Ministry of Environment and Energy
United Nations Development Program (UNDP)
National Institute of Aqueducts and Sewers (AyA)

Project Strengthening the Capacities of Rural Water Supply Associations (ASADAS) to face climate change risks in communities with water stress in Northern Costa Rica

#00092255

Product 3

Final report

Midterm evaluation (MTR)

Evaluating team

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International Evaluator

San Jose of Costa Rica
October 4, 2018

i. Basic information

Name of the Project: Project Strengthening the Capacities of Rural Aqueduct Associations (ASADAS) to face climate change risks in communities with water stress in Northern Costa Rica

UNDP ID (PIMS #): 5140

GEF ID (PIMS #): 6945

Execution period of the RMT: July 30, 2018 - September 24, 2018.

Report date : September 06, 2018

Territorial framework covered by the Project: Chorotega Region and Huetar Norte Region (border cantons Guatuso, Los Chiles and Upala)

Operational Focal Area GEF / Strategic Program: Climate Change

Executing agency / Implementing partner and other partners of the Project: Costa Rican Institute of Aqueducts and Sewers (AyA) **. National Meteorological Institute (IMN)**

Name of the Individual Contractor : Ronny Muñoz, International Evaluator (Leader).

Thanks:

The evaluator expresses his gratitude to the institutions, staff and other people consulted , for their collaboration and contributions made . Program staff of the United Nations Costa Rica, Costa Rican and l aqueducts and Sewers and Systems Administrators Association of Aqueducts and Sewers. E specialmente to Yamileth Astorga, President of ecutiv to AyA; Alice H. Shackelford , Resident of UNDP ; Cecilia Martínez Artavia , Deputy Manager of Communal Systems of AyA ; Krissia Rojas Quirós , Assistant Representative of UNDP ; Rodolfo Ramírez , Director of the UEM of management of ASADAS AyA ; Kifah Sasa Marín , Program Officer of Environment of UNDPand Gerardo Quir or s , Coordinator of the Project Team (UNDP). Liany Alfaro Garro, Head Office Acueductos Communal O FA Regional Chorotegan (O _ CH - AyA RA) and Vilma Castle, Chief Regional Office Acueductos Huetar Comunales North (ORA _ HN - AYA). As well as the staff of the Project Management Unit: Ingrid Hernández , Communication, Monitoring and Evaluation Officer ; Jairo Serna , Field Officer Huetar Norte Region ; Marcela Vargas , Financial Administrative Assistant ; Natalia Meza , Field Officer of the Chorotega Region and Rafaella Sánchez Mora , a sesora Gender Specialist .

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iii. Acronyms and Abbreviations

AED	Business Association for Development
AFS	Automated flow stations
ANC	Unaccounted Water
ARESEP	Public Services Regulatory Authority
ASADASS	Administrative Associations of Communal Aqueducts
AWS	Automated weather stations
Governess	National Institute of Aqueducts and Sewers
DC	Climate change
CENAT	National High Technology Center
CEWS	Climate information and early warning system
UNFCCC	United Nations Framework on Climate Change
CNE	National Emergency Commission
CODEFORSA	Forestry Development of San Carlos
CONIMBOCO	Commission for the Sustainable Management of the Coastal Aquifer and Nimboyores
CTP	Professional technical school
CTR	Revisions of the Tripartite Commission
GIVES	Water Management
DCC	Climate Change Directorate
DIM	Direct Implementing Modality
ENCC	National Climate Change Strategy
GEF	Fund for the Global Environment
FONAFIFO	National Fund for Forest Financing
GEF	Global Environment Facility
IDESPO	Social Studies in Population
IMN	National Meteorological Institute
INAMU	National Institute of Women
INDER	Institute of Rural Development
JP	Project Board
KMS	Knowledge management system
LATINOSAN	Latin American and Caribbean Sanitation Conference
LSC	Local Steering Committee
ME	Monitoring and Evaluation Plan
MIDEPLAN	Ministry of National Planning and Economic Policy
MINAE	Ministry of Environment and Energy
MINSALUD	Ministry of Health
ML	Logic frame
MOCUPP	Monitoring of land use change within productive landscapes linked to land tenure
MTR	Mid Term Review
ODS	Sustainable Development Goals
NGO	Non-governmental organizations
ORACH	Chorotega Regional Office
ORACS	Local Offices of AyA
PC	Project coordinator

HDPE	High density polyethylene
PIAA	Integrated Water Supply Plan for Guanacaste
PIR	Project Implementation reports
PIU	Implementation Unit (Management) of the Project
PME	Improvement and Efficiency Plans
UNDP	United Nations Development Program
POA	Annual plans
PPD	UNDP Small Grants Program
PRODOC	Project Document
PSA	water security plans
RMPPWS	Drinking Water and Sanitation Risk Management Plan
SAGA	ASADAS Management System
SAT	Early Warning System
SCCF	Special Climate Change Fund
SENARA	National Service of Irrigation and Drainage of Groundwater
SINAC	National System of Conservation Areas
SINAMEC	National Climate Change Metric System
TNN	Northern Territory - North
TPRH	Protection of Water Resources
UCR	Costa Rica university
ASADAS UEN	Strategic ASADABusiness Unit
UGP	Project Management Unit
UNA	National University of Costa Rica
UNESCO	United Nations Organization for Education, Science and Culture
USEDES	Development Services Unit

1. EXECUTIVE SUMMARY

1.1. Project Table

Project's name	**Conservation, sustainable use of biodiversity and maintenance of ecosystem services of protected wetlands of international importance**		
5140	5140	PIF approval date	October 15, 2014
GEF ID	PIMS #: 6945	Authorization date CEO:	January 14, 2016
ATLAS Business Unit, File N ° -ID of the project (Award # pro.ID)	00092255	Document signature date Project (ProDoc) (Start date of the project)	February 1, 2016
Country or Countries	Costa Rica	Project director hiring date	May 2016
Region:	Chorotega Region and Huetar Norte Region (border cantons Guatuso, Los Chiles and Upala	Date inception workshop	August 8, 2016
AREA acting	Adaptation	End date of Midterm Review	September 2, 2018
Strategic objective of the area of action of the GEF	Climate change	Expected completion date	March 31, 2021
Fiduciary fund (Indicate GEEF TF, LDCF, SCCF, NPIF)	SCCF	In case of revision new proposed completion date:	Not established
Executing agency	United Nations Development Program (UNDP)		
Other Partners in the execution	National Institute of Aqueducts and Sewers (AyA)		
Project financing	To the date of authorization of the CEO (US $)	At the date of the Mid-Term Review (US $) (*)	
[1] Financing of the GEF:	5,000,000.00	2,840,532.00	
[2] UNDP contribution:	450,000.00	(*)	
[3] Government:	13,650,000.00	5,051,000.00 (*)	
[4] Other partners:	4,808,949.00	1,528,423.00 (*)	
[15] Total co-financed (2 + 3 + 4)	17,188,318.00	6,579,423.00 (*)	
PROJECT TOTAL COST (1 + 5)	20,894,191.00	9,419,955.00 (*)	

Source: Project management unit

(*) The value can change increases when the information on cofinaciamientos is completed.

1.2. Project description Summary

The project seeks to support the improvement of drinking water supply and promote sustainable water practices among users of ASADAS and productive sectors through the incorporation of adaptation measures based on ecosystems and with broad community participation to address the hydrological vulnerability related to climate in the north of Costa Rica, particularly in the Chorotega Region and the North-North Territory. It is expected to generate community infrastructure and technical capacities to meet the projected changes in access to water and mainstream adaptation based on ecosystems within the policy and investments of the public and private sectors.

1.3. Project Progress Summary

The project is in progress with a satisfactory assessment and is on the way to achieving the goals and achieving its development objective "Improving water supply and promote sustainable water practices for end users and productive sectors promoting measures based on community and ecosystems in ASADAS to address the climatic hydrological vulnerability projected in the north of Costa Rica . " Through its contribution, the continuous availability of water for all the ASADAS has been increased by 24.20%, with only 0.5% reaching the goal of achieving continuous availability of water for all the ASADAS of at least 5 months; with which it has been possible to improve the services to 36,000 people of 22 ASADAS. On the other hand, there is evidence of an improvement in the availability of water per capita for the smaller categories, so that the goal is being reached at the end of the project, which is that the availability of water per capita is maintained or improved.

1.4. Summary table of assessments and achievements of the RMT

Table. Summary of assessments and achievements of the RMT of the project Conservation, sustainable use of biodiversity and maintenance of ecosystem services of protected wetlands of international importance

Parameter	Valuation of the RMT	Description of the achievement
Project Strategy	N / A	The project has been relevant to the national and institutional needs of the AyA and the ASADAS. It has provided a response to the national system of ASADAS, with the purpose of overcoming the barriers presented to these entities for the attention of the priorities of drinking water supply in areas of water stress and climate change in the coverage area. It has contributed to the implementation of national policies on Climate Change and the National Policy on water management and supply to the communities of Northern Costa Rica.

Progress in achieving results	Objective:	The project has presented a highly satisfactory assessment and is on track to achieve the goals and achievements of its developmental objective "To improve water supply and promote sustainable water practices for end users and productive sectors by promoting community-based measures and ecosystems in ASADAS to address the climatic hydrological vulnerability projected in the north of Costa Rica. "Through its contribution, the continuous availability of water for all the ASADAS has been increased by 24.20%, being only 0.5% to achieve the goal of achieving continuous availability of water for all ASADAS of at least 5 months; with which it has been possible to improve the services to 36,000 people of 118 ASADAS. On the other hand, there has been evidence of an improvement in the availability of water per capita for the smaller categories, which is why it is on track to reach the goal at the end of the project, which is that the availability of water per capita is maintained or improvemed.
	Outcome1.1. Highly Satisfactory	There have been installed 94% of the 10,200 micro meters and 60 macro meters, distributed among 118 ASADAS. The emergency caused by Hurricane Otto was attended by supporting six ASADAS, which allowed a quick recovery of the systems and benefited 9500 people. On the occasion of the impact of the Tropical Storm Nate on aqueducts in the Chorotega region, the ORAC was supported in the evaluation of affected systems, the preparation of investment plans for recovery, as well as the contribution in material and technical assistance for the rehabilitation of eight aqueduct systems in this region. Climate risk maps have been drawn up for all cantons of the project and guidelines for their use are in process. Technical studies have been elaborated to improve the infrastructure in 16 ASADAS, of which 14 are under review by the AyA, which is a tool that allows the ASADAS to obtain financial support, either through the INDER, other donors or banking for development of the improvement investments identified. This requires both technical monitoring and the political-administrative management of the managers of

		AyA and INDER. An INDER - AyA work platform has been facilitated to agree on a "Guide for the Development of Aqueduct and Sewer Projects (ASADAS)", a document that constitutes an interinstitutional technical standard that aims to standardize the formulation processes of ASADAS infrastructure projects between the AyA-INDER. The ASADAS have received training to improve the water collection, storage and distribution systems. In addition, it has finalized the diagnosis of water use practices and sanitation habits (developed by IDESPO), which will serve as an input for the design of information tools aimed at raising awareness about the rational use of water among users, which includes the promotion of use and installationof water saving devices . Baseline has been updated to define a new support in infrastructure to the ASADAS and installation of rainwater collection systems for non-potable uses in public buildings (educational centers, government offices), using as reference the system installed in the Committee of the Red Cross of Hojancha. In review of hydrogeological studies in **37 sources (springs and wells)** of 25 TNN ASADAS hace been elaborated for the identification of source protection zones. As part of the monitoring of the project, studies have been carried out to detect agrochemicals in the springs located in areas at risk of contamination by the extensive pineapple cultivation in Los Chiles , Upala and Guatuso . Several tools have been developed, among them the "Methodology of Improvement and Efficiency (PME) for ASADAS", applicable at national level. With the Professional Technical College (CTP) of Upala and the CTP of Guatuso , a program of restoration of areas of protection of springs has been developed, which is used as environmental education with a focus on Climate Change adaptation of students, members of A SADAS and the community.
	Outcome 1.2. Highly Satisfactory	To the date 1,629 members of the community, 423 children and 1,206 adults (60% men and 40% women) have been trained ; including household

		people, administrators and plumbers of ASADAS, producers, students and fishermen have received training in climate change, water resources management, water quality, construction of chlorinators, sanitation, reforestation and / or administrative management , using the methodology training of trainers . The training has promoted associativity and collaboration among peers; it has been highly valued by the officials of the ASADAS. With the support of UNDP, the virtual training platform has been consolidated through the web capacitacionasadas.com, which brings together different training offers for the ASADAS. There is also a preliminary proposal of an information software that will allow to promote an adequate planning in the ASADAS. The tools that have been generated, promote to build a change of the management model of the ASADAS, their capabilities for greater efficiency and effectiveness, understanding the impacts of climate change on water supply and resources and the application of good production practices to reduce the impact negative of its activities. The project has generated different conditions to increase the substantive participation of women. In addition, it has strengthened the institutional framework of the gender approach , through the Gender Equality Policy 2018-2033 of the AyA and its respective first Action Plan 2018-2022. Also has facilitated the revision and gender analysis in the Comprehensive Draft Regulations Reform Project ASADAS.
	Outcome 1.3. Highly Satisfactory	Ten meteorological stations and 5 hydrological stations have been installed in strategic locations. The meteorological information generated by the installed stations is available to local users (ASADAS, rural and indigenous communities / household members) on the website of automatic stations of the National Meteorological Institute (IMN). The development of the operational plan of the stations and the submission of periodic reports are pending. The vulnerability indexes were developed by IMN and the Project has used them to develop 16

		climate risk maps of the cantons. The risk management guidelines for the Ecosystem-based Water Security Plans that are in development will serve as an index of adaptive capacity. A tool is developed for the geospatial analysis of threats related to agricultural production and associated with risk factors for water resources, such as the intensive use of pesticides and fertilizers in pineapple cultivation and other productive activities . A program of Operational Control of water quality has been implemented in 10 ASADAS of the cantons of Nicoya and Hojancha, using the equipment acquired and delivered as support to the Development Services Unit (USEDES) of the Communal Water League. A program of monitoring for early detection of the presence of agrochemical in water sources has been put under development with the participation of 22 ASADAS in the TNN . The hydrological and meteorological stations contributed by the project, will provide n information for the operation of the early warning systems (SAT) in the project areas. The SAT has been advancing with the development, together with the communal risk management committees in Upala .
	Outcome 2.1. Satisfactory	The methodology and format of the Drinking Water and Sanitation Risk Management Plan (RMPPWS) has been developed in consultation with a technical committee (AyA, CNE, ARESEP, UCR and UNA). And other related actions: 1) 2 strategic plans to implement EbA for the protection of the Biological Corridor "Ruta de los Maleku", achieved with the participation of 6 ASADAS of the North-North ASADAS Union in the implementation of a community reforestation campaign for the protection of water resources; 2) 4 Water Security plans; 3) Acquisition by 3 ASADAS of 75.8 hectares of protected forest lands that includes 5 water sources; 4) 5) Seven ASADAS participated in the development of local management and adaptation plans, including fire management; 6) A geospatial tool based on

		Google earth to analyze the dangers of water resources related to climate change, agricultural production and physical vulnerabilities; and 7) high resolution maps on drought and flood risk for 16 cantons. The AyA has made the following investments: 1) A community aqueduct has been built; 2) Six hydrological and water availability studies were carried out; and 3) 13 wells were drilled. In the CNE: 1) hydrogeological studies on new water sources have been conducted for ASADAS affected by drought; 2) with the support of the project ASADAS GEF, the emergency was attended to and the infrastructure rehabilitated in 18 ASADAS in the zones of hurricane Otto in North-North and the Chorotega region and 10 ASADAS in the Chorotega region in the areas affected by the tropical Nate storm. Progress has been made in: 1) in the analysis of the viability of the product; 2) A feasibility study and a proposal for the creation of a National Fund for ASADAS was completed for the purchase of water recharge lands to protect their sources, 3) "Water Resources Protection Tariff (TPRH) has been supported. ", Which proposes a model to implement a tariff for the paymentof adaptation activities in rural aqueducts. Through the project, the need to model assessment of adaptation measures is analyzed with other actors.
	Outcome 2.2. Moderately Satisfactory	Progress has been made with TESCO, CAPA and FYFES, to define purchasing and credit policies and mechanisms, and approaches have been made with the Business Association for Development (AED) and with the regional Tourism Chambers to review the implementation model and the development of a scheme of use for the fair trade prize to support campaigns for the regeneration of vegetation cover in areas of water importance (sources of ASADAS) and construction and maintenance of biological corridors. Publications of the tools that the project has developed have been shared and a website linked to the UNDP server is built to be a repository of all the information.

Project execution and adaptive management	Highly satisfactory	The evaluation of the execution of the Project and adaptive management is Highly Satisfactory, because the implementation of most of the components have been leading to effective and efficient execution and adaptive management. The project has managed to achieve the proposed results. Annual work planning has been participatory and supports management. It has been efficient in the level of budgetary execution and contribution of the counterpart of co - financing. Monitoring has supported execution and accountability and management by results. In general, the involvement of stakeholders is positive at all levels, to achieve the results of the project . The general appropriation is high in all levels of management of the AyA involved and shows great satisfaction with the management of the project. The level of information been good to and useful for the strengthening of institutional capacities in water management ;at the level of allowed ASADAS has generated greater awareness about water resources and address climate change risks. The communication has been timely and of quality allowing processes fluidity; Through a more horizontal management of the project, the efficiency of the work teams has been favored. Corrective actions are required in the area of work planning.
Sustainability	Sustainability is likely (P)	Sustainability is likely (P), due to the strength of the institutionality of the community management of the country and the progress of the project in the development of capacities in the ASADAS, for the improvement and efficiency in the provision of the service and the adaptation to the climate change.

1.5. Summary of conclusions

The project is visionary to address the problems facing the ASADAS, presenting a strategy and design that correspond to the national policies and needs of the territories of the North of the country with water stress and threats of climate change; At the same time, the logical framework is aligned with the development objective. The execution strategy favored the adequate progress in achieving the results. The project presents

satisfactory progress, has contributed with the implementation of climate change policies and community management of water services, increasing the continuous availability of water for all the ASADAS by 24.20%, improving the service to 36,000 people of 118 ASADAS, and an improvement in water availability per capita. Has generated a positive impact on changing attitudes towards water resources; the management capacity and quality of the service and the financial and investment capacity of the ASADAS; strengthening its resilience to climate change. The Project has made efforts to achieve the officialization and standardization of technical studies, advance with economic incentives for livestock and agricultural sectors. Has generated outstanding public policy instruments such as gender policy in the AyA and has proposed amendment to the regulations, as well as other tools that also have contributed to changing the management model ASADAS, including institutional transformation; has improved capabilities of AyA officials and ASADAS, facilitating integration processes of ASADAS and has supported initiatives associations of ASADAS, has strengthened community water management to climate change, has contributed to build credibility in the AyA and the ASADAS policy, related to issues of integration, partnership and climate change. The geohydrological studies, investment and detection of agrochemicals in the headwaters to verify water quality, as the project has funded represent highly rated instruments that strengthen water governance because they reduce scientific uncertainty and social concern. Sustainability is likely (P) and the project can be linked to management spaces for climate change policies and ensure that their actions contribute to the national metric.

1.6. Summary of Recommendations

The recommendations are directed in a particular way and separately to AyA and the UGP. At the level of AyA, a reinforcement of the AyA institutionality is recommended from the regional offices, as a future input for the sustainability of the results. Management before public entities to speed procedures that limit concessions and enabling infrastructure (MINAE) and the formalization of the Guidelines for Project Development of Aqueducts and Sewers (INDER). Strengthening of the supply of offers in the Web or capacitacionasadas.com, generating a document of received, state and operation of infrastructure and equipment. The disclosure of successful experiences for the promotion of the processes for integration.

At the level of the Project Management Unit, it must manage its incorporation into the "Climate Change Committee" and the "Interministerial Technical Committee"; and register in the National Climate Change Metrics System (SINAMEC). To follow up on beneficiary ASADAS and IMN training on the use of meteorological data. To conduct agrochemical screening studies at least once a year. To establish a roadmap to achieve results on "economic incentives for livestock and agricultural sectors to adopt water conservation production practices to reduce vulnerability to climate change" and products on "Installed water saving devices" and the "Pilot of sanitation and purification and other adaptive technologies" in the year 2019. To strengthen the work of associations of ASADAS and the financing of actions for the promotion of the integration of ASADAS. To modify the logical framework including the results on the tools and instruments generated and the mainstreaming of the gender approach and update the values of the gender matrix. Disclose the experiences and results.

2. INTRODUCTION

2.1 Purposes and objectives of the RMT

The Medium Term Review (MTR) requested by the United Nations Development Program, aimed at "Strengthening the Capacities of Rural Aqueduct Associations (ASADAS) to face climate change risks in communities with water stress in the North from Costa Rica". For which you plan as specific objectives:

- Evaluate the progress in the achievement of the objectives and outcomes of the Project that were raised in the Project Document (PRODOC)
- Analyze the signs of success or failure in order to identify any change that is necessary to reorient the Project and achieve the desired results.
- Review the Project's strategy and risks associated with its sustainability.
- Analyze the progress of the Project in relation to the Project strategy, the execution of the Project and adaptive management, and the four sustainability factors.

The RMT answered the general question and the two complementary questions raised in its design. See Figure 2.1.

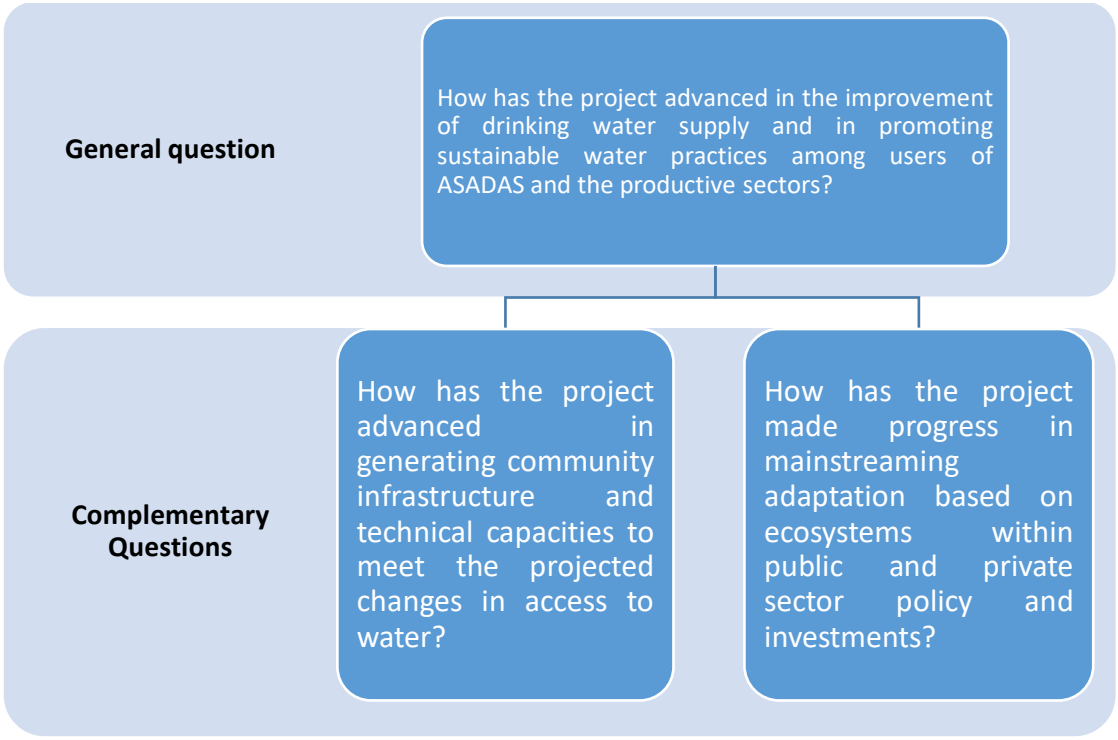


Figure 2.1 .: Interrogations of the Mid-term Review.

2.2 Scope and Methodology

2.2.1 Principles of design and execution of the RMT

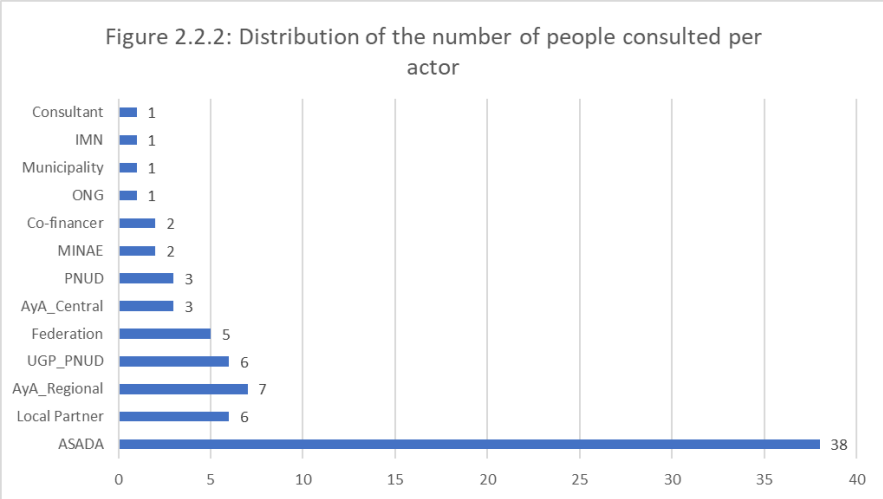
As requested in the Terms of Reference (annex 6.1.), The Mid-Term Review (RMT) was guided by the policies, guidelines, rules and evaluation procedures of the UNDP and the GEF, specifically the " Guide for the Realization of the Mid-Term Review in Projects Supported by UNDP and Funded by the GEF ". It has contemplated the evaluation of the four categories of progress of the Project (point 4): 1) Project Strategy, 2) Progress towards achieving results, 3) Execution of the Project and adaptive management and 4) Analysis of the Sustainability criteria in its four dimensions (financial, socioeconomic, governance and institutional and environmental framework). In annex 6.2., The information requested in the evaluation matrix is included on the criteria, indicators, sources of verification and methodological proposal.

2.2.2 RMT approach and data collection methods

The RMT considered a formative, participative and collaborative approach. The field mission have included meetings and visits in the City of San José and the two regions where the Project is carried out (see itinerary in Annex 6.3) Through open and semi-structured interviews, individual and group, a total of 76 people were consulted (see annex 6.4), list of people and actors consulted) that represented various institutions and actors. (See graphic 2.2.2.). The general questionnaire model used for data collection is included in Annex 6.5. and the documentation consulted in annex 6.6.

In addition to the interviews, two workshops were held, one with officials of the Chorotega Regional Office (ORACH) and another with the ASADAof Artola . To know their perception about the importance and the progress of the Proyecto ASADAS[1] and its contribution to improve the supply of drinking water and promote sustainable water practices among users of ASADAS and the productive sectors.

[1] As the Project Strengthening the Capacities of Rural Aqueduct Associations (ASADAS) to face climate change risks in communities with water stress in Northern Costa Rica is known.



The assessment of progress, execution and sustainability was guided by the specifications of the methodological guide[2] of RMT (UNDP / GEF), the criteria and scales indicated for each assessment. See in annex 6.7.In Annex 6.12. The change audit table is shown.

2.2.3 Limitations of the RMT

There are no limitations when performing the RMT, in the understanding that the evaluator had free access to the information sources, which were abundant to carry out the evaluation process. The field mission permitted substantive elements or to assess the level of progress of the project on the ground, being able to obtain primary evidence and the experience and subjectivities of the actors. In addition, the evaluator had sufficient and necessary independence to carry out the external evaluation.

2.2.4 Structure of the MTR report

The structure of the report corresponds to what is stated in Annex B of the TOR (Annex 6.1.) "Guidelines on the content of a report of Mid Term Examination". Corresponding to six chapters:

1. Executive Summary
2. Introduction
3. Description of the project and context
4. Proven facts
5. Conclusions and recommendations
6. Annexes

[2] Guidance for Conducting the Mid Term Examination in projects supported by UNDP and funded by the GEF (This document can be found at: http://web.undp.org/evaluation/documents/guidance/GEF/mid-term/Guidance_Midterm%20Review%20_SP_2014.pdf).

3 DESCRIPTION OF THE PROJECT AND CONTEXT

3.1 Development context: environmental, socio-economic, institutional and political factors relevant to the objective and scope of the Project

Environmental context: Costa Rica already experiences the effects of climate change. The climate change scenarios suggest that by the year 2080 annual precipitation will be reduced by up to 65% in this region. In the short term, it is expected that rainfall will decrease by 15% in 2020 and 35% by 2050. Alterations in the hydrological cycle modify the intensity, volume, duration and distribution of rainfall, with the consequent increase in floods and drought. These extreme conditions will exacerbate climate stress and water scarcity in some areas, recreating the typical conditions of semi-arid zones. If pressures driven by climate change are not addressed, the region will continue to face significant water shortages and the severe economic impact on the livelihoods of local communities and productive sectors.

- **Socioeconomic context:** The communities of the target area are increasingly vulnerable to climate variability, therefore, water supply is threatened by scarcity as a result of the impact of climate change. The situation of water stress may be affected in the future with an increase in water demand. The excessive consumption of agriculture, tourism and the development sectors affects the availability and quality of water for human consumption. In another direction, storms and hurricanes cause floods, and together with the degradation of land and the environment, the country is deeply affected socially and economically.

  In 2014 the Guanacaste area experienced a water shortage crisis which led to a state of emergency by the presidential palace. In the year 2017, this zone and the North - North territories were affected by Tropical Storm Nate. According to data from the National Commission for Risk Prevention and Emergency Response (CNE), the adverse effects caused by the tropical storm Nate in 2017 totaled US $ 577 million, equivalent to 1% of GDP for that year. The losses recorded include human and animal lives, as well as destruction of roads and bridges, impacts on housing, and more than 120,000 hectares for the production of cane, coffee, rice, beans, fruits and vegetables.

- **Legal and institutional context:** In Costa Rica, the associations of communal aqueducts (ASADAS), through delegation agreements with the National Institute of Aqueducts and Sewers (AyA), provide drinking water and sanitation services to 28.7% of the country's population, mainly in rural areas. suburban and rural communities.

  The provision of potable water and sanitation services by delegation is based on Article 2, paragraph g) of the Constitutive Law of the Costa Rican Institute of Aqueducts and Sewers (Law 2726), and is regulated by the Regulation of Associations of Rural Aqueducts (Executive Decree No. 32529-S-MINAE of February 2, 2005).

  The ASADAS represent a form of free and democratic citizen participation that goes beyond the provision of services related to water; They reinforce the identity of local communities, serve as a mechanism to defend water resources and exercise the human right to universal access to water.

  In the current context, the ASADAS, also play a relevant role within the institutional framework called to develop actions for adaptation to climate change, with the aim of reducing the vulnerability of rural populations.

However, they need to develop the necessary skills and have access to knowledge, tools and adequate investment, in order to cope with the shortage of water supply due to climate change.

3.2 Problems that the Project intended to address: threats and barriers

3.2.1 Threats

With the actions of the project it is proposed to face the threats[3] effect of climate change, on people's livelihoods. As are the increase in floods, water scarcity and severe economic impact to local communities and productive sectors; as well as the barriers that must be overcome so that the ASADAS can be strengthened in the face of the challenges of climate change.

3.2.2 Barriers

The long-term solution to mitigate threats of water scarcity to local livelihoods is to establish a comprehensive approach to water supply management and demand that takes climate change into account. However, some of the barriers that must be overcome in order for the ASADAS to be strengthened in the face of the challenges of climate change are:

1. Lack of knowledge and access to financing for storage infrastructure and distribution of resilient water collection, efficient technologies for water use in the home. Lack of information on precise locations and characters of aquifers (mapping) to effectively manage the demand and use of water and design strategies to conserve water during periods of extreme drought.
2. Limited capacity and knowledge among local stakeholders to adopt sustainable practices of water use and reduce their vulnerability to climate change and lack of integration of climate risk responses in extension services
3. The incomplete hydroclimatological network and the poor climate information and early warning system limit the capacity of rural ASADAS and local communities to implement timely mitigation measures.
4. Lack of awareness among policymakers and policy makers about the social, economic and environmental implications of the vulnerability of water resources to climate change. Lack of capacity to integrate climate risks into water and sanitation management plans at subnational level (canton). Lack of knowledge and experience to adopt payment practices for ecosystem services in the water sector
5. The lack of economic incentives for livestock and agricultural sectors to adopt water conservation production practices to reduce vulnerability to climate change.

3.3 Project strategy and description

The Project Strengthening the Capacities of Rural Aqueduct Associations (ASADAS) to face climate change risks in communities with water stress in the North of Costa Rica , aims to support the improvement of drinking water supply and promote sustainable water practices among users of ASADAS and the productive sectors through the incorporation of adaptation measures based on ecosystems and with broad community

[3] Not defined explicitly in the PRODOC.

participation to address the hydrological vulnerability related to climate in northern Costa Rica, particularly in the cantons of Guanacaste and Alajuela.

Includes components[4] , through which it is expected to achieve the following results:

a) **Component 1:** Generate community infrastructure and technical capacities to meet the projected changes in access to water

b) **Component 2:** Mainstream adaptation based on ecosystems within public and private sector policy and investments

The duration of the project is 5 years; started operations in May 2016, is planned for five years. It has GEF financing of US $ 5,000,000 and a total project budget of US $ 31,658,949. In addition to the UNDP and the AyA, interested parties include :

1. Ministry of Environment and Energy (MINAE)
2. Administrative Associations of Communal Aqueducts (ASADAS)
3. National Fund for Forest Financing (FONAFIFO)
4. Agricultural production sector
5. National Meteorological Institute (IMN)
6. National System of Conservation Areas (SINAC)
7. National Emergency Commission (CNE)
8. Local governments
9. The local committees
10. Universities

3.4 Project Execution Mechanisms

El The project is implemented and executed by UNDP[5] by decision of the government of Costa Rica (GoCR) under the modality of direct implementation (DIM) by the Costa Rican Institute of Aqueducts and Sewers (AyA), with the participation of the ASADAS Associations, institutional actors, of international cooperation, sector private sector and civil society.

It is structured at the national level with a general direction made through the Project Board as the highest body responsible for making management decisions and advising the Coordinator. In which the UNDP assumes the role of the Executive and the AyA the role of the Beneficiary.

UNDP, as well as Implementing Partner [6] , provides with the participation of the UNDP Sustainable Development Officer of the Country Office, supervision and guarantee of the project. Which account

[4] In Annex 1, there is the project results framework taken from PRODOC, where Objective, components, results, indicators, means of verification, risks and assumptions are detailed.

[5] The role of UNDP in this project is double .

[6] Provides project cycle management services as defined by the GEF Council.

for its execution with a Project Management Unit led by a coordinator who will manage the execution of the project.

The operation of the implementation is carried out by the Implementation Unit (Management) of the Project (PIU). The execution is led by a team led by a Project Coordinator (PC), a technical team composed of four specialists[7], a field consultant in the Chorotega Region, a consultant for Adaptation to CC, a biodiversity consultant, a communication monitoring and evaluation consultant and an administrative and financial assistant based in San Jose, Costa Rica. A vancacy is expected to be filled for December 2018 for the current lack of field consultant for the North - North region.

In addition, the project received technical support from contracted consultants, non-governmental organizations (NGOs) and experts from universities.

3.5 Project execution deadlines and milestones to be met during its development

The project began operations in August 2016 and is planned for five years of execution, so it is currently in its third year and if no extension is required it would be ending in March 2021. PRODOC establishes a series of goals for the project achievement of results and products, which represent milestones to be met during its development in relation to its results. The key moments from the point of view of their management are indicated for the proposed products. See table 3.5.

Table 3.5: Milestones to be met during its development.

Milestones	Years				
	one	two	3	4	5
Strengthened measurement systems to track the water supply					■
Water collection systems			■		
Installed water saving devices			■		
Pilot of sanitation and purification and other adaptive technologies				■	
Water sources and associated recharge areas of protected aquifers and / or rehabilitated				■	
Training in climate change					■
New AWS and AFS installed					■
Vulnerability index, adaptive capacity index			■		
Information monitoring system for Governess and ASADAS SAGA to track the impact of adaptation measures					■
Alert system and early climate information on climate-related risks and vulnerabilities					■
RMPPWS participatory implemented inside every canton objective					■
Investments of Governess and CNE			■		
Livestock and agricultural production companies adopt a voluntary rate system					■

[7] At the time of the evaluation: Biodiversity, Climate change, gender and human rights, Disaster risk management.

Milestones	Years				
	one	two	3	4	5
Models for the valuation of adaptation measures based on ecosystems and the economic valuation of ecosystem services					
Farmers incorporate adaptation measures to climate change based on ecosystems					
Knowledge management system					

Source: Own elaboration, based on point 4.2. of PRODOC

3.6 Main stakeholders: List of key stakeholders

The main national actors identified in the PRODOC are the Ministry of Environment and Energy (MINAE), the National Institute of Aqueducts and Sewers (AyA), the Ministry of Agriculture and Livestock (MAG), the Ministry of Health (MS), the Associations Administrators of Communal Aqueducts (ASADAS), the National Forestry Financing Fund (FONAFIFO), the Agricultural Production Sector, the National Meteorological Institute (IMN), the National Institute of Women (INAMU), the National Irrigation and Drainage Service of Subterranean waters (SENARA), the National Emergency Commission (CNE), the Public Services Regulatory Authority (ARESEP), local governments and local committees within the intervention area and the UNDP. The summary of the role that these actors would have is shown in table 3.6.

Table 3.6. Stakeholders and their role in the implementation of the Project.

Concerned parties	Role in Project Implementation
Ministry of Environment and Energy (MINAE)[8]	To guide the development of the legal and institutional framework for the incorporation of climate change measures in water management by ASADAS and the productive sector, and provide technical support[9] and political for the implementation of the project. Provide (through the Water Directorate) technical knowledge, in coordination with AyA, to integrate the impacts of climate change on water availability into policies, strategies and investments of the public and private sectors, and provide conditions to improve pilot experiences successful throughout the country.

[8] MINAE is also the focal point of the GEF . It also incorporates the Directorate of Climate Change , whose work from the ministry is to coordinate, manage and formulate public policy on climate change, promoting the integration of an inter-ministerial agenda. In addition, it coordinates the action plan of the National Climate Change Strategy (ENCC).

National Institute of Aqueducts and Sewers (AyA)	To provide technical and financial assistance to improve the management of drinking water. To participate in subregional planning such as during field activities, particularly those aimed at building capacity of ASADAS and the productive sector. further Coordinate the lessons learned and pilot experiences at the local level in order to improve them at the national level, so that the ASADAS in other areas can implement successful adaptation measures.
Ministry of Agriculture and Livestock (MAG)	To guide the development of an institutional framework for the incorporation of climate change measures in the agriculture and livestock sectors, especially in the regulation of private sector practices.
Ministry of Health (MS)	To monitor water quality in urban and rural areas through water security plans. To analize the lessons learned from the four pilot water security and ecosystem based in extending such experiences regulations and national policy plans, aiming to replicate such models in other ASADAS nationwide
Administrative Associations of Communal Aqueducts (ASADAS)	To incorporate climate change adaptation measures and sustainable use concepts and guidelines in local water management, reducing vulnerability to water and improving livelihood conditions.
National Fund for ForestFinancing (FONAFIFO)	Part interested in the development of relevant financial mechanisms for ecosystem-based adaptation.
Agricultural production sector	To participate in the implementation of two pilot projects that incorporate economic valuation of adaptation measures based on ecosystems. The members of the industry will also be the beneficiaries of sustainable innovative practices aimed at increasing their ecological competitiveness.
National Meteorological Institute (IMN)	Provide meteorological analysis and forecasts in the country. will be key to improving the technical capabilities of ASADAS and community-based monitoring and response systems.
National Institute for Women (INAMU)	To develop capacities within the AyA, ASADAS and the agro-industry sector in the incorporation of gender issues in water management and climate adaptation measures.
National Service of Irrigation and Drainage of Groundwater (SENARA)	To investigate the aquifers in the country and strengthen the capacities at the level of local government, ASADAS and communities. Provide technical and political support to make hydrological decisions, monitor vulnerability in wells, springs and protection zones. Design irrigation canals, drainage systems and support producers.
National System of Conservation Areas (SINAC)	To incorporate ecosystem-based adaptation into public and private policies
National Emergency Commission (CNE)	The CNE is the government agency for risk prevention and emergency management and is responsible for coordinating with AyA, municipalities and other public entities to monitor the implementation of activities defined in the drought emergency decree for the province of Guanacaste. The CNE also plays an important role in adapting to climate change and managing climate risk. The CNE investments for the target area will be updated to integrate the risks of climate change.

Public Services Regulatory Authority (ARESEP)	ARESEP is responsible for regulating the prices of public services in Costa Rica (water and sanitation, electricity, fuels and land, sea and air transport). The project will follow the policies of ARESEP regarding water rates, including those that apply to the private sector.
Local governments	Local governments regulate the local territory, grant building permits and support the welfare of the population.
The local committees	Local committees include public and private organizations, universities and non-governmental organizations (NGOs).
UNDP	UNDP will act as Implementing Partner according to the direct implementation modality (DIM) requested by the government.

Source: PRODOC.

4 FINDINGS

4.1 Project Strategy

4.1.1 Design of the Project

The project considers the national and institutional realities of AyA and ASADAS in its design. Supporting the priorities of drinking water supply in areas of water stress and climate change in the area of influence of the project and the development of the country. Its design responds to a broader strategy related to community water management in rural areas.

It is directly linked to the achievement of objective 6 of the Sustainable Development Goals (SDG), which seeks to " Guarantee the availability of water and its sustainable management and sanitation for all". Setting it as one of the goals for the year 2030, achieve universal and equitable access to drinking water, at a price affordable to all". Its also in accord with the national goals for drinking water and sanitation in the country[11].

The design contributes to the fulfillment of the country's commitments to the United Nations Framework Convention on Climate Change (UNFCCC), National Policy on Adaptation to Climate Change (2018) [12] , the Climate ChangeStrategy (2009-2021) [13] , the Action Plan of the National Climate Change Strategy (ENCC), the national goals[14] of the contribution planned and determined at the national level (MINAE, 2015), the National Risk Management Policy (2016-2030) and the National Development Plan (PND) 2015-2018, in relation to risk management and adaptation to climate change and the National Program for the Supply of Potable Water for the Population.

The project has contributed with the country regarding the implementation of the National Policy Drinking Water Costa Rica 2017 - 2030, Policy Organization and Strengthening Community Management of Drinking Water and Sanitation and Institutional Strategic Plan 2016-2020 of AyA. It also has relevance for the AYA within the initiative of the Integrated Water Supply Plan for Guanacaste (PIAAG)[15] , where a series of actions are taken to address the water shortage situation of the entire province of Guanacaste, through its systems to serve the most densely populated urban areas and the participation of 309 ASADAS that serve the rural zones.

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[11] Water for human consumption and sanitation in Costa Rica to 2016. Goals to 2022 and 2030. (Mora and Portuguez, 2018)

[12] Regarding the number of ASADAS that incorporate community-based Adaptation practices

[13] Particularme n like the actions corresponding to the axis adaptation, with regard to water resources sector, p. 33

[14] Predicted and Nationally Determined Contributions (INDC). At: http://www4.unfccc.int/submissions/INDC/Submission%20Pages/submissions.aspx

[15] Included in the Alberto Cañas Escalante National Development Plan (2015 and 2018). Executed from the Environment, Energy, Seas and Territorial Ordinance sector, with the objective of assuring the optimal use of the water resource in the North Pacific region, to satisfy the demands of water by the communities and the different productive activities, as well as the improvement of access to water in adequate quantity and quality. Execution report. Comprehensive Water Supply Program for Guanacaste - North Pacific (PIAAG) . 2018

It is important to note that although the results of the PIAGG show the product of the project on the characterization and evaluation of ASADAS aqueducts for the improvement of their management, the same does not occur for the rest of the outcomes, where There has been made important contributions. The observation is of interest, at a time when MIDEPLAN manages the evaluation of PIAAG, which is expected to be completed in October or November 2018.

Additionally, the project manages to connect with UNDP results (UNDAF)[16] , UNDP Strategic Plan[17] , Country Program [18] and Country Program Action Plan[19] and the GEF portfolio of the Costa Rican Office that represents 80%, with the rest of the Costa Rican water agenda. It has also achieved to add value in both active in the field of human rights, gender (subject to be expanded later) and as was mentioned above the ODS. With regard to the gender approach, the Project was a catalyst for the entire UNDP Costa Rica office and was reinforced by the contracting of the Gender official.

However, in the design it contemplates the integration of the human rights based approach, it explicitly recognizes the importance of ensuring transversality in this issue, assigning this responsibility to the Project Advisory Committee.

The orientation of the project in the remaining period of execution must be aligned with the National Wetland Policy, which recognizes that " The supply of drinking water and sanitation are two of the most relevant public services for sustainable development, in the same way, declared as Human Right by the United Nations " and defines in its second strategic axis the" Full enjoyment of the human right to access to water and sanitation ". This same indication corresponds to the design and implementation of future projects.

In its main rationale as a theory of viable change, that " ... the improvement of drinking water supply and promote sustainable water practices among users of ASADAS and productive sectors, can be achieved through the generation of community infrastructure and technical capabilities to meet the projected changes in access to water and the mainstreaming of adaptation based on ecosystems within the policy and investments of the public and private sector ". Which would be feasible through the achievement of the expected results for the two components, as stated in the strategy. See next box.

Theory of change of the ASADAS Project

The theory of change that underpins this project includes building community infrastructure and technical capacities to address the projected changes in water availability (Component 1) and incorporate adaptation measures based on ecosystems into public and private sector policies and investments in the area objective (Component 2).

First , the resources of the SCCF will be used to strengthen the infrastructure and technical capacity of ASADAS to face the impacts of CC

[16] Area 4: environmental sustainability and risk management.
[17] Growth and development, employment and livelihoods, adaptation and mitigation of climate change.

[18] Impacts of climate change on water availability

[19] National climate change strategy.

Second, the capabilities of end users ASADAS be strengthened to incorporate adaptation to climate change in their livelihood systems through a Community training program CC a gender perspective and including 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 , CC adaptation measures based on ecosystems will be integrated into public and private sector policies, strategies and investments Infrastructure and water supply services to the rural community.

Finally , the purchasing and credit policies of at least 20 commercial agricultural and livestock companies and five financial institutions in the target region will integrate incentives to promote the adoption of ecosystem-based CC adaptation measures by farmers, and a system of knowledge management that will allow the dissemination of data, information and tools to promote and to integrate adaptation practices based on ecosystems in other water-intensive productive sectors throughout the country.

Source: Taken from PRODOC

As established in the Project Identification Form (PIF, 2014), the project corresponds to address the problems diagnosed in relation to the supply of water resources was threatened by the change. This situation is aggravated by the analyzes of climate change scenarios, which predicted that by 2080 annual rainfall could be reduced by up to 65% in the North Pacific Region. Considering that these extreme conditions will futher exacerbate climate and water stress in some areas. This will aggravate the pressures of water consumption in the target area of at least 20% in the coming decades. In addition, in the Northern Region, a significant water scarcity would also inevitably be experienced that would have a severe economic impact on livelihoods and productive sectors.

The project as part of the solution, posed the challenge of solving the four barriers. See point 3.3. of PRODOC. Identified through a strategy and a results framework achievable and conceived logically.

The level of participation in the project design was high, although it had a strategic vision guided by the managerial and technical spheres, it was also based on a consultancy carried out at the regional and local level, where they evidently participated and were consulted the ASASAS.

In addition, the project document includes relevant gender issues in the design, since it proposes: 1) Increase women's access to opportunities for continuous personal growth, increase their leadership skills and their capacity as agents of change to disseminate measures of adaptation throughout the community; and 2) Improve knowledge and technical skills by providing training to both men and women in sustainable water resources management systems that are respectful of biodiversity, and enable them to be active participants in the management of public ecosystem policies.

The PRODOC also establishes that UNDP will monitor how the project plans to achieve its environmental objective by addressing the differences in the roles and needs of women and men. (Pag 20). In this sense, in relation to Result 1.2.1 - Community training based on climate change with a gender focus and that includes minority groups, such as indigenous communities, establishes the participation quota for women of 35%

trained people (1500) . In addition, on result 2.1., It is proposed for the four (4) RMPPWS, that the existing PES should be reviewed jointly with the members of the ASADAboard to evaluate if they incorporate adaptation measures to climate change based on ecosystems, including gender considerations, as part of its approach to risk assessment and risk management. " (Pag35).

Regarding the Safeguards, PRODOC establishes that the project will promote activities to close any gaps with respect to issues of gender equity that could still persist in some of the more traditional organizations, mainly in remote rural communities. Specifically, it establishes the following results: a) ensure that the Results Framework includes results and indicators to address issues of gender inequality; b) identify any cultural, social, religious or other factors that may prevent women from participating and develop strategies to overcome these limitations; and c) ensure that the project achieves a score of 3 or 2 on the ATLAS gender marker.

Beyond the Prodoc references, a strategy for effective gender inclusion and women's empowerment in the project has been defined, taking into account the GEF Gender Policy . This was possible through an initial work that consisted in the elaboration of a participatory diagnosis[20] on the panorama of women in ASADAS in the Huetar Norte and Chorotega regions. It also considered the definition of a "Guide for the Strategy for the Integration of a Gender Perspective", which includes strategy and the results framework for:

1. Create the necessary conditions in the AyA and Project Coordination to ensure that all interventions strategically and clearly integrate the gender perspective in the project

2. Generate actions to strengthen the gender perspective in the Boards of Directors of the ASADAS and the Local Offices of the AyA (ORACS), and will promote the empowerment of the women who are part of the Boards of Directors of the ASADAS

3. Promote actions aimed at strengthening the empowerment of women and girls in the communities of the project areas and aim to influence the socioeconomic conditions that affect the communities and limit their adaptation to the effects of climate change.

Solely for the result on training with a gender focus, a budget sensitive to the gender dimension is included. There was no consultation with gender specialists and representatives of women at different levels during the project design and preparation process.

In relation to Project Monitoring, the minutes of the meetings of the Steering Committee indicate the agreed provisions on the potential impact of the project on gender equality issues. In addition, the project captures gender outcomes, which will be incorporated into its monitoring. Goals were established in the framework of project results, in order to ensure sufficient gender balance in the activities to be carried out:

a) train 1,500 household members and producers, 50% of whom are women, to incorporate adaptation to climate change into their livelihoods;

[20] Through interviews with AyA , ORAC and DINADECO and the Boards of Directors of the ASADAS; as well as the application of a "Questionnaire of Knowledge, Attitudes and Practices on gender relations in the Boards of Directors of the ASADAS".

b) ensure that at least 40 water security plans (PES) that incorporate climate change adaptation based on ecosystems also include gender considerations.

With this adaptive measure, it was possible to include gender-sensitive indicators in the project's results framework and disaggregate the indicators of the project's results framework according to gender and other variables.

In relation to the execution of the project, the AyA has the capacity to generate benefits for women or to involve them, through the development of concrete actions. What will be strengthened with the implementation of gender policy, generated with input from the project which provides clear guidance on this topic.

The project meets and exceeds gender parity, in the area of women's participation in management and operational management levels; at the level of the PMU, it has an organizational distribution of the staff of 4 women and 2 men, for its administrative incidence; At the level of the Steering Committee, its composition includes 2 women and 1 man, for the purposes of correlativity and articulation of project actions.

Regarding the Impact of the Project, it does not differentiate between male and female, that is, it does not disaggregate beneficiaries by sex. There is conversation with both women and men during interviews and field visits, hence the project assumes gender equality in the local context. On the other hand, it has sought with some intentionality the participation of women and girls. If the project is likely to have the same positive and / or negative impact on women and men, girls and boys. No legal, cultural or religious barriers to the participation of women in the project are identified[21] . In addition, the project promotes its benefits from the point of view of gender equality, promoting equality and equity of opportunities for participation and ownership of communities. The issues addressed by the project are particularly relevant or important for women and girls and the project incorporates gender-inclusive communications into the communities . There is no potential negative effect on gender equality and women's empowerment.

In general, the logic of the original design has been maintained to date, it has turned out to be an instrument that has facilitated management by project results. It allowed the formulation of annual planning (AOP) and its programmatic execution. Through various adaptive management, it has facilitated the realization of the proposed activities. It incorporates few variations elements to the PIF, and the substantive changes, in general aim to increase the scope of the proposed results. It includes an analysis of Sustainability, as well as risks and assumptions of the Logical Framework (ML).

It is worth mentioning that the organizational structure of the project management structure is presented in the PRODOC, in two ways, therefore it is a point that should be clarified in the RMT as explained below. In point 5 of PRODOC (Management Arrangements), the Project Board (JP) that has been operating, composed of AyA and UNDP, is described. However, in the "Participation Plan for Stakeholders" section, a structure that was not operated by MINAE, AyA, MAG, MINSALUD, ASADAS and IMN is included within the JP.

[21] But if in its representation in the Boards of Directors of the ASADAS, due to a provision established in the regulation of ASADAS and that the project sought to correct by means of a reform proposal that seeks to correct that behavior.

4.1.2 Results Framework / Logical Framework

The logical framework (ML) of the project is maintained as it was designed in the PRODOC, and during the implementation was strengthened with the results framework of gender mainstreaming[22]. In addition, Indicator 3, "Installed water storage capacity (days) to replace water (storage capacity / average total consumption per day)" was replaced by "Storage hours / percentage of ASADAS". According to the national regulation, which establishes that the measurement must be done by " *storage hours* ", not " *storage days* ".

Its vertical logic is clear, and is based on the chain of results incorporated in the " *Theory of change* " (page 105) and in the results framework (page 20) of the project. Instruments that as a whole are aligned with the overall objective desired by the project.

Regarding horizontal logic, the original design of the project has had some changes resulting from adaptive management, which are not visualized in the ML, although some if present in the complementary results framework that includes gender issues:

1. Development of tools to strengthen the capacity of the ASADAS.
2. Development of tools to strengthen AyA in community water management.
3. Tools for the mainstreaming of the gender approach in the management of AyA, the project and the ASADAS.

Therefore, it is advisable to include a product in the ML , with its respective indicators, that allude to the development of tools to strengthen the capacities of the AyA and the ASADAS and the mainstreaming of the gender approach.

4.2 Progress in achieving results

4.2.1 Progress in achieving results

4.2.1. Progress in achieving results

4.2.2 Objective of the project , results and products / activities

The objective of of the project is to improve water supply and promote sustainable water practices for end users and productive sectors by promoting community-based measures and ecosystems in ASADAS to address the climatic hydrological vulnerability projected in northern Costa Rica.

Below is a description of the results, products and activities of the project:

[22] Incorporated the "Road Map for the Strategy for Gender Perspective Integration ". 2018

RESULT 1.1 - INFRASTRUCTURE AND TECHNICAL CAPACITY OF ASADASTRENGTHENED TO FACE THE IMPACTS OF CLIMATE CHANGE TO THE AQUIFERS IN THE TARGET AREA.

The achievement of this result is posed by means of measurement systems strengthened with micro and macro meters to track the water supply; water collection, storage and distribution systems, installed water saving devices, carrying out sanitation , a purification pilot , adaptive technologies and the protection of water sources and water recharge areas.

Product 1.1.1 - The strengthened measurement systems to track the water supply to the end users (micro and macro meters) in the ASADAS network provide up-to-date information on the risks related to climate and vulnerability of the water resources of the project area.

The expected results included the installation of up to 5,000 micro and macro meters, the technical evaluation of the water use tariff model, identification of gaps and recommendations for adjustments to address issues related to climate change and the vulnerability study, which included the risk related to climate and water resources.

The level of achievement of this result is rated highly satisfactory. There has been an outstanding progress in the installation of micro and macro water meters, because 94% of the 10,200 micro meters and 60 macro meters have been distributed among 118 ASADAS according to a set of prioritization criteria defined by the Draft. What allows to make accurate estimates of the production, distribution and sale of water. In addition, with the installation of new pipelines it was possible to guarantee the distribution and measurement of water, in areas where the supply was not constant, or the quality of water for human consumption could not be guaranteed.However, the generation of an AyA documentation is required, which accounts for the equipment and materials received, as well as its verification of the status of its installation and operation, since it is important that the project has a document in accordance with the equipment. Also, as part of the follow-up, reinforce and verify the proper installation and correct use of the macro meters.

The project allowed emergency attention caused by Hurricane Otto to six ASADAS for an amount of $ 20,633, to finance the recovery of the aqueducts by means of pipe supports, valves and accessories for the rehabilitation and chlorination equipment and accessories. What contributed to a quick recovery of the systems, which benefited about 9500 people. See table 2.4.1.

In such a way that the project, also facilitated to the United Nations the entry next to municipalities and other institutions, to develop an early warning system, that gave answer to the attention of the emergency caused by Hurricane Otto, for the restitution of the Affected asados, obtaining as a result a rapid intervention of the aqueducts.

Table 2.4.1 .: Attention of ASADAS affected by the hurricane OTTO.

Region	Investment	Type of support	Impact
Chorotega	$ 11,093	Pipe, valves and accessories for rehabilitation Technical accompaniment	Prompt recovery of systems- Around 5000 people
San Bernardo de Bagaces	$ 6,856		
Fortuna de Bagaces	$ 2,235		
El Porvenir, Aguas Claras, Upala	$ 154		
Javilla, Cañas	$ 1,848		
Huetar North - North		Piping, valves, chlorination equipment and accessories Technical accompaniment	Prompt recovery of systems- Around 4500 people
ASADACaño Castilla - The Delights of Los Chiles	$ 8,293		
ASADARincon de la Vieja de Upala	$ 1,247		
Total	**$ 20,633**		

Source: Own elaboration based on information provided by the project.

In addition, ASADAS in the Chorotega region received materials and support to rehabilitate climate-proof infrastructure damaged by tropical storm Nate.

In relation to the vulnerability study, maps were prepared in collaboration with the IMN[23] of risk before the Climate Change for the cantons of Guatuso, Los Chiles, Upala, Cañas, Santa Cruz, Hojancha, Nicoya, La Cruz, Liberia, Carrillo, Tilarán, Bagaces, Abangares[24] and the districts of Cóbano, Paquera and Lepanto de Puntarenas. In coordination with the IMN, the guides for using the maps are in the construction phase to facilitate their use by local actors such as municipalities and ASADAS, in their planning and decision-making activities at the territorial level.

[23] The cartographic information, the completed products and the projects are done through a folder on the Dropbox virtual platform, under the following link: https://www.dropbox.com/sh/sw8l4qmbl44tcqo/AADA0GZuky2js4fRXwSc2Oqda?dl=0

[24] With regard as a positive outcome not anticipated the project also vulnerability studies were carried in three cantons: Tilarán, Bagaces, Abangares.

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

The expected results considered 305 ASADAS with systems for capturing, storing and distributing water resilient to climate change. In addition to ASADAS and members of the household trained to improve water collection, storage and distribution systems.

The assessment of the level of achievement of this result is highly satisfactory. In relation to the mid-term progress, the project has made significant investments to improve the infrastructure of the ASADAS. This through a rigorous process of selection of proposals driven by the project with its own funds (using the SGP-GEF financing mechanism).

The investment includes 29 improvement projects and operation of aqueduct infrastructure; 23 of the Chorotega Region and 6 of the North-North Territory, resulting in the expansion or change of 37.6 km of pipelines [25] to improve the services to 36,000 people of 22 ASADAS, and the increase in storage capacity in 132m3 in 5 ASADAS. This represents a contribution of USD $ 300,000 that complements the additional investments made by strategic partners, the AyA and the own ASADAS. Among these advances is the automation of the pumping equipment of ASADAEl Flor.

In addition, technical studies[26] have been carried out in 16 ASADAS with the objective of guiding the construction, expansion and improvement of the infrastructure and operations to expand services to new communities, increasing the efficiency, quality, quantity and continuity of water, with a perspective of 20 years. Fourteen of these technical studies are already under review by the AyA. These studies will allow the mobilization of financial support from INDER to develop the investments proposed in them, for which, in addition to technical follow-up, the political-administrative management of the AyA and INDER managers will be required.

Precisely one of the unexpected strategic results of the project was the development of an INDER - AyA work platform, where issues about the ASADAS within the territories of the INDER are discussed. In addition, the technical studies were an identified need during the implementation phase, which made it possible to know about the absence of standardized and official administrative technical procedures for the processing and approval of requests for financial resources with INDER funds. Due to the importance that this topic has to strengthen infrastructure projects of ASADAS within territories managed by INDER, the project supports the institutional management of the AyA and INDER, for the development of a " *Guide for the Development of*

[25] Including the use of horizontal directional drilling to install high density polyethylene (HDPE) pipes.

[26] Technical studies among other things analyze water strengths , drilling sites, aqueduct design and engineering aspects ; the supply of service to subscribers and aspects for future development. They enable the restructureructure projects to be financed by INDER. It institutionalizes and legalizes the investment in the area where the wells and infrastructure will be established.

Aqueduct Projects and Sewerage systems (ASADAS) " This document constitutes an interinstitutional technical standard that aims to standardize the processes of project formulation among the AyA-INDER, as well as the contents of technical studies and plans to ensure that the projects managed by the ASADAS contain all the elements required by both institutions so that are subject to financing and have all the requirements for the eventual execution of work. The Project makes efforts to achieve the officialization and normalization of the technical studies, which could be an important element for the financial sustainability of the results, however, this initiative requires the political will and effort of the legal and technical area of the INDER, that facilitates the process of revision, adjustment, of the proposal worked with the inter-institutional commission formed by AyA and the INDER .

The ASADAS received training to improve the water collection, storage and distribution systems. In addition, it completed the diagnosis of water use practices and sanitation habits (rainy season and dry season) developed by the Institute of Social Studies in Population (IDESPO). This study will be used as input to guide a campaign and other communication actions to raise public awareness about the rational use of water.

The update of the baseline was carried out to define a new infrastructure support for the ASADAS, particularly in areas of storage improvement, pressure measurement equipment and water quality. Also, it is in the process of acquiring 50 tanks of High Density Polyethylene (HDPE) to improve the infrastructure and increase storage capacity in 30 ASADAS of the Chorotega Region and the TNN , and the acquisition of 240 manometers for measuring of pressure in potable water supply systems, which will allow the monitoring of the quality of the service provided by the ASADAS of the project's impact zone.

The installation of rainwater collection systems has also been financed to complement the main water supply systems. This is the case of the Hojancha Red Cross Station, where the system was installed and operates efficiently.

Product 1.1.3 - Water saving devices installed in homes .

The result includes up to 4,000 households with water saving devices installed and a water conservation awareness campaign (WCA) designed and implemented.

It has a Satisfactory level of achievement. It was expected to conclude this result in the third year, however, as a strategy for its approach, the project plans to carry it out in the first quarter of 2019, by accompanying the campaign for the rational use of water, which is in the design phase and part of the results of the study of water use practices developed with IDESPO.

Product 1.1.4 - Pilot sanitation and purification measures (eg, Management of sludge and dry composting toilets) and other adaptive technologies for wastewater management to improve water quality.

Among the expected results are: 1) 150 composting toilets installed, considering their implementation in 10 ASADAS; 2) 160 septic tanks to improve sludge management and 3) an education / awareness campaign to adopt measures that improve the water quality designed and implemented. It has a Satisfactory level of achievement. In this regard, the project plans to carry it out in 2019. Beyond the product, the project promotes legislation for the use and commercialization of wastewater.

Product 1.1.5 - Water sources and associated recharge areas of aquifers protected and / or rehabilitated through reforestation, natural regeneration and other protection and conservation measures.

For the achievement of this product, 275 hectares of water sources and associated recharge areas of protected and / or rehabilitated aquifers were projected. The progress shows that hydrogeological studies of water sources and improvement and efficiency have been carried out.

There is a highly satisfactory level of achievement. In this regard, hydrogeological studies are under review for the identification of source protection zones[27] (25 ASADAS, 6 ASADAS in Guatuso, 4 ASADAS in Upala 15 in Los Chiles) in conjunction with the Central American School of Geology, the Research Center in Geological Sciences of the University of Costa Rica, AyA and SENARA. This information is the basis for the identification of areas of vulnerable water importance, in addition they allow the identification of water catchment areas to guide the specific areas to be protected as a priority, as well as the definition of protection measures for these areas. A strategy that facilitates the achievement of this result can consider the existing mechanisms of Payment for environmental services (PSA) of the National Forestry Financing Fund (FONAFIFO), implemented by the federations of ASADAS , be the Union of ASADAS of the North Zone [28] or the ASADAS league of the Chorotega Region. For this case it be can taken into advantage the experiences such as the Forestry Development Commission of San Carlos (CODEFORSA) [29].

Studies were also carried out as part of the monitoring of the project and in support of the North-North ASADAS Union , for the detection of agrochemicals in the springs located in Los Chiles, as an accompaniment to verify the quality of the water. That presents the risk of pollution derived from the pineapple activity and that nevertheless allowed to demonstrate that there were no higher levels than allowed, reducing with this the scientific uncertainty and the existing social concern for the state of health of the springs. The definition of a monitoring plan that considers carrying out these studies every six months would be a recommendation to be considered for the next execution period.

As will be seen later on (product 1.2.1) the project developed several tools, among them the "Methodology of Improvement and Efficiency (PME) for ASADAS", which was implemented by 12 ASADAS [30] . It considers

[27] In order to determine the need to perform adaptation actions.

[28] The ASADAS North-North Union consists of 16 ASADAS located in the cantons of Upala, Guatuso and Los Chiles of the province of Alajuela. Supported before its formation by the Small Grants Program-PNUD-GEF.

[29] The Forestry Development Commission of San Carlos, (CODEFORSA) is a non-governmental organization (NGO), non-profit, with experience in water protection projects, which in the period 2011-2016, supported 42 ASADAS, for the protection of 1952.20has.

[30] ASADAS San Miguel de Cañas, Pilangosta de Hojancha

3. ASADA Malinches de Pinilla de Santa Cruz

4. ASADA Cuajiniquil de La Cruz

5. ASADA Santa Fe de Guatuso

the self-assessment and improvement plan and includes considerations on the protection of water resources and the risks of climate change. It is worth mentioning that this tool is currently being implemented in all the ASADAS in the country, with which the project generated an important result not foreseen in the PRODOC, but with an outstanding value for the strengthening of the ASADAS to the country, with the positive consequences that can be derived for the provision of drinking water to the communities.

With the Professional Technical College (CTP) of Upala, a program of restoration of areas of protection of springs is developed. In this initiative, students produce, sow and provide maintenance for 2 years to 2000 trees of native species. Also, with this initiative, environmental education is provided with a focus on adapting to Climate Change, where students also benefit, members of the ASADAand the community. There is an opportunity to address the issue of restoration with the North-North ASADAS Union , to restore ecosystems and recharge areas of springs associated in a 60-hectare asset.

RESULT 1.2 - THE TRAINING OF THE END USERS OF ASADAS IS STRENGTHENED TO INCORPORATE THE ADAPTATION TO THE CLIMATE CHANGE IN THEIR LIVELIHOODS SYSTEMS.

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

The expected results considered at least 1,500 members and producers of the household, training tools and extension services. In this case the evaluation of the result is highly satisfactory, given that through the project a total of 1,629 members of the community in both target regions, including household members, administrators and plumbers of ASADAS, producers, students and fishermen, were reached. They received training in climate change, water resources management, water quality, sanitation, reforestation and / or administrative management. Many of these activities aim to train future coaches. Of these 1,629 members of the community, 423 were children and 1,206 adults (60% men and 40% women).

A training program for the improvement of water quality and the procedure for the construction of pill chlorinators was initiated, through which 66 ASADAS of the Hojancha, Nicoya, Guatuso, Los Chiles and Upala cantons have been trained. This program is developed in conjunction with the Communal Water League, the North-North Water Supply Union, the Ministry of Health and the AyA. In addition to this training, other details are also explained below:

- Training was provided to 30 people as facilitators of UNESCO's "Water and Education" methodology. Additionally, training of 20 ASADAS, located in the impact zone of the Small Grants Program (PPD) of the UNDP, in the development of Improvement and Efficiency Plans (PME) and Non-

6. ASADA San José de Upala

Contained Water (ANC). This tool was also presented to strategic partners and is currently being implemented by the AyA nationwide.

- In the North-North ASADAS Union, 30 women were trained in Plumbing, of which 15 worked in the infrastructure establishment[31] .
- More than 139 ASADAS have been trained in water measurement, the essential of the unaccounted use and maintenance of water and hydrometers, which is a crucial knowledge to reinforce the rational use and the reduction of water waste.
- More than 66 ASADAS in both regions have been trained to improve water quality through chlorination and have learned how to build homemade chlorinators. Due to the teaching methodology, with these apprentices can train others.

The methodology used favors the positioning of associative figures and promotes joint coordination with institutional actors. For this purpose, a training of trainers strategy is used that enhances the horizontal cooperation between members of ASADAS of the Chorotega Region and the North-North Territory. For the training of the population it is possible to integrate the personnel of the ASADAS with a more active role, for which the synergy established with a network of young people by the Central American Water can be taken advantage of.

The project also supports ASADAS associative models[32] , through the Communal League of Water and the Union of ASADAS of the North zone. As part of the implementation of national policies, the project promotes the integration and associativity of the ASADAS. In the case of Integration, positive actions are observed to promote this model, in the interests of greater efficiency and effectiveness for the presentation of the service. In the same manner, some support for the federations of the Chorotega region and the North-North subregion . The strengthening of these second level structures is important to ensure the sustainable community water management system of the country, that the project addresses with the federations the consolidation of the service offering platform to the ASADAS and the creation of an investment fund and training aimed at the training of trainers that seeks to improve the local blocks of the ASADAS, as well as the promotion of generational exchange in the ASADAS. In addition, the project aims to promote generational exchange and integrate the youth component (as is the case with the ASADAde Quebrada Honda) in the management of communal water as a measure of sustainability, an action that could be developed with the associations of the Chorotega region and from North-North .

Important steps have been taken towards a cultural transformation of water in the institutional vision, on how to manage it from a more efficient management and with an adaptation approach. The current results allow the AyA, to make greater disclosure on the experiences lived, on issues of community water management in the framework of the regional water management against the CC. In the case of dissemination addressed to regional actors, the incorporation of local culture will favor community participation space.

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32 The Association of the ASADAS includes the promotion of a National Confederation of federations, leagues and unions of ASADAS. The Associativity, is a process of articulation, exchange and coordination between the ASADAS of a locality, region or country in order to learn and strengthen the capacities of management, of incidence in the public policies and of innovation in a sustainable way oriented to the common purpose to provide greater and better access to water and sanitation.

As part of a support already initiated by UNDP, the process of the web page *capacitacionasadas.com* has been consolidated with project support[33], which makes it possible to centralize the information on the different training and training providers available and provides the AyA with greater control over the standardization of contents and approaches in the training activities offered to the ASADAS. Table 2.4.2.

Table 2.4.2: Areas and thematic content of training to ASADAS.

Training áreas	Thematic content
Environmental management of the Water Resource	Introduction to IWRM Climate change and adaptation Conservation, protection and recovery of water resources
Systems Management of water	General concepts on management of public services APS Potable Water Supply Systems Wastewater Treatment
Financial Management	Administration in the ASADA Human Resource Management Material Resource Management Accounting Financial Management
Commercial management	New potable water and sanitation services Tariff management for ASADAS Commercial cycle User Service
Community Management	Water Culture Community water management ASADARelationship - Community Relationship Strategies ASADAS associativity

Source: Own elaboration based on http://www.capacitacionasadas.com/

There is a preliminary proposal of information software for ASADAS, designed jointly with AyA, National University, University of Costa Rica, Fundecooperación and ARESEP. This proposal based on the guidelines of the mobile application proposal (APP), originally designed to promote adequate planning in the ASADAS, based on technical criteria and incorporating needs in the areas of water resource management, water systems, financial management , commercial and communal.

[33] http://www.capacitacionasadas.com/

In addition, the project has developed technical tools and training to improve the management of the ASADAS and operation of the systems. See table 2.4.3. The tools generated, build in exchange for the management model of the ASADAS, their capacities for greater efficiency and effectiveness

Table 2.4.3: Technical and training tools developed for the management of the ASADAS.

Management of the ASADAS	Operation of the systems
- Improvement and Efficiency Methodology (PME) - Tool for application of the SME - Rate calculator for ASADAS (META), N1, N2 and N3. - Methodology to calculate the Water Resources Protection Tariff (TPRH) - in process - Scheme of zero net deforestation - Geospatial viewer to analyze the dangers of water resources related to climate change, agricultural production and physical vulnerabilities (Upala-Los Chiles) - High resolution flood and drought risk maps for 16 cantons - Protocol for the integration or fusion of ASADAS	- Guide to reduce unaccounted water - Tool for ANC control - Quick guide for the installation of water meters - Development and installation of chlorinators for the disinfection of drinking water - Step by step development of chlorinators - Logbook 2.0 LCA operational control - Operative Control History Tool - Quick guide for horizontal directional drilling to install high density polyethylene (HDPE) pipes

Source: Own elaboration based on project information.

Other tools with which the project supported AyA were:

- Instrument for the survey of the ASADAS, which is expected to be applied later to the rest of the Country.
- The strategy and the Protocol for the integration of ASADAS
- Methodology for the execution of projects under a quality approach

The training also focused on understanding the impacts of climate change on water supply and resources and the application of good practices to reduce the negative impact of their daily activities on the quantity and quality of water sources. In addition, the project supports and disseminates the " *Guardian of Nature* ", from which 875 books of the Nature Guardian program were delivered for use with schools corresponding to areas impacted by the project, the methodology developed by local actors, based on in a children's story that accompanies schoolchildren in the adoption of a series of commitments and actions for the environment in their schools and communities, new educational tools are being developed to support the AYA National Plan for Continuous Training of ASADAS.

A "Operation Manual of the ASADAS" is in the process of content validation by AyA advisers. Subsequently, a pedagogical mediation would be carried out by the team designated by the AyA with the support of the Project.

The training provided has been highly valued by the officials of the ASADAS, for its relevance to improve the management capacity of the ASADAS; the contents, materials generated and lessons learned from this process, once systematized, can offer an opportunity to strengthen the Web offer *formaciónasadas.com.*

In relation to the implementation of the gender approach, the results achieved so far have positive impacts in several ways: a) a concrete tool for the integration of gender allows to identify gaps, reduce them and limit inequalities; b) the Institutional Policy on Gender Equality seeks to guarantee the coherence and commitment of the governing body of the aqueduct services, with the protection of women's rights and the transformation of inequalities and internal and external discrimination of the institution; c) the equal participation of women and men in project activities helps to eliminate historical discrimination in the management of water resources, and even facilitates participants to reflect and question existing inequalities. d) Promoting regulatory changes in these barriers facilitates access and real participation of women in the ASADAS Board of Directors as decision-makers with full rights

The project has generated different conditions to increase the substantive participation of women in all possible activities, contributing to fulfill the commitments of the 2030 Agenda for Sustainable Development. This has been possible through the identification of women leaders of the ASADAS and inviting them specifically to participate in the different activities, and the encouragement of participation and joint conformation; For example, the project proposals presented by the ASADAS receive a better rating when there is gender parity in the Board of Directors.

In addition, it has strengthened the gender institutional framework, given that it transcends the PRODOC proposal when obtaining as one of the unforeseen results the Gender Equality Policy[34] 2018-2033 of the AyA and its respective first Action Plan 2018-2022. It constitutes an institutional milestone, whose general objective of the Policy is to promote the implementation of strategic actions for the mainstreaming of the gender approach in all the work of the AyA contributing to the reduction of gaps between women and men, in order to strengthen democratic and inclusive development and integrated management of water resources. In AyA, a commission was created with the participation of 17 directors to follow up on the policy. The commission is also supported in strengthening the capacity of technicians in a gender approach and it is proposed that work plans should be incorporated with a gender approach in the annual operating plans.

Facilitated the review and an exhaustive gender analysis in the Draft of the Comprehensive Reform Project to the ASADAS Regulation[35]. The integration of the established observations will make it possible to impact the

[34] It promotes the integration of the gender approach in all institutional activities to reduce the gaps between women and men, as well as strengthen the democratic and inclusive development of water resources management. This policy is aligned with the 2016-2020 AyA Strategic Plan, and its guidelines include an environment free of sexism and discrimination, work-life balance and family life, gender equality in opportunities and benefits for staff, services with a gender perspective and gender equality in the ASADAS.

[35] Draft of the Comprehensive Reform Project to the ASADAS Regulation (Executive Decree 32529-S-MINAE).

[Article 4. - Of the rendering of services to the users: The services provided by the ASADAS will be governed, among others by ... Law of Promotion of the Social Equality of Women No. 7142 ...]

[Article 18. - Of the Board of Directors: ... In the election of the Board of Directors of the ASADA, the provisions of Law No. 8901 that regulates the minimum percentage of women who must integrate the directives of associations, unions and associations must be respected. solidaristas. Each ASADA should identify the gender

obstacles that women have to be part of the Boards of Directors of the ASADAS, and to be decision makers on the integral management of water resources at the national level. It is worth mentioning that such analysis and recommendations are promoted by the UNDP and the Interdisciplinary Committee of the Gender Equality Policy of the AyA before the Board of Directors, in order to promote its full acceptance as it is one of the guidelines of the Policy.

As part of other results, the project has allowed the development of tools to strengthen AyA in community water management.

1. An instrument that allows to have information on the status of the ASADAS, which currently allows the estimation of the investments that must be made in them.
2. It has enerated procedures and an integration protocol, as well as experiences on the process that can be applied with other ASADAS.
3. Instruments to support the strengthening of the management of the ASADAS.
4. It has generated products for the chain of actions of the AyA, in relation to community water management.
5. To comply with the requirements of the Comptroller General of the Republic (CGR), the Ministry of Health and ARESEP.
6. To evelop proposals for reforms to the legal framework.
7. To strengthen the mainstreaming of the human rights and gender approach.

It also supported the organization of the Fifth Latin American and Caribbean Conference on Sanitation (LATINOSAN) 2018, where the aim is to position the issue of sanitation as a priority in the agendas of the countries; as it is one of the essential factors for improving health conditions , it improves the competitiveness of countries and contributes to achieving the commitments acquired in the goals of the Sustainable Development Goals (SDGs), especially Objective 6.

RESULT 1.3 - HYDOMETEOROLOGICAL INFORMATION INTEGRATED TO THE USE OF THE EARTH AND PRACTICES OF PRODUCTION, AND PROCESSES OF PLANNING TO INCREASE THE RESILIENCE OF THE RURAL COMMUNITIES TO ADDRESS THE VARIABILITY OF THE WATER.

distribution of its members and, when necessary, prepare an affiliation plan that guarantees the effective participation of women.]

Article 66. - Promotion of Affiliation: ... The ASADAS shall promote the affiliation of women as members of their organization ... which establishes as a transverse axis the real participation of women in the provision of public services and the protection of water resources. .]

In relation to the achievement of this result, the commissioning of 15 automated meteorological stations (AWS) and automated flow stations (AFS), the development of a vulnerability index and an adaptive capacity index, a monitoring system on measures were contemplated for adaptation by the AyA and the ASADAS Management System (SAGA) and a climate information and early warning system (CEWS).

Product 1.3.1 - Fifteen (15) new automatic weather stations (AWS) and automated flow stations (AFS) installed to provide consistent and reliable environmental data in real time in the North selected SEMU [35]***.***

The achievement of this product considered the operation of the 15 stations, generating information for local users. The level of achievement is highly satisfactory. Given that, to date, ten meteorological stations and five hydrological stations have been installed in strategic locations (in both regions) to transmit data in real time to the national hydrometeorological monitoring network. Of the 5 hydrological stations, 4 have been installed under the coordination of the AyA using the criteria of need to increase the coverage density to cover information gaps in the Quirimán-Las Juntas, Tempisquito, Ahogados (Chorotega Region) and Chimurria basins (North-North Territory).

The quality of the installed equipment complied with the standards established by the IMN, which showed its conformity with the quality and the opportunity cost of said resources.

Currently, the meteorological information generated by the installed stations is available to users of the ASADAS, on the website of automatic stations of the National Meteorological Institute (IMN)[36] . See example with illustration 1.

The operational plan development of the stations and the rendering of periodic reports available to local users (ASADAS, rural and indigenous communities / household members), are pending.

The hydrological stations are under the supervision of AyA, which must verify its operating and safety status. As indicated above, it is important that the project has evidence of AyA, through verification reports on the status of all stations. Also, it occurs with the weather stations, where a verification and communication of the IMN to the Project is required, in order to record the operation and safety of said stations. The training of the ASADAS in the use of meteorological data and the development of the operational plan are planned actions once the installation of all stations is completed.

Product 1.3.2 - Vulnerability index, adaptive capacity index developed and compatible with the early warning and climate information system, and the Risk Management Plan for drinking water and sanitation (RMPPWS).

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The expected result includes the realization of risk scenarios, and the preparation of drought and flood risk maps. The construction of a vulnerability index for each SEMU, vulnerability / risk reduction and adaptation to change planning.

The level of achievement of the result is highly satisfactory. The vulnerability indexes were developed by IMN before the project, and the Project uses them both for the climate risk maps of the cantons, and for the risk management guides for the *Ecosystem-based Water Security Plans* that are in development, these risk management guidelines will serve as an index of adaptive capacity. In addition, 16 high-resolution maps on drought and flood risk were developed for all project regions and will be available to local decision makers who have a guide to incorporate into the ASADAplanning tools.

It also develops and carries out the piloting of a tool for the geospatial analysis of threats related to agricultural production and associated with risk factors for water resources, such as the intensive use of pesticides and fertilizers in the pineapple crop. This instrument incorporates geospatial information previously mapped to improve the management of the water resources of the ASADAS and the georeferential layers related to pineapple production, developed in conjunction with the Airborne Research Program of the National High Technology Center (PRIAS / CENAT) . The new tool allows to categorize the risk and prioritize intervention actions by strategic partners in the cantons of Upala, Guatuso and Los Chiles.

Product 1.3.3 - Information monitoring system for the ASADAS and ASADAS Management System (SAGA) to track the impact of adaptation measures aimed at reducing the vulnerability of rural communities to address water variability due to climate change and articulated to national information systems (National System of Water Resources and National Hydrometeorological System).

The result considers the development of an information monitoring system to track the impact of the adaptation measures, as well as the training of AyA and ASADAS personnel for its management and effective use.

The result is assessed with a satisfactory level of achievement. To date, a program of Operational Control of water quality has been implemented in 10 ASADAS in the cantons of Nicoya and Hojancha, using the equipment purchased and delivered as support to the Development Services Unit (USEDES)[37] of the Communal Water League[38]. Additionally, the formats for implementation of the drinking water quality control log are in the process of being designed.

[37] Like the North-North ASADAS Union, it also has a Strategic Plan that the project could support for its implementation.

[38] It is a second level organization, representing the ASADAS of Nicoya, Hojancha and Nandayure, with the mission of improving water management, strengthening community water management by promoting organizations that provide quality services. It works to consolidate associativity, articulating efforts with actors involved in the management of water resources

Product 1.3.4 - Early warning system and climate information (CEWS) on the risks and vulnerability related to the climate of the water resources of the project area generated and disseminated to ASADAS, users and partners.

The result considers the strengthening of the CEWS, with its corresponding plan of institutional arrangements, climate forecast models and a website to present key layers of information. In this regard, the process of developing the Early Warning System (SAT) of Upala has begun. The level of result is considered highly satisfactory. To this end, work groups have been formed in which the University of Costa Rica, the National University, the IMN, the Water Directorate, the MINAE Geology and Mines Directorate, World Vision, the Costa Rican Red Cross, the World Meteorological Organization participate. and AyA, achieving a committed participation and leadership of the National Emergency Commission and the Municipality of Upala in order to achieve local empowerment. A consultancy has been hired, Upala is one of the cantons with the greatest vulnerability to extreme weather events. In addition, two results of great importance for this result:

1. An Early Action Early Warning Protocol was developed, with the participation of nine ASADAS on the agrochemical contamination of water sources in threatened intensive agricultural regions, which is being applied and can be replicated in all the ASADAS in the country.
2. With the installation of the hydroelectric and meteorological stations acquired by the project, it will provide indispensable information for the operation of the early warning systems in the project areas.

In addition to this inter-institutional plan, the SAT is advancing with the development, along with the community risk management committees, for the cantons of El Brujo, Zapote, Canalete, Yolillal, Pata de Gallo and Upada. In addition to the formulation of contingency plans and conducting a simulation with the ASADAS before emergency events.

The training of local ASADAS and AyA staff and local communities to prepare for and respond to flood, and drought emergencies is also pending for the second half of the period.

RESULT 2.1 - MEASURES OF ADAPTATION TO CLIMATE CHANGE BASED ON ECOSYSTEMS ARE INTEGRATED IN THE POLICIES, STRATEGIES AND INVESTMENTS OF THE PUBLIC SECTOR AND THE PRIVATE SECTOR RELATED TO THE INFRASTRUCTURE AND WATER SUPPLY SERVICES OF RURAL COMMUNITIES.

The achievement of the result includes the implementation of Four (4) participatory RMPPWS, AyA and CNE investments that integrate the risks of climate change; Adoption of a voluntary system of tariffs for ten (10) livestock and agricultural production companies and valuation models of adaptation measures and economic valuation of ecosystem services support the integration of water-related risks.

Product 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).

This product includes four (4) participatory RMPPWS , which incorporate climate change, risk management that emphasize ecosystem-based adaptation, implemented within each of the 10 target cantons in northern Costa Rica.

This product has a satisfactory level of achievement. The methodology and format of the Drinking Water and Sanitation Risk Management Plan (RMPPWS) is on track to be developed by a technical committee composed of AyA, the National Emergency Commission (CNE), the Public Services Regulatory Authority (ARESEP), Fundecooperation for Sustainable Development, the University of Costa Rica (UCR) and the National University of Costa Rica (UNA).

Meanwhile, several related actions have been developed that contribute to risk management at the ASADAS level, as reported in previous reports:

1. Six ASADAS participated in 2 strategic plans to implement EbA for the protection of the "Ruta de los Maleku" Biological Corridor with the participation of the North-North ASADAS Union. The EbA measures that are being considered are:
    a. To promote connectivity through reforestation and riparian ecosystems using PSA funds
    b. To review protected area management plans
    c. To promote use of best practices in agroforestry systems

2. Four ASADAS have developed Water Safety Plans, three of those ASADAS acquired forest land (75.8 hectares of protected areas including 5 water sources) and developed a community reforestation campaign for the protection of water resources that have been identified as vulnerable to climate change.
3. Seven ASADAS participated in the development of local management and adaptation plans , including fire management to protect water resources with the private sector in Caño Negro wildlife and as part of the coordination with the GEF-UNDP wetlands project .
4. Nine ASADAS participated in an Early Action Early Warning Protocol. The protocol warns about agrochemical contamination of water sources in threatened intensive agricultural regions. This protocol can be replicated in all the ASADAS in the country.
5. *Early Warning Early Action Protocol* is evolving towards a monitoring system for the presence of agrochemicals in water sources with the participation of 22 ASADAS from the north-north territory located in areas threatened by intensive pineapple production [39] . The monitoring system is designed to detect any agrochemical contamination early and links the alert to the ASADAS emergency plan to deal with the incidents.
6. Development of a geospatial tool based on *google earth* to analyze the dangers of water resources related to climate change, agricultural production and physical vulnerabilities (such

[39] In addition to providing follow-up to the inter-institutional and intersectoral articulation to operationalize the integral management of the water resource of the Pineapple Sustainable Production Decree.

as floods and earthquakes). So far it is available for the North-North Territory, but it can be expanded nationally.

7. Development of high resolution maps on drought and flood risk for 16 cantons that will be available to decision makers at the local level, backed by a guide to facilitate its use.

Product 2.1.2 - The investments of AyA and the National Emergency Commission (CNE) for the target area integrate the risks of climate change.

This product contemplates at least one (1) investment of the AyA and one (1) investment of the CNE for each of the three objective SEMU.

The result level of this product is highly satisfactory. In AyA and the CNE, important investments have been made in the project's target area, integrating the risks of climate change. AyA built a community aqueduct, carried out six hydrological and water availability studies and drilled 13 wells. In the CNE, hydrogeological studies were carried out on new water sources for ASADAS affected by the drought; with support from the ASADAS GEF project, support to rehabilitate infrastructure in 18 ASADAS in the zones of hurricane Otto in North-North and the Chorotega region and 10 ASADAS in the Chorotega region in the areas affected by the tropical Nate. See table 2.4. 4..

Table 2.4.4 .: investments of AyA and the CNE that take into account the risks of climate change.

AyA investment	**Investment of the CNE**
- Construction of a community aqueduct that will supply water to 14 members of the ASADAS of the Commission for the Sustainable Management of the Coastal Aquifer and Nimboyores (CONIMBOCO) in response to the droughts of its main source of water: the Huacas-Tamarindo aquifer. - Six hydrological and water availability studies ($ 105,000 USD for government investment) in 2017 to support communities affected by the drought. - Perforation of 13 wells in 2016, in communities to alleviate the stress related to the drought in Guanacaste by AyA and the Costa Rican Electricity Institute (ICE).	- 32 hydrogeological studies were carried out to determine possible new water sources for the ASADAS affected by the drought with funds from the CNE for $ 67,500 USD. - With the support of the ASADAS GEF project: to) It made investments in infrastructure to rehabilitate 18 ASADAS damaged by Hurricane Otto in the North-North region and the Chorotega region; b) 10 ASADAS in the Chorotega region received materials and support to rehabilitate and protect the climate

- Perforation of 10 wells in 2016, in communities with water problems in Guanacaste by AyA-ICE. - Drilling of three wells in 2016, in communities with water stress in Guanacaste by AyA.	infrastructure damaged by tropical storm Nate.

Source: Own elaboration, based on project information.

Product 2.1.3 - Ten (10) cattle and agricultural production companies adopt a voluntary system of fees (Certified Agricultural Products and Voluntary Watershed Payments) to pay for the protection of water resources .

The product considers as a result, achieve up to five (5) payment systems PSA / volunteer basin in operation.

The level of achievement presented by this product is modestly satisfactory. Various activities have been carried out:

a) Progress has been made in the analysis of the viability of the product around its nature and opportunity cost to achieve it, as proposed in the design of the project.
b) A mapping and characterization of the potential of the different mechanisms already available will be developed next year to determine, rather, a strategy of access to these financial sources.
c) The project has explored an experience and explored the development of possible mechanisms:
    1. A feasibility study and a proposal for the creation of a National Fund for ASADAS to buy water recharge land to protect its sources was completed. This initiative will be pending until the mapping and characterization indicated in point b.
    2. It has supported "Water Resources Protection Tariff (TPRH)", which is a tool for the ASADAS to finance water resources protection activities through a tariff, as a model to implement a voluntary payment of watersheds for adaptation in rural aqueducts. The issue was addressed[40] for the project with the participation of sixteen ASADAS of the North-North Territory , taking into account the risks of climate change. The methodology to elaborate the TPRH received the approval of the AYA and the regulatory authority (ARESEP) and is in public consultation. The initiative is developed with CEDARENA, ARESEP, AyA, GIZ and Fundecooperación and has the potential to be applied to all 1500 ASADAS nationwide.

It should be noted that as of September 2017, new rates approved by ARESEP apply for services provided by ASADAS. As indicated, through the project, templates were drawn up for the calculation of the water tariff

[40] Including the Five-Year Strategy of the North-North ASADAS Union supported by the United Nations Development Program (UNDP), within the framework of the Water Resources Protection Tariff Project (TPRH) promoted by the Public Services Regulatory Authority (ARESEP).

and a methodology explaining the calculation that each entity must perform according to the La Gaceta publication of August 21, 2017.

Product 2.1.4: The modeling the valuation of adaptation measures based on ecosystems and the economic valuation of ecosystem services support the integration of water risks and the new practices of ecosystem management within the productive sectors (agriculture and livestock).

Outcomes are modeled on scenarios of ecosystem services (maps) and values of biodiversity and ecosystem services available to support decision-making to implement ecosystem-based adaptation measures in all three SEMU objective.

This result presents a moderately satisfactory assessment. In this regard, through the project, the need to model assessment of adaptation measures is analyzed with other actors. In this sense, the Climate Change Directorate, the organization that leads this issue at the national level, could make a greater contribution, so its incorporation is important to ensure that the actions carried out by the project contribute to the national metric.In addition, to communicate and coordinate these issues, the project can take advantage of the experiences and tools developed by the management in the areas of interest.

RESULT 2.2 - THE PURCHASING AND CREDIT POLICIES OF AT LEAST 20 AGRICULTURAL AND LIVESTOCK COMMERCIAL COMPANIES AND FIVE (5) FINANCIAL INSTITUTIONS OPERATING IN THE TARGET REGION PROMOTE THE ADOPTION OF PRODUCTIVE PRACTICES THAT HELP MAINTAIN THE RESILIENCE OF THE ECOSYSTEM AGAINST CLIMATE CHANGE.

This result contemplates the incorporation of measures of adaptation to climate change by farmers and a knowledge management system that allows fostering and incorporating adaptation practices.

Product 2.2.1 - Farmers incorporate measures of adaptation to climate change based on ecosystems in their production processes, making use of the revised purchasing and credit policies of commercial and agricultural companies and financial institutions.

The expected result for this product includes at least 20 purchase and credit policies, at least 10 initiatives related to climate change that use revised policies and lessons learned and good documented practices.

The project progresses in a moderately satisfactory manner, with the objective of at least 20 agricultural and livestock enterprises and five financial institutions adopting productive practices that help maintain the ecosystem's resilience in the face of climate change. These efforts include:

1. The Project has fostered a dialogue process with TESCO, CAPA and FYFES, which are global marketing and production companies that have an active commercial exchange in the North-North territory. One of these policies, agreed with TESCO, is to use the Monitoring of land use change within

productive landscapes linked to land tenure -MOCUPP (which allows the verification of production units free of deforestation associated with specific owners) , as a decision-making tool to choose or reject suppliers related to their compliance with land exchange regulations. The project and TESCO are developing the details of the policies that would help promote the commitment of other international buyers to comply with this policy.

2. There are initial conversations with the Business Association for Development (AED) to explore the participation of financial actors and the existence of available credit tools applicable to the conservation of water resources.
3. Development of initial contacts with regional Tourism Chambers to establish a strategy to support the conservation of water resources through Social Responsibility Programs, Tourism Sustainability Certificate, Ecological Blue Flag Program.
4. Development of the scheme of use for the fair trade prize to support campaigns for the regeneration of vegetation cover in areas of water importance (sources of ASADAS) and construction and maintenance of biological corridors.

The central point to move forward with this product is to have agreed purchase and credit policies, which becomes a priority for the first semester of 2019. Another option can be through the articulation with other financial mechanisms such as: 1) the access of resources of the Bank for Development (BPD)[41], for the development of agricultural production systems resilient to Climate Change, 2) The incentive program for good agricultural and livestock practices of the MAG; 3) and experiences of " *Integral farms* " in sustainable agriculture developed by the Ministry of Agriculture (MAG)[42].

Product 2.2.2 - The knowledge management system allows the dissemination of data, information and tools to encourage and integrate adaptation practices based on ecosystems in other water-intensive productive sectors throughout the country.
Results of the output 2.2.2

The result includes a functioning Knowledge Management System (KMS) and strengthened institutional arrangements that allow the use of knowledge to support local adaptation efforts. This product has a highly satisfactory level, as it develops throughout the project, so far publications of the tools that the project has developed are shared, a website linked to the server UNDP is built to be the repository of all the information generated by the project. To this date exists, important results that deserve to be disclosed in the short term and on as the project goes, as were the experiences and results obtained with the improvement and reconstruction of infrastructure, the use of appropriate technologies, etc.

4.2.3 Analysis of the progress in the results

[41] https://www.sbdcr.com/webcenter/portal/sbdprod

[42] http://www.mag.go.cr/bibliotecavirtual/E14-5892.pdf

The project presents a satisfactory assessment and is on track to achieve the goals and achieve its development objective "Improve water supply and promote sustainable water practices for end users and productive sectors by promoting community-based measures and ecosystems in ASADAS to address the climatic hydrological vulnerability projected in the north of Costa Rica. " Through its contribution, the continuous availability of water for all the ASADAS has been increased by 24.20%, with only 0.5% reaching the goal of achieving continuous availability of water for all the ASADAS of at least 5 months; with which it has been possible to improve the services to 36,000 people of 22 ASADAS. On the other hand, there is evidence of an improvement in the availability of water per capita for the smaller categories, which means that the goal is being reached at the end of the project, which is that the availability of water per capita is maintained or improved. In addition, the evidence gathered in the field mission made it possible to discover that the effects of the project (see summary in Table 4.2.1.) In the ASADAS were also results that deserve to be pointed out:

1. The change attitudes (in ASADAS and users) towards water resources, water saving, risk management and adaptation to climate change.
2. The improvement in management capacity, including the planning, operation of the system and proper water accounting. As well as integration through the expansion of the network for the provision of the service to other ASADAS.
3. The improvement in the capacity and quality of the service, perceived with greater satisfaction of the population, the improvement and restoration of the capacity of the system and the expansion of the area of service provision
4. The improvement in the financial and investment capacity, from the generation of higher revenues, the reduction of operating costs, savings for future investments and investment in real estate.

Table 4.2.2 .: Achieved effects of the ASADAS Project .

Effects	Detail of the effects achieved of the ASADAS Project.
Change of attitudes in ASADAS and users	Greater credibility towards the work of the ASADAwith the community on climate change and global warming. A behavior change in housing consumption, which led to the elimination of waste and water savings by up to 30%. Awareness about the water resource in the leadership of the ASADAS and the users in general.
Financial capacity	Improvement of the income of the ASADAgiven an increase in collection 300,000 to 2,300,000 (investment fund in the aqueduct), including an increase in the affiliation of new subscribers
Improvement in management capacity	Improved capacity of the ASADAto formulate strategies and operations of the aqueducts, in accordance with the standards of ARESEP and the AyA. Specialization of board members and improvement of assignment of tasks. The adequate accounting of water supports the management of the system by sectors, by macro-metering in the system and improves in the micro-measurement of water consumption.

ASADAIntegration	Share and expand the network with the integration of ASADAS. (eg Artolita and San Antonio)
Investments	The increase in collection allows the creation of an investment fund and purchase of land for the expansion of the ASADAinfrastructure and for the protection of the area where the well is located.
Improvement in service	Satisfaction of the population for having a 24-hour potable water service. Improvement and restoration of the capacity of the system through the: 1) Updating or expansion of the networks and prolongation of the useful life of the system; 2) Increase your water storage capacity for adaptation and resilience. (Current 500m3 to 1000 m3); and 3) Increase in the capacity of the system to the water supply permanently with increases on average from 18 to 40 l / s increased pressures of 75-90 lbs / 2 "; 4) Recovery of the system affected by Hurricane Otto and Storm Nate; 5) Prevention of the affectation of wells due to storms and hurricanes. On extension of the services, it was achieved: 1) To take water to sectors where the services were lacking due to being at a higher altitude where the water could not reach (Columbia and Elderly home of La Jabilla); 2) Enabling housing areas and providing service to commercial areas and new communities; 3) Development of commercial activities due to the qualification of land for investment and real estate development, which includes areas to establish twelve housing projects. (previously, construction permits were not approved due to the lack of a permanent water source); and 4) The start-up of hydrants with tariff approved by ARESEP.

Source: Own elaboration, based on evidence collected in the field mission, where officials of ASADAS, Federations of ASADAS, AyA, Municipalities, Partners, community leaders, consultants and subscribers of the services provided by the ASADAS were consulted.

In Annex 6.9., The completion of the " *Matrix of progress in the achievement of results* " of the project is contemplated . This includes information on the current value of the indicators, the assessment and justification of the results. A summary of this matrix is presented in Table 4.2.2. Based on the assessments carried out (Annex 6.10.), It is possible to define that the project is progressing in a positive manner and is on track to achieve the development objective and the four results: 1) In a highly satisfactory manner, progress is being made on results 1 and two; 2) satisfactory result 3; and 3) moderately satisfactory result 4. 3

Table 4.2.2. Summary of the evaluation of the advancement of the progress Matrix in the achievement of results.

Objective /Result	Indicators
Objective Improve water supply and promote sustainable water practices for end users and productive sectors by promoting community-based and ecosystem-based measures in rural ASADAS to address the projected climatic hydrological vulnerability in northern Costa Rica	Proportion of ASADAS with continued water availability for different time periods
	Water availability per capita (water intake [volume at source]/number of people served by ASADA)
Outcome 1 Infrastructure and technical capacity of ASADAs strengthened to cope with climate change impacts to aquifers in the target area.	Installed water storage capacity (days) to supply water (storage capacity/total average consumption per day)
	Condition of the water supply system (evaluation index for system components)
Outcome 2 The capacity of ASADAS' end users to mainstream climate change adaptation into their livelihoods systems is strengthened.	Number of household members and producers (differentiated by gender) trained to mainstream climate change adaptation into their livelihoods (AMAT: CCA-2)
	Proportion use of hydrometeorological information by ASADAS in planning processes (by type of plan)
	Measures undertaken to reduce risks to climate change
Outcome 3: 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	Number of RMPPWS that incorporate ecosystem-based climate change adaptation, including gender considerations (AMAT: CCA-3)
	Number of AyA and CNE investments for the prioritized project area that integrate climate change risks (AMAT: CCA-3)
	Number of adaptation-related voluntary fee systems (expanded PES) implemented
Outcome 4 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.	Number of purchasing and credit policies of agricultural and livestock trading companies and financial institutions revised /adjusted (AMAT: CCA-3)
	Number of climate change-related initiatives making use revised purchasing and credit policies of agricultural and livestock trading companies and financial institutions

Source: Own elaboration, based on the methodology of the RMT and the results of the project.

4.2.4 Barriers that still exist for the achievement of the Project's objectives

Regarding the barriers identified in the PRODOC, the project has made significant progress in overcoming these barriers related to: 1) knowledge and access to financing for storage infrastructure and distribution of resilient water collection; 2) information on precise locations and characters of aquifers: 3) limited capacity and knowledge among local stakeholders; 4) a complete hydroclimatological network, 5) as well as the climate information and early warning system; 6) awareness among policy makers; 7) The ability to integrate climate risks into water management plans; and 8) Knowledge and experience to adopt payment practices for ecosystem services.

However, although the project has worked hard, it has not been possible to move forward with economic incentives for livestock and agricultural sectors to adopt water conservation production practices to reduce vulnerability to climate change.

4.3 Project Execution and Adaptive Management

4.3.1 Management mechanisms

The execution of the project and the adaptive management is highly satisfactory. It is guided by the institutional arrangements defined in the PRODOC (page 64). In such a way that UNDP provides the project cycle management services in accordance with the requirements of the GEF Council and the decision of the Costa Rican government to execute it. The Project Implementation Unit (PIU) was in charge of the implementation of the project, a structure that is not very visible but of strategic value. Through a Project Management Unit (PMU), the execution of the project is managed, while the Country Office provides supervision and guarantee of the project through a designated program officer, who supervises the Project Coordinator. The advisory committee did not operate formally, however through UNDP and AyA staff, support was provided in specific actions to guarantee a focus on gender and human rights.

The Steering Committee [43]met annually , facilitating strategic guidance to the Project coordinator, rendering accounts and making decisions and approving the Annual Work Plan. In addition, outside of this formal framework, from the executive presidency of the AyA and the Resident of UNDP, it is given a special importance and monitoring at the highest level of the actions of the project and the progress of the results. Not to mention, they have provided permanent support to the coordination of the project.

In addition, meetings were held where the AyA and UNDP teams participate, including the UEG staff, where the results are reviewed and accounts are rendered, and feedback is obtained for the next phase.

The technical team and the technical assistance provided by the PMU is highly valued, there is a favorable criterion from the political authorities of the AyA, also from the regional offices and offices. Among the things that stand out, the technical and management capacity and the methodological of participative work, adapted to the institutionality of the AyA and the ASADAS.

There was support in all instances of AyA, from the central level and from the regional offices[44] . At the central level, it supports the work team of the UAS ASADAS, including those of "systems engineering", "fortification ASADAS", "sustainability of the service"; the Engineering and Operations Department have participated.

It is worth mentioning that the AyA Regional Offices lack the personnel to face the totality of the work demands that represent the ASADAS and that for them it represented a challenge to approach the work that involved the execution of the project. However, its operation has been satisfactory in spite of having limited resources, effectively supported the implementation of the project, by coordinating the activities promoted by the project, as well as the dissemination, information and approaches with the ASADAS. The Regional Offices has participated in the annual planning, verification of the needs alluded to by the ASADAS projects, the revision of the terms of reference, the analysis of the proposals of the ASADAS, of the final products of the projects, elaboration and consultation of the instruments and special studies, accompaniment, assistance to ensure the proper functioning of the equipment and the system in general and the follow-up of the process of strengthening the ASADAS.

In relation to the Local Steering Committee (LSC), this has not been implemented, given that the project has been supported by a network made up of local actors: Academia, INDER, CNE, MINAE, Municipalities, ASADAS, Federations of ASADAS.

In addition, the project has managed to integrate from the beginning the AyA and other partners (CRUSA, IMN, Fundecooperación and Water Directorate) to achieve greater ownership and sustainability of the

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44 With the Directorate of Climate Change, Fundación Crusa y Fundecooperación

results. The general appropriation is high in all levels of management of the AyA involved and shows great satisfaction with the management of the project

With regard to partners [45] , it has participated in the spaces where the ASADAS topics are linked and adapted to the CC. This includes communication and information on the progress of the project and look at the possibility of establishing links and possible synergies. On this line, the project can take advantage of and have a greater presence in the Climate Change Committee and in the Interministerial Technical Committee, which can strengthen its link with the CC Policies, the estimation of the national metric and the emerging issues on CC may be of knowledge in the mentioned areas.

An aspect of special attention will be to coordinate with the DCC the way to report the contribution of the project to the implementation of the national adaptation policy, to the estimation of the national metric and the national goals. In addition, in relation to the estimation of the contribution of the project to the national metric, the project must be registered in the National System of Metrics of Climate Change (SINAMEC)[46], for which the DCC must provide an access code.

The management from the DIM modality has been implemented with a wide participation of the AyA, with the purpose of strengthening the governance of the project and strengthening the institutionality of the country's water resources management, the appropriation and sustainability of the results , where AyA assumed a more active role in the field of strategic political management and UNDP in the field of administrative management (strategic and operational) oriented to results. From the perspective of the UNDP, this management model put into practice should generate greater value added to the AyA, both in relation to the generation of results, as well as the development of appropriate management and innovation processes. The results obtained from this approach are:

1. It is highlighted that the administrative contracting processes are more agile than those of the AyA, with adequate formats and standards that guarantee quality.
2. At the regional level, it led a good articulation in the territories between the AyA, the partners and other relevant actors.
3. Through a management based on the achievement of results, guaranteed by an implementation based on the administrative guidelines -consumers of the UNDP and defined by the PRODOC.
4. Timely support to AyA to attend ASADAS in regions with emergency and where it was difficult to attend due to the limited availability of institutional resources.
5. From an intervention nuanced by awareness, joint learning and attention to the particularity and shared vision of what was to be achieved, helped to improve the relations of the AyA with the ASADAS.
6. Strengthening of the management of the Regional Offices of AyA, from the exchange with the UGP personnel, and of the specialized personnel hired by the Project.
7. The prior knowledge of UNDP was used, as well as the capacity to execute projects; especially those related to water resources and community water

[45] SINAMEC, is a virtual open source data platform to monitor the compliance and progress of Costa Rica's climate goals.

[46]

management in Costa Rica and the topics related to risk management and climate change.

8. Due to the limitations that the Costa Rican Public Administration presents, the DIM modality allowed the execution to be made more dynamic in the foreseen times and to obtain the required quality of the expected results.
9. Additionally, the "*adaptive management*" approach favored the integral management of the project towards the achievement of the project's objectives. In this sense, the design of the implementation strategy, the methodological approach and the decision making is considered positive for the AyA.
10. To have a work team with the leadership capacity and to adapt to the country's institutions and to appropriate the vision of the AyA.

In the field of AyA, the results in innovation as a result of the management mechanism of:

- The modality of competitive resources that has been put into practice for the first time and that the project was able to demonstrate that in the future the institution could apply the mechanisms and processes generated to carry out other interventions.
- Regular use of materials with appropriate technologies and operations for their installation. As are the High Density Polyethylene (HDPE) pipes and local construction manometers.
- The development of tailor-made instruments to strengthen the diagnosis, description and monitoring of improvements in the management capabilities of the ASADAS.
- The implementation of a strategy and form of proactive management to carry out the integration process of the ASADAS.
- The promotion of women's leadership in community water management.
- Incorporation of adaptation measures into strategic and operational institutional instruments.

The results framework and the logical framework of the project are used as a management tool, the values of the indicators are updated annually. In the case of actions on the terrain, the management mechanism is characterized by its horizontality, in which the Regional Offices of the AyA and the ASADAS participate, the beneficiary communities have positively facilitated the execution of the project and the support towards the achievement of the results .

It is worth mentioning that the role played by UNDP is highly valued by the authorities of the AyA, the IMN.

The budgetary processes are agreed with AyA and are carried out in a timely manner and in a consultative manner with the AyA, following the accounting and administrative procedures of UNDP. This also applies to procurement and contracting processes, which in general have not presented major inconvenience.

The project has managed to make alliances with federations of ASADAS, municipalities, schools, government institutions and universities, agricultural and business chambers, to promote the achievement of results.

4.3.2 Work planning

The planning of the work is oriented towards the achievement of the results and according to what is stated in the results framework (pages 20-39) and the work plan (pages 57-63) defined in the PRODOC. In this regard, it should be mentioned that the results framework and the programming of activities defined to achieve it have not been modified.

Work plans are prepared in a participatory manner[47] and in consensus with AyA. It consists of an adaptable planning during the execution of the project, in case of contingencies. They participate in this formulation process in addition to the UAS ASADAS and the Regional Offices of AyA, the coordination and the manager-financial and technical team of the project. The AWPs are presented for approval to the Steering Committee.

In general, it is considered that some changes have been made in order to adapt the planning to the scope of some results.

4.3.3 Financing and co-financing

The financial controls established in the PRODOC have been followed and supported by the financial administrative system of the UNDP, they allowed the control, the direction of the project to make decisions based on accurate and relevant information, on the budgets and their execution. The system is transparent, so that the evolution of financial execution can be observed and reported in real time for the actors that have links with the management of this type of systems and information.

Table 4.3.3.1 .: Budgetary execution of the GEF fund. Until September 2, 2018.

Year	2016	2017	2.018	Total for the period (US $)	PRODOC percentage (%)
PRODOC annual budget (US $)	1 365 370.00	1 313 995.00	1 138 845.00	3 818 210.00	**76.36**
Amount of the Annual Operating Plan (US%)	967 130.00	1 313 965.00	1 138 845.00	3 419 940.00	**68.40**
Annual budget execution (US $)	963 454.00	1 324 943.00	552 135.00	2 840 532.00	**56,81**
Percentage of execution of the annual Operational Plan	99.62	100.84	48.48	---	---

Source: Own elaboration based on financial information provided[10] for the project.

[47] To this end, workshops are held where the actions to be developed and goals are presented, are organized: annual programming, responsibilities and budget.

[10] PRO Report (Project Resource Overview), generated in the ATLAS system, for each year.

The budget execution accumulated until June 2018, reaches the sum of US $ 2,840,532.00. The project shows a very good level of budget execution for the first two years of operation, reaching an average of 100% of execution. By 2018, the pace of execution is maintained with a similar trend, which suggests that it will also complete the budgeted amount if arecurrent conditions are manteined.

It is clear that the project has been effective in the execution of the GEF resources, in the mid-term, it has managed to execute 56.81% of the resources, with the possibility of maintaining the current conditions, of reaching an approximate of execution of these resources close to 68.40%.

There is a difference between the annual resources projected in the PRODOC and those budgeted annually of 8%, which could be incorporated into the 2019 budget, with the purpose of strengthening the execution of the priority aspects, such as actions the promotion and execution of adaptation actions to the CC. On the one hand, forecasts must be made to establish an appropriate exit route for the results, both those currently achieved and what is to be achieved. On the other hand, a plan for the closure and liquidation of the UGP, in view of the looming operational reduction.

In Table 4.3.3.2., Co-financing is partially reported, given that some sources at the end of the evaluation did not provide the information. With the available information it may be indicated that the total investment of the project, a 84.20% corresponds to compromotive cofinancing monies, representing the total sum of 26,658,848 million. To date there is a 25% contribution from the co-financing, generated by the CRUSA Foundation and the National Meteorological Institute , monies that exceed the amounts committed by both entities .

Table 4.3.3. 2 .: Budgetary execution of the GEF fund. Until September 2, 2018.

Sources of co-financing	Entity name	Kind of co-financing	Amount financed as of the date of authorization	Amount actually contributed to the mid-term evaluation date.
Organism	GEF	Cash	5,000,000.00	2,840,532.00
Organism associated with GEF	UNDP	Cash	450,000.00	(*)
National government	AyA	Cash	16,400,000.00	(*)
		Species		(*)
	IMN	Cash	5,000,000.00	2,901,000.00
	IMN	Species		2,150,000.00
	AyA-IADB	Species	1,573,051.00	
Foundation	CRUSA Foundation		1,385,898.00	1,528,423.00
	Fuendecoperation		1,850,000.00	(*)
		Total	31,658,949.00	9,419,955.00

Source: self made.

(*) Information is required to fill in the box.

4.3.4 Project monitoring and evaluation systems

The project has a monitoring strategy and the actions carried out in this area were guided by the Monitoring and Evaluation Plan (M & E) of PRODOC, and it is based on the UNDP tools. Currently has several instruments at the Project level: "Initial report", Project Implementation Reports (PIR), quarterly reports, and minutes of the Steering Committee (CD) and the Tripartite Commission (CTP) Reviews. The financial follow-up is carried out by UNDP and has "Quarterly Progress Reports", as well as online progress through the " Project Progre ".

The PRODOC did not consider the participation of a specific person to monitor the achievement of results and assigns this function to the person in charge of communicating the project. The PMU is responsible for the daily monitoring, for that it counts on the instruments and mechanisms of its own monitoring, which allow it to verify the progress of the results on a day-to-day basis. The work methodology is participatory, with sessions of self-assessment and reflection on what has been done, where progress is shared and the necessary actions to strengthen progress are discussed.

Follow-up sessions are also developed with UNDP and with AyA, and follow-up and / or adaptive management actions in response to the PIRs are carried out in a timely manner, facilitating decision-making on the actions, management and budget of the project.

4.3.5 Involvement of interested parties

The involvement of the parties was positive, to achieve the results of the project. Being able to differentiate three levels of institutional involvement: political, managerial and technical. At all levels a high level of involvement can be observed. Equally a high appropriation at the central, regional and local level. The CRUSA foundation, support to improve the adaptation to climate change, to community water projects, as well as the creation of a National Information System (INGIRH), in coordination with AyA and the IMN.

In the case of Fundecooperación, although they do not participate in the execution of GEF funds, they participate in the activities developed by the project and have held informative meetings with the project. It runs the National Adaptation Fund (FAN), from where it supported the water tariff initiative in the North-North territory and co-financed instruments of meteorological stations of the IMN, to strengthen the early warning system and water safety plans.

The IMN addressed issues related to climate issues, specifically focusing on technical aspects and the acquisition, installation and start-up of meteorological stations. With which you can monitor the climate and provide information to the ASADAS and the CNE.

The ASADAS, have joined the work in all tasks: planning, budgeting, infrastructure construction including the selection of sites, the installation of materials and equipment, including high technology.

In addition to the actions taken , stakeholders, also supported the project initiatives to transversalize integration issues, gender and human rights.

4.3.6 Information

The project has a communication strategy and the hire of a communication specialist, who also serves as a monitoring and evaluation officer. Aspects that provide the project with important support in this area.

In the field of information, dissemination has been made, through notes on the activities and progress of the project, material on the generated tools (specific information), publications, videos, articles on experiences, maps, educational materials. It has a Facebook page, and a web page is in the process of being prepared.

For the Regional Offices of AyA and the ASADAS, the level of information has been good and useful for the strengthening of institutional capacities in water management . Particularly, at the level of the ASADAS, the theme allowed to generate a greater awareness of the water resource and the risks in the face of climate change.

In addition, these generated materials are useful for disseminating results and procedures, as well as the importance of adaptation to climate change for communities and ASADAS.

On the other hand, changes in adaptive management to the Project Board have been reported and shared in an adequate and transparent manner. Both the Project Team, AyA and the ASADAS involved maintain their commitment and comply appropriately with the information requirements requested by the GEF. The PIRs were shared with the Project Board, made up of AyA and UNDP . The lessons derived from the process of adaptive management are incorporated on the progress of the execution of the project.

Due to the good level of progress in many of the processes and results, the opportunity can be taken to be disseminated to wider audiences, increasing the ability to impact on the role of ASADAS and the importance for adaptation to CC in the area of influence of the project.

4.3.7 Communication

The project has a high level of communication within and between the different levels of project management, including also with partners and other interested stakeholders. The communication is timely and of quality what allows fluidity to the processes. It is clear that the relationships between the actors are adequate and that the project is managed in a framework of trust between the entities involved. From the current and future management, this condition is relevant to achieve the sustainability of the results, to the extent that it facilitates the path to achieve the proposed products.

Despite having a formal structure, when carrying out a more horizontal management of the project, communication favors the efficiency of work teams. This is positive to replicate for the remaining period of execution, as well as for the process of transferring the products to the AyA..

4.3.8 Assessment of project execution and adaptive management

The evaluation of the execution of the Project and adaptive management is Highly Satisfactory, because it is being conducted to achieve and maximize the results, including the unforeseen ones, which once identified the new needs, should be addressed, to advance with the goals proposals in the working plane:

1. The project has been adjusted to the needs and institutional AyA times and IMN without losing direction
2. The methodological adjustments were appropriate as well as the approach in the field.
3. Flexibility to adapt and align with the culture and institutional management of AyA.
4. Work planning that facilitates the implementation of the project and the achievement of the products.
5. Facilitating the implementation of the guidelines of public policy, which establishes the need to strengthen the sustainability and integration and the associativity of the ASADAS.
6. Strengthening the role and participation of women in water management for human consumption, including community water management.

The project has managed to achieve the proposed results. Annual work planning is participatory and supports management. It has been efficient in the level of budgetary execution and contribution of the counterpart of co - financing. Monitoring supports execution and accountability and management by results. In general, the involvement of stakeholders is positive and has an excellent level of ownership. Coordination has been good in relation to AyA at the central level, ORAC, the ASADAS and the PMU. It only requires corrective action to support the planning of work consisting of: 1) The preparation of a guide and a contingency plan to achieve the development of economic incentives for livestock and agricultural sectors to adopt production practices of water conservation to reduce vulnerability to climate change, at the end of the project; 2) A plan that guaranteed its implementation in 2019, of the products on "Installations of water saving installed" and the "Pilot of sanitation and purification and other adaptive technologies". See annex 6.11.

4.4 Sustainability

Sustainability is likely (P), due to the strength of the institutionality of the community management of the country and the progress of the project in the development of capacities in the ASADAS, for the improvement and efficiency in the provision of the service and the adaptation to the climate change.

4.4.1 Socioeconomic risks for sustainability

Sustainability due to financial risk factors is likely, because the Project has generated capacities in the ASADAS and effects that strengthen the efficiency and economic profitability of the services provided by the ASADAS, through the following changes identified in the attitudes, trends and behaviors among the actors involved: 1) change attitudes towards water resources, which lead to water savings: 2) Improvement in management capacity, including planning, operation of the system and proper accounting for water, including integration of ASADAS to improve efficiency 3) The improvement in the capacity and quality of the service, perceived as a greater satisfaction of the population; 4) The expansion of the area of provision of services what new revenues; and 6) Improvement in financial and investment capacity.

Sustainability due to social risk factors is likely. The project has contributed to achieve capacities and resources for political management and service provision: 1) A closer approach between the AyA and the ASADAS; 2) The ASADAS have improved their capacities to manage social issues; 3) The communities recognize the efforts of the ASADAS for the improvements made; 4) The improvement in the access and in the quality of the water service presented by the ASADAS, is a factor of success in the long term.

4.4.2 Risks to sustainability related to the institutional framework and governance

Sustainability due to risk factors in relation to legal frameworks, policies, structures and governance processes is likely. In this sense; the institutional framework, the legal and policy framework of the country have been strengthened, to support community management and specifically the provision of quality services by the ASADAS.

4.4.3 Environmental risks for sustainability

Sustainability due to institutional risk factors is likely. The ASADAS will always be subject to risks related to climate alterations, and damages caused by environmental disasters. Precisely, the adaptation measures that the project intends to establish strengthen the ASADAS so that CC can develop resilient systems. Additionally. The project has generated strategic alliances with key partners and is in constant communication with its counterparts and ASADAS to provide support in case of extreme events.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

a) The project is visionary to address the problems that the ASADAS are facing, for the provision of water supply services and the way in which they can face the risks caused by climate change.

b) The strategy and design correspond to the policies and needs of the country and the needs of the territories of the North of the country with water stress (intervention areas), to face the threats of climate change to people's livelihoods; as are the increase in floods, the scarcity of water in some and the severe economic impact of local communities and productive sectors. Likewise, the theory of

change is explicit and pertinent; Regarding the Logical Framework, the proposed components, products and actions correspond to the development objective and the barriers identified.

c) The Logical Framework (ML) of the project is maintained as it was designed (except in the case of indicator 3); its vertical logic is clear, and it has as a basis the results chain incorporated in the "Theory of change" and in the results framework. Regarding horizontal logic, the original design of the project has had value changes, product of adaptive management, which are not visualized in the Matrix.

d) The execution strategy has favored the adequate progress of the project until the first half of the execution period. However, several actions require special attention in the year 2019: 1) Regarding component 1, the installation of water saving devices and the sanitation and purification pilot and other adaptive technologies. Regarding component 2: The 20 companies and 5 financial institutions that promote the adoption of productive practices and initiatives related to climate change that use revised purchasing and credit policies.

e) It has had an outstanding progress in the installation of micro and macro water meters, the supply of pipes and tank for water storage. What allows to make accurate estimates of the production, distribution and sale of water. For the ASADAS, where the operation of the project has concluded, there is no AyA document, which accounts for the equipment and materials received, as well as its verification of the status of its installation and operation.

f) The Project makes efforts to achieve the officialization and standardization of technical studies, which could be an important element for the financial sustainability of the results. It has to address the absence of official administrative technical procedures for the processing and approval of requests for financial resources with INDER funds, which resulted in a limitation for the effective mobilization of financial support that would allow the ASADAS to develop infrastructure investments.

g) The project presents satisfactory progress and is on track to achieve the goals and achieve its development objective. It contributed to the increase in the continuous availability of water for all the ASADAS by 24.20%, improving the service to 36,000 people of 22 ASADAS, and an improvement in water availability per capita. Presenting positive effects in the change attitudes toward the water resource; the capacity of management, the capacity and quality of the service and the financial and investment capacity of the ASADAS.

h) It has made significant progress in overcoming the barriers identified in the PIF and the PRODOC, however, although the project has made an effort, it has not been possible to advance as expected with the economic incentives for livestock and agricultural sectors to adopt practices of Water conservation production to reduce vulnerability to climate change. Therefore, the approach of corrective measures in Annex 6.11 deserves a strategic review.

i) The tools generated by the project contribute to the change of the management model of the ASADAS, their capacities for greater efficiency and effectiveness.

j) The project stimulated, promoted and facilitated ASADAS integration processes and thereby instrumentalized the implementation of policies for the organization and strengthening of community water management.

k) It allowed to generate credibility in the AyA and in the policy of ASADAS, related to issues of integration, association and the strengthening of community water management in the face of climate change.

l) The project stimulated, promoted and facilitated the integration of ASADAS and thereby instrumentalized the implementation of policies for the organization and strengthening of community water management.

m) The establishment of meteorological and hydrometeorological stations will provide climate evidence to make decisions regarding the effects of CC; However, the current concern is how the communities can perceive benefits through these results. In this sense, the training directed to the ASADAS is important to achieve the sustainability of the expected results of the installation of the meteorological stations.

n) The training provided has been highly valued by the officials of the AyA and the ASADAS, for their relevance to improve the management capacity of the ASADAS; In addition, the contents, materials generated and lessons learned from this process, once systematized, can offer an opportunity to strengthen the Web's capacitaciónasadas.com.

o) The project had to address the lack of formalized administrative technical procedures for the processing and approval of requests for financial resources with INDER funds, which resulted in a limitation for the effective mobilization of financial support that would allow the ASADAS to develop infrastructure investments.

p) The support and the relevance that the project can offer to the figure of the Associations of ASADAS is positive and of transcendence within the framework of the strengthening of its capacities. They represent an important section within the institutional framework of water resources management, in terms of their potential to support the AyA in strategic issues at a regional level, as well as to support ASADAS at the local level; However, actions 1 and results related to them were not included in the PRODOC, as would be the allocation of resources and the accompaniment of the associative processes . So the efforts made by the project to support initiatives of the Communal Water League of the Chorotega Region and the Union of ASADAS of the North-North territory in this dimension were successful.

q) The follow-up actions were effective and consistent with the requirements of the entities involved, highlighting the development of various instruments and, in particular, the results framework and indicators of gender mainstreaming.

r) Studies of the detection of agrochemicals in the springs to verify the quality of water, such as those that the project has financed, represent highly valued instruments that strengthen water governance, since they reduce scientific uncertainty and social concern.

s) It generated outstanding public policy instruments, such as the gender policy of the AyA and the proposed modification of the regulation, as well as other tools that also contribute to changing the management model of the ASADAS.

t) The integration process entails a cost (because the Asadas policy, nor the project, sustain resources in a specific way, that support these processes) and investment commitments of which the integrating that ASADAS do not have. Due to this policy gap, the Asadas assumes it without the budgetary content

for it. Hence, the project's actions will be vital to achieve the integration of ASADAS, as part of the implementation of the ASADAS policy.

u) In the country, important spaces are represented to strengthen the connection of the Project to national instances linked to the management of the Climate Change Policies; the "Climate Change Committee" and the "Interministerial Technical Committee". There is not enough closeness of the Directorate of Climate Change, organization that leads this issue in the national scope, by which its incorporation is important to ensure that the actions carried out by the project contribute to the national metric.

Sustainability is likely (P), due to the strength of the institutionality of the community management of the country and the progress of the project in the development of capacities in the ASADAS, for the improvement and efficiency in the provision of the service and the adaptation to the climate change.

5.2 Recommendations

5.3 Recommendations at the level of AyA

a) At the local level it is recognized that the project is an initiative of the AyA, however, it is important that, from the regional offices, the positioning of the AyA institutionality is reinforced, which will be vital in the future for the sustainability of the results.

b) The AyA must intervene with the Water Directorate of MINAE to simplify and expedite procedures and processes (in reasonable time) and the procedures for permitting excavation of wells for ASADAS are developed.

c) It will require the political-administrative management of the managers of AyA and INDER so that in 2019 it is achieved: 1) The officialization of the Guide for the Development of Projects of Aqueducts and Sewers (ASADAS) ", which must include the procedures and the technical admirative requirement, 2) An agreement between AyA and INDER, where commitments are established, the processing and approval of technical studies will allow the mobilization of financial support from INDER to develop the investments proposed in 16 ASADAS. The formalization and normalization of technical studies requires the political will and effort of the legal and technical area of INDER, to facilitate the process of review, adjustment, of the proposal worked with the inter-institutional commission formed by AyA and INDER.

d) Strengthen the Web offer formaciónasadas.com, with the contents, generated materials and lessons learned generated in the process of project training.

e) It is necessary to generate a document from the ORAC of the AyA, which accounts for the equipment and materials received, as well as its verification of the status of its installation and operation, since it is important that the project has a document received from compliance with said equipment and current status.

f) Disseminate the successful integration experiences obtained with the project and capitalize on the promotion of the promoted model and the processes for integration

g) The hydrological stations are under the supervision of AyA, which must verify and communicate to the project the status of operation and safety.

5.3.1 Recommendations at the level of the Project Management Unit.

a) Manage before the Directorate of Climate Change, the incorporation of the representation of the project the "Climate Change Committee" and the "Interministerial Technical Committee"; instances that can be used for communication about project actions, knowledge about emerging issues related to the project objective, as well as the coordination with the DCC of the estimation and reporting of the contribution to the national metric.

b) In addition, to communicate and coordinate with these DCC these topics the project can take advantage of the experiences and tools developed by the management.

c) Regarding the follow-up: 1) Continue the accompaniment of the beneficiary ASADAS and the follow-up of the results; 2) Implement the update of the information of the matrix of results and indicators of gender mainstreaming; 3) Define a monitoring plan that considers the conduct of these studies of agrochemical detection in the springs, at least once a year.

d) Define and execute the plan that guarantees the achievement of the products on "Installed water saving devices" and the "Pilot of sanitation and purification and other adaptive technologies" in the year 2019.

e) Strengthen the work of the associations of ASADAS: 1) Maintain the support and synergy with the Communal League of Water and the Union of ASADAS of the North zone and shore up the platform of supply of services to the ASADAS, the creation of an investment fund and the training aimed at training trainers that seek to improve the local blocks of the Asadas; as well as the promotion of generational exchange in the ASADAS and integrate the youth component: 2) Invest in accompaniment and resource plans to support associations of ASADAS based on the potential services they can offer the ASADAS, such as: a) water quality control, b) accounting, c) managerial support, d) legal services, f) technical assistance, and g)other services (eg pipe welding and backhoe).

f) Review the budgets of the project and assess the feasibility of establishing a financing line for the integration of Asadas.

g) To provide follow-up on the training of the ASADAS that the IMN must offer, on the operation of the meteorological stations and the services of other institutions (IMN, MAG and INS) that these provide to the communities, particularly in the decision making of the ASADASS

h) Together with the technical committee, analyze the possibility of achieving the results, in the remaining period, the development of economic incentives for livestock and agricultural sectors to adopt water conservation production practices to reduce vulnerability to climate change. Establish a guide and the contingency plan to achieve it, in accordance with a prioritization of products and

budgets, including the participation of new partners formalized with implementation agreements (MAG / FONAFIFO, Corporations and regional associations).

i) Train the ASADAS in the use of meteorological data and the development of the operational plan of the stations and render periodic reports available to local users.

j) To this date exists, important results that deserve to be disclosed in the short term and on the go, as were the experiences and results obtained with the improvement and reconstruction of infrastructure, the use of appropriate technologies, etc.

k) An aspect of special attention will be to coordinate with the DCC the way to report the contribution of the project to the implementation of the national adaptation policy, to the estimation of the national metric and the national goals. In addition, in relation to the estimation of the contribution of the project to the national metric, the project must be registered in the National Climate Change Metrics System (SINAMEC), for which the DCC must provide an access code.

l) The Logical Framework (ML) should be modified to include product and its respective indicators, in relation to results concerning the development of tools to strengthen the capacities of the ASA, of the ASADAS, as well as those related to the mainstreaming of the gender approach.

6 Annex

Annex 6.1: Terms of reference.

United Nations Development Program (UNDP)
National Institute of Aqueducts and Sewers (AyA)

Project Strengthening the Capacities of Rural Water Supply Associations (ASADAS) to face climate change risks in communities with water stress in Northern Costa Rica

REFERENCE TERMS

UNDP Costa Rica will hire a consultant to carry out the Mid-Term Review (MTR) of the *Project Strengthening the Capacities of Rural Water Supply Associations (ASADAS) to face climate change risks in water stressed communities. the North of Costa Rica.*

1. INTRODUCTION

These are the Terms of Reference (TOR) of the Mid-Term Review (MTR) of PNUD-GEF for the ordinary project entitled **Strengthening the Capacities of Rural Water Supply Associations (ASADAS) to face the risks of Climate Change in communities with water stress in the North of Costa Rica** (PIMS 5140), implemented through UNDP Costa Rica and the Costa Rican Institute of Aqueducts and Sewers (AyA). The project started in May 2016 and is currently in its third year of execution. In line with the UNDP-GEF MTR Guide, this midterm review process is done prior to the submission of the Second Project Implementation Report (PIR). In the present TOR, the expectations for the current MTR are set. The MTR process must follow the guidelines set out in the Guide for the Conduct of the Examination of Half a Period in Projects Supported by UNDP and Funded by the GEF

2. BACKGROUND AND PROJECT INFORMATION

Here are some essential aspects of the project to be evaluated:

Title of the project:	**Project Strengthening ASADAS to face Climate Change risks in communities with water stress in Northern Costa Rica**			
Identification of the project	PIMS 5140		*at the time ofapproval*	*at the time ofending*
Identification of the UNDP project:	Project ID: 00092255	GEF financing:	US $ 5,000,000	N / A
Country:	Costa Rica			N / A

Area of interest:	Adaptation to climate change	Other:		N / A
		Total co-financing:	658,949	N / A
Executing Agency:	UNDP Costa Rica	Total budget of the project:	US $ 31,658,949	N / A
Other partners involved:	Costa Rican Institute Aqueducts and Sewers (Governess)	Signing of the project document (project start date): April 2016		
		Closing date (Operational):	Proposed: March 2021	Real: N / A

Costa Rica already experiences the effects of climate change, mainly in the northern region of the country. The climate change scenarios suggest that by the year 2080 annual precipitation will be reduced by up to 65% in this region. In the short term, it is expected that rainfall will decrease by 15% in 2020 and 35% in 2050. These extreme conditions will exacerbate climate stress and water shortages in some areas, recreating the typical conditions of semi-arid zones. If pressures driven by climate change are not addressed, the region will continue to face significant water shortages and the severe economic impact on the livelihoods of local communities and productive sectors.

In Costa Rica, the associations of communal aqueducts (ASADAS), through delegation agreements with the National Institute of Aqueducts and Sewers (AyA), provide drinking water and sanitation services to 28.7% of the country's population, mainly in rural areas. suburban and rural communities. Most of the ASADAS need to develop the necessary skills and have access to knowledge, tools and adequate investment, in order to cope with the shortage of water supply due to climate change. Often, the infrastructure of existing aqueducts is obsolete and overloaded, generating inefficiencies in services, which in turn makes it difficult to charge fees, leading to financial uncertainty and limits the capacity of ASADAS and AyA to plan and implement specific improvements and new investments. The AyA investment plans do not include ecosystem-based or community-based adaptation measures, and if the ASADAS do not strengthen their capacities to cope with climate change, the vulnerability of rural populations in the northern region of Costa Rica does not will do but increase.

The long-term solution to mitigate threats of water scarcity to local livelihoods is to establish a comprehensive approach to water supply management and demand that takes climate change into account. However, some of the barriers that must be overcome in order for the ASADAS to be strengthened in the face of the challenges of climate change are:

a) lack of knowledge and access to financing of resilient infrastructure, technologies for the efficient use of water in homes and mapping of aquifers to effectively manage the demand for water, as well as the design of strategies for the conservation and use of water during periods of drought; b) Limited capacity and knowledge of local actors to adopt practices of sustainable water use and vulnerability to climate change; c) lack of climate alert systems that allow ASADAS and communities to implement timely mitigation measures; d) the lack of awareness among political decision makers and the social, economic and

environmental implications of the vulnerability of water resources to climate change; and e) the lack of economic incentives for the productive sectors (livestock - agriculture) to adopt water conservation practices to reduce their vulnerability to climate change.

The *Project Strengthening of ASADAS to face Climate Change risks in communities with water stress in the North of Costa Rica* , is implemented in partnership between UNDP Costa Rica and AyA, with the participation of a large number of ASADAS, institutional actors, of international cooperation , private sector and civil society. The objective is to *support the improvement of drinking water supply and promote sustainable water practices among users of ASADAS and productive sectors through the incorporation of adaptation measures based on ecosystems and with broad community participation to address the hydrological vulnerability related to climate in the north of Costa Rica* , particularly in the cantons of Guanacaste and Alajuela. It has two components and 5 results that are:

1. Generate community infrastructure and technical capacities to meet the projected changes in access to water

- Outcome 1.1 - Strengthening the infrastructure and technical capacity of the ASADAS to deal with the impacts of climate change on the aquifers of the impact zone.
- Outcome 1.2 - Strengthening the capacity of the end users of the ASADAS to adapt to the effects of climate change on their life systems.
- Outcome 1.3 - Hydrometeorological information integrated in land use and production practices, planning process to increase the resistance of rural communities to cope with water variability.

2. Transversalize adaptation based on ecosystems within the policy and investments of the public and private sector

- Outcome 2.1 - Adaptation measures to climate change based on integrated ecosystems in public and private sector policies, strategies and investments related to infrastructure and water supply services to the rural community.
- Outcome 2.2 - Purchase and credit policies of at least 20 agricultural and livestock commercial enterprises and five (5) financial institutions operating in the priority region promoting the adoption of productive practices that help maintain the resilience of ecosystems to climate change.

Institutional arrangements, relevant counterparts and other partners of the Project

The duration of the project is 5 years and it is executed under the direct implementation modality (DIM) as requested by the Government of Costa Rica and in accordance with the norms and regulations of the UNDP. In this Project, UNDP plays two roles:

- As the executing agency (IA) of the GEF, UNDP provides project cycle management services according to GEF guidelines.
- At the request of the Government of Costa Rica, it serves as the Implementing Partner of the project and is responsible for the execution of the project in collaboration with the national parties involved, which requires the administration and delivery of financial inputs. The Management Unit executes

it, while the Country Office provides supervision and guarantee of the Project through a program officer who supervises the Project Coordinator.

Project Partners

Concerned parties	Role in the implementation of the project
Ministry of Environment and Energy (MINAE)	MINAE will guide the development of the legal and institutional framework for the incorporation of climate change measures in water management by ASADAS and the productive sector, and will provide technical and political support for the implementation of the project. In addition, the Water Directorate will provide technical expertise, in coordination with AyA, to integrate the impacts of climate change on water availability into public and private sector policies, strategies and investments, and provide conditions to improve successful pilot experiences in the whole country. MINAE is also the focal point of the GEF
National Institute of Aqueducts and Sewers (AyA)	The AyA is the national public institution in charge of providing technical and financial assistance to improve the management of drinking water. It will play a key role both at the level of sub-regional planning and during field activities, in particular those aimed at capacity building of ASADAS and the productive sector. Another important task of the AyA will be to coordinate the lessons learned and the pilot experiences at the local level in order to improve them at the national level, so that the ASADAS in other areas can implement successful adaptation measures.
Ministry of Agriculture and Livestock (MAG)	The MAG is the leading institution in the agricultural sector. The MAG will guide the development of an institutional framework for the incorporation of climate change measures in the agriculture and livestock sectors, especially in the regulation of private sector practices.
Ministry of Health (MS)	MS is responsible, among other things, for monitoring the quality of water in urban and rural areas through water security plans. MS will have a key role in the analysis of the lessons learned from the four water security pilot plans based on ecosystems and the extension of such experiences to national regulations and policies, with the aim of replicating these models in other ASADAS of all the country
Administrative Associations of Communal Aqueducts (ASADAS)	The ASADAS are responsible for the incorporation of adaptation measures to climate change and the concepts and guidelines for sustainable use in local water management, reducing vulnerability to water and improving the conditions of livelihoods.

National Fund of Forest Financing (FONAFIFO)	FONAFIFO executes the country's Payment for Environmental Services Program and will be an important stakeholder in the development of financial mechanisms relevant to ecosystem-based adaptation.
Agricultural production sector	The agro-industry sector, small, medium and large producers, will participate in the implementation of two pilot projects that incorporate the economic valuation of adaptation measures based on ecosystems. The members of the industry will also be the beneficiaries of sustainable innovative practices aimed at increasing their ecological competitiveness. In particular, the project will establish links with associations of producers of agricultural and livestock products, such as CANAPEP (pineapple), CORFOGA (cattle) and CONARROZ (rice). Consultations for the participation of the private sector began during the preparation phase of the project.
National Meteorological Institute (IMN)	The IMN is the national institution in charge of providing meteorological analysis and forecasts in the country. Their experience, especially in predicting the impacts of present and future climate change and in the generation of an early warning network in case of extreme weather conditions, will be key to improving the technical capabilities of ASADAS and monitoring and response systems based in the community.
National Institute of Women (INAMU)	INAMU is the leading institution that promotes gender equality as a cross-cutting issue in national and sub-regional planning, policies and strategies. It will develop capacities within the AyA, ASADAS and the agro-industry sector in the incorporation of gender issues in water management and climate adaptation measures.
National Irrigation Service and Groundwater Drainage (SENARA)	SENARA researches aquifers in the country and strengthens capacities at the level of local government, ASADAS and communities. It also provides technical and political support on hydrological decisions, providing supervision on vulnerability in wells, springs and protection zones. In addition, SENARA designs irrigation channels, drainage systems and supports producers.
National System of Areas of Conservation (SINAC)	SINAC is the administrator of national parks, conservation areas and other natural protected areas in Costa Rica; It is part of MINAE. It will play a significant role in the incorporation of ecosystem-based adaptation to public and private policies, since many of the water sources on which both sectors depend originate within the protected areas under the jurisdiction of SINAC.
National Emergency Commission (CNE)	The CNE is the government agency for risk prevention and emergency management and is responsible for coordinating with AyA, municipalities and other public entities to monitor the implementation of activities defined in the drought emergency decree for the province of Guanacaste.The CNE also plays an important role in adapting to climate change and managing climate risk. The CNE investments for the target area will be updated to integrate the risks of climate change.

Regulatory Authority of the Public Services (ARESEP)	ARESEP is responsible for regulating the prices of public services in Costa Rica (water and sanitation, electricity, fuels and land, sea and air transport).The project will follow the policies of ARESEP regarding water rates, including those that apply to the private sector.
Local governments	Local governments regulate the local territory, grant building permits and support the welfare of the population.
The local committees	Local committees include public and private organizations, universities and non-governmental organizations (NGOs).
UNDP	UNDP will act as Implementing Partner according to the direct implementation modality (DIM) requested by the government.

3. OBJECTIVES OF THE MTR

The MTR will evaluate the progress made in achieving the objectives and results of the project included in the Project Document (ProDoc), analyzing the first signs of success or failure with the purpose of identifying any change that is necessary to return to the course of the project and get the desired results. The MTR will also review the project strategy and its risks to sustainability

4. FOCUS AND METHODOLOGY OF THE MTR

The data provided by the MTR should be based on credible, reliable and useful information. The MTR team will review all relevant information sources, including documents produced during the preparation phase (eg PIF, UNDP Initiation Plan, UNDP Environmental and Social Protection Policy, Project Document, project reports). such as the Annual Review / PIR, project budget reviews, lessons learned reports, legal and national strategy documents, and any other material that the team considers useful for this examination based on objective data). The MTR team will analyze the Follow-up Tool of the GEF's area of action at the beginning of the project, sent to this body with the approval of the CEO, and the Monitoring Tool mid-cycle, which must be completed before the field mission of the MTR begins.

The team that carries out the MTR is expected to follow a collaborative and participatory approach to ensure a close relationship with the Project Team, its government counterparts, the UNDP Costa Rica Office, the Regional Technical Advisers (RTA) of the UNDP-GEF and other key stakeholders.

Stakeholder involvement is vital to the success of the MTR . This involvement should include interviews with those agents who have responsibilities and participation in the project, among which are: the implementation

partners, the highest ranking officials and the task team / their heads, experts in relief and consultants in the area that the project, the Project Board, interested parties, academic representatives, local governments, etc. occupy. Likewise, it is expected that the MTR team will carry out field missions to the project's implementation zones, including the following sites:

Chorotega region: Cañas, Liberia, La Cruz, Carrillo, Santa Cruz, Nicoya and the North-North territory: Los Chiles, Guatuso and Upala

The final report of the MTR should contain a full description of the approach followed and the reasons for its adoption, explicitly stating the assumptions used and the challenges, strengths and weaknesses of the methods and the approach followed for the review.

5. DETAILED SCOPE OF THE MTR

The MTR team will evaluate the following four categories of project progress. For more extensive descriptions, see the Guide for Conducting the Mid-Term Review in Projects Supported by UNDP and Funded by the GEF.

i. Project strategy

Project design:

- Analyze the problem addressed by the project and the hypotheses applied. Examine the effect of any incorrect hypothesis or changes in context on the achievement of the project results included in the Project Document.
- Analyze the relevance of the project strategy and determine if it offers the most effective way to achieve the desired / sought results. Were the lessons learned in other relevant projects properly incorporated into the project design?
- Analyze how the priorities of the country are included in the project. Check the national ownership of the project. Was the concept of the project aligned with the development priorities of the national sector and the plans for the country?
- Analyze the decision-making processes. Was the perspective of those who would be affected by the decisions related to the project, of those who could influence their results and of those who could contribute information or other resources during the project design processes taken into account during the project design processes?
- Analyze the extent to which the relevant gender issues were addressed in the design of the project. For further details of the guidelines followed see Guide for the Conduct of the Mid-Term Review Period in Projects Supported by UNDP and Funded by the GEF.
- If there are important areas that require attention, recommend aspects for improvement.

Results framework / logical framework :

- Undertake a critical analysis of the indicators and goals of the project's logical framework, assess to what extent the project's mid and end-period goals meet the criteria "SMART" (abbreviated in English as Specific, Quantifiable, Achievable, Relevant and Subject to terms) and suggest modifications / specific revisions of said goals and indicators as necessary.
- Are the objectives and results of the project or its components clear, practical and feasible to perform during the time stipulated for its execution?

- Analyze whether progress so far has generated beneficial development effects or could catalyze them in the future (for example, in terms of income generation, gender equality and women's empowerment, improvements in governance, etc.) so that They should be included in the project results framework and monitored annually.
- Ensure effective monitoring of the broader aspects of development and gender of the project. Develop and recommend SMART 'development' indicators, which should include indicators disaggregated by gender and others that capture the benefits of development.

ii. Progress in achieving results

Analysis of progress in achieving results :

- Review the indicators of the logical framework and compare them with the progress made in the achievement of the goals established for the end of the project through the Matrix of progress in the achievement of results and in accordance with the provisions of the Guide for the Realization of the Mid-Term Review in Projects Supported by UNDP and Funded by the GEF ; they reflect progress by following the "traffic light" color system based on the level of progress achieved; assign an assessment of the progress obtained to each result; make recommendations from the areas marked "Not on track to achieve" (red).

Table 1. Matrix of progress in the achievement of results (results obtained in comparison with the goals for the end of the project)

Project Strategy	Indicator[11]	Initial leve lof reference [12]	Level on 1st PIR (self-reported)	Mid Term Goal[13]	Goal at end of project	Level and assessment at mid term[14]	Assessment of achievements[15]	Justification of valuation
Objective: To improve water supply and promote sustainable water practices of end users and	Indicator 1: Proportion of ASADAS with continued water availability for different time periods	12 months 83% 9-11 months 3% 6-8 months 4% 3-5 months 2%						

[11] Complete with data from the logical framework and dashboards

[12] Complete with data from the Project Document

[13] If available

[14] Color only this column

[15] Use the valoration scale in the assessment of achieving results: AS, S, MS, MI, I, AI

productive sectors by advancing community- and ecosystem-based measures in rural ASADAS to address projected climate related hydrological vulnerability in northern Costa Rica.		< 3 months	9%						
	Indicator 2: Water availability per capita (water intake [volume at source]/number of people served by ASADA)	Range (L/person/day)	ASADAS						
		< 200	5%						
		201-500	10%						
		501-1,500	23%						
		1,501-5,000	10%						
		5,001-10,000	3%						
		>10,000	5%						

Outcome 1.1: Infrastructure and technical capacity of ASADAs strengthened to cope with climate change impacts to aquifers in the target area.	Indicator 1: Installed water storage capacity (days) to supply water (storage capacity/total average consumption per day)	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%					
	Indicator 2: Condition of the water supply system (evaluation index for system component)	- Poor: 50% (index score: 60%) - Needs improvement: 40% (index score: 61%- 84% score) - Good: 10% (index score: 85%)						

Outcome 1.2: The capacity of ASADAS' end users to mainstream climate change adaptation into their livelihoods systems is strengthened	Number of household members and producers (differentiated by gender) trained to mainstream climate change adaptation into their livelihoods (AMAT: CCA-2)	0						
	Proportion use of Hydrometeorological information by ASADAS in planning processes (by type of plan)	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%						
	Measures undertaken to reduce risks to climate change	Increase micrometering: 8% Protection of water sources: 14% Protection of pipes and other system components: 2% Increase efficiency of maintenance: 10% Promote watersaving measures among users: 11% None: 39% Other: 17%						

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	Number of RMPPWS that incorporate ecosystem-based climate change adaptation, including gender considerations (AMAT: CCA-3)	0						
	Number of AyA and CNE investments for the prioritized project area that integrate climate change risks (AMAT: CCA-3)	AyA and CNE investments lack integration of climate change risks in the project area						
	Number of adaptationrelated voluntary fee systems (expanded PES) implemented	Voluntary Watershed Payment: 0						
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.	Number of purchasing and credit policies of agricultural and livestock trading companies and financial institutions revised /adjusted (AMAT: CCA-3)	0						

	Number of climate change related initiatives making use revised purchasing and credit policies of agricultural and livestock trading companies and financial institutions	0						

Code for the Evaluation of Indicators

Green = Achieved	Yellow = Way to be achieved	Red = No way to achieve

In addition to analyzing progress in achieving results:

- Compare and analyze the GEF Tracking Tool at the initial reference level with the one completed immediately before the Mid-Term Review.
- Identify the remaining barriers to achieving the project's objectives in what remains until its completion.
- Once the aspects of the project that have been successful have been examined, identify formulas so that the project can expand the benefits achieved.

iii. Project execution and adaptive management

Management mechanisms:

- Analyze the general efficiency in the management of the project as it is included in the Project Document. Have changes been made? Are they effective? Are responsibilities and chain of command clear? Are decisions made transparently and at the right time? Recommend areas for improvement.
- Analyze the quality of execution by the executing agency / partner in the execution and recommended areas for improvement.
- Analyze the quality of the support provided by the GEF Associated Organization (UNDP) and recommend areas for improvement.

Work planning:

- Analyze any delay in the start-up and implementation of the project, identify its causes and examine if they have already been resolved.
- Are the work planning processes based on results? If not, can you suggest ways to reorient work planning to focus on results?
- Examine the use of the results framework / logical framework of the project as a management tool and review any changes that have occurred since the beginning of the project.

Financing and co-financing :

- Evaluate the financial management of the project, with special reference to the profitability of the interventions.

- Analyze changes in fund allocations as a result of budget revisions and determine if such revisions have been appropriate and relevant.
- Does the project have adequate financial controls, including appropriate information and planning, that allow Management to make informed decisions regarding the budget and to facilitate a flow of funds in an appropriate time and in a timely manner?
- From the information contained in the follow-up table of the cofinancing to be filled, offer comments on the co-financing. Is co-financing used strategically to help the project's objectives? Does the Project Team meet regularly with all partners in co-financing to align financial priorities and annual work plans?

Monitoring and evaluation systems at project level :

- Analyze the tracking tools currently used. Do you offer the necessary information? Do they involve key partners? Are they aligned with or incorporated into national systems? Do they use the existing information? Are they efficient? Are they profitable? Are additional tools required? How can they become more participatory and inclusive?
- Analyze the financial management of the budget for the monitoring and evaluation of the project. Are sufficient resources allocated for monitoring and evaluation? Are these resources used effectively?

Involvement of interested parties:

- Project management: Has the project developed and forged the appropriate alliances, both with direct stakeholders and with other tangential agents?
- Participation and processes promoted from the country: Do local and national governments support the project's objectives? Do they still have an active role in the decision making of the project that contributes to an efficient and effective execution of the same?
- Participation and public awareness: To what extent has the involvement and public awareness contributed to the progress made towards achieving the project's objectives?

Information:

- Analyze the mechanisms used by the Project Management to report changes in adaptive management and communicate them to the Project Board.
- Evaluate the extent to which the Project Team and its partners carry out and comply with all GEF information requirements (eg: what measures have been taken to address the PIRs with low ratings, where applicable)?
- Evaluate how the lessons derived from the adaptive management process have been documented and shared with key partners and how they have been internalized by them.

Communication :

- Examine the internal communication of the project with the interested parties: Is there regular and effective communication? Are there important stakeholders that are left out of the communication channels? Are there feedback mechanisms when communication is received? Does the communication with the interested parties contribute to the latter being more aware of the results and activities of the project, and to a greater commitment to the long-term sustainability of the results of the project ?
- Examine the external communication of the project: Have adequate communication channels been established, or are being established, to express the project's progress and the desired public impact (for example, is there a Web presence?)? Did the project carry out adequate public awareness and communication campaigns?).

- For informative purposes, write a half-page paragraph that summarizes the progress of the project towards the results in terms of its contribution to the generation of benefits related to sustainable development and the global environment.

iv. Sustainability

- Validate whether the risks identified in the Project Document, the Annual Review of the Project / PIR and the Risk Management Module of ATLAS are the most important and if the risk assessments applied are adequate and up-to-date. Otherwise, explain why.
- In addition, evaluate the following risks to sustainability:

Financial risks for sustainability:

- What is the probability that the availability of economic resources will be reduced or stopped once GEF assistance ends (bearing in mind that potential resources can come from multiple sources, such as public and private sectors, income generating activities and others)? resources that will be adequate to sustain the results of the project)?

Financial risks for sustainability:

- Are there any social or political risks that could jeopardize the sustainability of the project's results? What is the risk that the level of ownership and involvement of the interested parties (including that of governments and other interested parties) is insufficient to sustain the results / benefits of the project? Are the various key stakeholders aware that they are interested in the benefits of the project continuing to flow? Do the public and / or stakeholders have a sufficient level of awareness to support the long-term objectives of the project? Does the Project Team document the lessons learned on an ongoing basis? Are they shared / transferred to the appropriate agents who are in a position to apply them and potentially replicate and / or expand them in the future?

Risks to sustainability related to the institutional framework and governance:

- Do legal frameworks, policies, structures and governance processes present risks that could jeopardize the continuity of project benefits? When evaluating this parameter, it is also necessary to take into account if the systems / mechanisms required for accountability, transparency and technical knowledge are installed.

Environmental risks to sustainability:

- Is there any environmental risk that could jeopardize the continuity of the project results?

Conclusions and recommendations

The MTR team will include a section in the report that includes the conclusions obtained from all the data collected and tests carried out .

Recommendations should be succinct suggestions for critical interventions that must be specific, quantifiable, achievable and relevant. A recommendation table should be included in the report's executive report. For more information on the table of recommendations, see *the* Guide for Conducting the Mid-Term Review. Period in Projects Supported by UNDP and Funded by the GEF

The recommendations of the MTR consultant / team should be limited to 15 maximum.

Assessment

The MTR team will include their evaluations of the project results and brief descriptions of the associated achievements in a *summary table of assessments and achievements* in the Executive Summary of the MTR report. See Annex E to check the rating scales. It is not necessary to make an assessment of the Project Strategy or a general assessment of it.

Table. Summary of MTR valuations and achievements
Project Strengthening the Capacities of Rural Aqueduct Associations (ASADAS) to face climate change risks in communities with water stress
in the North of Costa Rica

Parameter	MTR rating	Description of the achievement
Project strategy	N / A	
Progress in achieving results	Assessment of the degree of achievement of the objective.Achievement Rating: (Rate according to 6 pt. Scale)	
	Assessment of the degree of achievement of result 1: (Qualify according to 6 pt. Scale)	
	Assessment of the degree of achievement of result 2: (Qualify according to 6 pt scale.)	
	Assessment of the degree of achievement of result 3: (Qualify according to 6 pt. Scale)	
	Etc.	
Project execution and adaptive management	(Qualify according to 6 pt scale.)	

Sustainability	(Qualify according to 4 pt. Scale)	

6. EXECUTION SCHEDULE

The total duration of the MTR will be 51 days, starting on June 25, 2018. The provisional schedule of the MTR is as follows:

PERIOD OF EXECUTION	ACTIVITY
June 15, 2018	Closing of applications
June 22, 2018	Selection of the MTR team
June 25-27, 2018	Preparation of the MTR team (delivery of Project Documents)
June 28 to July 02 2018	Review of the Documents and preparation of the MTR Initiation Report.
July 4, 2018	Finalization and validation of the MTR Initiation Report: latest date for the start of the MTR mission.
05-21 July 2018	MTR mission: meetings with stakeholders, interviews, field visits
July 23, 2018	Meeting to close the mission and presentation of the first conclusions: earliest date for the completion of the MTR mission
July 24-August 3 2018	Drafting of the report
04-07 August 2018	Incorporation of the audit trail from the data offered in the draft report / Finalization of the MTR report
August 8, 2018	Preparation and communication of the response of the Directorate
August 10, 2018	Conclusion workshop with interested parties
August 13, 2018	Expected date for the final completion of the MTR

The Initiation Report should present options for carrying out field visits .

7. MID TERM EXAMINATION PRODUCTS

#	Product	Description	Term	Responsibilities
1	**Initiation Report of MTR**	The MTR team clarifies the objectives and methods of the Mid Term	At least 2 weeks before the start of the MTR mission: June 26, 2018	The MTR team presents it to the Unit Adjudicator (UNDP Costa Rica) and the Project Management
2	**Presentation**	Initial conclusions	End of the MTR mission: July 21, 2018	The MTR team presents them to the Project Management and UNDP Costa Rica

3	**Final report draft**	Complete report (use the guidelines on its contents included in Annex B) with annexes	Within 3 weeks of the MTR mission: *August 03 2018*	Sent to UNDP Costa Rica, examined by the RTA, Unit Project Coordination, GEF OFP
4	**Final report***	Revised report with audit evidence detailing how they have been addressed (or not) in the final report of the MTR	Within 1 week of receipt of comments from the	Sent to UNDP Costa Rica
		All comments received	UNDP on the draft: 06 of August 2018	

* The final report of the MTR must be in English. Whenever applicable, UNDP Costa Rica may decide to translate the report into a language of greater use among national agents.

8. MECHANISMS OF THE MTR

The main responsibility in the management of this MTR corresponds to UNDP Costa Rica in its capacity as Adjudicator Unit for the MTR. UNDP Costa Rica will hire consultants and ensure timely payment of per diems travel expenses within the country corresponding to the MTR team. The Project Team will be responsible for communicating with the MTR team to provide all relevant documents, set up interviews with interested parties and organize field visits.

9. REQUIRED PROFILE

The bidder can propose a work team of two evaluators (as). However, it will only be evaluated based on the profile of the person who would lead the consultancy and a single contract will be issued in his name. None of the proposed persons may have participated in the preparation or execution of the project to be evaluated or have any conflict of interest with the activities related to the project.

REQUIREMENTS

- Professional with a university degree in Monitoring and Evaluation, Environmental Management, Biodiversity, Sustainable Development, Economics, Social Sciences or other related careers. Desirable Mastery.
- At least 5 years of relevant professional experience in the area of Sustainable Development, Climate Change, Environment, with technical knowledge in the focal areas of the GEF, and multifocal areas.
- At least 5 years of experience in implementing projects in a management framework based on results and adaptive management with international organizations, preferably from the UNDPGEF

- At least 5 similar evaluations carried out on projects preferably of the UNDP-GEF
- **Prerequisite** excellent writing skills in English. The evaluation reports must be delivered in English. Skills to write and report (**present at least 3 references of prepared documents and presenting technical offer in Spanish and English**).
- Desirable knowledge in Human Rights, gender equality and empowerment of women and girls.
- Desirable knowledge about the 2030 agenda for sustainable development
- Good communication skills

10. PAYMENT METHODS AND SPECIFICATIONS

%	Milestone
10% of the fees	Against delivery and approval of the work plan.
40% of the fees	After the presentation and approval of the first draft of the final evaluation report.
50% of the fees	After the presentation and approval (UNDP OP and UNDP ATR) of the final final evaluation report.

11. APPLICATION PROCESS

People wishing to apply for this consultancy must necessarily submit the following documentation:

a) **Note of interest** (maximum 2 pages), indicating how your work and this consultancy will contribute to accelerate the achievement of the objectives of sustainable development and strengthen gender equality.
b) Detailed **economic offer** (showing fees, air tickets, travel expenses, workshop and logistics costs, support personnel if necessary) which must be presented in national currency (Costa Rican colones) for national consultants, and in US dollars for international consultants.
c) **Technical offer** that indicates how the consulting will cover (methodology) to provide the requested results within the indicated period. **NOTE: The technical offer must be written in English because this way the writing ability in this language will be evaluated, since the final report must be written in both English and Spanish.**
d) **Present at least 3 references of documents prepared in English.**
E) **Resume** updated in a maximum of four pages that clearly reflects the criteria to be evaluated.
F) **Form P-11** (available at www.cr.undp.org / Operations / Service Center / Forms P11). This is an essential requirement for accepting offers.
g) In case of being a team, clearly indicate who will be the person who will lead the consultancy.

The offers must be sent only to the electronic address adquisiciones.cr@undp.org , indicating in the subject of the email: **"MTR ASADAS GEF-PNUD " .** Each document must be sent in separate files, identified by the name of the document and the offering person. Incomplete offers will be excluded from the process.

The deadline for receipt of offers is **Friday, June 15, 2018, at 11:00 am** (Costa Rica time). No technical or administrative telephone inquiries will be addressed and should only go to adquisiciones.cr@undp.org a maximum of 10 June 2018.

Note: This bidding process is aimed at professionals, who will provide their services individually.

12. EVALUATION CRITERIA

Only those applications that meet all the requirements will be evaluated. The offers will be evaluated according to the Combined Score method (*Combined Scoring*):

1. The evaluation of the technical offer that includes the training and experience described in the CV and supported by the supporting documents of the bidder, the technical offer and its correspondence with the Terms of Reference. The weight of the technical evaluation is 1000 points.
2. The evaluation of the economic proposal presented by the bidder for the value of the consultancy. The weight of the economic evaluation is 300 points.

The technical offer will be evaluated according to the following table:

Evaluation of technical proposal		**Maximum score**	**Consultant**				
			TO	**B**	**C**	**D**	**AND**
Proposal							
1	Have you developed the relevant aspects of the work with a sufficient level of detail?	100					
2	Have you adopted an appropriate conceptual framework for the work to be done?	100					
3	Is the scope of the work clearly defined? Is it adjusted to the TDR?Do you understand the nature of the work?	100					
Consultant Profile							

4	Professional with a university degree in Monitoring and Evaluation, Environmental Management, Biodiversity, Sustainable Development, Economics, Social Sciences or other related careers. Desirable Mastery. Professional: 50pts Master's degree or higher: 100pts	100					
5	At least 5 years of relevant professional experience in the area of Sustainable Development, Climate Change, Environment, with	150					
	technical knowledge in the focal areas of the GEF, and multi-focalareas . • 5 years 75 pts • Between 6 and 9 years 100 pts • 10 years or more 150 pts						
6	At least 5 years of experience in project implementation in a results-based management framework and adaptive management with international organizations, preferably from the UNDP-GEF • 5 years 75 pts • Between 6 and 9 years 100 pts • 10 years or more 150 pts	150					
7	At least 5 similar evaluations carried out to projects preferably from UNDP-GEF. • 5 experiences: 75 points • Between 6 and 9 experiences: 100 points • 10 or more experiences: 150 points	150					

8	Skills to write and report (present at least 3 references of documents preparations and presenting technical offer in Spanish and English). • It includes 3 references 50 points • Includes 3 references and acceptable translation of the technical offer 100 • Includes 3 references and adequate translation of the technical offer 150	150					
Total		**1000**					

The economic offer will be valued in the following way:

The Price Factor (Economic Bid) score will be determined by means of the following formula :

$$\textbf{PFP} = \frac{\textbf{POMB}}{\textbf{PO}} * 300$$

Where:

PFP = Percentage of Factor Price
POMB = Lowest Offer Price
PO = Bidding Price

Only the economic offers of the technical offers that acquire at least 700 of the 1000 points defined in the table of Criteria for the Technical Evaluation will be evaluated (see table of assignment of scores). The consultancy will be awarded to the offer that obtains the highest total score between the technical evaluation and economic offer.

Women are invited to submit bids

ToR ANNEX A: List of documents to be examined by the MTR team

1. PIF

2. UNDP Initiation Plan
3. UNDP Project Document
4. Results of the UNDP Environmental and Social Diagnosis
5. Project Initiation Report
6. All Project Execution Reports (PIR)
7. Quarterly progress reports and work plans of the various task execution teams 8 . Audit reports
8. Follow-up tools completed from the GEF's area of action to the approval of the CEO and mid-term (Tracking Tool for Adaptation Projects)
9. Mission monitoring reports 11. Project publications
10. Material and means of diffusion, life stories, press releases, Facebook Page https://www.facebook.com/fortalecimientodeasadas/
11. All monitoring reports prepared by the project
12. Financial and administrative guidelines used by the Project Team

The following documents will also be available:

13. Operational guidelines of the project, manuals and systems
14. UNDP program document (s) for the country
15. Minutes of the meetings of the Project Board Strengthening the Capacities of Rural Aqueduct Associations (ASADAS) to face climate change risks in water stress communities in Northern Costa Rica and other meetings (such as the Preliminary Evaluation Committee of the Draft)
16. Maps of the sites where the project operates

TDR ANNEX B: Guidelines on the content of the Mid-Term Review Report

i. Basic information of the report *(for the cover or initial page)*

- Name of the project supported by the UNDP and financed by the GEF
- UNDP PIMS numbers / GEF ID
- Period of execution of the MTR and date of the report
- Region and countries included in the report
- Action area / Strategic Program of the GEF
- Executing agency / Implementing partner and other project partners
- Components of the MTR team
- Thanks

ii. Index **iii .** Acronyms and abbreviations **1.** Executive summary *(3-5 pages)*

- Project information table
- Project description (brief)
- Summary of project progress (between 200-500 words)
- Summary table of valuations and achievements of the MTR
- Concise summary of conclusions
- Summary table of recommendations

2. Introduction *(2-3 pages)*

- Purpose of the MTR and objectives

- Scope and methodology: MTR design and execution principles, MTR approach and data collection methods, MTR limitations
- Structure of the MTR report

3. Description of the project and context *(3-5 pages)*

- Context of development: environmental, socio-economic , institutional and political factors relevant to the objective and scope of the project
- Problems that the project tried to address: threats and barriers
- Description and strategy of the project: objective, products and desired results, description of the places where it is developed (if any)
- Mechanisms of project execution: brief description of the Project Board, agreements with the main implementing partners, etc.
- Project execution deadlines and milestones to meet during its development
- Main stakeholders: Summary list.

4. Proven facts *(12-14 pages)*

4.1 Project strategy

- Design of the project
- Results framework / logical framework

4.2 Progress in achieving results

- Analysis of the progress in the results
- Barriers remaining for the achievement of the project's objectives

4.3 Project execution and adaptive management

- Management mechanisms
- Work planning
- Financing and co-financing
- Monitoring and evaluation systems at the project level
- Involvement of interested parties
- information
- Communication

4.4 Sustainability

- Financial risks for sustainability
- Socio-economic risks for sustainability
- Risks to sustainability related to the institutional framework and governance
- Environmental risks for sustainability

5. Conclusions and recommendations *(4-6 pages)*

5.1 Conclusions

- Complete and balanced statements (based on the evidence and data collected and connected to the proven facts of the MTR) that highlight the strengths, weaknesses and results of the project

5.2 recommendations

- Corrective actions for the design, execution, monitoring and evaluation of the project
- Actions to continue or reinforce the initial benefits of the project
- Proposals for future directions underlining the objectives

6 Annexes

- ToR of the MTR (excluding the ToR annexes)
- MTR evaluation matrix (evaluation criteria with the questions, indicators, data sources and key methodology)
- Model questionnaire or interview guide to be used in data collection
- Rating scales
- Itinerary of the mission of the MTR
- List of people interviewed
- List of documents examined
- Co-financing table (if it was not previously included in the body of the report)
- Form of the UNEG Code of Conduct signed
- Approval form for the final report of the MTR signed
- *Annex in a separate file:* Audit trail obtained from comments received in the draft MTR report
- *Annex in a separate file:* Relevant monitoring tools for the mid-period (*METT, FSC, capacity scorecard, etc.)*

ToR APPENDIX C: Template model for the MTR evaluation matrix

Evaluative questions	**Indicators**	**Sources**	**Methodology**
Project strategy: To what extent is the project strategy relevant to national priorities and ownership and ownership of the country? Is it the best way to obtain the desired results?			
(include the evaluative questions)	(eg established relationships, level of coherence between project design and implementation approach, specific activities undertaken, quality of risk mitigation strategies, etc.)	(eg project documents, national policies or strategies, Web sites, project staff and partners, data collected through the MTR mission, etc.)	(eg analysis of documents, analysis of information, interviews with project staff and interested parties, etc.)
Progress in achieving results: What is the degree of compliance with the results and objectives desired so far?			
Project execution and adaptive management: So far has the project been implemented efficiently, profitably and adapted to changing conditions? To what extent do the systems of monitoring and evaluation, information and communication of the project contribute to its execution?			
Sustainability: To what extent are there financial, institutional, socio-economic and / or environmental risks for the long-term sustainability of the project's results?			

ToR ANNEX D: UNEG Code of Conduct for MTR Evaluators / Consultants[16]

The evaluators / consultants :

They must present complete and fair information in their evaluation of the strengths and weaknesses, in such a way that the decisions or actions carried out are well founded.

They must disclose the complete set of conclusions together with the information of their limitations and have it available to all those affected by the evaluation who have the express right to receive the results.

They must protect the anonymity and confidentiality of individual informants. They should offer the maximum notification time, limit the demands of time and respect the right of people not to get involved. Evaluators should respect the right of people to give information in a confidential manner, and should ensure that sensitive information can not be traced back to its origin. Evaluators are not obliged to evaluate individual persons, but they must maintain a balance between the evaluation of management functions and this general principle.

On occasion, when conducting evaluations they will uncover evidence of crimes. Discrete information about such cases should be reported to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is the slightest doubt about whether these issues should be communicated and how they should be communicated.

They must be sensitive to beliefs, customs and practices and act with integrity and honesty in their relationships with all interested parties. In line with the Universal Declaration of Human Rights of the United Nations, evaluators should be sensitive to issues of discrimination and gender equality. They should avoid offending the dignity and self-esteem of those people with whom they establish a contact during the evaluation.Knowing that there is a possibility that the evaluation negatively affects the interests of some stakeholders, the evaluators should conduct the evaluation and communicate the objective of the evaluation and its results in a manner that clearly respects the dignity and self-esteem of those involved.

They are responsible for their performance and (the) product (s) they generate. They are responsible for a clear, precise and balanced written or oral presentation, as well as the limitations, conclusions and recommendations of the study.

1. They must apply sound accounting procedures and be prudent when using evaluation resources.

MTR Consultant Agreement Form

Agreement to abide by the Code of Conduct for Evaluators of the UN system:

Consultant Name: _____

[16] http://www.undp.org/unegcodeofconduct

Name of the Consulting Organization (when necessary):
_____

I affirm that I have received and understood and that I will abide by the UN Code of Conduct for Evaluators.

Signed in _____ (Place) to _____ (date)

Firm: _____

TDR ANNEX E: MTR Ratings

Evaluations of progress in achieving results: (an assessment for each result and objective)		
6	Highly satisfactory (AS)	It is expected to achieve or exceed the objectives / results established for the end of the project without serious deficiencies. Progress towards the achievement of the objectives / results can be presented as a "good practice".
5	Satisfactory (S)	It is expected to achieve most of the objectives / results established for the end of the project only with minimal deficiencies.
4	Moderately satisfactory (MS)	It is expected to achieve most of the objectives / results established for the final project, but with significant shortcomings.
3	Moderately unsatisfactory (MI)	It is expected to achieve most of the objectives / results established for the final project with significant shortcomings.
2	Unsatisfactory (I)	It is not expected to achieve most of the objectives / results established for the end of the project.
1	Highly unsatisfactory (AI)	The objectives / results have not been achieved by mid-term and it is not expected that any of those established for the end of the project will be achieved.

Valuations of project execution and adaptive management: (a general assessment)		
6	Highly satisfactory (AS)	The implementation of the seven components - management mechanisms, work planning, financing and co-financing, monitoring and evaluation systems at the project level, involvement of stakeholders, information and communication - is leading to effective and efficient execution and management. adaptive The project can be presented as a "good practice".
5	Satisfactory (S)	The implementation of most of the seven components is leading to effective and efficient execution and adaptive management, except for a few that require corrective action.

4	Moderately satisfactory (MS)	The implementation of some of the seven components is leading to effective and efficient execution and adaptive management, although some of the components require corrective action.
3	Moderately unsatisfactory (MI)	The implementation of some of the seven components is not leading to effective and efficient execution and adaptive project management; Most components require corrective action.
2	Unsatisfactory (I)	The implementation of most of the seven components is not leading to effective and efficient execution and adaptive project management.
1	Highly unsatisfactory (AI)	None of the seven components is implemented in a way that leads to effective and efficient execution and adaptive project management.

Sustainability assessments **:** (a general assessment)		
4	Likely (P)	Minimum risk for sustainability; the most important results are on track to be achieved at the conclusion of the project and are expected to continue in the near future.
3	Moderately probable (MP)	Moderate risks but it is expected that, at least, some results may be sustained due to the progress that is observed in the achievement of the goals during the mid-term exam.
2	Moderately unlikely (MI)	Significant risk that the most important results will not continue after the conclusion of the project although some products and activities should continue.
1	Unlikely (I)	Serious risk that project results and key products can not be sustained.

TDR ANNEX F: Authorization form of the MTR Report

Mid-term Review Report Revised and Approved by:

Adjudicator Unit

First name: _____

Signature Date: _____

Regional Technical Advisor of the UNDP-GEF

First name: _____

Signature Date_____

ANNEX G: AGREEMENT AND CODE OF CONDUCT OF THE EVALUATION CONSULTANT

The evaluators:

a) They must present complete and fair information in their evaluation of strengths and weaknesses, so that the decisions or measures taken have a good foundation.
b) They must disclose all the results of the evaluation together with information about their limitations, and allow access to this information to all those affected by the evaluation who have express legal rights to receive the results.
c) They must protect the anonymity and confidentiality of individual informants. They must provide maximum notices, minimize the demands of time, and respect the right of people not to participate. Evaluators must respect the right of individuals to supply information in a confidential manner and must ensure that confidential information can not be traced back to its source. They are not expected to evaluate individuals and must balance an evaluation of management functions with this general principle.
d) On occasion, they should disclose the evidence of transgressions when conducting the evaluations. These cases must be discreetly informed to the corresponding research organization. Evaluators should consult with other relevant oversight entities when there are doubts about whether certain issues should be reported and how.
e) They must be sensitive to beliefs, manners and customs, and act with integrity and honesty in relationships with all stakeholders. According to the UN Universal Declaration of Human Rights, evaluators should be sensitive to issues of discrimination and gender equality, and address such issues. They should avoid offending the dignity and self-esteem of those people with whom they are in contact during the course of the evaluation. Because they know that the evaluation could negatively affect the interests of some stakeholders, the evaluators should conduct the evaluation and communicate the purpose and results in a manner that clearly respects the dignity and self-worth of the stakeholders.
f) They are responsible for their performance and their products. They are responsible for the clear, precise and fair presentation, orally or in writing, of limitations, the results and the recommendations of the study.
g) They should reflect sound descriptive procedures and be prudent in the use of evaluation resources.

Evaluation Consultant Agreement Form[17]

Agreement to abide by the Code of Conduct for Evaluation in the UN System

Name of Consultant: _____

Name of Consultancy Organization (where relevant)**:** _____

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at *place* on *date*

Signature: _____

[17] www.unevaluation.org/unegcodeofconduct

Annex 6.2.: Evaluation Matrix (RMT)

Table 6.2.: Evaluation Matrix (RMT)

Evaluation Questions	Indicators	Sources of documentation	Methodology
Project Strategy: ¿To what extent is the Project strategy relevant to national priorities and ownership and ownership of the country? Is it the best way to obtain the desired results?			
PROJECT DESIGN			
Does the project support environmental and development priorities at the national level?	Degree to which the project supports the objective of sustainable management of the environment of the National Development Strategy.	• Documents on the National Development Strategy of the country. • Project team • Partners and key project stakeholders.	• Analysis of documents. • Interviews with the project team. • Interviews with key stakeholders.
What has been the level of participation of those interested in the design of the project?	Level of involvement of government officials and other partners in the project design process.	• Project documents • Project team • UNDP staff • Partners and key stakeholders.	• Analysis of documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with AyA, ASADAS and UNDP staff
Did the project consider national realities (policy and institutional framework) in its design?	Appreciation of stakeholders on the level of adaptation of the project design to the national realities and existing capacities?	• Project documents • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with AyA, ASADAS and UNDP staff

Evaluation Questions	Indicators	Sources of documentation	Methodology
Were the lessons learned in other relevant projects properly incorporated into the Project design?	Experiences and lessons learned from other relevant projects were considered in the design of the project	• Project documents • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with UNDP staff
How were the relevant gender issues incorporated into the design of the Project?	The project considers relevant issues and budgets on gender issues.	• Project documents • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with AyA, ASADAS and UNDP staff
Have other broader aspects of the development concept been integrated into the project design?	It includes aspects of income generation, gender equality and the empowerment of women, improvements in governance and livelihoods	• Project documents • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with AyA and UNDP staff
Does the project allow to determine the impacts that the initiative is having and / or projected to have on the livelihoods of the populations that live in the areas of influence of the project?	The design of the project (structure, content, baseline instruments and results framework) allows to determine the impact on the livelihoods of the populations	• Project documents • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with AyA and UNDP staff

Evaluation Questions	Indicators	Sources of documentation	Methodology
¿In what way is it possible to recommend improvements to the design of the project?	Improvement aspects adaptable to the design of the project are identified.	• Project documents • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of progress data and documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with AyA, ASADAS and UNDP staff
FRAME OF RESULTS / LOGICAL FRAME OF THE PROJECT			
Is the logic of the project theory (process theory and project change theory) coherent in relation to the risks and threats and expected results?	There are logical links between the expected results of the project and the design of the project (in terms of project components, choice of partners, structure, implementation mechanisms, scope, budget, use of resources, etc.).	• Data collected during the evaluation. • Project documents • Project team • UNDP staff • Quarterly and annual progress reports. • Partners and key project stakeholders.	• Analysis of data. • Analysis of documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with AyA and UNDP staff
¿Are the objectives and results of the Project or itscomponents clear, practical and feasible to perform during the time stipulated for its execution?	The objectives and results of the component or its components are clear, practical and feasible to perform in the time defined for the project	• Project documents • Project team • UNDP staff • Partners and key project stakeholders • Reports of project consultancies.	• Analysis of documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with AyA, ASADAS and UNDP staff • Interviews with consultants

Evaluation Questions	Indicators	Sources of documentation	Methodology
			participating in the Project
To what extent do the mid-term and end-of-project goals meet the "SMART" criteria?	The mid and end period goals comply with the following Criteria: Specific, Quantifiable, Attainable, Relevant and Subject to installments.	• Project documents • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with AyA, ASADAS and UNDP staff
Does it ensure effective monitoring of the broader aspects of development and gender of the Project? ¿In what way is it possible to recommend improvements to the Logical Framework of the project?	Improvement aspects adaptable to the Logical Framework of the project are identified, in terms of income generation, gender equality and women's empowerment, improvements in governance.	• Project documents • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of progress data and documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with AyA, ASADAS and UNDP staff
		•	•
Progress in achieving results: ¿What is the degree of compliance with the results and objectives desired so far?			
¿In what way and to what extent are the expected results of the project being achieved?	**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	• Project documents • Project monitoring instruments • Matrix of progress in achieving results • Quarterly and annual progress reports • Project team	• Analysis of progress data and documents. • Observation in the field (areas of direct implementation of the project) • Interviews with the project team.

Evaluation Questions	Indicators	Sources of documentation	Methodology
	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.** 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 1.1.2 – Water catchment (well, spring, and/or rain), storage, and distribution systems in rural areas improved	• National policies and strategies • UNDP staff • Partners and key project stakeholders.	• Interviews with key stakeholders. • Interviews with AyA, ASADAS and UNDP staff

Evaluation Questions	Indicators	Sources of documentation	Methodology
	and resilient to climate change. Output 1.1.3 – Water-saving devices installed in homes. 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 1.1.5 – Water sources and associated aquifer recharge areas protected and/or rehabilitated through reforestation, natural regeneration, and other protection and conservation measures. **Outcome 1.2 – The capacity of ASADAS' end users to mainstream climate change adaptation into their livelihoods**		

Evaluation Questions	Indicators	Sources of documentation	Methodology
	systems is strengthened. Output 1.2.1 – Community - based climate change training program with a gender focus and includes minority groups, such as indigenous communities **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.** 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.		

Evaluation Questions	Indicators	Sources of documentation	Methodology
	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 1.3.3 – 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 Hydrometeorologic al National System). Output 1.3.4 – Climate early warning and information system		

Evaluation Questions	Indicators	Sources of documentation	Methodology
	(CEWS) on climate-related risks and vulnerability of project area water resources generated and disseminated to ASADAS, users, and partners. **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** Output 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). Output 2.1.2 – AyA and the National Emergency Commission (CNE)		

Evaluation Questions	Indicators	Sources of documentation	Methodology
	investments for the targeted area integrate climate change risks. 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 2.1.4 – 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). **Outcome 2.2 – The purchasing and credit policies of at least 20 agricultural and livestock trading**		

Evaluation Questions	Indicators	Sources of documentation	Methodology
	companies and five (5) financial institutions operating in the target region promote adoption of productive practices that help maintain ecosystem resilience to climate change. 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 2.2.2 – 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.		

Evaluation Questions	Indicators	Sources of documentation	Methodology
What are the barriers or obstacles that the project has faced to move towards the goals stipulated in the progress matrix?	Barriers or obstacles faced to advance towards the goals of the project	• Project documents • Quarterly and annual progress reports • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of progress data and documents. • Evaluation of the indicators with the "traffic light system" • Interviews with the project team. • Interviews with key stakeholders. • Interviews with staff from AyA, ASADAS and UNDP
What factors have facilitated progress towards the goals stipulated in the progress matrix?	Facilitating factors to move towards project goals	• Project documents • Quarterly and annual progress reports • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of progress data and documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with staff from AyA, ASADAS and UNDP
What changes could have been made (if any) to the design of the project to improve the achievement of the expected results?	Proposals for change and improvement	• Project documents • Project team • UNDP staff	• Analysis of progress data and documents.

Evaluation Questions	Indicators	Sources of documentation	Methodology
		• Partners and key project stakeholders.	• Interviews with the project team. • Interviews with key stakeholders. • Interviews with staff from AyA, ASADAS and UNDP
Project Execution and adaptive management: ¿Has the Project been implemented efficiently, profitably and adapted to changing conditions? To what extent do the monitoring and evaluation, information and communication systems of the Project contribute to its execution?			
How effective has the Project management been as described in the Project Document -PRODOC-? How do you rate the quality of the support provided by UNDP? Would you have any recommendation on this?	Decisions are made transparently and in a timely manner. The changes made were effective to improve the management The support provided by UNDP contributed to improve the management of the project.	• Project documents • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of progress data and documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with staff from AyA, ASADAS and UNDP
¿Has adequate alliances been developed and forged in the Project, both with direct stakeholders and with other tangential agents? -Participation and processes promoted from the country: ¿Do local and national governments support the objectives of the Project? ¿In what way has public involvement and awareness been given and to what extent	Partnerships with direct stakeholders as with other tangential agents Local and national governments have an active role in the decision making of the Project, with	• Project documents • Inter-institutional cooperation agreements. • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of progress data and documents. • Interviews with staff from AyA, ASADAS and UNDP • Interviews with key stakeholders. • Observation in the field

Evaluation Questions	Indicators	Sources of documentation	Methodology
have these contributed to the progress made towards achieving the Project's objectives? ¿Are there identified efforts within civil society that contribute to the achievement of the Project's objectives? ¿which are and how do they contribute? and if they do not exist, why do not they exist?	which they contribute to an efficient and effective execution of the same. Involvement and public awareness contribute to the achievement of the results of the Project Civil society and the private sector contribute to the achievement of project results		• Interviews with staff from AyA, ASADAS and UNDP
How does the project management informationco mply with the requirements of the GEF, is it communicated to the project board and sharedlessons with the key partners and is it interned by them?	Effectiveness of the mechanisms used by the Project Management to report changes in adaptive management and communicate them to the Project Board. Degree of compliance with the requirements for the use of GEF information by the Project Team and its partners. The lessons derived from the adaptive management process are documented and shared with key partners and	• Project documents • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of progress data and documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with staff from AyA, ASADAS and UNDP

Evaluation Questions	Indicators	Sources of documentation	Methodology
	internalized by them.		
In what planning approach and in which tools is the project management oriented? Were there delays in the implementation and implementation? Did changes occur in the logical framework matrix?	The results-based planning approach and the logical framework in project management are used	• Project documents • Project team • UNDP staff	• Analysis of progress data and documents. • Interviews with the project team. • Interviews with staff from AyA, ASADAS and UNDP
To what extent have financial management and co-financing been implemented and how have they supported the implementation of the project's actions? Have the assignments initially planned changed?	Financial execution corresponds to what was planned Co-financing corresponds to the commitments established by the partners. The Project has adequate financial controls, including appropriate information and planning The co-financing is strategically planned to help the objectives of the Project. The Project Team regularly coordinates with all partners in co-financing in order to align financial priorities and annual work plans	• Project documents • Annual implementation reports • Annual operating plans • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of progress data and documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with staff from AyA, ASADAS and UNDP

Evaluation Questions	Indicators	Sources of documentation	Methodology
How does monitoring and evaluation facilitate project management and results-oriented guidance?	Reasonable and sufficient resources are allocated for the S & E. There are adequate S & E instruments The S & E supports management by results The S & E, has a strategic and participatory approach.	• Project documents • Project team • UNDP staff • Monitoring tools	• Analysis of progress data and documents. • Interviews with the project team. • Interviews with staff from AyA, ASADAS and UNDP
Sustainability: To what extent are there financial, institutional, socio-economic and / or environmental risks for the long-term sustainability of the Project's results?			
Are financial risks (from public, private, and international cooperation sources, among others?) Present or foreseen in the future, which could affect the ASADAS?	Financial risk factors to the sustainability of the results of the Project	• Project documents • Project monitoring instruments • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with staff from AyA, ASADAS and UNDP
¿Are social or political risks presented or foreseen in the future, which could jeopardize the sustainability of project interventions in their pilot areas?	Socioeconomic risk factors to the sustainability of the results of the Project	• Project documents • Project monitoring instruments • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with staff from AyA,

Evaluation Questions	Indicators	Sources of documentation	Methodology
			ASADAS and UNDP
Are risks of legal frameworks, policies, structures and governance processes related to the ASADAS sector presented or foreseen in the future that could jeopardize the continuity of project benefits?	Institutional risk factors to the sustainability of the results of the Project	• Project documents • Project monitoring instruments • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with staff from AyA, ASADAS and UNDP
Are there any future environmental risks that could jeopardize the continuity of the ASADAS initiatives?	Environmental risk factors to the sustainability of the results of the Project	• Project documents • Project monitoring instruments • Project team • UNDP staff • Partners and key project stakeholders.	• Analysis of documents. • Interviews with the project team. • Interviews with key stakeholders. • Interviews with staff from AyA, ASADAS and UNDP •
Alignment of the project to the CPD and UNDP Strategic Plan			
How is the project aligned to the UNDP CountryProgram Document (CPD) and the UNDP Strategic Plan its contributions to the achievement of results?	Actions and results aligned	• UNDP Country Program Document (CPD) • UNDP Strategic Plan • Project reports • UNDP staff	• Analysis of documents. • Comparison • Interviews with staff from AyA, ASADAS and UNDP
How does the project contribute to the perspective and approach of rights and human development?	The project contributes to the approach and approach of rights and human development	• UNDP staff	• Interviews with staff from AyA, ASADAS and UNDP

Source: self made.

Annex 6.3.: RMT mission itinerary

Table 6.3.: RMT mission itinerary

Date	Activity
July 30- August 14	Interview in San José
August 17	Visit of ASADAS Quebrada Honda de Nicoya and Santa Marta de Hojancha Meetings with institutional authorities, strategic partners and other actors linked to the Nicoya, Santa Cruz and Hojancha Project Evaluator interview with Natalia Meza
August 18	Visit of ASADAS San Vicente de Nicoya, El Llano de Santa Cruz and Artola de Carrillo
August 19	Visit of ASADAS El Salto de Liberia and Cuajiniquil de La Cruz
August 20	Meetings with institutional authorities, strategic partners and other actors linked to the Project Visit of ASADAS Javilla de Cañas
August 21	Visit Cpa Upala Nursery Municipal Council Meeting of Upala Meeting, ASADAof Los Santos and UANN Visit ASADABuena Vista
August 22	Evaluator interview with Jairo Serna ORAC meeting HN Visit ASADASan Rafael
27 -31 September	Interview in San José

Annex 6.4.: List of people and actors consulted

Table 6.4 .: List of people and actors consulted

N°	Name of the official	Position	Workplace
1	Abel Quirós Ramos	Chairman of the Board of Directors	ASADALa Javilla
2	Alice H. Shackelford	Resident	PNUD
3	Alonso Villareal Gómez	Board of Directors Plumber	ASADASan Vicente
4	Ana Arias Picado	Member of the Board of Directors	ASADAArtola
5	Ana María Lobo	Project management	Nosara biological corridor
6	Andrea Alvarado López	Assistant	ASADALos Santos
7	Andrea Meza Murillo	Director	Direction of Climatic Change. MINAE
8	Carlos Segura Orosco	Administrator	ASADASan Rafael
9	Carmen Villalobos Navarro	Vice President of the Board of Directors	ASADASan Rafael
10	Carolina Rojas Rivas	Research officer Adaptation program	Fundecooperation
11	Cecilia Martínez Artavia	Sub manager of Community Systems,	AyA
12	Dagoberto Mora Chavarría	Fiscal	ASADABuena vista
13	Danubia Madrigal Achia	Accountant	AYA- ORACH
14	Didiana Chaves Acevedo	President of the Columbia Board of Education	ASADAEl Salto
15	Edgar Gutiérrez Cruz	Member of the Board of Directors	ASADASan Rafael
16	Eduardo Duarte Abarca	Member of the Board of Directors	ASADAArtola
17	Eduardo Romero Espinoza	Plumber	ASADAEl Salto
18	Emel Rodríguez Paniagua	Chairman of the Board of Directors	Communal League of Water (Guanacaste)
19	Erick Hernández Díaz	Student / manager of Deer Zoocriadero	Upala CTP
20	Ethel Araya Chaves	Community projection	Hotel Harmony
21	Félix Fonseca Fonseca	Chairman of the Board of Directors	ASADAQuebrada Honda
22	Fidel Barrantes	Chairman of the Board of Directors	ASADAEl Llano de tempate
23	Franklin Pizarro Gutiérrez	Fiscal	ASADAArtola
24	Gabriel Zamora Ugalde	Student / nursery manager	Upala CTP
25	Gabriela Jiménez Ruiz	Treasurer of the Board of Directors	ASADAEl Salto
26	Georgette Sandoval Nelso	President of the Board of Directors	ASADASan Vicente
27	Gerardo Quirós	Coordinator	UNDP Project team

N°	Name of the official	Position	Workplace
28	Hugo Rojas Salas	Affiliate	ASADABuena Vista
29	Ingrid Hernández	Communication, monitoring and evaluation officer	UNDP Project team
30	Isabel Víquez Castillo	Secretariat of the Board of Directors	ASADAEl Salto
31	Iván Delgado Pitti	Adaptation Coordinator	Direction of Climatic Change. MINAE
32	Jairo Serna	Field Officer Huetar Norte Region	UNDP Project team
33	Javier Agüero Artavia	Plumber	ASADASanta Marta
34	Jesús Castro Rodríguez	Chairman of the Board of Directors	ASADASanta Marta
35	Jesus Villegas Gall	Treasurer of the Board of Directors	ASADAArtola
36	José Luis Solorsano	Neighbor of the community of San Antonio	ASADASan Rafael
37	José María Valerio	Civil engineer	AYA- ORACH
38	Juan Anda Alcocer Korea	President of the Municipal Council	Municipality of Upala
39	Juriely Quirós Loría	Secretary of the Board of Directors	ASADALa Jabilla
40	Karina Diaz	Administrator	Red Cross Hojancha
41	Keneth Villalobos Alvarado	Member Board of Directors	ASADALinda Vista
42	Kifah Sasa Marín	Program Officer of Environment	UNDP
43	Krissia Rojas Quirós	Assistant representative	UNDP
44	Laura Pérez Bertozzi	Project consultant	SAT Consultant
45	Liany Alfaro Garro	Head of the Office of Community Water Supply.	AYA- ORACH
46	Lil Soto	Program Manager Water access program	AVINA Foundation
47	Liliana Vallegos Cascante	Member of the Board of Directors	ASADAArtola
48	Marcela Vargas	Financial Administrative Assistant	UNDP Project team
49	Marianella Feoli Peña	Director	Fundecooperation
50	Mario Campos Vargas	Chairman of the Board of Directors	ASADABuena Vista
51	Marvin Mena Solano	Chairman of the Board of Directors	ASADAEl Salto
52	Mayra Monge Tijerino	Professor of agroecology	Upala CTP
53	Natalia Meza	Field Officer Chorotega Region	UNDP Project team
54	Neyfren Zeledón	Technical	Communal League of Water (Guanacaste)
55	Olger Pizarro Avanco	Chairman of the Board of Directors	ASADAArtola
56	Oscar Anpie Bermúdez	Engineer	AYA- ORACH
57	Pablo Mora Chavarría	Student / manager of Iguanas Zoocriadero	Upala CTP
58	Paola Jiménez Jara	Engineer	AYA- ORACH
59	Pedro Rolando Rivas Rosales	Treasurer of the Board of Directors	ASADAEl llano de tempate

N°	Name of the official	Position	Workplace
60	Polet Méndez Delgado	Administrative management	Communal League of Water (Guanacaste)
61	Rafaella Sánchez Mora	Gender Specialist Advisor	UNDP Project team
62	Raúl Aragón Alemán	Plumber	ASADAGuajiniquil
63	Roberto Villalobos Flores	Vice director	IMN
64	Rocío Villegas Estrada	Secretary	ASADAQuebrada Honda
65	Rodolfo Ramírez	Director UEM management of ASADAS	AyA
66	Ronald Vargas Araya	Social Manager	AYA- ORACH
67	Roy Alvarado Marcet	Community leader	ASADA El Salto
68	Salvado Mexicano Acevedo	Administrator	ASADALos Santos
69	Shirley Espinoza Marchena	Secretary of the Board of Directors	ASADAEl llano de Tempate
70	Tobías Quesada Quesada	Secretary of the Board of Directors	ASADASanta Marta
71	Vilma Castillo	Regional Director Huetar Norte	AyA
72	Vicky Espinoza Bran	Vice President	ASADAEl llano de Tempate
73	Victoria Lara Martínez	Chairman of the Board of Directors	ASADAGuajiniquil
74	Walter Noguera Brenes	Fiscal	ASADAEl Salto
75	Xinia Mortales Núñez	Secretary of the Board of Directors	Union of North-North Aqueducts
76	Yamileth Astorga	Executive president	AyA

Source: self made. Based on the field mission.

Annex 6.5 .: Questionnaire model used for data collection

Table 6. 5 .: Model of the questionnaire used for data collection

Project Strategy: To what extent is the Project strategy relevant to national priorities and ownership and ownership of the country? Is it the best way to obtain the desired results?

Design of the project

1. Does the project support environmental and development priorities at the national / regional and local levels?
2. What has been the level of participation of stakeholders (Municipalities, NGOs) in the design of the project?
3. Did the project consider the national and institutional realities of SINAC in its design?
4. Was the lessons learned in other relevant projects, in topics of Wetland Conservation and Biodiversity, appropriately incorporated into the Project design?
5. How were the relevant gender issues incorporated into the design of the Project?
6. Have other broader aspects of the concept of development, such as social policy, territorial vision, been integrated into the design of the project?
7. Does the project allow to determine the impacts that the initiative is having and / or projected to have on the livelihoods of the populations that live in the areas of influence?
8. In what way is it possible to recommend improvements to the project design for the remaining time of the execution period?

FRAME OF RESULTS / LOGICAL FRAME OF THE PROJECT

9. Is the logic of the project theory (process theory and project change theory) coherent in relation to the risks and threats and expected results ?
10. Are the objectives and results of the Project or its components clear, practical and feasible to perform during the time stipulated for its execution?
11. To what extent do the project's mid and end period goals meet the "SMART" criteria?
12. Does it ensure effective monitoring of the broader aspects of development and gender of the Project?
13. In what way is it possible to recommend improvements to the Logical Framework of the project?

Progress in achieving results: What is the degree of compliance with the results and objectives desired so far?

14. In what way and to what extent are the expected results of the project being achieved ?
15. What are the barriers or obstacles that the project has faced to move towards the goals stipulated in the progress matrix, in relation to the two components of the project?
16. What factors have facilitated progress towards the goals stipulated in the progress matrix?
17. What are the barriers or obstacles that the project has faced to advance in the proposed actions?
18. What changes could have been made (if any) to the design of the project to improve the achievement of the expected results?

Project Execution and adaptive management: Has the Project been implemented efficiently, profitably and adapted to changing conditions? To what extent do the monitoring and evaluation, information and communication systems of the Project contribute to its execution?

19. How effective has the Project management been as described in the Project Document -PRODOC-?
20. Was adaptive management used or needed to ensure efficient use of resources?
21. How do you rate the quality of the support provided by UNDP?
22. Would you have any recommendation on this?
23. Has adequate alliances been developed and forged in the Project, both with direct stakeholders and with other tangential agents?
24. -Participation and processes promoted from the country:
25. Do local and national governments support the objectives of the Project?
26. Do they still have an active role in the decision making of the Project that contributes to an efficient and effective execution of the same?
27. In what way has public involvement and awareness been given and to what extent have these contributed to the progress made towards achieving the Project's objectives?
28. Are there identified civil society efforts that contribute to the achievement of the Project's objectives? which are? and how do they contribute? and if they do not exist, why do not they exist?
29. How do Municipalities and NGOs support the achievement of the Project's objectives?
30. How does the project management information comply with the requirements of the GEF, is it communicated to the project board and shared lessons with the key partners and is it interned by them?
31. In what planning approach and in which tools is the project management oriented?
32. Were there delays in the implementation and implementation?
33. Did changes occur in the logical framework matrix?
34. To what extent have financial management and co-financing been implemented and how have they supported the implementation of the project's actions?
35. Have the assignments initially planned changed?
36. How does monitoring and evaluation facilitate project management and results-oriented guidance?

Sustainability: To what extent are there financial, institutional, socio-economic and / or environmental risks for the long-term sustainability of the Project's results?

37. Are financial risks (from public, private, and international cooperation sources, among others) presented or foreseen in the future, which could affect the sustainability of the PHII?
38. Are social or political risks presented or foreseen in the future, which could jeopardize the sustainability of project interventions in their pilot areas?
39. Are risks of legal frameworks, policies, structures and governance processes related to the sustainability of the PHII that could jeopardize the continuity of the project's benefits presented or foreseen in the future?
40. Do any environmental risks arise or foresee in the future that could jeopardize the continuity of the initiatives, the sustainability of the PHII and its derived benefits?

Annex 6.6 .: Documents consulted

1. AyA. Policy for the Organization and Strengthening of Community Management of Drinking Water and Sanitation Services. Costa Rica: Costa Rican Institute of Aqueducts and Sewers, 2015.

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5. MIDEPLAN. The National Development Plan (PND) 2015-2018. Costa Rica: Ministry of National Planning and Economic Policy, 2015.

6. MINAE. National Climate Change Strategy (2009-2021). Costa Rica: MINAE. 2009

7. Mora-Alvarado, D; Portuguez-Barquero, C. Water for human consumption and sanitation in Costa Rica to 2016. Goals to 2022 and 2030. Technology in March. Vol. 31-2. April-June 2018. Pág 72-86.

8. UNDP. Accompaniment to the strategy of promotion and implementation of good practices of agricultural and livestock production, linked to the protection of water resources and the maintenance of water quality for consumption, the implementation of adaptation measures based on ecosystems and respect for the zones of protection associated with this resource. 2018

9. UNDP. Archive of co-financing letters. ASADAS Project. 2018

10. UNDP. Archive of consults made. ASADAS Project. 2018

11. UNDP. Archive of ASADAS infrastructure proposals. ASADAS Project. 2018

12. UNDP. File of revision of Technical Studies of ASADAS. ASADAS Project. 2018

13. UNDP. Cartography and other tasks related to the Geographic Information System (GIS) for the assessment of climate change risk. Final report of mapping. Costa Rica: National Meteorological Institute United Nations Development Program

14. UNDP. Strategy to integrate the Gender perspective of the Project Strengthening the capacities of Rural Water Supply Associations (ASADAS) to face climate change risks in communities with water stress in the North of Costa Rica.

15. UNDP. Guides step by step the development of the Self-assessment and the Plan of Improvement and Efficiency (PME) for ASADAS, in order to optimize in a gradual and progressive way the quality of the water and sanitation services.

16. UNDP. Tools developed by the Project Strengthening the capacities of Rural Water Supply Associations (ASADAS) to face climate change risks in communities with water stress in Northern Costa Rica

17. UNDP. Roadmap for the Strategy for the Integration of a Gender Perspective in the Project Strengthening the capacities of Rural Water Supply Associations (ASADAS) to face climate change risks in communities with water stress in Northern Costa Rica

18. UNDP. Mission report. Presentation of Project Start-up "Strengthening the capacities of Rural Water Supply Associations (ASADAS) to face climate change risks in communities with water stress in Northern Costa Rica" of the GEF and coordination meeting with HIDROSEC-UNA (08-11) August 2016). San José, Upala, Santa Cruz and Liberia. Sf.

19. UNDP. Final report on the census to the ASADAS of the Chorotega and Huetar Norte region.2015.

20. UNDP. Minute of the Steering Committee. December 18, 2017.

21. UNDP. Minute of the Steering Committee. January 24, 2017.

22. UNDP. Annual Work Plan - AWP. 2017

23. UNDP. Social and environmental evaluation template.2017.

24. UNDP. Project identification form (PIF). 2014.

25. UNDP. Project Implementation Review (PIR) 2017.

26. UNDP. Project Implementation Review (PIR) 2018.

27. UNDP. Protocol for the Integration or Merger of ASADAS. 2017

28. PUND. Proposal for the partial administrative reorganization of the Submanagement of Management of Communal Systems of the Costa Rican Institute of Aqueducts and Sewers (AyA). 2107.

Annex 6.7 .: Rating scale of the RMT

Table 6.7 .: Scales for the integral assessment of results

Ratings for Progress Towards Results: (one rating for each outcome and for the objective)		
6	Highly Satisfactory (HS)	The objective/outcome is expected to achieve or exceed all its end-of-project targets, without major shortcomings. The progress towards the objective/outcome can be presented as "good practice".
5	Satisfactory (S)	The objective/outcome is expected to achieve most of its end-of-project targets, with only minor shortcomings.
4	Moderately Satisfactory (MS)	The objective/outcome is expected to achieve most of its end-of-project targets but with significant shortcomings.
3	Moderately Unsatisfactory (HU)	The objective/outcome is expected to achieve its end-of-project targets with major shortcomings
2	Unsatisfactory (U)	The objective/outcome is expected not to achieve most of its end-of-project targets
1	Highly Unsatisfactory (HU)	The objective/outcome has failed to achieve its midterm targets, and is not expected to achieve any of its end-of-project targets.

Ratings for Project Implementation & Adaptive Management: (one overall rating)		
6	Highly Satisfactory (HS)	Implementation of all seven components – management arrangements, work planning, finance and co-finance, project-level monitoring and evaluation systems, stakeholder engagement, reporting, and communications – is leading to efficient and effective project implementation and adaptive management. The project can be presented as "good practice".
5	Satisfactory (S)	Implementation of most of the seven components is leading to efficient and effective project implementation and adaptive management except for only few that are subject to remedial action.
4	Moderately Satisfactory (MS)	Implementation of some of the seven components is leading to efficient and effective project implementation and adaptive management, with some components requiring remedial action.
3	Moderately Unsatisfactory (HU)	Implementation of some of the seven components is not leading to efficient and effective project implementation and adaptive, with most components requiring remedial action.
2	Unsatisfactory (U)	Implementation of most of the seven components is not leading to efficient and effective project implementation and adaptive management.
1	Highly Unsatisfactory (HU)	Implementation of none of the seven components is leading to efficient and effective project implementation and adaptive management

Ratings for Sustainability: (one overall rating)		
4	Likely (L)	Negligible risks to sustainability, with key outcomes on track to be achieved by the project's closure and expected to continue into the foreseeable future
3	Moderately Likely	Moderate risks, but expectations that at least some outcomes will be sustained due to the progress towards results on outcomes at the Midterm Review

	(ML)	
2	Moderately Unlikely (MU)	Significant risk that key outcomes will not carry on after project closure, although some outputs and activities should carry on
1	Unlikely (U)	Severe risks that project outcomes as well as key outputs will not be sustained

Source: Terms of reference

Source: Terms of reference

Annex 6.9 .: Matrix of progress in achieving project results .

Table 6.9. Matrix of progress in achieving project results

Objective
Improve water supply and promote sustainable water practices for end users and productive sectors by promoting community-based and ecosystem-based measures in rural ASADAS to address the projected climatic hydrological vulnerability in northern Costa Rica

Description of Indicator	**Baseline Level**	**Midterm target level**	**End of project target level**	**Level at 30 June 2017**	**Level and evaluation at the middle of the period**	**Assessment of achievements**	**Justification of the valuation**
Proportion of ASADAS with continued water availability for different time periods	*12 months, 83% *9-11 months, 3% *6-8 months, 4% *3-5 months, 2% *	*(not set or not applicable)*	The continued water availability for all the ASADAS is at least 5 months	Baseline information has been updated revising data obtained by applying the Unified Information Form for Providers of Aqueducts Services (UIF) which is the official tool to conduct ASADAS diagnosis. This states that: a. 12 months 78,4% b. 9-11 months at 4,0%	Progress: Water availability (months) / proportion of ASADAS a. 12 months / 89,7% b. 9-11 months/ 8,8% c. 6-8 months / 1,0% d. 3-5 months / 0,5%	HS	The values of the indicator show a greater continuous availability of water for all the ASADAS and that it is on track to reach the goal at the end of the project. Change derived from investments

				c. 6-8 months at 4,8% d. 3-5 months at 4,8% e. Based on the above, during the year of execution the amount of water with more than five months of water availability increased by 5.7%, and the % of ASADAS with year-round water supply increased by 7.1. Changes in water availability are reflected as follows: a. 12 months 85,5% b. 9-11 months at 4,0% c. 6-8 months at 3,5% d. 3-5 months at 3,1% e.	e. The amount of ASADAS for both Chorotega and Norte-Norte Region with continued water availability increased, reaching almost the final project target		in infrastructure improvements that has improved the services of 36,000 people of 22 ASADAS.

Water availability per capita (water intake [volume at source]/number of people served by ASADA)	Range (L/person/day), ASADAS * *201-500, 10% *501-1500, 23% *1501-5000, 10% *5001-10000, 3% *>10000, 5%	*(not set or not applicable)*	Water availability per capita is maintained or improved	Baseline information has been updated revising the data obtained by applying the UIF, as follows: a. b. 201-500: 5,7% c. 501-1,500: 29.5% d. 1,501-5,000: 11.5% e. 5,001-10,000: 3.1% f. >10,000: 3.5% g. No data: 44.9% This baseline was obtained dividing the liters of water produced by the ASADAS' sources per number of end users. In the next implementation year, there will be an increase on the water availability per capita due to	Progress: Water availability per capita (Litres/person/day) / proportion of ASADAS a. b. 201-500 L / 16,2% c. 501-1,500 L / 29,5% d. 1,501-5,000 L / 11,4% e. 5,001-10,000 L / 2,4% f. >10,000 L / 1,9% No data / 36,7% The indicator of water availability considers the amount of water	HS	The values of the indicator show an improvement in the availability of water per capita for the smaller categories and the objective is that it is on track to reach the goal at the end of the project. In addition, other results favor the availability of water in the future, such as: a greater awareness of water resources, control of water flows

				improvements of the capacity of the sources. The information on water availability is also expected to be improved because of a periodic measurement of the sources (sources annual gauging) of a significant amount of ASADAS and methodical recording of the results, starting in the second half of 2017. Because of the drilling of new wells, there is an improvement in water availability in a range of 0.4% as shown below: a. b. 201-500: 5,7% c. 501-1,500: 29.1% d. 1,501-5,000: 11.9% e. 5,001-10,000: 3.1%	produced by the sources and the number of end users in every ASADA. This indicator was updated considering the growth of the number of users and the variation of the production of each of the ASADAS' water sources. In addition, an effort was made to decrease the number of ASADAS without information by 8.2 percental points. These new incorporations were accounted mostly in the range of 201-500		within the systems and an increase in household consumption savings

				f. >10,000: 3.5% g. No data: 44.9%	L/day/person, in both Chorotega and Norte-Norte Region		
The progress of the objective can be described as:				**On track**			
Outcome 1 **Infrastructure and technical capacity of ASADAs strengthened to cope with climate change impacts to aquifers in the target area.**							
Description of Indicator	**Baseline Level**	**Midterm target level**	**End of project target level**	**Level at 30 June 2017**	**Level and evaluation at the middle of the period**	**Assessment of achievements**	**Justification of the valuation**
Installed water storage capacity (days) to supply water (storage capacity/total average consumption per day)	Storage capacity, ASADAS * *1-2 days, 9% *2-5 days, 5% *5-15 days, 5% *15-30 days, 2%	*(not set or not applicable)*	The water storage capacity of all the ASADAS is at least 5 days	There is no specific progress yet in this firts reporting period. During the first year of the project execution, the baseline was updated using data from the UIF as well as information from different ASADAS to update the actual storage`s volume	Progress: Storage hours / Proportion of ASADAS a. 0 hours / 3,3%	HS	The values of the indicator show a greater installed water storage capacity and that it is on track to reach the

	*>30 days, 0%			available. The following equation was used to determine the daily volume demand at ASADAS: Maximal Daily Volume = (Services x Consumption x DMF) / (CF (1-AFW).Where: Services: actual households connected to the ASADAS systems. Source: UIF. Consumption: National average consumption per user according to ARESEP: 22.42 m3 / month. AFW: Unaccounted-For Water. The indicative value of AyA of 25% is used. DMF: Daily Maximum Factor. The indicative AyA value of 1.25 is used. CF: Conversion Factor for daily values (30 days)	b. 0-2 hours / 6,7% c. 2-4 hours / 7,1% d. 4-8 hours / 20,0% e. 8-14 hours / 29,5% f. > 14 hours / 24,3% 9,0% of the ASADAS do not have information on storage capacity As previously reported, the original baseline was updated during the first year of execution. In the second year,		goal at the end of the project. On the other hand, there is evidence of a reduction in the ASADAS without water storage capacity decreased by (1.5%).

				This information updates the original baseline with the different storage ranges according to: Storage Hours - ASADAS percentage 0 4,8% 0 2 4 8 >14 23,3% No data 15,4% Note: 15% of the ASADAS were not considered since the information was not available	significant progress was observed for the range 8-14 hours of water storage, which reached 29,5%. Furthermore, ASADAS without water storage capacity decreased in 1.5 % as well as organizations with no data decreased in 6.4% in both project region		

				Per the AyA regulations, the minimum storage to consider peak consumption fluctuations and main line interventions should be 8 hours of maximum daily consumption (with some exceptions). Based on the available information, 44.5% of the ASADAS do not comply with this regulation. In cases where the ASADAS do not have this volume of storage, the sources and the infrastructure must be able to supply the demanded flow in the peak hour of consumption. Due to the projected drought conditions, it is expected that many of the water sources will not be able to deliver that high			

				demand flow. Therefore, implementing this storage volume would ensure that the sources can reduce their flow by a percentage without affecting harming the water supply to users. The original objective for this indicator was to ensure 5 days of storage for all ASADAS. This is not feasible for this project since it represents a storage approximately 240 000 m3 distributed in the different areas of the project. To comply with national regulations, to protect supply against contingencies and to relieve pressure on supply sources, the proposed goal is to reduce to 0% the ASADAS that do not comply with this			

				regulation. This represents about 101 ASADAS.			
Condition of the water supply system (evaluation index for system components)	*Poor: 50% (index score: 60%) *Needs improvement: 40% (index score: 61% - 84% score) *Good: 10% (index score: 85%)	*(not set or not applicable)*	*Poor: 0% (index score: 60%) *Needs improvement: 50% (index score: 61% - 84% score) *Good: 50% (index score 85%)	In the first year of execution there was a 3% reduction of the poor ASADAS, as follows: a. Poor: 47% b. Needs improvement: 40% c. Good: 10% The 3% improvement represents 6 ASADAS interventions developed by the project on reconstruction and improvement of infraestructure and equipment after hurricane Otto.	Progress: a. Poor: 39% b. Needs improvement: 48% c. Good: 13% in both project region ASADAS in poor category has been reduced by 14%; ASADAS in Needs improvement Category increased by 11%; ASADAS in Good Category increased by 3%	HS	The value of the indicator indicates that the condition of the water supply system has improved and that it is on track to reach the goal at the end of the project.

				Through the Project 100% of the ASADAS in the intervention areas have been evaluated, by applying the UIF. As a result of this evaluation an individual Improvement plan has been developed for each ASADA, that will be executed in the next implementation year.			
The progress of the objective can be described as:				**On track**			
Outcome 2 **The capacity of ASADAS' end users to mainstream climate change adaptation into their livelihoods systems is strengthened.**							
Description of Indicator	**Baseline Level**	**Midterm target level**	**End of project target level**	**Level at 30 June 2017**	**Cumulative progress since project start**	**Assessment of achievements**	**Justification of the valuation**
Number of household members and producers (differentiated by gender)	*(not set or not applicable)*	*(not set or not applicable)*	1,500 (men 50%; women 50%)	In the first year of execution, 428 household members and producers have been trained through project activities, where 39%	Progress: Number of household members and producers trained to	HS	The value of the indicator indicates that the goal was exceeded. On the other

trained to mainstream climate change adaptation into their livelihoods (AMAT: CCA-2)				are women and 61% are men. Stakeholders, options and programs are continuously mapped to increase training opportunities for ASADAS on related issues, such as climate change, water resource management, water quality, sanitation, and administrative management. It has been developed as well, the platform www.capacitacionasadas.com to support the National Plan for Continuous Training of ASADAS.	mainstream climate change adaptation into their livelihoods, mostly administrators, agricultural producers, students and ASADA's plumber, fisher and housekeeper. 1,206 (60% men; 40% women) and 423 children participated in the project's activities. 1.629 community members have been trained in climate change, water resource management, water quality, sanitation, reforestation and/or administrative		hand, the degree of satisfaction of the people and institutions trained is high; they are also put into practice and have improved the management and provision of services of the ASADAS.

					management. Many of these activities aim to train trainers. This training wil help them to know and apply good practices to reduce the impact of their daily activities in quantity and quality of water sources, as well to assume a commitment to protect the hydric resources. Furthermore, new educational tools are in development to support the National Plan for Continuous Training of ASADAS.		

Proportion use of hydrometeorological information by ASADAS in planning processes (by type of plan)	*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%	*(not set or not applicable)*	*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%	There is no specific progress yest. Advances have been made due to the acquisition of 10 meteorological stations and 5 hydrological stations that will feed the national network of hydro meteorological monitoring. A technical committee composed by National Meteorological Institute (IMN), AyA, National Emergency Commission (CNE) and Water Direction (Ministry of Environment) advises on the criteria and most convenient sites for installation. So far, five meteorological stations have been installed in strategic places where currently the country has scarce meteorological information, such as Upala, Guatuso, Bagaces (2), Carrillo, Hojancha	Actions and tools to increase the indicators are being developed, and results will be shown on next execution periods: 10 meteorological stations and 5 hydrological stations have been installed in strategic places and transmit real-time data to the national network of hydro meteorological monitoring. Currently, the information is available in the National Meteorological Institute (IMN) website.	HS	The project has created the conditions through the provision of technological resources, equipment and information systems, and its application is planned in the planning process in the following period.

				(2), La Cruz, Liberia and Santa Cruz. The five hydrological stations will be installed following the same criteria of the need to increase the density of monitoring coverage, on Tempisquito, Tempisque, Quiriman, Sardinal and Chimurría river basins. AyA and IMN are developing tools with contents and formats adapted so that ASADAS and local stakeholders, such as municipalities, can implement measures on local planning and decision making using hydro meteorological information, such as climate data, sources gauging, water balance,	Moreover, drought and flood risk maps have been developed for each target canton that will be incorporated in the ASADAS's planning tools. Improvement and Efficiency Plans methodology (PME) has been developed, validated and diffused. So far 12 ASADAS have implemented PME that include considerations on water balance and Climate Change. Another 6 ASADAS have developed		

				early warning sytems, among others.	climate change adaptation plans. Investments have been made to formulate a preparedness system for climate-driven hydrological stress that will ensure a sustainable water use of aquifers through continuous assessment considering Hydrometeorolo gical information and climate change projections. A technical committee composed by AyA, National		

					Emergency Commission (CNE), Regulator Authority for Public Services (ARESEP), Fundecooperacion for Sustainable Development, University of Costa Rica (UCR) and National University of Costa Rica (UNA) has been conformed to review upcoming technical plans guides and standards that include: seasonal contingency, emergency/disaster, CC adaptation and local communication plans		

Measures undertaken to reduce risks to climate change	*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%]	*(not set or not applicable)*	*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%	The project has the following progress: a. Increased micro-metering: 39% (10,200 micro metering acquired, 6450 assigned to Chorotega Region - 65% already installed- and 3750 to North-North Territory -11% already installed) b. Protection of water sources: 18% Early Warning Early Action Protocol for water sources agrochemical contamination developed and tested in 9 ASADAS, in a region threatened by intensive agricultural activities. c. Protection of pipes and other system components: 4%; 6 ASADAS interventions developed by the project on reconstruction and	The project has reached the following progress: a. Increased micro-metering: 93% (9.519 micrometers installed in 118 ASADAS): measuring water production and consumption, as well as minimise unaccounted-for water and reduce water profligacy lead to a better use of the resource and to reduce the hydric stress. b. Protection of water sources: 29%, 32 ASADAS with hydrogeological	HA	The values of the indicators exceed the expectations for the middle of the period. Some even surpass them ("Protection of water sources", "Increase maintenance efficiency"). In addition, the other indicators ("Protection of pipes and other components" and "Promoting water saving measures among users") are close to

				improvement of infraestructure and equipment after hurricane Otto. d. Increase efficiency of maintenance: 16%; 14 ASADAS improved their skills in maintenance and efficiency through plumbing courses. e. Promote water-saving measurers among users: 29%; Improved water metering on 42 ASADAS results in direct saving from leak reduction and water wasting. f. None: 30% g. Other 17%: Actions will be reported in the next year related to fusion of small ASADAS into larger units (integration) and constitution of second tier organizations that group ASADAS from the same region	studies that allows them to clearly identify their capture areas and define recovery and protection measures for sources. 3 ASADAS with reforestation program have planted 2.605 planted trees in 2.6 Ha., with the objective of recover and extend the benefits of forest coverture c. Protection of pipes and other system components: 21%; 44 ASADAS with interventions developed or prompted by the		being achieved.

				(Associativity) aimed at strengthening the functioning and efficiency of systems.	project: the improvements in infrastructure are aimed at achieving more efficient use of water, as well as transforming current systems into resilience vision to face extreme events. d. Increase efficiency of maintenance: 80%; 162 ASADAS improved their skills in maintenance and efficiency through training in plumbing, Unaccounted-For Water and disinfection methods. This makes possible to improve the		

					quality of drinking water services and helps to extend the useful life of the systems e. Promote water-saving measurers among users: 35%; Improved water metering on 56 ASADAS results in direct saving from leak reduction and water wasting. f. None: 7% g. Other 19%: fusion of 21 small ASADAS into 8 new larger units and development of 4 new second tier organizations (Federation, League, Union –		

					FLU) that group ASADAS from the same region aimed at strengthening the functioning and efficiency of systems and organizations.		
The progress of the objective can be described as:				**On track**			
Outcome 3 **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**							
Description of Indicator	**Baseline Level**	**Midterm target level**	**End of project target level**	**Level at 30 June 2017**	**Cumulative progress since project start**	**Assessment of achievements**	**Justification of the valuation**
Number of RMPPWS that incorporate ecosystem-based climate change adaptation,	*(not set or not applicable)*	*(not set or not applicable)*	At least 40 RMPPWS developed with gender considerations integrated	In the first year of the project 26 ASADAS have incorporated EbA in: - 6 ASADAS participated in 2 strategic plans (Biological Corridor	0 Risk Management Plan for Potable Water and Sanitation (RMPPWS) developed: the	S	Progress has been made in organizational, methodological aspects and the

including gender considerations (AMAT: CCA-3)				"Ruta de los Malecu" and the Union de Asadas Norte Norte Plan) - 4 ASADAS have developed Water Security Plans, three of those ASADAS acquired forest land (75.8 ha at the protection area of 5 water sources) and develop a community reforestation campaign for protection of hydric resources. - 7 ASADAS developed measures to protect water resources with the private sector in the Caño Negro Wetland surroundings. - 9 ASADAS participated in a Early Warning Early Action Protocol. The protocol alerts water sources' agrochemical contamination in intensive agricultural threatened regions. This	methodology is under construction via a technical committee composed by AyA, National Emergency Commission (CNE), Regulator Authority for Public Services (ARESEP), Fundecooperacion for Sustainable Development, University of Costa Rica (UCR) and National University of Costa Rica (UNA). Other actions related includes the development of a monitoring system for the presence of agrochemicals in		development of several relevant actions, with related instruments of great value for the implementation of the RMPPWS. However, even the RMPPWS have not been developed.

				protocol may be replicated in all ASADAS in the country.	water sources with the participation of 22 ASADAS of the North-North territory located in areas of pineapple production. The monitoring system gives prevention EbA measures and alerts water sources' agrochemical contamination in intensive agricultural threatened regions. 6 ASADAS participated in 2 strategic plans to implement EbA for the protection of the Biological Corridor "Ruta		

					de los Malecu" with active participation of Union de Asadas Norte-Norte. 4 ASADAS have developed Water Security Plans, three of those ASADAS acquired forest land (75.8 ha at the protection area of 5 water sources) and develop a community reforestation campaign for protection of hydric resources. 7 ASADAS developed measures to protect water resources with the private sector in Caño		

					Negro Wetland surroundings.		
Number of AyA and CNE investments for the prioritized project area that integrate climate change risks (AMAT: CCA-3)	AyA and CNE investments lack integration of climate change risks in the project area	*(not set or not applicable)*	*AyA: at least three (one per target SEMU) *CNE: at least three (one per target SEMU)	During the first year of the project the following investments has been made: a.AyA: 1. Six hydro-geological studies and hydric availability (105,000 USD) AyA investments in 2017 in areas affected by drought (ENSO 2014-2016) 2. Ten wells were drilled in 2016 in water stressed communities in Guanacaste by AyA-ICE. 3. Three wells were drilled in 2016 in water stressed communities in Guanacaste by AyA. b. CNE: 32hydro-geological studies in drought emergency	The project has been reached the final target for investments of stakeholders: a. AyA: 1. 18 ASADAS with key investments to rehabilitate and climate-proof infrastructure damaged by Hurricane Otto. 2. Construction of community aqueduct that will supply water to 14 ASADAS members of the Commission for the Sustainable	HS	Important investments were made by the AyA (5) and the CNE (3), in the project's target area, integrating the risks of climate change.

				declared ASADAS (AyA delivered and CNE funding) (67,500 USD) (ENSO 2014-2016)	Management of the Nimboyores Aquifer and Coastal Aquifers (CONIMBOCO) as a response to droughts of their main water source: Huacas - Tamarindo aquifer. 3. 10 ASADAS received materials and support to convert infrastructure damaged by Tropical Storm Nate to resilient infrastructure 4. Six hydro-geological and hydric availability studies (105,000 USD) in 2017 to support communities		

					affected by drought. 5. 13 wells were drilled in 2016 in communities to alleviate drought related water stress in Guanacaste by AyA-ICE. b. CNE: 32hydro-geological studies to determine potential new water sources for drought affected ASADAS (AyA delivered and CNE funding) (67,500 USD).		

Number of adaptation-related voluntary fee systems (expanded PES) implemented	Voluntary Watershed Payment: 0	*(not set or not applicable)*	Voluntary Watershed Payment: at least 5	Two financial mechanisms are in development phase: a) Water Resources Protection Tariff Pilot implementation on 4 environmental projects in North-North Territory in junction with CEDARENA, ARESEP, AyA and GIZ. This project promotes good agricultural practices, reforestation and a new water culture. b) A feasibility study and proposal was done for the creation of a National Fund for ASADAS to purchase water recharge lands to protect their sources. During the next periods the implementation of the fund will be done.	Voluntary Watershed Payment: 0 16 ASADAS of North-North Territory have prepared a plan to formulate a Water Resources Protection Tariff (TPRH) and present it to the Regulatory authority (ARESEP) and AyA as a model to implement a voluntary watershed payment, for the first time in the country. This initiative is developed in junction with CEDARENA, ARESEP, AyA, GIZ and	MS	The project supported two strategies: 1) creation of a National Fund for ASADAS; and 2) Tool for ASADAS to finance activities of protection of water resources through a tariff. However, there are doubts about the feasibility of achieving the results designed in the remaining execution period.

					Fundecooperacion and has the potential to be applied to all 1500 ASADAS nation wide		
The progress of the objective can be described as:				**On track**			
Outcome 4 **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.**							
Description of Indicator	**Baseline Level**	**Midterm target level**	**End of project target level**	**Level at 30 June 2017**	**Cumulative progress since project start**	**Assessment of achievements**	**Justification of the valuation**
The purchasing and credit policies of at least 20 agricultural and livestock trading companies and five financial institutions operating in the	*(not set or not applicable)*	*(not set or not applicable)*	At least 20	The project is currently developing a strategy to promote purchasing and credit policies, in junction with national banks, agricultural and livestock sector, turistic sector, civil	Number of purchasing and credit policies: 0 Preparation meetings and stakeholder engagement with national	MS	The communication has advanced, but there is still no progress in defining the 20 companies or

target region promote adoption of productive practices that help maintain ecosystem resilience to climate change.				organizations and ASADAS.	banks, agricultural and livestock sector, touristic sector and civil organizations have been initiated to plan initiatives oriented to boost ecosystem resilience to climate change. (implementation by second semester of 2018): 1. International trading companies buying to Costa Rican producers and providers implementing, adaptation strategies (for example: zero		5 financial institutions on specific agreements or operations to adopt productive practices that help maintain the resilience of ecosystems in the face of climate change.

					deforestation schemes). 2. Main local trade company with feasibility to promote final consumer awareness. 3. Adoption of good practices in water management in hotels trough regional tourism boards and hotels.		
Number of climate change-related initiatives making use revised purchasing and credit policies of agricultural and	*(not set or not applicable)*	*(not set or not applicable)*	At least 10 (one per target municipality)	There is no specific progress. This output relies on the completion of the output 2.2.1. above	Number of climate change-related initiatives: 0 This output relies on the completion of the output 2.2.1.	MS	As its achievement depends on the completion of output 2.2.1, the maximum possible

livestock trading companies and financial institutions							rating is MS, a product that does not yet present an advance in implementation. This situation is usually presented in projects when the achievement of one of the results is planned in a concatenated manner. With another one
The progress of the objective can be described as:				**On track**			

Source: Modified from the TDR

Annex 6.10: Global evaluation of the Project

Table 6.10 .: Overall Project Valuation

	Objective	Result 1	Result 2	Result 3	Result 4	Draft
Number of indicators (Data)	2	2	3	3	2	12
Maximum possible score	12	12	18	18	12	72
Score obtained	12	12	18	15	8	65
Percentage achieved	100	100	100	83	67	90
Average points	6	6	6	5	4	5
Assessment	AS	AS	AS	S	MS	S

Source: self made.

Annex 6.11 .: Corrective action for management mechanisms.

Table 6.11: Corrective measures for management mechanisms

Management mechanism factors	Leads to effective and efficient implementation and management	Good practice / corrective action (AC)	Corrective action
Management mechanisms	Yes	Does not require corrective action (AC)	
Work planning	Yes	If it requires corrective action (AC)	Work planning consisting of: 1) The preparation of a road map and a contingency plan to achieve the development of economic incentives for livestock and agricultural sectors to adopt water conservation production practices to reduce vulnerability to climate change, at the end of the project; 2) A plan that guaranteed its implementation in 2019, of the products on "Installations of water saving installed" and the "Pilot of sanitation and purification and other adaptive technologies".
Financing and co-financing,	Yes	Does not require corrective action (AC)	
Monitoring and evaluation systems at the project level	Yes	Does not require corrective action (AC)	
Involvement of interested parties	Yes	Does not require corrective action (AC)	
information	Yes	Does not require	

		corrective action (AC)	
Communication	Yes	Does not require corrective action (AC)	

Source: self made.

Annex 6.12 .: Track of Audit of changes

Table 6.12 .: Change audit trail

The Table 6.12., contains the audit trail, to comments received on 20 September 201 8

The comments (column "N ° 3) were provided in the form of changes of edition (track changes) to the draft report (product 2); they are referenced by institution (column "Author") and change / comment number (column "No. 4 "):

Author	**Page**	**Comment / Contribution to the draft MTR report**	**Response of the MTR team and measures**
UGP	Page 10	This data needs to be reviewed, because the number of ASADAS that have received direct support to improve the infrastructure are 29 (approved infrastructure and operation improvement projects for 22 Chorotega Region ASADAS and 7 TNN ASADAS). To this data it must be added all those that have received micro and macro meters which constitutes a substantive improvement in the service (see data in the following box that speaks of 118 ASADAS with meters).	As the observation was adjusted the text as follows: *"... with what has been achieved to improve services to 36,000 people of 118 ASADAS.* "
	10	On the occasion of the impact of the Tropical Storm Nate on aqueducts in the Chorotega region, the ORAC was supported in the evaluation of	The text was incorporated: " On the occasion of the impact of the Tropical Storm Nate on aqueducts in the Chorotega region, the

		affected systems, the preparation of investment plans for recovery, as well as the contribution in material and technical assistance for the rehabilitation of eight aqueduct systems in this region.	ORAC was supported in the evaluation of affected systems, the preparation of investment plans for recovery, as well as the contribution in material and technical assistance for the rehabilitation of eight aqueduct systems in this region. "
	10	which are a tool that allows the ASADAS to manage financial support, either through the INDER, other donors or banking for development of the identified improvement investments.	Incorporated the text "...which are a tool that allows the ASADAS to manage financial support, either through the INDER, other donors or H of the identified improvement investments. "
	10	(developed by IDESPO), which will serve as an input for the design of information tools aimed at raising awareness about the rational use of water among users, including the promotion of use and installation of water saving devices.	Incorporated the text "...(developed by IDESPO), which will serve as an input for the design of information tools aimed at raising awareness about the rational use of water among users, including the promotion of use and installation of water saving devices . "
	11	non-potable uses in public buildings (educational centers, government offices), using as a reference the system installed in the Committee	Incorporated the text "... non-potable uses in public buildings (educational centers, government offices), using as a reference the system installed in the Committee)

	11	I would remove this and leave only the reference above to the campaign of rational use of water	Deleted the indicated text
	11	It would also remove it taking into account that the achievements are evaluated and not so much the future plans	Deleted the indicated text
	12	hydrogeological studies in 37 sources (springs and wells) of 25 TNN ASADAS	Incorporated the text "...e hydrogeological studios in 37 sources (springs and wells) of 25 TNN ASADAS ..."
	12	"... areas of contamination risk due to the extensive cultivation of pineapple in ..., Upala and Guatuso ... and the Guatuso CTP ..."	Incorporated the indicated text.
	13	These are not project achievements	The following text was deleted "... ; 2) 4 Water Security plans; 3) Acquisition by 3 ASADAof 75.8 hectares of protected forest lands that include 5 water sources and ... "
	13	This was already indicated in the previous box and refers to the monitoring program for the early detection of the presence of agrochemicals	The indicated text was deleted
	13	I can not locate this activity	The text was deleted
	14	Check the data of the ASADAS because only those that have received meters are 118	The data was corrected

	14	This paragraph is confusing	The wording of the paragraph was improved.
	15	It seems to me that this does not correspond to this project, it should be more of wetlands	The paragraph was deleted , I have incorporated the following text : " In general, the involvement of stakeholders is positive at all levels, to achieve the results of the project. The general appropriation is high in all the management levels of the AyA involved, it shows a great satisfaction with the management of the project. The level of information has been good and useful for the strengthening of institutional capacities in water management; At the level of the ASADAS, it was possible to generate a greater awareness of the water resource and the risks of climate change. The communication was timely and of quality allowing fluidity to the processes; Through a more horizontal management of the project, it favors the efficiency of the work teams. Corrective actions are required

			in the area of work planning. "
	32	It would be necessary to add data on post-Nate care	Added information provided by PIR 2018 "Ten ASADAS in the Chorotega region received materials and support to rehabilitate climate-proof infrastructure damaged by tropical storm Nate. "
	48	This activity I do not know what corresponds	The text was deleted
	52	I would put in red boxes the voluntary rates and the policies of purchase and credit	

Source: self made.

Annex 6.13 .: UNEG code of conduct for individual contractor for mid-term review

The evaluators / consultants:
1. They must present complete and fair information in their evaluation of the strengths and weaknesses, in such a way that the decisions or actions carried out are well founded.
2. They must disclose the complete set of conclusions together with the information of their limitations and have it at disposition of all those affected by the evaluation who have the express right to receive the results.
3. They must protect the anonymity and confidentiality of individual informants. They should offer the maximum notification time, limit the demands of time and respect the right of people not to get involved. Evaluators should respect the right of people to give information in a confidential manner, and should ensure that sensitive information can not be traced back to its origin. Evaluators are not obliged to evaluate individual persons, but they must maintain a balance between the evaluation of management functions and this general principle.
4. Sometimes, when conducting evaluations, they will uncover evidence of crimes. It must be reported discreetly about
such cases to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is the slightest doubt about whether these issues should be communicated and how they should be communicated.
5. They must be sensitive to beliefs, customs and practices and act with integrity and honesty in their relationships with all interested parties. In line with the Universal Declaration of Human Rights of the United Nations, evaluators should be sensitive to issues of discrimination and gender equality. They should avoid offending the dignity and self-esteem of those people with whom they establish a contact during the
evaluation. Knowing that there is a possibility that the evaluation negatively affects the interests of some stakeholders, the evaluators should conduct the evaluation and communicate the objective of the evaluation and its results in a manner that clearly respects the dignity and self-esteem of those involved.
6. They are responsible for their performance and (the) product (s) they generate. They are responsible for a written presentation or
oral clear, precise and balanced, as well as the limitations, conclusions and recommendations of the study.
7. They must apply sound accounting procedures and be prudent when using evaluation resources.
RMT Consultant Agreement Form
Agreement to abide by the Code of Conduct for Evaluators of the UN system:
Consultant Name: Ronny Ricardo Muñoz Calvo
Name of the Consulting Organization (when necessary):
I affirm that I have received and understood and that I will abide by the UN Code of Conduct for Evaluators.

Signed in (Place) a

signature:

(date)

Annex 6.14 .: Form for approval of the report on the revision of the medium

FORM OF APPROVAL OF THE MIDDLE-TERM REVIEW REPORT

Midterm Review Report Revised and Approved by: UNDP

First name:: _____

Signature:_____ DAte:_____

Regional Technical Advisor of the UNDP-GEF
First name:_____

Signature:_____Date:_____