

El Ministerio de Relaciones Exteriores y Culto, Dirección de Cooperación Internacional, saluda muy atentamente a la Honorable Representación Permanente del Programa de las Naciones Unidas para el Desarrollo (PNUD), con ocasión de remitir el documento de proyecto denominado "Fortalecimiento de las Capacidades de las Asociaciones Administradoras de Acueductos Rurales (ASADAS) para hacer frente a los riesgos del Cambio Climático en las comunidades del Norte de Costa Rica", cuyo propósito consiste en fortalecer las capacidades técnicas y de infraestructura de las ASADAS para hacer frente a los impactos del cambio climático, además de fortalecer la gestión de los usuarios finales de las ASADAS a través de un programa de formación de base comunitaria con enfoque de género, e inclusión de las comunidades indígenas, mediante procesos de planificación participativos para aumentar la resiliencia de las comunidades rurales a la variabilidad climática y del sector hídrico.

El monto solicitado es de US \$ 5.000.000 para acceder a recursos de Cooperación Técnica y Financiera No Reembolsable del Fondo Especial de Cambio Climático (SCCF) del Global Environment Facility (GEF), a través del Programa de las Naciones Unidas para el Desarrollo (PNUD), como administrador y ejecutor de los recursos, mediante la modalidad Direct Implementation Modality (DIM), con el Instituto Costarricense de Acueductos y Alcantarillados (A y A), como responsable técnico del proyecto. La contrapartida en efectivo y en especie es aportada por el A y A y por el Instituto Meteorológico Nacional por un monto de US\$ 13.650.000, por su parte, Fundecooperación para el Desarrollo Sostenible y la Fundación Costa Rica Estados Unidos para la Cooperación (CRUSA), por un monto total de US\$ 4.808.949 y el PNUD por un monto de US\$ 450.000. El monto total del proyecto es de US\$ 31.658.949.

Esta solicitud ha sido aprobada por el Ministerio de Planificación Nacional y Política Económica, por considerar que se enmarca dentro del Plan Nacional de Desarrollo 2015-2018 "Alberto Cañas Escalante", en el sector de Ambiente, Energía, Mares y Ordenamiento Territorial, con sus objetivos sectoriales: Fortalecimiento de la Gestión Comunitaria del Agua, objetivo 1.9.1 mejorar la calidad de los servicios de abastecimiento de agua potable y saneamiento brindado por las organizaciones comunales.

**A LA HONORABLE
REPRESENTACIÓN PERMANENTE
PROGRAMA DE LAS NACIONES UNIDAS PARA EL DESARROLLO
CIUDAD**



La Dirección de Cooperación Internacional tiene el honor de manifestar al PNUD su complacencia por la presentación de este importante proyecto.

El Ministerio de Relaciones Exteriores y Culto, Dirección de Cooperación Internacional, hace propicia la oportunidad para reiterar a la Honorable Representación Permanente del Programa de las Naciones Unidas para el Desarrollo (PNUD), las seguridades de su más alta y distinguida consideración.

A handwritten signature in black ink, consisting of a stylized, cursive letter 'C' followed by a flourish.

San José, 11 de febrero de 2016

San José, 04 de Febrero de 2016
ACI-056-2016

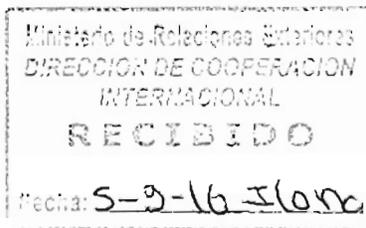
Señora
Irinia Elizondo Delgado
Directora
Dirección de Cooperación Internacional
Ministerio de Relaciones Exteriores y Culto

Estimada señora:

Reciba un cordial saludo. Me permito remitir el documento de proyecto denominado "Fortalecimiento de las Capacidades de las Asociaciones Administradoras de Acueductos Rurales (ASADAS) para hacer frente a los riesgos del Cambio Climático en las comunidades del Norte de Costa Rica", cuyo propósito consiste en fortalecer las capacidades técnicas y de infraestructura de las ASADAS para hacer frente a los impactos del cambio climático, además de fortalecer la gestión de los usuarios finales de las ASADAS a través de un programa de formación de base comunitaria con enfoque de género, e inclusión de las comunidades indígenas, mediante procesos de planificación participativos para aumentar la resiliencia de las comunidades rurales a la variabilidad climática y del recurso hídrico.

El monto solicitado es de US \$ 5.000.000 para acceder a recursos de Cooperación Técnica y Financiera No Reembolsable del Fondo Especial de Cambio Climático (SCCF) del Global Environment Facility (GEF), a través del Programa de las Naciones Unidas para el Desarrollo (PNUD), como administrador y ejecutor de los recursos, mediante la modalidad Direct Implementation Modality (DIM), con el Instituto Costarricense de Acueductos y Alcantarillados (A y A), como responsable técnico del proyecto. La contrapartida en efectivo y en especie es aportada por el A y A y por el Instituto Meteorológico Nacional por un monto de US\$ 13.650.000, por su parte, Fundecooperación para el Desarrollo Sostenible y la Fundación Costa Rica Estados Unidos para la Cooperación (CRUSA), por un monto total de US\$ 4.808.949 y el PNUD por un monto de US\$ 450.000. El monto total del proyecto es de US\$ 31.658.949.

Dicho proyecto se enmarca dentro del Plan Nacional de Desarrollo (PND) 2015-2018 "Alberto Cañas Escalante", en el sector de Ambiente, Energía, Mares y Ordenamiento Territorial, con sus objetivos sectoriales: Fortalecimiento de la Gestión Comunitaria del Agua, objetivo 1.9.1 mejorar la calidad de los servicios de abastecimiento de agua potable y saneamiento brindado por las organizaciones comunales.



Cordialmente,

Saskia Rodríguez Steichen

Directora Área de Cooperación Internacional



- C.
- Sra. Yamileth Astorga Espeleta, Presidenta Ejecutiva A y A.
 - Sra. Yolanda Martínez Cascante, Subgerente Gestión de Sistemas Delegados, A y A.
 - Sr. Rodolfo Ramírez, Director Unidad Ejecutora de Gestión de Acueductos Rurales, UEN, A y A.
 - Sr. Oscar Izquierdo, Director Dirección Nacional de Cooperación y Asuntos Internacionales, A y A.
 - Sr. Rubén Muñoz, Director de Cooperación Internacional MINAE.



GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

Naoko Ishii
CEO and Chairperson

January 14, 2016

Ms. Adriana Dinu
GEF Executive Coordinator
United Nations Development Programme
One United Nations Plaza
304 East 45th St.
FF Bldg., 10th floor
New York, NY 10017

Dear Ms. Dinu:

I am pleased to inform you that I have endorsed the full-sized project proposal detailed below:

Decision Sought:	CEO Endorsement of Full-sized Project
GEFSEC ID:	6945
Agency(ies):	UNDP
Agency ID:	5140 (UNDP)
Focal Area:	Climate Change
Project Type:	Full Size Project
Country(ies):	Costa Rica
Name of Project:	Strengthening Capacities of Rural Aqueduct Associations' (ASADAS) to Address Climate Change Risks in Water Stressed Communities of Northern Costa Rica
GEF Project Grant:	\$5,000,000
Agency Fee:	\$475,000
Funding Source:	Special Climate Change Fund

Break-down of Indicative Agency Fee				
Agency	Trust Fund	Fees committed at Council Approval	Fees to be committed at CEO Endorsement	Total (US\$)
UNDP	SCCF	\$190,000	\$285,000	\$475,000

I am endorsing this project on the understanding that the GEF Agency will have its internal approval of the project no later than four months after the CEO endorsement.

This endorsement is subject to the comments made by the GEF Secretariat in the attached document. It is also based on the understanding that the project is in conformity with SCCF focal areas strategies and in line with GEF/SCCF policies and procedures.

Sincerely,



Naoko Ishii
Chief Executive Officer and Chairperson

Attachment: GEFSEC Project Review Document
Copy to: Country Operational Focal Point, GEF Agencies, STAP, Trustee



GEF SECRETARIAT REVIEW FOR FULL/MEDIUM-SIZED PROJECTS*
THE GEF/LDCF/SCCF/NPIF TRUST FUNDS

GEF ID:	6945		
Country/Region:	Costa Rica		
Project Title:	Strengthening Capacities of Rural Aqueduct Associations ¹ (ASADAS) to Address Climate Change Risks in Water Stressed Communities of Northern Costa Rica		
GEF Agency:	UNDP	GEF Agency Project ID:	5140 (UNDP)
Type of Trust Fund:	Special Climate Change Fund (SCCF)	GEF Focal Area (s):	Climate Change
GEF-5 Focal Area/LDCF/SCCF Objective (s):			
Anticipated Financing PPG:	\$150,000	Project Grant:	\$5,000,000
Co-financing:	\$26,658,949	Total Project Cost:	\$31,958,949
PIF Approval:	September 03, 2014	Council Approval/Expected:	October 30, 2014
CEO Endorsement/Approval		Expected Project Start Date:	
Program Manager:	Saliha Dohardzic	Agency Contact Person:	Gabor Vereczi

Review Criteria	Questions	Secretariat Comment at PIF (FPD)/Work Program Inclusion ¹	Secretariat Comment At CEO Endorsement(FSP)/Approval (MSP)
Eligibility	1. Is the participating country eligible?	Yes, Costa Rica is eligible, as a Party to UNFCCC, and a non-Annex I country.	Yes, no change since PIF.
	2. Has the operational focal point endorsed the project?	Yes, the letter dated July 21, 2014 is on file.	
	3. Is the proposed Grant (including the Agency fee) within the resources available from (mark all that apply):		
Resource Availability	<ul style="list-style-type: none"> • the STAR allocation? • the focal area allocation? • the LDCF under the principle of equitable access 		

*Some questions here are to be answered only at PIF or CEO endorsement. No need to provide response in gray cells.
¹ Work Program Inclusion (WPI) applies to FSPs only. Submission of FSP PIFs will simultaneously be considered for WPI.
 : See 'STAR' review template updated January 2013.

Review Criteria	Questions	Secretariat Comment at PIF (PPD)/Work Program Inclusion ¹	Secretariat Comment At CEO Endorsement(FSP)/Approval (MSP)
	<ul style="list-style-type: none"> the SCCF (Adaptation or Technology Transfer)? the Nagoya Protocol Investment Fund focal area set-aside? 	Yes, from the SCCF-A.	No change since PIF.
Strategic Alignment	<p>4. Is the project aligned with the focal area/multifocal areas/ LDCF/SCCF/NPIF results framework and strategic objectives? <i>For BD projects: Has the project explicitly articulated which Aichi Target(s) the project will help achieve and are SMART indicators identified, that will be used to track progress toward achieving the Aichi target(s).</i></p>	<p>Yes, the project is aligned with CCA-1 and CCA-2. By CEO Endorsement, please consider how this project can ensure alignment with CCA-3 as well.</p>	Cleared. Project alignment with CCA-1, CCA-2, and CCA-3 is demonstrated.
	<p>5. Is the project consistent with the recipient country's national strategies and plans or reports and assessments under relevant conventions, including NPFE, NAPA, NCSA, NBSAP or NAP?</p>	<p>This is not clear. Recommended Action: Please elaborate how this proposal fits with Costa Rica's SNC, and if there are any other national strategies, plans, reports, and/or assessments with which this project will be aligned. Update 8/21/2014: The elaboration has been provided and this is cleared.</p>	<p>Yes, the project is consistent with the National Development Plan NDP 2015-2018, in addition to the consistency of the project with national strategies and plans outlined in the PIF.</p>
	<p>6. Is (are) the baseline project(s), including problem(s) that the baseline project(s) seeks to address, sufficiently described and based on sound data and assumptions?</p>	<p>For the most part. However, the relationship of the Biodiversity Partnership MesoAmerica to the proposed project, as a baseline, is unclear. Recommended Action: Please provide clarifications on the</p>	Yes.

Review Criteria	Questions	Secretariat Comment at PIF (PPD)/Work Program Inclusion	Secretariat Comment At CEO Endorsement(FSP)/Approval (MSP)
Project Design	7. Are the components, outcomes and outputs in the project framework (Table B) clear, sound and appropriately detailed?	relationship of the BPM, as a baseline project, to the proposed intervention. Update 8/21/2014: Further information has been provided and this is cleared.	Yes.
	8. (a) Are global environmental/adaptation benefits identified? (b) Is the description of the incremental/additional reasoning sound and appropriate?	Yes, the adaptation benefits have been identified. The description and reasoning are sound and appropriate, although not exhaustive. By CEO Endorsement, please provide a more comprehensive analysis of the adaptation benefits, and the additional reasoning.	The proposal contains detailed description of the additional reasoning, which appears sound and appropriate. This is cleared.
	9. Is there a clear description of: a) the socio-economic benefits, including gender dimensions, to be delivered by the project, and b) how will the delivery of such benefits support the achievement of incremental/ additional benefits?		Yes.
	10. Is the role of public participation, including CSOs, and indigenous peoples where relevant, identified and explicit means for their engagement explained?	Yes, the role of public participation including CSOs and indigenous people is identified and described.	Yes.
11. Does the project take into account potential major risks, including the consequences of climate change, and describes sufficient risk mitigation measures? (e.g., measures to enhance climate	Not clear. The project identifies risks, and describes risk mitigation measures. However, the risk of weak participation of ASADAS is proposed to be managed by communication of "importance that ASADAS and communities play an	Yes.	

Review Criteria	Questions	Secretariat Comment at PIF (PFD)/Work Program Inclusion ¹	Secretariat Comment At CEO Endorsement(FSP)/Approval (MSP)
	resilience)	<p>active role."</p> <p>Recommended action: Considering the importance of the planned role for ASADAS, which is crucial to the project design, please consider this issue further and devise a stronger risk mitigation strategy for this risk in particular. For instance, consider restructuring the project or using part of the grant to put in place a set of incentives which would ensure ASADAS active engagement.</p> <p>Update 8/21/2014: The project will further mitigate any risk by conducting regional meetings with the majority of the beneficiary ASADAS in the country to sign a collective letter of intent related to the implementation of the project. This is cleared.</p>	
	<p>12. Is the project consistent and properly coordinated with other related initiatives in the country or in the region?</p>	<p>Yes, the project will coordinate with a Socio-ecological Land Management initiative, Sustainable Development of the Rio Frio Watershed project, UNDP-GEF project "Conservation, sustainable use of biodiversity, and maintenance of ecosystem services of innationally important protected wetlands", among others.</p>	<p>Yes, the project is consistent and properly coordinated with other related initiatives in the country and region. (This also responds to a comment raised at PIF by the LDCF/SCCF Council).</p>
	<p>13. Comment on the project's innovative aspects, sustainability, and potential for scaling up.</p> <ul style="list-style-type: none"> • Assess whether the project is innovative and if so, how, and if not, why not. • Assess the project's strategy 	<p>This is not clear.</p> <p>Recommended action: Please comment on the innovativeness, sustainability, and scaling up.</p> <p>Update 8/21/2014: This project is innovative as it will</p>	<p>Through PES-type contracts that will last up to 20 years, the ASADAS and local communities will rely on a sustainable flow of funds that will contribute to the sustainability of project outcomes beyond its completion. The project will rely on a Knowledge Management System</p>

Review Criteria	Questions	Secretariat Comment at PIF (PED)/Work Program Inclusion ¹	Secretariat Comment At CEO Endorsement(FSP)/Approval (MSP)
	<p>for sustainability, and the likelihood of achieving this based on GEF and Agency experience.</p> <ul style="list-style-type: none"> Assess the potential for scaling up the project's intervention. 	<p>combine interventions across institutions that do not normally work together, will work with the water-intensive sectors and companies to expand the Payment for Ecosystem Services and voluntary water usage/aquifer conservation contributions. Sustainability of the proposed interventions hinges on the strong participation of Government entities, communities, and key stakeholders. There is a possibility of scaleup to the national level.</p> <p>By CEO Endorsement, it is recommended to strengthen the project design as it relates to sustainability (for instance, regarding voluntary payments) and scale-up.</p>	<p>(Section 2.4, Output 2.2.2) to synthesize lessons learned and experiences that will result from project implementation, including the implementation of voluntary payments and PES schemes, and for sharing information related to climate change and ecosystem-based adaptation practices so that these can be replicated/scaled-up in other water-stressed regions in the country. In addition, the project's monitoring and evaluation plan includes a strategy for sharing best practices and generating knowledge products that will also contribute to scaling up. This is cleared.</p>
	<p>14. Is the project structure/design sufficiently close to what was presented at PIF, with clear justifications for changes?</p> <p>15. Has the cost-effectiveness of the project been sufficiently demonstrated, including the cost-effectiveness of the project design as compared to alternative approaches to achieve similar benefits?</p>		<p>Yes.</p> <p>Yes.</p>
Project Financing	<p>16. Is the GEF funding and co-financing as indicated in Table B appropriate and adequate to achieve the expected outcomes and outputs?</p> <p>17. <u>At PIF</u>: Is the indicated amount and composition of co-financing as indicated in Table C adequate? Is the amount that the Agency</p>	<p>Yes, it appears to be appropriate and adequate.</p> <p>Yes, the cofinancing of \$26.9 million is currently indicated, of which \$450,000 is brought by the Agency.</p>	<p>Yes.</p> <p>Yes, the co-financing has been confirmed.</p>

Review Criteria	Questions	Secretariat Comment at PIF (PTD)/Work Program Inclusion ¹	Secretariat Comment At CEO Endorsement(FSP)/Approval (MSP)
	bringing to the project in line with its role? At CEO endorsement: Has co-financing been confirmed?		
	18. Is the funding level for project management cost appropriate?	Yes.	Yes, the funding level for project management cost, at 4.5% of the project cost, is appropriate.
	19. At PIF, is PPG requested? If the requested amount deviates from the norm, has the Agency provided adequate justification that the level requested is in line with project design needs? At CEO endorsement/ approval, if PPG is completed, did Agency report on the activities using the PPG fund?	Yes, in line with the norm.	Yes.
	20. If there is a non-grant instrument in the project, is there a reasonable calendar of reflows included?	n/a	n/a
Project Monitoring and Evaluation	21. Have the appropriate Tracking Tools been included with information for all relevant indicators, as applicable?		Yes.
	22. Does the proposal include a budgeted M&E Plan that monitors and measures results with indicators and targets?		Yes.
Agency Responses	23. Has the Agency adequately responded to comments from: • STAP? • Convention Secretariat? • The Council? • Other GEF Agencies?		Yes. N/A Yes. N/A
Secretariat Recommendation			
	24. Is PIF clearance/approval	Not yet. Please address the items under	

Review Criteria	Questions	Secretariat Comment at PIF (PFD)/Work Program Inclusion ¹	Secretariat Comment At CEO Endorsement(FSP)/Approval (MSP)
Recommendation at PIF Stage	being recommended?	#5, 6, 11, and 13. Update 8/21/2014: The PIF clearance is recommended.	
	25. Items to consider at CEO endorsement/approval.	#4 and 8. #13	
Recommendation at CEO Endorsement/ Approval	26. Is CEO endorsement/approval being recommended? First review*		Yes, the submission is ready to be recommended for CEO endorsement.
	Additional review (as necessary)	August 21, 2014	
Review Date (s)	Additional review (as necessary)		

* This is the first time the Program Manager provides full comments for the project. Subsequent follow-up reviews should be recertified. For specific comments for each section, please insert a date after comments. Greyed areas in each section do not need comments.



United Nations Development Programme

Country: Costa Rica

PROJECT DOCUMENT¹

Strengthening Capacities of Rural Aqueduct Associations' (ASADAS) to address climate change risks in water stressed communities of Northern Costa Rica

<p>UNDAF Outcome(s):</p>	<p>Area 4: Environmental sustainability and risk management.</p> <p>Outcome 4.2. The public and private sectors and civil society have advanced in mainstreaming and the implementation of national policies and strategies that consider environmental quality management and integrated natural resources management, the valuation of environmental goods and services, and the protection, conservation and sustainable use of biodiversity</p> <p>Outcome 4.3. The public and private sectors and civil society have mainstreamed into their policies and have developed the capacity to implement the National Plan for Risk Management and measures to for a better use of the land.</p>
<p>UNDP Strategic Plan <u>Primary</u> Outcome:</p> <p>UNDP Strategic Plan <u>Secondary</u> Outcome:</p>	<p>Outcome 1: Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded.</p> <p>Output 1.4. Scaled-up action on climate change adaptation and mitigation across sectors which is funded and implemented.</p>
<p>Expected CP Outcome(s):</p>	<p>Addressing climate change impacts on water availability by promoting community-based adaptation in the project area.</p>
<p>Expected CPAP/UNDAF Output (s):</p>	<p>Outcome 5: A national climate change strategy that allows moving to a low carbon economy and reduce vulnerability to climate change implemented.</p>
<p>Executing Entity/Implementing Partner:</p>	<p>United Nations Development Program (UNDP)</p>
<p>Implementing Entity/Responsible Partners:</p>	<p>United Nations Development Program (UNDP)</p>

¹ For UNDP supported GEF funded projects as this includes GEF-specific requirements

Brief Description

Costa Rica is already experiencing the effects of climate change (CC), principally in the northern region of the country. CC scenarios suggest that by 2080 the annual area rainfall will be reduced by up to 65% in the region. In the short term, rainfall is predicted to decrease 15% by 2020 and 35% by 2050. These extreme conditions will exacerbate climate and water stress in some areas, recreating conditions that are typical of semi-arid areas. If CC-driven pressures are not addressed, the region will continue to experience significant water shortages that will have a severe economic impact on the livelihoods of local communities and the productive sectors. In Costa Rica, rural aqueduct associations (ASADAS), which are locally organized groups of men and women from the user-communities delegated by the National Institute of Aqueducts and Sewers (AyA), provide potable water and sanitation services to 28.7% of the country's population, reaching communities in suburban and rural areas. Most ASADAS in the region must develop the necessary skills and have access to knowledge and tools, as well as adequate investment, in order to address the scarcity of the water supply due to CC. Existing aqueduct infrastructure is often outdated and overloaded, causing inefficient water delivery, which in turn complicates the collection of fees from end users. Instability of fee collection leads to financial uncertainty, which impedes the ASADAS and the AyA's ability to plan for and implement targeted improvements and new investments, including adaptation to CC. AyA investment plans lack community-based or ecosystem-based adaptation measures. If the ASADAS do not strengthen their capacities to cope with CC, the vulnerability of rural populations of the northern region of Costa Rica will only increase.

The long-term solution to mitigate the prevailing threats of water shortages to local livelihoods is to establish a holistic approach to managing the water supply and demand that takes CC into account. The objective of this five-year project is to improve water supply and promote sustainable water practices of end users and productive sectors by advancing community- and ecosystem-based adaptation measures in ASADAS to address projected climate-related hydrological vulnerability in northern Costa Rica. This will be achieved through community- and ecosystem-based measures in rural aqueduct associations (ASADAS) to address projected climate-related hydrological vulnerability. The interventions are targeted in the northern region of Costa Rica (Guanacaste and Alajuela provinces). However, the following barriers limit the achievement of the normative solution: a) lack of knowledge and access to finance for resilient infrastructure, efficient household-level water use technologies, and aquifer mapping to effectively manage water demand and usage and design strategies to conserve water during periods of drought; b) limited capacity and knowledge among local stakeholders to adopt sustainable water use practices and reduce their vulnerability to CC; c) incomplete hydroclimatological network and deficient climate early warning and information system (CEWS) that limit the ability of rural ASADAS and local communities to implement timely mitigation measures; d) lack of awareness among policy and decision-makers about the social, economic, and environmental implications of water resources vulnerability to CC; and e) lack of economic incentives for the livestock and agricultural sectors for adopting water conservation production practices to reduce their vulnerability to CC.

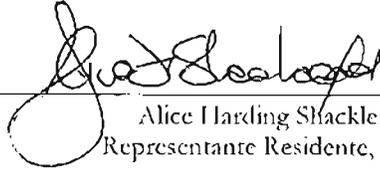
The theory of change underpinning this project includes building community-based infrastructure and technical capacities to address projected changes in water availability (Component 1) and mainstreaming ecosystem-based adaptation measures into public and private sector policies and investments in the target area (Component 2). First, SCCF resources will be used to strengthen the infrastructure and technical capacity of ASADAS to cope with CC impacts. Second, the capacities of ASADAS end users to mainstream CC adaptation into their livelihood systems will be strengthened through a community-based CC-training program with a gender focus and which includes indigenous communities. Third, hydrometeorological information will be integrated into land use and production practices and planning processes to increase the resilience of rural communities to water variability. Fourth, ecosystem-based CC adaptation measures will be integrated into public and private sector policies, strategies, and investments related to rural community water-sourcing infrastructure and services. Finally, the purchasing and credit policies of at least 20 agricultural and livestock trading companies and five financial institutions in the target region will integrate incentives to promote adoption of ecosystem-based CC adaptation measures by farmers, and a knowledge management system will be developed allowing dissemination of data, information, and toolkits to foster and mainstream ecosystem-based adaptation practices in other water-intensive productive sectors across the country.

Programme Period:	60 months
Atlas Award ID:	00084063
Project ID:	00092255
PIMS #	5140
Start date:	April 2016
End Date	March 2021
Management Arrangements:	DIM
PAC Meeting Date:	20 April 2016

Total resources required:	31,658,949
Total allocated resources:	31,658,949
• Other:	
o SCCF	5,000,000
o Government	13,650,000
o UNDP	450,000
o Other	4,808,949
In-kind contributions	
o Government	7,750,000



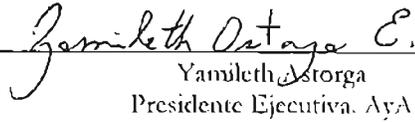
Agreed by (UNDP):



Alice Harding Shackelford
Representante Residente, PNUD

Date: 1/2/2016

Agreed by (strategic partner):


Yamileth Astorga
Presidente Ejecutiva. AyA

Date: 27/01/2016

Agreed by (Government):


Olga Marta Sánchez
Ministra MIDEPLAN

Date: 1/2/2016

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List of Acronyms

AFS	Automated Flow Stations
ALM	Adaptation Learning Mechanism
AMA'T	Adaptation Monitoring and Assessment Tool
APR/PIR	Annual Project Review/Project Implementation Reports
ARESEP	Regulator Authority for Public Services
ASADAS	Rural Aqueduct Associations
AWP	Annual Work Plan
AWS	Automated Weather Stations
AyA	Institute of Aqueducts and Sewers
BAU	Business As Usual
BIOMARCC	Coastal Marine Biodiversity and Climate Change Adaptation Project
CATIE	Tropical Agricultural Research and Higher Education Center
CC	Climate Change
CCA	Climate Change Adaptation
CCVI	Climate Change Vulnerability Index
CDR	Center for Rural Development
CEDARENA	Center for Environmental Law and Natural Resources
CEWS	Climate early warning and information system
CGR	Comptroller General Office
CNE	National Emergency Commission
CO	Country Office
CONCLIMA	National Climate Change Committee
CP	Country Programme
CPAP	Country Programme Action Plan
CRP	Centre for Development and Support
CSOs	Civil Society Organizations
CSR	Corporate Social Responsibility
DCC	Climate Change Office
DIM	Direct Implementing Modality
DSA	Daily Subsistence Allowance
EEG	Energy and Environment Group
ENCC	National Climate Change Strategy
ENSO	El Niño-Southern Oscillation
ERC	Evaluation Resource Center
ERPA	Emission Reductions Payment Agreement
ESC	Environmental Services Certificate
FCPF	Forest Carbon Partnership Facility
FONAFIFO	National Forestry Financing Fund
GEF	Global Environment Facility
GEF OFF	Global Environment Facility Operational Focal Point
GHG	Greenhouse gas
GIS	Geographic Information System
GIZ	German Federal Enterprise for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit)
GoCR	Government of Costa Rica
IA	Implementing Agency
IDCR	International Development Research Centre
IMN	National Meteorological Institute

INAMU	National Women's Institute
INBio	National Biodiversity Institute
LOI	Letter of Intent
LSC	Local Steering Committee
MAG	Ministry of Agriculture and Livestock
MINAE	Ministry of Environment and Energy
MINSALUD	Ministry of Health
MOSS	Minimum Operation Security Standards
M&E	Monitoring and Evaluation
NAF	National Adaptation Fund
NDP	National Development Plan
NGO	Non-Governmental Organization
PAC	Project Appraisal Committee
PC	Project Coordinator
PES	Payment for Ecosystem Services
PIF	Project Information Form
PIMS	Project Information Management System
PIU	Project Implementation Unit
PPG	Project Preparation Grant
PPR	Project Progress Reports
PPSA	Payments for Ecosystem Services Program
QPR	Quarterly Progress Report
RCU	Regional Coordination Units
RMPPWS	Risk Management Plan for Potable Water and Sanitation
RTA/HQ	Regional Technical Advisor/Headquarter
SAGA	ASADAS' Management System
SBAA	Standard Basic Assistance Agreement
SCCF	Special Climate Change Fund
SEM	Sustainable Ecosystem Management
SEMU	Socio-Ecological Management Unit
SENARA	National Service of Underground Water, Irrigation, and Drainage
SGP	Small Grant Program
SINAC	National System of Conservation Areas
SNC	Second National Communication
SOF	Source of Funding
TEEB	The Economics of Ecosystems and Biodiversity
TOR	Terms of Reference
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNDP CCA	United Nations Development Programme Common Country Assessment
UNDP-EEG	United Nations Development Programme-Environment and Energy Group
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar
WSP	Water Safety Plan

1. SITUATION ANALYSIS

1.1. Climate change-induced problem

1. Costa Rica, with a surface area of 51,100 square kilometers (km²), has abundant natural resources, including water. The available water per capita is estimated at 28,634 cubic meters (m³) per year, which is comparable with the available water per capita of Brazil.² Costa Rica is rich in tropical forests, savannas, and aquatic ecosystems. Costa Rica's forests, especially its tropical forests that are associated with aquatic ecosystems, are essential sources of goods and services and are vital to preserving the quality and quantity of the available water. Costa Rica currently has 18,400 km² of protected areas, which comprise a form of adaptation to climate change since they protect the country's forest and aquatic ecosystems and are a key source of water resources around the country.³

2. According to ECOTEC (2009), the water supply in the country is determined by weather variations and human alterations to the water cycle, which occasionally serve as causes for droughts and floods. Costa Rica has experienced the effects of climate change, principally in the northern region of the country: because of its location in an inter-tropical zone, evaporation and evapotranspiration are increasing the temperatures of the region. Based on climate change scenarios there is an expectation that by 2080 the annual area rainfall will be reduced by up to 65% in the northern Pacific region. In the short term, rainfall is predicted to decrease 15% by 2020 and 35% by 2050. These extreme conditions will exacerbate climate and water stress in some areas, such as the canton of La Cruz, where precipitation is expected to be less than 500 millimeters (mm) per year by 2080, recreating conditions that are typical of semi-arid areas. The region has already experienced multiple droughts: for example, between 1950 and 1999 the Province of Guanacaste reported 33 droughts.⁴ The aquifers in the region are also under stress because of over-consumption by the agriculture, tourism, and developmental sectors, which affects the availability and quality of water for human consumption.

The Target Project Area – Characteristics contributing to exposure and vulnerability

3. The areas targeted for this project are three Socio-Ecological Management Units (SEMUs) in the northern-Pacific and northern regions of Costa Rica. The northern region comprise the cantons (municipal territories) of Guatuso, Upala, Los Chiles (SEMU 1), while northern-Pacific region includes La Cruz (SEMU 1); Liberia and Cañas (SEMU 2); and Santa Cruz, Nicoya, Hojancha, and Carrillo (SEMU 3) (Figure 1). The project area has a total territorial extension of 10,608.9 km² and a population of 354,132 inhabitants. This region is targeted for Special Climate Change Fund (SCCF) financing as the water supply is threatened by shortages due to climate change impacts. In November 2014, the Government of Costa Rica issued an emergency decree that is valid for a period of five years, to address the effects of drought in the province of Guanacaste, including the SEMU 2 and 3, and La Cruz (SEMU 1).

4. The target SEMUs are located in the province of Guanacaste and the northern region of the province of Alajuela. The province of Guanacaste is a seasonally dry region in northwestern Costa Rica. The province experience little rain and has consistently hot temperatures from November to April. From May to October, the climate consists of daily showers with moderate temperatures. Twenty-seven percent (27%) of the wind power and geothermal sources of Costa Rica's electricity is produced in Guanacaste. The province is also an important agricultural and ranching region. In recent decades tourism has also become an important economic activity. Guanacaste has tropical dry forests, which are a natural adaption to the dry season conditions.

² ECOTEC 2009 Diagnostico Biofisico para Costa Rica del Proyecto. Mejoramiento de Capacidades Nacionales para la Evaluación de la Vulnerabilidad y Adaptación del Sistema Hídrico al Cambio Climático en Costa Rica como Mecanismo para Disminuir el Riesgo al Cambio Climático y Aumentar el Índice de Desarrollo Humano. San Jose, Costa Rica.

³ Ibid.

⁴ Retana, J. y Solano J. (s.f). Relacion entre las inundaciones en la cuenca del Tempisque y el fenómeno de la Niña y los rendimientos de arroz seco

5. Efforts made by Costa Rica through the National Meteorological Institute (IMN) to develop studies to determine the baseline analysis and to identify actions to promote adaptation measures to climate change include risk assessments of the country's water system to establish the impact of extreme weather events related to global warming. The results of these analyses have shown that in the case of extreme dry scenarios, Guanacaste is one of the two provinces with the highest risk.⁵ The risk was assessed by combining infrastructure, services, and human development variables into a vulnerability index together with climate-related variables, including rainfall excesses and deficits, frequency of occurrence of extreme events, frequency in drought and flooding, magnitude of the events, and relative spatial coverage of the events. Low rainfall during extended drought periods in the Guanacaste province does not allow for aquifers to recharge, thereby reducing their levels, limiting access to water resources, and impacting the local economy. This has led to the development of hydrogeological studies to assess the current state of the aquifers in terms of the quantity and quality of the water stored and to assess their vulnerability. In 2014, the National Groundwater, Irrigation, and Drainage Service (SENARA) assessed the water levels at the Potrero-Caimital aquifer in the canton of Nicoya and the Huacas-Tamarindo aquifer in the canton of Santa Cruz (Guanacaste province). This analysis indicated that after a decrease in rainfall at Guanacaste in 2014, the situation of those aquifers was so critical that the Office of the President of Costa Rica declared a state of emergency for the area. In addition, both aquifers are subject to high water demand through wells and degradation of the recharge areas.⁶ Monitoring reports indicate that the water used for irrigation may currently be recharging the Potrero-Caimital aquifer, which would create a potential risk of contamination. Previous studies have shown the existence of livestock in the aquifer recharge areas, as well as in areas close to sources of public water supply. This region is also susceptible to floods. During February 2009, the heavy rains that affected the Pacific coast caused floods and landslides that seriously damaged at least 27 major roads; at least 2,000 homes were flooded in the northern portion of the province.⁷

6. The province of Alajuela is located in the north-central part of Costa Rica. The province has two distinctive regions: the northern lowlands region and the Central Valley highlands. Alajuela's climate is generally divided into two periods: the dry season (December to April) and the rainy season (May to November); the latter corresponds with the Atlantic hurricane season. In the northern region, the weather is mostly hot and humid with moderate to high hydric availability. The basis of Alajuela's economy is agricultural production (e.g., coffee, rice, corn, pineapple, bananas, and sugar cane). The province also has large cattle ranching areas and a well-developed tourism industry.

El Niño-Southern Oscillation (ENSO) Cycle: El Niño and La Niña phenomena

7. The ENSO cycle consists of two phases: the warm *El Niño* and the cold *La Niña* phenomena that affect the weather patterns of some areas in Costa Rica. *La Niña* has usually been associated with heavy precipitation in the Pacific and central regions and with normal or slightly deficient rainfall in the Caribbean and northern region of the country. During *La Niña* the annual precipitation increases approximately 400 millimeters (mm) above the average, while the average temperature decreases due to the fact that the highest temperature lowers by an average of 0.4°C monthly.⁸ This weather anomaly has generated flooding, and together with land and environmental degradation, it has profoundly affected the country socially and economically. In the northern Pacific region of Costa Rica, the middle and lower basin of the Tempisque River and the Bebedero River have historically presented major flooding events; however, during the period of *La Niña* flooding events tend to increase in frequency and intensity. In the late 1990s floods in Guanacaste led to the death of citizens, economic losses in infrastructure and agriculture, an increase in emerging diseases, and other impacts.⁹

⁵ Costa Rica. Ministerio de Ambiente y Energía, e Instituto Meteorológico Nacional. Tercera comunicación nacional a la Convención Marco de las Naciones Unidas sobre Cambio Climático. San José, Costa Rica. MINAE, IMN, GEF, PNUD, 2014. 112 p

⁶ Agudelo, C. 2014. Reporte técnico sobre monitoreo de los acuíferos Huacas-Tamarindo y Potrero-Caimital. Servicio Nacional de Aguas Subterráneas, Riego y Avenamiento. San José, Costa Rica.

⁷ World Bank. Global Facility for Disaster Reduction and Recovery (GFDRR), and Climate Change Team/ENV. Vulnerability, Risk Reduction, and Adaptation to Climate Change. Climate Risk and Adaptation Country Profile. April 2011

⁸ Villalobos, R. 1999. Impacto del fenómeno ENSO sobre la producción de arroz y frijol en dos regiones agrícolas de Costa Rica. Instituto Meteorológico Nacional. Gestión de Desarrollo. San José, Costa Rica

⁹ Ibid

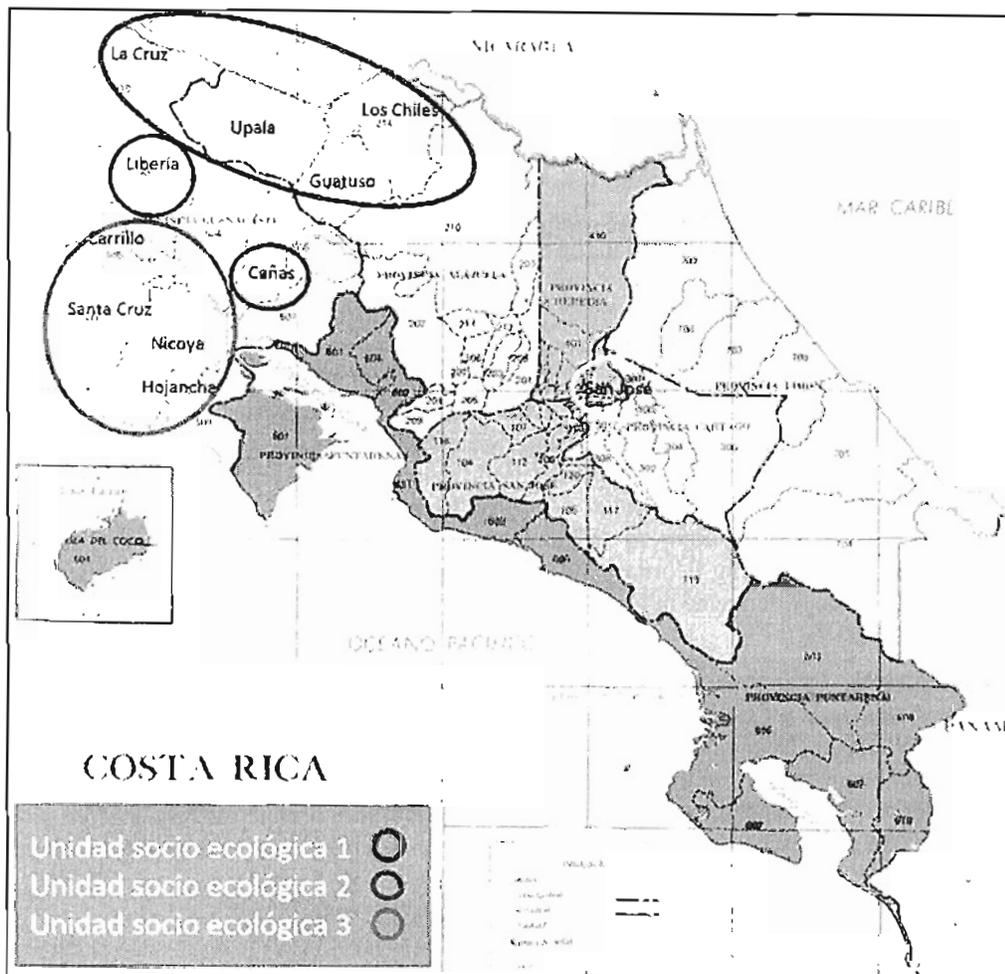


Figure 1 – Project area.

1.2. Vulnerability of community-based water management organizations in northern Costa Rica

8. The reduction in rainfall will compound pressures as water consumption in the target area is also expected to increase by at least 20% over the coming decades, driven by an expected increase in exports of agro-industry products, while investments in water infrastructure, mainly by the Institute of Aqueducts and Sewers (AyA), will be reduced because of fiscal and legislative constraints. The sustained increased demand of water resources by the agricultural sector and the lack of financial investment in water infrastructure is beginning to create stress on water availability in the area. Actual productive practices with a high water footprint index¹⁰, such as pineapple, livestock, and citrus crops, are increasing the demand pressure on water for irrigation. According to the available data¹¹, most of these productive activities are rain-fed (83% of the total), while irrigation accounts for 17% of the total. If climate change-driven pressures are not addressed, Costa Rica's SEMUs of the northern region will inevitably experience significant water shortages that will have a severe economic impact on livelihoods and the productive sectors. As a result of the increased frequency of extreme weather events (particularly drought), local communities and farmers in northern Costa Rica are currently facing a reduction of their means for production,

¹⁰ <http://www.waterfootprint.org/Reports/Mekonnen-Hoekstra-2011-WaterFootprintCrops.pdf>

¹¹ FAO Stats (2000) http://www.fao.org/nr/water/aquastat/countries_regions/costa_ricw/indexesp.stm

such as access to water and water infrastructure and facilities that are critical to their livelihoods. Consequently the communities from the target area (SEMUs 1, 2, and 3) are becoming increasingly vulnerable to climate variability.

9. Approximately 1,498 organizations exist as locally organized groups of men and women from the user-communities who are interested in the non-for-profit management of the local aqueduct and sanitation system, commonly known as ASADAS (Rural Aqueduct Associations). In a decentralized manner, public services enterprises, municipalities, and ASADAS provide 47.5% services of the total Costa Rican population. ASADAS alone manage and operate water systems for 28.7% of the population, primarily for those in rural areas and border regions.

10. Existing aqueduct infrastructure is often outdated and overloaded, causing inefficient water delivery, which in turn complicates the collection of fees from end users. Instability of fee collection leads to financial uncertainty, which impedes the AyA's ability to plan for and implement targeted improvements and new investments. Most ASADAS and the local governments of the target area need to develop the necessary skills and have access to knowledge, tools, and adequate investment in order to address the scarcity of the water supply. The AyA's current investment plan, which includes capacity development activities directed mainly to ASADAS, lacks community-based or ecosystem-based measures. In addition, financial institutions lack tools that are proven to be capable of providing the correct incentives for private sector enterprises to integrate community- and water-related adaptation measures, as financial institutions primarily consider traditional financial inputs in their investment analyses, excluding water-related practices and community livelihoods that impact production and generation of income. If ASADAS do not strengthen their capacities to cope with climate change, the vulnerability of rural populations of the northern region of Costa Rica will only increase.

11. There is limited capacity of the authorities to address climate change impacts. As such, the urgent need for adaptation to the growing severity of droughts in the northern region is not matched by appropriate scaling-up of climate-adaptive processes due to institutional weaknesses and lack of financial resources, both by ASADAS and political institutions.

1.3. Policy and institutional framework for climate change adaptation and water resources management

12. Costa Rica is signatory of the United Nations Framework Convention on Climate Change (UNFCCC, 1992), which was ratified and put in force in 1994. Costa Rica has submitted three national communications to the UNFCCC in 2000, 2009, and 2014 respectively, which outline government actions and policy frameworks to address adaptation to climate change.¹²

13. Costa Rica is located in an area of the globe that is particularly exposed to the impacts of climate change. Adapting to climate risks requires policies and measures to enable the country to prepare against possible extreme events. The following policies target adaptation and vulnerability to climate change and climate-related events:

- The National Climate Change Strategy (ENCC, 2009)¹³ calls for public institutions and all levels of government to produce action plans containing clear goals around six pillars: mitigation, adaptation, metrics, capacity-building, public awareness and education, and financing—all with the common goal of mainstreaming climate change policy in line with national strategies. The focus areas are mitigation, adaptation, measuring, capacity-building, awareness-raising, and public education funding. In addition, the ENCC establishes the country-wide goal of carbon neutrality by 2021 and considers both a national and international plan for mitigation and adaptation. The mitigation strategy addresses sources of greenhouse gas (GHG) emissions, carbon sequestration in forests, and development of carbon markets.

¹² Costa Rica 2014: Tercera Comunicación Nacional a la Convención Marco de Naciones Unidas sobre el Cambio Climático, Primera Edición.

¹³ Costa Rica: Ministerio de Ambiente, Energía y Telecomunicaciones 2009. Estrategia Nacional de Cambio Climático, San José, Costa Rica: Editor Calderón y Alvarado S. A.

- The Action Plan of the ENCC is a road map for mainstreaming the climate change agenda in priority sectors (transportation, energy, agriculture, and water resources) from the perspective of human development. It aims to be a catalyst instrument to guide the allocation of public and private resources in a more strategic and coordinated manner to move the country forward in its transformation to a model of low-carbon development (including the milestone of carbon neutrality by 2021) and resiliency to the effects of climate change.
- The National Development Plan (NDP) 2015-2018, Section 4.9: Risk Management and Adaptation to Climate Change, which calls for reduced vulnerability of public services to climate change events, including the provision of water and sanitation and the promotion of sustainable production practices (soil conservation, water management, and community-based forestry) as a strategy to reduce risks. Program 9.1: National Program to Supply Potable Water to the Population, aims to ensure the supply of quality drinking water to urban and rural populations.
- In 2012 the Domestic Voluntary Carbon Market was created, allowing the generation and sale of carbon credits.

14. The Ministry of Environment and Energy (MINAE) is the executive body in Costa Rica responsible for all matters concerning the environment, the General Environmental Law of 1995 created it. Within MINAE, the Climate Change Office (DCC) is responsible for Costa Rica's wider policies on climate change, including the national carbon market and the policy of becoming a carbon neutral country in 2021. The DCC also coordinates the National Adaptation Fund (NAF), which is aimed at financing projects and programs directed at addressing the adverse effects of climate change through adaptation initiatives. The MINAE is responsible for managing climate change-related issues.

15. The IMN, established in 1888, is attached to the MINAE. The IMN is responsible for collecting, studying, and analyzing all the climatological information that is recorded in the country. In addition, it develops studies and performs research in the fields of agro-meteorology, climatology, climate variability, global warming, and climate change, among other fields. The IMN also provides information and define procedures for water concessions, and advises other institutions regarding the best use of water for hydropower production, irrigation, and human consumption, among other uses.

16. In 2013, a proposed Climate Law was submitted to the Legislative Assembly of Costa Rica (folio 18.860). The law seeks to create a legal framework to counter the effects of climate change in Costa Rica. More specifically, it would enable reducing the carbon footprint of the Costa Rican economy and establish the national goal of carbon neutrality combined with a robust monitoring, reporting, and verification (MRV) system to strengthen the leadership of Costa Rica in the area of sustainable development. The proposed law would allow the establishment of a National Climate Change Committee (CONCLIMA) as a body separate from the MINAE. The committee would comprise government agencies, autonomous and decentralized entities, local governments, and civil society organizations (CSOs). In 2014, a revision of the proposed Climate Law was presented to the Committee on the Environment and is currently under review.

17. The 1996 Forest Law (Law No. 7575), which asserts the Government's responsibility for the sustainable management and use of forest resources, created the Forest Conservation Certificate that compensates landowners for the provision of environmental services and establishes both the Forest Fund and the National Forest Financing Fund (FONAFIFO). The MINAE sits on the board of the FONAFIFO, which is also responsible for Costa Rica's Payments for Ecosystem Services Program (PPSA).

18. Costa Rica has made meaningful progress in the expansion of water services in urban areas over the past decades. Approximately 99% and 81% of the urban and rural populations, respectively, is connected to a water supply; 48% of the population is connected to an urban sanitation system or has individual septic tanks. The Ministry of Health (MINSALUD) and the MINAE share the responsibility for the water and sanitation policy. The Regulatory Authority for Public Services (ARESEP), which was created in 1999, is the economic regulatory

agency of the major service providers (AyA and ASADAS), and is responsible for setting tariffs and technical regulations and monitoring the compliance with these regulations.

19. Law 2726 of 1961 established the AyA as the leading provider of potable water and sanitation services in the country. The provision of potable water and sanitation by the AyA is provided in two ways: first, through direct operation covering 46.8% of the population located mainly in urban centers around the country; second, through the legal concept of delegation, a mechanism by which local community associations are empowered to provide these services under the guidance of the AyA. The associations provide coverage to 28.7% of the country's population, reaching communities in suburban and rural areas with low population densities and that are geographically dispersed. The provision of potable water and sanitation services by delegation is founded on Article 2, paragraph g) of Law 2726, and is further regulated by Executive Decree No. 32529-S-MINAE of February 2, 2005, or the Regulation of Rural Aqueduct Associations.

20. Community organizations formalize their relationships with the AyA by signing a Delegation Agreement in which they agree to ensure the provision of quality potable water and sanitation services and the proper operation of organizations that provide them. For its part, the AyA assumes the role of supervisor, advisor, and trainer of these organizations. There are 1,498 community organizations, which are mostly ASADAS, which provide potable water and sanitation services throughout the country. These organizations are a free and democratic form of citizen participation that goes beyond the provision of water-related services; they reinforce the identity of local communities, serve as a defense mechanism of water resources, and exercise the human right of universal access to water.

21. The Communal Systems Subdivision of the AyA provides support to the local community associations. Created through Board Decision No. 2007-574 (2011), the subdivision has an internal organization that provides supervision of the development of communal water systems infrastructure and ensures the sustainable delivery of the delegated services. The community organizations receive direct support through seven Regional Offices Communal Aqueducts (ORAC) located in Puntarenas, Limón, San Carlos, Pérez Zeledón, San José, Cartago, and Liberia.

22. The Regulation of the ASADAS (N° 32529-S-MINAE, 2005), outlines the responsibilities of the ASADAS regarding the delegation of the management, operation, maintenance, and the development of the community water supply and sanitation systems. As per Law No. 218 (General Law of Public Administration), the ASADAS are to be staffed by an Assembly, a Board of Directors, and an Oversight Committee. The ASADAS can have administrative staff to fulfill their functions.

1.4. Long-term solution and barriers to achieving the solution

14.1. The long-term solution

23. The long-term solution to mitigate the prevailing threats of water shortages to local livelihoods is to establish a holistic approach to managing water supply and demand that takes climate change into account. The aim will be on the supply side to strengthen aqueduct infrastructure, climate-related technology and technical capacities of ASADAS and to promote specific landscape management interventions affecting aquifer-recharge zones or surface water systems. On the demand side, the project will mainstream climate change knowledge, the use of meteorological information and strategies into public and private sector policy and planning in order to promote adoption of productive practices that help maintain ecosystem resilience to climate change. Both approaches will be combined with market-based incentives oriented to achieve sustainability and eco-competitiveness as well as building the know-how for appropriate management of the landscape, which is at the moment threatened by unsustainable practices held by livestock and agricultural commodity-producing companies.

14.2. Barriers to achieving the proposed long-term solution

24. The barriers for each project outcome that limit the achievement of the long-term solution are summarized below; they are described in further detail in Annex 14.

Expected Outcome	Barrier
Component 1. Building community-based infrastructure and technical capacities to address projected changes in water availability	
Infrastructure and technical capacity of ASADAS strengthened to cope with climate change impacts to aquifers in the target area	Lack of knowledge about and access to finance for resilient water catchment storage and distribution infrastructure, efficient household-level water use technologies. Lack of information on precise aquifer locations and characters (mapping) to effectively manage water demand and usage and design strategies to conserve water during periods of extreme drought.
The capacities of ASADAS' end-users to mainstream climate change adaptation into their livelihoods systems are strengthened.	Limited capacity and knowledge among local stakeholder to adopt sustainable water use practices and reduce their vulnerability to climate change, lack of integration of climate risk responses in extension services
Hydro-meteorological information integrated into land use and production practices, and planning processes to increase resilience of rural communities to address water variability.	Incomplete hydroclimatological network and deficient climate early warning and information system limit the ability of rural ASADAS and local communities to implement timely mitigation measures.
Component 2: Mainstreaming of ecosystem-based adaptation into public and private sector policy and investments in the targeted area	
Ecosystem-based climate change adaptation measures are integrated into public and private sector policies, strategies, and investments related to rural community water-sourcing infrastructure and services	Lack of awareness among policy and decision-makers about the social, economic, and environmental implications of water resources vulnerability to climate change. Lack of capacity to integrate climate risks in subnational (canton) level water and sanitation management plans. Lack of knowledge and experience to adopt practices of payments for ecosystem services in water sector
The purchasing and credit policies of at least 20 agricultural and livestock trading companies and five (5) financial institutions operating in the target region promote adoption of productive practices that help maintain ecosystem resilience to climate change.	Lack of economic incentives for livestock and agricultural sectors for adopting water conservation production practices to reduce vulnerability to climate change.

2. STRATEGY

2.1. Country ownership: country eligibility and country drivenness

2.1.1. Country eligibility and country drivenness

25. Costa Rica is a signatory country of the UNFCCC, which was ratified by Law No. 7414 and issued on June 13, 1994. In addition, Costa Rica ratified the Kyoto Protocol on August 9, 2002. Following the ratification of the UNFCCC, Costa Rica has made a sustained effort to establish appropriate political, institutional, and legal frameworks to meet the commitments under the convention.

26. Costa Rican authorities and the various local stakeholders are motivated to support and implement the project as climate change adaptation and drought and flood risk management issues have been identified as of a high priority for the country's development and the wellbeing of the population. Further integration of climate change and adaptation mechanisms into sectoral strategies is seen as a way towards the sustainable development of the country. Responsible partner institutions (AyA, ASADAS, MINAE, Ministry of Agriculture and Livestock [MAG], MINSALUD, and IMN) are highly motivated to contribute to project implementation and generate ownership of planned activities and resulting outcomes due to the threat of drought and floods in northern Costa Rica and the need to improve their capacity for planning and implementing adaptation measures.

27. Recognizing the urgent needs to address, align, and integrate climate change and drought and flood risk management in northern Costa Rica, and communicating the requirements from sub-national level authorities, the project idea, concept note, PIF, and the Project Document have been fully supported by the Costa Rica GEF OFP. Endorsement letters have been issued for each required stage within the project development process.

28. As Costa Rica is located in an area of the globe that is particularly exposed to the impacts of climate change, the Government is well aware of its current and future potential economic and environmental consequences, as well as a need to take a strategic approach with strong government and local ownership in order to reduce risk and vulnerability of society and economy. Costa Rica's commitment to address climate change is clearly outlined in the ENCC, which calls for public institutions and all levels of government to develop strategies and action plans for the mitigation of and adaptation to climate change; develop metrics and indicators for informed decision-making; enhance capacity to face challenges and threats; increase public awareness and education; and increase financing, in order to mainstream climate change mitigation and adaptation into policies and sectors. In addition, the NDP 2015-2018 calls for the reduced vulnerability of public services including the provision of water and sanitation and for promoting sustainable production practices (soil conservation, water management, and community-based forestry) as a strategy to reduce risks. The project proposed herein will contribute to the implementation of the ENCC and the NDP in northern Costa Rica.

29. Overall, this project will contribute to the efforts of the program priority related to the United Nations Development Assistance Framework (UNDAF) Outcome 4.2. The public and private sectors and civil society have made progress in mainstreaming and implementing national policies and strategies that consider environmental quality management and integrated natural resources management; the valuation of environmental goods and services; and the protection, conservation, and sustainable use of biodiversity. The project will also contribute to achievement of UNDAF Outcome 4.3. The public and private sectors and civil society have mainstreamed into their policies and have developed the capacity to implement the National Plan for Risk Management and measures for improved land use.

2.1.2. Stakeholder baseline analysis

30. The list of stakeholders consulted during project preparation is provided in Annex 8.5 and the Stakeholder Engagement Plan is in Annex 8.6.

31. The successful implementation of the project will largely depend on effective communication with the multiple project stakeholders and the implementation of mechanisms to ensure their participation. The key

national stakeholders include the AyA, MINAE, MAG, MINSALUD, and IMN. At the local level, the most relevant stakeholders are the ASADAS and the municipalities as well as CSOs and local communities. Table 1 presents a description of the principal stakeholders involved in the project.

Table 1 – Summary of key stakeholders.

Stakeholders	Project Implementation Role
Ministry of Environment and Energy (MINAE)	The MINAE will guide the development of the legal and institutional framework for mainstreaming climate change measures into conscious water management by ASADAS and the productive sector, as well as provide technical and political support for project implementation. Further, the Direction of Water will provide technical expertise, in coordination with the AyA, in mainstreaming climate change impacts on water availability into public and private sector policy, strategies, and investments, as well as providing conditions to upscale successful pilot experiences throughout the country. The MINAE is also the focal point of the GEF.
Institute of Aqueducts and Sewers (AyA)	The AyA is the national public institution in charge of providing technical and financial assistance to improve water management. It will play a key role both at the subregional planning level as well as during field-level activities, particularly those directed towards the capacity-building of ASADAS and the productive sector. Another important task by the AyA will be to coordinate lessons learned and pilot experiences at the local level in order to upscale them at the national level, so that ASADAS in other areas can implement successful adaptive measures.
Ministry of Agriculture and Livestock (MAG)	The MAG is the lead institution of the agricultural sector. The MAG will guide the development of an institutional framework for the mainstreaming of climate change measures into the agriculture and livestock sectors, especially in the regulation of private sector practices.
Ministry of Health (MINSALUD)	MINSALUD is charged, inter alia, with monitoring water quality in urban and rural areas through water security plans. MINSALUD will have a key role in analyzing lessons learned from the four pilot ecosystem-based water security plans and in up scaling such experiences into national regulations and policies, with the goal of replicating such models to other ASADAS throughout the country.
Rural Aqueduct Associations (ASADAS)	ASADAS will be responsible for the incorporation of climate change adaptive measures and sustainable use concepts and guidelines into local water management, reducing water vulnerability and improving livelihood conditions.
National Forestry Financing Fund (FONAFIFO)	FONAFIFO executes the country's Payment for Environmental Services Program and will be an important stakeholder in the development of relevant financial mechanisms in ecosystem-based adaptation.
Agricultural production sector	The agroindustry sector, small-, medium-, and large-scale producers, will participate in the implementation of two pilot projects that incorporate the economic valuation of ecosystem-based adaptation measures. Industry members will also be the beneficiaries of innovative sustainable practices aimed at increasing their eco-competitiveness. In particular, the project will liaise with agricultural and livestock commodities producers associations, such as CANAPEP (pineapple), CORFOGA (livestock), and CONARROZ (rice). Consultations for the participation by the private sector were initiated during the project preparation phase.
National Meteorological Institute (IMN)	IMN is the national institution in charge of providing meteorological analysis and weather forecasts to the population of Costa Rica. Its expertise, especially in forecasting present and future climate change impacts and in generating an early warning network in case of weather extreme conditions, will be key in improving ASADAS' technical capacities and community-based monitoring and response systems.
National Women's Institute (INAMU)	INAMU is the lead institution that promotes gender equality as a cross-cutting issue in national and subregional planning, policies, and strategies. It will build capacities inside the AyA, ASADAS, and the agroindustry sector in mainstreaming gender issues in water management and climate adaptation measures.
National Service of Groundwater Irrigation and Drainage (SENARA)	SENARA investigates the aquifers in the country and strengthens capacities at the local government level, ASADAS, and communities. It also provides technical and political support on hydrological decisions, providing oversight on the vulnerability in wells, springs, and protection zones. Additionally, SENARA designs irrigation canals, drainage systems, and supports producers.

National System of Conservation Areas (SINAC)	SINAC is the administrator for the national parks, conservation areas, and other protected natural areas in Costa Rica; it is part of the MINAE. It will play a significant role in the mainstreaming of ecosystem-based adaptation into public and private policies, as many of the water sources on which both sectors depend originate within protected areas under SINAC's jurisdiction.
National Emergency Commission (CNE)	The CNE is the governing agency for risk prevention and emergency management and is responsible for coordination with AyA, the municipalities, and other public entities to monitor the implementation of activities defined in the drought emergency decree for the province of Guanacaste. CNE also plays a major role in climate change adaptation and climate risk management. CNE investments for the targeted area will be updated to integrate climate change risks.
Regulator Authority for Public Services (ARESEP)	ARESEP charged with regulating prices for public services in Costa Rica (water and sanitation, electricity, fuels, and terrestrial, sea, and air transportation). The project will follow ARESEP policies regarding water tariffs, including those that apply to the private sector.
Local governments	Local governments regulate the local territory, grant building permits, and support the wellbeing of the population.
Local commissions	Local commissions comprise public and private organizations, universities, and non-governmental organizations (NGOs).
UNDP	UNDP will act as Implementing Partner as per Direct Implementation Modality (DIM) requested by government.

2.2. Project rationale and policy conformity

32. The project is fully consistent with Costa Rica's adaptation priorities as set forth by the MINAE in three key documents: The National Climate Change Strategy (2009), the Action Plan for the Implementation of the National Climate Change Strategy (2012), and the NDP 2015-2018. These documents identify integrated water management as a prioritized area for strengthening the establishment and implementation of adaptation strategies to reduce vulnerabilities and climate-related impacts. In addition, the Third National Communication (2014) strongly associates the vulnerability in key areas (SEMU 3) and key sectors, such as infrastructure and food production, to hydrometeorological events whose impacts will be worsened by climate change.

33. The project is in line with the GEF Result-Based Management Framework for Adaptation to Climate Change, particularly with its Objective 1: Reduce the vulnerability of people, livelihoods, physical assets and natural systems to the adverse effects of climate change; Objective 2: Strengthen institutional and technical capacities for effective climate change; and Objective 3: Integrate climate change adaptation into relevant policies, plans and associated processes. Alignment with outcome indicators of the Adaptation Monitoring and Assessment Tool (AMAT) is indicated in Part 3. Project Results Framework.

2.3. Design principles and strategic considerations

2.3.1. Baseline projects

34. The baseline projects that form the foundation of this proposed SCCF-financed proposal is valued at \$26,208,949 USD over 5 years. The AyA and the CNE designed a new investment plan in the target area to improve ASADAS' existing infrastructure. The total estimated investment to be implemented over the next 5 years for the target area is \$15,650,000. Likewise, the AyA is also planning to support ASADAS in the preparation and implementation of water security plans for improving local planning capacities and new infrastructure needs, while guaranteeing communities and end users with continuous access to water resources and their availability. In the target area, 10 plans are under preparation with an estimated value of \$750,000. The IMN is improving its meteorological information infrastructure and has already invested \$900,000 over the last 4 years and is planning a further investment of \$5,000,000, for increasing staff capacities and improving technologies at the central level. The CRUSA Foundation will invest \$1,385,898 to strengthen the capacity of the local stakeholders to cope with climate change by providing technical training to the ASADAS and municipalities, improving their capacity to gather and manage information on climate change (e.g., water flow data), and improving water infrastructure in

selected communities. The Fundecooperacion for Sustainable Development will invest \$1,850,000 in education and awareness programs directed towards ASADAS, students, communities, and organizations to promote sustainable water management, including the development of sustainable management plans for coastal resources and the preservation of water sources and wetlands. The IADB, as part of a cooperation agreement with the AyA, will invest \$1,573,051.

2.3.2. National and local benefits

35. The total population of the target SEMUs is 354,132 inhabitants; however, as the project will improve water management of the main aquifers in northern Costa Rica that provide water to communities and settlements outside the project area, the number of beneficiaries estimated for this intervention surpass a total of 800,000 people (approximately 49.6% are men and 50.4% are women)¹⁴. Socioeconomic benefits to be delivered by the project include the adoption of economic incentives for the practice of community- and ecosystem-based adaptive measures that are biodiversity-friendly and that will result in increased income for small-, medium-, and large-scale enterprises across rural industry sectors. The project will also work with one indigenous population, the Maleku tribe, which is the only surviving native group in northern Costa Rica. The Maleku live in three communities (Palenque Margarita, Palenque Tonjibe, and El Sol) in close physical and social proximity with non-indigenous inhabitants of the area. The project will work with indigenous community-based organizations in the order to strengthen their capacities in watershed protection and management, while providing the right conditions for the development and strengthening of ecosystem-based economic activities. Moreover, the ecosystem-based adaptation approach will benefit existing national parks and recharge zones and will enhance the incentives of farmers to reduce and avoid invading or encroaching on conservation areas by increasing awareness of the economic effects of ecosystem degradation and incentives for conservation. National parks management teams are expected to provide support to the adoption of market instruments by the private sector (Certified Agricultural Products and Voluntary Watershed Payments), which will contribute to decrease encroachment and protect endemic and endangered species.

2.3.3. Coordination with other relevant GEF-financed and other initiatives

36. The UNDP-GEF Project “Conservation, sustainable use of biodiversity, and maintenance of ecosystem services of internationally important protected wetlands” aims to support the establishment of at least one new protected area in a wetland ecosystem to support the valuation of the full range of ecosystem goods and services provided by internationally important wetland protected areas, focusing on the seven protected areas, two of which, Caño Negro and Tamarindo, are part of the targeted area. This latter component will provide baseline information for the increased development of financial instruments, such as PES, which will also be key in incentivizing sustainable ecosystem-based adaptation measures such as silvopastoral practices in pilot areas of this proposed project. The SCCF proposal will also add value to the wetland project and other existing initiatives for protecting areas and sensitive water systems by creating financial incentives for agricultural and livestock producers to adopt best practices and join biological connectivity efforts, through engaging companies to shift their purchasing policies to favor producers who adopt good practices, and by helping the financial sector set up new credit lines for biodiversity-friendly economic activities in the targeted landscape.

37. Similarly, the project will coordinate efforts with the Socio-ecological Land Management initiative funded by the Costa Rica-Spain debt swap, which is coordinated by SINAC with the support of the National Biodiversity Institute (INBio) of Costa Rica. This initiative incorporates an ecosystem-based approach for the conservation of Costa Rica’s natural capital to secure, through its sustainable use, the flow of services that determine the wellbeing of its inhabitants. Finally, the project will coordinate actions with the project “Sustainable Development of the Río Frio Watershed,” a land planning and management initiative for securing a sustainable supply of ecosystem goods and services.

¹⁴ <http://datos.inec.go.cr>

38. Regarding the productive sector, technical support will also be provided by the UNDP/MAG/MINAE project aimed at the establishment of a “National platform of responsible production and trade of Costa Rican pineapple.” Lessons learned from the initiative as well as the local network that has been created among the communities, national institutions, and producers will guide the implementation of community and ecosystem-based adaptation productive actions for pineapple cultivation, while at the same time promoting more sustainable and conscious water use.

39. The project proposed herein will also integrate knowledge and lessons learned from the implementation of the Coastal Marine Biodiversity and Climate Change Adaptation (BIOMARCC) project funded by the German Development Cooperation Agency (GIZ). The BIOMARCC project aims to increase the adaptation capacity of marine and coastal ecosystems in Costa Rica by strengthening institutional management capacities for marine and coastal conservation areas, developing financial mechanisms to secure adaptation of marine and coastal protected areas with the participation of relevant stakeholders; and developing Clearing House Mechanism about climate change adaptation and coastal/marine ecosystem management exchange and transfer of knowledge and experiences. In particular, the project will incorporate lessons learned from the implementation of climate change adaptation activities for building resilience of wetland ecosystems to climate change in the Guanacaste province in northern Costa Rica.

40. In addition, the project proposed herein will incorporate knowledge and lessons learned from the project “Low Emission Development Costa Rica – Supporting the national climate neutrality strategy in Costa Rica.” as a model for low carbon development, which is also being supported by the GIZ. This initiative will provide support at the political and institutional levels to develop strategies and design framework policies as well as for programs and action plans directed at reducing greenhouse gas emissions. In addition, industrial companies and small- and medium-sized enterprises will receive support on how to plan and implement measures for reducing emissions and adopt environmentally and climate-friendly technologies. In particular, knowledge and lessons learned to enhance awareness and implement informational campaigns on climate change among the general public, as well as working with the private sector on implementing incentives to mainstream climate change, will be considered.

41. The project will also coordinate actions with the NAF, DCC/MINAE. The NAF funds adaptation projects and programs aimed at addressing the adverse effects of climate change. The project will coordinate actions and exchange knowledge and lessons learned regarding risk reduction and water management by the ASADAS and issues of importance for the NAF. The Fundcooperacion Foundation is the accredited National Implementing Entity in Costa Rica of the Adaptation Fund and is a project co-financier; thus, cooperation between the NAF and the project proposed herein will be facilitated.

42. The project will coordinate with the project “Water for human consumption, communities and climate change: expected impacts and adaptation in Central America” implemented by Tropical Agricultural Research and Higher Education Center (CATIE) and funded by the International Development Research Centre (IDRC). This goal of this research project is to obtain primary data from a representative sample of community-based drinking water organizations in Guatemala, Nicaragua, and Costa Rica, which are located in areas where major negative changes in the availability of water are expected due to climate change, in addition to other non-climatic disturbances.

43. Finally, the project will complement investments made by the Small Grant Program (SGP), which has been working in Costa Rica for the last 20 years on a community-focused basis, financing small-scale projects. In particular, the targeted area has seen several capacity-building projects developed, with the chance to encourage local champions to lead the subregional level platform for multi-stakeholder coordination of actions that the proposed project will establish.

2.3.4. Gender Considerations

44. Across the northern cantons of Costa Rica, women are more likely to be poor and earn less than men at all levels and are more affected by droughts than men. However, women are very active in organizations related to local development, including the boards of the ASADAS where they often represent the majority. This means

that the capacity of end users strengthened by this project has a particular focus on increasing women's access to opportunities for continued personal growth, increasing their leadership skills, and their capacity as agents of change to disseminate adaptive measures throughout the community. The project will also improve knowledge and technical skills by providing training equally to both men and women in sustainable and biodiversity-friendly, water resource management systems and certification, and will empower them to be active participants in influencing public policy ecosystem management (e.g., forest, wetlands, and freshwater systems) and sustainable land and water management. More specifically, the project will achieve the following: a) train 1,500 household members and producers, 50% of whom are women, to mainstream climate change adaptation into their livelihoods; and c) ensure that at least 40 Water Security Plans (WSP) that incorporate ecosystem-based climate change adaptation also include gender consideration.

45. Gender issues will also be addressed directly in partnership with INAMU to promote specific adaptive measures related to women's roles in rural settings. From project inception, the mandatory UNDP gender marker will be applied (a score of at least 2 in the ATLAS Gender Marker will be ensured). This will include a brief analysis of how the project plans to achieve its environmental objective by addressing the differences in the roles and needs of women and men.

2.3.5. Comparative Advantage of UNDP

46. The project is consistent with the main strategic lines of action of UNDP programming for Costa Rica, specifically with regard to environmental mainstreaming, strengthening environmental sustainability, and contributing to UNDAF Outcome 4.2: Implementing national policies and strategies considering integrated environmental and natural resources management, economic valuation of environmental services, and conservation and sustainable use of natural resources and biodiversity. In addition, it complies with the priorities of the UNDP Strategic Plan 2014-2017 (Outcome 2: Citizen expectations for voice, development, the rule of law and accountability are met by stronger systems of democratic governance); and Output 2.5: Legal and regulatory frameworks, policies, and institutions enabled to ensure the conservation, sustainable use, and access and benefit sharing of natural resources, biodiversity and ecosystems, in line with international conventions and national legislation. The design of this project takes into account Costa Rica's NDP (2015-2018), which currently serves as the over-arching planning instrument to achieve sustainable development in the country.

47. Additionally, UNDP has developed a close and collaborative relationship with AyA and the rural water sector beginning with the ASADAS' Transparency and Accountability Project, as well as UNDP's contribution to the process of defining the water tariff model in coordination with ARESEP and other related organizations. Due to the diversity of activities carried out in the environmental sector, the UNDP Costa Rica office is well positioned as a recognized stakeholder with capabilities to support joint interagency and intersectoral coordination and negotiation.

2.4. Project Objective, Outcomes, and Outputs/activities

48. The project objective is to improve water supply and promote sustainable water practices of end users and productive sectors by advancing community- and ecosystem-based measures in ASADAS to address projected climate-related hydrological vulnerability in northern Costa Rica. A description of the project's outcomes, outputs, and activities follows.

Outcome 1.1 - Infrastructure and technical capacity of ASADAs strengthened to cope with climate change impacts to aquifers in the target area.

Co-financing amounts for Outcome 1: \$10,259,000

SCCF project grant requested: \$1,794,700.

Without SCCF Intervention (baseline):

49. Improvement of infrastructure such as micro/macro-meters, water-saving devices, composting toilets, and piping improvements, is needed to improve water efficiency and reduce the risk of water shortages in drought situations, particularly in isolated rural communities in northern Costa Rica. While the extreme drought of 2008 sparked a reaction from the AyA, which responded by allocating \$15,650,000 USD over the next 5 years in the target area, proper metering systems to track water supply to end users in the ASADAS network in the project area will still be needed. AyA estimates that about 10,000 micro-meters still must be installed in the project area to have a complete water measuring system. The Development and Family Allowances Fund (FODESAF), and agency managed through the Ministry of Labor and Social Security, is planning to install around 5000 micro-meters during the project period, that would leave still half of the needed installations unsolved, thus would not allow a complete area and watershed coverage. The lack of a complete metering system is a key impediment to introducing fee collection (tariff system), which would help to address the financing of operation and maintenance costs (sustainability) of the ASDAS.

50. In addition, the census completed during the PPG indicates that the installed water storage capacity among the project ASADAS is deficient, as more than 50% of the ASADAS only have up to 2 days of installed water storage capacity and only 2% can store water to last between 15 to 30 days. In addition, 50% of the ASADAS have water supply systems that are in poor condition, which may lead to water losses. This situation put most of the ASADAS at a disadvantage in providing stable service during prolonged drought and periods of water scarcity.

51. Another important element to reducing the risk of water shortage in drought situations is the protection and rehabilitation of aquifer recharge areas, as groundwater levels are dependent on recharge from infiltration of precipitation and most of the ASADAS in the project area rely on groundwater. For the effective protection and rehabilitation of aquifer recharge areas, their locations need to be known. SENARA has made progress in mapping aquifers and establishing the location of pumping wells, information that is key for assessing the current situation of groundwater levels in northern Costa Rica that are currently at historic lows due to prolonged droughts and increases in water demand. However, the aquifers in the project region have not been fully mapped out; the recharge areas have not been properly identified, thereby limiting the ability of potable water providers to properly protect and rehabilitate these areas.

With SCCF Intervention (adaptation alternative):

52. SCCF resources will strengthen the current infrastructure by installing up to 5,000 metering devices (macro- and micro-meters) to track water supply to end users in the ASADAS network in the project area. This will serve to improve water use efficiency necessary for reducing the risk of water shortage in drought situations. The Development and Family Allowances Fund (FODESAF), and agency managed through the Ministry of Labor and Social Security, will provide for the installation of the remaining micro-meters, enabling complete coverage of the metering system in the ASADAS for prioritized region by project completion. In addition, the project will also directly support improvements of the rural aqueduct infrastructure through the establishment of enhanced water distribution systems as well as the construction of new and resilient aqueducts in isolated and rural areas, thus reducing overload on existing piping and potable water treatment systems. On the demand side, the project will subsidize the purchase and installation of water-saving devices in homes (high-efficiency toilets, toilet-tank displacement devices/toilet dams, and low-flow faucet aerators and showerheads) as part of a pilot water-saving campaign. In addition, pilot sanitation and purification measures will be implemented, including the installation of composting toilets as part of a pilot experience directed to 10 ASADAS with the largest water deficits in Guanacaste province.

53. These investments towards strengthening and expanding water-saving infrastructure will serve relevant stakeholders, from government ministries to end users, in the pursuit of maintaining updated information on water use and more accurately assessing climate-related risks and the vulnerability of project-area water resources. Most importantly, the investments will improve ASADAS' ability to monitor water levels, track coverage, and collect appropriate user fees, which in return will facilitate the up scaling of rural aqueduct infrastructure investments.

The investments in infrastructure will also provide accurate data on water-related ecosystems services, focusing on fostering data to the Government and water-intensive productive sectors (agriculture and livestock) to support the economic valuation analysis of water resources and to develop Ecosystem-based Water Security Plans, which will be developed through Component 2.

54. SCCF funds will also facilitate the development of complete aquifer maps with the participation of SANARA, including the location of recharge areas that according to information obtained during the PPG are largely unknown among the ASADAS consulted (81% indicated that the aquifer recharge areas need to be identified and mapped). This in turn will improve the protection and restoration of these water recharge areas, which is necessary to maintain the quantity and quality of groundwater in the aquifer, especially under drought conditions. Because amending land-use practices can play a major role in the protection of recharge areas, the project will facilitate accessing information on the land use and legal status of aquifer recharge areas and will involve landowners in protection and/or rehabilitation activities.

Output 1.1.1 – Strengthened metering systems to track water supply to end users (micro- and macro-meters) in the ASADAS network provide updated information on climate-related risks and vulnerability of project area water resources.

Output 1.1.1 deliverables

- a) Up to 5,000 micro- and macro-meters installed. A complete metering system will help to establish water efficiency measures including water conservation, and will allow the ASADAS to better respond to climate change-related needs. In addition, a complete metering system will facilitate the revision of the existing water tariffs so that the maintenance and related operational costs of the metering systems are incorporated into the tariffs. The criteria for area selection for installing the micro- and macro-meters will include as priority low-income ASADAS in rural areas in northern Costa Rica that cannot afford the initial investment, ASADAS that have a memorandum of understanding with the AyA to provide water and sanitation services, and ASADAS that are most vulnerable to climate change. This will be coordinated with and complementing the micrometers to be installed through FODESAF.
- b) Technical assessment of the water use tariff model identifying gaps and with recommendations for adjustments to address climate change-related issues.
- c) Updated information on climate-related risks and vulnerability of project area water resources available to decision-makers in the prioritized ASADAS and to the AyA. A vulnerability study will be conducted at the initial stages of the proposed project in coordination with the IMN to provide a comprehensive vulnerability assessment in the targeted cantons that will help to determine need, form, and frequency of further specified climate information services, including regular agro-meteorological bulletins.

Indicative Activities

- a) Purchase and installation of macro-meters, which will allow selected ASADAS to make accurate estimates of water production, distribution, and sale. Macro-metering measurement will accurately establish the flow of the water captured at the source, which is essential to establish the water balance and determine the amount of water that is unaccounted for. This will allow the ASADAS to improve the distribution of flows and provide continuous service to an increased number of inhabitants during prolonged drought periods, and to develop an investment plan for the development and maintenance of water infrastructure. Maintenance costs will be assumed by the ASADAS and will be built into the water tariffs.
- b) Purchase and installation of individual meters (micro-meters) at individual houses (i.e., low-income households in rural areas), and installation of new piping to ensure proper water distribution and measurement. The subsidies provided for micro-meters will enable the activity described below for the adjustment of the tariff system. Households to be subsidized by the project will be encouraged to verify

and report to the ASADAS if they detect leakages in the distribution systems by regularly reading the micro-meters before and after a one-hour period when no water is being used and by comparing differences in readings. Leaks in the distribution systems represent water losses from the aquifer, which currently have low water levels due to extended droughts in recent years. As the water levels of the aquifers are low, so are the levels of distribution wells, which affect the amount of potable water available.

- c) Assess and provide recommendations for the adjustment of water tariffs with the goal of consumers paying for the operations and maintenance of the water catchment, storage, and distribution systems, in accordance with AyA and ARESEP policies. In addition, an effective metering and billing system will encourage people to save water and prevent leakage and waste.
- d) Systematization and assessment of water usage information (i.e., water balance: catchment- consumption, distribution, and use) by vulnerable ASADAS in rural areas that have limited capacity to assess water demand, and to provide continued potable water services during periods of drought.

Output 1.1.2 – Water catchment (well, spring, and/or rain), storage, and distribution systems in rural areas improved and resilient to climate change.

Output 1.1.2 deliverables

- a) 305 ASADAS with water catchment, storage, and distribution systems resilient to climate change.
- b) ASADAS and household members trained to improve water catchment, storage, and distribution systems.

Indicative Activities

- a) Assessment of conditions of water catchment (well, spring, and/or rain), storage, and distribution systems for all ASADAS participating in the project and prioritizing of investments using as the basis the results of the census performed during the PPG.
- b) Improvement of water catchment (well, spring, and/or rain), storage, and distribution systems with the participation of ASADAS technical staff and community members, and technical support procured by the project and the AyA. Improvement of the water catchment, storage, and distribution systems will include the following:
 - Assessment of water levels of wells to meet demand during dry seasons and maintenance of wells systems (casting, pipes, screens, caps, pump, chlorination process [as per regulations of drinking water quality], etc.) to improve water flow, pressure, water quality, and ensure the protection of wells by reducing the access of people and animals.
 - Installation of spring boxes for: i) serving as a sedimentation chamber where particles of sand carried in the spring water can settle out; ii) serving as a means of water storage; iii) protecting the spring water from contamination; and iv) for collecting the spring water by giving it an easy flow path from the aquifer into the delivery pipe. Where spring boxes are not needed because the water carries only a low level of suspended solids and water flows are at a rate sufficient to meet the peak demand, protection of the spring (see Output 1.1.5) and catchment will be sufficient.
 - Assessment of water supply capacity (roof catchment and/or stand-alone catchment) and installation of low-cost rainwater harvesting systems as way to supplement the main water supply systems by: i) storing water to be used during the dry seasons and drought; and ii) reducing demand on wells and springs, contributing to sustain their water levels. Rooftop rainwater catchment and/or standalone rainwater harvesting systems will provide drinking water (with proper treatment); water for domestic use (e.g., toilets, kitchen, and laundry); and for livestock and small-scale irrigation (house gardens and small agricultural plots).

- c) Provide training to ASADAS and household members to build water catchment, storage, and distribution systems that are resilient to climate change.

Output 1.1.3 – Water-saving devices installed in homes.

Output 1.1.3 deliverables

- a) Up to 4,000 households with installed water-saving devices (high efficient toilets, toilet-tank displacement device/toilet dam, and low-flow faucet aerators and showerheads) as part of a pilot water-saving campaign.
- b) Water conservation awareness (WCA) campaign designed and implemented.

Indicative Activities

- a) Assess existing water use practices in a sample of households from the three targeted SEMUs (1, 2, and 3) through structured interviews/questionnaires and information from the census performed during the PPG.
- b) Install water-saving devices in selected homes. The households to be subsidized by the project will be selected based on their willingness to participate in a pilot water-saving campaign and to monitor water usage. The families will assume the cost of installation and maintenance of the water-saving devices and will directly benefit by reducing their water bills. The ASADAS that supply potable water to the beneficiary households will also participate in monitoring activities and will support the households in the installation and maintenance of the water-saving devices. This will provide the participant ASADAS additional information regarding water demand, which will be used to improve their water services. In addition, their participation will give them greater visibility as providers of potable water and sanitation services. The water-saving devices to be installed include:
 - High-efficiency toilets. Replacing older, inefficient toilets that use as much as 6 gallons per flush and are a major source of wasted water in many homes. Low-flow toilets use 1.6 gallons per flush and can reduce water use by 23 to 46%.
 - Toilet-tank displacement device/toilet dam. Toilets can account for nearly 30% of an average home's indoor water consumption. When installation of high-efficiency toilets is not possible, adding a displacement device (bag or plastic bottle) or toilet-tank dam will reduce the amount of water used per flush.
 - Low-flow faucet aerators and showerheads. These inexpensive devices work by mixing air into the water flow (like an aerator), which is restricted to increase the water pressure. Low-flow showerheads and faucet aerators can reduce home water consumption by as much as 50% and help reduce the amount of water entering the septic system. A low-flow showerhead can include shut-off valve, which turn off the water while the user is soaping up and turns it back on when rinsing. Household members will be encouraged to take efficient showers that last only 3 or 4 minutes and use less water.
- c) Implement a WCA campaign the three targeted SEMUs (1, 2, and 3) emphasizing the importance of using water efficiently at all stages from capture to consumption in order to promote change in attitudes and behavior with regard to water management and use. In addition to the general public, local governments, water management technicians, community leaders, teachers, ASADAS staff, the media, and NGOs will also be targeted to help promote WCA among the public.

Output 1.1.4 – Pilot sanitation and purification measures (e.g., sludge management and dry-composting toilets) and other adaptive technologies for wastewater management to improve water quality.

Output 1.1.4 deliverables

- a) 150 composting toilets installed. Composting toilets will be installed as part of a pilot experience directed to 10 ASADAS with the largest water deficits in Guanacaste province and that provide potable water and

sanitation services to about 30 families each (50% coverage is expected). The participating ASADAS will be selected considering their willingness to support the installation of the devices and to monitor changes in water quality, as well as those with the highest potential to serve as pilot participants for this initiative, including hosting members from other ASADAS in northern Costa Rica to learn from their experiences and to promote their replication.

- b) 160 number of improved septic tanks to improve sludge management.
- c) Education/awareness campaign to adopt measures that improve water quality designed and implemented.

Indicative Activities

- a) Review the existing measures and coverage for water sanitation and purification; structured interviews/questionnaires will be held with ASADAS and selected households to assess current sanitation and purification conditions and needs.
- b) Install and put into operation a pilot initiative using composting toilets that use little to no water as an alternative to flush toilets. This will be done following the experience using composting toilets, which are commonly used in ecolodges and ecological farms throughout the country; this also served as a pilot experience with a social housing project funded by the government in the Talamanca indigenous reserve in the southeastern region of the country. The households to be subsidized by the project will assume the cost of installation and maintenance of the composting toilets. The project will provide training to the participants of this pilot initiative in the use of composting toilets and will raise awareness about the benefits of this adaptive technology for saving water, improving water quality, and producing compost that may be used as fertilizer for agriculture.
- c) Assess current conditions of a selected number of septic tanks including: i) check leach fields (sewage drainpipes) and drainfields to detect leaks that may cause the contamination of groundwater and nearby surface waters during drought periods when water levels are low and concentrations of pathogens increase; ii) check the drainfield to determine if it is overloaded with too much liquid that may causing sewage to flow to the ground surface, particularly during the rainy season when precipitation tends to be more intense leading to septic tanks overflow (although the overall precipitation is lower to extended droughts); iii) evaluate soil permeability (e.g., percolation rate) for proper septic tank effluent infiltration; and iv) check location with respect to drinking water sources and groundwater recharge areas.
- d) Develop a septic tank and drainfield maintenance program, emphasizing the efficient use of water (e.g., checking toilets and facets regularly to detect leaks) and the use of household water saving devices (e.g., high-efficiency toilets) to maintain proper septic tank water levels needed for the long-term and effective treatment of household wastewater, particularly during periods of prolonged droughts and torrential rains.
- e) Implement sludge-composting activities with sludge pumped out of septic tanks to reduce the amount of material that can contribute to ground and surface water contamination during climate change related events (i.e., prolonged droughts and torrential rains). The sludge pumped out of septic tanks will be mixed with dry materials such as dry sawdust to achieve the required solids content and obtaining the required carbon to nitrogen ratio for composting, a co-benefit for the participating families. Quality compost that may be used as fertilizer for agriculture and home gardens.
- f) Developed a community-based hygiene education campaign, which will allow sharing knowledge, information, and experiences for better understanding the basics of hygiene and its role in improving water quality particularly during periods of prolonged droughts and torrential rains.

Output 1.1.5 – Water sources and associated aquifer recharge areas protected and/or rehabilitated through reforestation, natural regeneration, and other protection and conservation measures.

Output 1.1.5 deliverables

- a) 275 hectares of water sources and associated aquifer recharge areas protected and/or rehabilitated. Since groundwater levels are dependent on recharge from infiltration of precipitation, and most of the ASADAS in the project area use groundwater to service water users, selected aquifer recharge areas will be protected and/or rehabilitated to enhance water infiltration during times of drought.

Indicative Activities

- a) Identify, map, and delineate protective zones for water sources and associated aquifers, including aquifer recharge areas, jointly with the AyA, and members of the ASADAS and local communities, with support from SENARA and MINAE. This activity will include: i) reviewing historical and current land cover/land use maps and information about the areas of interest using a Geographic Information System (GIS); and ii) community mapping.
- b) Assess the socioeconomic and environmental conditions (land use) of the areas surrounding the water sources and associated aquifer recharge areas to be protected and/or rehabilitated. This participatory consultative assessment will include members of the ASADAS and local communities, and will allow identifying landowners interested in participating in the project and whose properties represent the most cost-effective options for protection and/or rehabilitation.
- c) Develop guidelines for protection and/or ecological rehabilitation that are adapted to the particular conditions of each aquifer recharge areas, including the identification of mechanisms to encourage and increase the participation of landowners or landholders in this initiative.
- d) Implement protection and/or ecological rehabilitation measures (e.g., protection of stream banks and springs and their buffer areas, natural regeneration and reforestation of the riparian forest with native species, wetland planting and seeding, bank stabilization, and channel restoration) to improve water supply, water quality, and reduce risks associated with floods and droughts. Agreements will be signed by participating landowners and/or landholders, ASADAS, and local environmental authorities (cantons), and the AyA to ensure the sustainability of protection and/or ecological rehabilitation measures to be implemented.
- a) Develop an impact assessment program to be operated by the ASADAS and the AyA to evaluate the effectiveness of the rehabilitation activities. Monitoring will include measurement of changes in plant structure and composition, and changes in water levels and water quality in aquifers and surface waters, among other variables.

Outcome 1.2 – The capacity of ASADAS’ end users to mainstream climate change adaptation into their livelihoods systems is strengthened.

Co-financing amounts for Outcome 1.2: \$1,043,100

SCCF project grant requested: \$182,420

Without SCCF Intervention (baseline):

55. In 2011, the AyA prepared and delivered a questionnaire to assess the work of the ASADAS in current climate-related hydrological vulnerability. The findings pointed out that climate change adaptation was not included in ASADAS planning and management policies and related training was a missing element. In order to maximize the impact of all training activities to be delivered to the ASADAS, the AyA is formulating a National Capacity Building Plan with support from the UNDP and the participation of the Center for Environmental Law and Natural Resources (CEDARENA). This initiative also includes the participation of universities (UCR, ITCR, UTN, CATIE, and the INA), as well as other NGOs and private companies involved in the training of the ASADAS. This includes an effort with the INA to review and adjust training programs currently under

implementation as part of the AyA-INA cooperation agreement, which includes a comprehensive training approach to support the needs of the ASADAS as identified by the AyA.

56. As part of the ASADAS Comprehensive Technical Support Strategy, which also takes into account specific guidelines from ARESEP and Comptroller General Office (CGR), and the technical assistance programs, a pilot initiative for risk management for the ASADAS was implemented that allowed drafting a preliminary handbook for integrated risk management for community-based water management organizations. Similarly, in conjunction with CEDARENA, technical assistance program for the design and implementation of transparency and accountability plans for program was established. A methodology, workbooks, and tools that address ASADAS needs have developed; additional technical assistance programs will also be developed in line with the ASADAS Comprehensive Technical Support Strategy.

57. Regarding adaptation to climate change, a comprehensive approach has been established to mainstream this issue into the ASADAS. This initiative, which relies on strategic alliances, is aligned with the Comprehensive Care Model, and will allow the development of a national assessment through the Unified Information Form for Sources and Organizations providing potable waters and sanitation services. The development of the Unified Information Form was a participative effort for the development of a tool to assess and prioritize the technical support needs of the community-based water management organizations that provide potable waters and sanitation services.

With SCCF Intervention (adaptation alternative):

58. SCCF resources will strengthen the capacity of ASADAS and end users to cope with climate change impacts on regional water sources. Currently, the AyA is the primary public entity responsible for training the ASADAS in the provision of water services, yet their training and capacity-building exercises do not include climate change adaptation or an emphasis on community-based responses that could be applied in the target area to improve resilience to climate change. Therefore, a community-based climate change training and monitoring system will be developed for the AyA, SENARA, MINAE, and ASADAS in the target area. A Training Toolkit on good practices for water-conscious consumer behavior and biodiversity monitoring will be developed based on analysis of local community-based practices such as organic and agroforestry certifications, community-planned nurseries, and drought proofing of wells. The toolkit will be accompanied by Training for Trainers toolkit for the ASADAS.

59. The education and training campaign for ASADAS end users will target high-vulnerability demographic groups as primary beneficiaries, particularly women, Maleku indigenous communities, and other minority groups. Similarly, at least 1,500 producers will be trained to maintain and raise their productivity in a context of increased climate impacts in topics such as: capacity development on making effective decisions between the amount of ecosystem services provided in a site and the alternative uses such as deforestation for agriculture, which deplete and unsustainably exploit area ecosystems; crop variety selection given knowledge of area biodiversity and climate-adaptive species; planting of live fences and the importance of micro-corridors; establishment of planning tools in cropping systems; and an increase of water storage systems developed through an ecosystem-based approach that would result in reduced pressure on weak existing aqueduct infrastructure.

Output 1.2.1 – Community-based climate change training program with a gender focus and includes minority groups, such as indigenous communities

Output 1.2.1 deliverables

- a) Training Toolkit on good practices for water-conscious consumer behavior and biodiversity monitoring in place, including Training for Trainers toolkit for the ASADAS.
- b) At least 1,500 household members and producers, including women (35%) and indigenous groups, trained to maintain and improve the use of water and sanitation in a context of increased climate impacts. Women are already active participants in the ASADAS and training will be geared towards their specific needs.

- c) Extension services (i.e., community outreach, including women and women organizations) for sustainable land use and production practices include courses and support material.

Indicative Activities

- a) Assess specific training needs for target groups (local communities including women, Maleku indigenous communities, and other minority groups, ASADA members, municipal governments, and AyA staff) and select training participants. Training objectives will be defined based on the identified gaps in knowledge, skills, and attitudes, which will be evaluated through structured and semi-structures questionnaires as well as with information from the census performed during the PPG.
- b) Prepare and/or adapt training materials (leaflets, brochure, posters, DVDs) to disseminate guidance materials and tools related to the interpretation of hydroclimatological information and early warning reports, conventional and alternative techniques for household water conservation and management, sanitation and purification measures and adaptive technologies to improve water quality, stream and springs protection and rehabilitation, climate change and variability, risk and vulnerability assessment, and risk reduction and adaptation.
- c) Organize educational visits for ASADAS and community members to the project sites and related initiatives in the three prioritized SEMUs (northern Costa Rica) to promote the exchange of knowledge and adaptation experiences.
- d) Conduct training modules in the three prioritized SEMUs through conventional training (e.g., workshops, seminars, and short courses) and participatory training and adult learning methods (e.g., discussion method, experiential/exercises learning, case study method, and field trips) that are specific to each targeted group (local communities including women, Maleku indigenous communities, other minority groups, ASADA board members, municipal governments, and AyA staff). Training topics will be directed to improving climate resilience and adaptation, and improving the use of water and sanitation in a context of increased climate-related risks.
- e) Conduct progress/evaluation workshops to assess the impact of training through interviews and capacity assessment questionnaires.

Outcome 1.3 – Hydrometeorological information integrated into land use and production practices, and planning processes to increase resilience of rural communities to address water variability.

Co-financing amounts for Outcome 1.3: \$7,419,329

SCCF project grant requested: \$1,297,880

Without SCCF Intervention (baseline):

60. Costa Rica has a nationwide network of meteorological monitoring stations (NUMBER) and highly trained scientists in data management and interpretation. However, there is still a need to improve the access and interpretation of more meteorological data, particularly in areas where stations have not been installed. In addition, the available data are not fully accessible to the public and very few are combined with sector impact models. Long-term and recent trends of drought and flooding are not always available or analyzed at proper scales, an issue of particular concern in northern Costa Rica, which is highly exposed to these climate-related risks. Climate change data for the country relies more on analyzing increases in minimum temperatures since the available studies show that there is a greater increase in these than in the maximum temperatures. This results in a generalized stated pattern for recent and future climate trends, which would mean that certain highly vulnerable areas are overlooked. Although drought events on the Pacific Slope have been studied, the measuring capacity is limited given the variety of microclimates in the region. With the current availability of weather and flow stations it is only possible to obtain coarse information about hydroclimatological variability.

61. The IMN is planning to invest approximately \$6,000,000 USD with \$900,000 already having been invested, to update their meteorological monitoring infrastructure, both physical and institutional. While these investments are crucial in the improvement of climate monitoring across the country, they are entirely focused on updating technologies and staff capacity at the central level, but not for installing new hydrometeorological stations in the regions to expand the existing network coverage, including in the northern region, which is among the most affected by drought (Guanacaste) and prone to flooding (northwestern Alajuela). In the project area, there is a need to make hydroclimatological information available to the ASADAS in a format that can be easily used to support decision-making at the local level. The census performed with ASADAS during the PPG indicated that 85% have no access to hydroclimatological information. Although those ASADAS that have access and use the information principally in the development of their strategic, operational, and maintenance plans, most of the ASADAS remain vulnerable to droughts and floods. In addition, better linkages with existing environmental and meteorological information management systems and sectoral databases (e.g., National Land Information System – SNIT and National Water Resource System – SIMASTIR) are needed so that the hydrometeorological data will be able to facilitate decision-making related to climate change mitigation.

62. Costa Rica's CEWS currently consists of several observation posts and surveillance stations that are continuously monitored across the country. The information produced is transmitted to the CNE central offices to help in decision-making in emergency situations. This is done through the system of emergency committees established by the CNE, with the support of the Inter-Agency Network Communications and Monitoring linking ministries, fire stations, Red Cross offices, the IMN and other scientific agencies, utility companies, and police offices. This monitoring network covers 90% of the country and monitors principally precipitation and river flows. Under extreme hydrometeorological conditions, or when requested by the IMN, the intensity of the monitoring activities is increased in the area or in areas at risk. The CEWS has been design to forecast and respond to flooding risks; however, institutional arrangements that would allow forecasting and monitoring rainfall deficits are needed for an appropriate response to drought risk. The ASADAS are not part of the monitoring and alert network of the CEWS, and although some local AyA offices are part of the municipal emergency committees, their participation in the CEWS is needed as part of a strategy to increase the resilience of local communities to water variability under drought conditions.

With SCCF Intervention (adaptation alternative):

63. Monitoring as accurately as possible critical variables such as water levels, soil conditions, weather, and then using that data to make projections and provide information within the project area to relevant stakeholders will require installing more AWS and AFS, since the current network only provides partial geographic coverage and may only be coarse information about hydroclimatological variability. SCCF resources will strengthen Costa Rica's Meteorological Network by acquiring 15 new stations to provide consistent and reliable environmental data in real time in the selected northern SEMUs. IMN will provide ASADAS and relevant government institutions timely and disaggregated information critical to the formulation of a Vulnerability Index, an Adaptive Capacity Index, and the Ecosystem-based Water Security Plans. The new stations will be fully incorporated into the country's network of hydroclimatological stations and IMN will assume their operation and maintenance.

64. In addition, the Vulnerability Index of Rural Aquifers and the Adaptive Capacity Index of Communities will incorporate data gathered at the local level on indicators related, but not limited to: the natural, socioeconomic and institutional frameworks, including adaptation capacity of ASADAS; state of existing infrastructure; current and historical water levels across components to water systems; local agro-meteorological data; livelihood assessments and profiling; and assessing local perception on risk. The impacts will be evidenced by the extent to which local and municipal planning documents and Ecosystem-based Water Security Plans from the area refer to indicators in both indices as means for monitoring and planning of water management.

65. The project will enhance the CEWS for SEMUs 1, 2, and 3 in northern Costa Rica, and by including the ASADAS and AyA in risk management at the local level. Enhanced hydroclimatological information will be

transmitted to the central CEWS (operated by the CNE, in coordination with the IMN), which will support the development of detailed risk scenarios based on precipitation, flow, and temperature thresholds and will serve as inputs to disseminate early warnings for floods and drought. Risk management will be enhanced by organizing, strengthening, and training ASADAS and AyA local staff and local communities (i.e., end water users) to prepare for and respond to drought and flood emergencies through the implementation of monitoring procedures, the activations of alerts, and response to events in coordination with local emergency committees, municipal authorities, the CNE, and the IMN.

Output 1.3.1 – Fifteen (15) new Automated Weather Stations (AWS) and Automated Flow Stations (AFS) installed to provide consistent and reliable environmental data in real time in the selected northern SEMUs.

Output 1.4 deliverables

- a) Fifteen (15) new AWS and AFS are procured and installed, covering gaps in the hydrometeorological network in northern Costa Rica (SEMUS 1, 2, and 3)
- b) More consistent and accurate weather and flow information available to local users (cantons and ASADAS) supporting decision-making regarding adaptation to climate change.

Indicative Activities

- a) Review the existing AWS and AFS coverage, their physical condition, and data collection and storage procedures including the quality of data.
- b) Purchase and install new AWS and AFS stations with satellite transmission. The AyA and IMN will select the sites for the installation of the AWS and AFS, with the participation of local authorities (cantons) and representatives from the ASADAS. The new stations will be fully incorporated into the country's network of hydroclimatological stations.
- c) Calibrate all of the equipment/sensors onsite and run tests to ensure that all the equipment is working properly (capturing and transmitting data) and that data is properly stored in a selected hydroclimatological information system (e.g., National System of Water Resources and/or Hydrometeorological National System).
- d) Prepare an operational plan for the transmission of data, data management, and data analysis and reporting procedures. The maintenance plan for the AWS and AFS stations will cover the role of various aspects such as manpower, capacity, materials, and funding.
- e) Strengthen the capacity of the AyA and IMN regional offices for validating and storing hydrometeorological information in databases to make it readily available for users (e.g., ASADAS) in the project target area.
- f) Provide daily and monthly reports through the early warning system (Output 1.3.4) and the AyA's Web page, and make data available to local users (rural and indigenous communities/household members) through the ASADAS' Management System (SAGA; Output 1.3.3) for the implementation of household- and community-level measures to face extended periods of drought (e.g., reduced water use) and flooding events during the rainy season (e.g., reduced water contamination preventing septic tank overflows).

Output 1.3.2 – Vulnerability Index, Adaptive Capacity Index developed and supporting the climate early warning and information system, and the Risk Management Plan for Potable Water and Sanitation (RMPPWS).

Output 1.3.2 deliverables

- a) Drought and flood risk maps (risk scenarios: projected variation in rainfall and temperature for the 2016-2040, 2040-2070, and 2070-2100 time periods) for the targeted SEMUs (1, 2, and 3) completed.
- b) Vulnerability Index for each target SEMU developed considering multiple social, economic, environmental, climate change, and policy/governance factors.
- c) Vulnerability/risk reduction and adaptation to climate change planning based on updated vulnerability and risk information and considering sufficient and sustainable financial resources required to adapt to climate change.

Indicative Activities

- a) Develop a climate change vulnerability analysis methodology to specific conditions (changes in temperature and rainfall) in the target SEMUs (1, 2, and 3) in northern Costa Rica. Vulnerability analysis will be developed on the basis of existing methodologies developed in Costa Rica and included in official documents such as the National Communications to the UNFCCC, rescaled (finer scale) and adjusted to reflect ecosystem, aquifers, socioeconomic, and sectoral conditions specific to the target areas, information that is not currently available for the target area (SEMUs 1, 2, and 3). This will include an analysis of climate change scenarios (projected variation in rainfall and temperature) specific to the target SEMUs 1, 2, and 3, using different time periods (e.g., 2016-2040, 2040-2070, and 2070-2100 time periods).
- b) Develop drought and flood risk maps (risk scenarios), using high-resolution radar and/or optical images at proper scales to be purchased with SCCF funds (e.g., 1:25,000/50,000 for the rural areas and aquifers, and 1:3,000 and/or 1:2,000 scales for the urban areas), and using data collected through the AWS and AFS installed by the project (Output 1.3.1), other data from the national network of meteorological monitoring stations, and participatory assessment of local vulnerability and risk.
- c) Analyze vulnerability and climatic trends for the target SEMUS using inputs from the risk scenarios identified above.
- d) Develop a Vulnerability Index and Adaptive Capacity Index for each target SEMU considering social, economic, environmental, climate change, and policy/governance factors, which will include: i) exposure to climate-related events (drought, floods, etc.); ii) human sensitivity, in terms of population patterns, development, availability of natural resources, agricultural dependency, and conflicts; and iii) future vulnerability by considering the adaptive capacity within the targeted SEMUS (e.g., local governments, AyA, and ASADAS) and water supply infrastructure to combat climate change. This approach follows the guidelines of the Climate Change Vulnerability Index (CCVI) released by global risks advisory firm Maplecroft (<http://maplecroft.com/about/news/ccvi.html>) and the NatureServe Climate Change Vulnerability Index (NatureServe, 2015; <http://www.natureserve.org/conservation-tools/climate-change-vulnerability-index>).
- e) Make available the vulnerability and risk information developed (drought and flood risk maps and Vulnerability Index) to regional and local interest groups (AyA regional offices, municipal governments, ASADAS, production sectors, NGOs, and local communities) to support decision-making regarding vulnerability/risk reduction and adaptation to climate change. It is expected that this service would be provided by the IMN as part of their regular programming after project completion, with support and in coordination of the AyA, the municipal environmental authorities, and the ASADAS.

Output 1.3.3 – Information monitoring system for the AyA and ASADAS Management System (SAGA) to track the impact of the adaptation measures aiming to reduce the vulnerability of rural communities to address water variability due to climate change, and articulated to national-level information systems (National System of Water Resources and Hydrometeorological National System).

Output 1.3.3 deliverables

- a) Information monitoring system for the AyA and ASADAS SAGA to track the impact of the adaptation measures operating.
- b) Training provided to the AyA and ASADAS staff for the effective management and use of the information monitoring system.

Indicative Activities

- a) Review and assess existing climate and adaptation information monitoring procedures for the AyA and ASADAS, including of assessment needs for storing, managing, and analyzing technical information related to drought and flood risk management, and adaptation to climate change and variability.
- b) Develop information monitoring platforms within the system for the AyA and the ASADAS SAGA to track the impact of the adaptation measures aiming to reduce the vulnerability of the ASADAS and rural communities to water variability due to climate change. Information management protocols and links will be developed for within the monitoring systems to access and share information with the National System of Water Resources and Hydrometeorological National System.
- c) Define indicators to assess progress and the impact of the adaptation measures implemented. Designs and formats used to capture information and mechanisms for reporting results to stakeholders will also be developed.
- d) Provide technical support in information management to the AyA and ASADAS staff, including assessing needs and purchase of hardware to operate the information monitoring systems.
- e) Identify resourcing, and training needs as well as institutional arrangements for the effective management and use of the information monitoring system. Provide training for the AyA and ASADAS staff in the operation and management of the systems.
- f) Assess the impact of the adaptation measures implemented through the project using the census questionnaires performed during the PPG to establish baseline values and information. The assessment will be completed at the midpoint (year 3) and end of the project (year 5).

Output 1.3.4 – Climate early warning and information system (CEWS) on climate-related risks and vulnerability of project area water resources generated and disseminated to ASADAS, users, and partners.

Output 1.3.4 deliverables

- a) ToR for a CEWS for SEMUs 1, 2, and 3 (northern Costa Rica).
- b) Strengthened CEWS for SEMUs 1, 2, and 3 include selected ASADAS and AyA local offices in 10 municipalities in northern Costa Rica, potentially benefiting a population of 354,132.
- c) Institutional Arrangement plan for CEWS for SEMUs 1, 2, and 3 (northern Costa Rica).
- d) Climate forecasting models built and implemented for a strengthened CEWS for SEMUs 1, 2, and 3.
- e) Public access website established for presenting key layers of information.

Indicative Activities

- a) Development of the ToR for an enhanced CEWS for SEMUs 1, 2, and 3, northern Costa Rica (this activity will also support the identification of the optimized hydrometric network – AWS and AFS – in Output 1.3.1).
- b) Review existing drought and flood forecasting programs, or elements of CEWS in northern Costa Rica.

- c) Assess current institutional arrangements and capacity for drought and flood forecasting, drought and flood emergency response, and develop an institutional arrangement plan for the CEWS, including the participation of ASADAS and AyA local offices and local communities.
- d) Undertake telecommunications studies to determine the requirements to support monitoring and telemetry system as well as warning dissemination system.
- e) Identify the requirement for drought and flood forecasting model(s) and develop the scope for drought and flood forecasting models (short-term or seasonal forecasts), for a strengthened CEWS.
- f) Design and implementation of an enhanced CEWS: a) strengthened technical-scientific component by improved monitoring and forecasting of drought and floods, and b) strengthened risk management by including the ASADAS and AyA in monitoring, the activations of alerts, and response to events at the local level.
- g) Design of a public-facing website presenting key layers of information, with the potential to disseminate early warning information to the public.
- h) Early warning awareness and training workshops for community, ASADAS, local governments, the AyA, and media representatives, short-term or seasonal forecasts, to interpret information for decision-making.
- i) Produce guidance to strengthen the drought and flood forecasting and early warning system.
- j) Prepare and implement municipal-level drought and flood response and preparedness plans, with the participation of the ASADAS and local AyA offices.

Outcome 2.1 – Ecosystem-based climate change adaptation measures are integrated into public and private sector policies, strategies, and investments related to rural community water-sourcing infrastructure and services

Co-financing amounts for Outcome 2.1: \$5,363,000

SCCF project grant requested: \$1,174,300

Without SCCF Intervention (baseline):

66. Costa Rica has a strategy for the development of water safety plans (WSP) aiming to improve community health in the case of natural disasters through planning for catchment of water and separating it from larger run-off streams. Costa Rica follows the guidelines of the World Health Organization model for developing WSP for managing drinking water quality from catchment to consumer. WSP are useful as they facilitate the understanding of community-level best practices in the risk assessment process for small water supply systems, mainly for ensuring the safety of drinking water. While the WSP are an important initial step toward adaptation and their adoption by small water supply systems has been promoted in Costa Rica, very few ASADAS in the target SEMUs have actually developed and implemented a WSP. In addition, integrated climate change risk management and ecosystem-based adaptation considerations are not considered. This a big limitation to reducing water resources vulnerability as the WSP are a key planning tool that will allow the ASADAS to manage their water resources in a comprehensive way. In 2014, AyA developed guidelines for integrated risk management by the ASADAS (i.e., *Gestión Integral del Riesgo para Organizaciones Comunitarias del Agua*); however, there is no reference to CC or for implementing adaptation actions. More recently (2015), AyA has recognized that the ASADAS should play a role in promoting adaptation to climate change adaptation, but also acknowledges there are limited institutional capacities and resources within the ASADAS and the AyA for the implementation of climate change adaptation measures.

67. To promote the conservation and restoration of forest ecosystems, Costa Rica has implemented a PES program, executed through the FONAFIFO, in which private landowners are paid for conservation performance. Under this approach, landowners receive direct payments for the ecological services produced on their land when

they adopt environmentally friendly land uses and forest management techniques (i.e., protection of primary forest, secondary forest growth, and sustainable forest production and management). The program is structured around four specific ecosystem services: water protection, carbon sequestration, biodiversity conservation, and scenic value. However, water protection has received less attention than other services such as biodiversity conservation. In addition, the program is heavily reliant on public funds, with less than 3% of the program financed privately (i.e., voluntary agreements with local users), mostly by hydropower plants.¹⁵ Thus, in the context of increasing climate change risks and more vulnerable water resources, there has been a missed opportunity to use the PES scheme to pay for the effective protection of water resources as part of a climate change adaptation strategy, particularly in areas like northern Costa Rica where there is growing demand for lands and water by large agribusinesses.

With SCCF Intervention (adaptation alternative):

68. SCCF resources will expand the scope of the WSP by developing and promoting the implementation of four Risk Management Plan for Potable Water and Sanitation (RMPPWS) within each target canton, incorporating climate change risk management into the planning process and emphasizing ecosystem-based adaptation. Ecosystem-based adaptation uses biodiversity and ecosystem services as part of an overall adaptation strategy to help people and communities adapt to the negative effects of climate change.¹⁶ Plans in the target area will be developed through an inclusive consultation process ensuring the participation of highly vulnerable groups such as women and the Maleku indigenous groups. Inclusivity in the development of the RMPPWS is of top priority, as the plans will specifically dictate guidelines for all future investments in rural water-sourcing infrastructure and ecosystem-based adaptation systems by all public and private entities planning future developments. Lessons learned and best practices will be documented and used in the development of a national RMPPWS model, which will be disseminated and shared through national workshops to allow national-level replication.

69. While the RMPPWS will be an important initial step toward planning for adaptation to climate change, a key link in mutual-accountability and compliance will be in financing for implementation. The project will identify 10 livestock and agricultural producing companies willing to pay for RMPPWS implementation through a voluntary fee system for water and aquifer protection under a PES model. Since a key aspect of the RMPSS will be the ecosystem-based adaptation component, the proposed PES model will be directed towards paying for ecosystem hydrological services, in particular the provision of water for human consumption and irrigation. To this end, SCCF resources will support the use of two key voluntary fee systems that involve an expansion of the PES program: Certified Agricultural Products and Voluntary Watershed Payments. The development of these fee systems will also take shape through inclusive consultations with area water users, taking into account their level of use of ecosystem services. Large, small, and subsistence-level producers will all report on their consumption behavior and the extent to which they harm area ecosystems, and all will decide collectively how the deficit between water use and climate-resilient water security might be amended and funded through a progressive, though still productive, fee structure.

70. The new PES schemes will allow integrating water-related risks and new ecosystems management practices into the productive sectors and will be used to fund the RMPPWS. To support the design of the new PES schemes (and future ecosystem-based initiatives), the project will implement economic valuation modeling of ecosystem-based adaptation measures within both agricultural and a livestock-based industrial sectors within each canton in the target area following the methodology as adopted in the UNEP published “The Economics of Ecosystems and Biodiversity – TEEB”¹⁷ and using spatially explicit models to quantify ecosystem services and

¹⁵ Porras, I., Barton, D.N., Miranda, M. and Chacón-Casante, A. 2013. Learning from 20 years of Payments for Ecosystem Services in Costa Rica. International Institute for Environment and Development, London.

¹⁶ <http://www.unep.org/climatechange/adaptation/>

¹⁷ The Economics of Ecosystems and Biodiversity (TEEB) has as its principal objective to mainstream the values of biodiversity and ecosystem services into decision-making at all levels. It aims to achieve this goal by following a structured approach to valuation that helps decision-makers recognize the wide range of benefits provided by ecosystems and biodiversity, demonstrate their values in economic terms and, where appropriate, capture those values in decision-making (<http://www.teebweb.org>)

adaptation benefits. Economic valuation modeling of ecosystems will be used to predict the economic benefits of adopting an ecosystem-based adaptation approach for production. The benefits of the ecosystem-based adaptation approach will be promoted among financial institutions, particularly micro-credit establishments, for the development of market-based incentive programs such as preferential credit options to incentivize the adoption of this approach by other producers in the country.

Output 2.1.1 – Four (4) participatory RMPPWS implemented within each target canton (SEMÚ 1: Guatuso, Upala, Los Chiles, and La Cruz; SEMÚ 2: Liberia and Cañas; SEMÚ 3: Santa Cruz, Nicoya, Hojancha and Carrillo).

Output 2.1.1 deliverables

- a) Four (4) participatory RMPPWS, which incorporate climate change, risk management emphasizing ecosystem-based adaptation, implemented within each of 10 target cantons in northern Costa Rica.

Indicative Activities

- a) Review jointly with the ASADAS board members existing WSP to assess if these incorporate ecosystem-based climate change adaptation measures, including gender considerations, as part of their risk assessment and risk management approach.
- b) Development of four (4) RMPPWS within the cantons in the three prioritized SEMÚs, jointly with the ASADAS board members and through a participatory process that includes women, indigenous communities and other vulnerable groups. The RMPPWS will include: i) ASADA-level participatory drought and flood risk assessment to fully characterize the exposure of the water catchment, storage, and distribution systems to drought and flood risks; ii) investment plan and financial sustainability strategy; and iii) alignment with the AyA and CNE investment plan process.
- c) Implement and sustain four (4) RMPPWS, which incorporate climate change risk management emphasizing ecosystem-based adaptation, within each target canton, including the development of operational monitoring and control measures to assess the effectiveness of the RMPPWS.
- d) Provide training to ASADA board members and waters users, including women and indigenous groups, in ecosystem-based climate change adaptation measures and drought and flood-resilient water supply systems. Training will be provided as part of Output 1.2.1.
- e) Synthesize lessons learned and experiences from the development and implementation of the four (4) RMPPWS and draft a national RMPPWS model.
- f) Obtain endorsement of the national RMPPWS model as a climate change risk management tool from environmental and water supply and sanitation authorities (MINAE, AyA, and ARESEP).
- g) Disseminate and share the national RMPPWS with the private and public sectors through climate change adaptation forums (web pages of the AyA and the Climate Change Division/MINAE; Red RANA, national climate change portals [e.g., School of Agricultural Engineering/University of Costa Rica, and the National University]) to promote national-level replication.

Output 2.1.2 – AyA and the National Emergency Commission (CNE) investments for the targeted area integrate climate change risks.

Output 2.1.2 deliverables

- a) At least one (1) investment of the AyA and one (1) investment of the CNE for each of the three target SEMÚs.

Indicative Activities

- a) Support AyA and CNE authorities and technical staff to review existing and planned investments for the targeted SEMUs (1, 2, and 3) and assess the extent to which these incorporate climate change adaptation considerations, and identify gaps in incorporating risk management strategies and specific adaptation actions to reduce vulnerability to climate change impacts, including drought and flooding.
- b) Develop a critical work path and guidelines for the integration of risk management strategies and climate change adaptation into AyA and CNE planning tools and investments using as a basis project results, with input from the ASADAS and of local community leaders.
- c) Inform key stakeholders (ASADAS, local communities, and local governments) about the adopted strategies to reduce risks and adapt to climate change.

Output 2.1.3 – Ten (10) livestock and agricultural producing companies adopt a voluntary fee system (Certified Agricultural Products and Voluntary Watershed Payments) to pay for the protection of water resources.

Output 2.1.3 deliverables

- a) Up to five (5) PES/voluntary watershed payment system operating.

Indicative Activities

- a) Implement as part of an ecosystem-based adaptation strategy a voluntary watershed payment system for water and aquifer protection in which up to 10 livestock and agricultural production companies that benefit from the provision of environmental services (i.e., reduced water pollution and regulation of water flow for irrigation and flood control) make payments to land owners and ASADAS that supply the services through the adoption of water supply-friendly land uses and enhance water management practices. The voluntary fee systems will be designed following guidelines of Costa Rica’s PES program that recognizes the value of services provided by ecosystems, including hydrological services.
 - Identify and select potential participating watersheds jointly with participating ASADAS and local community members, and assess the vulnerability of water resources to climate change and the environmental condition of the catchment area (e.g., forest cover, water quality, condition of riparian zones and recharge areas, etc.).
 - Identify up to 10 potential buyers (i.e., livestock and agricultural production companies), assess the marketable value of the hydrological services to be provided, raise awareness about the importance of ecosystem services as part of an adaptation strategy to help producers and local communities adapt to the negative effects of climate change, and determine the willingness to pay for the services (adaptation benefits) to be provided.
 - Define institutional arrangements for successful PES implementation, including assessing the legal and land ownership context for each selected watershed; and examining existing rules for PES markets and deals based on similar experiences implemented in the country as part of the FONAFIFO and other initiatives.
 - Identify and provide PES/climate change adaptation support services and training in areas such as business/project development, certification, verification, financing, technical assistance, and monitoring. This will include identifying national and international support agencies with recognize experience in PES and climate change adaptation.
 - Structure agreements and select a contract type. Draft PES/Voluntary Payment Agreements indicating all responsibilities and rights, including type of payment and fairness and distribution of net benefits accruing from payment from watershed services. Contract types will include: i) water protection contracts, which target the conservation of vegetation cover in catchments; ii) reforestation/rehabilitation contracts/easements, in which landowners commit to maintain reforested/rehabilitated areas (catchments, river banks, aquifer recharge areas, spring buffer areas) for

extended periods (e.g., 15 to 20 years); and iii) sustainable land use management contracts/easements, in which landowners make a commitment to maintain forested/rehabilitated areas for extended periods (e.g., 15 to 20 years).

- Design management and business plans to provide sustained watershed-based services as part of a long-term strategy to adapt to the negative effects of climate change.
- b) Certify agricultural products, following FONAFIFO's scheme for issuing of an Environmental Services Certificate (ESC) under its PES program. The ESC was conceived as a financial investment instrument of voluntary payments for the private sector, in which participating individuals or firms contribute to the conservation of forest ecosystems, including water resources protection. The project will expand the scope of the ESC by including voluntary payments for water resources protection through ecosystem conservation and sustainable management as part of an adaptation strategy for the sustainable provision of water for human consumption and irrigation.
- Promote certification among potential program participants (i.e., livestock and agricultural production companies or individuals), emphasizing the associated adaptation benefits: reduction of operating and maintenance costs by investing in ecosystem/water supply services (i.e., quality and quantity of water); hedging of risks (e.g., related to future fluctuations in supply of water due to climate variability); tax benefits (deductions from gross income according to Law No. 7092); and enhancing branding and improving public image.
 - Liaison between program participants and FONAFIFO to define voluntary payment mechanisms. FONAFIFO will perform the legal and technical actions to ensure water protection and investment of voluntary contributions, in coordination with the AyA and the beneficiary ASADAS.
 - Draft contracts for water resources protection/ecosystem-based adaptation. The project will use the results of valuation modeling of ecosystem-based adaptation measures and economic valuation of ecosystem services (i.e., provision of water for human consumption and irrigation; Output 2.1.4) to determine the duration of the contracts and the amount of the voluntary payments. As a guide, under the existing ESC program contracts are for a 10-year period and voluntary payments average USD \$800/hectare/yr.
 - Issue certificates endorsed by FONAFIFO to livestock and agricultural production participating companies for water resources protection/ecosystem-based adaptation.

Output 2.1.4 – Valuation modeling of ecosystem-based adaptation measures and economic valuation of ecosystem services support the integration of water-related risks and new ecosystems management practices within productive sectors (agriculture and livestock industries).

Output 2.1.4 deliverables

- a) Ecosystem services scenario (maps) and values of biodiversity and ecosystem services available to support decision-making to implement ecosystem-based adaptation measures in the three target SEMUs.
- b) Technical staff from the AyA and ASADAS trained in spatially explicit modeling (ecosystem and economic valuation modeling) and biodiversity and ecosystem services valuation.

Indicative Activities

- a) Select model to quantify ecosystem services and adaptation benefits using a spatially explicit model (e.g., InVEST, The Natural Capital Project - NatCap¹⁸) and economic valuation models (UNDP methodology – TEEB Approach¹⁹).
- b) Assess data needs for modeling (environmental/ecosystems and economic/production sectors) and collect data.
- c) Run models using stakeholder-defined scenarios of land-use/land-cover change to assess how ecosystem-based adaptation measures (e.g., reforestation, protection, rehabilitation, improved ecosystem connectivity) achieve the greatest downstream water quality and quantity benefits.
- d) Share results (e.g., water quality and quantity, and value of water supplied) with the stakeholders (AyA, ASADAS, local communities, and agriculture and livestock industries) and decision-makers to support decision-making regarding adopting ecosystem-based adaptation measures for the management of water-related risks within productive landscapes in the target SEMUs.
- e) Identify resourcing and training needs for spatially explicit modeling and biodiversity and ecosystem services valuation. Provide training for AyA and ASADAS staff, local communities, and agriculture and livestock industries.

Outcome 2.2 – The purchasing and credit policies of at least 20 agricultural and livestock trading companies and five (5) financial institutions operating in the target region promote adoption of productive practices that help maintain ecosystem resilience to climate change.

Co-financing amounts for Outcome 2.2: \$1,487,000

SCCF project grant requested: \$325,700

Without SCCF Intervention (baseline):

71. The governing body of the agricultural sector in Costa Rica is the MAG; this sector is aligned with the national goal of Costa Rica Carbon Neutral 2021. The State Agro-Environmental Policy prepared by the MAG has Pillar IV on climate change and a sectoral plan, which has several considerations aimed at mitigation, adaptation and vulnerability and risk management, climate applications, and training. In addition, the MAG has actively participated in international negotiations on climate change. The agricultural sector focuses on three productive activities (coffee, livestock, and sugar cane) and a wide program of family farms for the implementation of mitigation actions.²⁰

72. The National Bank of Costa Rica created in 2012 the "Financing for environmental-friendly investments - Mipyme", with the aim to encourage micro, small, and medium enterprises to make investments aimed at the prevention, control, mitigation, and compensation of adverse effects caused to the environment due to the activities. The program includes: 1) technical assistance fund; 2) partial credit guarantees; 3) credit interest rate differential; and 4) environmental-friendly products. In addition, in 2013 the Government of Costa Rica and the Forest Carbon Partnership Facility (FCPF) signed a Letter of Intent (LOI) to negotiate an Emission Reductions Payment Agreement (ERPA) worth up to US\$63. This would make Costa Rica the first country in the FCPF to access large-scale performance-based payments for conserving its forests, regenerating degraded lands, and scaling up agro-forestry systems for sustainable landscapes and livelihoods.

With SCCF Intervention (adaptation alternative):

¹⁸ Stanford Woods Institute for the Environment, University of Minnesota's Institute on the Environment, The Nature Conservancy, and World Wildlife Fund. <http://www.naturalcapitalproject.org>. Accessed August 2015

¹⁹ EEB (2010) The Economics of Ecosystems and Biodiversity: Mainstreaming the Economics of Nature: A synthesis of the approach, conclusions and recommendations of TEEB (Available at <http://www.teebweb.org>).

²⁰ World Bank, Global Facility for Disaster Reduction and Recovery (GFDRR), and Climate Change Team/ENV: Vulnerability, Risk Reduction, and Adaptation to Climate Change: Climate Risk and Adaptation Country Profile. April 2011

73. SCCF resources will support agricultural and livestock trading companies and financial institutions to include in their purchasing and credit policies incentives to promote adoption of ecosystem-based climate change adaptation measures by farmers. For those producers willing to switch over to the ecosystem-based adaptation approach, a knowledge management system will be established to disseminate data, information, and toolkits to foster and mainstream these practices in other water-intensive productive sectors across the country. The communication strategy will be pointedly inclusive and creative and will avoid highly technical language in exchange for a marketing approach geared toward communicating solely economic gains. For large to medium scale producers and municipal governments the information will be socialized through technical papers for decision-makers.

Output 2.2.1 – Farmers incorporate ecosystem-based climate change adaptation measures into their production processes, making use of revised purchasing and credit policies of agricultural and livestock trading companies and financial institutions.

Output 2.2.1 deliverables

- a) At least 20 revised /adjusted purchasing and credit policies of agricultural and livestock trading companies and financial institutions.
- b) At least 10 climate change-related initiatives making use revised purchasing and credit policies (one per target municipality).
- c) Lessons learnt and good practices documented for further improvement and for broader adoption.

Indicative Activities

- a) Detailed assessment of existing purchasing and credit policies and incentives, and identify gaps and needs.
- b) Discuss and recommend options for developing incentives to promote adoption of ecosystem-based climate change adaptation measures by farmers.
- c) Provide technical assistance and training for selected companies and financial institutions to adjust purchasing and credit policies with climate changes risks and incentives integrated.
- d) Campaign to publicize and build awareness among farmers, including women farmers, about the new lines of credit and incentives to promote adoption of ecosystem-based climate change adaptation measures.
- e) Document lessons learned/best practices with recommendations for companies and institutions for further improvement and for broader adoption.

Output 2.2.2 – Knowledge management system allows disseminating data, information, and toolkits to foster and mainstream ecosystem-based adaptation practices in other water-intensive productive sectors across the country.

Output 2.2.2 deliverables

- a) Knowledge management system (KMS) operating. The development of the KMS includes activities for the following: a) generating and gathering information and knowledge; b) storing, organizing, and managing information; c) disseminating knowledge; and d) technical support of application (replication of project results).
- b) Strengthened institutional arrangements allow the use of knowledge to support local adaptation efforts.

Indicative Activities

- a) Synthesize lessons learned and experiences that resulted from project implementation.

- b) Document experiences and approaches in ecosystem-based adaptation and climate change risk management identified by the project team and other stakeholders in other water-intensive productive sectors across the country, including local knowledge.
- c) Identify knowledge-to-action gaps and needs of key stakeholders (e.g., national and local water management authorities, production sectors, and national and local governments) for the understanding of risk and vulnerability, and the development and implementation of ecosystem-based adaptation strategies and measures.
- d) Identify and/or develop information and knowledge sharing platforms, such as existing electronic (e.g., websites, webinars, and digital publications) or traditional (e.g., hard copy publications, and seminars and conferences) platforms to codify information and for knowledge sharing related to climate change and ecosystem-based adaptation practices for easier access and dissemination. This will include protocols for collecting, storing, and processing information to generate knowledge.
- e) Ensure institutional arrangements so that knowledge is shared and used to support local and sectoral ecosystem-based adaptation efforts. This will include training staff (e.g., AyA, MINAE, and IMN) for effective information and knowledge management, including the development of skills for using information for decision-making, building knowledge, and improving ecosystem-based adaptation results.
- f) Make knowledge available to local, regional, and national interest groups, including the development of protocols for disseminating knowledge through the following: a) local and national forums (e.g., project web page, web pages of the AyA, the Climate Change Division/MINAE, and the IMN; Red RANA, national climate change portals [e.g., School of Agricultural Engineering/University of Costa Rica, and the National University]) and regionally (e.g., Regional Forum of Central America) and internationally recognized knowledge networks (e.g. UNDP/ ERPA); and b) technical papers for decision-makers.
- g) Provide technical assistance in response to specific needs that may arise in the implementation of experiences and approaches in ecosystem-based adaptation, including support to vulnerable populations and sectoral planners and experts (e.g., ecosystem and water resource managers).
- h) Establish a platform for dialogue for the exchange of community- and sectoral-based and scientific sources of climate and ecosystem management information, helping inform community- and sectoral-level decision-making.

2.5. Key indicators, risks and assumptions

74. The project's indicators are included in Section 3: Results Framework of this Project Document. The level of detail of the Project Results Framework is due to the fact that the indicators are a subset of the addendum to the census for the ASADAS that was completed during the PPG. The addendum to the census will be completed once more at the midpoint (year 3) and end of the project (year 5) as part of the planned activities for Output 1.3.3. The risks that might prevent the project from being achieved are presented in Table 2; a detailed risk analysis is provided in Annex 8.1.

Table 2 — Risks facing the project and the risk mitigation strategy.

Risk	Rating	Risk Mitigation Strategy
Staff changes among implementing partners taking into account the uncertainties of the current administration represent delays in project implementation.	L	The project team will continuously raise awareness about what the project is seeking to achieve among the staff of the implementing partners (AyA, ASADAS, MINAE, MAG, Ministry of Health, and IMN). This is important to ensure that they are aware about their roles in achieving the project objective and outcomes as well progress in achieving the outcomes, including the socioeconomic and environmental benefits, and delivering on the outputs. To ensure awareness about the project, inter-institutional coordination mechanisms have been defined (e.g.,

Risk	Rating	Risk Mitigation Strategy
		inter-institutional agreements, multiple training events, knowledge management system, and Project Board meetings).
Coordination among stakeholders regarding climate change, including the private sector, could be limited.	M	Consultations were carried out during the project design with all of the key ministries and stakeholders, including the AyA, ASADAS, MINAE, and MAG to establish sustained ownership and support for the project. It is fully recognized that for the successful implementation of project activities, effective coordination among all interested parties is necessary. They are also aware of the fact that robust integration of climate change considerations into their agendas is needed. The project will further promote support and networking with high-level leadership to prioritize climate change adaptation and build awareness on the direct and indirect project benefits at the local, subnational, and national levels.
Decision and policy-makers do not appreciate the need to mainstream ecosystem-based adaptation considerations into public and private sector policies and investments.	M	The project aims to strengthen climate change awareness among the public and private sectors, including ecosystem-based adaptation and ecosystem services and their socioeconomic benefits. Economic valuation of ecosystem services will allow decision makers in the public and private sectors to better understand the economic advantage of adopting ecosystem-based adaptation approach to production over the BAU alternative. The project also aims to build capacity among decision-makers in selected companies and financial institutions regarding climate change to facilitate decision-making processes.
The guarantors of rights may not have the capacity to fulfill their obligations with the project	M	The ASADAS are responsible for guaranteeing the continued provision of potable water to the end users; this guarantee depends on the technical and organizational capacity of the ASADAS to meet their obligations. The project gives special attention to strengthening the technical, operational, and management capacity of the ASADAS to ensure that they can provide high quality services to the end users.
Conflicts between at the local level (ASADAS, communities, and end users) could result in claims or disputes regarding management of water resources	M	Some proposals for improving access and quality of water services could include the merging of smaller ASADAS with larger ones, which may lead to local claims or disputes. The project will adopt a conciliatory approach and will guarantee access to clean drinking water for all beneficiaries and their participation in all decision-making processes. In case agreement cannot be reached, the project will seek alternatives approaches that will satisfy all interested parties.
The project could affect land tenure and/or community property rights, and/or customary rights to land or resources	L	During the project preparation phase the ASADAS expressed the importance of owning the land surrounding the water sources and associated aquifer recharge areas. Access to water sources could generate conflict with the current owners of the surrounding lands. The project will follow all procedures outlined in Costa Rican legislation related to these issues to avoid any conflicts regarding land property rights and waters resources use rights, including community and/or customary rights.
Local stakeholders (ASADAS, farmers, and municipal authorities) do not agree to adopt adaptation strategies at the ecosystem/watershed level.	M	During project preparation, local meetings were held with the majority of the beneficiary ASADAS in the prioritized region (northern Costa Rica: SEMUs 1, 2, and 3) to discuss the project and gain support for project implementation. During implementation the project will raise awareness and provide technical support and training to ASADAS, farmers, and municipal authorities to advance collaborative mechanisms throughout selected watersheds for the implementation of ecosystem/watershed-level adaptation actions.

2.6. Cost-effectiveness

75. The project implements drought and flood management measures in the northern Costa Rican region (three SEMUs in the Guanacaste and Alajuela provinces) so that these areas become more resilient to long-term impacts of climate change on water availability. The region, which is already experiencing more frequent and

extended droughts as well as increasingly damaging floods during the rainy season, requires a long-term strategy to improve water supply and promote sustainable water practices among end users and productive sectors by advancing community- and ecosystem-based measures in ASADAS to address these climate change-related threats. To assess the cost-effectiveness of the project, two different scenarios were examined. The first is an alternative project approach that builds resilient water supply infrastructure and technical skills to address projected changes in water availability and to mainstream ecosystem-based adaptation into public and private sector policy and investments. The second scenario is the development of large-scale infrastructure projects for a more centralized water supply (e.g., large dams and reservoirs).

Alternative project approach – Optimum combined effect/community-based intervention

76. The proposed approach will integrate the development of resilient water supply infrastructure at the local level with ecosystem-based adaptation measures at the local level to address risks and vulnerability associated with climate change. This approach, which is designed to reduce risk to drought and flooding, is more cost-effective since it not only addresses the specific infrastructure needs of local aqueducts but also addresses the need to restore the ability of the forest and aquatic ecosystems to provide a sustainable supply of abundant and quality water.

77. The project has been designed so that most of the project's budget is directed toward the implementation of a combination of concrete adaptation measures at the local level (ASADAS). These are cost effective considering their holistic and complementary nature, combining measures on all types of water sources (aquifer, surface, and rainwater); supply, demand management and sanitation actions as well; structural and ecosystem based solutions, and placing them in the context of integrated watershed management plans and practices. These measures include: a) strengthened metering systems to effectively track water supply and use; b) improve water catchment (well, spring, and/or rain), storage, and distribution systems, which will allow for a more sustain supply of water during drought periods; c) the use of water-saving devices in homes; and d) piloting water sanitation and purification measures and other adaptive technologies to improve water quality. On the other hand, under the project's scenario, risk managements plans will be developed (i.e., RMPPWS), which will allow the ASADAS to provide better services by incorporating ecosystem-based adaption strategies and building more resilient water catchment and distribution systems that will prove to be cost-effective over the long run. To finance RMPPWS implementation, the project will identify 10 livestock and agricultural producing companies willing to pay for the improvement of local ecosystems to implement a voluntary fee system for water usage and aquifer conservation.

78. The project also proposes activities for the development of fine-scale hydrometeorological information, early warning, and a climate change information monitoring system, which can be considered cost-effective being preventive and forward looking measures on climate related hazards, as compared to reactive and response measures post-hazard, thus potentially reducing costs of mitigating effects of climate related hazards. The project will support the provision of detailed and timely information to facilitate local decision-making (ASADAS, municipal authorities) to increase the resilience of rural communities to address water variability. This includes the installation of 15 new AWS and AFS to provide consistent and reliable environmental data in real time, and the participatory development of a Vulnerability/Adaptive Capacity Index and a climate early warning system for the target SEMUs.

79. Finally, all SFPC investments will be replicated and scaled up. The project will implement a knowledge management system that will synthesize lessons learned and experiences that resulted from project implementation, as well as document other experiences and approaches in ecosystem-based adaptation in other water-intensive use areas of the country. In addition to making information and knowledge available to multiple stakeholders at the local level in other regions of the country for replication, the knowledge management system will establish a platform for dialogue for the exchange of community- and sectoral-based and scientific sources of climate and ecosystem management information, thereby helping community- and sectoral-level decision-makers around the country to reduce their vulnerability to climate and variability.

Business-as-usual Scenario – Large-scale water infrastructure

80. Under the business-as-usual scenario the Government of Costa Rica expects to provide a solution to the existing and forecasted water deficits through the construction of the Rio Piedras Reservoir to collect and store water to supply irrigation and local community projects in the Guanacaste province. The main purpose of this new reservoir will be to collect excess water coming from the Arenal Hydropower Reservoir that drains unused into the Pacific Ocean. It is expected to increase the supply of water to the irrigation areas in the Cabuyo, Tempisque, and Zapandí sub-districts, develop a drinking water distribution network that will allow to supply water through the AyA and ASADAS distribution systems in the cantons of Santa Cruz, Nicoya, Hojancha, and Nandayure, and supply water to tourist developments in the coastal areas.²¹ The Rio Piedras Reservoir will have a capacity of 85 million cubic meters of water in an area of 800 ha at an approximate cost of \$100 million USD, and will benefit up to 350,000 people in Guanacaste. The construction of the Rio Piedras Reservoir project has experienced several delays and may not start until 2018, with an expected duration of four years.

81. Under the business-as-usual scenario, many of the measures on the supply (ASADAS) and demand sides (local communities) proposed in this project would be delivered only partially, as it would focus only on improving the water distribution system rather than a comprehensive set of a combination of complementary measures that will be delivered through the GEF alternative (including multiple water sources, supply and demand measures, information development and management, and community- and ecosystem-based adaptation) for best effectiveness. Similarly, under the business-as-usual scenario, most ASADAS in the target area will not be able to incorporate adaptation measures and risk management in their planning process to reduce their vulnerability to climate change. Finally, the large-scale water infrastructure alternative is not cost-effective in rural areas due to geographically isolating conditions and a social-institutional setup of a large number of small self-governing community-based water associations (ASADAS), which are more equipped to implement and manage integrated supply-demand infrastructure and ecosystem-based measures to reduce water resource vulnerability.

2.7. Sustainability

82. To achieve sustainability of the proposed interventions, the SCCF project was structured to include strong participation of Government entities, communities and key stakeholders to address water scarcity in northern Costa Rica. The project will implement adaptation measures to improve the water supply and promote sustainable water use practices by end users, with the active participation of the ASADAS and local communities (including women and Maleku indigenous groups) building ownership of project actions, which is essential for their sustainability. The implementation of adaptation measures will include strengthening the current infrastructure of the ASADAS (installation of water metering systems and improving the water catchment and distribution systems) with SCCF support. The operation and maintenance of the new infrastructure will be assumed by the ASADAS and the cost will be built into the water tariffs (the project will assess and provide recommendations for the tariffs' adjustment). Infrastructure will also include the purchase and installation of new AWS and AFS, which will be fully incorporated into the country's network of hydroclimatological stations and IMN will assume their operation and maintenance.

83. Similarly, the project will subsidize the purchase and installation of water-saving devices in homes (high-efficiency toilets, toilet-tank displacement device/toilet dams, and low-flow faucet aerators and showerheads) as part of a pilot water-saving campaign. The project will implement pilot sanitation and purification measures, including the installation of composting toilets as part of a pilot experience directed to 10 ASADAS with the largest water deficits in the Guanacaste province. The selection of the ASADAS and families participating in these will be partly based on villages to support the installations and cover maintenance needs and costs of these

²¹ Gobierno de Costa Rica. 2008. Declaratoria de interés público y conveniencia nacional del proyecto presa-embalse regulatorio del canal del distrito de riego Arenal-Tempisque, denominado también denominado también Embalse Piedras. N° 34678-MP-MINAE-MAG. Available at <http://www.mag.go.cr/legislacion/2008/de-34678.pdf>

measures and devices. Finally, the project will purchase and install new AWS and AFS with satellite transmission, and maintenance cost of these will be assumed by IMN.

84. In addition, the project will build business partnerships between the ASADAS and the private sector (agriculture and cattle ranching farms), which, through voluntary payments from the latter, will facilitate funding for the conservation of local ecosystems and the operation of upstream community-based water supply systems. The voluntary fee systems will be designed following guidelines of Costa Rica's PES program that recognizes the value of services provided by ecosystems, including hydrological services. The Costa Rican PES program, which is executed through the FONAFIFO, which was created in 1995 to finance small and medium producers to implement reforestation, forestation, greenhouses, and agroforestry systems, and for the recovery of deforested areas and the necessary technological changes in the use and industrialization of forest resources. FONAFIFO has proven to be a key player in the Costa Rica Climate Change Strategy and in reversing the process of deforestation in the country. Through PES-type contracts that will last up to 20 years, the ASADAS and local communities will rely on a sustainable flow of funds that will contribute to the sustainability of project outcomes beyond its completion. To this end, the project will rely on FONAFIFO and other Costa Rican institutions that have extended experience in the implementation of PES schemes.

85. The sustainability of project actions will also be ensured through the development of a strong institutional framework that includes national, regional, and local government agencies, the private sector, and the ASADAS. The project has been designed so that project activities are implemented in close partnership between institutions at all levels, building strong working relationships and creating accountability among all participating interest groups. In addition, decision makers at the national and local level will be more aware about the need for mainstreaming climate change adaptation into their policy development and planning processes, which will ensure institutional and public support of climate change adaptation after the project is completed. Through capacity building, technical assistance, and the availability of new and improved tools (e.g., information monitoring system, early warning system, AWS/AFS, and knowledge management system) the project will enhance the capacity of national-level decision makers to reduce risks and vulnerability of local communities to drought and flooding as well as for the replication and scaling-up of successful experience in other water-stressed areas around the country.

86. At the local level, the project will generate an attitude and behavioral change both at the supply and demand sides regarding water availability that includes strategic planning and management for a better provision of potable water and sanitation services and actions for water conservation. This change will be the basis for building a community-institutional partnership that will allow the exchange of knowledge, experiences, and dialogue among the ASADAS, end users/local communities, and local and authorities about climate change adaptation and vulnerability beyond project end. In addition, by knowledge and technical skills through targeted training local decision-makers will be empowered to be active participants in influencing the development of local policy for sustainable ecosystem and water management.

87. Finally, with the strong indication of commitment by the AyA and IMN cofinancing support for the ASADAS, the potential of scaling up relies on expanding this new partnership at the national level. In addition, MINAE and the AyA will ensure that interventions such as the RMPPWS model and actions implemented with agriculture and livestock commodities companies and financial institutions will serve as business cases to be disseminated and applied at the national level.

2.8. Replicability

88. Costa Rica has developed WSP to improve community health in the case of disasters through planning for catchment of water and separating it from larger run-off streams. The WSP are important for understanding good practices for community-level disaster planning. SCCF resources will expand the scope of the WSP by developing four RMPPWS that incorporate ecosystem-based adaptation strategies in the face of climate variability

to be implemented in each target canton. Plans in the target area will be developed through an inclusive consultation process ensuring the participation of highly vulnerable groups such as women, Malcku indigenous, and other minority groups. Inclusivity in the development of these plans is of top priority, as the plans will specifically dictate policies for all future investments in rural water-sourcing infrastructure and ecosystem-based adaptation systems by all public and private entities planning future developments. The RMPPWS model that will be developed with SCCF resources will be disseminated and shared through national workshops to allow national-level replication.

89. The innovative aspects of the SCCF project are related to the inter-institutional strengthening as the AyA and the IMN have not previously worked together, as normally the IMN liaises with MINAE on climate-related topics. In addition, the SCCF project will work with water-intensive productive sectors to expand the PES for agriculture and livestock commodities companies willing to support improvement of local ecosystems through a voluntary fee for water usage and aquifer conservation. To create financial incentives for agricultural and livestock producers and farmers to adopt sustainable practices, the SCCF project will support financial institutions to include in their credit policies incentives to promote adoption of ecosystem-based adaptation measures that will impact production and generation of income.

2.9. Stakeholder involvement plan

90. The list of stakeholders consulted during the project preparation is provided in Annex 8.5 and the stakeholder engagement plan is in Annex 8.6.

91. At the national and regional levels, the agencies responsible for water management, hydrometeorological institutes, and climate change focal point in Costa Rica (AyA, MINAE, and IMN) and other environment-related agencies, were invited to participate in project preparation. On the local and municipal levels, the project identified key stakeholders during the project preparation phase in the three target SEMUs. The ASADAS (225) and municipal authorities consulted provided data and information requested during meetings, questionnaires, and workshops.

92. The project includes extensive consultation activities, including the following:

- Northern Costa Rica visits and field consultation.
- PPG National Workshop, San José de Costa Rica.
- Climate change adaptation questionnaire: 225 ASADAS of the target SEMUs (1, 2, and 3) of northern Costa Rica were consulted.
- Census on sources and service providers for rural water supply and sanitation in 305 ASADAS in the municipalities (cantons) of Guatuso, Upala, Los Chiles, La Cruz, Liberia, Cañas, Santa Cruz, Nicoya, Hojancha, and Carrillo.

2.10. Compliance with UNDP Safeguards Policies

93. The project complies with UNDP safeguard policies as per the Social and Environmental Screening Procedure (SESP) is included in Annex 8.12.

94. Accordingly, environmental and social aspects of this project were reviewed against UNDP safeguards requirements and the following recommendations were developed:

95. The ASADAS are responsible for guaranteeing the continued provision of potable water to the end users (i.e., urban and local communities); this guarantee depends on the technical and organizational capacity of the ASADAS to meet their obligations. Accordingly, the project will give special attention to strengthening the technical, operational, and management capacity of the ASADAS. In addition, conflicts at the local level (ASADAS, communities, and end users) could result in claims or disputes regarding management of water resources as some proposals for improving access and quality of water services could include the merging of smaller ASADAS with larger ones. To reduce this risk, the project will adopt a conciliatory approach and will guarantee access to clean drinking water for all beneficiaries and their participation in all decision-making processes. In case an agreement cannot be reached, the project will seek alternative approaches that satisfy all interested parties.

96. Women play a key role in the ASADAS and are part of their decision-making structure. The project will promote activities to close any gaps regarding gender equity issues that could still persist in some of the more traditional organizations, mainly in remote rural communities. More specifically the project will achieve the following: a) ensure that the Results Framework includes outcomes and indicators to address issues of gender inequality; b) identify any cultural, social, religious or other factors that may restrain women from participating and develop strategies to overcome these limitations; and c) ensure that the project reaches a score of 3 or 2 in the ATLAS Gender Marker. Regarding indigenous communities, the Maleku inhabit areas of the northern region where the project will be implemented. Some water sources are located within their territories, which supply water to indigenous and non-indigenous communities. The Maleku and their representative organizations will actively participate in the project. Conflict regarding access and use of water is not anticipated given existing arrangements that guarantee that natural resources are provided equally to indigenous and non-indigenous communities, including water services.

97. The project will mainstream environmental sustainability through the implementation of ecosystem-based adaptation measures that will allow local communities and production sectors in northern Costa Rica to cope with water stress, the protection and rehabilitation of water sources and associated aquifer recharge areas, and the adoption of innovative technologies to ensure the long-term availability and access to water. This will be achieved with full participation of the community organizations that manage local water supply services, and in which there is a high participation of women in management structures and decision-making. Finally, the northern region of Costa Rica is vulnerable to earthquakes, subsidence, landslides, erosion, flooding, and extreme weather conditions. The project includes actions to reduce the vulnerability of water supply systems, including risk analysis aimed at identifying and reducing the vulnerability of the water sources, water distribution infrastructure, and water service facilities and to ensure the continuity of drinking water supply in case of extreme weather and geological events.

3. PROJECT RESULTS FRAMEWORK

This project will contribute to achieving the following Country Programme Outcome as defined in CPAP/CPD or UNDAF:							
Country Programme and/or UNDAF Outcome Indicators:							
Primary applicable UNDP Strategic Plan Outcomes: Outcome 1: Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded.							
Applicable SCCF Strategic Objective: CCA-1: Reduce the vulnerability of people, livelihoods, physical assets and natural systems to the adverse effects of climate change; CCA-2: Strengthen institutional and technical capacities for effective climate change; CCA-3: Integrate climate change adaptation into relevant policies, plans, and associated processes.							
Applicable SOF (e.g., GEF) Expected Outcomes: Outcome 1.1: Vulnerability of physical assets and natural systems reduced; Outcome 1.3: Climate-resilient technologies and practices adopted and scaled up; Outcome 2.1: Increased awareness of climate change impacts, vulnerability, and adaptation; Outcome 2.2: Access to improved climate information and early-warning systems enhanced at regional, national, sub-national and local levels; Outcome 2.3: Institutional and technical capacities and human skills strengthened to identify, prioritize, implement, monitor, and evaluate adaptation strategies and measures; Outcome 3.2: Policies, plans, and associated processes developed and strengthened to identify, prioritize, and integrate adaptation strategies and measures.							
Applicable SOF (e.g., GEF) Outcome Indicators: Indicator 1: Number of direct beneficiaries; Indicator 2: Type and extent of assets strengthened and/or better managed to withstand the effects of climate change; Indicator 4: Extent of adoption of climate-resilient technologies/ practices; Indicator 5: Public awareness activities carried out and population reached; Indicator 7: Number of people/geographical areas with access to improved climate information services; Indicator 8: Number of people/geographical areas with access to improved, climate-related early warning information; Indicator 9: Number of people trained to identify, prioritize, implement, monitor, and evaluate adaptation strategies and measures; Indicator 13: Sub-national plans and processes developed and strengthened to identify, prioritize, and integrate adaptation strategies and measures.							
	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions		
Project Objective: Improve water supply and promote sustainable water practices of end users and productive sectors by advancing community- and ecosystem-based measures in rural ASADAS to address projected climate-related hydrological vulnerability in northern Costa Rica.	Proportion of ASADAS with continued water availability for different time periods	12 months	- The continued water availability for all the ASADAS is at least 5 months	- Updated CCA survey for ASADAS - AYA and ASADAS annual reports	Risk: weak participation and coordination by national, regional and local water management authorities (including ASADAS) and the private sector in mainstreaming climate change adaptation measures		
		9-11 months				83%	
		6-8 months				3%	
		3-5 months				4%	
		< 3 months				2%	
		< 3 months				9%	
	Water availability per capita (water intake [volume at source]/number of people served by ASADA)	ASADAS	- Water availability per capita is maintained or improved		- Project annual reports, and mid-term and final evaluation reports		
		< 200					5%
		201-500					10%
		501-1,500					23%
	1,501-5,000	10%					
	5,001-10,000	3%					
	> 10,000	5%					
					Risk rating: low-medium		
					Assumption: national, regional and local		

<p>Outcome 1.1: Infrastructure and technical capacity of ASADAs strengthened to cope with climate change impacts to aquifers in the target area.</p>	<p>Installed water storage capacity (days) to supply water (storage capacity/total average consumption per day)</p>	<table border="1"> <thead> <tr> <th>Storage capacity</th> <th>ASADAs</th> </tr> </thead> <tbody> <tr> <td>< 1 day</td> <td>47%</td> </tr> <tr> <td>1-2 days</td> <td>9%</td> </tr> <tr> <td>2-5 days</td> <td>5%</td> </tr> <tr> <td>5-15 days</td> <td>5%</td> </tr> <tr> <td>15-30 days</td> <td>2%</td> </tr> <tr> <td>> 30 days</td> <td>0%</td> </tr> </tbody> </table> <p>31% of the ASADAs do not have information on storage capacity</p>	Storage capacity	ASADAs	< 1 day	47%	1-2 days	9%	2-5 days	5%	5-15 days	5%	15-30 days	2%	> 30 days	0%	<p>The water storage capacity of all the ASADAs is at least 5 days</p>	<ul style="list-style-type: none"> - Updated CCA survey for ASADAs - ASADAs annual reports 	<p>water management authorities (including ASADAs) and the private sector understand importance of climate change-induced drought and flood risk management and implementing climate change adaptation measures</p>
Storage capacity	ASADAs																		
< 1 day	47%																		
1-2 days	9%																		
2-5 days	5%																		
5-15 days	5%																		
15-30 days	2%																		
> 30 days	0%																		
<p>Outcome 1.2: The capacity of ASADAs' end users to mainstream climate change adaptation into their livelihoods systems is strengthened.</p>	<p>Condition of the water supply system (evaluation index for system components)</p>	<ul style="list-style-type: none"> - Poor: 50% (index score: 60%) - Needs improvement: 40% (index score: 61% - 84% score) - Good: 10% (index score: 85%) 	<ul style="list-style-type: none"> - Poor: 0% (index score: 60%) - Needs improvement: 50% (index score: 61% - 84% score) - Good: 50% (index score: 85%) 	<ul style="list-style-type: none"> - Updated CCA survey for ASADAs 	<p>Risk: weak participation by ASADAs in mainstreaming climate change adaptation measures</p> <p>Risk rating: low</p> <p>Assumption: ASADAs understand importance of climate change-induced drought and flood risk management and integrate climate change adaptation into planning</p>														
<p>Outcome 1.2: The capacity of ASADAs' end users to mainstream climate change adaptation into their livelihoods systems is strengthened.</p>	<p>Number of household members and producers (differentiated by gender) trained to mainstream climate change adaptation into their livelihoods (AMAT: CCA-2)</p>	<p>0</p>	<p>1,500 (men 50%; women 50%)</p>	<ul style="list-style-type: none"> - Updated CCA survey for ASADAs - Databases and reports about training events 	<ul style="list-style-type: none"> - No risks identified 														

	<ul style="list-style-type: none"> - Strategic plan: 52% - Annual/monthly operation plan: 8% - Maintenance plan: 25% - Seasonal contingency plan: 4% - Emergency/disasters plan: 2% - CC adaptation plan: 3% - Local communities communication/information plan: 6% 	<ul style="list-style-type: none"> - Strategic plan: At least 50% - Annual/monthly operation plan: At least 50% - Maintenance plan: At least 50% - Seasonal contingency plan: At least 50% - Emergency/disasters plan: At least 50% - Climate change adaptation plan: At least 50% - Local communities communication/information plan: At least 50% 	<ul style="list-style-type: none"> - Updated CCA survey for ASADAS 	
Proportion use of hydrometeorological information by ASADAS in planning processes (by type of plan)	<ul style="list-style-type: none"> - Increase micro-metering: 8% - Protection of water sources: 14% - Protection of pipes and other system components: 2% - Increase efficiency of maintenance: 10% - Promote water-saving measures among users: 11% - None: 39% - Other: 17% 	<ul style="list-style-type: none"> - Increase micro-metering: 100% - Protection of water sources: At least 25% - Protection of pipes and other system components: At least 40% - Increase efficiency of maintenance: At least 40% - Promote water-saving measures among users: At least 40% - None: 0% - Other: 17% 	<ul style="list-style-type: none"> - Risk: weak participation by ASADAS in mainstreaming climate change adaptation measures - Risk rating: low - Assumption: ASADAS understand importance of climate change-induced drought and flood risk management and implement climate change adaptation in to planning 	
Measures undertaken to reduce risks to climate change	<ul style="list-style-type: none"> - 0 	<ul style="list-style-type: none"> - At least 40 RMPPWS developed with gender considerations integrated 	<ul style="list-style-type: none"> - Approved RMPPWS - Project annual reports, and mid-term and final evaluation reports 	<ul style="list-style-type: none"> - Risk: weak participation by ASADAS in mainstreaming climate change adaptation measures - Risk rating: low
Outcome 2.1: Ecosystem-based climate change adaptation measures are integrated into public and private sector policies, strategies and	<ul style="list-style-type: none"> - 0 	<ul style="list-style-type: none"> - 0 	<ul style="list-style-type: none"> - Approved RMPPWS - Project annual reports, and mid-term and final evaluation reports 	<ul style="list-style-type: none"> - Risk: weak participation by ASADAS in mainstreaming climate change adaptation measures - Risk rating: low

<p>investments related to rural community water-sourcing infrastructure and services</p>	<p>Number of AyA and CNE investments for the prioritized project area that integrate climate change risks (AMAT: CCA-3)</p>	<ul style="list-style-type: none"> - AyA and CNE investments lack integration of climate change risks in the project area 	<ul style="list-style-type: none"> - AyA: at least three (one per target SEMU) - CNE: at least three (one per target SEMU) 	<ul style="list-style-type: none"> - Approved investment documents 	<p>Assumption: ASADAS understand importance of climate change-induced drought and flood risk management and implement climate change adaptation in to planning</p> <p>Risk: climate change adaptation is no longer a priority for the national government</p> <p>Risk rating: medium</p> <p>Assumption: New administration elected in 2014 considers climate change adaptation a priority policy</p> <p>Risk: Lack of coordination amongst stakeholders regarding climate change, including the private sector</p> <p>Risk rating: medium</p> <p>Assumption: Private sector willing to participate in climate change-related voluntary programs</p>
<p>Number of adaptation-related voluntary fee systems (expanded PES) implemented</p>	<ul style="list-style-type: none"> - Voluntary Watershed Payment: 0 	<ul style="list-style-type: none"> - Voluntary Watershed Payment: at least 5 	<ul style="list-style-type: none"> - PES/voluntary payment contract agreements <ul style="list-style-type: none"> - PES/ Environmental Services Certificate contract agreements - Certificates issued by FONAFIFO - Project annual reports, mid-term evaluation, final report 		

<p>Outcome 2.2: The purchasing and credit policies of at least 20 agricultural and livestock trading companies and five financial institutions operating in the target region promote adoption of productive practices that help maintain ecosystem resilience to climate change.</p>	<p>Number of purchasing and credit policies of agricultural and livestock trading companies and financial institutions revised /adjusted (AMAT: CCA-3)</p>	<p>- 0</p>	<p>- 0</p>	<p>- At least 20</p>	<p>- Approved purchasing and credit policies of agricultural and livestock trading companies and financial institutions</p> <p>- Purchasing and credit receipts and contracts</p>	<p>Risk: limited interest from agricultural and livestock trading companies and financial institutions to revise /adjust their policies to and mainstream climate change adaptation</p> <p>Risk rating: medium</p> <p>Assumption: agricultural and livestock trading companies willing to mainstream climate change adaptation</p>
<p></p>	<p>Number of climate change-related initiatives making use revised purchasing and credit policies of agricultural and livestock trading companies and financial institutions</p>	<p>- 0</p>	<p>- At least 10 (one per target municipality)</p>	<p></p>	<p></p>	<p></p>

4. TOTAL BUDGET AND WORK PLAN

4.1. Total Budget

Award ID:	00084063	Project ID(s):	00092255
Award Title:	Strengthening Capacities of Rural Aqueduct Associations' (ASADAS) to address climate change risks in water stressed communities of Northern Costa Rica		
Business Unit:	Cost Rica		
Project Title:	Strengthening Capacities of Rural Aqueduct Associations' (ASADAS) to address climate change risks in water stressed communities of Northern Costa Rica		
PIMS no.	5140		
Implementing Partner Agency)	United Nations Development Program		

GEF Outcome/ Atlas Activity	Responsible Party/ Implementing Agent	Fund ID	Donor Name	Atlas Budget. Account Code	ATLAS Description	Budget	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	See Budget Note:
OUTCOME I (Includes Monitoring and Evaluation – M&E)	UNDP	SCCF		71300	Local Consultants		21,250	21,250	21,250	21,250		85,000	1
				71400	Contractual Services Individuals		108,440	108,440	108,440	108,440		542,200	2
				71600	Travel		13,100	13,100	13,100	13,100		65,500	3
				72100	Contractual Services Companies		261,000	261,000	244,000	20,000	54,000	840,000	4
				72200	Equipment		286,200	256,700	144,200			687,100	5
				72300	Materials & Goods		193,750	193,750	193,750	193,750		775,000	6
				72400	Communic. & Audio Visual Equip		5,100	3,000	3,000	3,000	3,000	17,100	7
				72500	Supplies		2,000	2,000	2,000	2,000	2,000	10,000	8
				72800	Information Technology Equipmt		6,800					6,800	9
				73400	Rental & Maint of Other Equip		6,700	6,700	6,700	6,700	6,700	33,500	10
				74500	Miscellaneous Expenses		4,160	4,160	4,160	4,160	4,160	20,800	11

					71600	Travel	1,430	1,430	1,430	1,430	1,430	1,430	7,150	30
					72800	Information Technology Equip	3,700	800	800	800	800	800	6,900	31
					72500	Supplies	520	520	520	520	520	520	2,600	32
					74598	UNDP cost recovery charges	20,000	20,000	20,000	20,000	20,000	20,000	100,000	33
						MOSS ²² Costs	3,700	625	625	625	625	625	6,200	34
						Total Project Management	49,780	43,805	43,805	43,805	43,805	43,805	225,000	
						TOTAL GEF	1,365,370	1,313,995	1,138,845	674,445	507,345	5,000,000		

Summary of Funds: ²³

	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)
SCCF	1,365,370	1,313,995	1,138,845	674,445	507,345	5,000,000
UNDP	150,000	150,000	150,000			450,000
AyA	3,817,500	3,817,500	3,817,500	3,817,500	1,130,000	16,400,000
IMN	1,145,000	1,145,000	1,145,000	1,145,000	420,000	5,000,000
CRUSA Foundation	461,966	461,966	461,966			1,385,898
AyA-IADB	314,610	314,610	314,610	314,610	314,611	1,573,051
FUNDECOOPERACION	370,000	370,000	370,000	370,000	370,000	1,850,000
TOTAL	7,624,446	7,573,071	7,397,921	6,321,555	2,741,956	31,658,949

Budget Note	Description of cost item
1	a) Water Resources Expert: technical support to strengthening the metering systems and water catchment, storage, and distribution systems for ASADAS. Total cost: \$14,200; 52 weeks at \$850/week. b) Water Sanitation Expert: technical support for implementation of pilot sanitation and purification measures and other adaptive technologies to improve water quality. Total cost: \$20,400; 24 weeks at \$850/week. c) Ecosystem restoration expert. Total cost: \$20,400; 24 weeks at \$850/week.
2	a) Project Coordinator (part time): project planning, day-to-day management of project activities, project reporting, maintaining key relationships with stakeholders. Total cost: \$116,875; 25 months at \$4,675/month.

²² Minimum Operation Security Standards

²³ Summary table should include all financing of all kinds: GLF financing, co-financing, cash, in-kind, etc

	<p>b) Administrative Assistant. Responsible for financial management of the project, accounting, purchasing, and reporting. Total cost: \$23,025; 15 months at \$1,535/month.</p> <p>c) CC Risk Management Technical Officers (3). Provides technical support and supervise all activities and assessment undertaken as part of the project in the target SEMUs. Total cost: \$402,300; 108 months at \$3,725/month.</p>
3	<p>a) In-country Daily Subsistence Allowance (DSA) related to building community-based infrastructure and technical capacities to address projected changes in water availability. Total cost: \$32,500; \$65/day (500 days during 5 years).</p> <p>b) International DSA related to building community-based infrastructure and technical capacities to address projected changes in water availability. Total cost: \$18,000; \$225/day (80 days during 5 years).</p> <p>c) International travel (airfares). Total cost: \$15,000; \$750/unit.</p>
4	<p>a) Community-based climate change training program with a gender focus and including minority groups. Total cost: \$100,000.</p> <p>b) Development of Vulnerability Index/Adaptive Capacity Index (including risk and vulnerability maps) to support the CEWS and the RMPPWS. Total cost: \$315,000.</p> <p>c) Development of and information monitoring system for AyA and the ASADAS' Management System (SAGA). Total cost: \$170,000.</p> <p>d) Development of a climate early warning and information system (CEWS) for the project target SEMUs. Total cost: \$255,000.</p>
5	<p>a) Vehicle. Total cost: \$28,000</p> <p>b) AWS and AFS. Total cost: \$225,000; \$15,000/unit (includes installation).</p> <p>c) Water micrometers. Total cost: \$380,000; \$95/unit (includes installation).</p> <p>d) Water macro meters. Total cost: \$52,600; \$1,315/unit (includes installation).</p> <p>e) Office furniture (3 field offices). Total cost: \$1,500; \$500/office.</p>
6	<p>a) Material and goods for resilient water catchment, storage, and distribution systems in rural areas. Total cost: \$400,000.</p> <p>b) Material and goods for water saving devices installed in homes. Total cost: \$75,000.</p> <p>c) Material and goods for pilot sanitation and purification measures and other adaptive technologies to improve water quality. Total cost: \$100,000.</p> <p>d) Material and goods for protection and/or rehabilitation of water sources and associated aquifer recharge areas. Total cost: \$200,000.</p>
7	<p>a) Communications related to building community-based infrastructure and technical capacities to address projected changes in water availability. Total cost: \$15,000; \$3,000/yr. for 5 years.</p> <p>b) HD Camcorder. Total cost: \$750.</p> <p>c) Digital camera (3). Total cost: \$900; \$300/unit.</p> <p>d) Audio Recorder (3). Total cost: \$300; \$100/unit.</p> <p>e) Microphones (3). Total cost: \$150; \$50/unit.</p>
8	<p>Office and field supplies related building community-based infrastructure and technical capacities to address projected changes in water availability. Total cost \$10,000; \$2,000/yr. for 5 years.</p>
9	<p>a) Computers (3). Total cost: \$3,600; \$1,200/unit.</p> <p>b) Software (license): i) remote monitoring and maintenance of AWS/AFS (\$1,300); ii) AWS/AFS data visualization (\$800); iii) Office software (\$1,100). Total cost: \$3,200.</p>
10	<p>a) Gas for vehicle. Total cost: \$13,500; \$2,700/year during 5 years.</p> <p>b) Maintenance & Insurance of vehicle. Total cost: \$20,000; \$4,000/year during 5 years.</p>
11	<p>Incidental expenses related to increase PA system representation and emplacement of institutional capacity for the sustainable management and conservation of wetlands. Total cost: \$20,800.</p>
12	<p>a) Workshops and meetings related to strengthening the metering systems to track water supply to end-users (micro- and macro-meters). Total cost: \$15,000.</p> <p>b) Workshops and meetings related to the improvement of water catchment (well, spring, and/or rain), storage, and distribution systems for ASADAS. Total cost: \$25,000.</p>

	<p>c) Workshops and meetings related to the water saving devices installed in homes. Total cost: \$15,000.</p> <p>d) Workshops and meeting related to the implementation of pilot sanitation and purification measures and other adaptive technologies improve water quality. Total cost: \$15,000.</p> <p>e) Workshops and meeting related to the protection and/or rehabilitation of water sources and associated aquifer recharge areas. Total cost: \$20,000.</p>
13	<p>a) Mid-term project evaluation: Total cost: \$16,000.</p> <p>b) Final project evaluation: Total cost: \$16,000.</p>
14	<p>a) Mid-term project evaluation: Total cost: \$11,000.</p> <p>b) Final project evaluation: Total cost: \$11,000.</p>
15	<p>a) Travel costs for mid-term evaluation: Total cost: \$10,500.</p> <p>b) Travel costs for final evaluation: Total cost \$10,500.</p>
16	External audit (5). Total cost: \$15,000; \$3,000/yr.
17	Incidental expenses related to mid-term and final evaluations. Total cost: \$2,000.
18	<p>a) Project Inception Workshop. Total cost \$7,000.</p> <p>b) Mid-term (\$1,500) and final evaluation (\$1,500) related workshops. Total cost: \$3,000.</p>
19	<p>a) Water Resources/Climate Change Adaptation Expert: technical support for the development and/or improved/updated, and implementation of four (4) RMPPWS for each of 11 municipalities. Total cost: \$110,500; 130 weeks at \$850/week.</p> <p>b) Environmental economist: technical support to agricultural and livestock trading companies and financial institutions to promote the adoption of productive practices that help maintain ecosystem resilience to climate change as part of their purchasing and credit policies. Total cost: \$66,300; 78 weeks at \$850/week.</p>
20	<p>a) Project Coordinator (part time): project planning, day-to-day management of project activities, project reporting, maintaining key relationships with stakeholders. Total cost: \$107,525; 23 months at \$4,675/month.</p> <p>b) Administrative Assistant. Responsible for financial management of the project, accounting, purchasing, and reporting. Total cost: \$23,025; 15 months at \$1,535/month.</p> <p>c) CC Risk Management Technical Officer (3). Provides technical support and supervise all activities and assessment undertaken as part of the project in the target SEMUs. Total cost: \$268,200; 72 months at \$3,725/month.</p>
21	<p>a) In-country DSA related to mainstreaming of ecosystem-based adaptation into public and private sector policy and investments in the targeted SEMUs. Total cost: \$16,250; \$65/day (250 days during 5 years).</p> <p>b) International DSA related to building capacities to address projected changes in water availability. Total cost: \$7,200; \$225/day (32 days during 5 years).</p> <p>c) International travel (airfares). Total cost: \$6,000; \$750/unit.</p>
22	<p>a) Development of a voluntary fee/PES system for water usage and aquifer conservation. Total cost: \$150,000.</p> <p>b) Valuation modeling of ecosystem-based adaptation measures and economic valuation of ecosystem services. Total cost: \$100,000.</p> <p>c) Development of a knowledge management system allows disseminating data, information, and toolkits to foster and mainstream ecosystem-based adaptation practices Total cost: \$100,000.</p>
23	Materials & goods for the implementation and maintenance of four (4) RMPPWS within each target canton. Total cost: \$385,975.
24	Communications related to mainstreaming of ecosystem-based adaptation into public and private sector policy and investments in the targeted SEMUs. Total cost: \$7,500; \$1,500/yr. for 5 years.
25	Office and field supplies related to mainstreaming of ecosystem-based adaptation into public and private sector policy and investments in the targeted SEMUs. Total cost \$3,625; \$725/yr. for 5 years.
26	<p>a) Audiovisual and printing of RMPPWS for 11 prioritized municipalities. Total cost: \$15,000</p> <p>b) Publication of national model RMPPWS. Total cost: \$10,000.</p>

27	<p>Incidental expenses related to mainstreaming of ecosystem-based adaptation into public and private sector policy and investments in the targeted SEMUs. Total cost: \$7,900.</p> <p>a) Workshops for the development and/or improve/update four (4) RMPPWS for each of 11 municipalities. Total cost: \$30,000 b) Workshops and meetings to disseminate and share the national RMPPWS model with the private and public sectors. Total cost: \$30,000 c) Workshops and meetings for the integration of climate change risks in the AYA and the CNE investments for the prioritized project area. Total cost: \$15,000. d) Workshops and meetings to inform key local stakeholders about the strategies to reduce risks and adaption to climate change incorporated in the investments of the AYA and the CNE. Total cost: \$25,000. e) Workshops and meetings to involve agricultural and livestock trading companies and financial institutions in the promotion of the adoption of productive practices that help maintain ecosystem resilience to climate change as part of their purchasing and credit policies. Total cost: \$15,000.</p>
28	<p>a) Project Coordinator: project planning, day-to-day management of project activities, project reporting, maintaining key relationships with stakeholders. Total cost: \$56,100; 12 months at \$4,675/month. b) Administrative Assistant: financial management of the project, accounting, purchasing, and reporting. Total cost: \$46,050; 30 months at \$1,535/month.</p>
29	<p>In-country DSA project coordination: Total cost: \$7,150; \$65/day during 5 years.</p>
30	<p>a) Two (2) computers. Total cost: \$2,400. \$1,200/unit. b) One (1) printer. Total cost: \$500. c) IT supplies & maintenance. Total cost: \$4,000; \$800/year.</p>
31	<p>Office supplies related to project management. Total cost: \$2,600; \$520/year for 5 years.</p>
32	<p>UNDP Country Office Direct Management Costs. Total cost: \$100,000; \$20,000 for 5 years (see annex 8.15 for details).</p>
33	<p>Telecommunications a) Three (3) portable radios (field staff). Total cost: \$930; \$310/unit Medical Support b) One (1) first aid kit for vehicle. Total cost: \$45 c) Three (3) first aid kit for field offices. Total cost: \$1,050 Vehicle d) One (1) ABC extinguisher for vehicle. Total cost: \$35 e) One (1) road emergency kit. Total cost: \$190 f) One (1) vehicle base radio. Total cost: \$520 g) Protective coating. Total cost: \$125 Offices and Facilities h) Tree (3) ABC extinguishers for field offices. Total cost: \$180 Shared MOSS Costs i) Maintenance of the telecommunication network. Total cost: \$950; \$190/yr. during 5 years. j) Security training (5 persons). Total cost: \$1,275; \$255/year during 5 years. Other k) E-mail account (Project Coordinator). Total cost: \$900; \$15/month.</p>
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<p>real time in the selected northern SEMUs</p>	<p>Calibrate all of the equipment/sensors onsite and run tests to ensure that all the equipment is working properly and data is properly stored</p> <p>Prepare an operational plan for the transmission of data, data management, and data analysis and reporting procedures</p> <p>Strengthen the capacity of AyA and IMN regional offices for validating and storing hydrometeorological information in databases</p> <p>Provide daily and monthly reports through the early warning system</p>
<p>1.3.2. Vulnerability Index, Adaptive Capacity Index developed and supporting the climate early warning and information system, and the Ecosystem-Based Water Security Plans</p>	<p>Develop a climate change vulnerability analysis methodology to specific conditions in the target SEMUs and analyze climate change scenarios</p> <p>Develop drought and flood risk maps (risk scenarios), using high-resolution radar and/or optical images at proper scales</p> <p>Analyze vulnerability and climatic trends for the target SEMUs using inputs from the risk scenarios</p> <p>Develop a Vulnerability Index for each target SEMU considering multiple, social, economic, environmental, and policy/governance factors</p> <p>Make available the vulnerability and risk information developed to regional and local interest groups</p>
<p>1.3.3. Information monitoring system for AyA and the ASADAS SAGA to track the impact of the adaptation measures aiming to reduce the vulnerability of rural communities to address water variability due to climate change, and articulated to national-level information systems</p>	<p>Review and assess existing climate and adaptation information monitoring procedures for AyA and the ASADAS</p> <p>Develop information monitoring platforms within the system for AyA and the ASADAS' SAGA</p> <p>Define indicators to assess progress and the impact of the adaptation measures implemented</p> <p>Provide technical support in information management to AyA and ASADAS staff</p> <p>Identify resourcing, and training needs as well as institutional arrangements for the effective management and use of the information monitoring system and provide training for AyA and ASADAS staff</p> <p>Assess the impact of the adaptation measures implemented through the project using the census questionnaires performed during the PPG to establish baseline values and information</p>

<p>1.3.4. Climate early warning and information system on climate-related risks and vulnerability of project area water resources generated and disseminated to ASADAS, end users, and partners</p>	<p>Development of the ToR for a full CEWS for SEMUs 1, 2, and 3, northern Costa Rica</p> <p>Review existing drought and flood forecasting programs, or elements of CEWS in Costa Rica</p> <p>Assess current institutional arrangements and capacity for drought and flood forecasting, drought and flood emergency response, and develop an institutional arrangement plan for the CEWS.</p> <p>Undertake telecommunications studies to determine the requirements to support monitoring and telemetry system as well as warning dissemination system</p> <p>Identify the requirements and develop the scope for drought and flood forecasting models</p> <p>Design and implementation of fully integrated CEWS</p> <p>Design a public-facing website presenting key layers of information for disseminating early warning information to the public.</p> <p>Early warning awareness and training workshops for key stakeholders</p> <p>Produce guidance for the development of a drought and flood forecasting and early warning system</p> <p>Prepare and implement municipal-level drought and flood response and preparedness plans</p>	
<p>Outcome 2.1. Ecosystem-based climate change adaptation measures are integrated into public and private sector policies, strategies and investments related to rural community water-sourcing infrastructure and services</p>		
<p>2.1.1. Four (4) participatory RMPPWS implemented within each target canton (SEMU 1: Guatuso, Upala, Los Chiles y La Cruz; SEMU 2: Liberia y Cañas; SEMU 3: Santa Cruz, Nicoya, Hojancha y Carrillo).</p>	<p>Review jointly with the ASADAS board members existing WSP to assess if these incorporate ecosystem-based climate change adaptation measures</p> <p>Development four (4) RMPPWS within the cantons in the three prioritized SEMUs</p> <p>Implement and sustain four (4) RMPPWS within each target canton</p> <p>Provide training to ASADA board members and waters users in ecosystem-based climate change adaptation measures and drought and flood-resilient water supply systems</p> <p>Synthesize lessons learned and experiences from the development and implementation of the four (4) RMPPWS and draft a national RMPPWS model</p> <p>Disseminate and share the national RMPPWS model with the private and public sectors</p>	

2.1.2. AYA and CNE: investments for the prioritized project area integrate climate change risks	<p>Hold meetings and workshops with AYA and CNE authorities and technical staff to review existing and planned investments for the targeted SEMUs</p> <p>Develop a critical work path and guidelines for the integration of risk management strategies and climate change adaptation into AYA and CNE planning tools and investments</p> <p>Inform key stakeholders about the adopted strategies to reduce risks and adapt to climate change</p>	
2.1.3. Ten (10) livestock and agricultural producing companies adopt a voluntary fee system (Certified Agricultural Products and Voluntary Watershed Payments) to pay for the protection of water resources	<p>Implement a voluntary watershed payment system</p> <ul style="list-style-type: none"> Identify and select potential participating watersheds Identify up to 10 potential buyers, assess the marketable value of services, determine willingness to pay for services to be provided Define institutional arrangements for successful PES implementation Identify and provide PES support services and training Structure agreements and select contract types Design management and business plans to provide sustained watershed-based services 	
2.1.4. Valuation modeling of ecosystem-based adaptation measures and economic valuation of ecosystem services support the integration of water-related risks	<p>Certify agricultural products, following FONAFIFO's scheme for issuing of an ESC under its PES program</p> <ul style="list-style-type: none"> Promote certification among potential program participants Liaison between program participants and FONAFIFO to define voluntary payment mechanisms Draft contracts and select contract types Issue certificates endorsed by FONAFIFO to livestock and agricultural production participating companies <p>Select model to quantify ecosystem services and adaptation benefits using a spatially explicit model</p> <p>Assess data needs for modeling and collect data</p> <p>Run models using stakeholder-defined scenarios of land-use/land-cover change to assess how ecosystem-based adaptation measures</p> <p>Share results with key stakeholders and decision-makers</p>	

5. MANAGEMENT ARRANGEMENTS

98. The Project will be executed under the Direct Implementing Modality (DIM) as requested by the Government of Costa Rica (GoCR) (Annex 8.2. Agreements) and according to the standards and regulations of the UNDP. This modality of implementation will facilitate communication between sector institutions and in coordination with other UNDP projects, and is also based on UNDP's comparative advantages which include: country presence and relationship between the project and UNDP's country assistance strategies, especially as refers to capacity building, policy development and consensus-building; and UNDP's experience in the implementation of projects of similar scope. In addition, the project will have an advisory committee to ensure a focus on gender and human rights, as well as other cross-cutting issues. The UNDP has identified partners responsible for carrying out project activities.

99. UNDP's role in this Project is twofold:

- As Implementing Agency (IA) for the GEF, UNDP will provide project cycle management services as defined by the GEF Council (Annex 8.14).
- At the request of the Government of Costa Rica (as mentioned above), UNDP will serve as Implementing Partner for this project. UNDP will be responsible for the execution of the proposed project in collaboration with national stakeholders, which requires the administration and delivery of financial inputs as detailed in section 4. Total Budget. Any inputs related to Project Management (which covers the costs of project management staff for the duration of the project; costs for project inception, Project Board and coordination meetings; costs of office space/supplies; costs of independent external evaluations; and costs for monitoring/evaluation-related travel of project staff to the field sites) have been costed and apportioned.
- Project execution will be managed by Project Management Unit, while the Country Office will provide project oversight and assurance through a designated programme officer who will supervise the Project Coordinator.

100. The duration of the project will be 5 years. Implementation of the project will be carried out under the general guidance of a *Project Board*, specifically formed for this purpose. According to UNDP policy, each project must install a Project Board as the highest body responsible for making management decisions and advising the Project Manager or Coordinator when guidance is required, including approval of revisions to the budget. The project assurance reviews conducted by this group are carried out according to designated decision points during the development of the project or, as necessary, when the Project Manager or Coordinator deems necessary. The Project Board is consulted by the Project Manager or Coordinator when it comes to making decisions in the event that the project limits have been exceeded.

101. The above group includes the following two extensive functions: a) Executive Agency: Represents the tenure of the project and chairs the Board; and b) Senior Provider: An individual or group representing the interests of parties who provide funding and/or technical assistance to the project. Their main function on the Board is to provide guidance on the technical feasibility of the project.

102. The main responsibilities of the Project Board are:

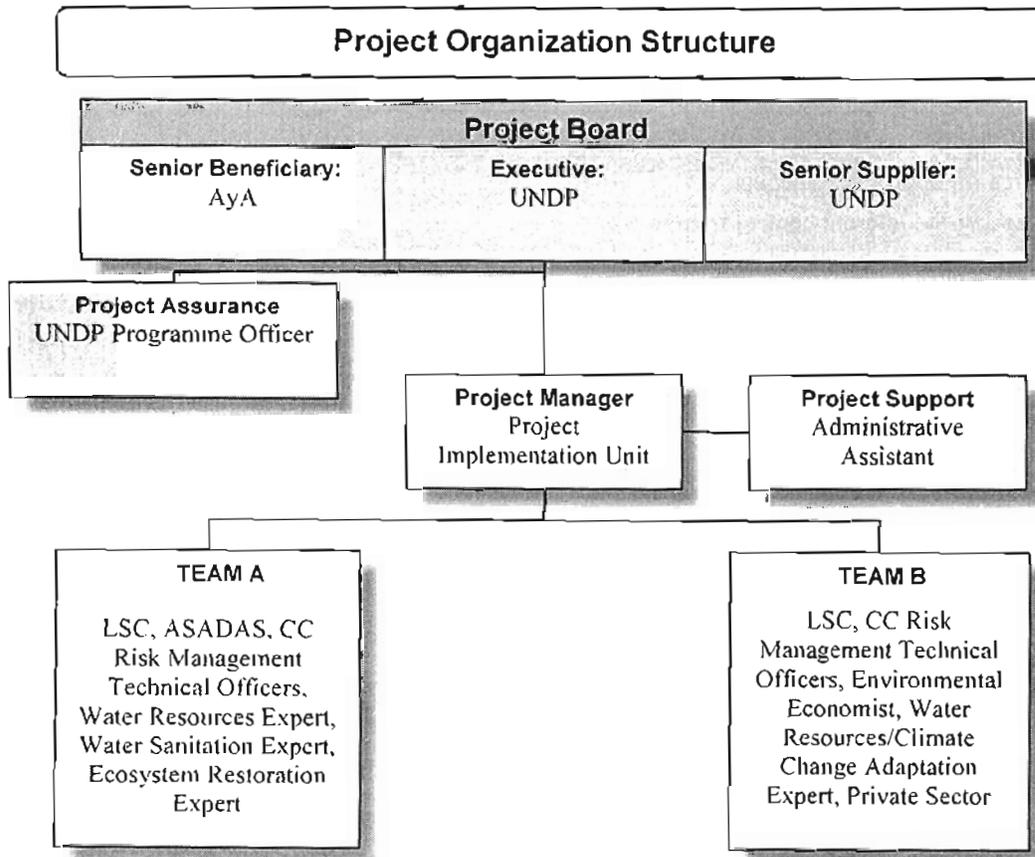
- Approve the project work plan;
- Make decisions regarding the milestones defined in the Annual Operational Plan;
- Monitor project development; ensure that activities are contextualized in the strategies and objectives of the Project;
- Approve budget and substantial project revisions and address issues relating to the Project Manager's report; and
- Approve the project plans and technical reports and financial progress.

103. The Project Board will be composed as follows:

- The UNDP, who will assume the role of Executive
- AyA who will assume the role of the Senior Beneficiaries.
- The Project Board shall meet regularly every six months and in extraordinary sessions when convened by the Executive Agency.
- Project Assurance: The UNDP will assign a programme officer at the Costa Rica Country Office to support the Project Board in overseeing and monitoring the project in an objective and independent way.

104. Local stakeholders will have an additional mechanism to influence the project through a *Local Steering Committee* (LSC), which will consist of appointed members, and whose composition, responsibilities, and function will be determined by the stakeholders themselves. The LSC will meet regularly to discuss the project's progress and to communicate interests and concerns to the Project Coordinator. The LSC may also have a seat on the Project Board. Subject to confirmation at project inception, the LSC may also designate sub-committees to discuss specific issues such as the mainstreaming of gender considerations into project operations.

105. The organizational chart for the Project is as follows:



106. Project implementation will be the responsibility of the *Project Implementation Unit* (PIU). The PIU will be led by a *Project Coordinator* (PC) who will be the signing authority of requests to UNDP for disbursements of project funds. The PC will lead a team composed of an Administrative Assistant based in San Jose and three (3) field-based CC Risk Management Technical Officers for the target SEMUs in Northern Costa Rica. The project Administrative Assistant will have as his/her principal role to ensure the fluidity of administrative procedures and budget disbursements from UNDP to the PIU. At the community level, CC Risk Management Technical Officers will be contracted to provide technical support and follow up to initiatives promoted by the project.

107. In addition to the specific positions underlined above, a series of sub-contracts will be necessary in order to ensure and complement the technical capacity of the members of the PIU. These contracts will be entered into in accordance with the guidelines of the UNDP and the terms of reference defined by the PC during the first month of the implementation phase or annually, in accordance with the project's work plan.

108. Moreover, the project's financial management will be supported by the UNDP office in Costa Rica. To this end, in the first 45 days after the start of the project, a guide should be made that will define levels of financial authority, responsibility, and accountability. Among others, the guide will include the following:

- Guidelines for recording all expenses in the combined delivery report (CDR).
- Establishment of a project accounting system to maintain updated information on the financial situation.
- Mechanisms for expenditure control and segregation of duties.
- A system for the management of unliquidated obligations.
- Procedures for making payments and monitoring of contractor performance.
- Financial regulations, policies, and procedures applicable to UNDP DIM projects.
- Procedures for approving budgets.
- Implementing the internal control framework.

109. Community level actions in ASADAS under Outcome 1, will be also delivered through the provision of small grants

110. The UNDP Costa Rica Country Office will provide direct project support services, as specified in Annex 8.15.

6. MONITORING FRAMEWORK AND EVALUATION

111. Project M&E will be conducted in accordance with the established UNDP and GEF procedures and will be provided by the project team and the UNDP-CO with support from the UNDP/GEF RCU in Panama City. The Project Results Framework in Section 3 provides performance and impact indicators for project implementation along with their corresponding means of verification. The M&E plan includes an inception report, project implementation reviews, quarterly and annual review reports, and mid-term and final evaluations. The following sections outline the principle components of the M&E plan and indicative cost estimates related to M&E activities. The project's M&E plan will be presented and finalized in the Project Inception Report following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities. The M&E budget is provided in the table below.

Project Inception Phase

112. A **Project Inception Workshop (IW)** will be held within the first three (3) months of project start-up with the full project team, relevant GoCR counterparts, co-financing partners, the UNDP-CO, and representation from the UNDP-GEF RCU, as well as UNDP-GEF headquarters (HQ) as appropriate.

113. A fundamental objective of this IW will be to help the project team to understand and take ownership of the project's goal and objectives, as well as finalize preparation of the project's first annual work plan on the basis of the Project Results Framework and the AMAT. This will include reviewing the results framework (indicators, means of verification, and risks and assumptions), imparting additional detail as needed, and on the basis of this exercise, finalizing the AWP with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project.

114. Additionally, the purpose and objective of the IW will be to: a) introduce project staff to the UNDP-GEF team that will support the project during its implementation, namely the CO and responsible RCU staff; b) detail the roles, support services, and complementary responsibilities of UNDP-CO and RCU staff in relation to the project team; c) provide a detailed overview of UNDP-GEF reporting and M&E requirements, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Project Report (APR), as well as mid-term and final evaluations. Equally, the IW will provide an opportunity to inform the project team on UNDP project-related budgetary planning, budget reviews including arrangements for annual audit, and mandatory budget re-phrasings.

115. The IW will also provide an opportunity for all parties to understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines and conflict resolution mechanisms. The ToR for project staff and decision-making structures will be discussed again, as needed, in order to clarify each party's responsibilities during the project's implementation phase.

Monitoring Responsibilities and Events

116. A detailed schedule of project review meetings will be developed by the project management in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: a) tentative timeframes for Project Board meetings (or relevant advisory and/or coordination mechanisms); and b) project-related M&E activities.

117. **Day-to-day monitoring** of implementation progress will be the responsibility of the Project Manager based on the project's AWP and its indicators. The Project Manager will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion. The Project Manager will fine-tune the progress and performance/impact indicators of the project in consultation with the full project team at the IW with support from UNDP-CO and assisted by the UNDP-GEF RCU. Specific targets for the first-year implementation progress indicators together with their means of verification will be developed at this workshop. These will be used to assess whether implementation is proceeding at the intended pace and in

the right direction and will form part of the AWP. Targets and indicators for subsequent years will be defined annually as part of the internal evaluation and planning processes undertaken by the project team.

118. Periodic monitoring of implementation progress will be undertaken by the UNDP CO through quarterly meetings with the project implementation team, or more frequently as deemed necessary. This will allow parties to take stock of and to troubleshoot any problems pertaining to the project in a timely fashion to ensure the timely implementation of project activities. The UNDP CO and UNDP-GEF RCU, as appropriate, will conduct yearly visits to the project's field sites, or more often based on an agreed upon schedule to be detailed in the project's Inception Report/AWP to assess first-hand project progress. Any other member of the project Board can also take part in these trips, as decided by the Project Board. A Field Visit Report will be prepared by the UNDP CO and circulated no less than one month after the visit to the project team, all Project Board members, and UNDP-GEF.

Project Monitoring Reporting

119. The Project Manager, in conjunction with the UNDP-GEF extended team, will be responsible for the preparation and submission of the following reports that form part of the monitoring process and that are mandatory.

120. A **Project Inception Report (IR)** will be prepared immediately following the IW. It will include a detailed First Year/AWP divided in quarterly timeframes detailing the activities and progress indicators that will guide implementation during the first year of the project. This work plan will include the dates of specific field visits, support missions from the UNDP CO or the RCU or consultants, as well as timeframes for meetings of the project's decision-making structures. The IR will also include the detailed project budget for the first full year of implementation, prepared on the basis of the AWP, and including any M&E requirements to effectively measure project performance during the targeted 12-month timeframe. The IR will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions, and feedback mechanisms of project-related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. When finalized, the IR will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to the IR's circulation, the UNDP CO and UNDP-GEF's RCU will review the document.

121. The **Annual Project Report (APR)** is a UNDP requirement and part of UNDP CO central oversight, monitoring, and project management. It is a self-assessment report by the project management to the CO and provides input to the country office reporting process and the Results-Oriented Annual Report (ROAR). An APR will be prepared on an annual basis, to reflect progress achieved in meeting the project's AWP and assess performance of the project in contributing to intended outcomes through outputs and partnership work. The format of the APR is flexible but should include the following sections: a) project risks, issues, and adaptive management; b) project progress against pre-defined indicators and targets; c) outcome performance; and d) lessons learned and best practices.

122. The **Project Implementation Review (PIR)** is an annual monitoring process mandated by the GEF. It has become an essential management and monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects. Once the project has been under implementation for one year, a PIR must be completed by the CO together with the project management. The individual PIRs are collected, reviewed, and analyzed by the RCU prior to sending them to the focal area clusters at the UNDP-GEF headquarters. In light of the similarities of both APR and PIR, UNDP-GEF has prepared a harmonized format for reference.

123. **Quarterly Progress Reports** outlining main updates in project progress will be provided quarterly to the local UNDP CO and the UNDP-GEF RCU by the project team. Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform and the risk log should be regularly updated in ATLAS based on the initial risk analysis included in Annex 8.1.

124. **Specific Thematic Reports** focusing on specific issues or areas of activity will be prepared by the project team when requested by UNDP, UNDP-GEF, or the Implementing Partner. The request for a Thematic Report will be provided to the project team in written form by UNDP and will clearly state the issue or activities that need to be reported on. These reports can be used as a form of lessons learned exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered. UNDP is requested to minimize its requests for Thematic Reports, and when such are necessary will allow reasonable timeframes for their preparation by the project team.

125. A **Project Terminal Report** will be prepared by the project team during the last three (3) months of the project. This comprehensive report will summarize all activities, achievements, and outputs of the project; lessons learned; objectives met or not achieved; structures and systems implemented, etc.; and will be the definitive statement of the project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's activities.

126. **Technical Reports** are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the Inception Report, the project team will prepare a draft Reports List detailing the technical reports that are expected to be prepared on key areas of activity during the course of the project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent APRs. Technical Reports may also be prepared by external consultants and should be comprehensive and specialized analyses of clearly defined areas of research within the framework of the project and its sites. These technical reports will represent, as appropriate, the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national, and international levels. Technical Reports have a broader function and the frequency and nature is project-specific.

127. **Project Publications** will form a key method of crystallizing and disseminating the results and achievements of the project. These publications may be scientific or informational texts on the activities and achievements of the project in the form of journal articles or multimedia publications. These publications can be based on Technical Reports, depending upon the relevance and scientific worth of these reports, or may be summaries or compilations of a series of Technical Reports and other research. The project team will determine if any of the Technical Reports merit formal publication, and (in consultation with UNDP, the GoCR, and other relevant stakeholder groups) will also plan and produce these publications in a consistent and recognizable format. Project resources will need to be defined and allocated for these activities as appropriate and in a manner commensurate with the project's budget.

Independent Evaluation

128. The project will be subjected to at least two independent external evaluations as follows:

129. An independent **Mid-Term Evaluation** will be undertaken at exactly the mid-point of the project lifetime. The Mid-Term Evaluation will determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency, and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation, and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, ToR, and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The ToR for this Mid-Term Evaluation will be prepared by the UNDP-CO based on guidance from the UNDP-GEF RCU and UNDP-Energy and Environment Group (EEG). The management response of the evaluation will be uploaded to the UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Center (ERC). The AMAT for the project will also be completed during the mid-term evaluation cycle.

130. An independent **Final Evaluation** will take place three months prior to the end date of the project, and will focus on the same issues as the Mid-Term Evaluation. The Final Evaluation will also look at impact

and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities and requires a management response, which should be uploaded to PIMS and to the UNDP ERC. The ToR for this evaluation will be prepared by the UNDP-CO based on guidance from the UNDP-GEF RCU and UNDP-EEG. The AMAT will also be completed during the final evaluation.

Audit Clause

131. According to UNDP's general corporate audit regulations, internal and external audits will be carried out individually to each responsible party, and these costs will be covered by the project. The audit should be performed in accordance with the UNDP financial regulations and rules applicable to audit policies on UNDP projects.

132. As a part of its oversight function, UNDP will conduct audit spot checks at least two times a year. UNDP shall have the right, at its own expense, to audit or review such Project-related books and records as it may require.

133. The audit will be conducted according to UNDP's financial regulations, rules, and audit policies by the legally recognized auditor by the GoCR, or by a commercial auditor engaged by the GoCR.

Learning and Knowledge Sharing

134. Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums. In addition, the project will participate, as relevant and appropriate, in UNDP-GEF sponsored networks, organized for Senior Personnel working on projects that share common characteristics. UNDP-GEF RCU has established an electronic platform for sharing lessons between the project managers. The project will identify and participate, as relevant and appropriate, in scientific, policy-based, and/or any other networks, which may be of benefit to project implementation through lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Identifying and analyzing lessons learned is an ongoing process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered not less frequently than once every twelve (12) months. UNDP-GEF shall provide a format and assist the project team in categorizing, documenting, and reporting on lessons learned. Specifically, the project will ensure coordination in terms of avoiding overlap, sharing best practices, and generating knowledge products of best practices in the area of adaptation to climate change with the current projects of Costa Rica's portfolio.

Communications and visibility requirements:

135. Full compliance is required with UNDP's Branding Guidelines. These can be accessed at <http://intra.undp.org/coa/branding.shtml>, and specific guidelines on UNDP logo use can be accessed at: <http://intra.undp.org/branding/useOfLogo.html>. Amongst other things, these guidelines describe when and how the UNDP logo needs to be used, as well as how the logos of donors to UNDP projects need to be used. For the avoidance of any doubt, when logo use is required, the UNDP logo needs to be used alongside the GEF logo. The GEF logo can be accessed at: http://www.thegef.org/gef/GEF_logo. The UNDP logo can be accessed at <http://intra.undp.org/coa/branding.shtml>.

136. Full compliance is also required with the GEF's Communication and Visibility Guidelines (the "GEF Guidelines"). The GEF Guidelines can be accessed at: http://www.thegef.org/gef/sites/thegef.org/files/documents/C.40.08_Branding_the_GEF%20final_0.pdf. Amongst other things, the GEF Guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. The GEF Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items.

137. Where other agencies and project partners have provided support through co-financing, their branding policies and requirements should be similarly applied.

M&E work plan and budget

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team staff time</i>	Time frame
Inception Workshop and Report	<ul style="list-style-type: none"> ▪ Project Manager ▪ UNDP CO, UNDP CCA 	Indicative cost: 7,000	Within first two months of project start up
Measurement of Means of Verification of project results	<ul style="list-style-type: none"> ▪ UNDP CCA RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members. 	To be finalized in Inception Phase and Workshop.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on output and implementation	<ul style="list-style-type: none"> ▪ Oversight by Project Manager ▪ Project team 	To be determined as part of the Annual Work Plan's preparation.	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ UNDP RTA ▪ UNDP EEG 	None	Annually
Periodic status/ progress reports	<ul style="list-style-type: none"> ▪ Project manager and team 	None	Quarterly
Mid-term Evaluation	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team) 	Indicative cost: 40,000	At the mid-point of project implementation.
Final Evaluation	<ul style="list-style-type: none"> ▪ Project manager and team. ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team) 	Indicative cost: 40,000	At least three months before the end of project implementation
Project Terminal Report	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ Local consultant 	None	At least three months before the end of the project
Audit	<ul style="list-style-type: none"> ▪ UNDP CO ▪ Project manager and team 	Indicative cost per year: 3,000 (15,000 total)	Yearly
Visits to field sites	<ul style="list-style-type: none"> ▪ UNDP CO ▪ UNDP RCU (as appropriate) ▪ Government representatives 	For GEF supported projects, paid from IA fees and operational budget	Yearly
Learning and Knowledge Sharing	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ UNDP RCU 	None	Yearly
TOTAL indicative COST Excluding project team staff time and UNDP staff and travel expenses		US\$ 102,000 (+/- 5% of total budget)	

7. LEGAL CONTEXT

138. This document together with the CPAP signed by the Government and UNDP which is incorporated herein by reference, constitute together a Project Document as referred to in the Standard Basic Assistance Agreement (SBAA), as such all provisions of the CPAP apply to this document. All references in the SBAA to Executing Agency shall be deemed to refer to "Implementing Partner" as such term is defined and used in the CPAP and this document.

139. UNDP as the Implementing Partner shall comply with the policies, procedures and practices of the United Nations safety and security management system.

140. UNDP agrees to undertake all reasonable efforts to ensure that none of the [project funds]²⁴ [UNDP funds received pursuant to the Project Document]²⁵ are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

141. Any designations on maps or other references employed in this project document do not imply the expression of any opinion whatsoever on the part of UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

²⁴ To be used where UNDP is the Implementing Partner

²⁵ To be used where the UN, a UN fund/programme or a specialized agency is the Implementing Partner.

8. ANNEXES

8.1. Risk Analysis

Project Title: Strengthening Capacities of Rural Aqueduct Associations' (ASADAS) to address climate change risks in water stressed communities of Northern Costa Rica		Award ID: 00084063		Date: 09/29/2015					
#	Description	Date Identified	Type	Probability and Impact	Countermeasures/ Management Response	Owner	Submitted, Updated By	Last Update	Status
1	Staff changes among implementing partners take into account the uncertainties of the current administration represent delays in project implementation	September, 2015 (at CEO Endorsement)	Political	Enter probability on a scale from 1 (low) to 5 (high) P = 2 Enter impact on a scale from 1 (low) to 5 (high) I = 2	The project team will continuously socialize the project among the staff of the implementing partners (AyA, ASADAS, MINAE, MAG, Ministry of Health, and IMN) to ensure that they are aware about their roles in the project and its progress and outcomes, including the socioeconomic and environmental benefits. To ensure awareness about the project, inter-institutional coordination mechanisms have been defined (e.g., interinstitutional agreements, multiple training events, knowledge management system, and Project Board meetings).	UNDP	UNDP	AI CEO Endorsement	Risk continues to persist
2	Coordination among stakeholders regarding climate change, including the private sector, could be limited.	August 21, 2014 (at PIF)	Institutional	Enter probability on a scale from 1 (low) to 5 (high) P = 2 Enter impact on a scale from	Consultations were carried out during project design with all of the key ministries and stakeholders, including the AyA, ASADAS, MINAE, and MAG to establish sustained ownership and support for the project. It is fully	UNDP	UNDP	AI CEO Endorsement	Risk continues to persist

3	Decision and policy makers do not appreciate the need to mainstream ecosystem-based adaptation considerations into public and private sector policies and investments.	August 21, 2014 (at PIF) September, 2015 (at CEO Endorsement)	Political	Enter probability on a scale from 1 (low) to 5 (high) P = 3 Enter impact on a scale from 1 (low) to 5 (high) I = 3	The project aims to strengthen climate change awareness among the public and private sectors, including ecosystem-based adaptation and ecosystem services and their socioeconomic benefits. Economic valuation of ecosystem services will allow decision makers in the public and private sectors to better understand the economic advantage of adopting ecosystem-based adaptation approach to production over the BAU alternative. The project also aims to build capacity among decision makers in selected companies and financial institutions regarding climate change to	UNDP	UNDP	At CEO Endorsement	Risk continues to persist
					recognized that for the successful implementation of project activities, effective coordination among all interested parties is necessary. They are also aware of the fact that robust integration of climate change considerations into their agendas is needed. The project will further promote support and networking with high-level leadership to prioritize climate change adaptation and build awareness on the direct and indirect project benefits at the local, sub-national, and national levels.				

4	The guarantors of rights may not have the capacity to fulfill their obligations with the project	September, 2015 (at CEO Endorsement)	Institutional	Enter probability on a scale from 1 (low) to 5 (high) P = 3 Enter impact on a scale from 1 (low) to 5 (high) I = 3	facilitate decision-making processes. The ASADAS are responsible for guaranteeing the continued provision of potable water to the end users; this guarantee depends on the technical and organizational capacity of the ASADAS to meet their obligations. The project gives special attention to strengthening the technical, operational, and management capacity of the ASADAS to ensure that they can provide high quality services to the end users.	ASADA S, AYA, UNDP	UNDP	At CEO Endorsement	Risk continues to persist
5	Conflicts between at the local level (ASADAS, communities, and end users) could result in claims or disputes regarding management of water resources	September, 2015 (at CEO Endorsement)	Institutional	Enter probability on a scale from 1 (low) to 5 (high) P = 3 Enter impact on a scale from 1 (low) to 5 (high) I = 3	Some proposals for improving access and quality of water services could include the merging of smaller ASADAS with larger ones, which may lead to local claims or disputes. The project will adopt a conciliatory approach and will guarantee access to clean drinking water for all beneficiaries and their participation in all decision-making processes. In case agreement cannot be reached, the project will seek alternatives approaches that will satisfy all interested parties.	ASADA S, AYA, UNDP	UNDP	At CEO Endorsement	Risk continues to persist
6	The project could affect land tenure and/or	September, 2015 (at CEO Endorsement)	Institutional	Enter probability on a scale from 1	During the project preparation phase the ASADAS expressed the importance of owning the land surrounding	ASADA S, AYA, UNDP	UNDP	At CEO Endorsement	Risk continues to persist

	community property rights, and/or customary rights to land or resources			(low) to 5 (high) P = 1 Enter impact on a scale from 1 (low) to 5 (high) I = 2	the water sources and associated aquifer recharge areas. Access to water sources could generate conflict with the current owners of the surrounding lands. The project will follow all procedures outlined in Costa Rican legislation related to these issues to avoid any conflicts regarding land property rights and waters resources use rights, including community and/or customary rights. During project preparation, local meetings were held with the majority of the beneficiary ASADAS in the prioritized region (northern Costa Rica: SEMUs 1, 2, and 3) to discuss the project and gain support for project implementation. During implementation the project will raise awareness and provide technical support and training to ASADAS, farmers, and municipal authorities to advance collaborative mechanisms throughout watershed selected for the implementation of ecosystem/watershed-level adaptation actions.	UNDP	UNDP	AI CEO Endorsement	Risk continues to persist
7	Local stakeholders (ASADAS, farmers, and municipal authorities) do not agree to adopt adaptation strategies at the ecosystem/watershed level.	September, 2015 (at CEO Endorsement)	Institutional	Enter probability on a scale from 1 (low) to 5 (high) P = 3 Enter impact on a scale from 1 (low) to 5 (high) I = 3		UNDP	UNDP	AI CEO Endorsement	Risk continues to persist

8.2. Agreements



Instituto Costarricense de
Acueductos y Alcantarillados
PRESIDENCIA EJECUTIVA

29 de setiembre, 2015
PRE-2015-1386

Señora Yoriko Yasukawa
Representante residente PNUD
Costa Rica

Estimada señora:

Tengo el gusto de dirigirme a su representada para solicitar que el proyecto "Fortalecimiento de las capacidades de Asociaciones de Acueductos Rurales (ASADAS) para enfrentar riesgos del Cambio Climático en comunidades con estrés hídrico en el Norte de Costa Rica" sea implementado por PNUD por medio de una implementación directa (DIM).

Este proyecto es de alto interés para el Gobierno de la República, siendo la gestión comunitaria del agua un tema central del Plan Nacional de Desarrollo 2015-2018 Alberto Cañas Escalante. La propuesta sectorial de Ambiente, Energía, Mares y Ordenamiento Territorial de dicho plan, en su objetivo sectorial 2 propone: *Fomentar las acciones frente al cambio climático global, mediante la participación ciudadana, el cambio tecnológico, procesos de innovación, investigación y conocimiento para garantizar el bienestar, la seguridad humana y la competitividad del país.* Como parte de este compromiso se incluye en el plan el Proyecto 1.9 *Fortalecimiento de la Gestión Comunitaria del Agua.*

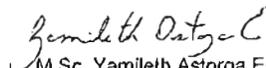
Es de especial interés del AyA que este proyecto sea ejecutado de la manera más efectiva posible. Nos parece que conformándose un comité de seguimiento con participación del AyA y PNUD y una estrecha coordinación entre ambas instituciones durante su implementación, sería mejor que este proyecto se implemente mediante modalidad directa (DIM) por las siguientes razones:

1. Para lograr sus objetivos, el proyecto amerita de mucha coordinación inter-institucional ya que aborda temas no son rectoría exclusiva del AyA como por ejemplo: temas de adaptación basada en eco-sistemas; gestión de riesgos; y fomento de incentivos económicos a la producción. Por esta razón vemos más viable que PNUD, en su condición de agencia de cooperación y un rol neutral el país, sea la responsable de implementación para que esto facilite interacción de otras instituciones en el marco del proyecto.
2. La Subgerencia de Acueductos Comunes, la unidad de trabajo del AyA más afín al proyecto, está sobrecargada de trabajo. Por lo anterior, es mejor que los funcionarios de esta unidad tengan un rol de supervisión estratégica y política del proyecto, y se ahorre la participación de nuestros funcionarios en la gestión administrativa diaria con procedimientos de PNUD, que son ajenos a los de contratación administrativa a los que estamos más acostumbrados.

3. El esquema propuesto de implementación directa por PNUD, pero con una estrecha coordinación con AyA, es otra forma de fortalecer capacidades nacionales. Los funcionarios del AyA asignados al proyecto podrán mejorar sus destrezas y conocimiento sobre administración de proyectos complejos y de cooperación internacional al ir conociendo sobre los procedimientos de implementación seguidos por los funcionarios de PNUD en el marco de esta cooperación.

Agradecida de antemano por su atención a la presente se despide,

Atentamente,


M.Sc. Yamileth Astorga Espeleta
Presidencia Ejecutiva



cc. Ing. José Alberto Moya, Gerencia General
Lic. Yolanda Martínez, Subgerencia SC
Lic. Rodolfo Ramírez, UEN Gestión de Asadas
Archivo

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8.4. Key assessment reports

PPG activities included the assessment *Census on Sources and Service Providers for rural water supply and sanitation in 305 ASADAS in the municipalities (cantons) of Guatuso, Upala, Los Chiles, La Cruz, Liberia, Cañas, Santa Cruz, Nicoya, Hojancha, and Carrillo*. The study was completed by the Center for Rural Development (CDR) and CEDARENA on behalf of UNDP and AyA.

The main objective of this study was to obtain baseline information from the 305 ASADAS that operate in the project area (Northern Costa Rica) regarding raising awareness, gathering information, strengthening infrastructure, and training their staff and water end users on issues related to climate change adaptation and water availability. The study was developed using a questionnaire with over a 100 questions regarding the provision of potable water and sanitation services and included a set of indicators related to climate change adaptation defined by UNDP, which served as the basis for the development of the Project Results Framework. The final report of this assessment is available through the UNDP CO in Costa Rica.

8.5. Stakeholder meetings, workshops and consultations held during project preparation

1. Northern Costa Rica visit & Field consultation - May 11/13, 2015

- Meeting with Yamileth Astorga, Director of AyA
- Meeting with Carlos Matamoros, AyA Regional Office in the canton of Guatuso, Province of Alajuela in Northern Costa Rica.
- Consultation workshop with members of 35 ASADAS and municipal authorities (Guatuso, Upala, and Los Chiles), Northern Costa Rica. Share information with local and regional stakeholders on climate change and adaptation, and discuss aspects of the project and their views on water-related issues.
- Meeting with leaders of the Maleku indigenous group (Margarita community, Guatuso). Consultation with the Maleku leadership on water-related issues and local priorities.
- Meeting with AyA regional authorities in the canton of Liberia, Province of Guanacaste in Northern Costa Rica.

- Consultation workshop with members of 32 ASADAS and municipal authorities (Cañas, La Cruz, Carrillo, and Liberia), Northern Costa Rica. Share information with local and regional stakeholders on climate change and adaptation, and discuss aspects of the project and their views on water-related issues.
- Field visit to the ASADA in the locality of El Salto, Liberia. Learn about the day-to-day operation of and ASADA and consultation with the Board and administrative staff about water-related issues needs and project expectations.

2. PPG National workshop May 15, 2015 – San Jose de Costa Rica.

The main objective of the workshop was to present the project to national-level public institutions, and confirm their support and commitment to the project.

List of participants:

Name	Institution
Analia Hernández Alvarado	AyA
Cinthya Hernández G	University of Costa Rica
Kathya Elizondo Orozco	IAAS
Emilia Martén Araya	IAAS
Jorge Fallas	AyA
Rosa Gómez Arce	AyA
Jorge García C	AyA
Carlos Zúñiga	SENARA
Jose M. Cordero Arauz	ARESEP
Marvín Quesada Porras	ARESEP
Alexis Méndez Quirós	MINAE
Elizabeth Fallas Monge	AyA
Laura Torres Corral	AyA
Paula Chaves Alfaro	Instituto Nacional de Aprendizaje
Héctor Arce Benavides	FONAFIFO
Gerardo Quirós Cuadra	UNDP
Adolfo Suarez	CDR
Yolanda Martínez	AyA
Kathia Acuña Sossa	IADB
Ismael Bartly	UNAGUAS
Silvia Jimenez Cavallini	National University
Mario Arias Salguero	University of Costa Rica
Ana Lorena Salmerón A	National Technical University
Rolando Marín Leon	National Technical University
Eugenia León Alvarado	CATIE
Roberto Villalobos Flores	IMN
Fernando Jara Rodríguez	MINAE
Manuel Mora Calderón	MINSALUD
Carolina Ovarés	CEDARENA
Irene Murillo	CEDARENA

3. Consultation with 113 ASADAS of the target SEMUS (1, 2, and 3) of Northern Costa Rica – May/August, 2015.

This consultation allowed establishing baseline information regarding awareness activities at the community level related to climate change adaptation and water variability developed by the ASADAS.

The information gathered was part of a wider study completed during the PPG: *Census on Sources and Service Providers for rural water supply and sanitation in 305 ASADAS in the municipalities (cantons) of Guatuso, Upala, Los Chiles, La Cruz, Liberia, Cañas, Santa Cruz, Nicoya, Hojancha, and Carrillo.*

8.6. Stakeholder involvement plan

Name of institutions /stakeholders consulted	Stakeholder interests, official position or mandate	Relevance to the Project / Reasons for inclusion	Modality of involvement
MINA	National public level Responsible for developing and coordinating environmental policies and measures in Costa Rica	Location of GEF Operational Focal Point Project Executing Partner Member of Project Board	Guide the development of the legal and institutional framework for mainstreaming climate change measures by the by ASADAS and the private sector
AyA	National and regional public level National public institution in charge of providing technical and financial assistance to improve water management	Principal project Executing Partner and project proponent Coordination, advocating Member of Project Board	Support to the capacity-building and provide technical advice to ASADAS and the productive sector Document lessons learned and pilot experiences at the local level in order to upscale them at the national level
CNE	National-level Governing agency for risk prevention and emergency management	Responsible for coordination with AyA, the municipalities, and other public entities for monitoring the implementation of the activities defined in the drought emergency decree for the province of Guanacaste	CNE investments for the targeted area will be updated to integrate climate change risks
ARESEP	National level In charge of regulating prices for public services in Costa Rica (water and sanitation, electricity, fuels, and terrestrial, sea, and air transportation)	Responsible for establishing tariffs for public services, including water and sanitation	The project includes issues related to policies and waters tariffs for ASADAS where ARESEP is a primary decision-maker
MAG	National and regional public level Responsible for coordinating policies and measures in the agricultural sector	Project Executing Partner Guide the development of an institutional framework for the mainstreaming of climate change measures into the agriculture and livestock sectors, especially in the regulation of private sector practices Member of Project Board	Technical support for implementing PES-related initiatives with livestock and agricultural production companies Technical support to revise/adjust purchasing and credit policies of agricultural and livestock trading companies and financial institutions

MINSALUD	National and regional public level Responsible for coordinating policies and standards related to water quality and health	Project Executing Partner Monitoring water quality in urban and rural areas through WSP Member of Project Board	Analyze lessons learned from the four pilot ecosystem-based WSP and in up scaling such experiences into national regulations and policies
ASADAS	Local level community-based water management organizations Provide potable water and sanitation services throughout the country	Principal project Executing Partner and project beneficiary Member of Project Board	Incorporation of climate change adaptive measures and sustainable use concepts and guidelines into local water management, reducing water vulnerability and improving livelihood conditions. Management of resilient water supply systems Will benefit from training and technical support
FONAFIFO	National public level – Forestry Fund/MINAE Executes the country's Payment for Environmental Services Program	Provide the institutional and technical framework necessary for the implementation of project PES-related initiative	Support the development of relevant financial mechanisms in ecosystem-based adaptation (Voluntary fee system and Certified agricultural products).
Agricultural production sector	Local private sector	Sectoral policies and plans will be updated to incorporate ecosystem-based adaptation and climate change considerations	Small-, medium-, and large-scale producers, will participate in the implementation of two pilot projects that incorporate the economic valuation of ecosystem-based adaptation measures Beneficiaries of innovative sustainable practices aimed at increasing their eco-competitiveness
IMN	National public level Charged of providing meteorological analysis and weather forecasts to the population of Costa Rica	Project Executing Partner Timely provide updated hydrometeorological information for the target SEMUs Member of Project Board	Data provider: AWS/AFS and EWS Improve ASADAS' technical capacities and community-based risk monitoring and response systems
INAMU	National and regional public level Lead agency that promotes gender equality as a cross-cutting issue in national and subregional planning, policies, and strategies	Mainstreaming gender into project activities	Contribute to build capacities inside the AyA, ASADAS, and the agroindustry sector in mainstreaming gender issues in water management and climate adaptation measures.
SENARA	National public level Investigates the aquifers in the country and provides technical and political support on hydrological decisions, providing oversight on the vulnerability in wells, springs, and protection zones	Technical support to local governments, ASADAS, and communities regarding aquifers and their management and protection	Data provider: aquifers and aquifer recharge areas, water quality Provide technical support to AyA and the ASDAS for the mapping and protecting aquifers and aquifer recharge areas in the target SEMUs
SINAC	National public level	Mainstreaming of ecosystem-based adaptation into public and	Technical support for the mainstreaming of ecosystem-based adaptation by local government, the

Local Governments	<p>Administrator for the national parks, conservation areas, and other protected natural areas in Costa Rica</p> <p>Local - Municipal bodies Management of public functions. Develop policies and regulations at the local level, grant development permits, and support the wellbeing of the population.</p>	<p>private policies, as many of the water sources on which both sectors depend originate within protected areas under SINAC's jurisdiction</p> <p>Local development plans and policies will influence the implementation of climate change adaptation measures</p> <p>Data provider</p>	<p>ASADAS (e.g., development WSP, protection and rehabilitation of water catchments), and the agricultural sector</p>
			<p>Active participation in project implementation: institutional support for development of participatory risk management plans; implementation of ecosystem-based adaptation measures for protection and/or ecological rehabilitation measures to protect water sources and associated aquifer recharge areas.</p> <p>Data provider at the local level</p> <p>Benefits: access to hydrometeorological and weather information, EWS, training and technical support</p>

8.7. Terms of Reference for Project Personnel

The following are the indicative TORs for the project management staff. A full-time Project Coordinator and a full-time Project Administrator/Finance Assistant both of which will be nationally recruited positions will staff the PMU. TORs for these positions will be further discussed with UNDP's CO and will be fine-tuned during the IW so that roles and responsibilities and UNDP GEF reporting procedures are clearly defined and understood. Also, during the IW the TORs for specific consultants and sub-contractors will be fully discussed and, for those consultancies to be undertaken during the first six months of the project, full TORs will be drafted and selection and hiring procedures will be defined.

Project Coordinator

The UNDP CO will hire the Project Coordinator to carry out the duties specified below, and to provide further technical assistance as required by the project team to fulfill the objectives of the project. He/she will be responsible for ensuring that the project meets its obligations to the GEF and the UNDP, with particular regard to the management aspects of the project, including supervision of staff, serving as stakeholder liaison, implementation of activities, and reporting. The Project Coordinator will be responsible for the day-to-day management of project activities and the delivery of its outputs. The Project Coordinator will support and coordinate the activities of all partners, staff, and consultants as they relate to the execution of the project. The Project Coordinator will be responsible for the following tasks:

Tasks:

- Prepare detailed work plan and budget under the guidance of the UNDP CO.
- Make recommendations for modifications to the project budget and, where relevant, submit proposals for budget revisions to the Project Board and UNDP.
- Facilitate project planning and decision-making sessions.
- Organize the contracting of consultants and experts for the project, including preparing TOR for all technical assistance required, preparation of an action plan for each consultant and expert, supervising their work, and reporting to UNDP CO.
- Provide technical guidance and oversight for all project activities.
- Oversee the progress of the project components conducted by local and international experts, consultants, and cooperating partners.
- Coordinate and oversee the preparation of all outputs of the project.
- Coordinate the preparation and implementation of the Project Inception Workshop and prepare the Project Inception Report.
- Foster, establish, and maintain links with other related national and international programs and national projects, including information dissemination through media such as web page actualization, etc.
- Organize Project Board meetings at least once every semester as well as annual and final review meetings as required by UNDP, and act as the secretary of the Project Board.
- Organize required consultations or meetings with the technical group at AyA, MINAE, IMN, ASADAS, local communities, and other entities, in accordance with the requirements of each project component.
- Coordinate and report the work of all stakeholders under the guidance of UNDP CO.
- Prepare PIRs/APRs in the language required by the GEF and the UNDP's CO and attend annual review meetings.
- Ensure that all relevant information is made available in a timely fashion to UNDP CO regarding activities carried out nationally, including private and public sector activities, which impact the project.
- Prepare and submit quarterly progress and financial reports to UNDP as required, following the quality management system and internal administrative process at UNDP.

- Coordinate and participate in M&E exercises to appraise project success and make recommendations for modifications to the project.
- Coordinate the mid-term and final project evaluations in consultation with UNDP.
- Prepare and submit technical concepts and requirements about the project requested by UNDP or other external entities.
- Perform other duties related to the project in order to achieve its strategic objectives.
- Ensure the project utilizes best practices and experiences from similar projects.
- Ensure the project utilizes the available financial resources in an efficient and transparent manner.
- Ensure that all project activities are carried out on schedule and within budget to achieve the project outputs.
- Solve all technical and administrative issues that might arise during the project.

Outputs:

- Detailed work plans indicating dates for deliverables and budget.
- Documents required by the control management system of UNDP.
- TORs and action plan of the staff and monitoring reports.
- List of names of potential advisors and collaborators and potential institutional links with other related national and international programs and national projects.
- Quarterly reports and financial reports on the consultant's activities, all stakeholders' work, and progress of the project to be presented to UNDP (in the format specified by UNDP).
- A final report that summarizes the work carried out by consultants and stakeholders during the period of the project, as well as the status of the project outputs at the end of the project.
- Minutes of meetings and/or consultation processes.
- Yearly PIRs/APRs.
- Adaptive management of project.

All documents are to be submitted to the UNDP CO in MS Word and in hard copy.

Qualifications (indicative):

- A graduate academic degree in areas relevant to the project (e.g., Water resources management and sanitation, climate change adaptation, disaster risk management).
- Minimum 5 years of experience in project management with at least 3 years of experience in climate change adaptation.
- Experience facilitating consultative processes, preferably in the field of natural resource management.
- Working knowledge of PA management and planning
- Proven ability to promote cooperation between and negotiate with a range of stakeholders, and to organize and coordinate multi-disciplinary teams.
- Strong leadership and team-building skills.
- Self-motivated and ability to work under the pressure.
- Demonstrable ability to organize, facilitate, and mediate technical teams to achieve stated project objectives.
- Familiarity with logical frameworks and strategic planning.
- Strong computer skills.
- Flexible and willing to travel as required.
- Excellent communication and writing skills in Spanish and English.
- Previous experience working with a GEF-supported project is considered an asset.

Flood Risk Management Technical Officer (3 staff)

In consultation with the Project Coordinator, his/her responsibilities consist of the following:

Tasks:

- Provides technical support to building community-based infrastructure and technical capacities to address projected changes in water availability, including: strengthened metering systems; improving water catchment, storage, and distribution systems; installing water saving devices installed in homes; Piloting adaptive sanitation and purification measures to improve water quality; and protecting and/or rehabilitating water sources and associated aquifer recharge areas
- Provide field support for the integration of hydrometeorological information into land use and production practices in the target area in Northern Costa Rica;
- Supports identification of training needs, organizes training, and recommends institutional arrangements for the implementation of a community-based climate change training program;
- Provides technical support in the field to the Project Coordinator.

Qualifications (indicative):

- Degree in Water Resource Engineering or Environmental Sciences
- Minimum 5 years of professional experience in Drought and Flood Risk Management;
- Experience in technical work in water resources risk management;
- Experience of the development of drought and flood management and mitigations measures and strategies;
- Experience working with local communities and participatory processes;
- Good analytical and problem-solving skills;
- Ability and demonstrated success to work in a team;
- Good communication skills and competence in handling project's external relations at all levels;
- Fluency in English.

Project Administrative Assistant

The Project Administrator/Finance Assistant is responsible for the financial and administrative management of the project activities and assists in the preparation of quarterly and annual work plans and progress reports for review and monitoring by UNDP. This position also provides support to the Project Coordinator for the day-to-day management of the project and secretarial or assistance functions. The Project Administrator/Finance Assistant will have the following responsibilities:

Financial management:

- Responsible for providing general financial and administrative support to the project.
- Take own initiative and perform daily work in compliance with annual work schedules.
- Assist project management in performing budget cycle: planning, preparation, revisions, and budget execution.
- Assist the Project Coordinator in all project implementation activities.
- Provide assistance to partner agencies involved in project activities, performing and monitoring general administrative and financial aspects to ensure compliance with budgeted costs in line with UNDP policies and procedures.
- Monitor project expenditures, ensuring that no expenditure is incurred before it has been authorized.
- Assist project team in drafting quarterly project progress reports concerning financial issues.
- Ensure that UNDP procurement rules are followed during procurement activities that are carried out by the project and maintain responsibility for the inventory of the project assets.

- Perform preparatory work for mandatory and general budget revisions, annual physical inventory and auditing, and assist external evaluators in fulfilling their mission.
- Provide assistance in all logistical arrangements concerning project implementation.
- Prepare all outputs in accordance with the UNDP administrative and financial office guidance.

Administrative management:

- Make logistical arrangements for the organization of meetings, consultation processes, and media.
- Provide secretarial support for the project staff.
- Draft contracts for international/local consultants and all project staff, in accordance with instructions by the Procurement Office at UNDP CO.
- Draft agreements for entities related to the project, in accordance with instructions by the Procurement Office at UNDP CO.
- Draft correspondence related to assigned project areas; provide clarification, follow up, and responses to requests for information.
- Assume overall responsibility for administrative matters of a more general nature, such as registry and maintenance of project files.
- Perform all other administrative and financial related duties, upon request.
- Provide support to the Project Coordinator and project staff in the coordination and organization of planned activities and their timely implementation.
- Assist the Project Coordinator in liaising with key stakeholders from the GoCR counterpart, co-financing agencies, civil society, and NGOs, as required.
- Ensure the proper use and care of the materials and equipment used on the project.
- Ensure the project utilizes the available financial resources in an efficient and transparent manner.
- Ensure that all project financial and administrative activities are carried out on schedule and within budget to achieve the project outputs.
- Resolve all administrative, financial, and support issues that might arise during the project.

Qualifications and skills:

- At least an Associate's Degree in finance, business sciences, or related fields.
- Experience in administrative work, preferably in an international organization or related to project execution.
- A demonstrated ability in the financial management of development projects and in liaising and cooperating with government officials, NGOs, etc.
- Self-motivated and ability to work under the pressure.
- Team-oriented, possesses a positive attitude, and works well with others.
- Flexible and willing to travel as required.
- Excellent interpersonal skills.
- Excellent verbal and writing communication skills in Spanish and English.
- Good knowledge of Word, Outlook, Excel, and Internet browsers is required.
- Previous experience working with a GEF-supported project is considered an asset.

8.8. Special Clauses

N/A

8.9. Letters of Co-financing



Instituto Costarricense de
Acueductos y Alcantarillados
PRESIDENCIA EJECUTIVA

16 de julio 2015
PRE-2015-0986

Señora Yoriko Yasukawa
Representante residente PNUD
Costa Rica

Estimada señora:

Mediante el presente oficio, en calidad de Presidenta Ejecutiva del Instituto Costarricense de Acueductos y Alcantarillados (AyA), ratifico el Co-financiamiento de esta institución para el proyecto: *Fortalecimiento de las capacidades de Asociaciones de Acueductos Rurales (ASADAS) para enfrentar riesgos del Cambio Climático en comunidades con estrés hídrico en el Norte de Costa Rica*, implementado en asocio con el Programa de las Naciones Unidas para el Desarrollo en Costa Rica (PNUD).

Este proyecto es de alto interés para el Gobierno de la República, así queda constancia en la nota remitida por el Vicepresidente de la República al PNUD del 14 Junio 2013, DV-AP-137-2013, en la que por primera vez el Gobierno de Costa Rica se comprometía al co-financiamiento para esta iniciativa.

La presente administración reitera ese apoyo en vista que la gestión comunitaria del agua es un tema central del Plan Nacional de Desarrollo 2015-2018 Alberto Cañas Escalante. La propuesta sectorial de Ambiente, Energía, Mares y Ordenamiento Territorial de dicho plan, en su objetivo sectorial 2 propone: *Fomentar las acciones frente al cambio climático global, mediante la participación ciudadana, el cambio tecnológico, procesos de innovación, investigación y conocimiento para garantizar el bienestar, la seguridad humana y la competitividad del país*. Como parte de este compromiso se incluye en el plan el Proyecto 1.9 *Fortalecimiento de la Gestión Comunitaria del Agua*. Las inversiones del AyA para ese rubro del Plan Nacional de Desarrollo son las que coordinaremos como co-financiamiento del con PNUD y de la siguiente manera:

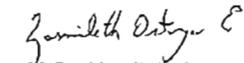
Como financiamiento en efectivo (Cash Co-finance) el AyA se compromete a coordinar un equivalente financiero a US\$ 10,750,000 de su presupuesto ordinario en el periodo 2015-2018. Por cofinanciamiento en efectivo nos referimos al equivalente monetario que invertirá la institución en el citado periodo para nuestro recurso humano, dedicado a actividades de este proyecto, desde personal técnico hasta las jerarquías de la institución. Este cofinanciamiento proviene específicamente en los cantones beneficiarios del proyecto, y en parte del presupuesto central de AyA, en vista que el proyecto fortalece las capacidades de la institución a nivel nacional. Bajo ningún

TELÉFONOS: 2242-5012 / FAX: 2242-5025

concepto se deberá entender el cofinanciamiento en especie como un traslado de recursos financieros al PNUD, únicamente coordinación de las inversiones en beneficio de objetivos comunes.

Como financiamiento en especie (In Kind Co-finance) AyA se compromete a coordinar un equivalente financiero a US\$ 5,650,000 de sus bienes y activos en el período de vigencia del proyecto. Por cofinanciamiento en efectivo nos referimos al equivalente monetario del aprovechamiento por el proyecto de la infraestructura y bienes inmuebles de la institución para consecución de los objetivos comunes.

Atentamente,


M.Sc. Yamileth Astorga Espelón
Presidenta Ejecutiva



cc. Ing. José Alberto Moya Segura, Gerencia General
Lic. Yolanda Martínez Cascante, Subgerencia Sistemas Comunes
Lic. James Phillips Ávila, Dirección de Planificación
Archivo



Instituto Costarricense de
Acueductos y Alcantarillados
PRESIDENCIA EJECUTIVA

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16 de setiembre 2015 PRE-2015-1330	24/09
Comentarios:	

Señora
Kryssia Brade
Representante Residente Auxiliar PNUD
Costa Rica

Estimada señora:

24 SEP 15 09:45

Mediante el presente oficio, en calidad de Presidenta Ejecutiva del Instituto Costarricense de Acueductos y Alcantarillados (AyA), ratifico el Co-financiamiento para el Proyecto: *Fortalecimiento de las capacidades de Asociaciones de Acueductos Rurales (ASADAS) para enfrentar riesgos del Cambio Climático en comunidades con estrés hídrico en el Norte de Costa Rica* el cual estamos implementado en asocio con el Programa de las Naciones Unidas para el Desarrollo en Costa Rica (PNUD).

Dicho proyecto y sus resultados se alinean tanto con los objetivos del Plan Nacional de Desarrollo 2015-2018 Alberto Cañas Escalante como con nuestros propios objetivos estratégicos con respecto a los temas de adaptación al cambio climático y la garantía de los servicios de agua y saneamiento de calidad.

Como financiamiento en efectivo (Cash Co-finance), AyA se compromete a coordinar un equivalente financiero a US\$ \$1.573.051 provenientes del préstamo No. 2493/OC-CR suscrito entre el Instituto Costarricense de Acueductos y Alcantarillados y el Banco Interamericano de Desarrollo para financiar el programa de agua potable y saneamiento, específicamente del Componente 2: Agua Potable y Saneamiento en Áreas Rurales Prioritarias, el cual tiene una vigencia de seis años de setiembre 2013 a setiembre 2019 y que coincide en objetivos y alcance con los de este proyecto. Bajo ningún concepto se deberá entender el cofinanciamiento como un traslado de recursos financieros al PNUD, únicamente coordinación de las inversiones en beneficio de objetivos comunes.

De usted, con toda consideración y estima.

Atentamente,

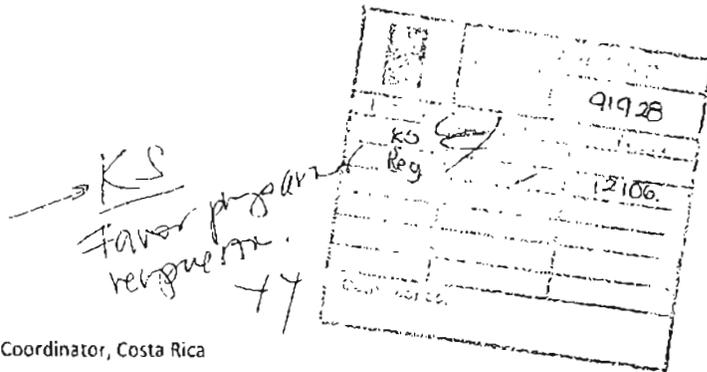
Yamileth Astorga Espinoza
M.Sc. Yamileth Astorga Espinoza
Presidenta Ejecutiva



c.c.: archivo
mbm



June 10, 2015
DE 174-2015



Dear Ms. Yasukawa,
United Nations Resident Coordinator, Costa Rica

It is a pleasure to greet you on behalf of the Costa Rica-USA Foundation for Cooperation.

CRUSA as we are known, is a private Costa Rican, apolitical foundation that seeks to facilitate the broadest possible collaboration between the peoples and governments of Costa Rica and the United States of America in order to promote the sustainable development of Costa Rica. Since its creation in 1996, CRUSA has donated more than \$54 million to projects in four thematic areas: Education, Environment, Science and Technology, and Strategic Capacity. Today, the Foundation focuses on programs and projects in four key economic areas – integrated water resources management, renewable energies, rural economic development and the creation of national capacity in these key sectors.

In line with UNDP efforts to promote climate-resilient economic development and sustainable livelihoods in the face of climate change, the CRUSA Foundation is committing \$1,385,898 over the next three years to community water management projects and support for creation of a National Integrated Water Management Information System (SINIGIRH), in coordination with the National Meteorological Institute as well as with the National Institute of Water and Sewages (AyA). This is part of an integral effort to improve adaptation to climate change at the intersection between rural economic development and integrated water management.

In an effort to align resources with other donors, we have learned of and analyzed GEF/UNDP Project *Strengthening Capacities of Rural Aqueduct Associations' Adaptation to Climate Change in Costa Rica*, that foresees actions at national and local levels to increase the capacity of adaptation in response to the dangers of climate change in the management of water resources. The mentioned activities and its variables can easily be incorporated into the institutional planning and the projects already underway at CRUSA.

We believe that the activities and results of this project will complement and contribute to the strengthening of present and future actions of CRUSA's social investments, especially those activities related to:

Teléfono: 2246-5656 | Fax: 2283-0981 | Email: info@crusa.cr | Web: www.crusa.cr
Fundación Crusa | Apdo. Postal: 12229-1000 San José, Costa Rica

- Infrastructure and technical capacity of ASADAs strengthened to cope with climate change impacts to aquifers in target areas.
- Meteorological information integrated to sub-regional development plans and strategies to increase resilience of rural communities to address water variability.

Consequently, CRUSA wants to express our interest and commitment as counterparts of the Project in order to coordinate and develop actions of mutual interest. Our committed funds will be disbursed by CRUSA directly to implementing NGOs or the GoCR via an implementing NGO.

As we have conversed with your representative in Costa Rica, Mr. Sasa, CRUSA and UNDP could share terms of reference and technical specificities of hydro-meteorological stations to be installed by the project to ensure coordination of investments.

We hope our expression of interest will contribute positively to strengthen the adaptation capacity of rural aqueduct associations in Northern Costa Rica and improve the GoCR's capacity to take informed decisions about water resource management.

Sincerely,


Michelle Coffey
Executive delegate





Instituto Meteorológico Nacional
Fundado en 1888

26 de junio del 2015
Nº 189-2015-IMN

Señora
Yoriko Yasukawa
Representante Residente
PNUD - Costa Rica

Estimada señora Representante:

En mi calidad de Director General del Instituto Meteorológico Nacional (IMN), ratifico el cofinanciamiento de esta Institución para el proyecto: *Fortalecimiento de las capacidades de Asociaciones de Acueductos Rurales (ASADAS) para enfrentar riesgos del Cambio Climático en comunidades con estrés hídrico en el Norte de Costa Rica*, implementado en asocio con el Programa de las Naciones Unidas para el Desarrollo (PNUD) en Costa Rica.

Para el IMN es pertinente coordinar el quehacer institucional con el proyecto, en vista de que este se alinea con los objetivos del Plan Nacional de Desarrollo 2015-2018 Alberto Cañas Escalante.

Las inversiones del IMN que se coordinarán como cofinanciamiento con el PNUD, serán de la siguiente manera:

Como financiamiento en efectivo (Cash Co-finance) el IMN se compromete a aportar un equivalente financiero de US \$2.900.000 de su presupuesto ordinario durante el periodo 2015-2018. Por cofinanciamiento en efectivo nos referimos al equivalente monetario que invertirá el IMN en el citado periodo, en el recurso humano dedicado a las actividades de este proyecto. Desde personal técnico hasta las jerarquías de la Institución. Este cofinanciamiento proviene del presupuesto ordinario del IMN, en vista de que el proyecto fortalece las capacidades de la Institución a nivel nacional. Bajo ningún concepto se deberá entender el cofinanciamiento en especie, como un traslado de recursos financieros al PNUD, únicamente coordinación de las inversiones en beneficio de objetivos comunes.

Como financiamiento en especie (In Kind Co-finance) el IMN se compromete a aportar un equivalente financiero de US \$2.100.000 de sus bienes y activos durante el periodo de vigencia del proyecto. Por cofinanciamiento en efectivo nos referimos al equivalente monetario del aprovechamiento por el proyecto de la infraestructura y bienes Inmuebles de la Institución, para la consecución de los objetivos comunes.

De usted atentamente,

Juan Carlos Fallas Sojo
Director General

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Comentarios		

Apartado: 5583-1000
San José, Costa Rica
Calle 17, Avenida 9
Teléfono: (506) 2223-5616
Fax: (506) 2223-1837
Correo Electrónico: una@imn.or.cr
Sitio Web: <http://www.imn.or.cr>

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Fundecooperación para el Desarrollo Sostenible

Ente de Implementación Nacional (EIN) del Fondo de Adaptación (F.A.)
Dirección: Barro Escalante de la Iglesia Santa Teresita, 350 metros al sur,
San José, Costa Rica
Teléfono: (506) 2225-1507 • Fax: (506) 2225-0500
www.fundecooperacion.org

San José, 11 de setiembre 2015

EIN-018-15

Señora Kryssia Brade
Representante Residente Auxiliar PNUD
Costa Rica

Asunto: Apoyo de Co-financiamiento.

Mediante el presente oficio, en calidad de Directora Ejecutiva de la fundación FUNDECOOPERACION, ratifico el Co-financiamiento de esta organización al proyecto: *"Fortalecimiento de las capacidades de Asociaciones de Acueductos Rurales (ASADAS) para enfrentar riesgos del Cambio Climático en comunidades con estrés hídrico en el Norte de Costa Rica"* implementado en asocio con el Programa de las Naciones Unidas para el Desarrollo en Costa Rica (PNUD).

Para FUNDECOOPERACION es pertinente coordinar nuestro quehacer institucional con el proyecto en vista que este se alinea con los objetivos del Plan Nacional de Desarrollo 2015-2018 Alberto Cañas Escalante y con nuestros propios objetivos estratégicos para Costa Rica, particularmente con respecto a temas de adaptación al cambio climático.

Las inversiones de FUNDECOOPERACION que coordinaremos como co-financiamiento con PNUD serán de la siguiente manera:

Como financiamiento en efectivo (Cash Co-finance) FUNDECOOPERACION se compromete a coordinar un equivalente financiero a US \$1.850.000 de su presupuesto de proyectos en el periodo 2015-2020, lo cual se refiere al equivalente monetario que invertirá FUNDECOOPERACION en el citado periodo dedicado a actividades que coinciden en objetivos y alcance con los de este proyecto. Este cofinanciamiento proviene del presupuesto de proyectos FUNDECOOPERACION. Bajo ningún concepto se deberá entender el cofinanciamiento como un traslado de recursos financieros al PNUD, únicamente coordinación de las inversiones en beneficio de objetivos comunes. Asimismo, dicho compromiso es equivalente al que PNUD mediante este proyecto apoyará al proyecto del Fondo de Adaptación para duplicar impacto de las actividades y promover los objetivos y alcance de ambos proyectos en la zona.

Atentamente,


Marianella Feoli Peña
Directora Ejecutiva
Fundecooperación para el Desarrollo Sostenible.

Cc. Sra. Saskia Rodríguez Steichen, Directora Cooperación Internacional, MIDEPLAN,
Sr. William Aparar, Director Dirección de Cambio Climático, MINAE,
Sr. Rubén Muñoz Robles, Director Cooperación Internacional, MINAE



Ref: 00091928: 102/15

San José, 30 de setiembre 2015

Estimada señora Dinu:

Mediante el presente oficio, en calidad de Oficial a Cargo del PNUD Costa Rica, ratifico el Co-financiamiento de esta oficina para el proyecto *Fortalecimiento de las capacidades de Asociaciones de Acueductos Rurales (ASADAS) para enfrentar riesgos del Cambio Climático en comunidades con estrés hídrico en el Norte de Costa Rica* implementado en asocio con el Instituto Costarricense de Acueductos y Alcantarillados (AyA).

Dicho Proyecto está en línea con nuestros Instrumentos de planificación y con los objetivos del Plan Nacional de Desarrollo del país para 2015-2018 y el UNDAF, particularmente con respecto a temas de adaptación al cambio climático.

Como financiamiento en efectivo (Cash Co-finance), nos comprometemos a coordinar un equivalente financiero a US\$450.000 de nuestro presupuesto en el periodo 2015-2018.

Atentamente,


Kryssia Brade
Oficial a Cargo

Adriana Dinu
Executive Coordinator and Director a.i.
HQ/GEF

8.10. Response to Project Reviews

Reviewer's comments	Responses	Reference in ProDoc
Secretariat Comment at PIF (PFD)/Work Program Inclusion: Update 8/21/2014		
<p><i>4. Is the project aligned with the focal area multifocal areas/ LDCF/SCCF/NPIF results framework and strategic objectives?</i></p> <p>By CEO Endorsement, please consider how this project can ensure alignment with CCA-3 as well.</p>	<p>As suggested, the project will also be aligned with CCA-3: Integrate climate change adaptation into relevant policies, plans and associated processes. More specifically, the project will be aligned with Outcome 3.2: Policies, plans, and associated processes developed and strengthened to identify, prioritize, and integrate adaptation strategies and measures (Indicator 13: Sub-national plans and processes developed and strengthened to identify, prioritize, and integrate adaptation strategies and measures; alignment with this outcome indicator has been included in the AMAT).</p> <p>The project will mainstream climate change adaptation into plans and policies, including: a) four (4) participatory Risk Management Plans for Potable Water and Sanitation (RMPPWS) within each target canton (SEMU 1: Guatuso, Upala, Los Chiles, and La Cruz; SEMU 2: Liberia and Cañas; SEMU 3: Santa Cruz, Nicoya, Hojancha, and Carrillo); b) RMPPWS for 40 ASADAS; and c) up to three (3) AyA and CNE investments for the target area in northern Costa Rica.</p>	<p>– Section 2.2. Project rationale and policy conformity</p>
<p><i>8. (a) Are global environmental/ adaptation benefits identified? (b) Is the description of the incremental/ additional reasoning sound and appropriate?</i></p> <p>By CEO Endorsement, please provide a more comprehensive analysis of the adaptation benefits, and the additional reasoning.</p>	<p>A more comprehensive analysis of the adaptation benefits and the additional reasoning is provided in the text of this Project Document. Please refer to Section 2.4: Project Objective, Outcomes, and Outputs/Activities.</p>	<p>– Section 2.4: Project objective, outcomes, and outputs/activities</p>
<p><i>13. Comment on the project's innovative aspects, sustainability, and potential for scaling up. Assess whether the project is innovative and if so, how, and if not, why not. Assess the project's strategy for sustainability, and the likelihood of achieving this based on GEF and Agency</i></p> <p>By CEO Endorsement, it is recommended to strengthen the project design as it relates to sustainability (for instance, regarding voluntary payments) and scale-up.</p>	<p>The project will build business partnerships between the ASADAS and the private sector (agriculture and cattle ranching farms), which, through voluntary payments from the latter, will facilitate funding for the conservation of local ecosystems and the operation of upstream community-based water supply systems. The voluntary fee systems will be designed following guidelines of Costa Rica's PES program that recognizes the value of services provided by ecosystems, including hydrological services. The Costa Rican PES program is executed through the National Forest Financing Fund (FONAFIFO), which was created in 1995 to finance small and medium producers to implement reforestation, forestation, greenhouses, and agroforestry systems, and for the recovery of deforested areas and the necessary technological changes in the use and industrialization of forest resources. FONAFIFO has proven to be a key player in the Costa Rica Climate Change Strategy and in reversing the process of deforestation in the country.</p>	<p>– Section 2.7: Sustainability – Section 2.4: Project objective, outcomes, and outputs/activities</p>

	<p>Through PES-type contracts that will last up to 20 years, the ASADAS and local communities will rely on a sustainable flow of funds that will contribute to the sustainability of project outcomes beyond its completion. Thus, the project will rely on FONAFIFIO and other Costa Rican institutions that have extended experience in the implementation of voluntary payments and PES schemes. Details on how voluntary payments will operate are provided in Section 2.4 (Output 2.1.3).</p> <p>The project will rely on a Knowledge Management System (Section 2.4, Output 2.2.2) to synthesize lessons learned and experiences that will result from project implementation, including the implementation of voluntary payments and PES schemes, and for sharing information related to climate change and ecosystem-based adaptation practices so that these can be replicated/scaled-up in other water-stressed regions in the country. In addition, the project's monitoring and evaluation plan includes a strategy for sharing best practices and generating knowledge products that will also contribute to scaling up.</p>	
STAP Scientific and Technical screening of the Project Identification Form (PIF). Date of screening: September 24, 2014		
No comments from STAP.	NA	NA
Compilation of Comments Submitted by Council Members on the joint LDCF/SCCF October 2014 Work Program		
<i>Germany's Comments</i>		
<p>I. Germany appreciates that the PIF refers to the currently developed Third National Communication to the UNFCCC. Nevertheless, the proposal does not make any reference to the national development plan (Plan Nacional de Desarrollo 2015-2018), which adaptation in the water sector, nor to the newly established national Adaptation Fund. Furthermore, the national climate change secretariat seems to be unaware of the project proposal. Germany therefore asks to consider these highly relevant national policy processes as well as to coordinate the proposal with the national climate change secretariat and with the new leadership of the MINAE</p>	<p>The project has considered the National Development Plan (NDP) 2015-2018, more specifically Section 4.9: Risk Management and Adaptation to Climate Change, which calls for reduced vulnerability of public services, including the provision of water and sanitation and for promoting sustainable production practices (soil conservation, water management, and community-based forestry) as a strategy to reduce risks; and Program 9.1: National Program to Supply Potable Water to the Population, which has as its objective to ensure the supply of quality drinking water to urban and rural populations.</p> <p>Similarly, the project has considered the National Adaptation Fund (NAF) and joint efforts for the implementation of the project were discussed during project preparation with the GIZ and the Fundecooperacion Foundation, which have received funding from the NAF. The Fundecooperacion Foundation is the accredited National Implementing Entity in Costa Rica of the Adaptation Fund and is a project cofinancier.</p> <p>The proposal was coordinated with the national climate change secretariat within the MINAE, including Mr.</p>	<p>– Section 1.3. Policy and institutional framework for climate change adaptation and water resources management – 2.2. Project rationale and policy conformity</p>

	Ivan Pitty, Coordinator of the National Climate Change Strategy (encc2021@gmail.com)	
<p>2. Germany appreciates that the project aims to establish financial incentives and builds upon the Payment for Ecosystem Services (PES) programme FONAFIFO. We believe it is very important to work on the demand side of water use since Ecosystem-based Adaptation approaches alone are unlikely to resolve the projected water scarcity. Germany therefore welcomes the investments in metering systems and recommends that the project further promotes water saving and water efficiency measures.</p>	<p>In addition to investing in metering systems (up to 5,000 micro- and macro-meters will be installed), the project will also invest in the demand side of water use, including: a) the installation of water-saving devices (high-efficiency toilets, toilet-tank displacement devices/toilet dams; and low-flow faucet aerators and showerheads) in up to 4,000 households; b) implementation of a pilot composting toilet program that use little to no water as an alternative to flush toilets (150 composting toilets will be installed); c) the development of a septic tank and drainfield maintenance program, emphasizing the efficient use of water (e.g., checking toilets and facets regularly to detect leaks) and the use of household-water-saving devices (e.g., high-efficiency toilets); and d) the implementation of a water conservation awareness (WCA) campaign in the three target areas in northern Costa Rica (SEMUs 1, 2, and 3) emphasizing the importance of using water efficiently at all stages from capture to consumption in order to promote change in attitudes and behavior with regard to water management and use.</p>	<p>– Section 2.4: Project objective, outcomes, and outputs/activities</p>
<p>3. Germany welcomes the significant amount of co-funding from government agencies. Part C of the PIF also lists a grant from GIZ over USD 5,000,000 for the Biodiversity Partnership Mesoamerica (BPM). However, this project and the stated amount are determined for eight countries in the region and therefore cannot be fully attributed to activities in Costa Rica. Germany therefore requests to correct the stated co-funding accordingly to approximately USD 500,000 (i.e. 10% of the previous amount).</p>	<p>The final project co-financing established during the PPG phase does not include funding from the GIZ/ BPM.</p>	<p>– Section 4. Total budget and work plan</p>
<p>4. Similar projects on ecosystem-based adaptation and water funded by Germany are currently being implemented in Costa Rica and the region and could provide valuable experiences and lessons learned. Germany therefore recommends integrating knowledge generated in these initiatives in the design and implementation of the project.</p>	<p>The project proposed herein will integrate knowledge and lessons learned from the implementation of the Coastal Marine Biodiversity and Climate Change Adaptation (BIOMARCC) project funded by the German Development Cooperation Agency (GIZ). The BIOMARCC project aims to increase the adaptation capacity of marine and coastal ecosystems in Costa Rica by strengthening institutional management capacities for marine and coastal conservation areas, developing financial mechanisms to secure adaptation of marine and coastal protected areas with the</p>	<p>– Section 2.3.3. Coordination with other relevant GEF-financed and other initiatives</p>

	<p>participation of relevant stakeholders; and developing Clearing House Mechanism about climate change adaptation and coastal/marine ecosystem management exchange and transfer of knowledge and experiences. In particular, the project will incorporate lessons learned from the implementation of climate change adaptation activities for building resilience of wetland ecosystems to climate change in the Guanacaste province in northern Costa Rica.</p> <p>In addition, the project proposed herein will incorporate knowledge and lessons learned from the project “Low Emission Development Costa Rica – Supporting the national climate neutrality strategy in Costa Rica.” as a model for low carbon development, which is also being supported by the GIZ. This initiative will provide support at the political and institutional levels to develop strategies and design framework policies as well as for programs and action plans directed at reducing greenhouse gas emissions. In addition, industrial companies and small- and medium-sized enterprises will receive support on how to plan and implement measures for reducing emissions and adopt environmentally and climate-friendly technologies. In particular, knowledge and lessons learned to enhance awareness and implement informational campaigns on climate change among the general public, as well as working with the private sector on implementing incentives to mainstream climate change, will be considered.</p>	
<i>USA’s Comments:</i>		
<p>1. Clarify how it plans to promote coordination between relevant stakeholders and national and local governments, throughout the development and implementation of this project.</p>	<p>Coordination between relevant stakeholders and national and local governments during project development was done through field visits in Northern Costa Rica completed during PPG where representatives from 67 ASADAS, municipal authorities, AyA regional and national officers, and UNDP shared information on climate change and adaptation, and discuss aspects of the project design and participation/coordination mechanism, and their views on water-related issues. Specific information regarding the PPG consultation process is present Annex 8.5 of this Project Document.</p> <p>Coordination between relevant stakeholders and national and local governments during project implementation will be achieved through specific actions outlined in Section 2.4, where the projects outcomes/outputs and related activities are detailed. In addition, a Stakeholder Participation Plan for the project (Annex 8.6) has been developed that also outlines participation and coordination mechanisms during project implementation. Finally, project management arrangements include a Project Board, which will be composed of AyA, ASADAS, MINAE, MAG,</p>	<p>– Section 2.4: Project objective, outcomes, and outputs/activities – Annex 8.5. Stakeholder meetings, workshops and consultations held during project preparation – 8.6. Stakeholder involvement plan</p>

	<p>MINSALUD, IMN, and UNDP that will allow the implementation of the project between relevant stakeholders and national and local governments in a coordinated manner, including the approval of annual work plans, approve budget and monitor project development.</p>	
<p>2. Explain the role of the Vulnerability and Adaptive Capacity Indices outlined in paragraph 12. Please provide greater detail on how these indicators will be collected and used during the implementation of the project.</p>	<p>The Vulnerability and Adaptive Capacity Indices will provide information about the vulnerability (exposure) and adaptive capacity in the target SEMUs. Indices will be developed considering multiple, social, economic, environmental, and policy/governance factors, which will include: a) exposure to climate-related events (drought, floods, etc.); b) human sensitivity, in terms of population patterns, development, availability of natural resources, agricultural dependency, and conflicts; and c) future vulnerability by considering the adaptive capacity within the targeted SEMUS (e.g., local governments, AyA, and ASADAS) and water supply infrastructure to combat climate change. This approach follows the guidelines of the Climate Change Vulnerability Index (CCVI) released by global risks advisory firm Maplecroft (http://maplecroft.com/about/news/ccvi.html) and the NatureServe Climate Change Vulnerability Index (NatureServe, 2015; http://www.natureserve.org/conservation-toos/climate-change-vulnerability-index) and existing methodologies developed in Costa Rica and included in official documents such as the National Communications to the UNFCCC, rescaled and adjusted to reflect ecosystem, aquifers, socioeconomic, and sectoral conditions specific to the target areas.</p>	<p>– Section 2.4: Project objective, outcomes, and outputs/activities (Output 1.3.2)</p>
<p>3. Provide more information on how beneficiaries, including women, have been involved in the development of the project proposal and will benefit from this project.</p>	<p>Gender considerations were mainstreamed into the project preparation following GEF and UNDP guidelines. How women will participate and will benefit from the project is outlined in Section 2.4 (Outcomes/outputs and related activities) and Section 2.3.4 (Gender considerations). Women are very active in organizations related to local development, including the boards of the ASADAS where very often they represent the majority. This means that the capacity of end users who will be strengthened by this project will be particularly focused on increasing women's access to opportunities for continued personal growth, increasing their leadership, and their capacity as agents of change to disseminate adaptive measures through the communities in which they live. This will include: a) sustained access to potable water and sanitation services under conditions of water-stress associated to climate change (e.g., drought and flooding); b) strengthened capacity through training to maintain and improve the use of water and sanitation measures in a context of increased climate impacts; c) access to extension services for sustainable land use and production practices; d) empowerment by their participation in</p>	<p>– Section 2.3.4: Gender considerations – Section 2.4: Project objective, outcomes, and outputs/activities – Section 2.10. Compliance with UNDP Safeguards Policies</p>

	<p>water management-related planning processes (e.g., development and/or improved/updated ecosystem-based WSP; Project Board as member ASADAS representatives); and e) access to lines of credit and incentives to promote adoption of ecosystem-based climate change adaptation measures.</p> <p>In addition, the project Results Framework includes indicators to ensure that women and men will participate and benefit equally from the project. Finally, in compliance with UNDP Safeguards Policies, the project-level Social and Environmental Procedure, which is a requirement for all proposed projects with a budget of \$500,000 or more (annexed to this Project Document as a separate file), includes strategies and indicators as to how to improve gender equality and women's empowerment through the project.</p>	
<p>4. Expand on how the implementing agency and its partners will ensure the sustainability of climate change adaptation education for decision makers at the national and local level.</p>	<p>The sustainability of climate change adaptation education for decision makers at the national and local level will be ensured by increasing awareness their about the need for mainstreaming climate change adaption into their policy development and planning processes, which will ensure institutional and public support of climate change adaptation after the project is completed. Through capacity building, technical assistance, and the availability of new and improved tools (e.g., information monitoring system, early warning system, AWS/AFS, and knowledge management system) the project will enhance the capacity of national-level decision makers to reduce risks and vulnerability of local communities to drought and flooding as well as for the replication and scaling-up of successful experience in other water-stressed areas around the country.</p> <p>At the local level, the project will generate an attitude and behavioral change both at the supply and demand sides regarding water availability that includes strategic planning and management for a better provision of potable water and sanitation services and actions for water conservation. This change will be the basis for building a community-institutional partnership that will allow the exchange of knowledge, experiences, and dialogue among the ASADAS, end users/local communities, and local and authorities about climate change adaptation and vulnerability beyond project end. In addition, by knowledge and technical skills though targeted training local decision-makers will be empowered to be active participants in influencing the development of local policy for sustainable ecosystem and water management.</p>	<p>– Section 2.7. Sustainability</p>
<p>5. Clarify how the implementing agency and its partners will communicate results, lessons learned and best practices identified throughout the project to the various</p>	<p>The project will rely on a Knowledge Management System (Section 2.4, Output 2.2.2) to synthesize and communicate lessons learned and experiences that will result from project implementation so that these can be</p>	<p>– Section 2.4: Project objective, outcomes, and outputs/activities (Output 2.2.2)</p>

<p>stakeholders both during and after the project.</p>	<p>replicated/scaled-up in other water-stressed regions in the country.</p> <p>In addition, the project's monitoring and evaluation plan includes a strategy for sharing best practices and generating knowledge products that will also contribute to communicating results, lessons learned, and best practices identified during the project.</p>	<p>– Section 6. Monitoring Framework and Evaluation</p>
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8.11. Adaptation Monitoring and Assessment Tool (AMAT)

Included as a separate file.

8.12. UNDP Social and Environmental Screening Procedure (SESP)

Included as a separate file.

8.13. Theory of Change

Expected Outcome	Output	Barrier	Barrier Type	Risk Category	Risk Mitigation/Project Approach/Steps to achieve Output
Component 1. Infrastructure and technical capacity of ASADAS strengthened to cope with climate change impacts to aquifers in the target area	1.1. Building community-based infrastructure and technical capacity of ASADAS strengthened to cope with climate change impacts to aquifers in the target area	1.1.1 Strengthened metering systems to track water supply to end-users (micro- and macro-meters) in the ASADAS network provide updated information on climate-related risks and vulnerability of project area water resources.	Barrier	Medium	1. Purchase and installation of macro-meters, which will allow selected rural ASADAS (the most vulnerable and less resource-endowed) to make accurate estimates of water production, distribution, and sale. 2. Purchase and installation of micro-meters in selected rural at individual houses and installation of new piping to ensure proper water distribution and measurement.
		– Lack of access to finance to complete metering systems (micro and macro-meters), which do not allow to effectively accounting for water demand and usage and reduce water resources vulnerability to climate change	Technical/ Financial	Medium	1. Tariffs-gap assessment and proposal to include fees to cover operation and maintenance costs to address climate-induced disturbances in water supply.
		– Lack of appropriate metering limits the ability of the ASADAS to revise tariffs and generate additional resources for sustainable operation	Technical	Medium	1. Assessment of water levels of wells to meet demand during dry seasons and maintenance of wells systems to improve water flow, pressure, and water quality. 2. Installation of spring boxes to collect, store, and collect clean spring water. 3. Installation of low-cost rainwater harvesting systems at the household level to supplement the main water supply systems.
		– Water catchment and storage systems are not designed to collect, store, and supply water to meet demand during prolonged droughts	Technical/ Financial	High	1. Installation of water-saving devices at the household level (high efficient toilets, toilet-tank displacement device/toilet dam, and low-flow faucet aerators and showerheads) as part of a pilot water-saving campaign. 2. Implementation of a water conservation awareness campaign to promote change in attitudes and behavior with regard to water management and use.
	1.1.2. Water catchment (well, spring, and/or rain), storage, and distribution systems in rural areas improved and resilient to climate change.	– Lack of awareness and financial resources among rural households to install water-saving devices for efficient water use during drought	Technical/ Financial/ Behavioral	Medium	1. Installation of water-saving devices at the household level (high efficient toilets, toilet-tank displacement device/toilet dam, and low-flow faucet aerators and showerheads) as part of a pilot water-saving campaign. 2. Implementation of a water conservation awareness campaign to promote change in attitudes and behavior with regard to water management and use.
	1.1.3. Water-saving devices installed in homes.	– Lack of knowledge and financial resources among rural households to implement adaptive sanitation and purification measures	Technical/ Financial/ Behavioral	Medium	1. Implementation a pilot initiative using composting toilets that use little to no water as an alternative to flush toilets. 2. Implementation of a septic tank and drainfield maintenance program to reduce chances of water contamination during periods of prolonged droughts and torrential rains. 3. Septic tank sludge composting to reduce the amount of material that can contaminate ground and surface waters.
	1.1.4. Pilot sanitation and purification measures (e.g., sludge management and dry composting toilets) and other adaptive technologies for wastewater management to improve water quality.				

<p>1.1.5. Water sources and associated aquifer recharge areas protected and/or rehabilitated through reforestation, natural regeneration, and other protection and conservation measures.</p>	<p>- Lack of reliable and complete maps of the aquifers in northern Costa Rica prevent their effective protection and enhance water recharge</p>	<p>Technical</p>	<p>High</p>	<ol style="list-style-type: none"> 1. Identify, map, and delineate protective zones for water sources and associated aquifers, including aquifer recharge areas. 2. Implementation of protection and/or ecological rehabilitation measures to improve water supply, water quality, and reduce risks associated with floods and droughts. 3. Monitoring of ecological and hydrological variables to evaluate and improve the effectiveness of the rehabilitation activities (i.e., sustained water levels to cope with drought and prevent water contamination)
<p>1.2. The capacities of ASADAS' end-users to mainstream climate change adaptation into their livelihoods systems are strengthened.</p>	<p>- Lack of knowledge and skills among the ASADAS and end water users (i.e., local and indigenous communities) to reduce climate change impacts on water resources</p>	<p>Technical</p>	<p>Medium</p>	<ol style="list-style-type: none"> 1. Training for ASADAS and end water users directed to improving the use of water and sanitation as measures to their vulnerability to climate change
<p>1.3. Hydrometeorological information integrated into land use and production practices, and planning processes to increase resilience of rural communities to address water variability.</p>	<p>- Low capacity of AyA staff and the ASADAS board members to promote community-based-adaptation and reduce hydrological vulnerability</p>	<p>Technical</p>	<p>Medium</p>	<ol style="list-style-type: none"> 1. Training for AyA staff and the ASADAS board members to promote community-based solutions to reduce water resources vulnerability to climate change.
<p>1.3.1. Fifteen (15) new Automated Weather Stations (AWS) and Automated Flow Stations (AFS) installed to provide consistent and reliable environmental data in real time in the selected SEMUs.</p>	<p>- Limited number of hydroclimatological stations in the targeted area for the purpose of drought and flood risk management, forecasting, and early warning</p>	<p>Technical</p>	<p>Medium</p>	<ol style="list-style-type: none"> 1. Procurement and installation of fifteen (15) new AWS and AFS to cover gaps in the hydroclimatological network in Northern Costa Rica 2. Develop and operational plan for: a) data transmission management, and analysis; b) reporting; and c) maintenance of the installed AWS and AFS stations (AWS/AFS operation and maintenance will be assumed by the IMN). 3. Periodic reports to make data available to local users (ASADAS, and rural and indigenous communities/household members).
<p>1.3.2. Vulnerability Index, Adaptive Capacity Index developed and supporting the climate early warning and information system, and the Risk Management Plan for Potable Water and Sanitation (RAMPPWS).</p>	<p>- Lack of tools to assess risk and vulnerability at local scales to support local-level decision-making to reduce climate-related hydrological vulnerability.</p>	<p>Technical</p>	<p>Medium</p>	<ol style="list-style-type: none"> 1. Produce drought and flood risk maps for multiple risk scenarios at proper scales (projected variation in rainfall and temperature for 2016-2040, 2040-2070, and 2070-2100 time periods for the targeted area) 2. Develop and make available a Vulnerability Index and Adaptive Capacity Index for the targeted area considering social, economic, environmental, climate change, and policy/governance factors
<p>1.3.3. Information monitoring system for the AyA and the ASADAS' Management System (SAGIA) to track the impact of adaptation measures with the aim</p>	<p>- Lack of capacity by suppliers of potable water services (i.e., AyA and ASADAS) to monitor and assess the impact of climate change adaptation interventions</p>	<p>Technical</p>	<p>Medium</p>	<ol style="list-style-type: none"> 1. Develop information monitoring platforms to track the impact of the adaptation measures aiming to reduce the vulnerability to climate change of the ASADAS and rural communities

	to reduce the vulnerability of rural communities due to climate change, and articulated to national-level information systems	<ul style="list-style-type: none"> Limited participation of ASADAS and AyA in risk monitoring and management 	Technical	Medium	<p>2. Develop information management protocols to access and share information with the National System of Water Resources and Hydrometeorological National System.</p> <p>3. Provide technical support and training to the AyA and ASADAS staff for effective information monitoring management.</p> <p>1. Make available enhanced hydroclimatological information in the central CEWS (operated by the CNE, in coordination with the IMN), which will support the development of detailed risk scenarios based on precipitation, flow, and temperature thresholds and will serve as inputs to disseminate early warnings for floods and drought.</p> <p>2. Improve risk management by organizing, strengthening, and training ASADAS and AyA local staff, and local communities to prepare for and respond to emergencies of floods and drought, in coordination with local emergency committees, municipal authorities, the CNE, and the IMN.</p>
<p>Component 2: Mainstreaming of ecosystem-based adaptation into public and private sector policy and investments in the targeted area</p> <p>2.1. Ecosystem-based climate change adaptation measures are integrated into public and private sector policies, strategies, and investments related to rural community water-sourcing infrastructure and services</p>	<p>2.1.1. Four (4) participatory RMPPWS implemented within each target canton (SEMU 1: Guatuso, Upala, Los Chiles, and La Cruz; SEMU 2: Liberia and Cañas; SEMU 3: Santa Cruz, Nicoya, Hojancha, and Carrillo).</p> <p>2.1.2. The AyA and the CNE investments for the prioritized project area integrate climate change risks.</p> <p>2.1.3. Ten (10) livestock and agricultural producing companies adopt a voluntary fee system (Certified Agricultural Products and Voluntary</p>	<ul style="list-style-type: none"> Lack of consideration of climate change and water resources vulnerability in local Water Safety Plans Limited consideration of climate change and water resources vulnerability in water sector plans and policies Poor understanding and awareness about available PES schemes among agricultural and livestock producers 	Regulatory/ Institutional	High	<p>1. Development and implementation of four (4) RMPPWS, which incorporate climate change risk management emphasizing ecosystem-based adaptation, within each target canton.</p> <p>2. Synthesize lessons learned and experiences from the development and implementation of the four (4) RMPPWS and draft a national RMPPWS model.</p> <p>3. Disseminate and share the national model WSP with the private and public sectors through climate change adaptation forums to allow national level replication</p> <p>1. Review existing and planned AyA and CNE investments for the targeted SEMUs and assess the extent to which these incorporate measures to reduce vulnerability to climate change impacts, including drought and flooding.</p> <p>2. Develop a critical work path and guidelines for the integration of risk management strategies and climate change adaptation into AyA and CNE investments.</p> <p>3. Inform key local stakeholders about the adopted strategies to reduce risks and adapt to climate change.</p> <p>1. Implement a voluntary watershed payment system (PES scheme) for water and aquifer protection with 10 livestock and agricultural production companies as part of strategy to adapt to the negative effects of climate change</p>

<p>2.2. The purchasing and credit policies of at least 20 agricultural and livestock trading companies and five (5) financial institutions operating in the target region promote adoption of productive practices that help maintain ecosystem resilience to climate change.</p>	<p>2.1.4. Valuation modeling of ecosystem-based measures and economic valuation of ecosystem services support the integration of water-related risks and new ecosystem management practices within productive sectors (agriculture and livestock industry).</p>	<p>– Lack of tools available to assess the value of ecosystems services to encourage the public and private sectors to allocate resources for ecosystem/water resources protection and restoration</p>	<p>Technical</p>	<p>Medium</p>	<p>2. Certify agricultural production that includes ecosystems conservation and sustainable management as adaptation strategy for the sustain provision of potable water and for irrigation.</p> <p>1. Develop and run models to quantify ecosystem services and adaptation benefits using a spatially explicit model and economic valuation models.</p> <p>2. Share modeling results with stakeholders (AyA, ASADAS, local communities, and agriculture and livestock industries) and decision-makers to support decision-making regarding ecosystem-based adaptation and water-related risk management within productive landscapes in the target SEMUS.</p> <p>3. Train AyA and ASADAS technical staff in spatially explicit modeling and biodiversity and ecosystem services valuation.</p>
<p>2.2. The purchasing and credit policies of at least 20 agricultural and livestock trading companies and five (5) financial institutions operating in the target region promote adoption of productive practices that help maintain ecosystem resilience to climate change.</p>	<p>2.2.1. Farmers incorporate ecosystem-based climate change adaptation measures into their production processes making use of revised purchasing and credit policies of agricultural and livestock trading companies and financial institutions</p>	<p>– Limited consideration of climate change and water resources vulnerability in purchasing and credit policies</p>	<p>Regulatory/ Economic</p>	<p>Medium</p>	<p>1. Recommend options for developing incentives to promote adoption of ecosystem-based climate change adaptation measures by farmers</p> <p>2. Provide technical assistance and training for selected companies and financial institutions to adjust purchasing and credit policies with climate changes risks and incentives integrated</p> <p>3. Build awareness among farmers, including women farmers, about the new lines of credit and incentives to promote ecosystem-based adaptation.</p> <p>4. Document lessons learned/best practices with recommendations for companies and institutions for further improvement and for broader adoption</p>
<p>2.2. The purchasing and credit policies of at least 20 agricultural and livestock trading companies and five (5) financial institutions operating in the target region promote adoption of productive practices that help maintain ecosystem resilience to climate change.</p>	<p>2.2.2. Knowledge management system allows disseminating data, information, and toolkits to foster and mainstream ecosystem-based adaptation practices in other water-intensive productive sectors across the country.</p>	<p>– Lack of mechanisms to effectively communicate and replicate or mainstream successful adaptation practices, including ecosystem-based adaptation, in other hydrological vulnerable regions</p>	<p>Technical</p>	<p>Medium</p>	<p>1. Synthesize lessons learned and experiences that resulted from project implementation.</p> <p>2. Document experiences and approaches in ecosystem-based adaptation and climate change risk management.</p> <p>3. Identify knowledge-to-action gaps and needs of key stakeholders.</p> <p>4. Identify and/or develop information and knowledge sharing platforms.</p> <p>5. Make knowledge available to local, regional, and national interest groups, including the development of protocols for disseminating knowledge.</p>

8.14. Project Cycle Management Services

Stage	Country Office ²⁶	UNDP/GEF
Identification, Sourcing/Screening of Ideas, and Due Diligence	Identify project ideas as part of country programme/CPAP and UNDAF/CCA.	<ul style="list-style-type: none"> • Technical input to CCA/UNDAFs and CPAPs where appropriate. • Input on policy alignment between projects and programmes. • Provide information on substantive issues and specialized funding opportunities (SOFs). • Policy advisory services including identifying, accessing, combining and sequencing financing. • Verify potential eligibility of identified idea.
	Assist proponent to formulate project idea / prepare project idea paper (e.g. GEF PIF/PPG).	<p><i>Technical support:</i></p> <ul style="list-style-type: none"> • Research and development. • Provide up-front guidance. • Sourcing of technical expertise. • Verification of technical reports and project conceptualization. • Guidance on SOF expectations and requirements. • Training and capacity building for Country Offices.
	<p><i>Appraisal:</i></p> <ul style="list-style-type: none"> • Review and appraise project idea. • Undertake capacity assessments of implementing partner as per UNDP POPP. • Environmental screening of project as and when included in UNDP POPP. • Monitor project cycle milestones. 	<ul style="list-style-type: none"> • Provide detailed screening against technical, financial, social and risk criteria. • Determine likely eligibility against identified SOF.
	<p><i>Partners:</i></p> <ul style="list-style-type: none"> • Assist proponent to identify and negotiate with relevant partners, cofinanciers, etc. 	<ul style="list-style-type: none"> • Assist in identifying technical partners. • Validate partner technical abilities.
	<p><i>Obtain clearances:</i></p> <ul style="list-style-type: none"> • Government, UNDP, Implementing Partner, LPAC, cofinanciers, etc. 	<ul style="list-style-type: none"> • Obtain SOF clearances.
Project Development	<p><i>Initiation Plan:</i></p> <ul style="list-style-type: none"> • Management and financial oversight of Initiation Plan • Discuss management arrangements 	<ul style="list-style-type: none"> • Technical support, backstopping and troubleshooting. • Support discussions on management arrangements • Facilitate issuance of DOA
	<p><i>Project Document:</i></p> <ul style="list-style-type: none"> • Support project development, assist proponent to identify and negotiate with relevant partners, cofinanciers, etc. • Review, appraise, finalize Project Document. • Negotiate and obtain clearances and signatures – Government, UNDP, Implementing Partner, LPAC, cofinanciers, etc. • Respond to information requests, arrange revisions etc. 	<p><i>Technical support:</i></p> <ul style="list-style-type: none"> • Sourcing of technical expertise. • Verification of technical reports and project conceptualization. • Guidance on SOF expectations and requirements. • Negotiate and obtain clearances by SOF • Respond to information requests, arrange revisions etc. • Quality assurance and due diligence. • Facilitate issuance of DOA

²⁶ As per UNDP POPP with additional SOF requirements where relevant

Stage	Country Office ²⁶	UNDP/GEF
	<ul style="list-style-type: none"> Prepare operational and financial reports on development stage as needed. 	
<p><i>Key UNDP/GEF management performance indicators/targets for Project Development:</i></p> <p>1. Time between PIF approval to CEO endorsement for each project:</p> <ul style="list-style-type: none"> Target for GEF trust fund project: FSP = 18 months or less, MSP 12 months or less. Target for LDCF and SCCF: FSP/MSP = 12 months or less. <p>2. Time between CEO endorsement (or PAC for non GEF funded projects) to first disbursement for each project:</p> <ul style="list-style-type: none"> Target = 4 months or less 		
Project Oversight	<i>Management Oversight and support</i>	<i>Technical and SOF Oversight and support</i>
	<i>Project Launch/Inception Workshop</i> <ul style="list-style-type: none"> Preparation and coordination. 	<ul style="list-style-type: none"> Technical support in preparing TOR and verifying expertise for technical positions. Verification of technical validity / match with SOF expectations of inception report. Participate in Inception Workshop
	<i>Management arrangements:</i> <ul style="list-style-type: none"> Facilitate consolidation of the Project Management Unit, where relevant. Facilitate and support Project Board meetings as outlined in project document and agreed with UNDP RTA. Provide project assurance role if specified in project document. 	<ul style="list-style-type: none"> Technical input and support to TOR development. Troubleshooting support. Support in sourcing of potentially suitable candidates and subsequent review of CVs/recruitment process.
	<i>Annual WorkPlan:</i> <ul style="list-style-type: none"> Issuance of AWP. Monitor implementation of the annual work plan and timetable. 	<ul style="list-style-type: none"> Advisory services as required Review AWP, and clear for ASL where relevant.
	<i>Financial management:</i> <ul style="list-style-type: none"> Conduct budget revisions, verify expenditures, advance funds, issue combined delivery reports, ensure no over-expenditure of budget. Ensure necessary audits. 	<ul style="list-style-type: none"> Allocation of ASLs, based on cleared AWP's Return of unspent funds to donor Monitor projects to ensure activities funded by donor comply with agreements/ProDoes Oversight and monitoring to ensure financial transparency and clear reporting to the donor
	<i>Results Management:</i> <ul style="list-style-type: none"> Alignment: link project output to CPAP Outcome in project tree in Atlas, link CPAP outcome in project tree to UNDP Strategic Plan Environment and sustainable Development Key Result Area as outlined in project document during UNDP work planning in ERBM. Gender: In ATLAS, rate each output on a scale of 0-3 for gender relevance. Monitoring and reporting: Monitor project results, track result framework indicators, and co-financing where relevant. Monitor risks in Atlas and prepare annual APR/PIR report where required by donor and/or UNDP/GEF. Annual site visits – at least one site visit per year, report to be circulated no later than 2 weeks after visit completion. 	<ul style="list-style-type: none"> Advisory services as required. Quality assurance. Project visits – at least one technical support visit per year.

Stage	Country Office ²⁶	UNDP/GEF
	<p><i>Evaluation:</i></p> <ul style="list-style-type: none"> • Integrate project evaluations into CO evaluation plan. Identify synergies with country outcome evaluations. • Arrange mid-term, final, and other evaluations: prepare TOR, hire personnel, plan and facilitate mission / meetings / debriefing, circulate draft and final reports. • Participate as necessary in other evaluations. • Ensure tracking of committed and actual co financing as part of mid-term and final evaluations. • Prepare management response to project evaluations and post in UNDP ERC. 	<ul style="list-style-type: none"> • Technical support and analysis. • Quality assurance. • Compilation of lessons and consolidation of learning. • Dissemination of technical findings. • Participate as necessary in other SOF evaluations.
	<p><i>Project Closure:</i></p> <ul style="list-style-type: none"> • Final budget revision and financial closure (within 12 months after operational completion). • Final reports as required by donor and/or UNDP/GEF. 	<ul style="list-style-type: none"> • Advisory services as required. • Technical input. • Quality assurance.
<p><i>Key UNDP GEF management performance indicators/targets for Project Oversight:</i></p> <ol style="list-style-type: none"> 1. Each project aligned with country outcomes and UNDP Strategic Plan Environment and Sustainable Development key results, and included in Country Office Integrated Work Plan in the ERBM: <ul style="list-style-type: none"> • Target = 100% 2. Quality rating of annual APR/PIRs: Once completed and submitted, the quality of each project APR/PIR is rated by an external reviewer <ul style="list-style-type: none"> • Target = Rating of Satisfactory or above 3. Quality rating of Terminal Evaluations: Once completed, the quality of each terminal evaluation is rated by an external reviewer <ul style="list-style-type: none"> • Target = Rating of Satisfactory or above 4. Quality of results achieved by project as noted in terminal evaluation: the independent evaluator assigns an overall rating to the project. <ul style="list-style-type: none"> • Target = Satisfactory or above 		

**DESCRIPTION OF UNDP COUNTRY OFFICE
DIRECT PROJECT SUPPORT SERVICES**

Support services (insert description)	Schedule for the provision of the support services	Quantity and Type of reimburse- ment of UNDP LPL/ UPL	Cost to UNDP of providing such support services
1. Requesting Payment Process	Approximately 12 monthly transactions. Project duration of 60 months.	\$48.27 / Transaction	\$34754
2. Emission check	Approximately 1 monthly transaction. Project duration of 60 months.	\$18.15/ Transaction	\$1089
3. Recruitment of Consultants	Approximately 40 hires throughout project life	\$341.89/ Transaction	\$13675
4. Management Services Permanent Personnel : Personnel and Payroll Management and Banking Administration	Approximately a total of 5 permanent staff (Service contracts) per year of project duration (5).	\$615.79/ Transaction	\$15394
5. Calculation of missions - Claim Form F10	Approximately 1 monthly transaction. (61 transactions)	\$42.68/ Transaction	\$2603
6. Purchasing process (involving PAC)	Approximately 17 hires throughout project life	\$789.89/ Transaction	\$13430
7. Local procurement (lower price. without PAC)	Approximately 50 hires throughout project life	\$310.34/ Transaction	\$15517
8. Final Disposition / disposal of equipment	Approximately 10 transactions at the end of project life	\$353.87/ Transaction	\$3538
TOTAL			\$100,000

8.16. Signature Page

Country: Costa Rica

UNDAF Outcome(s):	<p>Area 4: Environmental sustainability and risk management.</p> <p>Outcome 4.2. The public and private sectors and civil society have advanced in mainstreaming and the implementation of national policies and strategies that consider environmental quality management and integrated natural resources management, the valuation of environmental goods and services, and the protection, conservation and sustainable use of biodiversity</p> <p>Outcome 4.3. The public and private sectors and civil society have mainstreamed into their policies and have developed the capacity to implement the National Plan for Risk Management and measures to for a better use of the land.</p>
<p>UNDP Strategic Plan <u>Primary</u> Outcome:</p> <p>UNDP Strategic Plan <u>Secondary</u> Outcome:</p>	<p>Outcome 1: Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded.</p> <p>Output 1.4. Scaled up action on climate change adaptation and mitigation across sectors which is funded and implemented</p>
Expected CP Outcome(s):	Addressing climate change impacts on water availability by promoting community-based adaptation in the project area.
Expected CPAP/UNDAF Output (s):	Outcome 5: A national climate change strategy that allows moving to a low carbon economy and reduce vulnerability to climate change implemented
Executing Entity/Implementing Partner:	United Nations Development Program (UNDP)
Implementing Entity/Responsible Partners:	United Nations Development Program (UNDP)

Programme Period:	60 month
Atlas Award ID:	00084063
Project ID:	00092255
PIMS #	5140
Start date:	April 2016
End Date	April 2021
Management Arrangements:	DIM
PAC Meeting Date:	20 Nov. 2015

Total resources required:	31,658,949
Total allocated resources:	31,658,949
• Other:	
o SCCF	5,000,000
o Government	13,650,000
o UNDP	450,000
o Other	4,808,949
In-kind contributions	
o Government	7,750,000

Agreed by (Government):

Olea Marta Pacheco Olea Marta Pacheco _____
NAME SIGNATURE Date/Month/Year

Agreed by (Executing Entity/Implementing Partner):

Yamileth Astorga Espelata Yamileth Astorga _____
NAME SIGNATURE Date/Month/Year



Agreed by (UNDP):

ALICE H. SHACKELFORD Alice Shackelford _____
NAME SIGNATURE Date/Month/Year



8.17. UNDP Strategic Plan: Key Focal Areas + Key result areas + Provisional Corporate Outcomes

The project is in line with UNDP's Strategic Plan 2014 – 2017, and the following outcomes:

- UNDP Strategic Plan Primary Outcome 4 - Countries have strengthened institutions to progressively deliver universal access to basic services. Output 4.2. Functions, financing and capacity of [national and] local level institutions enabled to deliver improved basic services and respond to priorities voiced by the public.
- UNDP Strategic Plan Primary Outcome 6 – Countries are able to reduce the likelihood of conflict and lower the risk of natural disasters, including from climate change. Output 6.1. Mechanisms in place to assess natural and man-made risks at national and sub-national levels; Output 6.2 Gender responsive disaster and climate risk management is integrated in the development planning and budgetary frameworks of key sectors (e.g. water, agriculture, health and education); Output 6.3. Effective institutional, legislative and policy frameworks in place to enhance the implementation of disaster and climate risk management measures at national and sub-national levels Output 6.4. Preparedness systems in place to effectively address the consequences of and response to natural hazards (e.g. geo-physical and climate related) and man-made crisis at all levels of government and community.

