IOT-BASED OL TRAP AND C-DEWS

THE PROBLEM

Dengue remains a critical public health concern in the country. With its transmission occurring through the bites of infected Aedes mosquitoes, notably Aedes aegypti, combating the spread of dengue requires effective vector control measures, and community engagement. Strategies for vector control involving technological advancements such as computer vision and deep learning, have been recently explored. However, detecting disease carriers poses challenges, particularly when their eggs are clustered among similar items. Additionally, the complexity of identifying disease carriers underscores the need for innovative surveillance methods and refined detection techniques.

THE SOLUTION

The Isabela State University (ISU) developed an **IoT-Based Ovicidal-Larvicidal (OL) Trap and Community Dengue Early Warning System (C-DEWS)**. This PCHRD-funded technology is an OL trap prototype with a smart camera that is able to capture, count, and record mosquito eggs and larvae. Simultaneously, it records the precise placement of OL traps making real-time index computation possible.

A soft field testing of the device has been conducted in Cauayan City, Isabela. The ISU project team deployed antennas among identified barangays to address signal limitations. CDEWS has successfully transmitted data collected from the traps to the database, and enabled the counting and correlation of mosquito egg counts with dengue cases in the area.

TECHNOLOGY GENERATOR

Isabela State University
Project Leader: Betchie E. Aguinaldo, DIT

TECHNOLOGY DEVELOPMENT

The current Technology Readiness Level (TRL) stands at TRL 5, with plans for additional analysis to enhance the system algorithm.

The project team is in the final stages of assessing the technology. They are actively seeking funding opportunities to support the enhancement of their system algorithm. Interested parties may send letters of intent to contact details provided below.