

COLUMBIA UNIVERSITY ENGINEERS WITHOUT BORDERS

INFORMATION PACKET

Morocco Project



ENGINEERS WITHOUT BORDERS USA
Columbia University Chapter

EWB-USA

Engineers Without Borders is a national non-profit organization dedicated to partnering with developing communities to provide sustainable engineering solutions.

Mission Statement

By collaborating with partners worldwide, we aim to design and implement sustainable engineering projects, while creating transformative experiences and responsible leaders.

Areas of Focus

- Water Supply
- Civil Works
- Sanitation
- Agriculture
- Energy
- Structures



EWB-COLUMBIA

Columbia University's student chapter of Engineers Without Borders was founded in 2004. Our chapter works on successful development projects in Ghana, Uganda, and Morocco.



OUR TEAM: CU-EWB MOROCCO

The Morocco program was started in 2011 after a Peace Corps Volunteer in Ait Bayoud reached out to us about the issues in the community. Namely, isolation from crucial resources such as schools and clinics as a result of a regularly flooded ravine.

A lot has happened since then. In 2014, we completed the world's longest high-density polymer simple suspension footbridge. In 2015, we added a sustainable water distribution system project after the community presented us with a new issue: the most remote parts of the region lacked access to potable water. Our student-driven team has expanded to approximately 40 diligent students split between technical and non-technical teams. The only thing that hasn't changed is our passion for helping.



ENGINEERS WITHOUT BORDERS-USA
COLUMBIA UNIVERSITY
STUDENT CHAPTER

Morocco Program



THE AIT BAYOUD BRIDGE PROJECT

THE AIT BAYOUD BRIDGE PROJECT

SITUATION

During the 3 month rainy season, the Tagawwt River consistently floods for several weeks, and isolates communities in the rural Northern Bank of Ait Bayoud from the schools, markets and clinic located on the more developed Southern Bank.

SOLUTION

In response to this need for accessibility , CU-EWB Morocco partnered with local leaders in Ait Bayoud and the Peace Corps to construct a 210 ft suspension footbridge to join the North and South Banks of Ait Bayoud.

OUTCOME

With the two banks now connected year round, the community members of Ait Bayoud have greater access to all of the resources of their community. For example, the community has seen a decrease in their infant mortality rate as a result of more consistent access to the clinic.

THE AIT BAYOUD BRIDGE PROJECT

CONTINUED WORK

Our program is currently in the **monitoring and evaluation phase** of the bridge project.

This involves performing extensive bridge inspections when we travel every 6 months and working to fully transfer ownership and maintenance responsibilities of the bridge to Ait Bayoud's development association.





THE IZGOUAREN WATER DISTRIBUTION PROJECT

THE IZGOUAREN WATER DISTRIBUTION PROJECT

SITUATION

Two of the most remote dwars (or villages) in the area – Ilguiloda and Izgouaren – lack access to drinkable water. Women and children must walk back and forth for hours on a daily basis across harsh terrain to get water. This prevents children from going to school, women from working jobs, and the community from being able to make an economic surplus. Furthermore, the trek is dangerous for their health and the water quality can still be questionable.

ONGOING SOLUTION

So far, we have completed a well, an electrical room, a water storage site foundation, and about 1300 meters of galvanized steel piping. The water storage site is nearby Ilguiloda and is located about 3200 meters from the well at the highest elevation in the area. From there, another ~3200 meters of pipeline will be laid downhill, resulting in a gravity-fed distribution system to Izgouaren. The water storage foundation will hold two 20,000 L concrete tanks.

THE IZGOUAREN WATER DISTRIBUTION PROJECT

CONTINUED WORK

Summer 2018 Goal: Complete the section of the pipeline from the well to the water storage site

Winter 2019 Goal: Install the 20,000 L concrete tanks

Summer 2019: Complete the section of the pipeline from the water storage site to Izgouaren

Post Summer 2019: Monitor the project and transfer maintenance of the project to the community



OTHER FUTURE GOALS

COMMUNITY BUILDING

CU-EWB Morocco is working on **educational outreach** in both Ait Bayoud, Morocco as well as back home in New York City. We are also looking to **improve partnerships** with similar organizations and **increase membership**.



\$40,000

PIPELINE TO
STORAGE TANK

\$40,000

PIPELINE TO
IZGOUAREN

\$2,000

BRIDGE
MAINTENANCE

\$5,000

STORAGE TANK

\$5,000

CHAPTER FEES

\$5,000

WATER MISC.
EXPENSES

\$97,000

TOTAL FEES
(FURTHER BREAKDOWNS OF ALL COSTS ARE
AVAILABLE UPON REQUEST)

PROJECT COSTS

HOW YOU CAN CONTRIBUTE

- Tax deductible donation to help us cover our project costs
- Sponsor a student's travel to help give more students the opportunity to travel
- Mentorship/advising for our technical teams that are working on the water projects as well as bridge monitoring and maintenance
- Mentorship/advising for our team as we analyze and write up cost estimates and contracts with local contractors

SPONSORSHIP TIERS

	HONORARY \$500	BRONZE \$1000	SILVER \$2500	GOLD \$5000	PLATINUM \$10000	DIAMOND \$30000+
Logo on website	✓	✓	✓	✓	✓	✓
Social media exposure	✓	✓	✓	✓	✓	✓
Recognition on presentation material		✓	✓	✓	✓	✓
Distribution of promotional materials to EWB-Morocco		✓	✓	✓	✓	✓
Opportunity to host a workshop or presentation with EWB-Morocco			✓	✓	✓	✓
Access to resume book for recruitment			✓	✓	✓	✓
Opportunity to speak at a general body meeting			✓	✓	✓	✓
Promotion at events and during outreach			✓	✓	✓	✓
Opportunity to host 3 workshops or presentations with EWB- Morocco				✓	✓	✓
Name part of the project						✓

HOW TO DONATE

1

Donate directly to our fundraising efforts through the donation button on our website:

<http://morocco.cuewb.org/>

2

Or, write a check:

Please email
aai2121@columbia.edu for more details on this donation method.



CONTACT INFO

Website:

<http://morocco.cuewb.org/>

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