

IEEE SIGHT

Special Interest Group on Humanitarian Technology

Status Update of Projects Funded by the IEEE Special Interest Group on Humanitarian Technology (SIGHT) in 2018 12 November 2018



[Map](#) of SIGHT 2018 Funded Projects
[List](#) of SIGHT Projects Funded 2016 - 2018

Mamawapowin Technology Society (MTS)

- **Canada - Region 7**

This project will be taking place in Maskwacis, Canada, a place formerly cut-off from the online world. Maskwacis is an impoverished First Nations Canadian community grappling with addiction, unemployment, and suicide. Like many other indigenous reserves, it is a place with little access or connection to the Internet. Bruce Buffalo, a Maskwacis resident and self-taught engineer, founded the Mamawapowin Technology Society (MTS) with the objective of bringing free internet connection to Maskwacis. “Mamawapowin” - the Cree word for bringing people together - aptly describes MTS’s mission statement: “To bring rural, First Nations people together through connectivity.”

This group received their funding on October 25, 2018.



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Rehabilitation of the Solar Home Systems in Cerrito de Los Morrenos Gulf of Guayaquil, Ecuador

- Ecuador - Region 9

The 900 inhabitants of the community of Cerritos de Los Morrenos in Ecuador live in an isolated island community without access to the electrical grid. A SIGHT team will be evaluating solar panels that were installed in 78 homes in the community 8 years ago as most of the systems no longer work due to lack of maintenance and knowledge of the community on how to operate the system. The project will rehabilitate the solar home systems and train the local community to operate and maintain them. The SIGHT group traveled to Cerritos two weeks ago to verify the equipment state in every PV installation, complete surveys with 20 families, and analyze the lighting circuit to be powered.

Pictures are of the team's visit to Cerritos to collect information.



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Mobile App to Mitigate the Middleman Problem

- Costa Rica - Region 9

This SIGHT project will train farmers and community leaders on the use of a technology-based solution (a mobile app) to mitigate their “middleman problem,” foster the transition from conventional to organic farming, and provide basic tools to run the farms as (small) businesses. Part of the funds awarded will be used to develop a new module for the mobile app that will allow farmers to announce on a weekly basis what they have for sale and at what price.

This project was notified of their award on October 1, 2018.

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Illumination of the Parque Escuela 36

- Chile - Region 9

This project was notified of their award on November 8th, 2018 and is awaiting their funding in order to install lighting for a local children’s playground that includes a slide, games, and even an orchard. They plan to begin on December 1st, but their team has been able to advance with the initial steps, completing an electrical and finance study which will be presented to their workforce on Monday, November 12th. The team also has the opportunity to present the project to a university journalist and share the mission of IEEE with the school. *(Pictures of the park that will be illuminated).*



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Installation of Photovoltaic System Project in ADESCOSET

- El Salvador - Region 9

This SIGHT group based in El Salvador was awarded a sponsorship in June, when a group of young engineers decided they wanted to help a community challenged by the high cost on their water pump system electrical energy bill. In August they installed a photovoltaic system connected to the grid to reduce the energy consumption, allowing the community center to continue offering its training course program. One thousand and six hundred people will benefit from this project.

The students shared that, “From this project we gained knowledge, improved technical skills, expanded our network and made bonds with the community. We encourage engineers, IEEE members, volunteers and anyone willing to help to implement humanitarian technology projects - we guarantee you will have a great experience.”



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Intelligent Animal Attack Prevention System for Crop Protection

- India - Region 10

This SIGHT project will benefit the Seethampuram village in Andhra Pradesh, India. The village's population of 300 families have a problem of wild boars that destroy their crops, so this team will install a laser system that automatically detects the animals before they enter the field and will scare them away by flashing lights and an alarm. Every time the animals trigger the device a different sound and light pattern will be generated so that the animals won't get used to it. It will also send a message to a connected phone to warn the farmers, who can go and check their fields if necessary.

This project was notified of their award on October 23, 2018 and is awaiting their funding. They have not yet begun the project, but they aim to start the first week of December after student members finish their semester exams.

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Improving Lives Through the Use of Automatic Irrigation System in a Farm in Omor Ifite Ogwari

- Nigeria - Region 8

This project will benefit *Omor ifite ogwari*, a farming community located in Nigeria. The group plans to work with the community's farmers to install a modern automatic irrigator, allowing them to grow more rice while reducing the work needed to cultivate it. The irrigation system will aid in the continuous growth of rice even through periods of low rainfall, and lead to the modernization of surrounding rice farms which in turn will increase the output of rice to cater to the growing population of Nigeria. This system will provide water at the peak periods, and control the flow and amount of water to reduce waste and aid growth. Additionally, the water will be provided by a solar powered borehole and store water in a tank to be used as needed.

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Enta Mnawar (In English: You are the LIGHT)

- **Egypt - Region 8**

This SIGHT group is working to provide reliable, lower price and a clean energy source in their local community. The project includes:

1. A renewable energy awareness program in schools, in conjunction with NGO "Brilliant Minds School". In September the group help many simple technical sessions about renewable energy with students.
2. A training program for university students to design PV system, which will be held during the last week of November 2018.
3. The design and installation of a PV system in Assiut city to increase the general standard of living of its inhabitants to be started in January of 2019.



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Comapa Water Well

- **Guatemala - Region 9**

This project is taking place in a small community called "El Pinito" in Guatemala. Residents of this rural, mountainous areas in Guatemala close to the border with El Salvador have limited options for potable

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Special Interest Group on
Humanitarian Technology

water, so this SIGHT group will install a submersible pump that obtains its energy from a solar panel. The group's goal is to impact approximately 810 people from 3 different communities, improving their quality of life, and preventing diseases due to the consumption of non-potable water. So far they have been able to meet with members of the three communities to encourage their active participation, obtained samples of the well water and sent them to be analyzed, and taken the exact measurements to build the structure that protects the well, the pump, and the other components.

(Pictures of the team, community, and well where the pump will be installed).



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Lighting Up Sirumalai Hills

- India - Region 10

In September, IEEE Madras Section SIGHT Volunteers, Young Professionals and 15 student volunteers from IEEE PSNA SB (Dindugal) successfully installed 60 solar lights in the houses of Sirumalai. The community is located in the middle of a dense forest, so volunteers walked about 5-6 kms to arrive to the location, highlighting the reason why this electrification process is the ideal lighting solution for a

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such a remote community. The team also conducted STEM-based education activities in Pazhaiyur Village School, Sirumalai in partnership with a NGO called Infinite Engineers. Having accomplished the electrification process of 160 houses (in three phases) out of the 500 houses of Sirumalai, the group hopes to finish providing light to the entire community soon.

