



Innovations and Linkages between
Public Policy and Engineering for
Curriculum and Research Panel:

Strong Coasts – Systems Thinking & Opportunities for Policy Collaborations

Maya Trotz, Ph.D. ENV SP

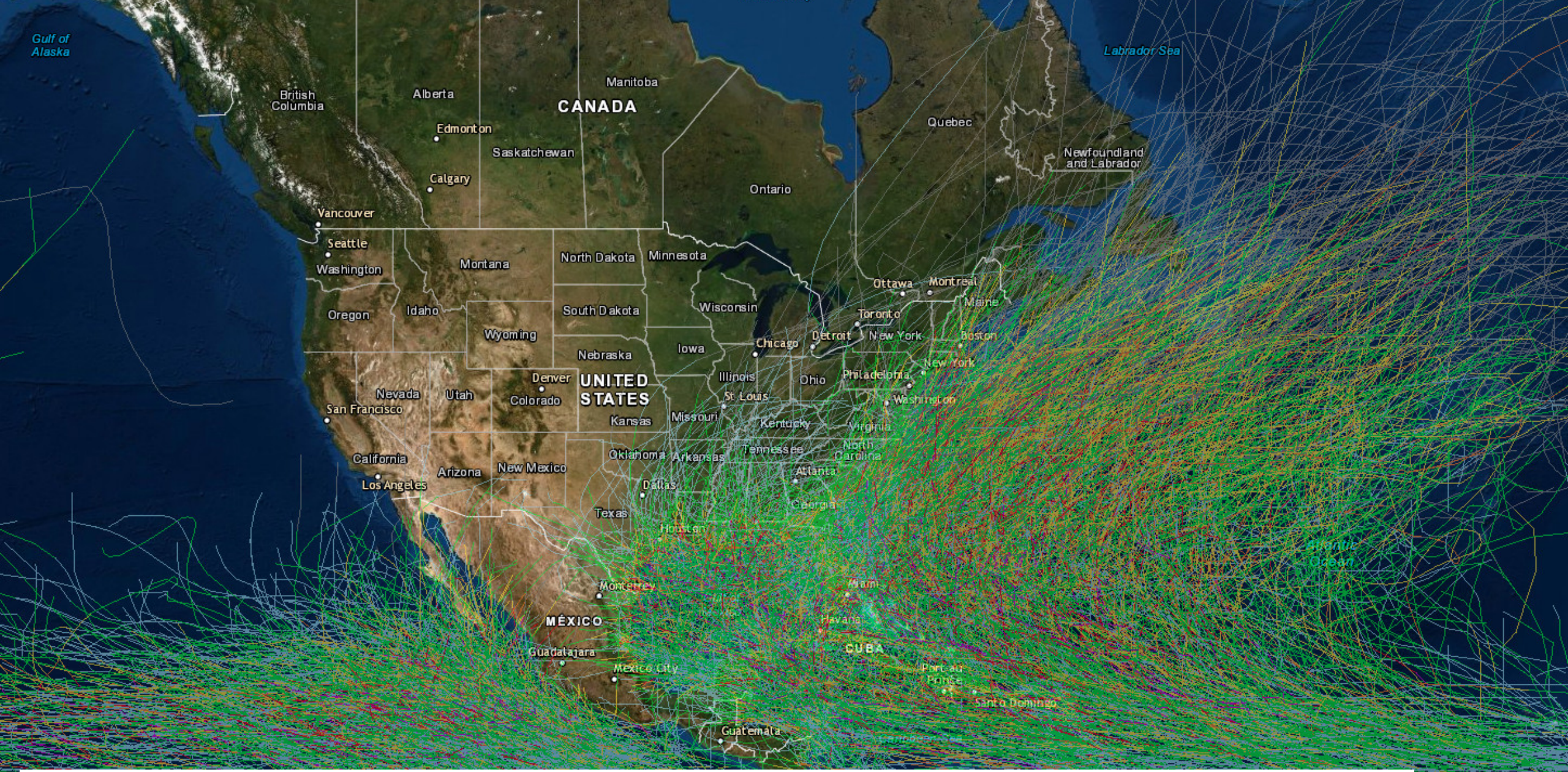
Professor, Civil & Environmental Engineering,
University of South Florida

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& Science Professors (AEESP)

Director, Collaborative National Research Traineeship
Strong Coasts

2nd Annual Sloan Foundation Workshop
Linking Engineering and Public Policy in the
MPA/MPP Curriculum and Beyond

September 15 - 17, 2019 | Sheraton Syracuse
University Hotel & Conference Center



Resnick, B. 26 feet of water: What the worst-case hurricane scenario looks like for Tampa Bay.
<https://www.vox.com/energy-and-environment/2019/9/11/18485563/hurricane-florida-climate-change-tampa>

We Are **STRONG** Coasts

Strong Coasts is a community-engaged training and research program on systems thinking to better manage complex and interconnected food, energy and water systems in coastal locations.

<http://www.strongcoasts.org>
<https://medium.com/@strongcoasts>
<https://twitter.com/strongcoasts>
<https://www.facebook.com/NRTstrongcoasts>

Collaborative National Research Traineeship

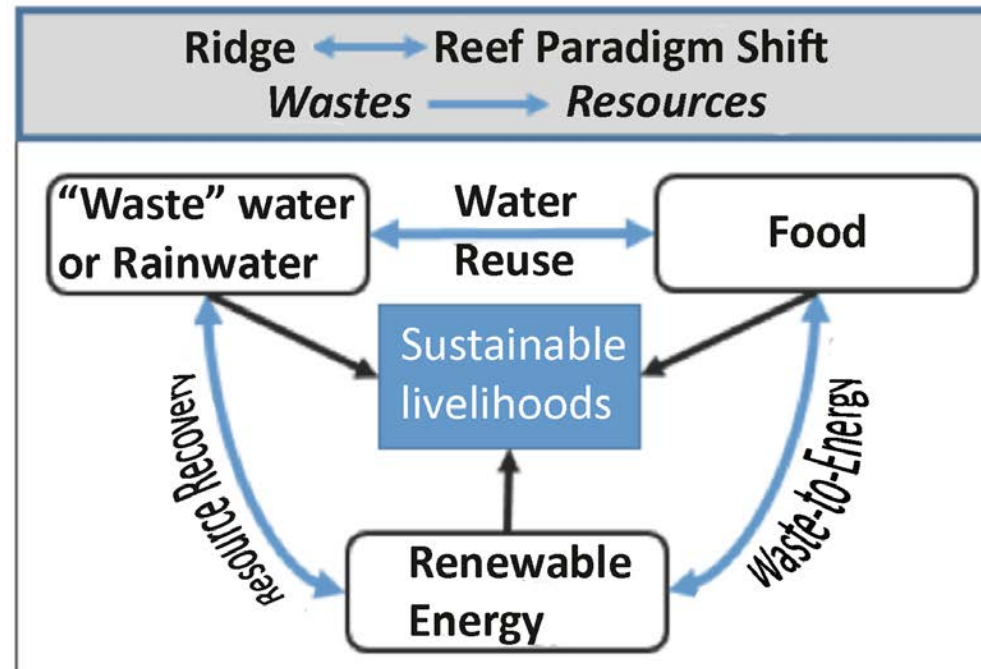


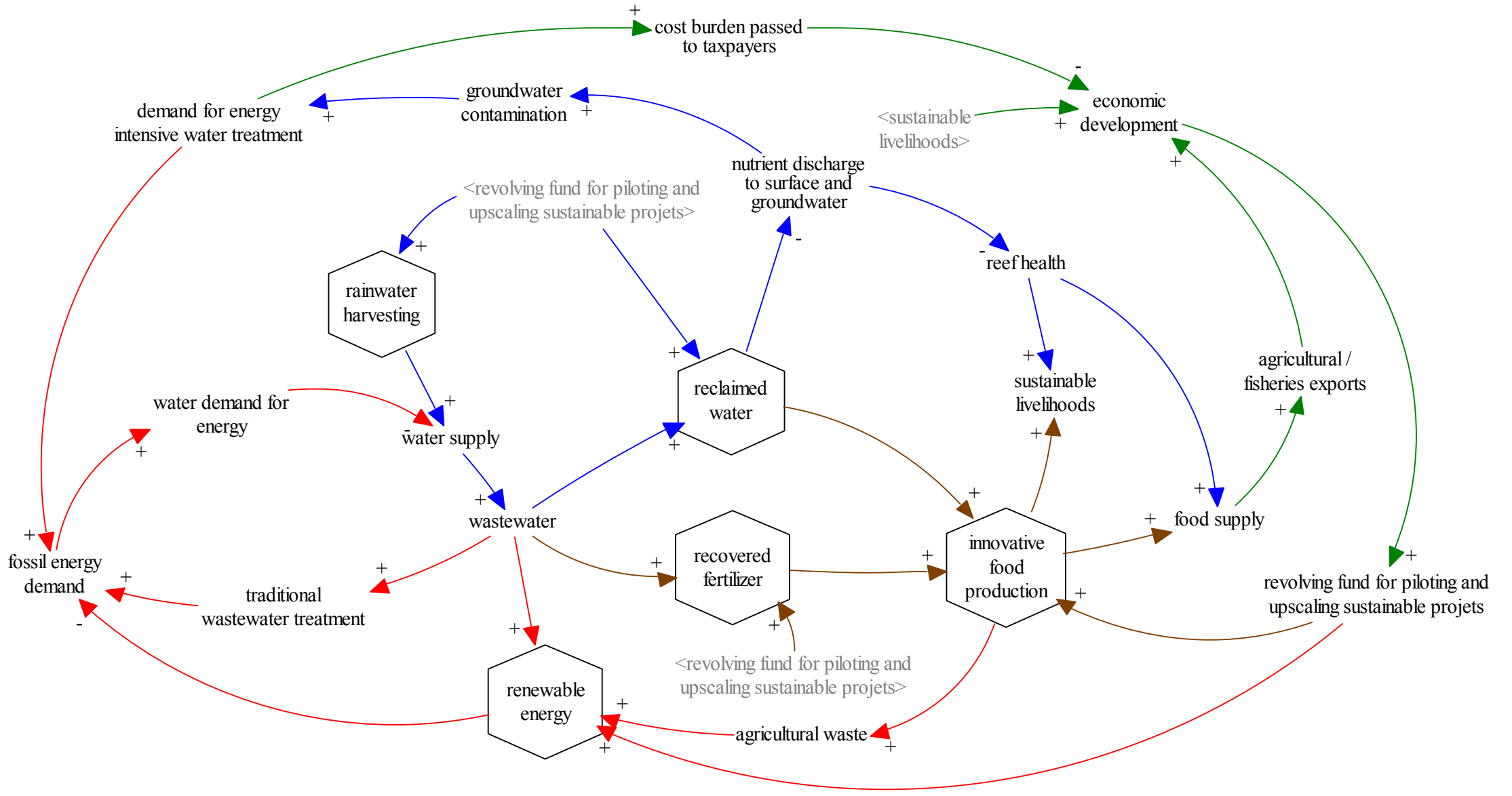
UNIVERSITY OF
SOUTH FLORIDA



GUIDING RESEARCH QUESTION

What are the leverage points (technological, regulatory, organizational) in food-energy-water systems (FEWS) in a specific geographic context to improve the sustainability of the overall system across different scales?

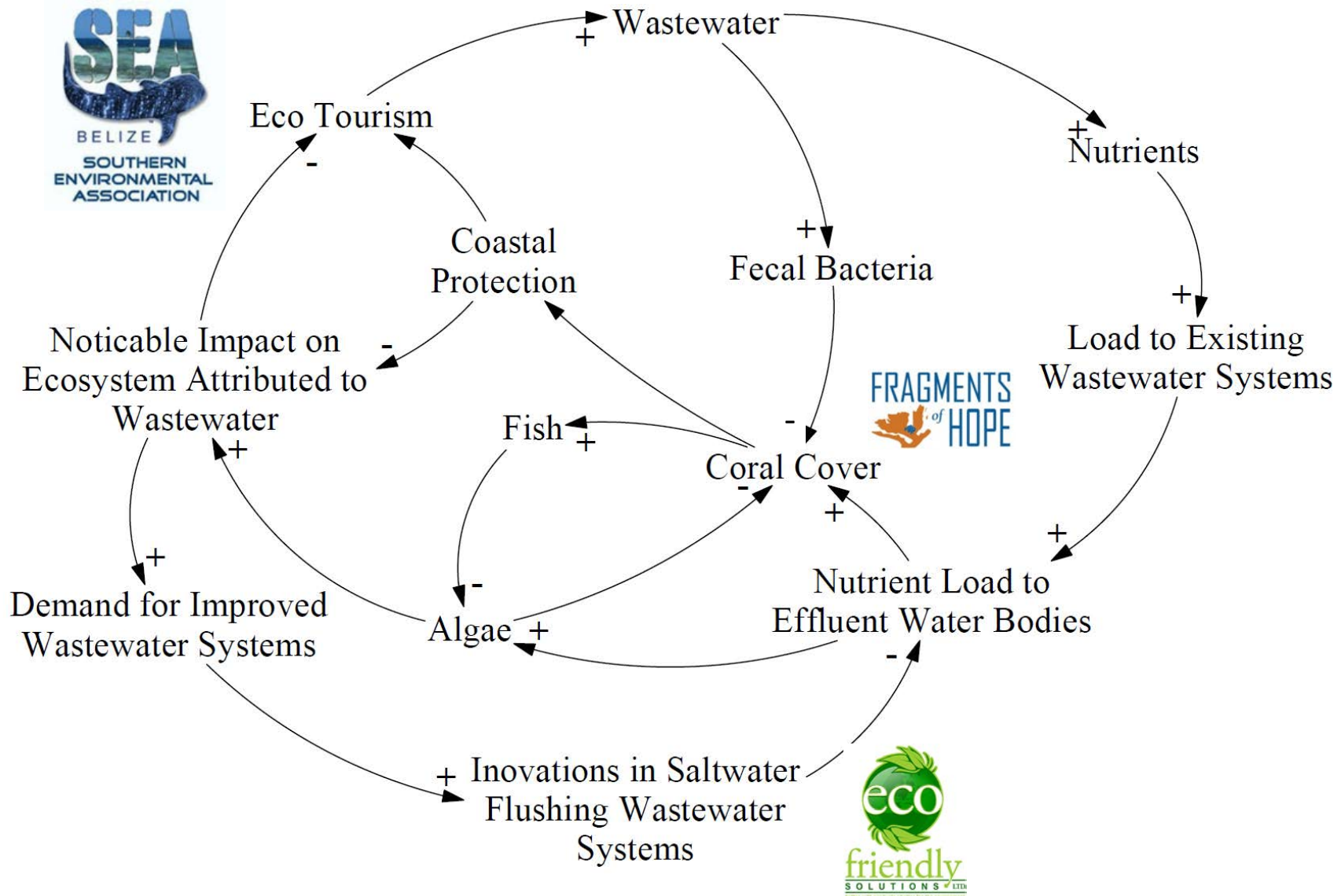




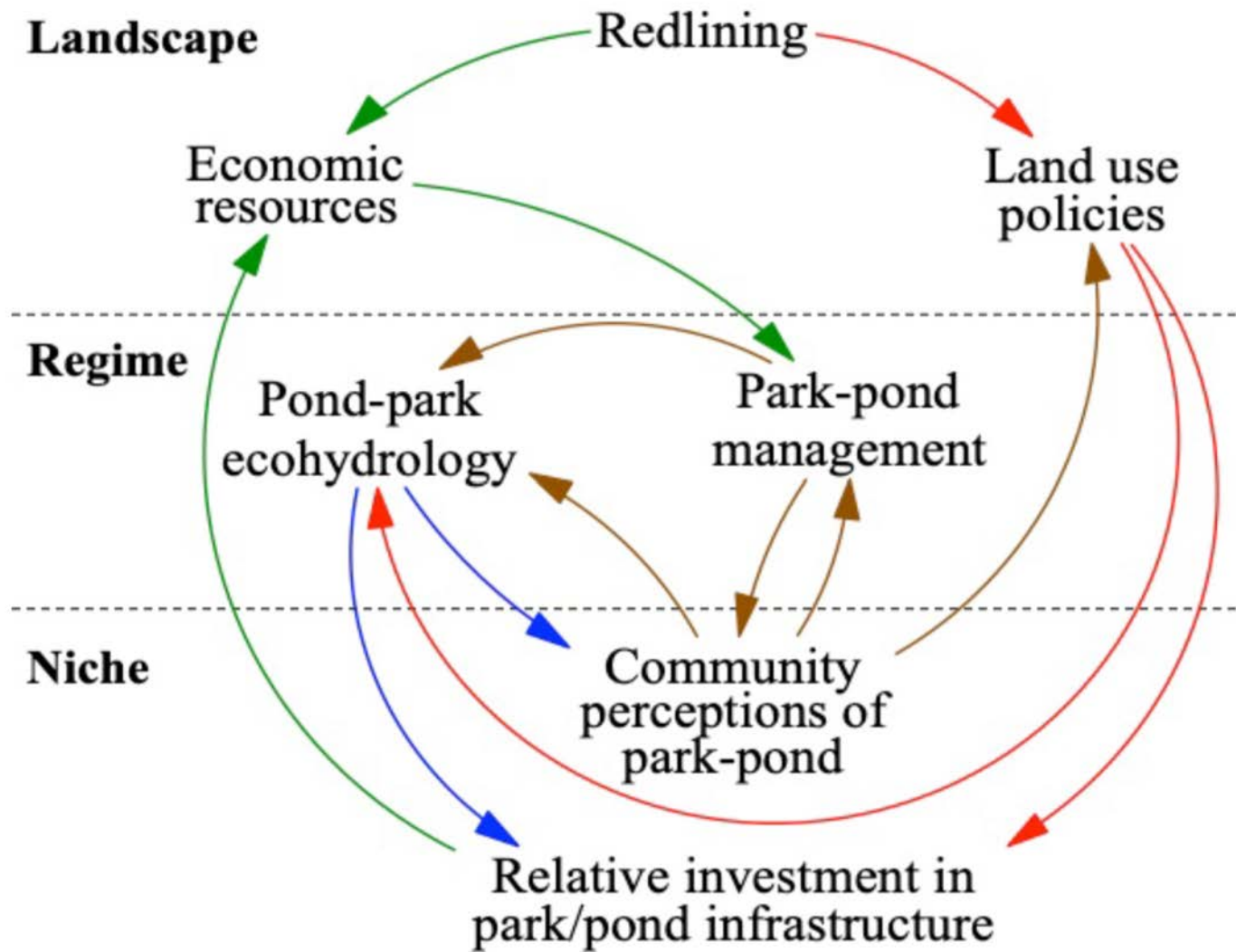


**Community Engaged Research
Interdisciplinary Research & Education
Systems Thinking
Global Competency**





Causal Loop Diagram of Onsite Wastewater Treatment Management for Nutrient Pollution in the Belizean Cayes. Credit: Daniel Delgado, William Alex Webb, Christine Prouty, Rebecca Zarger, Luis Garcia



Initial conceptual diagram of a socio- ecosystems model for community engaged decision making for stormwater management in Tampa, FL. Credit: Rebecca Zarger, Maya Carrasquillo, Christine Prouty, David Bruce-Lewis, Mauricio Arias, Shawn Landry

Water Sector Resilience Nexus for Sustainability in Barbados (WSRN S-Barbados) – Causal Loop Diagram

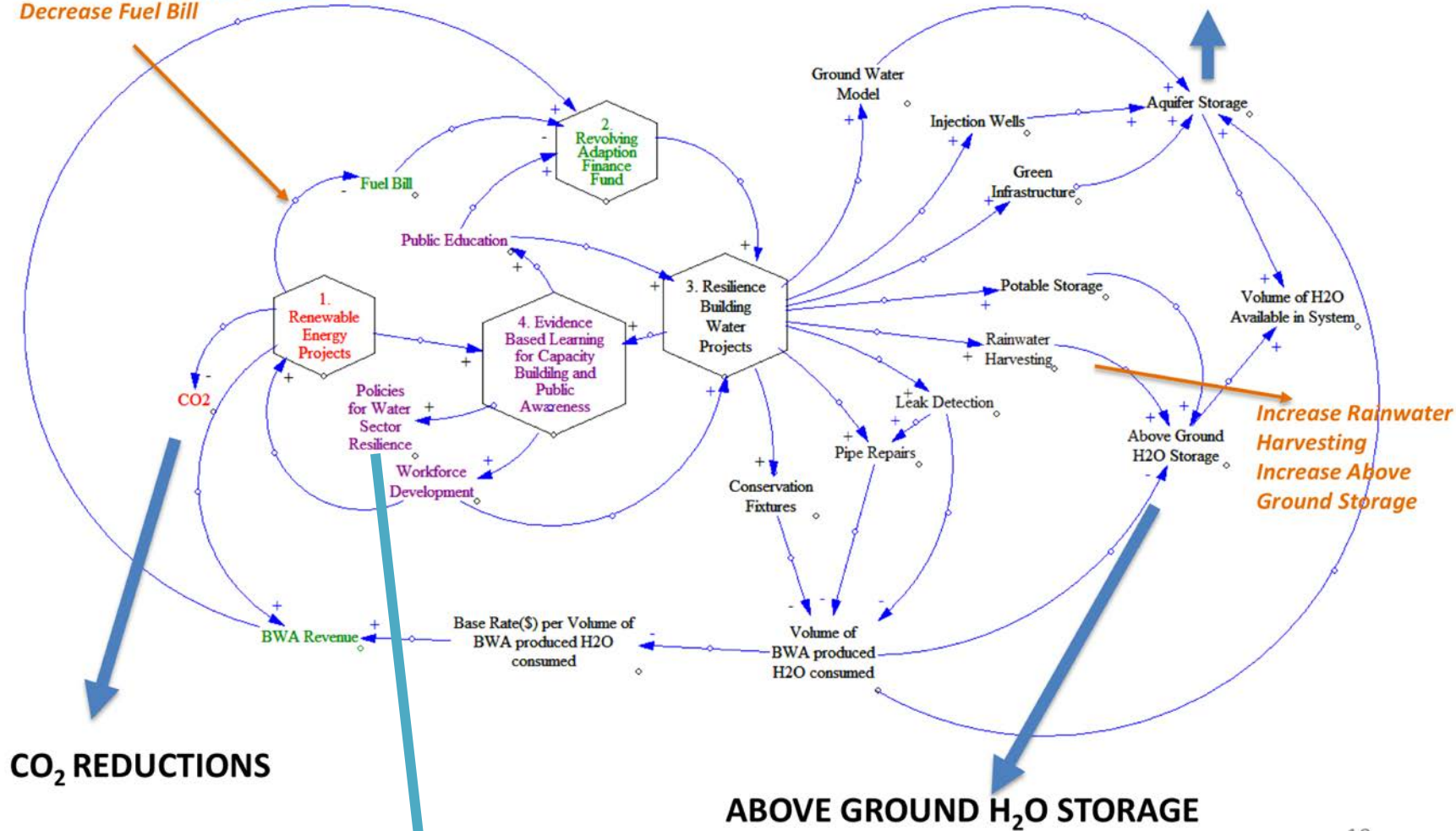
Credit - Wainella Isaacs & Christine Prouty, University of South Florida
matrotz@usf.edu



Caribbean Community
Climate Change Centre



Increase Renewable Energy projects
(4.5 MW PV + 2.8 MW Natural Gas)
Decrease Fuel Bill



“I think my positionality knowing that as a black woman in this space, that the work I am doing is directly impacting a community that I can self-identify with, has been a motivator to keep going in the program. So, I think if you are talking about not only recruiting students, but retaining students in a program that is already rigorous, you want to be able to provide a support system not just from a community level, but in terms of the research that we are equipped to do.”

Maya Carrasquillo, ENV SP
Ph.D. Candidate, Environmental Engineering, USF

Thank You.

Strong COASTS



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Questions?

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<https://medium.com/@strongcoasts>

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Questions?

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Mullins Beach, Barbados. August 2019