

Goal

To propose a more efficient irrigation system in the Jordan Valley to help address water shortages within the water-scarce urban setting of Amman.

Regional Disputes

The Jordan water crisis is not solely an environmental issue. Conflict over natural resources, such as access to water, has always been prevalent among Jordan's neighboring nations. These conflicts have only escalated within the last century. By promoting sustainable technologies, the foundations for cooperation and environmental heritage can be laid.



Problem

Jordan's physical water scarcity stems from 3 major sources which lead to a physical lack of water within the country.

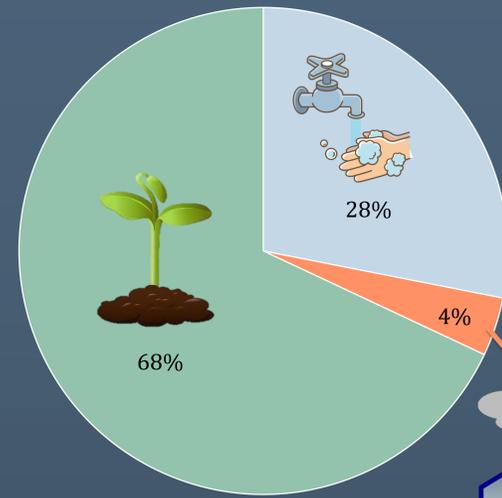
Climate

Poor Infrastructure

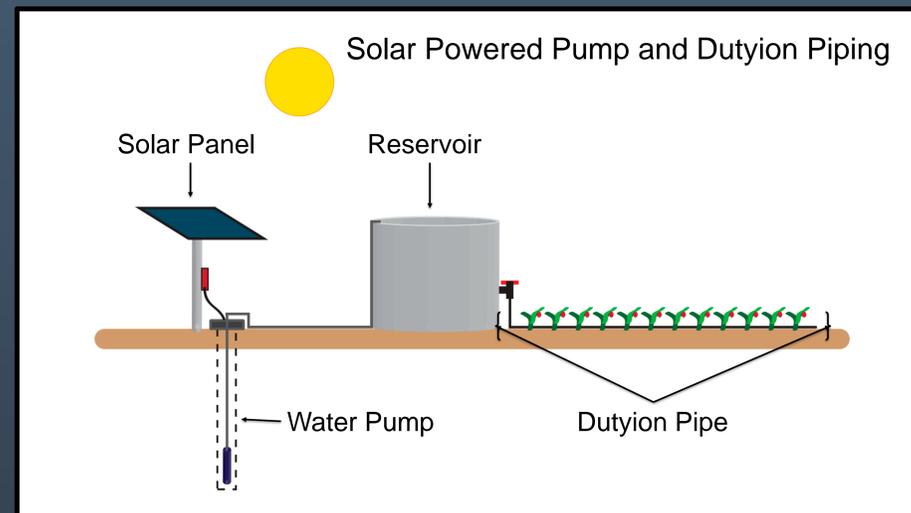
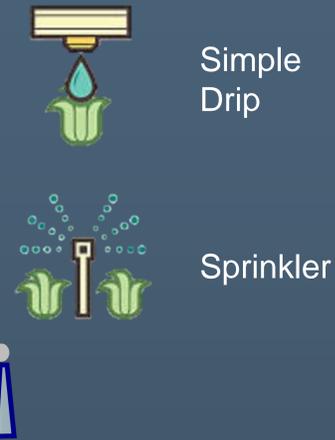
Refugee Influx



Current Water Use



Current Methods of Irrigation



Advantages

- Longevity
- Solar Power
- Reliable Crop Yield
- Uses Any Type of Water

Limitations

- Expensive Initial Investment
- Acceptance by Community
- Periodic Maintenance
- Doesn't Address Poor Infrastructure

Implementation

Step 1

EcoPeace hires a project team

Step 2

Director, Solar Technician, Agricultural Technician

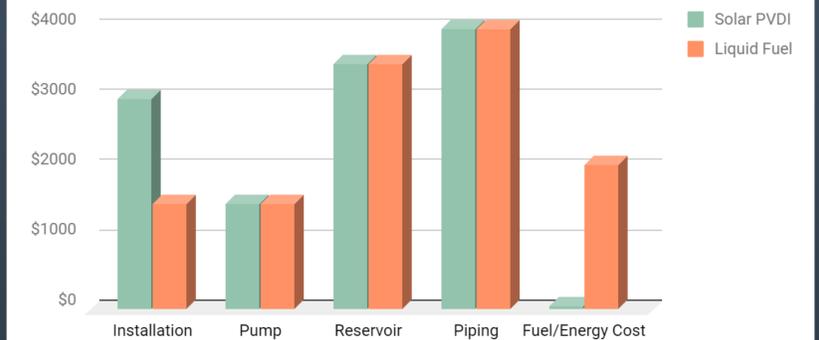
Step 3

Providing training and education for farmers

Step 4

Lay foundations for future expansion

System Costs



Acknowledgements

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References

Amman: Annual Weather Averages. Retrieved October 12, 2017, from <http://www.holiday-weather.com/amman/averages/>
 Jordan: Water is Life. Retrieved October 12, 2017, from <http://www.who.int/whl/plots/jordan/en/>
 Hadadin, N. A., Qatish, M., Akawwi, E. J., & Bdeir, A. N. (2010, January). Water Shortage in Jordan — Sustainable Solutions. Retrieved October 6, 2017, from https://www.researchgate.net/publication/22136110_Water_shortage_in_Jordan_-_Sustainable_solutions
 Burney, J., Woltering, L., Burke, M., Naylor, R., & Pastrnak, D. (2010). Solar-powered drip irrigation enhances food security in the Sudano-Sahel. Proceedings of the National Academy of Sciences, 107(5), 1848-1853. doi:10.1073/pnas.0909678107
https://upload.wikimedia.org/wikipedia/commons/thumb/6/6e/Jordan_location_map.svg/2000px-Jordan_location_map.svg.png
<http://www.trbimg.com/img/579ab89/turbine/ia-4p-urban-refugees-jordan-20160831-snap>
<https://assets.mcc.gov/content/uploads/2017/05/photo-051617-jor-zarqa-water-network-upgrade.jpg>
<http://www.holiday-weather.com/amman/averages/>
https://www.self.org/PNAS_Article_Solar_Market_Garden.pdf
<https://choosemosaic.org/wp-content/uploads/2016/03/Eco-Peace-Logo.jpg>