



WPI

DEVELOP A STRATEGIC PLAN FOR AN EXPERIENTIAL ENVIRONMENTAL EDUCATION PROGRAM IN PIÑONES, PUERTO RICO

Samuel Boudreau, Emily Doucette,
& Nathaniel Gamboa



Presentation Outline

- **PROJECT GOAL**
- **IMPORTANCE OF ENVIRONMENTAL EDUCATION**
- **OBJECTIVES**
- **RESULTS/FINDINGS**
- **RECOMMENDATIONS**



March 2022



March 2022

PROJECT GOAL

Create an outline of an environmental education program, so that a full curriculum, specific to Piñones, can be developed.

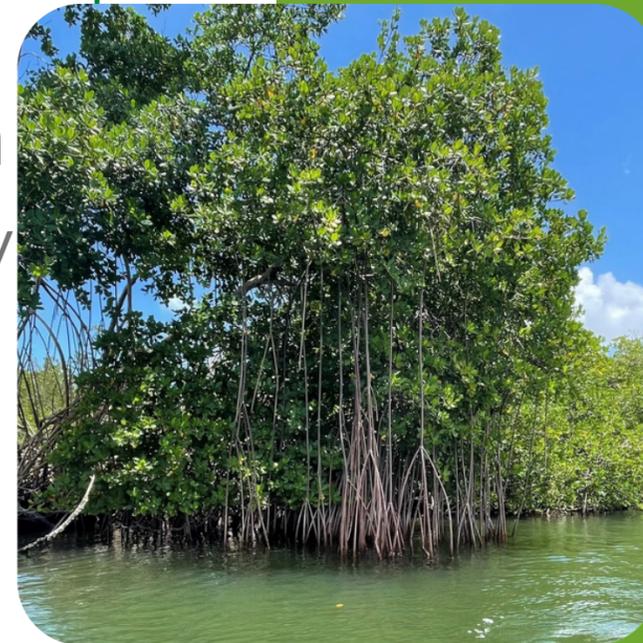
WHY IS ENVIRONMENTAL EDUCATION IMPORTANT?

"You can't care about something you don't know about." -Jami Claypoole

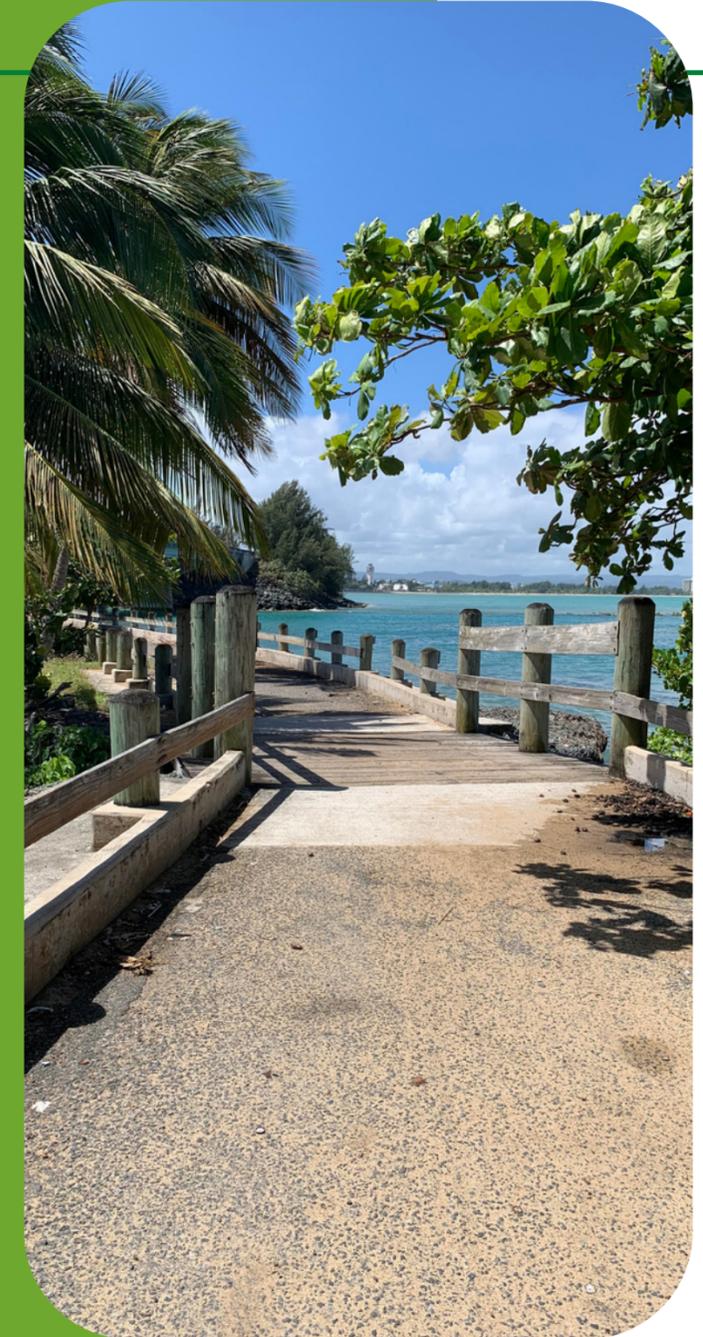
"Early childhood environmental education programs improve environmental literacy outcomes such as environmental cognition, attitudes, and behavior, while building knowledge and skills that lay the foundation for more environmentally responsible and engaged adults." -NAAEE



Rocket 2019



March 2022



March 2022

OUR OBJECTIVES

**Understand
LimPiaR's
Mission**

**Gain
Community
Perspective**

**Research
Environmental
Education
Organizations**

LimPiaR's Mission



- Our Goals
 - Understand the overall mission of LimPiaR
 - Understand each person's role within LimPiaR
- Methods
 - Conducted interviews
 - Jami Claypoole
 - Auraluz Guzmán
 - Roberto Lopez

COMMUNITY PERSPECTIVE



- Our Goal
 - Understand the state of environmental education from a local point of view
- Methods
 - Surveyed community members
 - Interviewed individuals from local organizations and community centers

Environmental Education Organizations



- Our Goals
 - Develop environmental lesson plans
- Methods
 - Research organizations and their lesson plans
 - Adapt premade lesson plans to relate to the Piñones environment

RESULTS & FINDINGS



LIMPIAR'S **MISSION**

Achieve a cleaner and greener Puerto Rico for everyone who lives and visits the island while also providing educational information geared toward raising environmental awareness.

JAMI CLAYPOOLE

FOUNDER & EXECUTIVE DIRECTOR

- Municipality does not pick up trash regularly
- Goal of implementing recycling/composting in every building within San Juan
- Wants to implement environmental education throughout Puerto Rico



Cleanup August 2019

AURALUZ GUZMÁN

CO-DIRECTOR OF EDUCATION AND COMMUNITY ALLIANCE

- Specializes in hands-on education
- Communicates with other community centers and organizations





ROBERTO LOPEZ

SOCIAL MEDIA DIRECTOR

- Mainly creates content for Instagram and YouTube
- Working to expand to TikTok and Podcasts to increase influence online
- Grow volunteer base

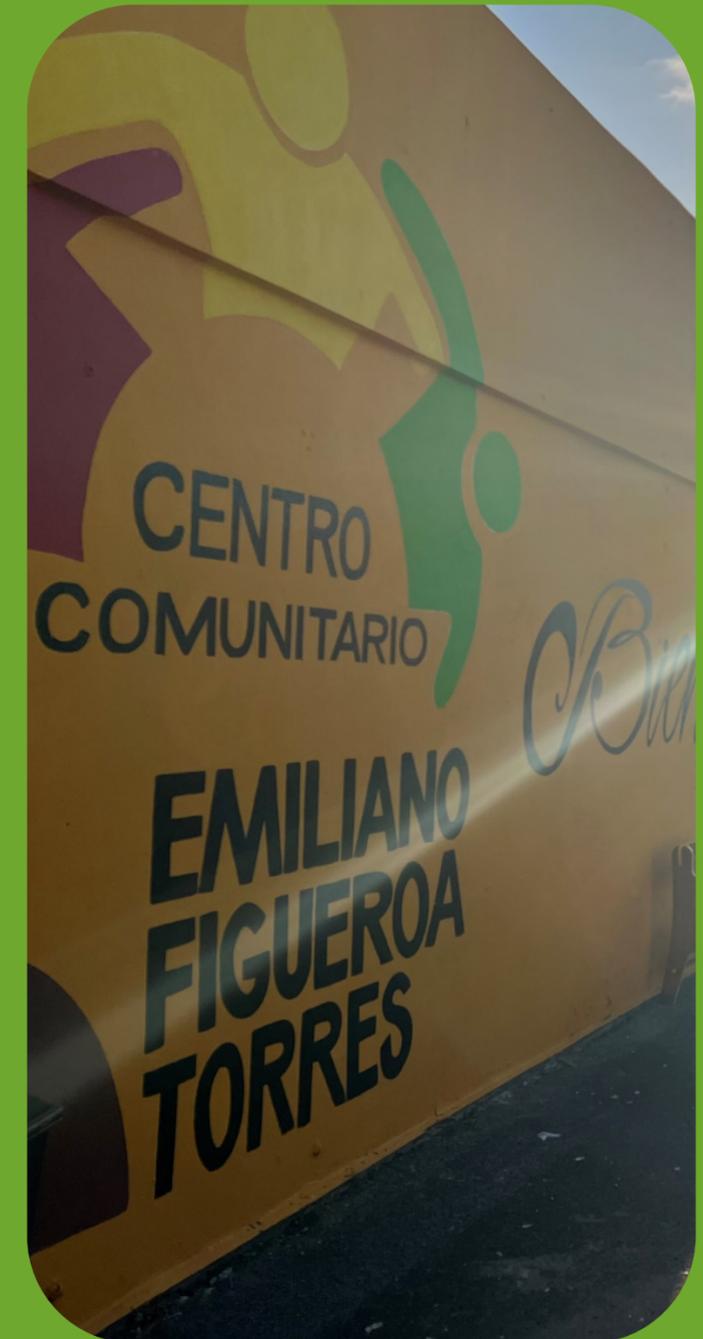
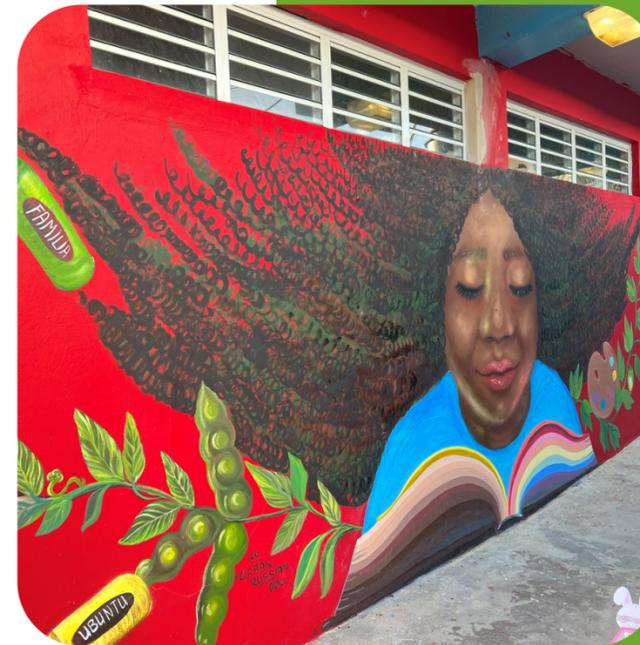
COMMUNITY PERSPECTIVE



TANISHA GASPAR

FOUNDRESS OF P.A.Y.E

- Goal is to help kids understand how the community center was developed and the importance of a community center
- Planning a Summer program from June 20th–July 9th
 - Invited Auraluz to attend and teach from July 5th–8th
- P.A.Y.E provides a space for after school tutoring



JULIO CÉSAR CARROMERO ALBANDOZ

ENVIRONMENTAL EDUCATOR AT COPI

- Teaches children at COPI on Saturdays through art and interactive materials such as crab shells, binoculars, and ocean wildlife action figures
- Participates in mangrove restoration efforts after the effects of Hurricane Maria



ENIEL DAVILLA

BOSQUE ESTATAL DE PIÑONES EMPLOYEE

- Has worked in the forest for a year
- Views the forest as a wildlife refuge and doesn't wish to promote it as a community space
- Stated that LimPiaR could hold meetings at the forest with proper preparations



COMMUNITY SURVEYS

- Surveys conducted at COPI and sent out in Piñones community chat
- 7 total responses
- Top environmental topics
 - Agriculture (4 votes)
 - Waste Management (3 votes)
 - Climate Change (3 votes)
 - Ecology (3 votes)

**Organizations
with
Environmental
Education
Programs**



**THE CENTER FOR
ECOLITERACY**

**PROJECT LEARNING
TREE**

**CORNELL WASTE
MANAGEMENT
INSTITUTE**

**OCEAN
CONSERVANCY**

THE SMITHSONIAN

LIMPIAR'S ENVIRONMENTAL EDUCATION PROGRAM

6 Main Learning Topics

Ecology

Diversity and Interdependence

Water

Soil & Food

Solid Waste Management

Climate Change

La Búsqueda Del Tesoro



Mangles



Piedra



Zafacón



Coco



Bicicleta



Lagarto



Pollo



SCAVENGER HUNT

- Adapted from Cornell Waste Management Institute
 - Originally a scavenger hunt for litter
- Developed into a scavenger hunt displaying living and non-living things found at COPI



HOW TRASH TRAVELS INFOGRAPHIC

- Adapted from the Ocean Conservancy
- Displays the consequences of improper waste disposal
- Utilizes many textures and colors to engage the children



HOW ORGANIC MATTER CYCLES

- Adapted from an urban gardening project at Sitopia
- Displays how organic matter cycles through nature
 - Connects to the topic of composting
- Turned it into a game where kids must put each piece of the cycle in the correct order

RECOMMENDATIONS



RECOMMENDATIONS

We recommend
LimPiaR
continues
developing
interactive
lessons for each
main topic.

We recommend
LimPiaR adapts their
curriculum to be
implemented at the
P.A.Y.E after-school
program at the
abandoned Emiliano
Figueroa Torres
school

We recommend
LimPiaR develops
a way to
evaluate the
students'
understanding of
lessons.

RECOMMENDATIONS CONT.

We recommend LimPiaR develops a pamphlet or PowerPoint that defines their mission, in addition to the macro-objectives developed.

We recommend LimPiaR updates their website to reflect current projects, media and environmental education resources.

The image features a vibrant green forest background. A central black rounded rectangle with a thin green border contains the text. The text is in white, bold, sans-serif font. The background shows a dense forest with various shades of green, and a rocky path with people is visible at the bottom.

THANK YOU

ANY QUESTIONS?

WORKS CITED

Claypoole, J. (2022, March 26). Meeting with Jami of LimPiaR. Personal interview.

Cleanup August 2019. (2019). LimPiaR. Retrieved April 26, 2022, from <https://limpiar.org/galley-ii/>.

Cornell Waste Management Institute, Department of Crop and Soil Sciences. "When It Is 'Wrong To Belong' - Scavenger Hunt." Cornell Waste Management Institute. Cornell University, 1991.
<http://cwmi.css.cornell.edu/TrashGoesToSchool/WhenItIsWrong.html>.

North American Association for Environmental Education. (2016, November 4). The Benefits of EE and Nature Connections in Early Childhood. NAAEE. <https://naaee.org/eepro/research/eeworks/benefits-ee-and-nature-connections-early>

Ocean Conservancy. (2022). Home. Ocean Conservancy. Retrieved April 25, 2022, from <https://oceanconservancy.org/>

Rocket, J. (2019). Wildlife of Piñones Loíza Puerto Rico. Hive Blog. photograph, Piñones. Retrieved April 20, 2022, from <https://hive.blog/puertorico/@joeyrocketfilms/wildlife-of-pinones-loiza-puerto-rico>.

Sitopia. "Sitopia - Agricultura Urbana." Sitopia, 2020. <https://www.sitopia.mx/>.