Statesman

Glaeser & Solis: YouthMappers have contributed to global humanitarian transformation

By Emily Glaeser and Patricia Solís

Posted Aug 18, 2019 at 1:01 AM

Maps are more than diagrams that help us navigate from point A to point B; they are windows into the world that allow us to explore exotic places, understand how societies are structured and assist in building solutions for a better world. Unfortunately, information about different geographic locations is not uniformly available. Indeed, developed parts of the globe often contain greater infrastructure detail, such as roads, structures, population demographics and water flow, than less-developed areas. When such uncharted regions of the globe overlap with pressing political, environmental or societal problems, youth mapping can assist humanitarian efforts.

How does YouthMappers work? The project utilizes web-based open geospatial technologies and a network of universities around the globe. The mission is to cultivate a generation of young leaders to create resilient communities and to define the world by mapping it. By creating reliable geospatial information for developing regions, YouthMappers can respond to network-wide initiatives in uncharted places or places where spatial data is limited. YouthMappers can work remotely by tracing features, like roads and buildings from satellite imagery, and participate in mapathons (campus parties to build up databases) and map-offs (where universities collaborate and compete in real-time). YouthMappers is made up more than 5,000 university student mappers on over 150 campuses across 42 countries.

Food security is a current focus for YouthMappers and the United Nations under the auspices of the Sustainable Development project. In the Philippines, the island Mindanao produces almost half the country's food, yet it remains poor. By identifying the specific agricultural regions that suffer from large gaps in gender equality, targeted infrastructure improvements can be made with the long-term goal of improved health, well-being and livelihood for its citizens. By mapping

food outlets on the island, areas that rely solely on processed food (as indicated by a high density of convenience stores) can be strategically targeted for the distribution of more healthy and economical food sources.

Another focus area is flooding resistance downstream of hydropower dams. The strategy is to identify regions at high risk for damaging floods, then work with local partners to develop flood-management plans and strengthen emergency-preparedness efforts. In a health project developed under a 2018 YouthMappers Fellowship program, students in the villages of the Senegal River Valley are generating risk maps to predict the spread of infectious water-borne diseases, such as schistosomiasis. The proximity of villages to the river and access points to the water are not only important for agriculture but can also be used as a predictor of disease. At Texas Tech University, one of three founding universities of the program, YouthMappers has contributed to increased food security in Bangladesh, malaria prevention in Mozambique and Hurricane Maria relief in Puerto Rico.

United Nations' World Humanitarian Day is Monday, August 19, and this year's focus is on women humanitarians. To inspire women to participate around the globe, YouthMappers offers a Women Connect Challenge to bridge the digital gender divide and increase women's access and usage of technology. The annual campaign runs from March 8 (International Women's Day) to October 11 (International Day of the Girl) and features mapping efforts that specifically support inclusive mapping communities for females. The aim is to create and sustain gender-inclusive mapping communities, as well as improve knowledge and access to quality education and healthcare.

But YouthMappers are not just students who want to map. With limited local capacity to analyze and use geospatial data in many parts of the world, one of the aims of YouthMappers is to build not just maps, but mappers. By embedding volunteer data creation within the academic sector and directly linking such data production to end-users, YouthMappers can begin to fill a geospatial data gap on a large scale. Moreover, the program develops technical skills that can foster their career aspirations. YouthMappers can improve the world by filling in the blank spots on our planet.

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