación NATURA team, exchanged information of the program with coffee producers.

A coffee ranch with agroforestry technology that is developing in the area, was visited. Technicians saw how the climate variability impacts the coffee plantation and it is causing a new wave of plagues and fungus, we also saw how the producers in the area are palliating the effects. It was possible to confirm the interest of the producers to participate in the program and the willingness to increase their adaptive capacities.

Additionally, the roles and responsibilities of the MIDA agency in Renacimiento and the Ministry of Environment Regional Department in the province of Chiriquí were discussed in terms of monitoring the various activities that will be carried out with the Program.

2. Inception Workshop - River Watershed of Santa María:

- a) Watershed Committee: was realized in the offices of the Agriculture Investigations Institute (IDIAP), Veraguas Province, in June, 13, 2018. With the attendance of 46 members of the committee.

The representatives of the Designated National Entity and the National Implementing Entity, Israel Torres and Vilna Cuéllar, attended a room courtesy at the Santa María river watershed committee meeting to present the Adaptation Fund Program. The general concept, objectives and the four components of the Program and their respective projects were presented as well as the scope and interaction between the Adaptation Program and the watershed committee.

Once the presentation was finished, there was a question and answer session with the participants.

The Watershed Committee was asked to choose two delegates (principal and alternate) to be members of the Technical Advisory Committee of the Program.

- b) Presentation and workshop of the beginning of the Program: It was held on June 14, 2018 at the Mykonos Hotel, Santiago with the assistance of 90 people.

The words of welcome were given by Marissa Acosta, representing the Designated Authority (AD) and Regional Director of the Ministry of Environment, Edward Molley, Mayor of the Santiago District and Patricio Bosques, Member of the Strategic Program Committee of the Adaptation Fund and Member of the board Directors of Fundación NATURA.

As in the Chiriqui Viejo River Watershed, the four components of the program were presented, the responsibilities of the Fundación NATURA as National Implementing Entity and the executing entities. Also, a question and answer session was held.

In the Annex 3, order of the day and list of attendants. Asked questions of reunion with the watershed committee and launch and program start up workshop which are described in the Annex 4.

- c) Field Trip: The representatives of the executing agencies and Fundación NATURA participated in the field visit.

Two areas were visited; a livestock farm in the “Rincón de Parita” in the lower part of the Watershed. The producer explained the impacts he has had with climate variability (increased temperature, high speed and changing wind patterns stressing cattle livestock with heat highly, variable precipitation) what has caused them to increase pest and diseases, loss of palatability and turgidity on the herbaceous component.

The second was carried out in the sector of El Alto, Santa Fe, coffee ranch's that counts with agroforestry systems where visited, the sector for the production of “naranjilla” and an orchid seedling nursery. It was also possible to verify the threats caused by fluctuations in weather patterns.

V. Other Scheduled Activities

The Ministry of Agriculture Development will carry out the conformation of the work team of their respective agencies after the launch date of the program according to information provided by the assigned counterpart. It has been defined that in the month of July 2018 they must deliver to Fundación NATURA the names of their representatives in each area of incidence of the Program.

After the conformation of the equipment, they will perform technical working sessions with key implementing partners and project staff to define workplan, coordination arrangements and the presentation of the Operative Manual of the program.

ANNEX 1



**PROGRAMA DE ADAPTACIÓN AL CAMBIO CLIMÁTICO A TRAVÉS DEL MANEJO
INTEGRADO DEL RECURSO HÍDRICO EN PANAMÁ**

AGENDA

Provincia de Chiriquí, Distrito de Bugaba
Hotel Bambito, Salón Los Cisnes
7 de junio de 2018

8:30-9:00 am		Inscripción
9:00-9:10 am		Invocación Religiosa Sr. Carlos Manuel Araúz, Alcalde del Distrito de Bugaba
9:10-9:40 am	Palabras de Bienvenida	Sr. Patricio Bosques, Vice-Presidente de la Junta de Síndicos - Fundación NATURA Sra. Yilka Aguirre, Directora Regional de Chiriquí - Ministro de Ambiente
9:40-10:00 am	COFFE BREAK	
10:00-10:05 am	Video del Fondo de Adaptación Arreglos para la implementación	Sra. Vilna Cuéllar - Fundación Natura
10:05-11:30 am	Presentación de los Componentes del Programa de Adaptación al Cambio Climático a través de la Gestión Integrada del Agua en Panamá	Sr. Fernando Ortega - MIDA Sr. Israel Torres - MiAmbiente Sr. Diego González - ETESA
11:30 am - 12:00 md	Preguntas y Respuestas	
12:00-12:30 pm	Siguiente Pasos	Sr. Israel Torres - MiAmbiente Sra. Vilna Cuéllar - Fundación Natura
12:30 pm	ALMUERZO	



Entidades Ejecutoras



Programa de Adaptación al Cambio Climático a través Del Manejo Integrado
del Agua en Panamá

Reuniones Invitados

Actividad: Reunión Comité Cuenca río Chiriquí Vieja.

Día: 6 de junio de 2018.

Lugar: MINSA CAPSI, VOLCAN

Responsable de la Reunión: Israel Torres y Vilma Cuéllar

	Nombre Completo	Entidad	Email	Telefono	Firma
1	Valencia Paredes	Sociedad civil		66374503	<i>Valencia Paredes</i>
2	José Orellana	APACA		66019489	<i>José Orellana</i>
3	Francisco D. Flores	Alcaldía	PORT. CIUDADANO MUN. DONL	722-8807	<i>Francisco D. Flores</i>
4	Aracelis Alvarado	Alcaldía	Alcaldía de Desarrollo Rural	722-880781	<i>Aracelis Alvarado</i>
5	Ana C. Martínez	Mi Ambiente-DCC	anamartinez@miambiente.gob.pa	67151441	<i>Ana C. Martínez</i>
6	Daisy Chu	Mi Ambiente-DCC	dchu@miambiente.gob.pa	500-0855	<i>Daisy Chu</i>
7	Crispian Quintero	ASCOA.ONG		69225789	<i>Crispian Quintero</i>
8	Samuel Rodríguez	Fund. Natura	arodriguez@naturapanamá.org	66780089	<i>Samuel Rodríguez</i>
9	Ashby Ruiera	Fundación Natura	arivera@naturapanamá.org		<i>Ashby Ruiera</i>
10	Ange Blanco	Fundación Natura	comunicaciones@naturapanamá.org	6673-3076	<i>Ange Blanco</i>
11	Santiago Morales	MIDA	moreles.santiago28@natura.org	6627-9759	<i>Santiago Morales</i>
12	Silva Boya	Mi Ambiente David	sboya@miambiente.gob.pa	6470-1272	<i>Silva Boya</i>



Programa de Adaptación al Cambio Climático a través Del Manejo Integrado
del Agua en Panamá

Reuniones Invitados

Actividad: Reunión del Comité Cuenca río Chiriquí Viejo
 Día: 6 de junio de 2018. Lugar: Minsa Capsi, Volcán
 Responsable de la Reunión: Israel Torres y Vilma Cuellar

	Nombre Completo	Entidad	Email	Telefono	Firma
1	Essey Acevedo	MIDA	eacevedo@mida.gob.pa	507-0738	
2	Vilma Cuellar	NATURA	Vcuellar@natura-fund.org	232 7615	
3	Fernando Ortega	MIDA / SEC. TEUCA	fortega@mida.gob.pa	507-0751	
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5	Arilo Montenegro	Mi Ambiente	amontenegro@miambiente.gob.pa	500 0922	
6	Yukic Sabido	Mi Ambiente	ysabido@miambiente.gob.pa	500-09-22	
7	Anthony Torres	IDAAN	Atorres@idaan.gob.pa	6946687	
8	Tomara Carroxo	IDAAN	TomaraCarroxo430@gmail.com	6423 8738	
9	Salmayra Hernández	IDAAN	mmoralesmm201@gmail.com	68562952	
10	Bima Jimenez	MI AMBIENTE	bjimenez@miambiente.gob.pa	500-0855	
11	Valia Elena Sousa	MI AMBIENTE	vsousa@miambiente.gob.pa	500-0855 ext 6172	
12	Ornela Lopez	MI AMBIENTE	olopez@miambiente.gob.pa	500-0855 ext 6457	



Programa de Adaptación al Cambio Climático a través Del Manejo Integrado
del Agua en Panamá

Reuniones Invitados

Actividad: Reunión del Comité Cuenca río Chiriquí Viejo
 Día: 6 de junio de 2018. Lugar: Mirna Capsi, Volcán
 Responsable de la Reunión: Israel Torres y Vilma Cuellar

	Nombre Completo	Entidad	Email	Telefono	Firma
1	Diosdado González	ETESA	dgonzalez@hidromet.com.pa	66773589	[Firma]
2	Diego A. González	HIDROMET-ETESA	dagonzalez@hidromet.com.pa	5013849	[Firma]
3	Ramon Delgado	A. P. A. D		6486 5575	[Firma]
4	Luz Edith González	APAD		64554337	[Firma]
5	Raquel Cobay	Cuenca 108	raquelcobayd@hotmail.com	6114-8673	[Firma]
6					
7					
8					
9					
10					
11					
12					



Programa de Adaptación al Cambio Climático a través del Manejo Integrado del Agua en Panamá

Actividad : Lanzamiento del Programa Fondo de Adaptación / Cuenca Río Chiriquí Viejo

Día 7 de junio de 2018

Lugar: Hotel Bambito

	Nombre	Comunidad	Telefono	Firma	Email	Sexo		Edad					
						Fem	Mas	menos de 15	16-29	30-44	45-59	60-74	75+m
1	Lourdes S. González	Monte Lirio	676613788	Lourdes S. González		✓			✓			✓	
2	Bethiana Muñoz	Santa Clara	66884090	Bethiana Muñoz			✓						✓
3	Evelio A. Morales	Santa Clara	67603692	Evelio A. Morales			✓			✓			
4	Lidia E. Saldana	Caizán	66328413	Lidia E. Saldana	lidysles@hotmail.com	✓						✓	
5	Margarita Saldana	Caizán	67034642	Margarita Saldana		✓							
6	Yuma Miranda	MAMBIENTE	500-0868	Yuma Miranda	ymiranda@mambiente.gob.pa		✓			✓			
7	Jorge Barria	Rio Sereno	62523334	Jorge Barria	jorgebarria0912@gmail.com		✓			✓			
8	Diogenes Ponsato	ETESA	66773589	Diogenes Ponsato	dponsato29@hotmail.com		✓						✓
9	Vicente Chavarez	MIDA	66131692	Vicente Chavarez	vchavarez@mida.gob.pa		✓					✓	
10	Adrian Barrios	Caizán	67236044	Adrian Barrios			✓					✓	
11	Daniel Aguilar	MIDA-Volcan	69118921	Daniel Aguilar	danielaguilar@hotmail.es		✓					✓	
12	Ernesto Rodríguez	ALCALDIA	6482-6892	Ernesto Rodríguez	erodsdn@gmail.com		-			✓			
13	Amarilio Rodríguez	Fond. Naturon	66780689	Amarilio Rodríguez	arodriguez@naturapanamá.org	✓				✓			
14	Fernando Ortiz	MIDA-RI	777-5815	Fernando Ortiz	fortega@mida.gob.pa		✓					✓	
15	Fernando Ortiz	MIDA	507-0751	Fernando Ortiz	fortega@mida.gob.pa		✓					✓	
16	Isabel Torres	Mambiente	507-0855	Isabel Torres	itrujas@mambiente.gob.pa							✓	



Programa de Adaptación al Cambio Climático a través del Manejo Integrado del Agua en Panamá

Actividad : Lanzamiento del Programa Fondo de Adaptación / Cuenca Río Chiriquí Viejo

Día 7 de junio de 2018

Lugar: Hotel Bambito

	Nombre	Comunidad	Telefono	Firma	Email	Sexo		Edad						
						Fem	Mas	menor de 15	16-29	30-44	45-59	60-74	75 m.	
1	Rubén Guerra	Volcán	61560812	Rubén A Guerra	ruben.guerra1956@gmail.com		✓						✓	
2	Romón Batista	santa clara	66321643	Romón A Batista			✓					✓		
3	Louise M Yonquez	santa clara	65016229	Louise M Yonquez		✓				✓				
4	Clare Scheib-Fealey	santa Clara	678886545	clare m h f	cscheibfealey@gmail.com	✓			✓					
5	Edith M. Barrow M.	santa Clara	60499450	Edith M. Barrow M.	Edithbarrow955@gmail.com									
6	Ernesto Arcia	Darién	68024971	Ernesto Arcia	ernezbarbei@hotmail.com		✓						✓	
7	Proedín Mitu	Panid (Mida)	65025430	Proedín Mitu	ernezbarbei@gmail	✓			✓					
8	Amilcar Caballero S.	Bugaba (Mida)	61345772	Amilcar Caballero S.	amilcarcaballero9@yahoo.com		✓						✓	
9	Valia Elena Sosa	MI AMBIENTE	685-8583	Valia Elena Sosa	vsosa@miambiente.gob.pa								✓	
10	Yaguinde Resendiz	MI AMBIENTE	500-0922	Yaguinde Resendiz	yaguinde.resendiz@miambiente.gob.pa						✓			
11	César De la Hoz	MI AMBIENTE	6641-3325	César De la Hoz	cdgrace@miambiente.gob.pa		✓					✓		
12	Emery A. Yonquez	Santa Clara	6698-6441	Emery A. Yonquez	emerya.yonk06@gmail.com		✓						✓	
13	Yolanda Pappalardo	MI AMBIENTE	6253-6771	Yolanda Pappalardo	olop12@gmail.com					✓				
14	Yolanda Pappalardo	APASAC	6786-3528	Yolanda Pappalardo			✓							✓
15	Daisy Chu	MI AMBIENTE Pna	500-0855	Daisy Chu		✓					✓			
16	Norma Miranda S.	Parado de las Flores	68311486	Norma Miranda S.	miranda10102@gmail.com	✓						✓		



Programa de Adaptación al Cambio Climático a través del Manejo Integrado del Agua en Panamá

Actividad : Lanzamiento del Programa Fondo de Adaptación / Cuenca Río Chiriquí Viejo

Día 7 de junio de 2018

Lugar: Hotel Bambito

	Nombre	Comunidad	Telefono	Firma	Email	Sexo			Edad					
						Fem	Mas	menor de 15	16-29	30-44	45-59	60-74	75+	
1	Diego A. González	Ensenada	5013849	[Signature]	gonzalez@hidromet.com.pa		✓			✓				
2	Luis A. Morales M	Fundicep	6903 0917	Luis A. Morales M.	Morales/Luis 0320@gmail.com		✓			✓				
3	Luis Rodríguez	MIDA (Riego)	6655-4800	Rodríguez L.	luisrodriguez@ruda.gov.pa		✓			✓				
4	Sila Boya	Meambiente David	6470-1272	[Signature]	sboya@miambiente.gob.pa	✓				✓				
5	William Hartmann	Santa Clara	64922808	William Hartmann	hartmannsamuel@hotmail.com		✓					✓		
6	Adela Amador Hartmann	Santa Clara	6290-7149	Adela Amador de la Hartmann	hartmannadela@hotmail.com	✓						✓		
7	Jorge O. Pitty	Rio Se	66748570	[Signature]	jorgepitty@outlook.com		✓					✓		
8	Damaso Sánchez	Cerro Punta	66712171	[Signature]	damasan19@gmail.com	✓								
9	Juventino Zapata C.	Monte Lirio	69695864	Juventino Zapata			✓						67	
10	Carlos Rivera	Carra Blanca	69-09346	Carlos Rivera								✓		
11	Elva A. Amador	ASAFIA	7712620	Elva Amador			✓					✓		
12	Vilma Cuellar	Fund. NATURA	2327615	[Signature]		✓						✓		
13	Elvira González	Caisan	60705823	[Signature]			✓		✓					
14	Raquel Caba	Calihri, Delega	6114-8673	[Signature]	raquelcabaqgd@hotmail.com		✓					✓		
15	Juan Antonio Santamaria	APAD Delega	64560770	[Signature]		✓	✓						✓	
16	JAME A. SALDANA	MEDCOM	6551-8388	[Signature]	jaldana@medcom.com.pa		✓			✓				



Programa de Adaptación al Cambio Climático a través del Manejo Integrado del Agua en Panamá

Actividad : Lanzamiento del Programa Fondo de Adaptación / Cuenca Río Chiriquí Viejo

Día 7 de junio de 2018

Lugar: Hotel Bambito

	Nombre	Comunidad/ Entidad	Telefono	Firma	Email	Sexo		Edad						
						Fem	Mas	menor de 15	16-29	30-44	45-59	60-74	75 m	
1	Ana Carolina Martínez	Mi Ambiente	600 08 55	Ana Carolina	permutivag@miambiente.gov.pa	✓			✓					
2	Jonathan González	Fundicep	64200331	Jonathan González			✓		✓					
3	Maria B. Chini	Aprofive	6642-2620	Maria Chini		✓					✓			
4	Santiago Morales	MIDA	6627-9759	Santiago	morales.santiago28@yahoo.com		✓				✓			
5	Keily P. López	APRE	6597-5467	Keily López	garlem0319@gmail.com	✓			✓					
6	SUSANA Hartman	APRE	63902452		thc1421@gmail.com	✓	✓		✓					
7	Valeria Hartmann	APRE	69391291	Valeria E. Hartmann	valeria-hartmann@hotmail.com	✓			✓					
8	Carlos Fuentes	A.P.R.E	6893 0168	Carlos Fuentes	carlosfuentesapre@hotmail.com		✓				✓			
9	Miguel Ángel S.	A.P.R.C	67072535	Miguel Ángel S.	miguel1969@hotmail.com	✓					✓			
10	Alma Fajardo	Monte Lirio 34 AR	69963602	Alma Fajardo		✓				✓	✓			
11	Victor Juan Fuentes	Coño Blanco Arriba	67-40-1107	Victor Fuentes			✓				✓			
12	William Harold Guevara	Cerro Punta	6855436	William Guevara	whguevara@fundicep.org		✓			✓	✓			
13	Salvador Martínez	Paseo Ancho	65287778	Salvador Martínez	salva.sports@hotmail.com		✓				✓			
14	Digna Noviez	RIO SERENO	63084633	Digna Noviez	idignanoviez@proffo.com	✓								
15	Esque Acevedo	MIDA	507-0730	Esque Acevedo	eacevedo@mida.gov.pa	✓					✓			
16	Richard M. Sánchez	caisan	66462323	Richard M. Sánchez			✓			✓				



Actividad : Lanzamiento del Programa Fondo de Adaptación / Cuenca Río Chiriquí Viejo

Lugar: Hotel Bambito

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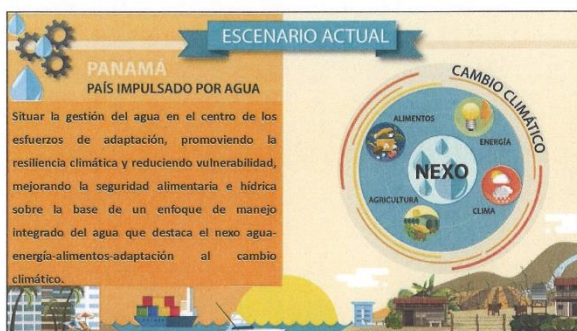
Programa de Adaptación al Cambio Climático a través Del Manejo Integrado
del Agua en Panamá

Reuniones Invitados

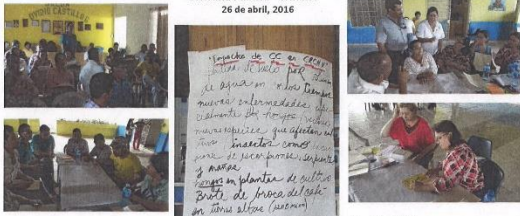
Actividad: Visita y reunión MIDA, Río Sereno
 Día: 7 de junio de 2018 Lugar: Río Sereno, MIDA
 Responsable de la Reunión: Irael Torres

Nombre Completo	Entidad	Email	Telefono	Firma
Juan Quintana Mendez	MIDA Río Sereno		6888-5376	Juan Quintana Mendez
Edwin Caballero	MIDA Río Sereno		65220970	Edwin
Madeline Rami S.	APRE	Madeline-1945@outlook.com	6707-7535	Madeline S.
Arturo Espinosa	M.I.D.A. Río Sereno		6806-4082	Arturo
Jorge O. Pitty	APRE	jorgepitty@outlook.com	66715850	Jorge O. Pitty
Jorge Barria	MIDA Río Sereno	jorgebarria0912@gmail.com	62525534	Jorge L. Barria A.
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Carlos Fuentes	A.P.R.E	carlufuentesapre@hotmail.com	68930168	Carlos L. Fuentes
Digna Nuñez	APRE	ndignaenem@fyaHaa.com	63084633	Digna
Vilma Cuellar	Fund. NATURA	Vicellar@notunpanama.org	2327615	Vilma
Irael Torres	Coordinador de Program.	itorresj@miambiente.gob.pa	500-0855	Irael
Daisy Chu	MI Ambiente Panamá	dchu@miambiente.gob.pa	500-0855	Daisy

Presentation Slideshow



Consulta Pública - CHRCHV
26 de abril, 2016



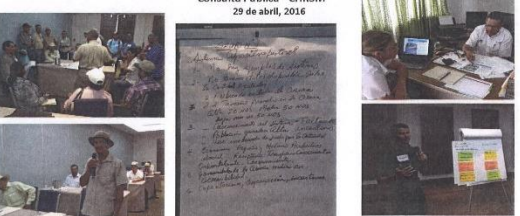
INVITACIONES

- Radio
- Pagina web Fundación NATURA

Anuncios

- Apoyo de la sociedad civil organizada
- Instituciones gubernamentales

Consulta Pública - CHRSM
29 de abril, 2016

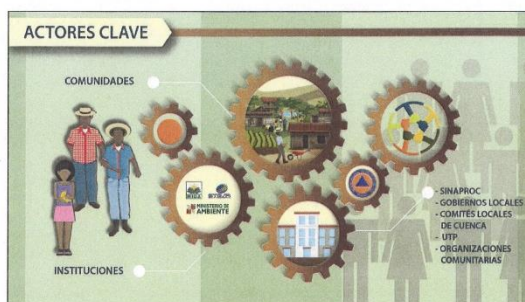


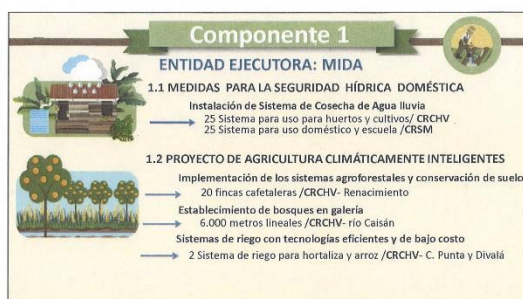
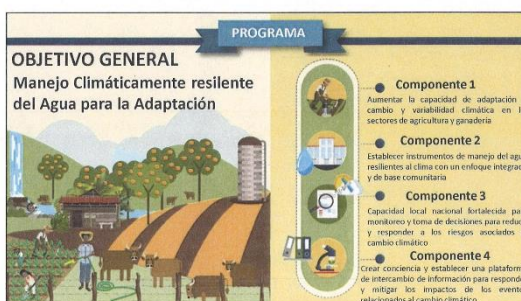
INVITACIONES

- Radio
- Pagina web Fundación NATURA

Anuncios

- Apoyo de la sociedad civil organizada
- Instituciones gubernamentales






Componente 1

ENTIDAD EJECUTORA: MIDA

1.5 APOYO SECTORIAL MEJORADO A TRAVÉS DE INSTRUMENTOS DE FINANCIAMIENTO CLIMÁTICOS




- ✓ Talleres informativos / instructivos sobre microfinanzas para Adaptación basada en Ecosistemas (MEbA)
- ✓ Elaboración de una cartera de microfinanzas para productores con la metodología de Adaptación basada en Ecosistemas (MEbA)
- ✓ Selección de 2 instituciones microfinancieras (una en cada cuenca) o cooperativas que pueden gestionar microfinanzas.
- ✓ Desarrollar 4 planes de negocios (2 para cada cuenca) para acceder a fuentes de financiamiento.

Componente 2


ENTIDAD EJECUTORA: MIAMBIENTE / MIDA

2.1 ANÁLISIS DE VULNERABILIDAD AL CAMBIO CLIMÁTICO



- ✓ Actualización del Plan de Manejo/ CRSM
- ✓ Análisis de vulnerabilidad / CRCHV

2.2 CRITERIOS TÉCNICOS PARA DAR CONCESIONES Y PERMISOS DE USO AGUA




- ✓ Determinación del balance hidrológico y caudal ambiental / CRCHV-CRSM
- ✓ Documento técnico que apoye a los tomadores de decisiones para el otorgamiento de concesiones de agua para usos agropecuario y energía
- ✓ Documento técnico y recomendaciones para hacer los ajuste para inducir el restablecimiento del ciclo hidrológico (a partir de revisión de las concesiones vigentes en ambas cuencas).

Componente 2

ENTIDAD EJECUTORA: MIAMBIENTE / MIDA

2.3 SEGURIDAD HIDROLÓGICA EN ZONAS PRIORIZADAS



- ✓ 2 planes distritales de seguridad hídrica incorporando información Climática/ CRCHV-CRSM
- ✓ Mapa nacional de capacidad de producción agropecuaria, con base en datos climáticos y de gestión hídrica

Componente 3

ENTIDAD EJECUTORA: ETESA/SINAPROC/MIDA/MIAMBIENTE

3.1 SISTEMA NACIONAL DE DATOS CLIMÁTICOS (SNDC)



- ✓ Adquisición e instalación de estaciones hidro-agrometeorológicas / ETESA-(Nivel Nacional)

3.2 SISTEMA DE ALERTA TEMPRANA PARA EVENTOS AGRO-HIDRO-CLIMÁTICOS



- ✓ Sistema sonoro para inundaciones/ CRCHV-SINAPROC-ETESA
- ✓ Sistema de inundaciones / CRSM-SINAPROC-ETESA
- ✓ Sistema Sequía/ CRSM-MIDA-ETESA

3.3 NODO AGROCLIMATOLÓGICO (MIDA, ETESA)





ANNEX 2

Asked Questions Chiriquí Viejo River Watershed

The following questions were made in the Chiriquí Viejo River:

1. Will the irrigation systems in Chiriquí continue to be carried out after the program has started?

The irrigation systems are for small producers and the Project will start in the first year of the program. The MIDA will carry out an initial assessment of the irrigation needs using the dimension of food security and climate data.

Irrigation systems will be low cost and efficient for small producers as direct beneficiaries.

To define specifics of the irrigation system, the AP reinforces the need to conduct an initial rapid assessment of the irrigation needs in the watershed using a concrete linkage with food security dimension and climate data.

Low cost and efficient irrigation systems for small scale farmers as direct beneficiaries installing rice irrigation systems.

2. What are the aspects or characteristics to take into count when choosing a district? Will the water balance or water security that will be elaborated be from a superficial or underground base?

Two hydrological security district plans, including weather information, will be drafted, 1 for each watershed. These plans shall be drafted with participative methodologies and based on the provisions of existing planning instruments, including, but not limited to, the watershed's Management Plan, local government plans, as well as what it is indicated in the instruments at the national level.

The main criteria to select the districts shall be in function of its adaptive capacity, the vulnerability analysis' results and interest expressed by the local municipal authorities.

Work will be done with the Rivershed Committees for the selection of the districts; MiAmbiente will send criteria but the committee may also include other criteria that they consider necessary for the selection of the districts.

3. What would be the measures for the distribution of wealth and work in the program?

The program has defined the projects that will be executed in the two prioritized Watersheds And their respective budgets.

Each Project will go public and for example for the projects of component 1, which is *Increase climate change and variability adaptation capacity in agriculture, livestock, and energy production sectors*, there are some criteria for the selection of products.

4. Will the traditional sowing system be respected?

Final arrangement of the shaded coffee farms will follow the guide for ecological coffee farming methodology and the technical standards defined by CATIE, which is in line with MIDA's strategy for caficulture.

The agroforestry scheme will include: Facilitate access to new seeds /varieties resistant to climate changes, Training in innovative techniques for pest control, especially fungi, that are not intensive in the use of agrochemicals and coffee production with economic and environmental conservation benefits (connectivity and habitat creation) and design that includes trees that protect from the wind and protection of shade coffee, for example.

Everything proposed will be evaluated with MIDA technicians and the selected producers.

5. Is the storage of seeds considered viable?

It is a viable practice that will be evaluated by MIDA.

6. Time designated to form a representative and an alternate for the basin committee?

The Technical Advisory Committee must comply with the first three months of the program, which is why the Watershed Committee must make its selection as soon as possible.

7. What are the designated project start times and how and who will speak to the project's producers?

The meetings of coordination with the producers will be carried out by the technicians of the MIDA in both prioritized River Watershed for the implementation of the program.

ANNEX 3



PROGRAMA DE ADAPTACIÓN AL CAMBIO CLIMATICO A TRAVÉS DEL MANEJO INTEGRADO DEL RECURSO HÍDRICO EN PANAMÁ

AGENDA

Provincia de Veraguas, Distrito de Santiago
Hotel Mykonos, Salón Los Corales
14 de Junio de 2018

8:30-9:00 am	Inscripción	
9:00-9:10 am	Invocación Religiosa	
9:10-9:40 am	Palabras de Bienvenida	<p>Sr. Edward Molley , Alcalde del Distrito de Santiago</p> <p>Sr. Patricio Bosques, Vice-Presidente de la Junta de Síndicos - Fundación NATURA</p> <p>Sra. Marissa Acosta, Administradora Regional del Ministerio de Ambiente en Veraguas</p>
9:40-10:00 am	COFFE BREAK	
10:00-10:05 am	Video del Fondo de Adaptación Arreglos para la implementación	Sra. Vilna Cuéllar - Fundación Natura
10:05-11:30 am	Presentación de los Componentes del Programa de Adaptación al Cambio Climático a través del Manejo Integrado del Recurso Hídrico en Panamá	<p>Sr. Fernando Ortega - MIDA</p> <p>Sr. Israel Torres - MiAmbiente</p> <p>Sr. Diego González - ETESA</p>
11:30 am -12:00 md	Preguntas y Respuestas	
12:00-12:30 pm	Siguiente Pasos	<p>Sr. Israel Torres - MiAmbiente</p> <p>Sra. Vilna Cuéllar - Fundación Natura</p>
12:30 pm	ALMUERZO	



Entidades Ejecutoras



Programa de Adaptación al Cambio Climático a través Del Manejo Integrado
del Agua en Panamá

Reuniones Invitados

Actividad: Reunión Comité de Cuenca del río Santa María
 Día: 13 de junio de 2018. Lugar: Divisa, Salón del IDIAP
 Responsable de la Reunión: Hq. Israel Torres, Coordinador de proyecto.

	Nombre Completo	Entidad	Email	Telefono	Firma
1-	Stephanie Carrera	MICI - Veraguas	scarrera940@icloud.com	6949-7241	Stephanie Carrera A
2-	Maria Castillo	MICI - Veraguas	mcastillo@mici-gob.pa	998-0853	Maria M. Castillo
3-	Noel Santos	ETESA - Hidromet	nsantos@hidromet.com.pa	66636046	Noel Santos
4-	Vicron. Smead	MICI	vabrego@mici-gob.pa	998-0853	Vicron Smead
5-	Yara Flores	Mi Ambiente - Cali	yflores@miambiente.gov.pa	997-9805	Yara Flores
6-	Fernando Alvarado	UINSA - V	falvarado14@uiosa.com	6534-4945	Fernando Alvarado
7-	José Felisberto	MICI		69084357	José Felisberto
8-	Maqui Aguilar	MICIOT	araaguilar@miciot.gov.pa	61501690	Maqui Aguilar
9-	Teleme Escobar	Mi Ambiente		69448805	Teleme Escobar
10-	Karen Azcarraga	IDAAM - Herrera	Kazcarraga@idaam.gov.pa	66943530	Karen Azcarraga
11-	José Burgos	MICI - Herrera	jburgos@mici-gob.pa	6630-9835	José Burgos
12-	Leopoldo Burgos	Coop. La Esperanza		61256905	Leopoldo Burgos



Programa de Adaptación al Cambio Climático a través Del Manejo Integrado
del Agua en Panamá

Reuniones Invitados

Actividad: Reunión Comité de Cuenca del río Santa María
 Día: 13 de junio de 2018 Lugar: Divisa, Salón del IDIAP
 Responsable de la Reunión: Ing. Israel Torres, Coordinador de proyecto.

	Nombre Completo	Entidad	Email	Telefono	Firma
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3-	Carmen Morales	Alcohol de Hondo	carmenmorales1669@gmail.com	636 X8128	
4-	Nicole Ruiz	A.M.P.	nruez@amp.gov.pa	68727836	
5-	Edgar R. Rodriguez M	MIVITOT	edcorrodri98@gmail.com	65 80 79 50	
6-	Edison Pimentel	M. Ambiente Hondo	epimentel@hondop.gov.pa	6523 8088	
7-	Fernando Ortega	MIDA/S. Tec	fortega@mida.gov.pa	307-0751	
8-	Luis Torres	MIDA		6708-3413	
9-	Rosie Quintana	Municipio Interoceánico	mayra2114@gmail.com	6547-72-71	
10-	Isaac Alvarado	FUNDPROUD	fundproud@gmail.com	994-4060 6611-1965	
11-					
12-					



Programa de Adaptación al Cambio Climático a través Del Manejo Integrado
del Agua en Panamá

Reuniones Invitados

Actividad: Reunión Comité de Cuenca del río Santa María
 Día: 13 de junio de 2018. Lugar: Divisa, Salón del IDIAP
 Responsable de la Reunión: Ing. Israel Torres, Coordinador de proyecto.

	Nombre Completo	Entidad	Email	Telefono	Firma
1-	Amarilia Rodríguez	Fond. Natura	arodriguez@naturapanam.org	23276015	Rodriguez
2-	Loures Gacia	MI AMBIENTE	lgacia@miambiente.gob.pa	64218511	Loures Gacia
3-	JERRI H. Palacio	M. Ambiente	jhpalacio@miambiente.gob.pa	67854114	Jenni Palacio
4-	Vilma Cuellar	Fond. Natura	Vcuellar@naturapanam.org	232-7615	Cuellar
5-	Eric Efraim Carrera R.	IDAAN - Coclé	ecarrera@idaan.gob.pa	65345748	Eric Carrera
6-	David Estigarribia	Municipio Naté		66405651	David Estigarribia
7-	Ruben Correa	MiAmbiente-Coclé		67744545	Ruben Correa
8-	José Pimentel	Gobernación Veraguas	jpimentel@mingob.gob.pa	69249491	Pimentel
9-	Leilani Apurindesi	Municipio de Atalaya		66680292	Leilani Apurindesi
10-	Adrián Baudilio	Idemecor	abbaudilio@hotmail.com	63882082	Adrián Baudilio
11-	Delmiro del C. Cornejo V	Alcaldía Ocú	delmiro.cornejo@hotmail.com	68563853	Delmiro Cornejo
12-	Angea Banco L.	Fundación Natura	comunicaciones@natura.panam.org	6673-3076	Angea Banco



Programa de Adaptación al Cambio Climático a través Del Manejo Integrado
del Agua en Panamá

Reuniones Invitados

Actividad: Reunión Comité de Cuenca del río Santa María
 Día: 13 de junio de 2018. Lugar: Divisa, Salón del IDIAP.
 Responsable de la Reunión: Inq. Israel Torres, Coordinador de proyecto.

Nombre Completo	Entidad	Email	Telefono	Firma
1- Lorena Varegas	MIAMBIENTE	lvaregas@miambiente.gob.pa	L. Varegas	500-03-02
2- Israel Torres	Coordinador Program	itorres@miambiente.gob.pa	500-0855	Israel
3- Nohelia Medina	MIAMBIENTE	nmedina@miambiente.gob.pa	500-0934	Nohelia
4- Edgardo Urbante	AMP	eaubarte@amp.gob.pa	6503 43 11	Edgardo
5- LEONEL DELGADO	MIDA STA. MARÍA	—	67617939	Leonel
6- Daisy Chu	Mi Ambiente	dchu@miambiente.gob.pa	500-0855	Daisy
7- David Chiriqui	MINSA-Cogel	dchiriqui@minsa.gob.pa	67653486	David
8- James Araujo	La Victoria	jaraujo@la victoria.gob.pa	62342138	James
9- Liliana Figueroa	Mi Ambiente	lfigueroa@miambiente.gob.pa	PA 9808	Liliana
10- Daniel E. Anzures	Municipio Natú	—	68405651	Daniel
11- Boris Espinosa	MIDA R 2	boris.espinosa@idmilitar.com	69281695	Boris
12- Ashby Ruera	Fundación Natura	aruera@naturapanamá.org	—	Ashby



Programa de Adaptación al Cambio Climático a través del Manejo Integrado del Agua en Panamá

Actividad : Lanzamiento del Programa Fondo de Adaptación / Cuenca del Río Santa María

Día 14 de junio de 2018

Lugar: Hotel Mykonos, Santiago

	Nombre	Entidad / Comunidad	Teléfono	Firma	Email	Sexo		Edad						
						Fem	Mas	menor de 15	15-29	30-44	45-59	60-74	7+	
1	Alfaro Ramírez	La Juebita	997-9805	[Firma]	marcandrea@miambiente.org	✓						✓		
2	Corona M. González	La Jandura	67584132	Corona M. González		✓						✓		
3	Bolívar Castillo	La Jandura	11	Bolívar Castillo			✓					✓		
4	David Medina	Piedra de moler	—	David Medina			✓		✓					
5	Horacio Llanusa	Palo Verde	—	Horacio Llanusa			✓					48		
6	Celestino Hernández	Piedra de moler	—	Celestino Hernández			✓					✓		
7	Alfredo Quirós	Palo Verde	—	Alfredo Quirós			✓			✓				
8	Domingo Rodríguez	Piura	—	Domingo R.			✓					✓		
9	Jose Igualar	La Penita	6590-1520	José Igualar			✓			✓				
10	Prospero Hernández	Coto Santa Fe	6972-7923	NO FIRMA			✓						✓	
11	Berenisa Hernández	El Alto, Santa Fe	6577-5090	Berenisa Hernández			✓			✓				
12	Donis E. Rodríguez	Piura - Santa Fe	6468-9979	Donis E. Rodríguez	doniselaena@hotmail.com		✓			✓				
13	Maximo Rodríguez	La Penita	—	No Firma			✓			✓				
14	Daniel Hernández	La Golondrina	—	Daniel Hernández			✓					✓		
15	Mariana Mendoza	La penita	63104181	Mariana Mendoza			✓		✓					
16	Alonso Rodríguez	Piedra de Molero	6363-9808	Alonso Rodríguez			✓					✓		



Programa de Adaptación al Cambio Climático a través del Manejo Integrado del Agua en Panamá

Actividad : Lanzamiento del Programa Fondo de Adaptación / Cuenca del Río Santa María

Día 14 de junio de 2018

Lugar: Hotel Mykonos, Santiago

	Nombre	Entidad / Comunidad	Teléfono	Firma	Email	Sexo		Edad						
						Fem	Mas	menos de 15	16-29	30-44	45-59	60-74	75 más	
1	TAVIERA GONZÁLEZ	Mi Ambiente	67664894		conservacionverde.pa@gmail.com		✓				✓			
2	Nohelia Medina	MI AMBIENTE	6766-7930		medina@miambiente.pa	✓					✓			
3	Louredes García	M. AMBIENTE	64218511		lgarcia@miambiente.gob.pa	✓			✓					
4	Jenny H. Palacios	Mi Ambiente	67854114		jhpalacios@miambiente.gob.pa					✓				
5	Edison Pimentel	Mi Ambiente	65238088		epimentel@miambiente.gob.pa		✓			✓				
6	Vilma Zúñiga	Fund. NATURA	2327615		vzuniga@fundnatura.org	✓					✓			
7	Boris Espinosa	MIDA R 2	69281695		boris.espinosa@miambiente.gob.pa							✓		
8	Fernando Ortega	MIDA/S. Técnica	581-0151		fortega@mida.gob.pa						✓			
9	Jairo O. Alvarado B.	MIDA - Agricultura	64755440		agrotecnologiedna@gmail.com		✓				✓			
10	Belando Ruyter J.	Mi Ambiente	6693867		rruyter@miambiente.gob.pa	✓					✓			
11	Alister Valdez	MIDA - St. María	69319378		asechuzo@hotmail.com	✓			✓					
12	José Domingo Rolón	MIDA Herrera	6676-6070		jdrodriguez@smail.com							✓		
13	Manuel A. López	Mi Ambiente Coclé	66303104		mlopez@miambiente.gob.pa									
14	FLORENCIO VÁSQUEZ	PIURA	64961295	FLORENCIO VÁSQUEZ		✓					✓			
15	Eduardo Mendoza	Palmarito	Eduardo Mendoza			✓				✓				
16	Roque Mendoza	Peñita		+ Roque Mendoza 9-14862		✓					✓			



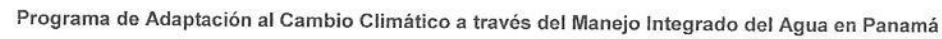
Programa de Adaptación al Cambio Climático a través del Manejo Integrado del Agua en Panamá

Actividad : Lanzamiento del Programa Fondo de Adaptación / Cuenca del Río Santa María

Día 14 de junio de 2018

Lugar: Hotel Mykonos, Santiago

	Nombre	Entidad / Comunidad	Teléfono	Firma	Email	Sexo		Edad						
						Fem	Mas	menos de 15	16-29	30-44	45-59	60-74	75 y más	
1	Laura Vaneza	MIAMBIENTE	500-01-02	L. Vaneza	lvaneza@miambiente.gob.pa	✓				✓				
2	Carlos Moroa	MIDA - Colobru	65-28-4115	Carlos Moroa	INDIOCRM3108@gmail.com		✓					✓		
3	Daisy Chu	MIAMBIENTE	500-0855	D. Chu	dchu@miambiente.gob.pa	✓				✓				
4	Betina Abrego	MIAMBIENTE	6884-9218	B. Abrego	babrego@miambiente.gob.pa	✓				✓			✓	
5	Ramón Quiroz	MIDA	66963828	R. Quiroz	quiroz1661@hotmail.com									
6	ROSARIO RODRIGUEZ	SANTAE	68540611	R. Rodríguez			✓					✓		
7	Amarilis Rodríguez	Fund. Natura	66780681	A. Rodríguez	arodriguez@fundnatura.org	✓				✓				
8	Aristides Aguirre	MIDA	65392054	A. Aguirre	aristidesaguirre23@gmail.com		✓					✓		
9	Ruben Ramos	MIDA	67942081	R. Ramos	rdramos@mida.gov.pa		✓			✓				
10	Ramón Eliza	MIDA - PALMARIA	68581092	R. Eliza	RELIZA@MIDA.GOV.PA		✓					✓		
11	Carolina Castillo	MIDA - Atabuya	6270-43-50	C. Castillo	castillorodriguez2@gmail.com	✓			✓					
12	Tadeo Rodríguez	SANTAE	—	T. Rodríguez			✓		✓					
13	Ange Blanco	F. Natura	6673-3036	A. Blanco	comunicaciones@natura.panam.org	✓			✓					
14	Claudia Góng	MIDA	69461664	C. Góng	ggong2378@hotmail.com	✓				✓				
15	Yonilka Guevara	MIDA/Aguacilán	63505182	Y. Guevara	yongilka@gmail.com	✓				✓				
16	Guillermo Herrera	Mi Ambiente	66-727480	G. Herrera	gherrera@miambiente.gob.pa							✓		



Lugar: Hotel Mykonos, Santiago

[illegible]



Actividad : Lanzamiento del Programa Fondo de Adaptación / Cuenca del Río Santa María

Lugar: Hotel Mykonos, Santiago

[illegible]



Programa de Adaptación al Cambio Climático a través Del Manejo Integrado
del Agua en Panamá

Reuniones Invitados

Actividad: Visita a la finca del Sr. Cipriano Pérez
 Día: 13 de junio de 2018 Lugar: Cuenca baja del río Santa María
 Responsable de la Reunión: La Macana

	Nombre Completo	Entidad	Email	Telefono	Firma
1-	Lorena Varela	MIAMBIENTE	lvarela@miambiente.gob.pa	500-0802	L. Varela
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3-	Celestino Valdes	MIDA	asechu20@hotmail.com	6931-9378	C. Valdes
4-	Fernando Ortega	MIDA S.Tec	fortega@mida.gob.pa	507-0751	F. Ortega
5-	Deisy Naranjo	MIAMBIENTE			D. Naranjo
6-	Israel Torres	MIAMBIENTE	itorres@miambiente.gob.pa	500-0855	I. Torres
7-	Leidy Ruesca	Fundación Natura	aruesca@naturapanamay.org	232-7615	L. Ruesca
8-	Vilma Cuellar	Fund. Natura	vcuellar@naturapanamay.org	232-7615	V. Cuellar
9-	Ange Blanco	Fundación Natura	comunicaciones@naturapanamay.org	232-7615	A. Blanco
10-	Samuel Rodríguez	Fund. Natura	srodriguez@naturapanamay.org	232-7615	S. Rodríguez
11-					
12-					

ANNEX 4

Asked Questions Santa María River Watershed

1. Were the solar panels will be installed?

The solar panels can be installed in the projects of component 1 of the Program. Project will include structures for water. It is planned to construct works collection and conveyance of water in the paddocks and encircle, to give the animals a good water quality to improve production quality by developing a friendly livestock of the environment. It is proposed to use solar water pumps that feed on a photovoltaic system that generates electricity applied to hydraulic pumps, which bring the water to a storage tank to be carried by gravity to the various troughs used on farms as well as for irrigation pasture.

MIDA maintained solar panels in areas near the proposed program, which have been well received by farmers.

2. Were programs from previous countries take in count to carry out this plan?

Yes, successful experiences from other countries were taken into account. For example, the project *Enhanced sectorial support through climate financing instruments*. To conduct this activity, the Adaptation Program will take into consideration the experiences and products developed in the context of the Microfinance for ecosystem based adaptation project (MEBA) project in Perú and Colombia, as well as explore and evaluate other microfinance products and programmes as implemented successfully in the region.

3. What are performance indicators and impact indicators?

The Program has results indicators for each of the projects of the Program, including milestones, targets and indicators, including one or more core outcome indicators of the Adaptation Fund Results Framework, and in compliance with the Gender Policy of the Adaptation Fund.

A matrix is also presented with the alignment of the results framework of the program with the results framework of the Adaptation Fund.

4. Where will the resources for the project come from?

Program resources were granted by the Adaptation Fund after Fundación NATURA as NIE presented the proposal and it was approved for funding.

5. When will the funds be disbursed for the project?

The Secretariat of the Adaptation Fund makes the disbursements annually after presenting and approving the technical, financial and external audit reports. For this program, 3 disbursements are contemplated; the first was already disbursed to Fundación NATURA.

6. Is it possible to work in this fund without territorial order?

Criteria were used to select the areas of program implementation and the program is aligned with public policies. The National Integrated Management Plan for Water Resources 2010-2030, the Energy Plan 2015-2050, the National Plan for Water Security 2015-2050 as well as the Watershed Management Plans were used.

7. Which districts will you choose for the Water Harvest project?

It is not selected yet. This will be done in coordination between MiAmbiente and the Watershed Committees. Two hydrological security district plans, including weather information, will be drafted, 1 for each watershed. These plans shall be drafted with participative methodologies and based on the provisions of existing planning instruments, including, but not limited to, the watershed's Management Plan, local government plans, as well as what it is indicated in the instruments at the national level.

The main criteria to select the districts shall be in function of its adaptive capacity, the vulnerability analysis' results and interest expressed by the local municipal authorities.

8. Are public consultations only for publicity purposes?

No, remember that public consultations were held for the proposal. The results of the consultations were included in the proposal that was presented to the Adaptation Fund.

9. Will floods be pointed out in the program?

Yes, early warning systems for floods in both watershed and drought in the Santa María watershed will be installed. You must choose the area where they will be installed. The Sound System will be established to alert the communities, the signaling of the communities in the risk areas will be completed and the communities will be trained.

10. Project execution period?

It is 3 years old. 3 months to set up work teams, 27 months for implementation and 6 months to close the program.

11. Should the Watershed committee have a copy of the project that includes Responsibilities and definition of them?

The document is on the website of the Adaptation Fund and will be installed in the NATURA and executing entities.

The role that the representatives of the Basin Committees have in the Technical Advisory Committee of the program.

ANNEX 5

Photo Gallery

➤ The Cooperation Agreement Signing between Natura Foundation and Executing Entities



From MIDA participated Jorge Ulloa, General Secretary and for Natura Foundation, Lisandro Madrid, President of the members of board of Natura Foundation



For the Ministry of environment Berta Zevallos, General Secretary in charge, For Natura Foundation Lisandro Madrid, President of the members board of Natura Foundation



For ETESA Gilberto Ferrari Participated, General Manager of ETESA and For Natura Foundation Lisandro Madrid, President of the members board of Natura Foundation



The photo shows members of MIDA, MiAmbiente and Fundación NATURA present at the signing ceremony of the Cooperation Agreements

➤ Chiriquí Viejo River Watershed



Workshop participants Chiriquí Viejo River Watershed Committee



Inception Workshop Presentation by Fernando Ortega from MIDA



Inception Workshop presentation by Diego González from ETESA and Israel Torres, MiAmbiente



Workshop participants: Renacimiento producers



Workshop participants: Tech Team of Executing Entities



Meeting with technicians of Executing Entity MIDA, from the Renacimiento Agency



Producer showing a coffe plantation with agroforestral technology



Views of the field trip to the coffee farm in the Renacimiento sector



Coffee nursery in the Renacimiento agency from MIDA

➤ **Santa María River Watershed**



Workshop participants from the river watershed of Santa María



Program presentation



Program presentation by Patricio Bosques, from Natura Foundation Members board



Santa Maria Watershed Program presentation asistants





Field trip to a farm that use agriculture technology



Jairo Alfaro from MIDA, Santiago Central
Offices



Orchid producer Anayansi Bernaza explaining
the process of an orchid nursery