

ABSTRACT

This Request for Proposal (RFP) presents an opportunity developed in collaboration with the Nimba County community in Liberia: improving water regulation--which includes collection and distribution--in small gardens within the community. This document provides the situational background for the community and establishes the requirements that proposed designs should consider.

The primary contacts for this community are Dan & Donna Davies, Canadian missionaries who facilitate communication with community members so that we can properly and respectfully interact with a vulnerable group of people. Since 2012, the Davies have lived in Nimba County for 8 months/year, situation permitting. This makes them a reliable primary source and representative of the community.

The most important consideration in this opportunity is the Liberian climate. It is harsh and volatile, with an annual rainfall of about 2500 mm [1] in the rainy season (contrasts with 850mm annual rainfall in Toronto, Canada) [2]. This leads to severe flooding of roads and the destruction of “soft crops” such as lettuce or tomatoes. In the dry season, temperatures regularly reach 30°C, scorching the land and producing severe droughts that make growing crops a severe challenge. In rural areas there is limited running water, electricity, and healthcare; many people must walk 2-3 km to regularly fill a bucket with water [3]. Due to these factors, the people of Nimba County tend to cultivate their own food and rely on local resources. Daily routines are driven by the collection of water for drinking, cooking and irrigating small local crops cultivated as a food supply [3].

The Nimba County community is the primary stakeholder impacted by this opportunity. As such, the high-level objectives have been formulated predominantly around its needs and available resources. They are: improving water regulation, creating an accessible design, and designing for safety. This aligns with the authoring team’s—as well as the Davies’—values. The detailed requirements are outlined in the ensuing document and are used to evaluate reference concept designs.

Water is a critical resource for the Nimba County community and an effective design solution implemented in gardens will have a significant impact on members’ quality of life. It will provide them with better food security, generate a larger source of potential income, and allow them to focus more time and energy on better remunerated work.

References

- [1] “Data.org,” *Climate*. [Online]. Available: [https://en.climate-data.org/north-america/canada/ontario/toronto-53/#:~:text=Toronto%20Climate%20\(Canada\)&text=Even%20in%20the%20driest%20month,is%20845%20mm%20%7C%2033.3%20inch](https://en.climate-data.org/north-america/canada/ontario/toronto-53/#:~:text=Toronto%20Climate%20(Canada)&text=Even%20in%20the%20driest%20month,is%20845%20mm%20%7C%2033.3%20inch). [Accessed: 27-Feb-2021].
- [2] climatestotravel, “Climate - Liberia,” *Liberia climate: average weather, temperature, precipitation, best time*. [Online]. Available: <https://www.climatestotravel.com/climate/liberia#:~:text=In%20Liberia%2C%20the%20climate%20is.more%20marked%20in%20the%20north>. [Accessed: 27-Feb-2021].
- [3] Primary information from: Dan and Donna Davies (donna.davies.global@gmail.com and dan.davies.global@gmail.com)