COLLEGE OF SOCIAL & BEHAVIORAL SCIENCES
SCHOOL OF GEOGRAPHY & DEVELOPMENT
Master's in Development Practice

Geographic Information Systems (GIS) and Environmental Sustainability in Eleuthera, Bahamas

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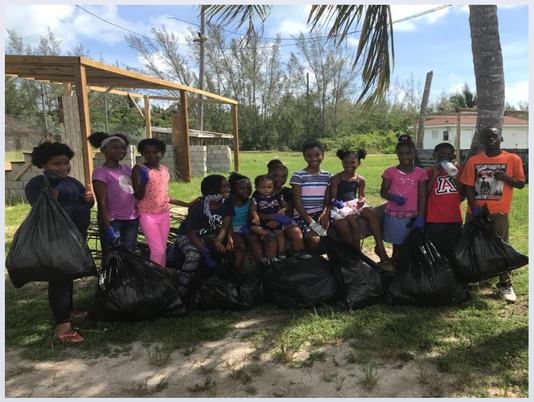
BACKGROUND

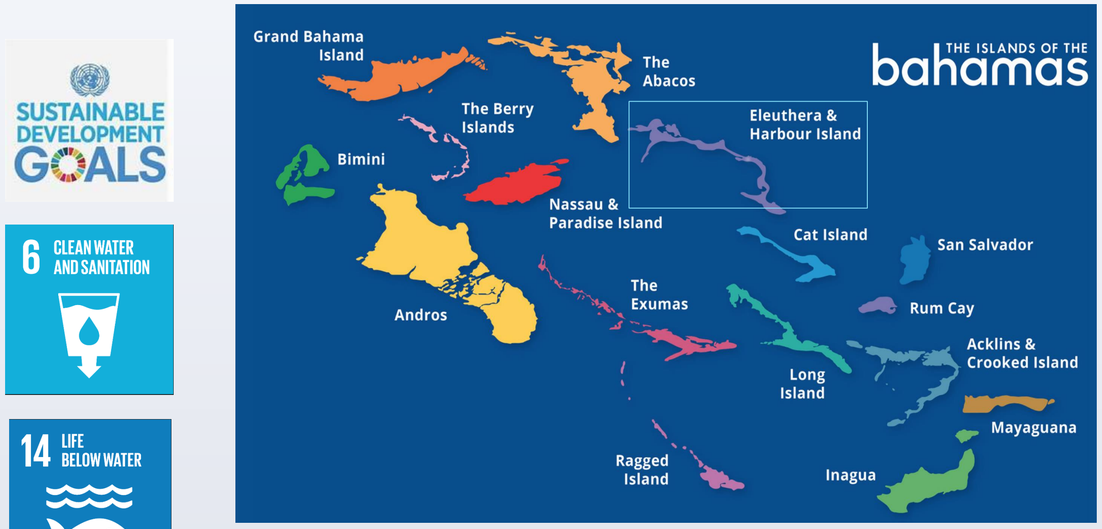
This project introduced Geographic Information Systems (GIS) and its utility for understanding the natural and human impact on island ecosystems in Eleuthera, Bahamas. Participants were exposed to basic GIS concepts and their application to environmental sustainability projects. This project aligns with United Nations Sustainable Development Goals (SDGs) specifically goals 6 and 14.



Youth campers with the Bahamas Plastic Movement during clean up event.
Photo Credit: Philana A. Jeremiah

METHODS

The sample consisted of members and affiliates of One Eleuthera Foundation, a non-government organization founded in 2009 to protect Eleuthera's natural resources, along with members of local government agencies. The confidential email questionnaire consisted of 11 questions addressing GIS as a tool to achieve environmental sustainability and to preserve the beauty of Eleuthera, Bahamas.



Above, map of The Bahamas, with blue box indicating the study area (Photo Credit: Investment Facilitating and Financing, LTD.) *At left, two of the UN Sustainable Development Goals*

How do you see the role of local and national government in achieving environmental stability in Eleuthera?

- Both local and national government needs to work together to create a national plan of action and be proactive about finding a solution to our trash problem.

Thinking about the bigger environmental sustainability picture, what do you see as the greatest NEED for the island?

- Residents want to be able to live and raise their families on this island without having to emigrate to Nassau or Freeport for post-secondary education or employment (see quotation at right).

FINDINGS AND IMPLICATIONS

Participants were able to highlight the areas (see at left) where they felt GIS would improve the preservation of Eleuthera by using local knowledge.

The Bahamian government's response to the public interest in reducing plastic waste. Photo Credit: The Ministry of Environment

"It would be nice to have Nassau right here [in Eleuthera]. I do not want to leave the island just because there is nothing here for young people. We do not have enough fun stuff to do for children like birthday party places. We need more attraction so we can develop this island." – Parent of a Bahamas Plastic Movement (BPM) Camper

REFERENCES

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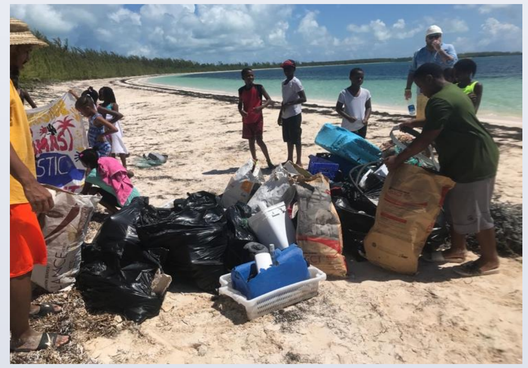
RECOMMENDATIONS

- Revamp the Bahamas National Geographic Information Systems Program (BNGIS), allowing youth to gain real world GIS skills.
- Establish partnerships to solidify research efforts promoting environmental studies that include GIS.



Winding Bay Beach Clean Up.
Photo Credit: Philana A. Jeremiah

CONCLUSION

This study highlighted the need to integrate GIS in future plans for achieving environmental sustainability goals in The Bahamas. The input of the local community has allowed for a more holistic approach for progress without damaging this island they call home.

ACKNOWLEDGEMENTS

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Islands - IFF. (2018). Retrieved from http://www.iffpros.com/islands/