

SHREDDING BOUNDARIES

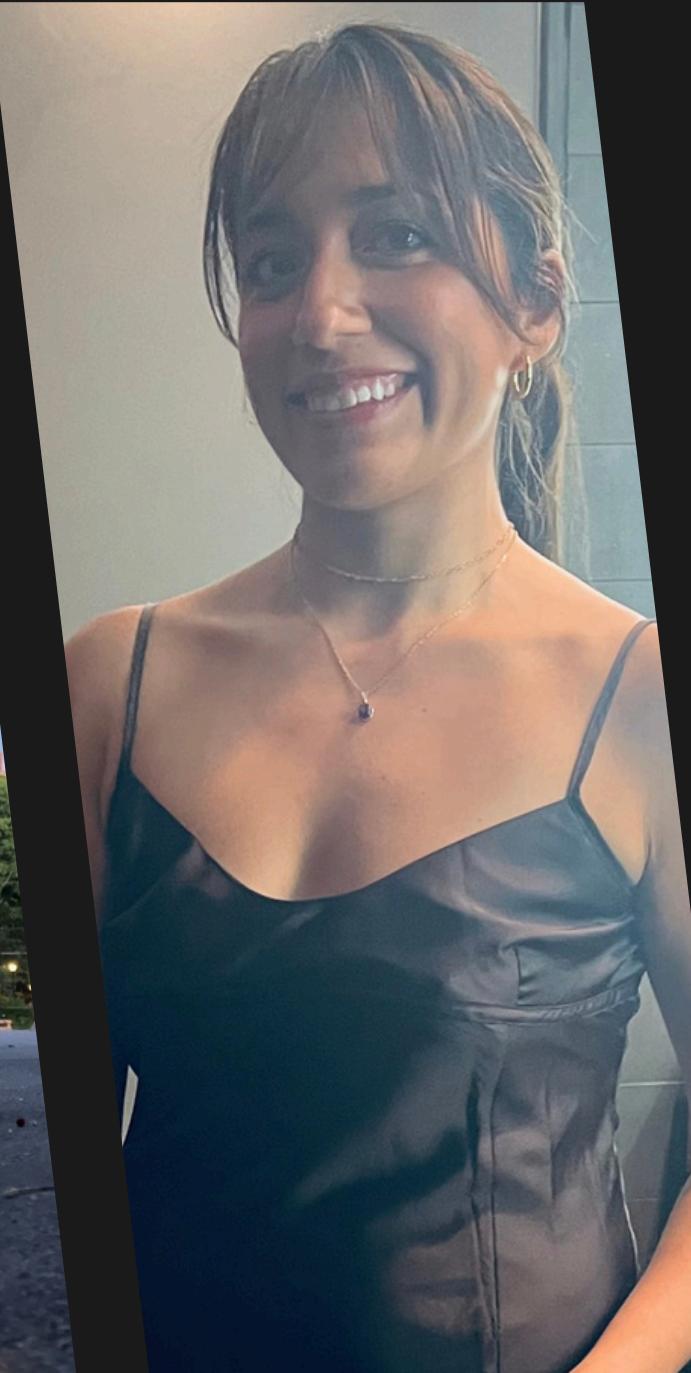


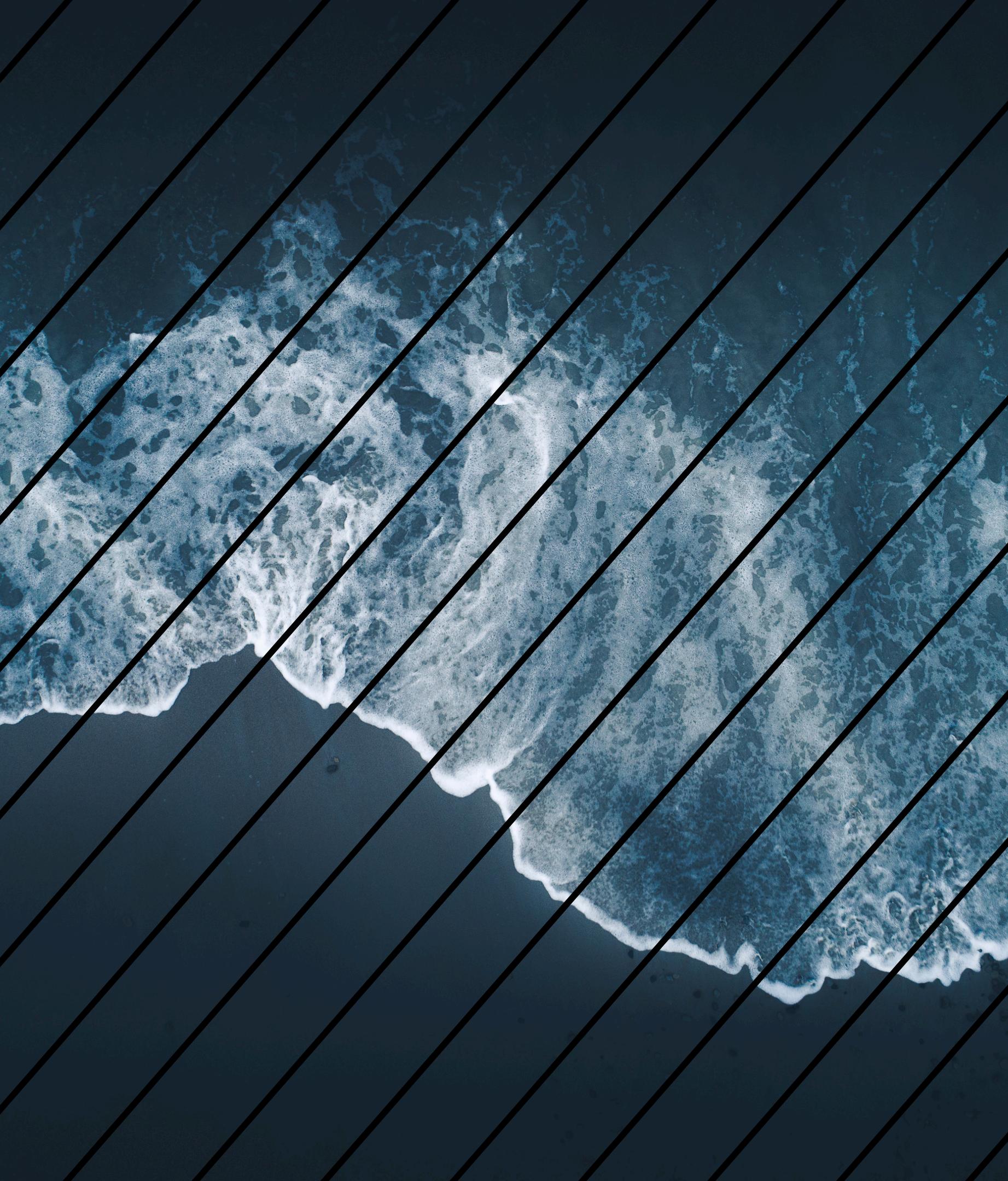
Data-Driven Solutions for Environmental Stewardship
and Youth Empowerment through Action Sports

By Karina Baculima

THE ROLES

- ▶ Lead Presenter
Karina Baculima
- ▶ GitHub Manager
Karina Baculima
- ▶ Technical Director
Karina Baculima





CONTENT

- 01** EXECUTIVE SUMMARY
- 02** RELEVANCE
- 03** DATA OVERVIEW
- 04** ANALYSIS
- 05** RECOMMENDATIONS
- 06** FUTURE PROJECTS

EXECUTIVE SUMMARY

Project Overview

The Laru Beya Collective and Brujas are looking to merge surf culture with skateboarding, uniting their communities under environmental stewardship

Project Objective

Analyze New York City's dataset to make a tangible impact on both environmental conservation and social empowerment within communities

Bottom Line

Polluted air and water heavily impact surfers and skateboarders alike. Long-term exposure to PM2.5 in the air causes 1 in 25 deaths! Rockaway Beach suffers 188% more flooding than the city average, exposing the beach to Enterococci bacteria.



WHY DOES IT MATTER?



This project presents an analysis of environmental data in areas of NYC where surfing and skateboarding are prevalent.

Brujas and the Laru Beya Collective ultimately want to know how to maximize the impact of sustainable initiatives while promoting cross-disciplinary cooperation and community cohesion.

THE DATA

Source

- The Department of Health and Mental Hygiene accessed through the New York City Open Data website
- Two datasets:
 - a. Beach Water Samples from 2005 to 2023
 - b. Air Quality from 2008 to 2022

Limitations

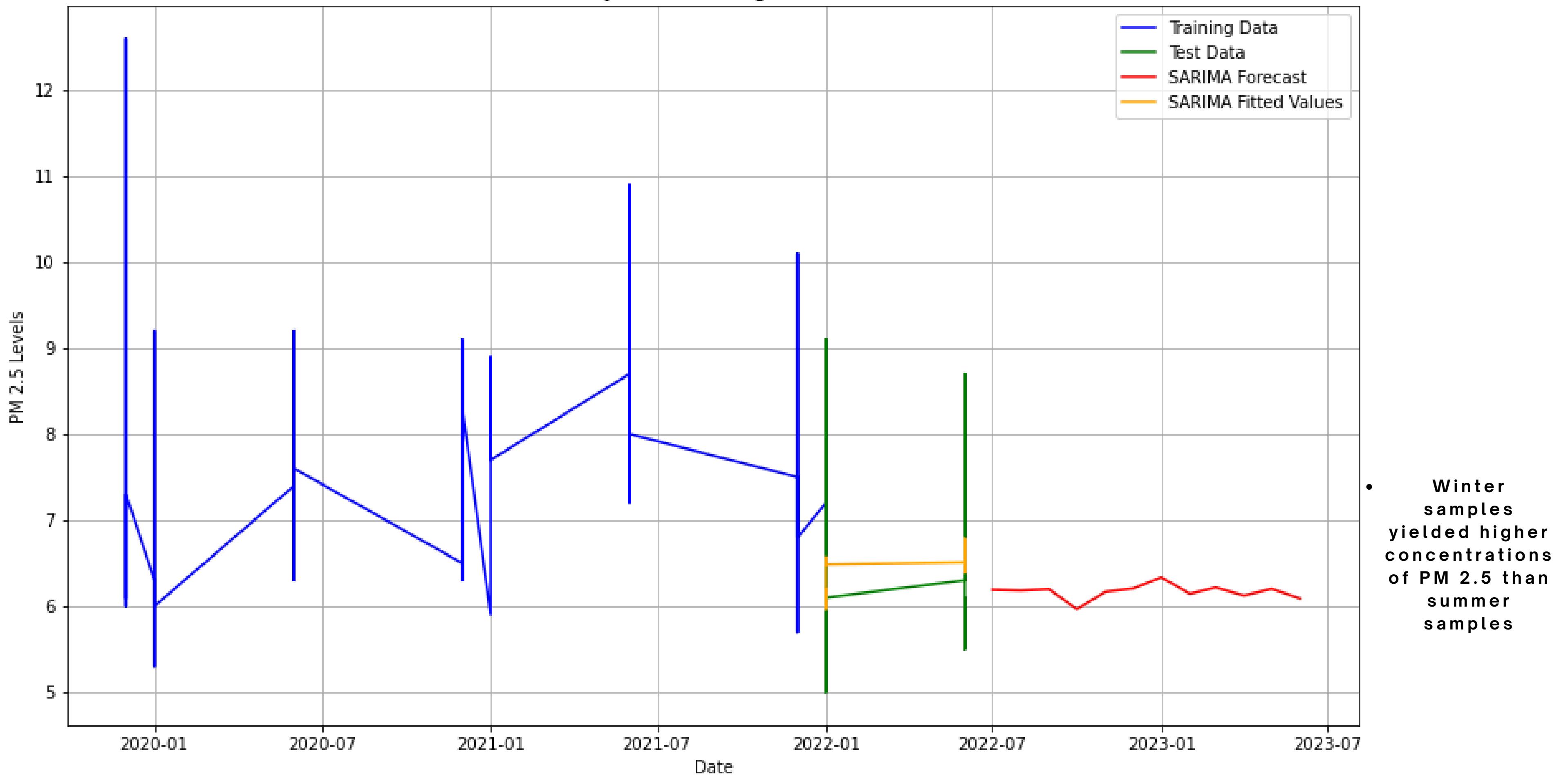
- Any skepticism in the data is mainly due to the lack of year round sample collection
- The Air Quality dataset provided data only up until 2022



A photograph of a person in a long, flowing yellow dress with orange accents and black sneakers riding a skateboard at a concrete skate park. The person is captured in motion, with their shadow cast on the ground. The background shows the textured surface of the concrete bowl of the skate park.

DATA ANALYSIS

Air Quality Forecast using SARIMA Model



KICKFLIP TRICK
The highest concentrations of PM 2.5 are all found in the Manhattan borough

NOLLIE TRICK

WALLRIDE TRICK

X X X X
X X X X
X X X X
X X X X

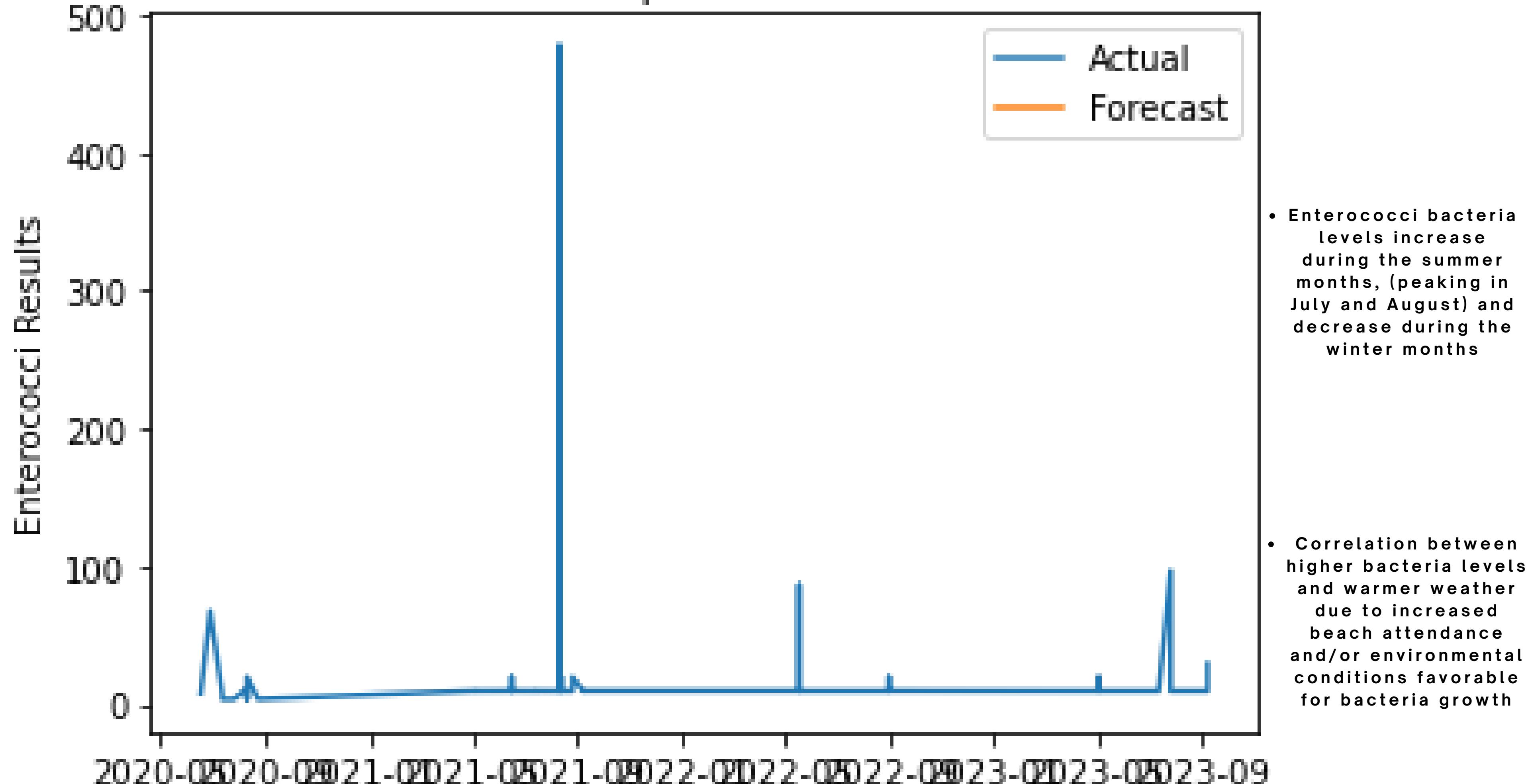


OLLIE TRICK

HELLPLIP TRICK

Midtown and Chelsea poses the biggest risk of pollution exposure to skateboarders

Beach Water Samples - Actual vs Forecast



**Beach 9th to
59th street**
TRICKLE TRICK
poses the
biggest risk of
bacteria
exposure to
surfers

NOLLIE TRICK

Enterococci
bacteria levels in
the beach water
exhibit a
seasonal pattern

x x x x
x x x x
x x x x
x x x x



OLLIE TRICK

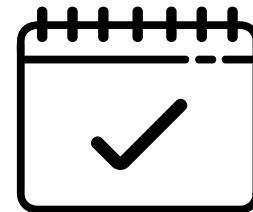
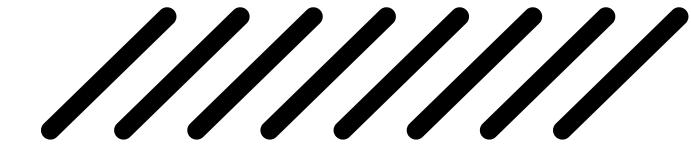
**The highest
concentrations of
Enterococci bacteria
are found in Beach
9TH - 13TH street**

BIGSPIN TRICK

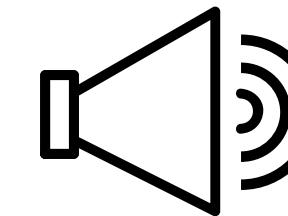
WHAT CAN WE DO ABOUT IT?



RECOMMENDATIONS



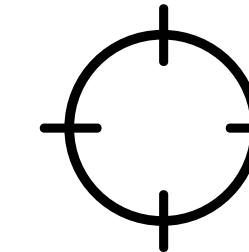
Laru Beya: Organize beach clean ups in targeted areas as well as time of year when beaches are most polluted



Brujas: Use social media platform to enlighten the community of the environmental dangers posed to urban skateboarders. Color code a map highlighting areas with highest concentrations of PM 2.5



Laru Beya + Brujas: Forge dynamic partnerships outside the surf/skate community: Brujas partner with NY Restoration Project (tree planting organization) and host tree planting events, Laru Beya partner with local schools/organizations near the most affected areas of the beach and offer educational talks regarding the project's findings. T



Brujas + Laru Beya: Host workshop to empower through knowledge with environmental component. Frame air and water quality information as a tool for personal empowerment rather than a set of rules. Understanding air and water quality helps them make informed decisions about when and where to skate and/or surf to maximize their performance and reduce the risk of discomfort or health issues. Surfers teach skaters how to surf and skaters teach surfers how to skate. Swap skills, make new connections, strengthen the community

WHERE DO WE GO FROM HERE?



FUTURE PROJECTS

1 YOUTH ORGANIZATION ASSESSMENT

- ASSESS YOUTH ORGANIZATIONS' PROGRESS
- TRACK ENGAGEMENT, ACTIONS, PARTNERSHIPS, FEEDBACK
- USE INSIGHTS TO ENHANCE AND AMPLIFY THEIR IMPACT

2 ADVANCED MODELS

- CREATE A NEW MODEL INTEGRATING ENVIRONMENTAL DATA WITH ORGANIZATION'S ASSESSMENT ANALYSIS
- EXPLORE CONNECTIONS BETWEEN ACTION SPORTS, ENVIRONMENTAL STEWARDSHIP, AND YOUTH EMPOWERMENT

3 EXPANDING TO NEW CITIES

- ADAPT TO REGIONAL ENVIRONMENTAL CONDITIONS AND COMMUNITY NEEDS
- CONDUCT THOROUGH ANALYSES OF NEW DESTINATIONS
- FOSTER PARTNERSHIPS WITH ENVIRONMENTAL ADVOCATES AND SURF/SKATE COMMUNITIES WORLDWIDE

QUESTIONS?



THANK

YOU



x x x x
x x x x
x x x x
x x x x



Karina Baculima
[GitHub: KariSteph](#)
Email: KariBaculima15@gmail.com

x x x x
x x x x
x x x x
x x x x