Lighting Up the Streets of Nineveh
Alqosh Sub-district, Iraq
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Project Summary
Lighting Up the Streets of Nineveh aims to provide solar street lights to the Alqosh sub-district in villages where segregated minorities reside with limited access to light and electricity. By installing solar light fixtures in rural communities with limited electrical infrastructure, the project will provide an alternative and clean source of electricity not impacted by government outages.

Project Description
The Nineveh province is in northwest Iraq and contains some of the most ancient indigenous villages in the world. Christianity sprouted in Iraq in the beginning of the first century, and St. Thomas the Apostle is believed to have started the conversion. Although the native Assyrian Christians have been living in the Nineveh province for thousands of years, in the most recent centuries, the villages have suffered through persecutions, wars and terrorist attacks. Most recently the invasion of ISIS in 2014 has caused many Iraqi Christians to flee from their villages with few returning back. Still troubled by the invasion, many were hesitant to engage in events after sundown. Thus, Lighting Up the Streets of Nineveh seeks to improve safety and security conditions by providing motion-sensored solar LED street lights for villages in the Alqosh sub-district.

Inspiration for Lighting up the Streets of Nineveh
The inspiration for this project relates to my ethnic roots. My parents grew up in Alqosh, Iraq, and I have many aunts, uncles, and cousins who reside there. Growing up, my parents discussed the troubles that the wars caused the citizens and how they were failed by their own government. In particular, Iraq has been suffering power outages for currently over thirty years, and when I visited Iraq in 2011 at 9 years old, I was surprised to see that the electricity issues didn’t improve slightly. Many of my relatives have owned generators to provide electricity for their homes. On the streets though, the electrical street lights can not be powered using these generators. At night in the high heat with no power, there is no light outside; the only sources of light are from the stars and the moon. Returning back to the United States, I knew that I wanted to help out with the issues of electrical outages. When I started college, I looked for opportunities to begin a project. When I heard about the Davis Projects for Peace, I knew that I would need a community partner, and so through my family in Alqosh, I have been able to receive information about my community partner, The Shlama Foundation (Shlama1). They are a non-profit that strives to rebuild villages directly and indirectly affected by ISIS. For this project, the Shlama engineers have been involved with the pre-implementation process of gathering pre-assessment results, interviews, and speaking with companies to buy solar street lights.

Pre-assessment Results
Lack of power negatively affects daily life. In our pre-assessment results from both Karanjok and Garmawa many common issues were identified. For instance, many people feel uncomfortable walking at night because of the danger from snakes and scorpions. Many people also don’t have working lights around their homes. In their regular lives, there are daily routines they can’t do when the power goes out like washing clothes. Even with little light, store owners close their shops at 11:30 pm and have to walk in the dark unless they have a flashlight. Both have stated that they would like job opportunities for their youth, recreational places, and paved roads. Statistically speaking, no one has said that a car or pedestrian accident and crimes have occurred.

Project Implementation
The Alqosh sub-district consists of villages including Alqosh, Ain Baqre, Bandawaya, Dashqotan, Garmawa, Jamboor, Karanjok, Perozawa, Sharafiya, and Tesqopa. For each village, we examined data from assessments conducted in March 2021. The data includes the number of families, resident population, and any past solar street lights installed. For instance, Ain Baqre, Bandawaya, and Tesqopa had solar street lights installed in 2020. From our assessments, we chose Karanjok because they had not received any humanitarian aid in the past. It is a small village with 21 families and 95 people. We ordered 17 street lights. We also chose Garmawa, which has 15 families and 68 people. They had electrical lights

installed by another non-profit, so the citizens requested four solar street lights with one being by the church. We looked at five companies: Bilad UTU for Energy Solutions, Space Power, SWAS Solar Company, Dawran, and Sunlid. We compared the type and prices of each solar street light. In the summer, we ordered the lights from Dawran because they had the all-in-one solar LED street lights at a reasonable price.

Challenges to Project Implementation
The project had to pivot early in the summer. When I wrote my proposal, I was writing on specifically helping the Alqosh village, but later on it became apparent that there were greater needs in other villages. The villagers in Alqosh discussed how they receive plentiful help and explained it would be more beneficial to help other Assyrian Christians who don’t have some of the same benefits. Once Karanjok and Garmawa were selected, through the Shlama Foundation the solar street lights were ordered. However, the delivery of the solar lights for this project had been delayed because of the supply chain interruptions due to COVID-19. In addition, the inflation and supply chain issues this summer affected the amount of solar street lights that can be bought. Despite the challenges, this project has been successfully completed. Installation was completed in November 2022. The lights arrived, the installation and follow up assessment was done by the Shlama engineers and installation company.

Post-Assessment Results
We interviewed the same five people from Karanjok and four people from Garmawa who we interviewed for the pre-assessment results. Across the board, all the citizens in both villages have stated the clarity at night and throughout the village is very good. There have been more people walking outside at night with a decrease of fear of poisonous snakes and insects. There has also been an increase in events at night without a need for a flashlight. More people have been walking outside, going shopping, sitting outside, and playing soccer or card games since this installation. Community activities have increased such as parents are comfortable with letting their kids play outside. One particular person even said there is no need to rely on the day to finish outside work, alleviating some of the stress of completing responsibilities before sun down. Every one interviewed has said they would recommend villages to have solar street lights installed because they never turn off during the night and have good lighting. Karanjok doesn’t have electrical street lights, but Garmawa does. The four people from Garmawa said they would recommend solar street lights rather than electrical ones because electrical street lights quickly break down and one time they only worked for twenty days and only worked when there was government electricity. All 9 villagers have said that the installation process was smooth, and they are overall satisfied with the solar street lights.

Funding
The Davis Projects for Peace grant entirely supported this project.

Reflections
What Peace Means to Me
To be in peace means to live in peace. Unreliable electricity causes a buildup of worries such as community-wide stress, educational barriers, safety concerns, and interruptions in daily events. Peace means providing support and love in issues of high concerns.

How Does Lighting Up the Streets of Nineveh Contribute to Peace
This project contributes to reducing community-wide stress. The solar LED street lights provide an alternative and clean source of electricity not impacted by government outages. In addition, in the pre-assessment results, the nine citizens of Karanjok and Garmawa voiced their concerns about walking at night and that sometimes they would visit relatives or friends if they had a flashlight. This project has increased social gatherings in the evenings and promoted community-building. Additionally, people who do have to walk at night such as store owners feel safer and many people have been walking at night and kids have been playing outside. The motion-sensored solar LED street lights from this project provides safety and security for the villages of Garmawa and Karanjok.

There are many ways to continue our work in the electrical issues in Iraq. In our interviews, we asked the villagers what they would say is their greatest need. Both villages responded that parks, kids recreations
area, paved roads, and job opportunities are highly needed. From the challenges, I learned that there will always be issues outside one's control, but it should never reduce the amount of support and enthusiasm for social justice. Instead, these challenges have taught me to be more encouraging and empathetic towards others while continually learning about changes in the Alqosh sub-district region.

**Personal Statement**

“Through the support from the Davis Foundation, I have been able to lend out a hand to my roots in Alqosh sub-district, Iraq. I couldn’t let the knowledge of what my parents have suffered through and what many Iraqi Christians in the Nineveh Province still struggle with to be ignored. When I spent three months in Iraq in 2011, many nights I struggled to sleep because of limited air-conditioning. I remember how difficult it was to walk in pitch darkness because of the general issues of electricity. In these eleven years, I still reflect about my experiences and connect it to the citizens who still live in these conditions. I do not want to forget and ignore. I want to pursue peace and justice for their quality of life.” - Athera Yakoo