

Water, Sanitation, and Hygiene (WASH) Addendum

**Global Grant Application for Kutsutkao Water Project Grant
Application – GG2572915**



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1. Overview

This document supplements the Global Grant Application GG2572915 and is provided as an addendum to specifically address Water, Sanitation, and Hygiene (WASH) guidelines.

Our proposed project aligns well with Rotary's approach to conduct projects supporting Goal 6 of the United Nations Sustainable Development Goals, ensuring availability and sustainability of clean water and sanitation by 2030. Specifically, this project will:

- Establish equitable access to safe and affordable drinking water in the Achuar village of Kutsutkao and neighboring villages on the Caapawari River.
- Provide pertinent training in sanitation and waste management.
- Improve overall community hygiene knowledge, behaviors, and practices.



The Achuar are a group of Indigenous peoples of the Amazon basin, whose ancestral lands – nearly 2 million acres in all, straddle the modern borders of Ecuador and Peru. Oil concessions in the Achuar territory and the Amazon rainforest were first granted in the early 20th century



by the Ecuadorian government. Further access was granted in the 1960's when exploration and development in this region increased dramatically. Other industries since as lumber, rubber, and industrial agriculture had a similar history in the region. Since the 1980's, the Indigenous peoples, elders, and shamans successfully pushed for protection of providence over their lands. The Achuar have partnered with 30 other indigenous nationalities in the region, through the Sacred Headwaters Initiative, and have gained that control. The Achuar have rights to water usage within their region.

Jungle and rainforest traditional habitation and development with respect to water resources must be addressed by caring individuals and organizations to start alleviating water health issues and the ongoing degradation of water quality in the Amazon headwaters area. Villages within the Achuar Territory have little to no sanitation facilities. Being located next to rivers, this presents numerous health issues due to contamination of the rivers with human fecal matter. Neither do these Achuar villages have any type of community water purification. The living situation in jungle villages is therefore challenging. Water is life and getting water supply for drinking and other activities is more challenging in jungle villages. While the water supply is plentiful, clean water is not. Thus, hundreds of people fall ill and suffer as a result of drinking contaminated water, with a majority being children. Common maladies in the Ecuadorian jungle villages include diarrheal issues, parasitosis, Hepatitis A, dysentery, cholera, and typhoid.

Children in jungle villages are especially subject to be affected by waterborne diseases and often cannot attend limited school opportunities. The other serious social problem in

these jungle villages is that women and children have the responsibility of fetching water from the river to their dwelling.

2. Partnering Approach/Collaboration

While Indigenous people and villages within the Ecuadorian rainforest/jungle are blessed with an abundance of natural resources, their ability to design and install basic modern technology is extremely limited and typically requires the assistance and cooperation of entities from “outside” the Achuar territory for successful implementation and long-term support.

Estes Valley Sunrise Rotary and Puyo Club Rotario have chosen to partner with two respected, long-established organizations steeped in experience of working in the Ecuadorian rainforest with the Achuar peoples: Fundacion Mente and Maketai.

Fundacion Mente is an Ecuadorian NGO established in 2009 by a team of experienced conservation and sustainable development professionals, with headquarters in Quito, Ecuador. Fundacion Mente promotes dialogue and cooperation between communities and allies willing to work for conservation and sustainable development with the rainforest. Fundacion Mente staff members include several Indigenous Achuar staff.

A U.S. non-profit based in Tucson, AZ, Maketai passionately supports the Achuar's vision regarding human community as being One Planet — One People. They join the Achuar in developing and delivering capacities, resources and programs that promote planetary cooperation and sustainability. They have listened to and responded to the Achuar request to unite the wisdom of their ancient ancestors with appropriate technology of the modern world. They support projects that deepen social justice, expand environmental awareness, and promote participatory actions among the Achuar, especially the women and young adults.

Both of these organizations have the full support and endorsement of the Nacionalidad Achuar de Ecuador (NAE), the mother organization that unites 18 Achuar associations and 89 different Achuar groups, tribes and villages.

3. Equipment Selection

The WallSpring Solar Microbiological Water Treatment System was selected for a number of reasons:

- Simplicity – Other than pump, no moving parts
- Has been installed around the world in more than 70 Rotary International projects.
- Proven technology – uses the same membrane technology as used by large scale water filtration plants.
- Successful operation for many years in nearly 40 third world countries
- No consumables or chemicals needed.
- Self-contained; powered by wind and/or solar.
- Membranes physically block 99.999% of all pathogens from any contaminated water supply.
- Small size: transportation to remote areas via small airplane.
- Cost: Most cost effective, high throughput system on the market.
- Complete with tool kit, maintenance kit, spare parts kit, minimizing or eliminating operational downtime or post installation maintenance expertise.
- Proven itself time and again: Developing countries; isolated remote/ indigenous areas; Military deployment and operations; Emergency/Disaster response.
- Bottle Buddy ensures sanitization of water containers used by locals for transport.

This system includes multiple pumps to supply water to the filtering unit (run from a roof mounted solar/battery unit), a bottle buddy – a water bottle clean/sanitize/rinse station designed to be used with the WallSpring water purification system. The Combo Bottle Buddy cleans, sanitizes and rinses any size water bottle in seconds. Also included will be 100 collapsible 2.5-gallon water carriers for individual families. Part of our installation would include training local women in the operation and maintenance of the unit. In remote African villages, the women have proven to be much more reliable than the men in maintaining these units!

Laboratory results from a water sample collected on site and reviewed by the Municipal Public Company of Drinking Water and Sewerage of Pastaza, 10th of August Street between Atahualpa and Bolivar, Puyo, Ecuador (Telephone 032533-082 ext. 430).

Please see these documents in the Supporting Documents section of the Grant:

- Water Sample report for GG2572915 (laboratory results)
- Proyecto_Achuar1_2.pdf
- global_grants_community_assessment_results_es_1_2.pdf



4. Community Assessment – WASH Supplement

The community of Kutsutkao lies within the Montalvo Parish (Canton) of the Pastaza Province. As of the last census, there were 4,952 inhabitants in the Montalvo Parish.

Within the village of Kutsutkao, per the most recent census, there were 111 inhabitants, including 62 females and 49 males, comprising 17 families. Two adults were over the age of 65. There were 52 children under the age of 18.

The Montalvo parish is located within the public health network of the Ministry of Health, District 16D01 Mera – Pastaza – Santa Clara. At this cantonal level, among the top 10 causes of morbidity in Montalvo is the common cold (11%), parasitosis (10%), acute pharyngitis (7%), and diarrhea (5%), Tonsillitis (4%), Lumbago (3%), and Developmental delay, malnutrition (2%).

Health coverage in the Kutsutkao is deficient. There is no health post, nor does it have infrastructure for health care. Which means there are no health professionals of any kind. For any specialized care, the individuals must be flown to Puyo.

There is no sewage network of sewage handling within the community. Typically, all sewage is buried. There is currently no raw water collection in the village, nor any drinking water system. Therefore, the community is susceptible to contracting diseases of all kinds, particularly intestinal and diarrheal diseases. Because there exists no type of centralized health organization within Kutsutkao, there is no statistical baseline for disease such that improvement post project can be measured. The BoD members within the community are prepared to track illness post grant project to measure and validate effectiveness of availability of clean drinking water.

In the area of communications technology, the community of Kutsutkao has a radio that operates on the HF radio frequency, which serves as a means of communication with the rest of the province. Solar panels are installed in the community, along with satellite internet, allowing communication with the rest of the world. Generally, these systems are only used for emergency purposes. Such emergencies are often health related.

The most used transportation system in the community is the Kapawari River. There are no roads in the jungle, or in the community – nor is there any desire for a road system. Such a system would be difficult and would entail a series of catastrophic negative impacts on jungle biodiversity. Kutsutkao does have an airstrip measuring 850 meters long by 30 meters wide. The village airstrip is maintained by individuals within the village.

The schooling within Kutsutkao is at a “basic” level, with education for 10 years. This includes pre-primary (1 year), primary, and Basic (12 – 14-year-olds).

The Nacionalidad Achuar de Ecuador (NAE) together with the leaders of the communities has made it possible to undertake certain community tourism projects, with community lodging (huts) infrastructure. Such endeavors require the availability of potable drinking water.

Kutsutkao has maintained an ancestral life, living off family farming (orchards) and fishing. Artisanal production is carried out by both genders: The women of the village make ceramics (vessels, figures, jars) and weavings. The men make shigras, baskets,

hammocks, nets, feather crowns, drums, spears, and flutes. The sale of crafts and ceramics is a significant motivator in attracting tourism.

This project could never proceed without strong community support, and the village is fully on board. From early planning of equipment requirements and location; to assistance with installation, trenching, and equipment sheltering; and finally, to system operation and on-going maintenance and reporting, the community members of Kutsutkao are involved at every step. Our principal points of contact in Kutsutkao are:

Celestino Antik, Village President, BoD
Fernando Antik, Board of Director
Simon Santi, BoD Treasurer
Norma Palora Santi, Women's Group Leader

5. Governance

While the Achuar have Indigenous rights to the waters in their sacred headlands, projects that collect, pump, purify, and distribute water from their rivers require additional community oversight and governance to ensure their long-term success. The community of Kutsutkao will be responsible for operating, repairing, and maintaining their new delivery and purification system. According to the community, they will establish a water, sanitation, and hygiene committee for local inhabitants with the responsibility of:

- Manage the community water and sanitation systems
- Promote sanitation and hygiene education in the community.
- Promote conservation of potable water, and prioritize allocation of water to households, school, community facilities, and the MAANA Chicken Project
- Provide oversight into system operation and water quality monitoring.

Our partners Fundacion Mente and Maketai, together with the Puyo and Macas Rotary Clubs have agreed to conduct initial and on-going training and reporting to ensure the long-term viability of the water, sanitation, and hygiene committee. This training will ensure that the Community WASH Committee will initially:

- Establish relevant water, sanitation, and hygiene policies.
- Establish job duties and roles/responsibilities for committee members.
- Determine how committee members are appointed/selected.
- Determine reporting relationships of the committee to the community leaders.
- Provide details about the percentage of women on the committee and their roles.

6. Training Plan

(Summarized below. See full document "*PLAN DE CAPACITACIÓN PARA SUBVENCIONES.PDF*" in supporting documents).

What is the title of your project?

Water purification and distribution project training

What is the purpose or goal of the training?

Teach community teachers, and senior adults about the use and management process of the water purification and distribution project.

What knowledge and skills will students learn from the training?

1. Training from the supplier company on the care and maintenance of the WallSpring Solar system to Rotarians from clubs in the USA.
2. Training on the care and maintenance of the WallSpring Solar system for Rotarians and environmental engineers from the Puyo and Morona Macas Rotary Clubs.
3. Training on the care and maintenance of the WallSpring Solar system for members of the water, sanitation, and hygiene and BoD leaders of the Kutsutkao community.
4. Training teachers, parents, health leaders and community leaders on how to manage water safely and prevent diseases transmitted by water and feces. That is, materials that show hand washing after using the bathroom and before handling food, among others.

Why did you choose this training?

The action of the Drinking Water and Sanitation Administrative Board is important: They are responsible for providing the drinking water and sanitation service in the community. They are very important in rural areas, since they are responsible for managing and supplying drinking water for human and productive needs.

How will you address gaps in beneficiary knowledge and skills that were identified during the community needs assessment?

This training for schoolteachers allows them to comply with the guidelines of the Ministry of Education regarding the constitutional rights to health, water, in their own language and teaching resources in accordance with the worldview and identity of the community; As the community counterpart to the project, they are bilingual.

The Puyo and Morona Macas Rotary Clubs can, through Nataly Casigña and Franklin Puente, provide training to teachers and leaders so that they can replicate it in the community.

Is this new training a result of this grant?

Yes.

What methods (such as presentations, discussion groups, hands-on activities, or case studies) practical) will be used to carry out the training?

Practical activities.

How many hours of training will each student receive? (The length of the training should address the theme appropriately).

40 hours.

How many times will this training be offered to each student? (Follow-up training required for most types of projects).

In their class hours at school for 2 weeks.

Who will conduct the training? What are the qualifications of the trainers? (The trainers must have professional experience in the subject).

The Puyo and Morona Macas Rotary Club will, through Nataly Casigña and Franklin Puente, provide training to teachers and leaders so that they can replicate it in the community. (Train the Trainer).

Who will receive the training? How many men? How many women?

Community members as determined by the Water, sanitation, and hygiene committee/Achuar BoD.

How will students continue to use the knowledge and skills they learned from the training after the grant activities are completed?

The community of Kutsutkao will be responsible for operating, repairing, and maintaining their new delivery and purification system. According to the community, we will establish a water, sanitation, and hygiene committee for local inhabitants with the responsibility of:

- Manage the community water and sanitation systems
- Promote sanitation and hygiene education in the community.
- Promote conservation of potable water, and prioritize allocation of water to households, school, community facilities, and the MAANA Chicken Project
- Provide oversight into system operation and water quality monitoring.

How will this training be evaluated to determine its effectiveness and improve future training?

Our partners Fundacion Mente and Maketai, together with the Puyo and Macas Rotary Clubs have agreed to conduct initial and **ongoing training** to ensure the long-term viability of the water, sanitation, and hygiene committee.

This project could never proceed without strong community support, and the village is fully on board. From early planning of equipment requirements and location; to assistance with installation, trenching, and equipment sheltering; and finally, to system operation and

on-going maintenance and reporting, the community members of Kutsutkao are involved at every step. Our principal points of contact for the local water, sanitation, and hygiene committee in Kutsutkao are:

Celestino Antik, Village President, BoD
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7. Operations and Maintenance Plan

(See “*water-sanitation-hygiene-operation-and-maintenance-planner-GG2572915.pdf*” in supporting documents section of global grant.)

8. Financial Sustainability Plan

(Summarized below. See “*water-sanitation-hygiene-financial-sustainability-planning-template-GG2572915.pdf*” in supporting documents section of global grant.)

The WallSpring Solar purification system was selected due in large part to its minimal long-term operational and maintenance cost.

Fundacion Mente is installing and maintaining the water collection and distribution system (see *Basic Implementation Schematic - Achuar Clean Water Project.PDF*). They are a key partner in installing the WallSpring Solar as part of that system, and have agreed to assume on-going financial responsibility for operation, maintenance, and repair costs for the entire system.