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Building Healthy Communities in the Dominican Republic: A Mixed-Methods Approach towards Engaging the Community

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Clemson University

Et al.

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Las Malvinas II

Building a Healthier and More Sustainable Community in the Dominican Republic

Las Malvinas II



Overview

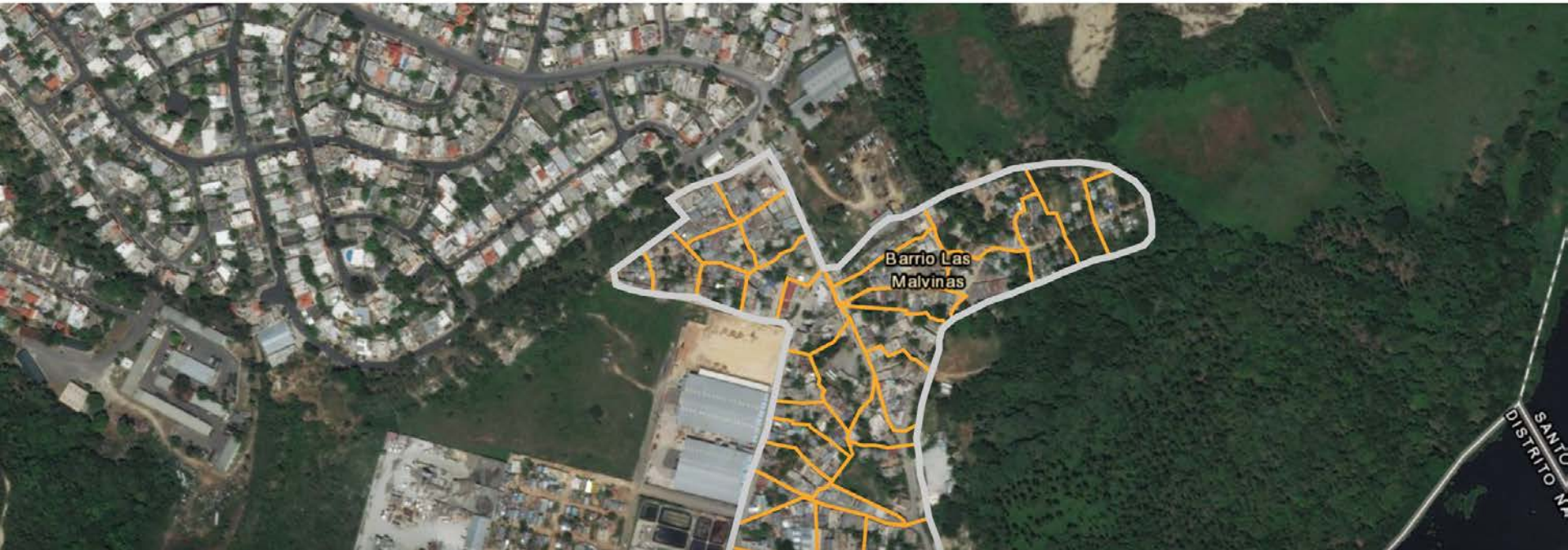
The healthy communities movement is a collaborative, community-engaged effort primarily focused on improving the health status and long-term quality of life within specific geographic areas.

The WHO and the CDC have championed this movement. It promotes development of multidisciplinary partnerships to assess status of the social determinants of health within a community, with the objective of developing targeted interventions to improve the health and wellbeing of its residents.

This story map walks you through the process followed to design and implement a building a healthier community process at las Malvinas II in the Dominican



The Building Healthy Communities Creative Inquiry was established in Fall 2015 at Clemson University by Dr. Arelis Moore de Peralta.



Las Malvinas II

Las Malvinas II is a small, low-resource community in Santo Domingo, Dominican Republic. It is nestled between two rivers (the Ozama River and Isabela Rivers) and an Industrial Park.

Barrio Las Malvinas

This project involves Clemson and UNIBE students, allowing them the opportunity to work together.

Las Malvinas II



Las Malvinas II

Barrio Las
Malvinas

1500 residents live in .1 square kilometers of land in Las Malvinas II. Many residents face unemployment, low literacy, lack of access to potable water, lack of sewage systems, transportation, and other issues.

Zona Industrial
Luisabala

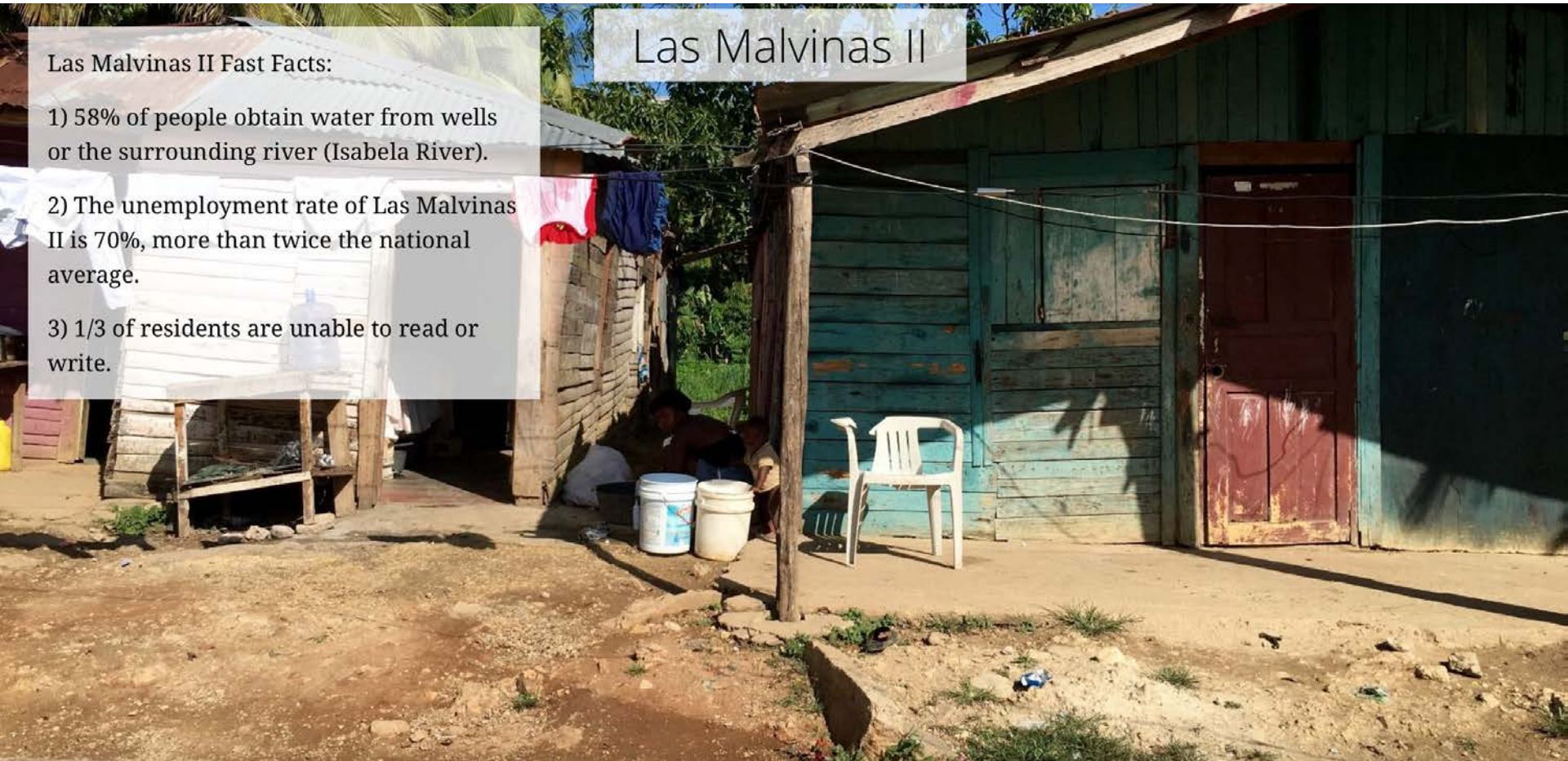
SANTO DOMINGO
DISTRITO NACIONAL



Las Malvinas II

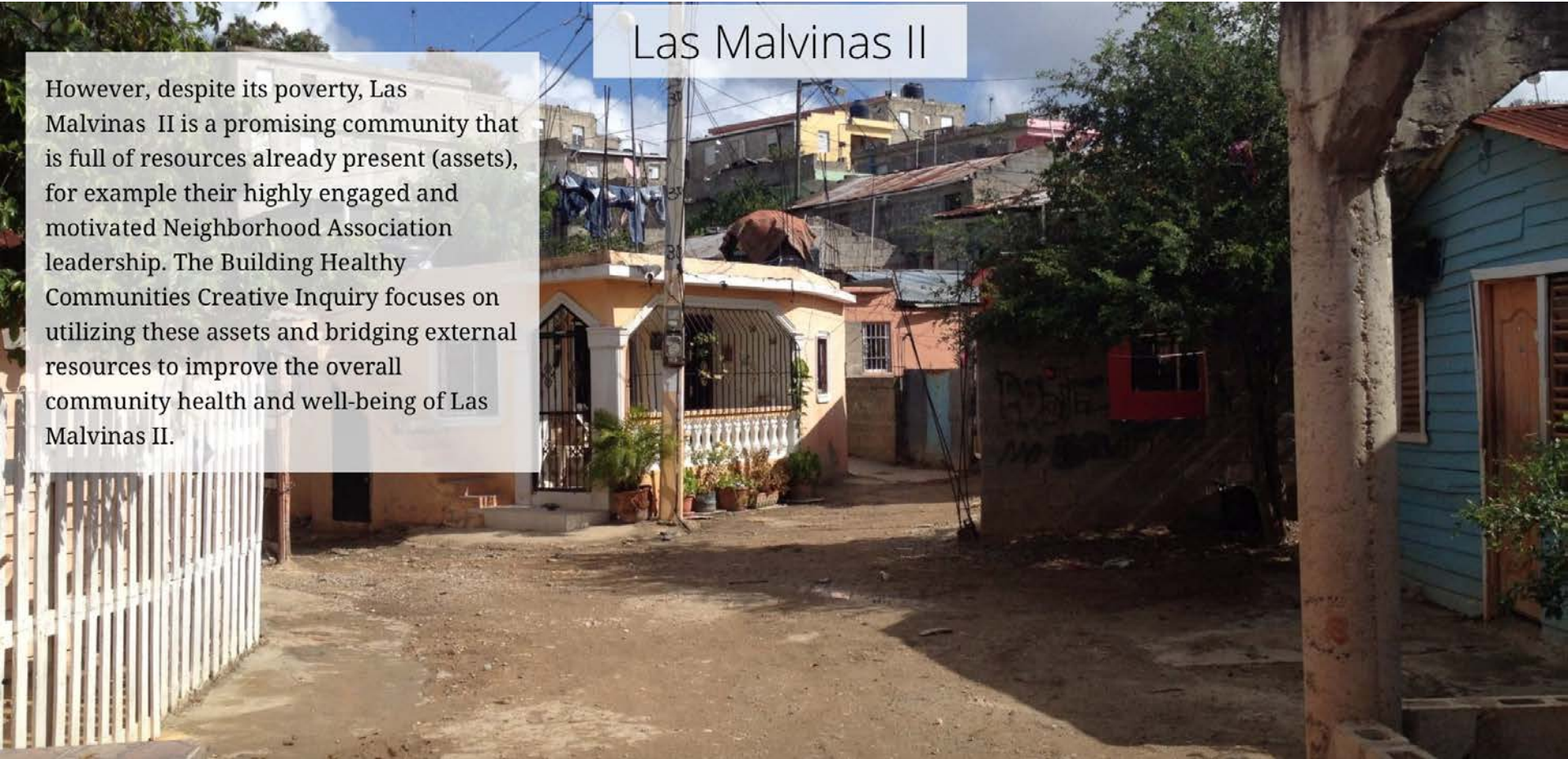
Las Malvinas II Fast Facts:

- 1) 58% of people obtain water from wells or the surrounding river (Isabela River).
- 2) The unemployment rate of Las Malvinas II is 70%, more than twice the national average.
- 3) 1/3 of residents are unable to read or write.



Las Malvinas II

However, despite its poverty, Las Malvinas II is a promising community that is full of resources already present (assets), for example their highly engaged and motivated Neighborhood Association leadership. The Building Healthy Communities Creative Inquiry focuses on utilizing these assets and bridging external resources to improve the overall community health and well-being of Las Malvinas II.

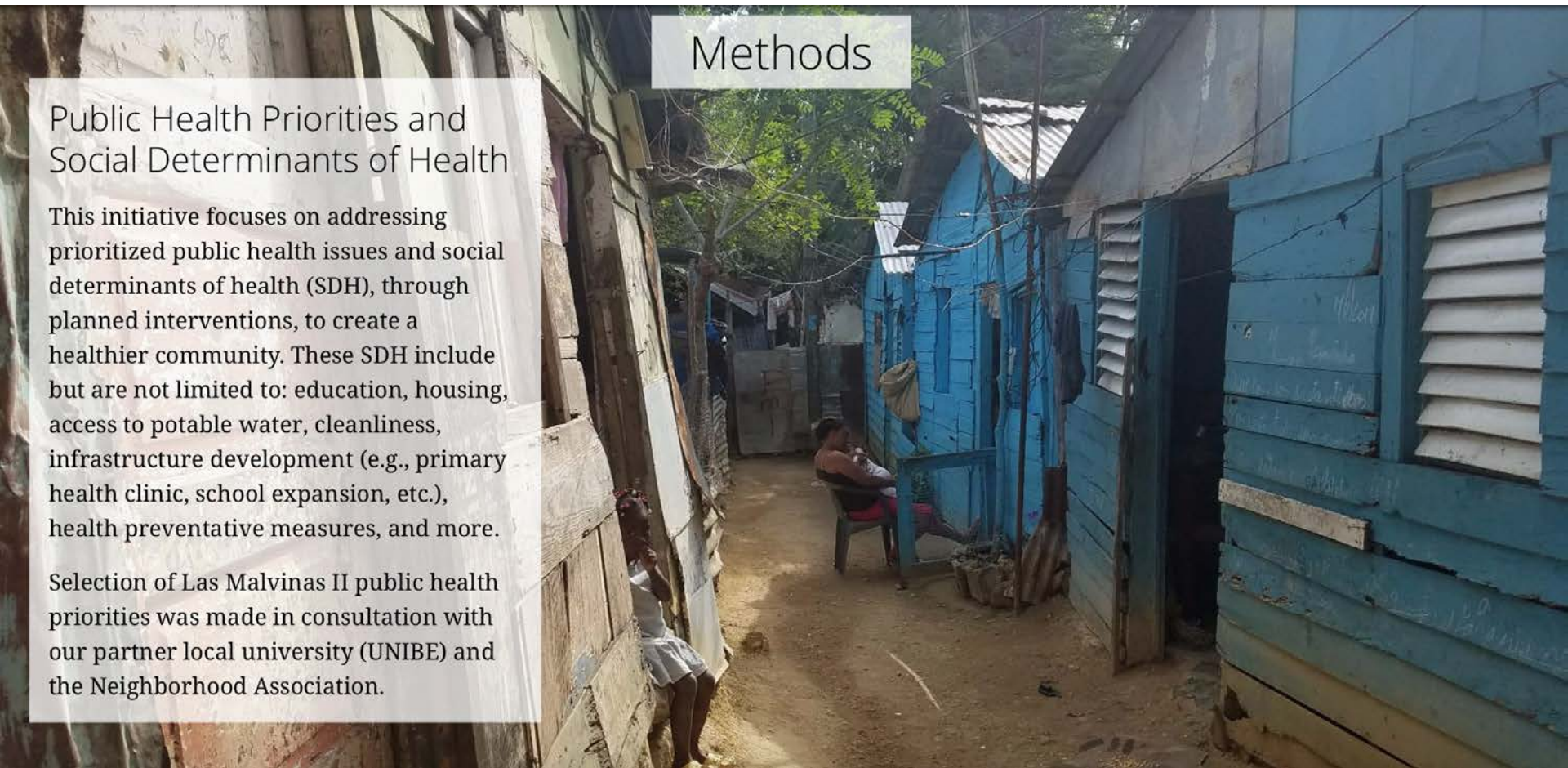


Methods

Public Health Priorities and Social Determinants of Health

This initiative focuses on addressing prioritized public health issues and social determinants of health (SDH), through planned interventions, to create a healthier community. These SDH include but are not limited to: education, housing, access to potable water, cleanliness, infrastructure development (e.g., primary health clinic, school expansion, etc.), health preventative measures, and more.

Selection of Las Malvinas II public health priorities was made in consultation with our partner local university (UNIBE) and the Neighborhood Association.



Methods

Community Health Improvement Plan (CHIP) and Action Plan

Findings from the CHA informed the development of a CHIP.

Leaders from Las Malvinas II, governmental and non-governmental organizations conveyed in March 2017, to develop a CHIP and action plan.



Community Health Improvement Plan (CHIP) and Action Plan cont.

These local leaders and government officials identified both short and long-term strategies and programs to address the priorities identified in the CHA.

This CHIP is currently being implemented in las Malvinas II.

Methods



During its first year (2015), the CI team at Clemson analyzed data provided by UNIBE to propose five public health priorities: unwanted pregnancies, vaccine-preventable diseases, chronic disease management, sanitation, and education. These priorities were selected in consultation with community leaders.

2015: Design



Data Collection and Analysis

2016: Focus Group



The Health Priorities framed the development of surveys and questionnaires for focus groups and interviews with key informants.

Dr. Moore also facilitated focus groups and interviews in five different sectors of the community: education, community-at-large, health, work, and community institutions and organizations.

2016: GIS Household Survey

During spring break 2016, students and Dr. Moore went to different households in Las Malvinas and collected survey data using arcGIS.



GIS Analysis

(1 of 3)

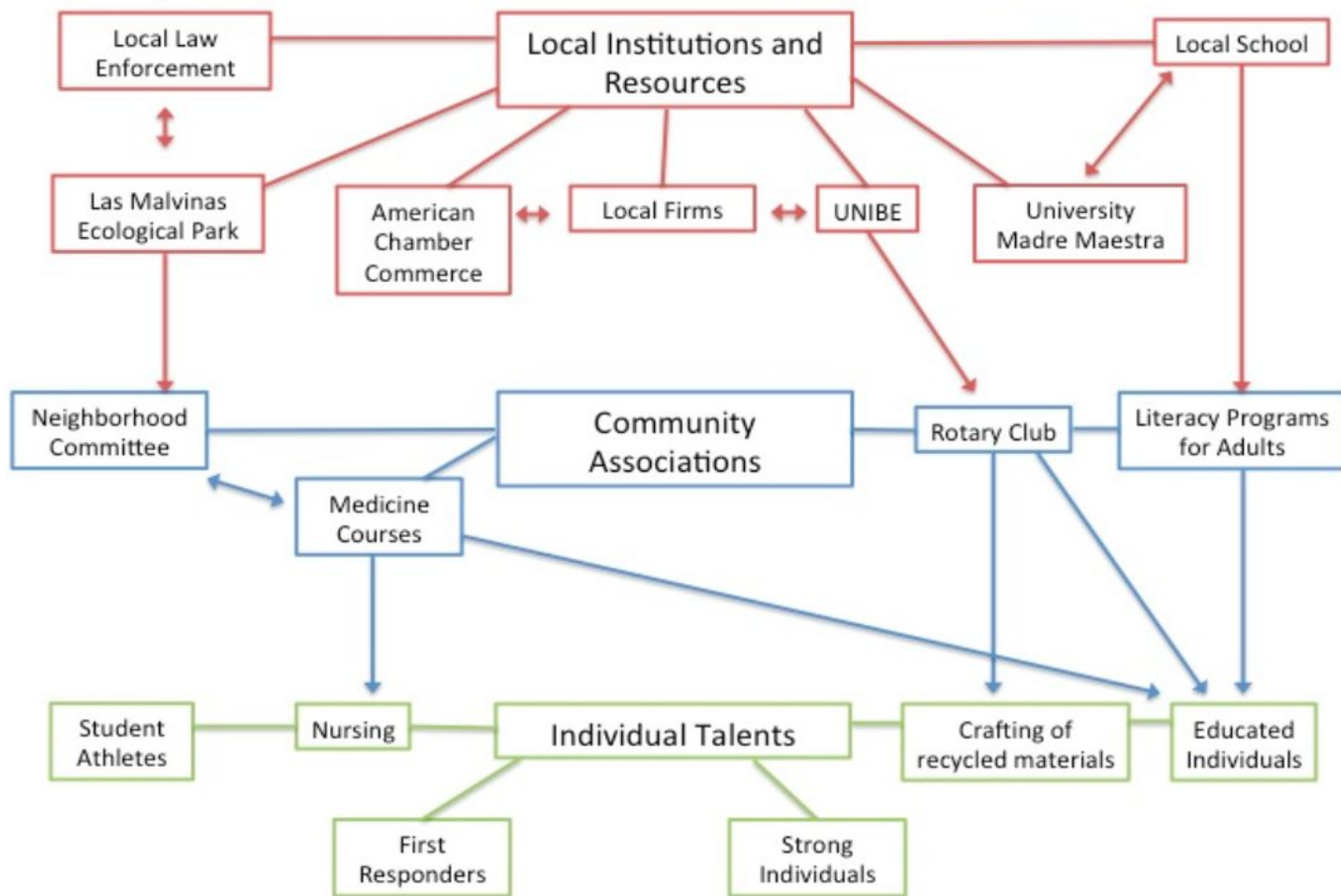
Las Malvinas Survey Questions:
Carpinteria

Chlorine_in_water dos o tres veces al mes

Students created maps illustrating relationships among various factors using geographic information system (GIS) technology and the data collected from the Spring 2016 trip.

The map displayed here illustrates the relationship between frequency of water chlorination and the incidence of dengue and malaria.






2017: CHIP workshop

Fortalezas Nivel 1

In the spring of 2017, Dr. Moore and four students facilitated a workshop to develop the CHIP with the participation of representatives from Las Malvinas II Neighborhood Association, governmental and non-governmental organizations.

Talentos, destrezas y Capacidades
de los individuos que residen
en la comunidad

Current & Future Plans

A group of school children in blue uniforms are standing in a courtyard. In the background, there is a yellow building with large windows and a tree. The children are engaged in various activities, some standing and some sitting on the ground. The scene is outdoors and appears to be a school setting.

Current and Future Plans: 2017 to 2018

2018: The CI team is currently creating protocols for facilitating focus groups and a photovoice project with Las Malvinas II youth population. This research effort will facilitate youths' engagement in ongoing community health improvement process.

Community Achievements in 2017



Construction of the Primary Health Clinic began with financial support from the municipality. The community won a participatory budget contest.

Community Achievements in 2017

Other achievements include:

The government began installation of water pipes for water distribution throughout the community.

Regular water truck delivery by the government

More frequent trash pick up

Youth vocational education including arts and craft, theater and dancing lessons facilitated by the government

Partnership agreement between UNIBE's school of architecture and Mancomunidad (governmental program) to develop the community Urban Master Plan (ongoing)



Student Impact

Building Healthier Communities in the Dominican Republic: Community Health Needs and Assets Assessment Preliminary Results

Schockling, C., Brown, K., Moore de Peraltas, A., Pérez, N., & Abreu, G.

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Introduction

In order to determine the most successful U.S. health models to develop in countries like the Dominican Republic (DR), a team of students from Clemson University, South Carolina, and students from Universidad Autónoma de Santo Domingo (UNASD) conducted a community health needs and assets assessment (CHNA) in the Las Matillas II sector, specifically in the Las Matillas II sector.

The team was led by Dr. Catherine Schockling, a senior undergraduate student in the Department of Biological Sciences at Clemson University. The team also included Dr. Kaitlyn Brown, a senior undergraduate student in the Department of Youth, Family, and Community Studies at Clemson University, and Dr. Ana Moore de Peraltas, a senior undergraduate student in the Department of Youth, Family, and Community Studies at Clemson University.

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Methods

- Coordinative data: Household survey with GIS technology in 177 households (Figure 2)
- Bi-national IRB approval by CU and UNASD
- Participants signed informed consent
- Bi-national student teams collected data using GIS Collector app
- Data was uploaded into ArcGIS online for analysis



Figure 2 | GIS Collector App

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Results

- Las Matillas II faces several environmental risks: unimproved roads, inadequate waste management, lack of sewage and water systems, and stagnant water

- 46% of households reported a case of a water-borne disease (Dengue, Malaria, Chikungunya, and Zika) in the last year (Figure 3)

- 77% reported stagnant water around home in an ongoing basis

- 28% did not know how often they needed to treat their water tanks with chlorine

- 56% reported some type of barrier to access health services (e.g. financial, location, transportation, and time)

- 36% reported one or more adults who could not read or write in the household

Figure 3 | Vector-Borne Disease Prevalence



Conclusions

- Results showed presence of transmissible diseases and related environmental factors in this community
- Literacy and barriers to access health care services were also reported
- Need to develop multi-disciplinary partnerships within Clemson University, and with local governmental and non-governmental organizations to address challenges and priorities.

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References

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- Escudé, D. (2017). Correlación de Factores Socioeconómicos y de Salud en el Sector Las Matillas II (p. 3, Rep.). Santo Domingo, Dominican Republic: UNASD.

The project has had:

4 presentations and conferences

1 technical report

1 paper on CHA submitted for publication

1 CHIP

Tigers Building Healthier Communities Abroad

Tigers Building Healthier Communities Abroad (TBHCA) is a newly formed student organization based on the Creative Inquiry.



Time to Celebrate!!

At the end of the semester, the class celebrates their hard work. Pictured here is the class at "Cena de Navidad," or "Christmas Dinner."



