



ADAPTATION FUND

## ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY:

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**Country/Region:** Mexico/LAC  
**Project Title:** Ha Ta Tukari, "Water our Life": Towards universal drinking water coverage for 23 communities of the Wixarika Nation  
**Thematic Focal Area:** Water Management  
**Implementing Entity:** Instituto Mexicano de Tecnología de Agua (IMTA)  
**Executing Entities:** Isla Urbana  
**AF Project ID:** AF00000328  
**IE Project ID:** **Requested Financing from Adaptation Fund (US Dollars):** 3,255,000  
**Reviewer and contact person:** Claudia Lasprilla Pina **Co-reviewer(s):** Patricia Marcos Huidobro  
**IE Contact Person:**

### Technical Summary

The project "Ha Ta Tukari, "Water our Life": Towards universal drinking water coverage for 23 communities of the Wixarika Nation" aims to achieve sustainable and climate adaptive universal drinking water access in 23 Wixarika villages, through the installation of 600 rainwater harvesting cisterns, and work on landscape management for water retention and regeneration. This will be done through the five components below:

Component 1: Diagnose the current water situation in the communities, households, community buildings, and landscapes, using co-participation principles and community involvement in all towns and villages of the agrarian center San Andres Cohamiata (USD 294,714);

Component 2: Implement ecotechnologies that improve water access in a participative way, through the installation of 600 rainwater harvesting (RWH) systems in homes and community buildings, and the training and skill transfer to end-users (direct and indirect) (USD 1,548,271);

Component 3: Analyze, co-design and implement rainwater retention and infiltration strategies for water availability at a landscape scale (USD 291,714);

Component 4: Strengthen and develop local capacities through intercultural and active community participation, and knowledge-sharing processes to promote social, ecological and cultural resilience through ensure the

	<p>efficient replication, installation, use, and maintenance of RWH technologies and the recognition and adoption of climate change adaptive strategies (USD 291,714);</p> <p><u>Component 5</u>: Monitor, evaluate, and document the impact of the activities carried out in the Wixarika communities to systematize the intercultural processes and facilitate adjustments and optimization, to ultimately generate a replicable implementation model in the form of a detailed manual (USD 573,587).</p> <p><u>Requested financing overview</u>:  Project/Programme Execution Cost: USD 1,000,000  Total Project/Programme Cost: USD 4,000,000  Implementing Fee: USD 255,000  Financing Requested: USD 4,255,000</p> <p>The initial technical review raises several issues, such as the need for an initial gender analysis, a description of the initial consultations, and further clarity on the aim of the project and its cost-effectiveness, as is discussed in the number of Clarification Requests (CRs) and Corrective Action Requests (CARs) raised in the review.</p>
Date:	August 22, 2022

Review Criteria	Questions	Comments
Country Eligibility	1. Is the country party to the Kyoto Protocol?	<b>Yes.</b>
	2. Is the country a developing country particularly vulnerable to the adverse effects of climate change?	<b>Yes.</b> The territory of the Wixarika Nation in Mexico is exposed to extremely precarious water access conditions; additionally, the region is very vulnerable to persistent droughts, affecting the population's ability to meet their most basic needs.
Project Eligibility	1. Has the designated government authority for the Adaptation Fund endorsed the project/programme?	<b>Yes.</b> As per the Endorsement letter dated August 8 <sup>th</sup> , 2022
	2. Does the length of the proposal amount to no more than Fifty pages for the project/programme concept, including its annexes?	<b>Yes.</b>
	3. Does the project / programme support concrete adaptation actions to assist the country in	<b>Not clear.</b>

addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?

The proposal states that it aims to build a model that can be easily replicated in the rest of the Wixarika nation and other similar contexts in Mexico and abroad. While in other sections, it says that it will scale-up existing systems.

**Correction on page 7 under Brief Summary**

**CR1:** Please clarify which model(s) are expected to be replicated and what is expected to be developed through the project? Please harmonize throughout the document which systems will be piloted and which are already proven methods. For the proven ones, please provide a technical description, including capacity, and type of usage. For the pilot technologies, please clarify the different alternatives that will be considered or the process for selection of the options.

**CR1 on page 14 and 15, components 2 and 3.**

The past 12 years of experience in the sierra have helped us systematize a model for rainwater harvesting projects' implementation for such contexts as the sierra.

The rainwater harvesting systems installed in buildings for potable purposes are already a proven model that is ready to be expanded and replicated.

The rainwater harvesting technologies at a landscape scale, for irrigation and soil rehydration (mainly), are the ones that will be piloted in this phase. This phase will allow us to carry out a thorough diagnosis to carefully design the integration of this component within the project.

		<p>Both of these technologies will be implemented by our intercultural team of promoters and installers, a model of local capacity building and knowledge exchange that is the basis for the expansion and replication of the project.</p> <p>The proponent states that the project would bring new opportunities for the practice [of RWH] to be continuous, expanded and replicated without [their] presence.</p> <p>Once our team of local promoters and installers is complete and well established, they can work on the implementation without our presence (reaching agreements with communities, doing diagnosis and technical visits, installing RWH systems, training its users, and doing monitoring and follow-up). Our role thus becomes a coordination and continuous funding one, with supervision and professionalization activities every few months.</p> <p><b>CR2:</b> Please clarify if initiative/s have been taken from other communities in which 'Isla Urbana' has worked in the past 10+ years to replicate RWH systems in other areas? Please clarify what have been the lessons learned from the experience of Isla Urbana that will be applicable to the current AF project.</p> <p><b>CR2-3-4 on page 8-9 new section "Experience in the proposed field"</b></p> <p>Isla Urbana has worked in a diversity of contexts throughout Mexico to contribute to RWH detonation and expansion. The lessons learned are different in</p>
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every context: from urban contexts, to periurban, rural, and isolated indigenous communities. Isla Urbana has installed more than 25,000 RWH systems, more than 2,000 of these in rural and/or indigenous contexts, teaching us lessons mostly related to:

- Technical aspects of implementation of RWH systems in dispersed, isolated communities that are difficult to access: the geomembrane cisterns we use are the best way to transport significant storage capacities in a fairly compact manner.
- Social aspect of profound work of community linkage based on empathy, the establishment of relationships of trust with the locals and the reaching of community agreements, co-participation methods
- Globally, our 13 year experience gives us certainty about the importance of carefully combining technological aspects with the right social and environmental considerations, particularly the integration of the local culture and cosmovision in general, but particularly related to water, that is the starting point to build resilience

Such lessons have been learned mainly when we compare working with urban and rural communities, where systematization is more difficult, and processes tend to take longer. We have had such experiences in the Sierra Mazateca in Oaxaca, as well as the Sierra Tarahumara, and other, less isolated indigenous communities.

The proponent mentions that previous work has resulted in the integration of several protocols and approaches adapted to working with remote and

isolated communities for methodologies of water infrastructure deployment.

**CR3:** Please further elaborate on the already existing protocols and approaches and how they differ from the activity proposed to systematize the methodology and produce a manual.

**CR2-3-4 on page 8-9 new section “Experience in the proposed field”**

As opposed to most of Isla Urbana’s projects, the project in the Sierra Wixárika can’t be replicated and expanded properly without the integration, preparation, and professionalization of a local team of installers and promoters.

Even though this intercultural team is set to replicate protocols that are applied in most projects (community linkage process, technical visits, installations, training and skill transfer, monitoring and follow-up) there are two main differences:

1. This project requires the building of a local professionalized team: the implementation is done by them and not Isla Urbana’s usual technicians
2. Because of its nature, this project requires a way deeper understanding of the local culture and context, its cosmovision and traditions, a much more sensitive approach to be able to intervene in the field.

Further, there is a natural lack of trust towards *teiwaris* (foreigners) and building a mutual trust has been a process of years, and the communities attended are

living deep in the Sierra, 18 hours away by car through dangerous roads.

**CR4:** Please clarify how this project does not fall under a 'business-as-usual' type of development/environmental project. What makes it different from all the other projects in the area installing RWH systems and from the ones that 'Isla Urbana' has carried in the region.

**CR2-3-4 on page 8-9 new section "Experience in the proposed field"**

The main difference lies in the fact that we do not seek to simply install RHW technologies, but rather to build RWH communities. To achieve this, we only work with communities who explicitly ask us to, we carry out community linkage processes, we design the project upon agreement of both parties, and, most importantly, the technicians and promoters doing most of the work locally are professionalized Wixárikas that live in the Sierra and are employed by Isla Urbana.

To achieve our goals, the work is based on a long-term relationship of trust with the locals. Thus, the project is not "a business" so to speak. It seeks to be a platform for the Wixárika Nation to build their own resilience and ensure their water sustainability and autonomy. Our role is one of coordination and funding to keep the project growing.

The proposal states that the project will provide water to the community of San Andres of Cohamiata. However, there is no description of how many people (disaggregated by gender and their unique

Las actividades beneficiarán directamente a los 5250 habitantes de San Andrés Cohamiata, considerando las redundancias entre personas que recibirán beneficios a través de más de una actividad. El desglose aproximado de beneficiarias (os) consiste en los habitantes de las 21 localidades. En cada localidad viven alrededor de 250 personas 100% indígenas. Cada una tiene al menos una escuela primaria registrada por la Secretaría de Educación Pública, en donde se instalará un sistema de captación pluvial comunitario y se fortalecerán prácticas de higiene. También se instalarán sistemas de captación pluvial en otras escuelas no registradas (alrededor de 20), por lo que se beneficiarán los más de 3000 niñas (os) y jóvenes de la comunidad. Se instalarán sistemas de captación en los Centro de Salud para impactar en las mejoras del servicio para toda la población indígena. El desglose de beneficiarios por grupo de población se estableció por la pirámide poblacional del municipio Mezquitic y de la localidad La Laguna, en los que se se determinó que aproximadamente el 36% de la población son niños de 0 a 9 años, el 23.9% son jóvenes de 10 a 19 años, 37.6% son adultos de 20 a 54 años y 2.2% de la población son adultos mayores de 65 años. En la fase comunitaria del proyecto, se verificarán datos de los censos oficiales porque no corresponden con los datos reales y posiblemente se subestimen

vulnerabilities) the 600 rainwater harvesting systems would benefit. Similarly, further explanation of the current situation of the target area is needed to understand the project's positive outcome.

**CR5:** Please clarify whether all members of the 23 communities would benefit from the RWH systems. To understand the background/context and thus measure the suitability of the activities, please include the number of beneficiaries, if possible disaggregated by gender/youth.

**CR5 on page 14, component 2**

Yes, all members of San Andrés Cohamiata (23 communities) would benefit from the RWH systems. This counts to 5250 inhabitants, considering redundancies of people who would benefit from more than one activity. Each locality has approximately 250 inhabitants, all 100% indigenous. Each locality has at least 1 registered primary school (SEP) where a communitary RWH system will be installed and hygiene practices will be improved.

RWH systems will also be installed in non-registered schools (around 20 in all of San Andrés Cohamiata), through which all children and youth will benefit.

RWH systems will also be installed in Health Centers or Clinics of San Andrés Cohamiata to improve health services for all of the indigenous population in the sierra.

The population breakdown was established based on the population pyramid of the municipality of Mezquitic and the locality of La Laguna, as well as description of the locals (since there is very limited census data of



las cifras reales

the region). It was determined that approximately 36% of the population are children between 0 and 9 years old, 23.9% are youngsters between 10 and 19, 37.6% are adults between 20 and 64, and only 2.2% are elderly (more than 65).

The first approach to each community will also be used to verify this data since official data is so limited and most probably unrealistic.

**CR6:** Please identify which AF strategic objectives would the project activities support.

**CR7:** Please clarify how integrated systems (rainwater harvesting, successional agroforestry systems, controlled water consumption and land roaming for livestock) will be implemented in the project. Also clarify the target locations for implementing integrated systems.

**CR7 on page 15 under Component 3.**

The integration process of the successional agroforestry systems and soil rehydration strategies will be done through the same implementation route we have used for the other RWH technologies and its 4 phases: diagnostics, implementation, follow-up, and evaluation. In each phase we contemplate the integration of participative methodologies, gender inclusive, and with consideration for the communities' different stakeholders.

In the site visit carried out in April 2022 we started the collection of information of a few potential zones for

		<p>these activities. The decision on the sites in which to start piloting and implementing these strategies will be made with more information and a selection criteria that will include not only the technical aspects, but also the social ones: an explicit solicitation from the locals to start these interventions.</p> <p>It is important to mention that the site visit carried out has reinforced our vision on the importance of the integrated systems and the capacities built through them to build resilience in the Sierra Wixárika.</p> <p><b>CAR1:</b> Under Project/Program Objectives, the proposal mentions that the project will have <u>six</u> components instead of five. Please amend accordingly.</p> <p><b>CAR1 corrected on page 7</b></p> <p>This was a mistake; the project has 5 components that are the ones listed.</p>
	<p>4. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<p><b>Not cleared.</b> Please refer to <b>CR 5</b> above on expected beneficiaries. This information will allow measuring the equitable distribution of benefits among the target community.</p> <p><b>CR8:</b> Further information is needed on the background of the target population in terms of local economic activities.</p> <p><b>CR8 on page 3 under Economic and Social Context</b></p> <p>Most Wixárika people live in conditions of great material poverty. Paid work is almost non-existent in</p>

		<p>the region, and subsistence agriculture remains a principal activity.</p> <p>Income comes mainly from the production of crafts made from small glass beads, which are either taken by a family member to cities throughout Mexico, or are sold to middlemen, or from seasonal labor in adjoining states. The Wixárika people travel long distances, often as entire families, to pick tomatoes, chilies, or tobacco, in industrial agriculture operations in Nayarit and Zacatecas.</p> <p>The most vulnerable members of the community, often single mothers, or women with abusive spouses, have practically no income whatsoever, and subsist minimally on support from family members.</p> <p>The proposal states that “some locals, whether they are authorities or other individuals, tend to be reluctant to the project.”</p> <p><b>CR9:</b> Please clarify how the system installations would not end as maladaptation practices and how the project will promote the systems' assimilation and the local community knowledge in their design.</p> <p><b>CR9 on page 25 under subparagraph J</b></p> <p>The first systems that we installed in the Sierra around 12 years ago are still functioning; we drank the water from them at the end of April 2022 during our last trip there. The rainy season was about to begin again, proving to us that most families could rely on the rainwater year-round.</p>
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Since there is no water infrastructure in homes, and the RWH systems can be adapted to pretty much any building, the design of the system was based on simplicity of use and adaptation to existing features, namely: dispersed homes with vast space around them makes it easy to install on-ground geomembrane cisterns measuring almost 5 meters in diameter; the roofs of homes are mostly made of metal sheets which is an excellent material for RWH, and the very simple filtration process is designed for unpolluted isolated regions.

Families decide where their cisterns will be installed with the help of our local technicians, and a extensive one-on-one training is carried out (during the technical visit, the after installation ,adn during follow-up).

The community knowledge is integrated since very precarious RWH practices were already in place; our project aims at improving a traditional practice and realizing its true potential.

The proposal does not include an initial gender analysis. Proposals at the concept stage are required to comply with the AF Gender Policy by providing initial gender analysis, and/or assessment. This helps determine the different needs, capabilities, roles and knowledge resources of women and men, and/or identify how changing gender dynamics might drive lasting change.

**CAR2:** Please include an initial gender analysis and/or assessment.

**CAR2 on page 17 under Gender Equity**

Since there is very little official data of the region, most of the analysis we count on is made either by research of existing documents, or direct observation from our team and our 12 years experience working in the region. The most relevant observation is the following: most of the people in the sierra have to haul their water, and most of the hauling (at least 75% according to our observations) is done by either women or young girls due to the traditionally gendered housekeeping and cooking roles.

“The lack of water in this region is extremely precarious; women and children spend approximately one to three hours a day fetching water, and families live with less than 20 L per person/day.”

“The interview with the heads of households were mostly with women because they are the ones responsible for providing water for the household.”

“For example, increased access to water could potentially allow more time dedicated to other activities in a household, but at the same time could limit water-collection activities that provide a shared space for women.”

González-Padrón et al. (2019), UNAM

Please note that the Fund offers NIEs the opportunity to request a **Project Formulation Grant** as part of their concept note. This can help entities carry out the full Gender Analysis and other analyses or consultations required in fully-developed proposal, please find the template here:

		<p><a href="https://www.adaptation-fund.org/apply-funding/project-funding/project-proposal-materials/">https://www.adaptation-fund.org/apply-funding/project-funding/project-proposal-materials/</a></p> <p>One of the main environmental impacts of the project relates to the landscape-scale work of soil and rainwater retention, by which the project intends to fight the trend towards desertification, promote the recharge of springs and water holes, and assist in increasing vegetation cover.</p> <p><b>CR10:</b> Please clarify related to the agroforestry systems that they project will implement and include details of its economic, social and environmental benefits. Further clarify the communities' involvement in agroforestry interventions.</p>
	<p>5. Is the project / programme cost effective?</p>	<p><b>Not clear.</b></p> <p>Please note that a cost-effectiveness analysis relates the costs of a project to its key outcomes/benefits, helping identify the potential of its success. This differs from a cost-benefit analysis which measures success in terms of financial rewards.</p> <p><b>CR11:</b> Please amend this section, accordingly, providing a logical explanation of the selected scope and approach and validating this from a cost-effectiveness standpoint.</p> <p><b>CR11 on page 18 under C</b></p> <p>The potential success of this project has been proven at a local, smaller scale, with the installation of 200 RWH systems that provide water for human contact and consumption for 10-12 months a year for almost</p>

2,000 people. With the Adaptation Fund this number could increase to around 7,000.

Given the geographical conditions of this territory, and the fact that most settlements are located on very difficult terrain, with no natural waterways other than some springs and small rivers, the cost of building traditional infrastructure for water provision from wells or other natural sources is very hard to calculate, but surely extremely high and almost impossible to maintain in good conditions for long.

The cost-effectiveness of this project can also be proven by the fact that in these conditions, providing completely decentralized water provision systems that rely on the most local of all sources - the rain that falls on people's roofs - is the most cost-effective strategy. Furthermore, the sources of water available, which ever they are, are all seasonal, which states the importance of building storage capacity, whether it is communitarian or individual. The biggest investment of the RWH is the storage tanks (in this case geomembrane cisterns with high capacity), so by implementing such a project, we are solving the central problem that any other water-provision systems would also be faced with.

Further, the cost effectiveness also relies on the fact that the RWH technologies proposed have the potential to generate permanent changes in the population's water access; they are not mitigation strategies, but rather deep transformation. Lastly, this project aims at detonating a market through capacity

		<p>development, which could be set to go on even if our project failed.</p> <p><b>CR12:</b> Please consider comparing the proposed approach with alternative adaptation options to highlight its cost-effectiveness. A table presentation is useful and can include benefits associated with retained solution against alternative solutions available and not retained.</p> <p>Cost of 1 liter of RWH drinking water: \$0.005 USD (calculated based on the cost and harvesting potential of our systems)  Cost of 1 liter of bottled drinking water in the Sierra: \$0.11 USD  Cost of drinking from unsafe water sources: gastrointestinal diseases</p>
	<p>6. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments?</p>	<p><b>Not clear.</b></p> <p>The proposal mentions its alignment with 3 national tools for climate change, “2015-2018 State Program for Climate Change Action, PEACC” and to nine of the SGDs. However, provided that the project is based in an indigenous community, alignment with national programs is needed.</p> <p><b>CR13:</b> Please include all relevant plans and strategies, NAPs, NDC, SDGS related to climate-adaptation, indigenous communities and other sectors involved.</p>
	<p>7. Does the project / programme meet the relevant national technical standards, where applicable, in</p>	<p><b>Not clear.</b></p>



	<p>compliance with the Environmental and Social Policy of the Fund?</p>	<p>The project states meeting Article 7 of the National Water Law and compliance with the Norm NOM-127-SSA1-1994; however, since water will be used for personal consumption, all relevant national/international standards should be stated.</p> <p><b>CR14:</b> Please identify all relevant national technical standards. Including the 'Norma Oficial Mexicana NOM-127-SSA1-2021, Agua para uso y consumo humano. Límites permisibles de la calidad del agua.'"</p> <p><b>CR14 on page 19 under E.</b></p> <p>Since passive purifiers might also be included for consumption, the applicable technical standard is the NOM-244-SSA1-2020 for equipment made to remove bacterial and germicide substances from water in domestic contexts.</p> <p><b>CAR3:</b> Kindly include a description of how compliance with technical standards will be carried out in the implementation of project outputs.</p> <p><b>CAR3 on page 19-20 under E.</b></p> <p>Compliance with technical standards will be achieved through the testing of the harvested rainwater in different places of the sierra with certified labs and/or individuals.</p> <p><b>CR15:</b> Please clarify how the project will take into account indigenous customary law, if applicable, in the implementation of interventions.</p> <p><b>CR15 on page 24-25 under paragraph J.</b></p>
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		<p>The project takes place within the context of a semi-autonomous indigenous area, with a large degree of self-rule under a traditional government and customary law. This fact is considered throughout the implementation process, which involves close collaboration with local traditional authorities.</p> <p>Work in each individual community begins only after having established agreements of collaboration with the current representatives of the local traditional government, the details of which are developed in conversation with them, and then set into writing. The central traditional government, which represents all the communities, requested the extension of the project to every town and village in the area, and the project was formally presented in the main assembly and accepted by the traditional authorities earlier this year.</p> <p>Traditional governance and custom are always taken into consideration and respected. For example, it was the request of the traditional authority that the work of implementing Rainwater Harvesting Systems in all the communities should begin in the 11 major ceremonial centers where the principal rituals are held. This was agreed upon, and has already been fulfilled, with traditional ceremonies held to bless the work and place it within the framework of the customary law and tradition.</p>
	<p>8. Is there duplication of project / programme with other funding sources?</p>	<p><b>Not clear.</b></p> <p>The proposal does not identify all relevant potentially overlapping/complementary projects/programmes.</p> <p>For instance, the proposal mentions ‘Ha Ta Tukari’, as a successful project in which the executing entity</p>

takes part, without drawing on the lessons learned or similarities between the programs. Similarly, comparable projects are: 'Camino de Agua' in San Luis de la Paz, 'Water for Humans', and 'PROCAPTAR' by Conaguas, among others.

**CR16:** The proposal should identify all relevant potentially overlapping recently finalized, on-going or soon-to-be-implemented projects and programs from other domestic, international bilateral cooperation and multilateral funding sources, including those implementing/executed by AMTI and/or Isla Urbana. Please also identify synergies, complementarity and lessons learned that can benefit this project. A table to present the findings might be helpful.

**CR16 on page 9 under Experience in the proposed field**

This project represents a scaling-up of the work done over the past 12 years by Ha Ta Tukari, through which the executing entity has installed approximately 200 Rainwater Harvesting Systems in the Wixárika territory and has worked intimately with several of the communities in the area.

The executing entity is the non-profit branch of Isla Urbana, a social enterprise which has pioneered large scale rainwater harvesting programs and projects throughout Mexico.

Isla Urbana has directly installed over 26,000 rainwater harvesting systems to date and has contributed greatly to the development of rainwater harvesting policy in the country.

		<p>Mexico City's Rainwater Harvesting Program was largely designed by Isla Urbana, as was Guadalajara's Nidos de Lluvia Program, along with several municipal scale programs. In 2022, Isla Urbana installed 9,000 rainwater harvesters within these programs.</p> <p>The current proposal will build upon Ha Ta Tukari's work, which has complementary funding secured for the next two years, primarily from the Fundación Gonzalo Río Arronte, with which Rainwater Harvesting Systems will be installed in 75 schools and health centers in the Wixárika Territory.</p> <p>In late 2022 and 2023, Isla Urbana will carry out related projects in indigenous communities in the Mazateca Nation (northern Oaxaca) and the Tarahumara Nation (Chihuahua). These related projects explore different rainwater harvesting techniques and implementation models, and seek to build knowledge on how to achieve sustainable water access in various social and geographic contexts.</p> <p>The many different projects and programs that have been and are being carried out are building a deep body of knowledge and experience, which this project will draw upon in the effort to design and implement a model for achieving universal adaptive water access in the most difficult and complex contexts, as is the Wixárika Nation.</p>
	<p>9. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?</p>	<p><b>Not clear.</b></p> <p>The project aims at creating manuals, didactic materials and trainings for the local community. However, further information is needed on the duplication of information and products.</p>

**CR17:** Please clarify how the project will document and share the experiences and lessons learned.

**CR17 on page 21 under G**

An important part of this project is to produce documents (reports, guides, etc.) as well as products (videos, pictures, etc.) to be able to share the experience within the communities of the sierra as well as outside of them, to make these processes known and to be able to share experiences across the global south.

The mechanisms employed to this ends are:

- semi-annual work reports elaborated from information obtained on site through different tools (daily logs, census formats, databases)
- Audiovisual products (pictures, shorts and videos) of all phases of the work

**CR18:** Given the executing entity experience in the region, what would be the difference in the knowledge products. Please clarify if there will be no duplication of knowledge products or communication materials, and how previous knowledge products would be used in this project. Refer to **CR3** above.

**CR18 on page 21 under G**

The generated products in the past phases are mainly related to implementation processes in only two villages in the Sierra Wixárika, where the project started in 2010. The main documents generated up to date have been activities reports, research papers on

		<p>implemented methodologies and a scientific article about impacts in health and perception in a village. So far, no product or material exists on integrated rainwater harvesting and landscape hydration systems in the region. Previous experience on this subject stems from the implementation of these projects in other contexts and areas of Mexico.</p> <p>While previous information and knowledge about implementation of RWH systems of communal buildings and homes provides the ground for continuity and elaborating the next proposal, the intended generation of knowledge from implementing this project are different and mainly related to replicate previously designed and approved methodology.</p> <p>All documents generated throughout these years of proposal implementation, seek to attend to the needs of generating water sustainability in all the region, and provide with essential information that allows a scaling in a whole agrarian region from agrarian community San Andrés Cohamiata (one of the four large communities among the Sierra Wixárika).</p>
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10. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?

**Not clear.**

The proposal states that the executing entity 'Isla Urban' has over 10+ years of experience working in the Wixakira community, having learned their cultural customs. Additionally, it mentions that the members of the Wixaritari community have been consulted before and will continue to be consulted on the matter of cultural values, beliefs and resources. However, the proposal does not include any details on such consultations with the target community.

These consultations are key to avoid maladaptation, to better understand the needs of the group, and to involve them as co-creators of the project.

**CAR4:** Please carry out initial consultation with the target community and all key stakeholders of the project and in particular indigenous people and ensure that these consultations include gender considerations. The proposal should include a description of the consultative process specifying who was consulted, how gender considerations were taken into account and a summary of the consultation outputs and an explanation of how these were integrated into the design.

**CAR4 on page 22-23**

The design of the work carried out in the Wixárika communities involves ongoing dialogue and participation with the population. Practical decisions, for example criteria on where to install Rainwater Systems, or what co-participation requirements are fair and viable, have always been made in consultation with the communities. This is done in a variety of ways, some formal (meetings with traditional

		<p>authorities and leaders, open consultation during community meetings and assemblies) and some informal (privately asking the opinions of multiple people from the communities). Both approaches are necessary. The traditional authorities must have a say and be heard. They have valuable insight and understanding of their communities' needs, but they also often have significant blind spots, especially concerning more marginalized members of the population. Women often participate much less than men do in community meetings, and the most vulnerable people (single mothers, spouses of alcoholic or abusive partners, persons with disabilities, etc) often do not participate at all. The thoughts, opinions, and needs of these people must be sought through direct and personal approach.</p> <p>The team has carried out hundreds of interviews with community members ranging from the most influential to the most marginalized, many of these have been recorded and transcribed. This information has served to guide the design of progressive iterations of implementations.</p> <p>The project methodology involves initial community work in each new village before any Rainwater Systems are installed. This includes consultation with the local traditional authorities, community meetings, and individual conversations.</p> <p>The process of consultation and community participation in decision making will be part of the final proposal for this project.</p>
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	<p>11. Is the requested financing justified on the basis of full cost of adaptation reasoning?</p>	<p><b>Not clear.</b></p> <p>Please refer to the <b>CR5, CR8, and CR12</b> above on the need to provide clarity on the target area and beneficiaries, as well as a comparison with alternative options.</p> <p><b>CR19:</b> Please justify why Component 5 “Monitor, evaluate and document the impact of the activities” accounts for approximately 20% of the project budget. While monitoring and evaluation are key aspects of a well-designed project, particularly in this proposal since it aims at generating a replicable implementation</p>

model in the form of a detailed manual, the budget assigned to this component seems a bit high compared to other components. In addition, please note that most M&E costs should be included as part of the implementation fee and execution costs. Please see the [fund's guidance on costs and fees](#).

**CR19 on page 11 under Project Components and Financing**

The amounts were changed on the budget chart since there was a misunderstanding from our part.

The proposal states that the full cost of implementing water coverage to the region is calculated at around 10-15 million USD.

**CR20:** Please explain how the other USD 7+ million (additional to the AF funding) will be obtained? Please also note that co-financing is not required for AF projects and that AF projects need to demonstrate that, taken solely, without additional funding from other donors, they will help achieve their stated objectives. If a project has co-financing, the Adaptation Fund project should be able to deliver its outcomes and outputs regardless of the success of the other project(s).

**CR20 on page 13 under Project Components and Financing and page 23 under I.**

The overall objective of the project is to achieve universal water coverage for the totality of the

		<p>Wixárika Nation, which will cost approximately 10-15 million USD.</p> <p>The Wixarika Nation is divided into 4 sub-regions, each with its own government and capital town. The current proposal seeks to achieve universal, adaptive water coverage in the first of these sub-regions, covering the 23 villages and towns in the territory of San Andrés Cohamiata. Ha Ta Tukari has already achieved near universal coverage in two of these villages, and has secured funding to install Rainwater Harvesters in every school and clinic in the area. The current proposal for 3 million USD would cover the implementation of Rainwater Systems for the remaining households in this area.</p>
	<p>12. Is the project / program aligned with AF's results framework?</p>	<p><b>Not clear.</b></p> <p>The proposal does not state the alignment with the AF's results framework.</p> <p><b>CR21:</b> Please specify the alignment with the Adaptation Fund revised strategic results framework adopted in 2019 <a href="https://www.adaptation-fund.org/wp-content/uploads/2019/10/Adaptation-Fund-Strategic-Results-Framework-Amended-in-March-2019-2.pdf">https://www.adaptation-fund.org/wp-content/uploads/2019/10/Adaptation-Fund-Strategic-Results-Framework-Amended-in-March-2019-2.pdf</a></p>
	<p>13. Has the sustainability of the project/programme outcomes been taken into account when designing the project?</p>	<p><b>Not clear.</b></p> <p>The section focuses on the sustainability of the executing entity but not the sustainability of the project's outcomes.</p> <p><b>CR22:</b> Please amend to focus on sustainability of the project's outcomes.</p>

The proponents explained that to secure the sustainability of the project, extensive education and training are needed.

**CR22 on page 26 under J**

The project's sustainability is deeply related with the thorough way of leading every stage of the implementation process to completion, equally considering both technical and socio-ecological aspects. Throughout the years of work, we've stated that giving the same importance to both elements, instead of prioritizing one over the other, is essential.

Technical aspects intend that the eco-technological designs can serve the population's needs, taking both conditions and features of the location into account, that is, adapted to a particular context and design for a long term function. Response to technic problems is essential, as well as taking into consideration training processes, users learning, and following up the correct use and maintenance of the installed eco technologies.

Concerning social aspects, every activity is done considering different actors within the villages, and we actively seek to involve the voices of every historically marginalized actor, such as women and children, in subjects such as decision-making. This process is part of every single stage: diagnosis, implementation, follow up and evaluation.

**CR23:** Please clarify, based on experience in the region, what issues have been encountered in the installation, and maintenance of the systems? What measures are in place to avoid those from happening

in this project, and to ensure the sustainability of the project outcomes after it ends.

**CR24:** Please clarify the selection process of those who are trained to become technicians, local installers and promoters. What is the commitment from the executing entity to the number of women hired directly by the project?

**CR24 on pages 26-27**

Part of the local team is made up of people who were interested in the work and began organically helping years ago as volunteers, eventually becoming permanent members. The rest joined by responding to an open application process, which was shared in community meetings, and through the National Institute of Indigenous Nations' (INPI) network. The Executing Entity is very committed to the integration of women into the team (the EE's team itself has very strong female integration, including the project director). Wixárika women, however, are often not supported by their families if they seek active employment, and effort had to be put into encouraging female candidates to apply. The integration of women into the local team has involved on-going support for them from the whole team. It is the intention of the EE that the growth of the team in the next phases of the project involve as many women as possible.

Please refer to **CR9** above on maladaptation and assimilation of the system.

	<p>14. Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<p><b>Not clear.</b></p> <p>The proposal states that the components of the project do not reveal unwanted environmental or social impacts. However, some previous sections mentioned the possibility of maladaptation.</p> <p><b>CR25:</b> Please revise the section by considering all possible risks and impacts -social and environmental- by the different activities in the project, following the Fund's guidance on compliance with ESP  <a href="https://www.adaptation-fund.org/wp-content/uploads/2016/07/ESP-Guidance_Revised-in-June-2016_Guidance-document-for-Implementing-Entities-on-compliance-with-the-Adaptation-Fund-Environmental-and-Social-Policy.pdf">https://www.adaptation-fund.org/wp-content/uploads/2016/07/ESP-Guidance_Revised-in-June-2016_Guidance-document-for-Implementing-Entities-on-compliance-with-the-Adaptation-Fund-Environmental-and-Social-Policy.pdf</a></p> <p><b>CR26:</b> Please indicate in section K the category (A, B or C) in which the screening process has classified the project.</p> <p>Please refer to <b>CAR2</b> above on the initial gender analysis.</p>
<p>Resource Availability</p>	<p>1. Is the requested project / programme funding within the cap of the country?</p>	<p><b>Yes.</b></p>
	<p>2. Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?</p>	<p><b>Yes.</b>  IMTA fee is at 8.5%.</p>
	<p>3. Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?</p>	<p><b>No.</b></p> <p>The Execution cost is at 33.3% (USD 1,000,000).</p> <p><b>CAR5:</b> Please revise the execution costs to be at or below 9.5% of the total project/programme budget (including the fee). Please also ensure that these are</p>

		<p>the project execution costs (it seems the amount covers the total project costs instead of the execution cost). Please see the <a href="#">fund's guidance on costs and fees</a>.</p> <p>We understand that the project executing entity is "Isla Urbana"; however, the letter signed by the Director General of the Mexican Institute of Water Technology mentioned that the project will be executed by "Lluvia para Todos, A.C."</p> <p><b>CR27:</b> Please clarify which entity will be the executing entity of the project, and what is the relation between "Isla Urbana" and "Lluvia para Todos, A.C.".</p> <p>The executing entity will be Lluvia para Todos, A.C.</p> <p>Isla Urbana is a global project and brand that is based on a hybrid for-profit and not-for-profit model. It is composed of a social company, Solución Pluvial S.A. de C.V. which develops specialized products, sells them to private clients, and implements social projects. This legal figure allows Isla Urbana to implement massification projects through public tenders and direct contracts with governments and private clients. Lluvia para Todos, A.C. is an NGO that can legally receive donations and apply to philanthropic funds. The kind of projects that Lluvia para Todos does are usually longer-term and smaller scale, and have a stronger social component since the beneficiaries are usually isolated rural and/or indigenous communities. All projects, however, are branded under the name Isla Urbana.</p>
Eligibility of IE	1. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	<p><b>Yes.</b></p> <p>IMTA is a national accredited entity to the Fund.</p>

Implementation Arrangements	1. Is there adequate arrangement for project / programme management, in compliance with the Gender Policy of the Fund?	n/a at concept stage
	2. Are there measures for financial and project/programme risk management?	n/a at concept stage
	3. Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy and Gender Policy of the Fund?	n/a at concept stage
	4. Is a budget on the Implementing Entity Management Fee use included?	n/a at concept stage
	5. Is an explanation and a breakdown of the execution costs included?	n/a at concept stage
	6. Is a detailed budget including budget notes included?	n/a at concept stage
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the Gender Policy of the Fund?	n/a at concept stage
	8. Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?	n/a at concept stage
	9. Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?	n/a at concept stage
	10. Is a disbursement schedule with time-bound milestones included?	n/a at concept stage





**ADAPTATION FUND**

**REQUEST FOR PROJECT/PROGRAMME  
FUNDING FROM THE ADAPTATION FUND**

The annexed form should be completed and transmitted to the Adaptation Fund Board Secretariat by email or fax.

Please type in the responses using the template provided. The instructions attached to the form provide guidance to filling out the template.

Please note that a project/programme must be fully prepared (i.e., fully appraised for feasibility) when the request is submitted. The final project/programme document resulting from the appraisal process should be attached to this request for funding.

Complete documentation should be sent to:

The Adaptation Fund Board Secretariat  
1818 H Street NW  
MSN N7-700  
Washington, D.C., 20433  
U.S.A  
Fax: +1 (202) 522-3240/5  
Email: [afbsec@adaptation-fund.org](mailto:afbsec@adaptation-fund.org)

# PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION FUND

## PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category: Regular project

Country/ies: Mexico

Title of Project/Programme: **Ha Ta Tukari, “Water our Life”: Towards universal drinking water coverage for 23 communities of the Wixarika Nation**

Type of Implementing Entity: Lluvia Para Todos, A.C.

Implementing Entity: Instituto Mexicano de Tecnología de Agua

Executing Entity/ies: Isla Urbana

Amount of Financing Requested: (in U.S Dollars Equivalent)

### **Project / Programme Background and Context:**

*Provide brief information on the problem the proposed project/programme is aiming to solve. Outline the economic social, development and environmental context in which the project would operate.*

This Project addresses the extremely precarious water access conditions being experienced in the territory of the Wixarika Nation, often known as Huichol, in the western Sierra Madre mountains. This remote and beautiful region, inhabited by one of the most iconic indigenous peoples of Mexico, is also one of its poorest, with some of the worst development and health outcomes in the country. Water access is very problematic, and most of the population lives with minimal amounts of often unsafe water, carried from small and dwindling springs and water holes spread thinly through the landscape. It is an arduous job, disproportionately borne by women, and the difficulty involved results in extremely low per-capita use, often in the range of just 10-15 liters per day. This contributes to the very high levels of child illness and mortality that are pervasive in the region. The Water problem in the Wixarika nation has geographic, economic, development, and environmental aspects. The combination of steep, mountainous terrain, scattered, low-density settlement patterns, and low levels of economic development make water infrastructure hard to build and maintain.

Environmental and climate changes are making already difficult water conditions even more precarious. The region is very vulnerable to the persistent droughts affecting the entire northwest of Mexico and southwestern United States. Rain-irrigated subsistence agriculture is fundamental in the Wixarika territory, and their mountain forests are highly vulnerable to desertification. Dryer dry

seasons are seeing large forest fires, some of which burn for weeks, and the thinning forests and eroding soils hold less water. Springs and water holes are shrinking under combined pressures of reduced recharge, and increased demand from a growing population trying to meet its needs. The Sierra normally gets considerable, though short and concentrated, summer rains, but with little retention and storage capacity, the water flushes directly down the canyons and gorges, leaving the landscape dry and the population scarcely able to meet their most basic needs.

This project seeks to scale up a line of work we have been carrying out with Wixárika communities over the course of more than ten years developing and installing rainwater harvesting systems that have proven highly effective at improving water access, quality, and resilience, in the complex contexts of the Sierra. We seek to achieve sustainable and climate adaptive universal drinking water access in 22 Wixarika villages that together make up the largest of the 4 subgroups of the Wixarika Nation, through the installation of 600 rainwater harvesting cisterns, and work on landscape management for water retention and regeneration.

### **Economic/Social Context:**

The Wixarika people live in one of Mexico's most isolated and underdeveloped regions, high in the western Sierra Madre, where the states of Jalisco, Nayarit, Zacatecas and Durango converge. The wixaritari (plural of Wixarika) live in small villages and hamlets scattered amongst the imposing cliffs, mesas, and canyons that dominate the territory. One of Mexico's least assimilated indigenous communities, The Wixaritari preserve their language and continue to follow the traditional spiritual belief system known as El Costumbre, which ties directly back to their pre-European ancestors. They have resisted assimilation fiercely, aided by the historical inaccessibility of their homeland, and for hundreds of years remained very much removed from the rest of Mexican society. The Wixarika people gained notoriety for the persistence of their indigenous culture, artwork, and their deep spiritual tradition and elaborate practices, involving the psychoactive Peyote cactus. They are an emblematic people, featured heavily in Mexican cultural and political displays appealing to national identity. Despite all of this, the Wixarika today live in conditions of great material hardship and poverty, their way of life is being subjected to giant and converging pressures from the no longer distant outside world.

The Wixaritari are primarily subsistence farmers, who traditionally practiced slash and burn type agriculture. There is little arable land however, and yields are very low, averaging as little as 358.95 kg/ha of corn and 65.89 kg/ha of beans. Paid work in the sierra is almost nonexistent, and so the Wixarika often leave home to work in agriculture as laborers in neighboring states, or to sell their crafts in towns and cities throughout Mexico, their travel expenses consuming much of what they earn. The erosion of food self-sufficiency and the introduction of new necessities like cell phones has pushed the Wixaritari into an economic system for which they have limited preparation.

Most Wixárika people live in conditions of great material poverty. Paid work is almost non-existent in the region, and subsistence agriculture remains a principal activity. Income comes mainly from the production of crafts made from small glass beads, which are either taken by a family member to cities throughout Mexico, or are sold to middlemen, or from seasonal labor in adjoining states. The Wixárika people travel long distances, often as entire families, to pick tomatoes, chilies, or tobacco, in industrial agriculture operations in Nayarit and Zacatecas. The most vulnerable members of the community, often single mothers, or women with abusive spouses, have practically no income whatsoever, and subsist minimally on support from family members.

The municipality of Mezquitic, where our work is focused and where the largest share of the Wixarika people live, has the lowest Health Index rating in all of Mexico (0.39), among the lowest education and income ratings (0.42 and 0.59). It has the lowest Human Development Index (HDI) rating in the State of Jalisco (0.46). Tellingly, Mezquitic had one of the country's greatest reductions in HDI, falling 9.61% between 2010 and 2015. INEGI (Mexico's National Institute of Statistics and Geography) categorizes the municipality as having "Very High" Marginalization.

The Situation facing the Wixaritari people has recently become even more difficult with the increased presence and activity of organized crime groups in the region, who commit acts of violence, intimidation, and engage in extractivist economies like illegal logging.

**Development/Environmental Context:**

The territory the work takes place in is one of extreme topography, with sheer cliffs and canyons separating villages that might be a few kilometers apart as the crow flies, but take hours of driving or walking to get between. Elevations range from around 600 to 2,200 meters, often within short distances, so the ecology and plant life of the region vary greatly.

For hundreds of years and up until the mid-late 20<sup>th</sup> century, the Wixárika Sierra had no roads whatsoever, and the indigenous peoples living there were settled in very small, family ranches or hamlets, located in places near springs or water holes and land suitable for farming. The forests in the area, especially the higher elevation parts, were dense and rich in wildlife.

Infrastructure development in the Wixárika region began with the establishment of airstrips, followed by government schools, and eventually in the 1980`s and 90`s, roads, the existence of which resulted in significant logging, which in the telling of local people, changed the forest and made it significantly thinner, to this day.

The topography and location of the Wixárika Sierra make it very vulnerable to soil erosion and climate related problems. The rocky mountains have only very thin soils, and the loss of forest cover, and overgrazing from livestock, and increasing drought conditions in the entire region result in a desertifying landscape, with increasing incidence of forest fires, less surface water, and tougher conditions for the subsistence farming the Wixárika rely on to feed themselves.

By almost any indicator, the area has very low development, with some of the lowest basic services coverage in Mexico. The great majority of homes have no running water, sanitation services are almost nonexistent, electricity only started reaching most communities in the last 10 years and is intermittent at best. Health and education outcomes are at the very bottom of national ratings.

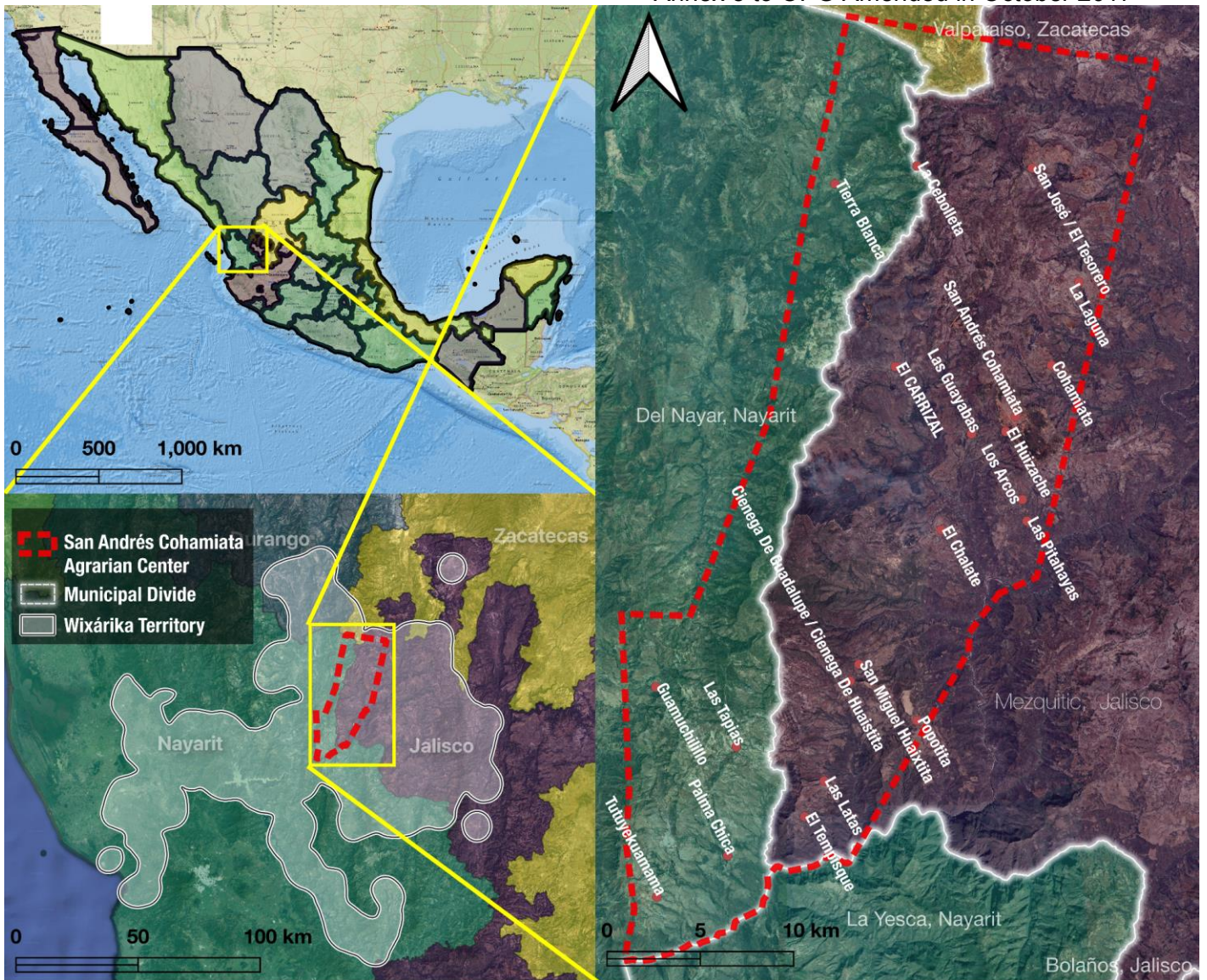


Figure 1. Map of the location of the Sierra Wixárika, Jalisco, México; along the location of the Agrarian Nucleus of San Andrés Cohamiata

Over the course of these 11 years, we have developed close ties and relationships in the region, and developed protocols and methodologies for extending work into new communities. We have trained local installers, and maintain relationships with schools, leaders, and assemblies in 11 different towns and villages.

This experience is enriched by our much broader work in cities, towns, and rural communities throughout Mexico, where we have installed over 26,000 rainwater harvesting systems in over 20 states.

### **Climate change impact in Wixaritari people**

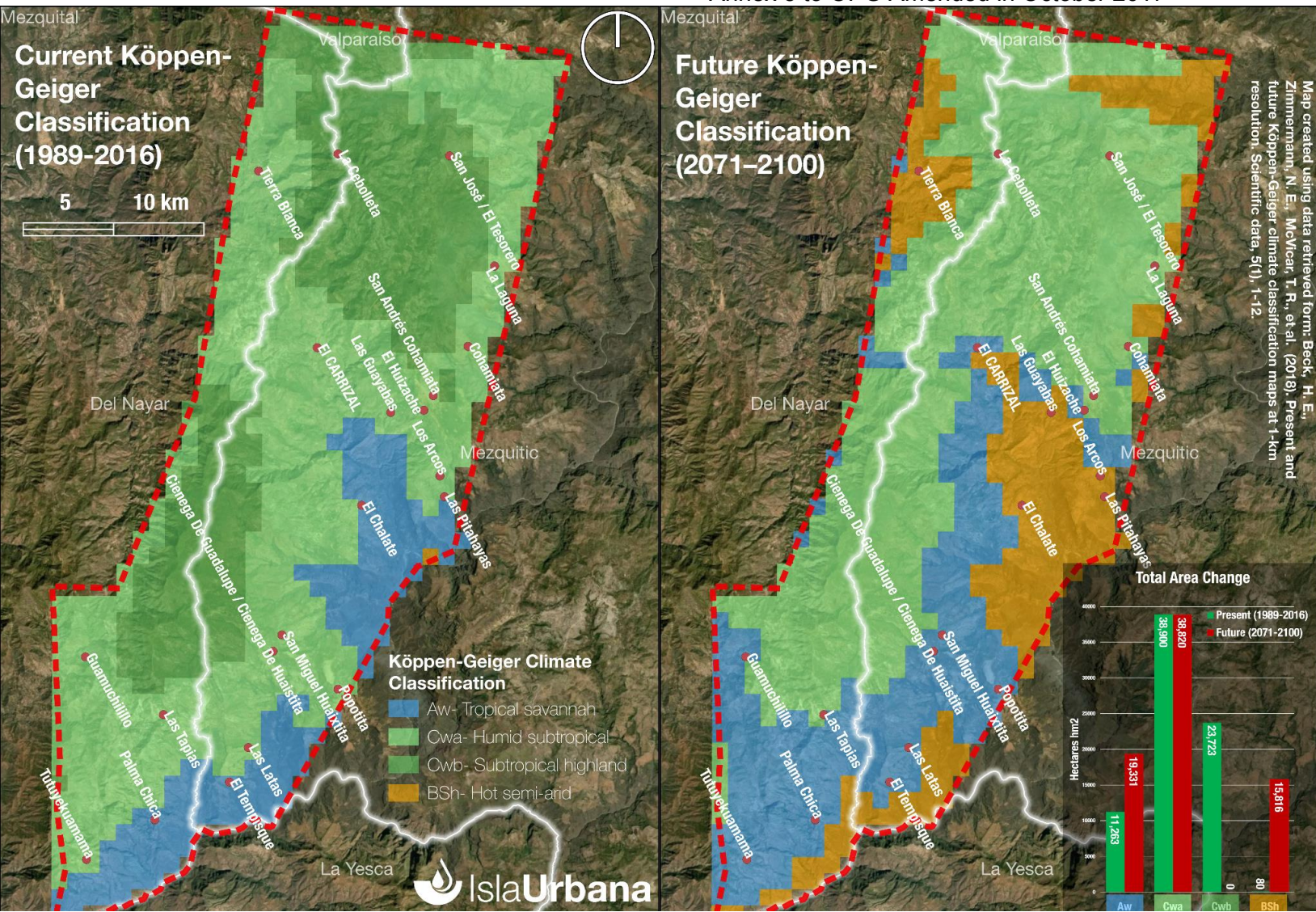


Figure 2. Actual and future distribution of the Köppen-Geiger Climate classification within the Agrarian Nucleus of San Andrés Cohamiata

Future climate change predictions within the San Andrés Cohamiata region are expected to have a detrimental effect on the local population. Overall annual average precipitation levels at a national scale are expected to decrease by 3 to 15% and temperatures are expected to increase by 1.3 to 4.8 C° by the end of the century. Based on figure 2, current climatic classifications include Subtropical Highlands and Humid subtropical within most of the region, Tropical Savannah to the southeast border and a small region of Hot semi-arid climate. However, based on a study by Beck et al. (2018), indicates that based on current climate change weather predictions for 2071 to 2100, (1) Subtropical highland climate will virtually disappear, (2) humid subtropical climate will be displaced northwards, and (3) both tropical savannah and hot semi-arid climates will dramatically increase. These last two climates have a shorter and less intense rainy season, as well as a dryer and hotter summers.

Conabio indicates that currently, the three municipalities where San Andres Cohamiata agrarian nucleus is located: Mezquitic, Del Nayar and Valparaiso have a high and very high vulnerability towards drought at a national level. Thus, the climate change predictions for the future are expected to worsen the region's vulnerability index to drought. These effects will compromise the reliability of Wixarika communities to current water sources and their agricultural cycles; thus drastically increasing the vulnerability of these communities.

Currently, both the probability of forest fires are medium for Mezquitic and Del Nayar, and low for Valparaiso; and the associated risk is medium for Mezquitic, High for Del Nayar and Low for Valparaiso. However, with longer dryer seasons and hotter winters, it is expected that both the probability and risk are going to increase significantly by the end of the century.

## **Project / Programme Objectives:**

*List the main objectives of the project/programme.*

### **Brief summary**

This project seeks to achieve universal, autonomous, renewable, and adaptive water access in an entire indigenous nation within Mexico, through an innovative deployment of Rainwater Harvesting (RWH) strategies and community capacity building at different scales and for different purposes. With the Adaptation Fund, we aim at expanding our current reach of RWH systems in buildings (homes, schools, clinics and ceremonial centers) and piloting strategies for rainwater harvesting, retention and infiltration at a landscape scale, in the locality of San Andres Cohamiata, Municipality of Mezquitic. The main goal is to build resilience and adaptation for the Wixarika communities in the face of climate change by capturing the rain at different levels and scales, giving it the most efficient use, and rehydrating the landscape to fight desertification and adapt to a scenario of increasingly harsh droughts.

We have been working in the region since 2010, developing and testing rainwater harvesting technology and implementation strategies in close collaboration with the local population. The result is a RWH program that can be taken to the most remote and difficult locations, and establish a permanent source for up to 100% of a family's drinking water needs. Over 200 such systems are already installed, mainly in two villages that have vastly improved their water access, by renewably harvesting some 5 million liters of rain every year.

The lack of food sovereignty, desertification and soil deterioration are some of the most urgent matters to address to generate resilience in the face of climate change. To this end, we will be working on the analysis and deployment of the most adapted rainwater harvesting practices at a landscape scale, to increase the availability of water for irrigation as well as to increase overall humidity, rehydrate the soils and generate better adapted agricultural practices.

We seek to expand our reach in the locality of San Andres Cohamiata, the region best known to us and of which we have the most information, and build a model that can be replicated in the rest of the Wixarika nation (outside of San Andrés Cohamiata) and other similar contexts in Mexico and abroad. Together with local technicians and community workers, we will deploy the technologies and carry out an extensive education and training program involving all local schools, village assemblies, and end-users. The model by which we will achieve universal, sustainable water access will be systematized and turned into a comprehensive manual for replication in communities with similar water problems throughout Mexico and the world.

**Main Objective:** Achieving universal sustainable water coverage in the *Wixarika* territory to build resilience and adapt to the impacts of climate change, while systematizing a complete methodology that merges technical innovation with intercultural, social tools and processes for the project's sustainability and replication.

**For this particular funding opportunity, we will be focusing on 23 communities of San Andres Cohamiata to expand our current reach and keep working towards a universal sustainable drinking water coverage objective.**

The project will deliver this objective and will have five components:

1. Diagnose the current water situation in the communities' households, community buildings, and landscapes, using co-participation and intercultural principles and community involvement in all towns and villages of the agrarian center San Andres Cohamiata.
2. Implement ecotechnologies that improve water access in a participative way, through the installation of 600 rainwater harvesting (RWH) systems in homes and community buildings, and the training and skill transfer to end-users (direct and indirect). Replication of an existing model.
3. Analyze, co-design and implement rainwater retention, infiltration and rehydration strategies for water availability at a landscape scale. Piloting and development of a model.
4. Strengthen and develop local capacities through intercultural and active community participation, and knowledge-sharing processes to promote social, ecological and cultural resilience through ensure the efficient replication, installation, use, and maintenance of RWH technologies and the recognition and adoption of climate change adaptive strategies.
5. Monitor, evaluate, and document the impact of the activities carried out in the Wixarika communities to systematize the intercultural processes and facilitate adjustments and optimization, to ultimately generate a replicable implementation model in the form of a detailed manual

### Experience in the proposed field

Isla Urbana has worked in a diversity of contexts throughout Mexico to contribute to RWH detonation and expansion. The lessons learned are different in every context: from urban contexts, to periurban, rural, and isolated indigenous communities. Isla Urbana has installed over 25,000 RWH systems, more than 2,000 of these in rural and/or indigenous contexts, teaching us lessons mostly related to:

- Technical aspects of implementation of RWH systems in dispersed, isolated communities that are difficult to access. For example, the geomembrane cisterns we use are the best way to transport significant storage capacities through difficult terrain and dispersed, highly isolated areas.
- Social aspects of profound work of community linkage based on empathy, the establishment of relationships of trust with the locals and the reaching of community agreements, and co-participation methods

Globally, our 13-year experience in RWH gives us certainty about the importance of carefully combining technological aspects with the right social and environmental considerations, particularly the integration of the local culture and cosmovision in general, but specifically in relation to water, the starting point to build resilience.

Such lessons have been learned mainly when we compare working with urban and rural communities, where systematization is more difficult, and processes tend to take longer. We have had such experiences in the Sierra Mazateca in Oaxaca, as well as the Sierra Tarahumara, and other, less isolated indigenous communities.

As opposed to most of Isla Urbana's projects, the project in the Sierra Wixárika can't be replicated and expanded properly without the integration, preparation, and professionalization of a local team of installers and promoters. Even though this intercultural team is set to replicate protocols that are applied in most projects (community linkage process, technical visits, installations, training and skill transfer, monitoring and follow-up) there are two main differences:

1. This project requires the building of a local professionalized team: the implementation is done by them and not Isla Urbana's usual technicians
2. Because of its nature, this project requires a way deeper understanding of the local culture and context, its cosmovision and traditions, and a much more sensitive approach to be able to intervene in the field.

Further, there is a natural lack of trust towards *teiwaris* (foreigners) and building a mutual trust has been a process of years, and the



communities attended are living deep in the Sierra, 18 hours away by car through dangerous roads.

For these reasons, and by Isla Urbana's mission and vision, we are not doing "business as usual"; we do not seek to simply install RWH technologies, but rather to build RWH communities. To achieve this, we only work with communities who explicitly ask us to and have an explicit need for it, we carry out community linkage processes, we design the project upon agreement of both parties, and, most importantly, the technicians and promoters doing most of the work locally are professionalized Wixárikas that live in the Sierra and are employed by Isla Urbana.

To achieve our goals, the work is based on a long-term relationship of trust with the locals. Thus, the project is not "a business" so to speak. It seeks to be a platform for the Wixárika Nation to build their own resilience and ensure their water sustainability and autonomy. Our role is one of coordination and funding to keep the project growing.

This project represents a scaling-up of the work done over the past 12 years by Ha Ta Tukari, through which the executing entity has installed approximately 200 Rainwater Harvesting Systems in the Wixárika territory and has worked intimately with several of the communities in the area. The executing entity is the non-profit branch of Isla Urbana, a social enterprise which has pioneered large scale rainwater harvesting programs and projects throughout Mexico.

Isla Urbana has directly installed over 26,000 rainwater harvesting systems to date and has contributed greatly to the development of rainwater harvesting policy in the country. Mexico City's Rainwater Harvesting Program was largely designed by Isla Urbana, as was Guadalajara's Nidos de Lluvia Program, along with several municipal scale programs. In 2022, Isla Urbana installed 9,000 rainwater harvesters within these programs. The current proposal will build upon Ha Ta Tukari's work, which has complementary funding secured for the next two years, primarily from the Fundación Gonzalo Río Arronte, with which Rainwater Harvesting Systems will be installed in 75 schools and health centers in the Wixárika Territory.

In late 2022 and 2023, Isla Urbana will carry out related projects in indigenous communities in the Mazateca Nation (northern Oaxaca) and the Tarahumara Nation (Chihuahua). These related projects explore different rainwater harvesting techniques and implementation models, and seek to build knowledge on how to achieve sustainable water access in various social and geographic contexts. The many different projects and programs that have been and are being carried out are building a deep body of knowledge and experience, which this project will draw upon in the effort to design and implement a model for achieving universal adaptive water access in the most difficult and complex contexts, as is the Wixárika Nation.

## **Project / Programme Components and Financing:**

*Fill in the table presenting the relationships among project components, activities, expected concrete outputs, and the corresponding budgets. If necessary, please refer to the attached instructions for a detailed description of each term.*

*For the case of a programme, individual components are likely to refer to specific subsets of stakeholders, regions and/or sectors that can be addressed through a set of well defined interventions / projects.*

Project/Programme Components	Expected Concrete Outputs	Expected Concrete Outcomes	Amount (US\$)
<p>Component 1. Diagnose the current water situation in the communities households, community buildings, and landscapes, using co-participation principles and community involvement in all towns and villages of the agrarian center San Andres Cohamiata</p>	<p>Carry out community meetings, tours, and other activities to deeply diagnose the water access and environmental situation through community participation processes, and achieve agreements of co-participation with the locals in preparation for the implementation phase.</p>	<p>Communities with comprehensive diagnoses of the current water situation as a baseline</p>	<p><u>\$239,428.43</u></p>
<p>Component 2. Implement ecotechnologies that improve water access in a participative way, through the installation of 600 rainwater harvesting (RWH) systems in homes and community buildings, and the training and skill transfer to end-users (direct and indirect)</p>	<p>Implementation of 600 fully functioning RWH systems in homes and community buildings, as well as the group and one-on-one training and agreements for their correct use and maintenance</p>	<p>600 rainwater harvesting systems installed and in proper operation throughout the Sierra Wixárika</p>	<p><u>\$1,74,228.43</u></p>
<p>Component 3. Analyze, co-design and implement rainwater retention and infiltration strategies for water availability at a landscape scale</p>	<p>Analyze and co-design the best strategies for water retention, storage and soil rehydration and implement pilot systems in the areas with the best opportunities</p>	<p>Full adoption, correct use, maintenance and replication of RWH technologies, and a common understanding of climate change impacts on the local territory and its environment, as well as the adaptation strategies at hand</p>	<p><u>\$507,483.63</u></p>

<p><b>Component 4.</b> Strengthen and develop local capacities through intercultural and active community participation, and knowledge-sharing processes to promote social, ecological and cultural resilience through ensure the efficient replication, installation, use, and maintenance of RWH technologies and the recognition and adoption of climate change adaptive strategies</p>	<p>Carry out workshop, meetings, group and one-on-one training, and other knowledge-sharing activities to develop and strengthen the local capacities around RWH technologies and ensure the project's sustainability</p>	<p>A professional intercultural team made up of technical coordinators for the installation of rainwater harvesting systems and field coordinators who are trained in the all the program</p>	<p><u>\$271,431.43</u></p>
<p><b>Component 5.</b> Monitor, evaluate, and document the impact of the activities carried out in the Wixarika communities to systematize the intercultural processes and facilitate adjustments and optimization, to ultimately generate a replicable implementation model in the form of a detailed manual</p>	<p>Systematized documentation of the community processes taking place during the project for the elaboration of a detailed manual for the effective replication of the model created</p>	<p>Integrative model for the implementation of rainwater harvesting systems that can be replicated to address water precariousness in contexts of dispersed rural population</p>	<p><u>\$234,428.43</u></p>
<p>6. Project/Programme Execution cost</p>			<p>3,000,000.00</p>
<p>7. Total Project/Programme Cost</p>			<p>10,000,000.00</p>
<p>8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)</p>			<p></p>
<p><b>Amount of Financing Requested</b></p>			<p>3,000,000.00</p>

The overall objective of the project is to achieve universal water coverage for the totality of the Wixárika Nation, which will cost approximately 10-15 million USD.

The Wixarika Nation is divided into 4 sub-regions, each with its own government and capital town. The current proposal seeks to achieve universal, adaptive water coverage in the first of these sub-regions, covering the 23 villages and towns in the territory of San Andrés Cohamiata. Ha Ta Tukari has already achieved near universal coverage in two of these villages, and has secured funding to install Rainwater Harvesters in every school and clinic in the area. The current proposal for 3 million USD would cover the implementation of Rainwater Systems for the remaining households in this area.

### Projected Calendar:

*Indicate the dates of the following milestones for the proposed project/programme*

Milestones	Expected Dates
Start of Project/Programme Implementation	March 2023
Mid-term Review (if planned)	November 2024
Project/Programme Closing	March 2026
Terminal Evaluation	July 2026

## PART II: PROJECT / PROGRAMME JUSTIFICATION

- A. Describe the project / programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.

Climate resilience and adaptation can only be achieved by integrating different layers and scales of the problem, understanding the region in its ecosystem, and linking the most urgent needs with long-term solutions. The project aims at building resilience through the lens of water access, and goes even further by integrating the landscape as one of the end-users of these technologies. The whole model relies on a participative and community linking process to ensure that the technologies are well adapted to the local context and understood by its users, thus generating true paradigm shifts and permanent practices.

On the one hand, we can achieve full potable water autonomy for families and school communities by implementing RWH systems whose impact and durability have been thoroughly proven. On the other hand, we can rehydrate the soils and combat desertification while increasing non-potable water availability by retaining as much rainwater in the local watersheds.

Components particularly focusing on the concrete adaptation activities of the project:

- 2. Implement ecotechnologies that improve water access in a participative way, through the installation of 600 rainwater harvesting (RWH) systems in homes and community buildings, and the training and skill transfer to end-users (direct and indirect)**

The Wixarika nation has historically dealt with the lack of water infrastructure and its related vulnerability and precariousness. By harvesting rainwater in buildings, families can satisfy their needs for potable water pretty much year-round, thus relieving them from the burden of carrying water and the negative impacts associated with bad water quality.

All members of San Andrés Cohamiata (23 communities) will benefit from the RWH systems. This counts to 5250 inhabitants, considering redundancies of people who would benefit from more than one activity. Each locality has approximately 250 inhabitants, all 100% indigenous, and at least 1 registered primary school (SEP) where a community RWH system will be installed and hygiene practices will be improved. RWH systems will also be installed in non-registered schools (around 20 in all of San Andrés Cohamiata), through which all children and youth will benefit. RWH systems will also be installed in Health Centers or Clinics of San Andrés Cohamiata to improve health services for all of the indigenous population in the sierra, as well as in homes.

The population breakdown was established based on the population pyramid of the municipality of Mezquitic and the locality of La Laguna, as well as description of the locals (since there is very limited census data of the region). It was determined that approximately 36% of the population are children between 0 and 9 years old, 23.9% are youngsters between 10 and 19, 37.6% are adults between 20 and 64, and only 2.2% are elderly (more than 65). The approach to each community will also be used to verify this data since official data is so limited and most probably unrealistic.

The installation of such systems will be done through the replication of proven models: both the RWH system itself (a geomembrane cistern with capacities ranging from 14,000 to 30,000 liters, installed along three to four filtration steps that can be adapted to almost

any building) and the process of implementation (agreements with community, technical visit, installation, training and skill transfer, monitoring and follow-up) are models that are well established and can be replicated.

### **3. Analyze, co-design and implement rainwater retention and infiltration strategies for water availability at a landscape scale**

To generate resilience at an ecosystemic level and prevent harsher droughts, retaining as much water as possible within the region's watersheds is essential. This water can be used for non-potable purposes and soil/aquifer rehydration, thus increasing water availability for irrigation and increasing humidity to ensure sufficient rainfall, while fighting desertification.

This component will be in a piloting phase. Firstly, it relies on the conclusions of a thorough diagnosis that will guide us through the design and implementation of a pilot phase in one to three localities (we have already made an initial analysis in the locality of La Laguna) to build capacity and evaluate the impact at a locality/community scale.

The integration process of the successional agroforestry systems and soil rehydration strategies will be done through the same implementation route we have used for the other RWH technologies and its 4 phases: diagnostics, implementation, follow-up, and evaluation. In each phase we contemplate the integration of participative methodologies, gender inclusive, and with consideration for the communities' different stakeholders.

In the site visit carried out in April 2022 we started the collection of information of a few potential zones for these activities. The decision on the sites in which to start piloting and implementing these strategies will be made with more information and a selection criterion that will include not only the technical aspects, but also the social ones: an explicit solicitation from the locals to start these interventions.

It is important to mention that the site visit carried out has reinforced our vision on the importance of the integrated systems and the capacities built through them to build resilience in the Sierra Wixárika.

### **4. Strengthen and develop local capacities through intercultural and active community participation, and knowledge-sharing processes to promote social, ecological and cultural resilience through ensure the efficient replication, installation, use, and maintenance of RWH technologies and the recognition and adoption of climate change adaptive strategies.**

By promoting intercultural knowledge-sharing processes and the strengthening of local capacities for the efficient replication, installation, use, and maintenance of RWH technologies, based on the establishment of community co-participation agreements in all communities addressed and developing capacities for the technologies' maintenance and expansion, local populations can ensure their sustainability and establish a long-lasting sustainable water-access model. Furthermore, adapting to climate change begins by acknowledging its impacts and understanding its effects, and share both the local ancestral knowledge as well as our technical and theoretical knowledge to find the best adaptive strategies together.

- B.** Describe how the project / programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project / programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and

## Gender Policy of the Adaptation Fund.

**General water access**

Water access is extremely uneven in Mexico. Some populations enjoy abundant and accessible water, and others don't. There is a great amount of overlap between communities that are economically poor, and those that suffer from poor water access. Small, rural, and especially indigenous populations, are much more likely to lack secure water. The *Wixarika* as a whole are a stark example of this, being one of the poorest, most rural, most purely indigenous regions in the country, while also being amongst those with the lowest water service coverage. By securing permanent, sustainable, autonomous water infrastructure in this area, we will help address this inequity, and create a model to assist other communities in similar conditions.

**Social and economical benefits**

The RWH systems installation has always been accompanied by a process of co-design and of building of local capacities through group and one-on-one training to users for the operation, monitoring, maintenance and repair of such systems. In addition, we have intensively trained four technicians in the field, installing systems with them in their own communities, carrying out theoretical and practical courses specifically for them, and bringing them to Mexico City to work with the Isla Urbana core installation team to deepen their knowledge and skills and professionalize their work. This team already has the technical capabilities to install, monitor, maintain and repair residential and community systems, and expand the decentralized infrastructure further in the Sierra. They will become the base local team of coordinators from which we will expand to up to 40 local technicians for installation and promotion tasks. All the technicians and promoters (currently 11; 9 men and two women who would otherwise hardly have a stable job) are hired directly by us. In the medium-term, we expect to expand this team and eventually offer more work opportunities. Furthermore, we are working on the creation of a local infrastructure and operational capacity, that will include at least one warehouse to centralize all materials and tools, one truck and one pick-up truck.

Each project's sustainability relies on the social processes needed for the knowledge and skill transfer to be executed correctly, to ensure full adoption of the ecotechnology. In this particular project, the knowledge and skill transfer are supported by the already established relationship of trust and common understanding of the objectives both with the authorities as well as the communities and individuals, and are further enforced by the promotion of professional work capacities around rainwater harvesting, through the creation of a local team of installers and promoters. This not only sustains the project, but also brings new opportunities for the practice to be continuous, expanded and replicated without the constant presence of our core team of coordinators, and at the same time, can become a gathering point within the communities, as all of them face the urgent need for water.

Also, more specifically:

- Increased access to clean water and the promotion of better hygiene practices has reduced diarrhea (the main infant mortality cause in the region) by 50%.
- The project includes children in the co-participation agreements processes, as well as in education and diagnosis activities through art, giving them spaces for expression and participation and promoting their role as agents of change in their communities.
- Reduced costs for: 1) water provision through the reduction of travel (by foot or truck) to the natural water sources, 2) medical consultations and treatment for children and adults due to polluted water consumption.

**Environmental benefits**



In terms of environmental and access to food benefits, rainwater retention within the watersheds will have impacts on food sovereignty as well as in the landscape and the ecosystemic services it can provide, in turn also attracting biodiversity and generating biomass. Establishing integrated systems (rainwater harvesting, successional agroforestry systems, controlled water consumption and land roaming for livestock) is the key starting point towards soil and forest regeneration, which can be the detonation of a more stable habitat resilient to droughts. Water retention within the watershed will also conduct the communities towards access to diversified and nutritive food, as well as sustainable wood and traditional medicine.

## Gender equity

This project inherently impacts on gender and equity issues, because current water access is highly unequal, and has markedly differentiated effects and implications for women vs men.

Since there is very little official data of the region, most of the analysis we count on is made either by research of existing documents, or direct observation from our team and our 12 year's experience working in the region. The most relevant observation is the following: most of the people in the sierra have to haul their water, and most of the hauling (at least 75% according to our observations) is done by either women or young girls due to the traditionally gendered housekeeping and cooking roles.

Water access is extremely uneven in Mexico. Some populations enjoy abundant and accessible water, and others don't. There is a great amount of overlap between communities that are economically poor, and those that suffer from poor water access. Small, rural, and especially indigenous populations, are much more likely to lack secure water. The *Wixárika* as a whole are a stark example of this, being one of the poorest, most rural, most purely indigenous regions in the country, while also being amongst those with the lowest water service coverage. By securing permanent, sustainable, autonomous water infrastructure in this area, we will help address this inequity, and create a model to assist other communities in similar conditions.

Insofar as gender is concerned, poor water access affects women and children disproportionately. Most of the work of hauling water falls on them, as a part of traditionally gendered housekeeping and cooking rolls. Many men assist in water hauling, but it is the women who do by far the most. Children, meanwhile, are the most vulnerable to water and hygiene related illnesses, which is evident in the prevalence of gastrointestinal diseases and high mortality rates among *Wixárika* infants and children. Securing clean water in the home relieves women of one of their most grueling daily tasks, and improves health and hygiene conditions for their entire families.

In addition to these impacts, there are particular cases where the lack of water access aggravates situations experienced by the most vulnerable groups and individuals in the communities. Single mothers, or those married to alcoholic or violent partners, for example, have to carry out both their own, and traditionally male chores like collecting firewood, and are often in grim conditions of abject impoverishment. For them, being relieved of the need to walk long distances carrying water is an incalculable assistance.

This work, by the mere fact of providing clean water in the homes, will have tangible positive effects on gender and equity dynamics. We strive, however, to go beyond these direct impacts.

We seek the inclusion of the full diversity of actors that make up the community. We respect and collaborate closely with established local leaderships, but also find mechanisms to avoid being drawn into their personal agendas and constituencies. We place particular emphasis on the substantive participation of women and children throughout the process. The essential work done in local schools seeks to generate and disseminate better hygiene practices, water management knowledge, and understanding of environmental sustainability concepts in general. It also gives us rich opportunities to talk to the children and adolescents about things like gender equality, and a host of things they are themselves interested in.

**C. Describe or provide an analysis of the cost-effectiveness of the proposed project / programme.**

The current characteristics of geographic isolation, insecurity and marginalization of the region, which are evidenced in the low Human Development Index (HDI), the conditions of health and access to basic services, make the implementation of socio-environmental projects in the area (in addition to being risky and complex) costly and demanding in terms of investment of time, human and financial resources. For these reasons and because it is an indigenous population whose socio-political and religious organization is complex, cost-benefit analysis by number of beneficiaries can be detrimental to the evaluation of this type of project.

Government agencies and municipal authorities, guided by hegemonic conceptions of development, make social investment decisions inappropriate to local problems due to ignorance, misunderstanding or lack of sensitivity or interest in other different realities. Evaluating interventions through cost-benefit models ignores the particularities of the area, increasing the level of exclusion of populations with these characteristics and condemning them to a circle of vulnerability and marginalization that clearly opposes ethics and water justice. The work carried out in this project is based on principles of transdisciplinarity and interculturality, and aims at overcoming these dominant paradigms, starting from the collective and permanent construction arising from a dialogue of knowledge sharing, for the guarantee of human rights associated with water as an ethical commitment of the project.

The potential success of this project has been proven at a local, smaller scale, with the installation of 200 RWH systems that provide water for human contact and consumption for 10-12 months a year for almost 2,000 people. With the Adaptation Fund this number could increase to around 7,000.

Given the geographical conditions of this territory, and the fact that most settlements are located on very difficult terrain, with no natural waterways other than some springs and small rivers, the cost of building traditional infrastructure for water provision from wells or other natural sources is very hard to calculate, but surely extremely high and almost impossible to maintain in good conditions for long.

The cost-effectiveness of this project can also be proven by the fact that in these conditions, providing completely decentralized water provision systems that rely on the most local of all sources - the rain that falls on people's roofs - is the most cost-effective strategy. Furthermore, the sources of water available, which ever they are, are all seasonal, which states the importance of building storage capacity, whether it is communitarian or individual. The biggest investment of the RWH is the storage tanks (in this case geomembrane cisterns with high capacity), so by implementing such a project, we are solving the central problem that any other water-provision systems would also be faced with.

Further, the cost effectiveness also relies on the fact that the RWH technologies proposed have the potential to generate permanent changes in the population's water access; they are not mitigation strategies, but rather deep transformation. Lastly, this project aims at detonating a market through capacity development, which could be set to go on even if our project failed.

**D. Describe how the project / programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.**

Mexico's climate change policies and plans are somewhat recent and state that "a) there is still a lot of uncertainty about climate change's impacts", and "b) the vulnerability of its impacts is very dynamic and demands a constant evaluation to better understand

these processes”. It has 3 main national tools for climate change adaptation which aim at “reducing the society’s and ecosystem vulnerability in the face of climate change effects, and strengthen the resilience and resistance of human and natural systems” and our project attend to them as follows (citing the national tools objectives and points that directly apply):

1. The General Climate Change Law
  - a. Reducing vulnerability and increase resilience of the social sector
  - b. Increasing the access to, reducing vulnerability and increasing resilience of critical infrastructure and productive systems
  - c. Preserve and sustainably use ecosystems and the environmental services they provide
2. The National Climate Change Strategy
  - a. Attend to the most vulnerable communities
  - b. Project and program transversality
  - c. Promote prevention
  - d. Sustainability in the use of natural resources
  - e. Preservation of ecosystems and their biodiversity
  - f. Active participation of target population and capacity strengthening
  - g. Adaptation capacity strengthening
  - h. Coordination between actors and sectors
  - i. Flexibility
  - j. Monitoring and evaluation of enforcement and effectiveness of the actions taken
3. The Special Climate Change Program (this program is specific to Federal Public Administration, but our project is consistent with it nonetheless)
  - a. Territorial and ecosystemic approach: consider socio-environmental and institutional diversity, and the sustainable management of the territory and its resources
  - b. Human rights, social justice and gender equity: consideration of equality of rights and ethnics and gender differences
  - c. Inclusive and participative processes: adaptation must result from a collective and inclusive process

Source: Gobierno de México, (2022), Adaptación al Cambio Climático, <https://www.gob.mx/inecc/acciones-y-programas/adaptacion-al-cambio-climatico-78748>

The project is also consistent with the adaptation and mitigation strategies presented in the most recent climate change action plan in the State of Jalisco, where the project is being implemented, the “2015-2018 State Program for Climate Change Action, PEACC” (2018; <https://semadet.jalisco.gob.mx/gobernanza-ambiental/cambio-climatico/programa-estatal-de-accion-ante-el-cambio-climatico-peacc>), and with the 2030 Agenda and the following SDGs (to a greater or lesser extent): 1) No poverty, 2) Zero hunger, **3) Good Health and wellbeing**, **5) Gender equality**, **6) Clean water and sanitation**, 8) Decent work and economic growth, **10) Reduced inequalities**, **11) Sustainable cities and communities**, **13) Climate action**.

- E. Describe how the project / programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

Based on the Article 7 of the national water laws (Ley de Aguas Nacional), the following indexes apply to the proposed project as public utility or public interest:

- Art. 7, I - Integrated management of surface, subsurface water resources, based on the hydrological basins within the national territory as a priority and as a national security issue.
- Art. 7, V - Restoring The ecosystems’ equilibrium relevant to water quality

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- Art. 7, VI - Increasing the efficiency and modernization of domestic and public water services, as a way to contribute and improve public health and wellbeing, to improve the quality and accessibility of the resource, as well as making a contribution to the goal of reaching an integrated management of water resources
- Art. 7, IX - To prevent and address the effects of unusual meteorological phenomena that could affect the people, productive areas or installations.
- Art. 7 BIS., V - The prioritization to address water related issues within communities, aquifers, hydrological basins and hydrological regions with water scarcity.

Our Water Harvesting Systems and associated filtering system, if used adequately, provide water with a quality that is compliant with the NOM-127-SSA1-1994, which established the minimum permissible limits of pollutants. Since passive purifiers might also be included for consumption, the applicable technical standard is the NOM-244-SSA1-2020 for equipment made to remove bacterial and germicide substances from water in domestic contexts. Compliance with technical standards will be achieved through the testing of the harvested rainwater in different places of the sierra with certified labs and/or individuals.

Our project is compliant with the following Principles of the Environmental and Social Policy of the Adaptation Fund:

- Compliance with the Law: All our actions will be consulted and have been previously approved by the federal, municipal and communitarian laws. Similarly, our infrastructure has been corroborated to deliver a water quality which meets the minimum water quality standards.
- Access and Equity/ Marginalized and Vulnerable Groups: Our project is specifically designed to address the water scarcity problem within marginalized and vulnerable groups. Also, assuring that the most vulnerable section of the populations, specifically indigenous women and children, are the most benefited by this project.
- Gender Equity and Women's Empowerment: Similar projects and associated studies have proven that Women are the most benefited with these projects, as they deal with the responsibility to provide water for their family.
- Indigenous Peoples: Our project complies and emphasizes The UN Declaration on the Rights of Indigenous Peoples
- Involuntary resettlement: Our Project increases the viability of communities to stay within their original
- Protection of Natural Habitats: Our project has the intention to modify micro basins in order to increase water availability within the landscape. However, the physical modifications created will benefit the ecosystem, reduce erosion rates and increase the water retention of the landscape.
- Conservation of Biological Diversity: Our Project will not harm the ecosystem or any biological species within it.
- Climate Change: Although the use of fuel to transport equipment will be used, no other significant source of Green gas House emissions will be used.
- Pollution Prevention and Resource Efficiency: As our project will be conducted in a very isolated region, the reuse of disposable materials will be highly encouraged. Similarly, most infrastructure comes with no packaging
- Public Health: Our project will be carried in a way that enforces the best practices during installation, transport and assembly to guarantee the public health of staff, the community and providers.
- Physical and Cultural Heritage: This project will be carried out with members of the Wixaritari community, of which have been consulted before and will continue to be consulted on the matter of cultural values, beliefs and resources.
- Lands and Soil Conservation: This project will be carried out in a manner that will prevent soil erosion and loss of biodiversity, as well as promoting the production of organic soil, increasing soil resilience to a changing climate, and increasing water retention.

**F. Describe if there is duplication of project / programme with other funding sources, if any.**

This proposal builds on Isla Urbana's 10+ years working with *Wixárika* communities. The work done thus far has been possible thanks to a diversity of partnerships and collaborations with funders, other NGO's and civil society organizations, and several national and

international institutions, including the UNDP, HSBC, PepsiCo Foundation, the National Institute of Social Development (INDESOL), the Gonzalo Río Arronte Foundation, the National Institute for Indigenous Peoples (INPI), the Mexican Institute of Water Technology (IMTA), amongst several others.

Currently, the project is mainly financed by the Gonzalo Río Arronte Foundation (FGRA) and Casa Córdoba Foundation, totalling around USD\$500,000.00 exercised from 2020 to 2025. Nevertheless, the funds we are applying for here are specific to the expansion of the project in San Andrés Cohamiata. But since our general objective is the long-term vision of ensuring universal access to water *in the whole Wixárika nation*, we have and will keep on working to get more funding sources that will each take us closer to our goal.

Additionally, beyond the work in *Wixárika* communities, Isla Urbana counts on an extensive network of partners and collaborators whose support and assistance can be called upon for the development, execution, communication, and evaluation of this project. Existing collaborators that may prove valuable include the Government of the State of Jalisco, the National Institute of Health (INSP), National Geographic, the National Autonomous University of Mexico (UNAM), Agua Capital, the Ashoka Network, amongst several others.

**G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.**

The project approaches capacity development in two ways: 1) the development of technical capacities for rainwater harvesting, and 2) sensitive education and community participation and involvement. Though Rainwater Harvesting is in itself a long understood and widely used practice, we have been able to develop new technical solutions aimed at making replication more viable in such a geographically and socially complex context. The Rainwater System itself has been developed through an iterative process of testing and monitoring different ideas, and has resulted in a uniquely deployable technological package of demonstrated effectiveness.

Additionally, the coordination, community work, and capacity building aspects of the project have required a great amount of thought and development in order to function effectively in the Sierra. The integration of several protocols and approaches adapted to working with remote and isolated communities has resulted in a very innovative methodology for water infrastructure deployment. Within the community, knowledge sharing takes the form of education and capacity building.

Our purpose is to achieve full and deep adoption of the technologies and practices by the community as a whole, through a process of sensibilization and awareness of the potential for their lives' transformation in terms of health, environment, and the human right to water. We know that artistic and sensibilization processes in this kind of participatory projects contributes to the sense of ownership and empowerment of individuals and communities. We promote an educational process that is purely intercultural, in which local actors and stakeholders propose and adapt content, processes and didactic materials. The activities program is designed with a holistic view enriched by analysis, and contributes to the participants recognition and expression of their needs, particularly the most urgent and radical ones, as it also actively promotes empathy, which is the principle of the articulation between stakeholders.

An important part of this project is to produce documents (reports, guides, etc.) as well as products (videos, pictures, etc.) to be able to share the experience within the communities of the sierra as well as outside of them, to make these processes known and to be able to share experiences across the global south.

The mechanisms employed to these ends are:

- semi-annual work reports elaborated from information obtained on site through different tools (daily logs, census formats, databases)

- Audiovisual products (pictures, shorts and videos) of all phases of the work

Up until now, the learning and knowledge management approach is one of documentation of processes and progress, and experience sharing within and between the individuals and organizations that have participated in this project. Nevertheless, one of the key objectives of this work is to systematize the methodology and produce a manual that can be used and adapted for working in other communities, or for the implementation of other development programs in the same area. The writing of such a manual would constitute a significant knowledge sharing exercise we hope will prove valuable to the sustainable development community in Mexico and beyond.

The generated products in the past phases are mainly related to implementation processes in only two villages in the Sierra Wixárika, where the project started in 2010. The main documents generated up to date have been activities reports, research papers on implemented methodologies and a scientific article about impacts in health and perception in a village. So far, no product or material exists on integrated rainwater harvesting and landscape hydration systems in the region. Previous experience on this subject stems from the implementation of these projects in other contexts and areas of Mexico.

While previous information and knowledge about implementation of RWH systems of communal buildings and homes provides the ground for continuity and elaborating the next proposal, the intended generation of knowledge from implementing this project are different and mainly related to replicate previously designed and approved methodology.

All documents generated throughout these years of proposal implementation, seek to attend to the needs of generating water sustainability in all the region, and provide with essential information that allows a scaling in a whole agrarian region from agrarian community San Andrés Cohamiata (one of the four large communities among the Sierra Wixárika).

- H. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.**

The project is mainly driven by Isla Urbana, with the help of other organizations that all take part in the decision-making processes. The project preparation, in all of its phases, is an exercise of constant consultation and teamwork between the implementing organizations and the collaborators and funders. Our communication, with all of the stakeholders, is usually one of long relationships based on empathy, understanding and trust, since the objectives and means to carry out the project are built on a common understanding of the issues at stake and the collaborative solutions we propose. With funders, as well as with collaborators, the process relies mainly on weekly or monthly meetings to present progress, adjust items, funds, and objectives.

This proposal is built on 10+ years of experience working in *Wixárika* communities. It draws lessons from the many successes and challenges faced during this time, and strives to implement a project that integrates the knowledge gained into all aspects of the planning and execution.

Inn the context of *Wixárika* communities, the work involves not only the usual considerations of technical quality, ethics, community involvement, co-responsibility, etc, which apply for any project, but also must take into account the cultural idiosyncrasies of this highly traditional and ancient indigenous people.

## Annex 5 to OPG Amended in October 2017

The Wixárika being the principal stakeholders, understanding the spiritual framework, traditional governance structures, communication styles, taboos, and forms of communal organization present in *Wixárika* culture is crucial. To give one example, we have learned that in order to begin working in a new *Wixárika* community, it is necessary to first be formally “presented” and give an offering of candles, corn, and some very specific items, in the local ceremonial center. Failing to do so causes the people to fear that the work will not be spiritually grounded, and any accident or incident that occurs will often be blamed on this failure.

We have developed forms of community work and communication based on cultivating empathy and trust, in order to overcome the deep cultural differences, and distrust that the *Wixárika* often feel for non-indigenous persons, after centuries of extreme marginalization and isolation. This work has allowed us to build strong affective and collaborative relationships, and has made it possible to make and keep agreements, and work together on the design and implementation of the project.

The design of the work carried out in the Wixárika communities involves ongoing dialogue and participation with the population. Practical decisions, for example criteria on where to install Rainwater Systems, or what co-participation requirements are fair and viable, have always been made in consultation with the communities. This is done in a variety of ways, some formal (meetings with traditional authorities and leaders, open consultation during community meetings and assemblies) and some informal (privately asking the opinions of multiple people from the communities). Both approaches are necessary. The traditional authorities must have a say and be heard. They have valuable insight and understanding of their communities’ needs, but they also often have significant blind spots, especially concerning more marginalized members of the population. Women often participate much less than men do in community meetings, and the most vulnerable people (single mothers, spouses of alcoholic or abusive partners, persons with disabilities, etc) often do not participate at all. The thoughts, opinions, and needs of these people must be sought through direct and personal approach.

The team has carried out hundreds of interviews with community members ranging from the most influential to the most marginalized, many of these have been recorded and transcribed. This information has served to guide the design of progressive iterations of implementations. The project methodology involves initial community work in each new village before any Rainwater Systems are installed. This includes consultation with the local traditional authorities, community meetings, and individual conversations. The process of consultation and community participation in decision making will be part of the final proposal for this project.

I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

All of the objectives for this project and this particular financing opportunity are designed to address the most urgent risk in the Sierra: the lack of potable water and the soil deterioration leading to desertification. Through the Adaptation Reasoning, we find that:

1. The Climate Related Drivers are (although these are merely assumptions and observations due to the lack of local data): 1) Increased intensity and frequency of Droughts; 2) Decrease in annual precipitation; 3) Warming trend.
2. The Key Risks linked to this are Risk 5: food insecurity and breakdown of food systems, and precipitation variability; Risk 6: loss of rural livelihoods and income due to insufficient access to drinking and irrigation water and reduced agricultural productivity (semi-arid region); Risk 8: loss of terrestrial and inland water ecosystems, biodiversity, and ecosystems goods, functions and services.
3. The Barriers identified are mostly social (on the one hand, some locals, whether they are authorities or other individuals, tend to be reluctant to the project and our interventions there; on the other hand, there is a rising insecurity crisis due to cartel presence in the region That has been the major obstacle for implementation in the past two years), and of resource availability (mostly economic: although the past two and following two years' work has been secured with financing, this hasn't always been the case and we have no certainty that it will after those two years).

Ha Ta Tukari is a project that started in 2010 and has since depended of very diverse sources of funding that have all played a very important part in getting to the point where we are today, a project well on the way, well-known, accepted and promoted by the local population, with more than 200 RWH systems installed, and an intercultural team counting 6-8 members of Isla Urbana in Mexico City and 11 Wixárika members. Our general objective (achieving universal sustainable water coverage in the *Wixárika* territory to build resilience and adapt to the impacts of climate change, while systematizing a complete methodology that merges technical innovation with intercultural, social tools and processes for the project's sustainability) is a long-term one that can only be met if we keep finding financing opportunities. The full cost of implementing such a project is calculated at around 10-15 million USD.

The Wixarika Nation is divided into 4 sub-regions, each with its own government and capital town. The current proposal seeks to achieve universal, adaptive water coverage in the first of these sub-regions, covering the 23 villages and towns in the territory of San Andrés Cohamiata. Ha Ta Tukari has already achieved near universal coverage in two of these villages, and has secured funding to install Rainwater Harvesters in every school and clinic in the area. The current proposal for 3 million USD would cover the implementation of Rainwater Systems for the remaining households in this area.

The objectives specific to the Adaptation Fund, if approved, are the following:

**To focus on the locality of San Andrés Cohamiata to expand our current reach and get us closer to our universal sustainable water coverage objective.**

1. Diagnose the current water situation in the communities households, community buildings, and landscapes, using co-participation and intercultural principles and community involvement in all towns and villages of the agrarian center San Andres Cohamiata.



2. Implement ecotechnologies that improve water access in a participative way, through the installation of 600 rainwater harvesting (RWH) systems in homes and community buildings, and the training and skill transfer to end-users (direct and indirect).
3. Analyze, co-design and implement rainwater retention, infiltration and rehydration strategies for water availability at a landscape scale.
4. Strengthen and develop local capacities through intercultural and active community participation, and knowledge-sharing processes to promote social, ecological and cultural resilience through ensure the efficient replication, installation, use, and maintenance of RWH technologies and the recognition and adoption of climate change adaptive strategies.
5. Monitor, evaluate, and document the impact of the activities carried out in the Wixarika communities to systematize the intercultural processes and facilitate adjustments and optimization, to ultimately generate a replicable implementation model in the form of a detailed manual

**J.** Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project / programme.

The project takes place within the context of a semi-autonomous indigenous area, with a large degree of self-rule under a traditional government and customary law. This fact is considered throughout the implementation process, which involves close collaboration with local traditional authorities.

Work in each individual community begins only after having established agreements of collaboration with the current representatives of the local traditional government, the details of which are developed in conversation with them, and then set into writing. The central traditional government, which represents all the communities, requested the extension of the project to every town and village in the area, and the project was formally presented in the main assembly and accepted by the traditional authorities earlier this year.

Traditional governance and custom are always taken into consideration and respected. For example, it was the request of the traditional authority that the work of implementing Rainwater Harvesting Systems in all the communities should begin in the 11 major ceremonial centers where the principal rituals are held. This was agreed upon, and has already been fulfilled, with traditional ceremonies held to bless the work and place it within the framework of the customary law and tradition.

The sustainability of the project can refer to two separate things. One is the potential for the work done to produce long-lasting improvements in the communities' conditions which they can independently sustain over time, and the other can refer to the organization's capacity to assure its own long-term viability.

Achieving truly sustainable improvement in water access is the core objective of this project. It seeks to do so by the mass-implementation of Rainwater Harvesting Systems, a form of infrastructure which, once built, requires minimal external energy and resources to maintain, and which, by virtue of its complete decentralization, is highly resilient to generalized failure or collapse. Rainwater systems take advantage of the sole renewable water source available in every location of the sierra, and which currently goes unused for lack of storage and filtration capacity, and of knowledge on how to harvest it effectively.

Once built, this large number of rainwater harvesters will be able to provide fully autonomous and renewable water in every homestead. What is needed is a capture, treatment, and storage system that can be locally installed, maintained, operated, repaired, and expanded as necessary. To this end, we have spent years developing and extensively piloting different solutions, designing for minimal operating costs, ease of use, durability, reparability, and deployability in areas that are extremely isolated and difficult to reach

with heavy materials and equipment. The result is a RWH system that includes a polyethylene geomembrane cistern with capacity ranging from 14,000 to 30,000 liters, pipes, gutters, and filters, that are extremely lightweight and can be transported anywhere, including places with no vehicle access, and be quickly installed.

The presence of Rainwater Harvesting Systems by itself, however, will not guarantee true sustainability. The RWH system is a tool with the potential of providing permanent water access, but its success in doing so depends on full adoption and local capacity for maintenance and repair. The project's sustainability therefore relies on social processes that lead to engagement and knowledge and skills transfers to the population.

The work involves extensive education and training. This involves three principal elements: the intensive training of a local team of technicians and community workers to install systems and carry out major repairs when necessary; the training of the general population in use, maintenance, and minor repairs of the systems; and education work in all the local schools to teach the next generation of children and adolescents about rainwater harvesting, sustainability, and health and hygiene practices.

The project's sustainability is deeply related with the thorough way of leading every stage of the implementation process to completion, equally considering both technical and socio-ecological aspects. Throughout the years of work, we've stated that giving the same importance to both elements, instead of prioritizing one over the other, is essential. Technical aspects intend that the eco-technological designs can serve the population's needs, taking both conditions and features of the location into account, that is, adapted to a particular context and design for a long-term function. Response to technic problems is essential, as well as taking into consideration training processes, users learning, and following up the correct use and maintenance of the installed eco technologies. Concerning social aspects, every activity is done considering different actors within the villages, and we actively seek to involve the voices of every historically marginalized actor, such as women and children, in subjects such as decision-making. This process is part of every single stage: diagnosis, implementation, follow up and evaluation.

The first systems that we installed in the Sierra around 12 years ago are still functioning; we drank the water from them at the end of April 2022 during our last trip there. The rainy season was about to begin again, proving to us that most families could rely on the rainwater year-round.

Since there is no water infrastructure in homes, and the RWH systems can be adapted to pretty much any building, the design of the system was based on simplicity of use and adaptation to existing features, namely: dispersed homes with vast space around them makes it easy to install on-ground geomembrane cisterns measuring almost 5 meters in diameter; the roofs of homes are mostly made of metal sheets which is an excellent material for RWH, and the very simple filtration process is designed for unpolluted isolated regions.

Families decide where their cisterns will be installed with the help of our local technicians, and an extensive one-on-one training is carried out (during the technical visit, the after installation, and during follow-up). The community knowledge is integrated since very precarious RWH practices were already in place; our project aims at improving a traditional practice and realizing its true potential.

By working with the entirety of the community, we will seek to establish a new rainwater harvesting culture, where this form of autonomous water management becomes a completely normal practice, understood by the population as a whole.

The sustainability of the organization's work in the sierra depends on our capacity to continue securing the funding necessary to carry out our work. To achieve this, we cultivate a network of funders, and work to increase our capacities. We focus on diversification of funding streams through fundraising, grants, partnerships with organizations that have compatible missions, collaborations with local governments, etc. We have been able to work in the sierra for eleven years, and we believe that we will be able to maintain our presence for the foreseeable future. We currently have funding secured to operate in the area for the next two to three years.

**J.K.** Provide an overview of the environmental and social impacts and risks identified as being relevant to the project / programme.

The environmental risks are many, given that the region is already vulnerable: droughts are already the main source of forest fires. Changes in the rain patterns are also one of the main concerns, given that they can increase the negative impact of these droughts. The project does not contribute to these risks, in fact, it should reduce them significantly and mitigate them through the increased availability of water. In the same line, regenerating the forest and soils and creating new water bodies can increase overall humidity and stabilize rain patterns.

The main environmental impacts we hope to achieve relate to the landscape-scale work of soil and rainwater retention, by which we intend to fight the trend towards desertification, promote the recharge of springs and water holes, and assist in increasing vegetation cover.

In terms of social impacts, the detonation of participation and community involvement spaces, sensitive to the cultural context, can greatly improve social dynamics in place. Further, the promotion of local work opportunities, with professionalized technicians and promoters, can be of great help in the detonation of a local economy that can impact many families' incomes. There is also the topic of gender, where we seek to integrate women more and more and initiate conversation about gender equity issues, without disrupting the traditions and social structures in place. Therefore, the project allows us to create new spaces where women can integrate the participative processes and facilitate their involvement, and in particular cases find work opportunities that can be adapted to their specific roles within their families and communities.

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
<i>Compliance with the Law</i>	X	
<i>Access and Equity</i>	X	
<i>Marginalized and Vulnerable Groups</i>	X	
<i>Human Rights</i>	X	
<i>Gender Equality and Women's Empowerment</i>	X	
<i>Core Labour Rights</i>	X	
<i>Indigenous Peoples</i>	X	
<i>Involuntary Resettlement</i>	X	
<i>Protection of Natural Habitats</i>	X	
<i>Conservation of Biological Diversity</i>	X	
<i>Climate Change</i>	X	
<i>Pollution Prevention and Resource Efficiency</i>	X	
<i>Public Health</i>	X	
<i>Physical and Cultural Heritage</i>	X	
<i>Lands and Soil Conservation</i>	X	

## **PART III: IMPLEMENTATION ARRANGEMENTS**

**The following section is still under development and incomplete. It will be elaborated upon in detail in the final proposal.**

### **A. Describe the arrangements for project / programme implementation.**

Project Component 1. Diagnose the current water situation in the communities households, community buildings, and landscapes, using co-participation and intercultural principles and community involvement in all towns and villages of the agrarian center San Andres Cohamiata.

Project Component 2. Implement ecotechnologies that improve water access in a participative way, through the installation of 600 rainwater harvesting (RWH) systems in homes and community buildings, and the training and skill transfer to end-users (direct and indirect).

Project Component 3. Analyze, co-design and implement rainwater retention, infiltration and rehydration strategies for water availability at a landscape scale.

Project Component 4. Strengthen and develop local capacities through intercultural and active community participation, and knowledge-sharing processes to promote social, ecological and cultural resilience through ensure the efficient replication, installation, use, and maintenance of RWH technologies and the recognition and adoption of climate change adaptive strategies.

Project Component 5. Monitor, evaluate, and document the impact of the activities carried out in the Wixarika communities to systematize the intercultural processes and facilitate adjustments and optimization, to ultimately generate a replicable implementation model in the form of a detailed manual

**The activities established under each of the components, are follows:**

Activities for Component 1:

- a. Design, piloting, adjustment and translation of instruments for the correct diagnosis of the current water access situation, sensitive to existing cultural and language barriers.
- b. Outreach to local authorities, teachers and community leaders.
- c. Meetings with local authorities to define the nature of new partnerships (and each party's respective roles and responsibilities), as well as presenting the Project's Operating Rules and conditions.

## Annex 5 to OPG Amended in October 2017

- d. Carry out a participatory mapping of the current water situation and state of streams, natural wells, production systems, create a timeline of local human intervention and identify priority areas with the greatest potential within Micro-basins.
- e. Create a participatory diagnosis of traditional managing techniques for rainwater seeding into the subsoil (such as infiltration ditches, water storage facilities, dams and fauna used to protect wells) in each locality.
- f. Estimate the possible changes in precipitation patterns and seasonality, temperature changes, and vegetation changes based on current climate change prediction models adapted to San Andrés Cohamiata Agrarian Nucleus.
- g. Field reconnaissance and application of semi-structured interviews for the identification of the main sources of water supply, for the full diagnosis of the water situation.
- h. Create a diagnosis of the current health practices and conditions within schools.
- i. Create in a collective fashion the history of water within the community and the territory. Mount theater plays about this history.

### Activities for Component 2:

- a. Community meetings with traditional, communal, and religious authorities, as well as end-users, to define the location and design of the community RWH systems.
- b. Technical visits to installation sites to determine feasibility and specifications for each system and the user's commitments in terms of operation and maintenance.
- c. Installation of 600 RWH systems in homes, schools, clinics, and ceremonial centers in the area (starting with schools, clinics, and community buildings).
- d. Monitoring and evaluation of the use and maintenance of community systems.

### Activities for Component 3:

- a. A participatory identification of the current state of streams, natural wells, production systems, create a timeline of local human intervention and identify priority areas with the greatest potential within Micro-basins.
- b. An assessment of the restoration potential and agroforestry transition with interested families.
- c. Create a participatory diagnosis of traditional managing techniques for rainwater seeding into the subsoil (such as infiltration ditches, water storage facilities, dams and fauna used to protect wells).
- d. Participatory identification and classification of the local floral species with the highest potential for rainwater subsoil seeding and Agroforestry successional agriculture.
- e. Codesign a strategy to obtain the identification of local floral species that includes an interchange of knowledge between the oldest and youngest generations.
- f. The creation of a nursery garden to cultivate and propagate the identified flora;
- g. Codesign the models for water harvesting, infiltration and storage within sub-basins and channel systems with different natural elements and plants (such as local stones, wood, etc.)
- h. Carrying out a participatory investigation that records current conditions in the identified areas of potential restoration.
- i. Adapt the models for water harvesting systems in order to mitigate a future with a shorter and less intense rainy season.
- j. Implement the restoration models in a participatory fashion.

Activities for Component 4:

- a. Build, train, and professionalize a local, intercultural team of technicians and social workers for the diagnosis, community involvement, installation, and monitoring of the RWH systems.
- b. Carry out theory and practical training workshops with the intercultural team and build capacity for effective implementation in the field.
- c. Design and produce participatory tools and didactic material needed for the full adoption of RWH systems and generalized knowledge on their use and maintenance by the local population.
- d. Provide technical training for the population on the correct operation, use and maintenance of community and residential RWH systems.
- e. Train the local intercultural team (mostly Wixaritari people) that will implement the project.
- f. Generate didactic and educational material, which is both bilingual and intercultural, which includes the general thoughts about communitarian resilience against climate change.
- g. Carry out workshops through artistic means in order to educate about the adoption of rainwater harvesting systems within primary schools, communitarian centers and within homes.
- h. Carry out workshops in order to teach children and parents about health. Establish routines for hygiene and sanitation adapted to the context of each school and home.
- i. Create murals and other communitarian art related projects about the water rights of the Wixárita Nation and the history of water within the region.
- j. Evaluate the potential for restoration and co-envisioning a transition towards agroforestry with interested families.

Activities for Component 5:

1. Design the monitoring, follow-up and evaluation tools for short-, medium- and long-term impact measurement and analysis.
2. Capture data and evaluate the direct impact of the installation of RWH technologies and the benefits of the increased access to water in the *Wixárika* communities.
3. Joint monitoring of areas of intervention and necessity identification (planting, pruning, soil enrichment, etc.)
4. Consolidate, systematize, and structure all the steps and actions taken in the course of the implementation, and produce a manual detailing the process, with the purpose of facilitating the adaptation and replication of the model for other communities in and beyond Mexico.
5. Systematize the development of content, processes, didactic material for intercultural education, and adapt them to other cultural contexts.

**B.** Describe the measures for financial and project / programme risk management.

**C.** Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

- D. Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan, in compliance with the ESP and the Gender Policy of the Adaptation Fund.
  
- E. Include a results framework for the project proposal, including milestones, targets and indicators, including one or more core outcome indicators of the Adaptation Fund Results Framework, and in compliance with the Gender Policy of the Adaptation Fund.
  
- F. Demonstrate how the project / programme aligns with the Results Framework of the Adaptation Fund

Project Objective(s) <sup>1</sup>	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)

<sup>1</sup> The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply



Project Outcome(s)	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)

**G.** Include a detailed budget with budget notes, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs.

**H.** Include a disbursement schedule with time-bound milestones.

**PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY**

**A. Record of endorsement on behalf of the government<sup>2</sup>** *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:*

<i>(Enter Name, Position, Ministry)</i>	<i>Date: (Month, day, year)</i>
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**B. Implementing Entity certification** *Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address*

<p>I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (.....list here.....) and subject to the approval by the Adaptation Fund Board, <u>commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund</u> and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.</p>

<sup>6</sup> Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

<i>Name &amp; Signature</i>	
Implementing Entity Coordinator	
Date: <i>(Month, Day, Year)</i>	Tel. and email:
Project Contact Person:	
Tel. And Email:	



ADAPTATION FUND

**Letter of Endorsement by the Government of Mexico  
Secretariat of Finance and Public Credit**



**SHCP**  
SECRETARÍA DE  
HACIENDA Y  
CRÉDITO PÚBLICO

**08<sup>th</sup> August 2022**

To: The Adaptation Fund Board  
c/o Adaptation Fund Board Secretariat  
Email: [afbsec@adaptation-fund.org](mailto:afbsec@adaptation-fund.org)  
Fax: 202 522 3240/5

Subject: Endorsement for Project “**Project on sustainable water management in indigenous regions**”

In my capacity as General Director in process of being appointed as designated authority for the Adaptation Fund in Mexico, in the absence of an appointed authority, I confirm that the above national project proposal is in accordance with the government’s national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Mexico.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Mexican Institute of Water Technology (IMTA) and executed by the **National Institute of Indigenous People**.

Sincerely,

Laura Elisa Aguirre Téllez  
Director General  
Secretariat of Finance and Public Credit  
(Unit of Public Credit)  
+52 55 3688 1873  
[laura\\_aguirre@hacienda.gob.mx](mailto:laura_aguirre@hacienda.gob.mx)



ADAPTATION FUND



**IMTA**  
INSTITUTO MEXICANO  
DE TECNOLOGÍA  
DEL AGUA

**Regular Project Cover Letter**

**Secretariat of Environment and Natural Resources  
Mexican Institute of Water Technology**

**08<sup>th</sup> August 2022**

To: The Adaptation Fund Board  
c/o Adaptation Fund Board Secretariat  
Email: [afbsec@adaptation-fund.org](mailto:afbsec@adaptation-fund.org)  
Fax: 202 522 3240/5

Subject: Endorsement for Project “**Project on sustainable water management in indigenous regions**”

In my capacity as Director General of the National Implementing Entity for the Adaptation Fund in Mexico, I am pleased to send the above project for the consideration of the Board for the upcoming 39<sup>th</sup> Meeting.

The project contains crucial elements for adaptation in the country, as stated in the content. If approved, the project will be executed by the **National Institute of Indigenous People**.

Sincerely,

A handwritten signature in blue ink, consisting of a large, stylized loop followed by a horizontal line.

Dr. Adrián Pedrozo Acuña  
Director General  
Mexican Institute of Water Technology



ADAPTATION FUND

### Project Formulation Grant (PFG)

Submission Date: September 13<sup>th</sup>, 2022

Adaptation Fund Project ID: AF00000328

Country/ies: Mexico

Title of Project/Programme: Ha Ta Tukari, "Water our Life": Towards universal drinking water coverage for 23 communities of the Wixarika Nation

Type of IE (NIE/MIE): NIE

Implementing Entity: Instituto Mexicano de Tecnología del Agua

Executing Entity/ies: Lluvia para todos AC

#### A. Project Preparation Timeframe

Start date of PFG	Approval date of concept note
Completion date of PFG	January 2024

#### B. Proposed Project Preparation Activities (\$)


Describe the PFG activities and justifications:

List of Proposed Project Preparation Activities	Output of the PFG Activities	USD Amount
Stakeholder consultancy Inclusion of all existing interested parties for project presentation and preparation according to each parties' roles, analysis and inclusion of potential new collaborators, and correct integration of all stakeholders at a local and regional level. This includes a planification of security protocols through the integration of relevant stakeholders (National Guard, State Police) given the recent increase of cartel violence in the area.	Stakeholders' inclusion and participation	\$8,000
Technical consultancy Improvement of technical capacity for the project's scaling (improving the manufacturing processes of geomembrane cisterns),	Technical adaptation of proposed eco-technologies and improvement of local capacity	\$10,500

<p>planification for the transportation of materials and people to the Sierra (transport, storage and accommodation), and enhancement of local technical capacity for RWH systems installation</p>		
<p>Demographic analysis and financial consultancy</p> <p>Thorough analysis of demographics in the localities of San Andrés Cohamiata and gender analysis. Determination of the budget in terms of potential resulting changes in the activities (number of RWH systems, for example) and the resources needed for the project (human resources, facilities, etc.)</p>	<p>Demographic and gender analysis, financial plan</p>	<p>\$6,500</p>
<p>Economic consultancy</p> <p>Analysis of the project through a cost-benefit point of view, as well as the economic outcome of the project at the local level. Integration of new practices relevant to the new tax and NGO regulations.</p>	<p>Cost-benefit analysis and economic evaluation</p>	<p>\$3,000</p>
<p>Proposal preparation</p> <ul style="list-style-type: none"> <li>- Drafting of the final proposal</li> <li>- Preparation of main document and annexes.</li> <li>- Translations (Wixa-Spanish and Spanish-English)</li> </ul>	<p>Final proposal</p>	<p>\$2,000</p>
<p>Total Project Formulation Grant</p>		<p>\$30,000</p>

### C. Implementing Entity

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund's criteria for project identification and formulation

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Dr. Adrián Pedrozo Acuña		13 <sup>th</sup> September 2022	Dr. Adrián Pedrozo Acuña	+52 777 329 3600 Ext 554	director_general@tlaloc.imta.mx
			Dra. Pamela Iskra Mejía Estrada	+52 777 329 3600 Ext 236	iskra_mejia@tlaloc.imta.mx