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Using GPS and GIS to Engage students in High-Impact Educational Practices (HIEP); A case study in Bahia Ballena, Costa Rica

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Community Mapping and Citizen Science

By: Austin Riegel

Advised by: Dr. Nathan Amador Rowley

Project Objectives:

- Collecting and Organizing GIS and Remote Sensing Data
- Strengthen Collaborative Relationships
- Engage students in High-Impact Educational Practices



Bahia Ballena, Costa Rica

- Small Pacific coast town with approximately 500 people.
- Ø Its best known for many things:
 - Ø Whale Watching
 - Ø Beautiful beaches
- These areas are protected by the Parque Ballena National Park agency located in the town.



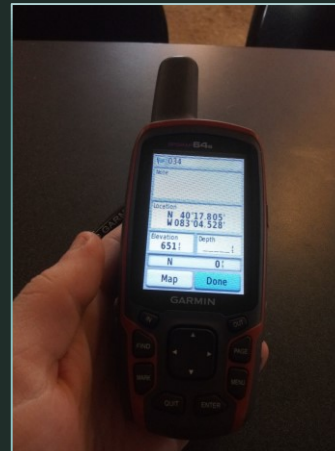


The Big Picture

- We have worked with Geoporter and individual groups to design research questions and methodologies for addressing environmental concerns.
- Ø These maps can be used to:
 - Ø Assess any local changes to the environment
 - Ø Help local utility organizations
- In the past, maps were generated of local community but not the whole community.

My Contribution

- Employed hands-on activities using
 - Drones
 - GPS units
- Got the students thinking about environmental sustainability

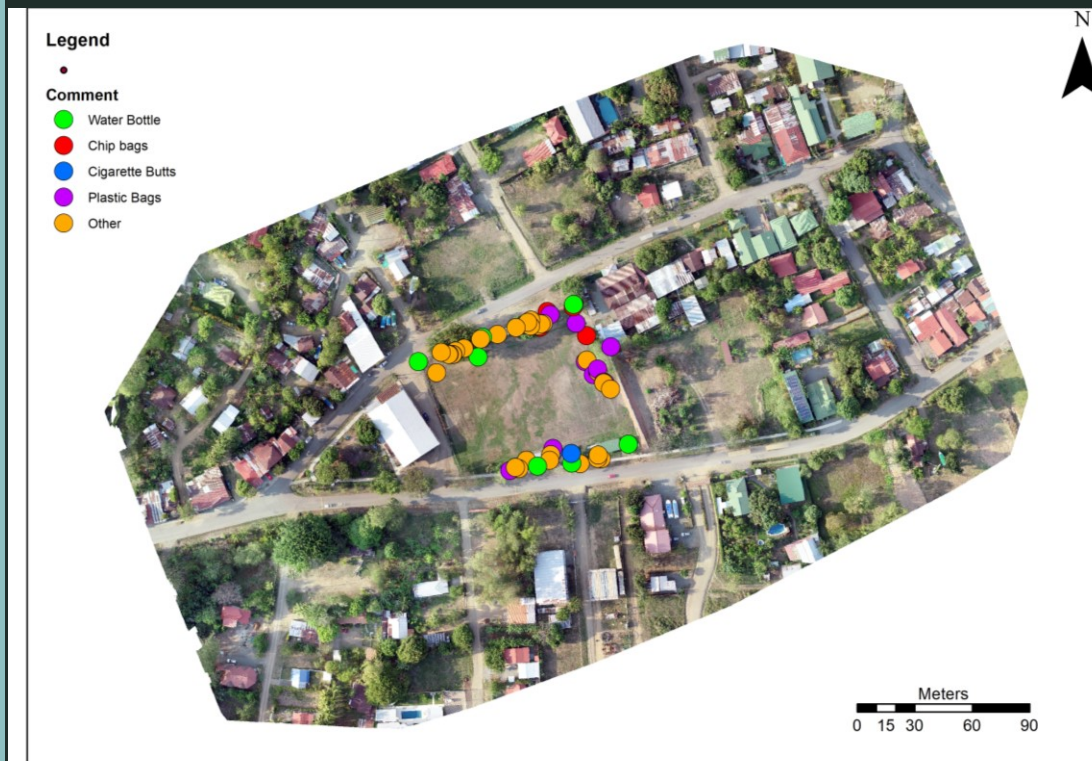


My contribution

- Engage students in High-Impact Educational Practices (HIEP)
- What is a HIEP?



The Activity



Colono Construcción La Jungla Tel. 2743-8053

CUIDEMOS A
JUNTOS NUESTRO
MEDIO AMBIENTE

VAMOS EQUIPO
PUNTO CUTO
NUESTRA PLAZA
COSTA RICA

How to Improve the Project?

- Implementing the project on a bigger scale
- Time management
- Allow the students to have more of a personal connection to activity



Reflecting on the Experience

- Learned how to effectively relay information while navigating through language barriers
- Leadership and Communication skills
- Got me thinking about my future





Reflecting on the Experience

- How to get out of my comfort zone
- How to appreciate the outdoors and the small things

Most Important Lessons

- How do people get by with making such little money?



