



Title: Conservation and Restoration of the Sierra de Tepetzotlán Water Security

PROJECT DETAILS

Project Objective:

To restore and protect the Sierra de Tepetzotlán in order to increase water infiltration and aquifer recharge, through community-based ecological restoration, construction of gabion dams, and local capacity building, to ensure long-term water security and environmental resilience for surrounding communities more of 130,000 inhabitants.

Country/Location: México

Focus Area: Agua y Saneamiento

Implementation Year: 2027

Total Project Budget: \$108,432.90 USD

Missing Funds: \$19,820.90 USD

Community Assessment:

Community Needs Assessment Process

Community Engagement and Relationship Building

Over the past five years, we have maintained continuous and active engagement in the Sierra de Tepetzotlán through:

Volunteer-led reforestation activities

Participation in wildfire prevention and fire response efforts

Support to community brigades

Participatory resource management initiatives

Environmental education and awareness activities

This sustained presence allowed us to build trust, understand local dynamics, and gain firsthand knowledge of environmental and water-related challenges.

Methodology and Evaluation Tools Used

To conduct a structured and participatory needs assessment, we applied multiple tools:

Community Asset Inventory:

Identification of natural, social, and organizational assets (local leaders, water recharge areas, existing brigades).

Participatory Community Mapping:

Joint identification of erosion zones, runoff paths, fire-prone areas, and priority intervention sites.

Community Assembly Meeting:

Open discussion space to validate findings and collectively define priority needs.

Document and Regulatory Review:

Analysis of watershed data, fire reports, environmental plans, and relevant regulations.

Focus Group Discussion

2 Semi-Structured Interviews

1 Community Survey

1 Multi-stakeholder Meeting with approximately 100 participants

Major Problems Identified

The assessment identified four primary challenges:

Reduced Water Infiltration and Aquifer Recharge

Increased Water Scarcity and Economic Burden (dependence on water trucks)

More Frequent and Intense Wildfires

Need for Technical Training and Coordinated Action

Conclusion

The evaluation process confirmed that restoring the Sierra to improve water infiltration is both a community priority and a strategic solution for long-term water security.

Project Design:

The project includes the following key activities:

Construction of 4 water retention structures (gabion and masonry dams) to improve water infiltration and reduce sediment runoff.

Environmental mitigation and reforestation of 1,100 native trees to restore degraded areas and strengthen soil stability.

Training of 30 community members in the construction, maintenance, and monitoring of water infiltration structures.

Exchange of experience with experienced dam builders (Rarámuri community) to strengthen technical capacity.

Technical supervision and environmental monitoring, carried out in coordination with state environmental authorities, who serve as administrators of the Natural Protected Area (ANP), to ensure regulatory compliance and measurable impact.

Community-based monitoring and participatory management, ensuring long-term sustainability and local ownership.

Direct Beneficiaries:

Direct Beneficiaries

More than 1,100 inhabitants directly benefiting from improved water infiltration and aquifer recharge.

30 trained community members gaining technical skills in construction, maintenance, and environmental monitoring.

More than 50 vulnerable farmers whose livelihoods depend on water availability and soil conservation.

These beneficiaries will experience direct improvements in water security, technical capacity, and environmental stability.

Indirect Beneficiaries

Approximately 130,000 inhabitants living in surrounding areas who benefit from ecosystem services provided by the Sierra de Tepotzotlán, including water regulation, soil conservation, climate moderation, and air quality.

Future generations who will benefit from long-term watershed protection and environmental resilience

Sustainability:

The project ensures long-term results through a community-based ownership model combined with institutional coordination.

Capacity Building: Training 30 community members as environmental guardians and brigade members capable of constructing, maintaining, and monitoring water retention structures independently.

Institutional Support: Ongoing coordination with state environmental authorities, administrators of the Natural Protected Area (ANP), to ensure regulatory compliance and technical oversight.

Community Monitoring: Establishment of participatory monitoring mechanisms to track water infiltration, erosion reduction, and

structure functionality.

Local Resource Mobilization: Implementation of local crowdfunding and continued support from the Rotary Club of Cuautitlán Izcalli as a flagship long-term initiative.

Use of Local Materials and Appropriate Technology: Ensuring that maintenance can be carried out locally without reliance on external or complex systems.

Together, these components create a self-sustaining model that secures water infiltration and ecosystem protection beyond the grant period.

Collaborators:

Stakeholders Involved

Engagement included:

Local authorities

State environmental representatives

Community collectives

Farmers

Families and women representatives

Youth and sports groups

Cultural and artistic groups

Environmental volunteers

Regular users of the Sierra

Rotary Club Cuautitlán Izcalli and District 4170

This ensured broad representation across sectors.

Evaluation and Monitoring:

The project includes a structured monitoring and evaluation framework with measurable and standardized indicators to assess impact and long-term sustainability.

Standardized Measures

1,100 direct beneficiaries linked to improved water infiltration and aquifer recharge.

130,000 indirect beneficiaries benefiting from ecosystem services and watershed protection.

30 community members trained in construction, maintenance, and monitoring of water retention structures.

Temporary employment opportunities created during construction and reforestation phases.

4 water retention structures built and fully functional.

313,000 liters of water retention capacity installed.

250 hectares conserved and monitored.

1,100 native trees planted for environmental mitigation.

Evaluation and Local Economic Integration

Technical supervision and site inspections.

Community-based monitoring of structure functionality.

Coordination with state environmental authorities (ANP administrators).

Periodic reporting on water infiltration, erosion reduction, and community participation.

Procurement of construction materials from local suppliers in communities surrounding the Sierra de Tepozotlán, strengthening the local economy and ensuring accessible maintenance resources.

These indicators and practices demonstrate measurable environmental, social, and local economic impact aligned with Rotary Foundation standards.

PROJECT CONTACTS

Host Club: Cuautitlán Izcalli (District 4170)

Contact: Magali Sofia Rivera Dueñas - sofia.riveradu@gmail.com

International Club: Heart to heart (District 6780)

PROJECT FINANCE SUMMARY

Finance Calculator

Funds Sources (Requested / Committed)

Source	Club (Cash)	District (DDF)	Match + 5% Fee	Total
Cuautitlán Izcalli (Cash)	\$13,012.00 USD	-	+\$650.60 USD	\$13,012.00 USD
Distrito 4170 (FDD)	-	\$10,000.00 USD	\$8,000.00 USD	\$18,000.00 USD
Heart to heart (Cash)	\$0.00 USD	-	-	\$0.00 USD
Distrito Intl 6780 (FDD)	-	\$32,000.00 USD	\$25,600.00 USD	\$57,600.00 USD
TOTALS	\$13,012.00 USD	\$42,000.00 USD	\$33,600.00 USD	\$88,612.00 USD

**** Required FDD ****

\$33,600.00 USD

Total Requested Budget	\$108,432.90 USD
Total Obtained Funds	\$88,612.00 USD
** Funding Gap **	\$19,820.90 USD
Total 5% Cash Fee (info only)	\$650.60 USD

DOCUMENTS, PHOTOS & FILES (CLICK TO OPEN)

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(1 FILES)

[PDF] Presentacion RIMEX IA Izcalli 2026 Oficial.pdf

4,573 KB

FOLDER: FOTO PROMOCION

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[JPG] Sierra Tepo 4.jpg

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