

Fishery Ecosystem Plan

2021 Stakeholder Engagement Workshops Briefing

CFMC EBFM TAP

Overview

Fishery Ecosystem Plan (FEP) Stakeholder Engagement Workshops

- Project background and purpose
- Methods and outreach
- Conceptual models
- Common themes

Background

- Project driver = FEP best practices
- “Where are we now?”
- Co-creation of a conceptual model (stakeholders, managers, scientists)
- *“Stakeholder input is central to fishery system planning.”*
- Broad stakeholder involvement is necessary to identify tradeoffs

THE FEP LOOP

The main recommendation of the Task Force report is that FEPs be used to create a structured process for establishing goals and translating them into action. The report proposes the “FEP Loop” process.



Credit: Lenfest Fishery Ecosystem Task Force (2016)

Background

- Project was part of large, coordinated effort by the Council and others to reach as many stakeholder groups as possible, as per FEP best practices
 - Fishers and fishing communities
 - Scientists and coastal/marine experts
 - Managers
 - Other (non-fishing) stakeholder groups
 - Lots of conceptual models for TAP!
- PCT offered to support a subset of stakeholder engagement workshops (local businesses, eNGOs)
- Coordination with Lenfest grantees regarding methods
- Project timeframe: late August 2020-August 2021

Purpose

- Ensure that a variety of stakeholder viewpoints are incorporated into the development of the Council's overall conceptual model.
- Engage a subset of stakeholder groups that are not frequently involved in the Council's work.
 - Coastal businesses: dive shops, surf shops, sailing charters, outdoor guides, restaurants, hotels, guest houses, etc.
 - Local environmental nongovernmental organizations (eNGOs) based in each island district.
- Develop conceptual models for each stakeholder group in each district (PR, STT/STJ, STX).

Methods

Outreach materials

- Two-page information briefs
- Spanish and English versions
 - Fishery Ecosystem Plans
 - Conceptual Models
- Distributed to all stakeholders who accepted invitation



The Caribbean Fishery Management Council (Council) is responsible for conserving, restoring, and managing the fishery resources in federal waters of the U.S. Caribbean. As part of the Council's work, they are developing a Fishery Ecosystem Plan (FEP), which is a comprehensive plan that acknowledges the connections among fish and other marine life, the changing ocean environment, and the humans who rely on and use these resources.

What is an ecosystem? What is a fishery? What is a fishery ecosystem plan?

An **ecosystem** is a community or group of living things that interact with one another in a particular environment. There are many types of ecosystems – for example, forest ecosystems, desert ecosystems and coral reef ecosystems. The most important characteristics of an ecosystem are the linkages between living and non-living things.

A **fishery** – fish + people. It consists of a species or group of species and the people who catch those fish. Fisheries can be defined by many characteristics, such as the type of gear used, an area fished, or a user group (e.g. commercial, private angler, charter). Fisheries are systems that have biological, social, cultural, economic, and human components.

A **fishery ecosystem** consists of all the linkages between a fishery (or fisheries) and its components: human (fishermen, processors/dealers, boat mechanics), biological (fish, habitats, predator-prey relationships), social (seafood restaurants, ocean recreation), cultural (fishing-dependent communities), and economic (market demands, costs for fuel, bait, crew, etc.).



Modelos Conceptuales



¿Qué es un modelo conceptual? ¿Cómo se usa?

Un *modelo conceptual* es una herramienta que permite que un grupo de individuos obtenga conocimiento sobre problemas o sistemas sociales y ambientales complejos. Los modelos conceptuales son un medio para representar y compartir diferentes ideas sobre un sistema para entender supuestos, puntos en común y diferencias. Además, permiten identificar los componentes críticos de un sistema y las relaciones entre estos componentes. El objetivo principal de un modelo conceptual es guiar las estrategias de manejo mediante la identificación de factores o decisiones particulares que pueden afectar a los componentes identificados. Esto puede ayudar a mejorar la solución de problemas de manera colaborativa y la toma de decisiones, así como la comunicación entre la comunidad, los científicos y los manejadores.

¿Cómo se desarrolla un modelo conceptual?

El desarrollo de un modelo conceptual no es complicado. El primer paso es *identificar los componentes* del sistema de interés. Los *componentes* son cosas que pueden aumentar o disminuir en cantidad o calidad (por ejemplo, lluvia, felicidad, tráfico, empleos, poblaciones). Pueden ser de naturaleza social, biológica, cultural o económica. El siguiente paso es *identificar las relaciones, o vínculos entre los componentes*. Los impactos son direccionales y son positivos o negativos (Figura 1).



Figura 1: Ejemplo que ilustra componentes e impactos. A representa dos componentes (lluvia, una planta) mientras que B representa el vínculo entre los componentes. La flecha y el signo de más muestran la dirección y la naturaleza del impacto.

Methods

Stakeholder contact

- Stakeholder list developed in coordination with OEAP Chair and support from Sea Grant staff.
 - Separate workshops for each stakeholder group in each district (2 groups x 3 districts = 6 workshops)
 - Target size 8-12 participants for each workshop
 - Invited over 40 eNGOs and over 80 coastal businesses
- Email invitation ~4 weeks in advance of workshop
 - Follow-up email and phone calls for non-respondents
 - Agenda and outreach materials sent to confirmed stakeholders
- Reminder email with agenda/materials 2 days prior to workshop, reminder phone calls one day in advance
- Workshops conducted in April and May of 2021

Methods

Workshops

- Virtual 2-hour facilitated workshops (recorded)
- Evening workshops for businesses
- Simultaneous translation for PR, Spanish materials
- Brief presentation
 - Background information
 - Trigger questions and individual brainstorming
 - Identification of biological, social, and economic components
 - Identification of relationships



What is an ecosystem?

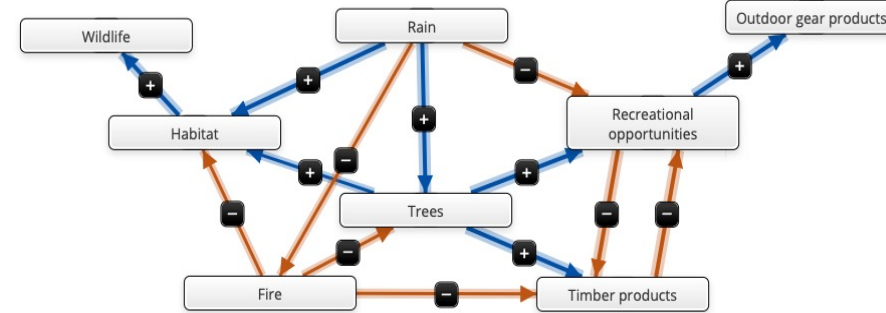
- **Ecosystem** = a community or group of living things that interact with one another

What is a fishery?

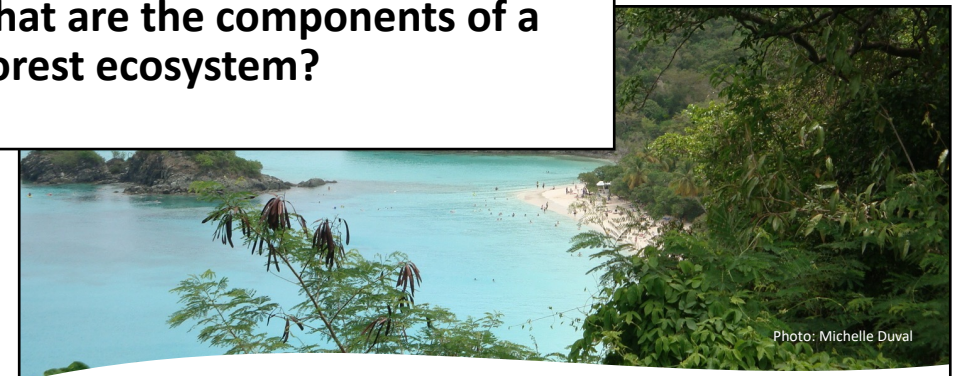
- **Fishery** = fish + people

What is a fishery ecosystem plan?

- **Fishery ecosystem** = linkages between a fishery and its components
- **Fishery ecosystem plan** = comprehensive management system based on the connections between human and biological components of fisheries



Example: What are the components of a forest ecosystem?



What do you think are the components of the marine fishery ecosystem in St. Croix?

- **Components:** Things that can increase or decrease in quality or quantity
- Social, biological, economic, cultural, physical
- Individual brainstorming: Think of 3-5 components
- There are no wrong answers!

Methods

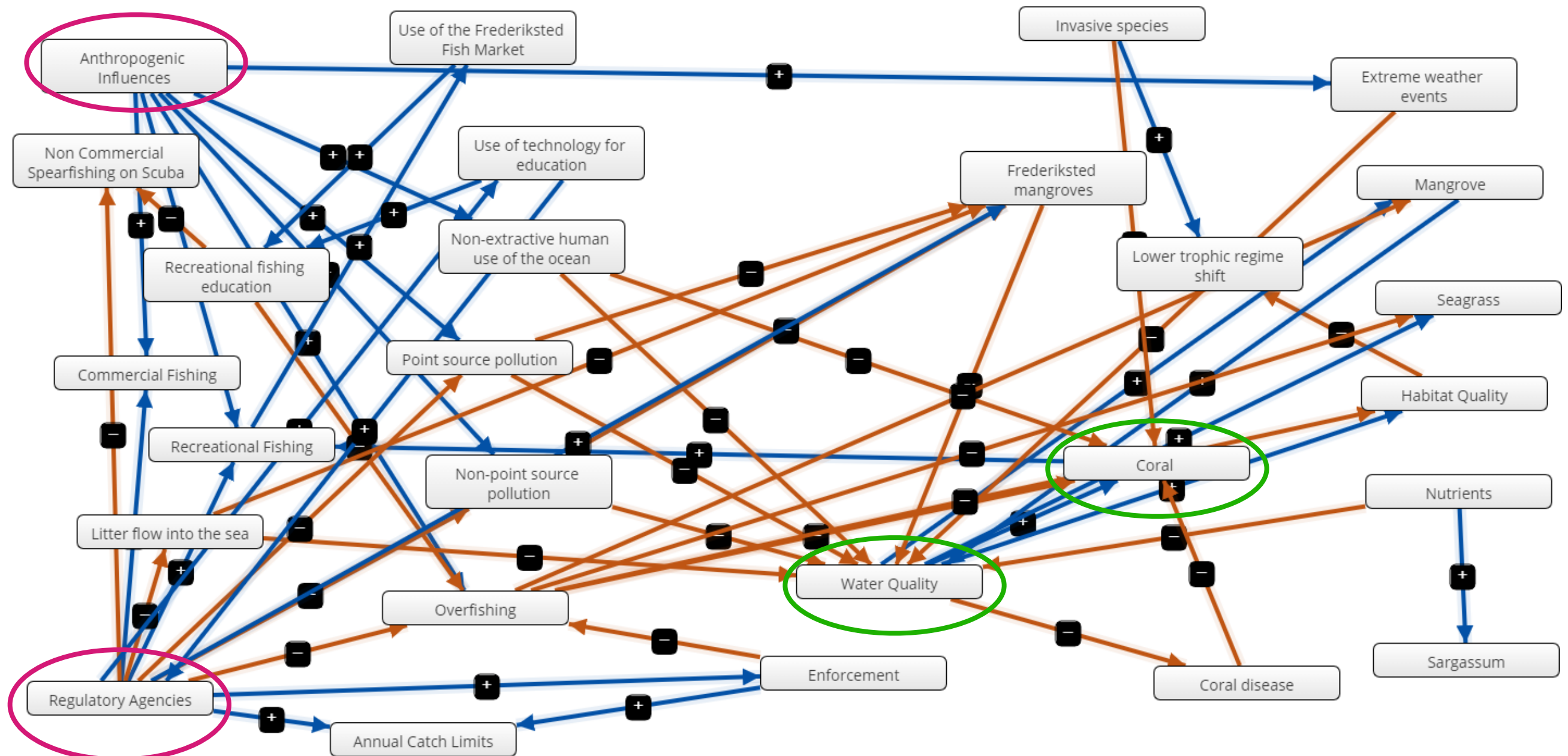
Workshop follow-up

- Thank you email with link to Google document containing conceptual model
- Allowed 2 weeks for participants to provide feedback on additional relationships/linkages between components (model validation)
- Incorporation of additional participant feedback
- Review of workshop recordings to ensure accuracy

Conceptual Models

St. Croix

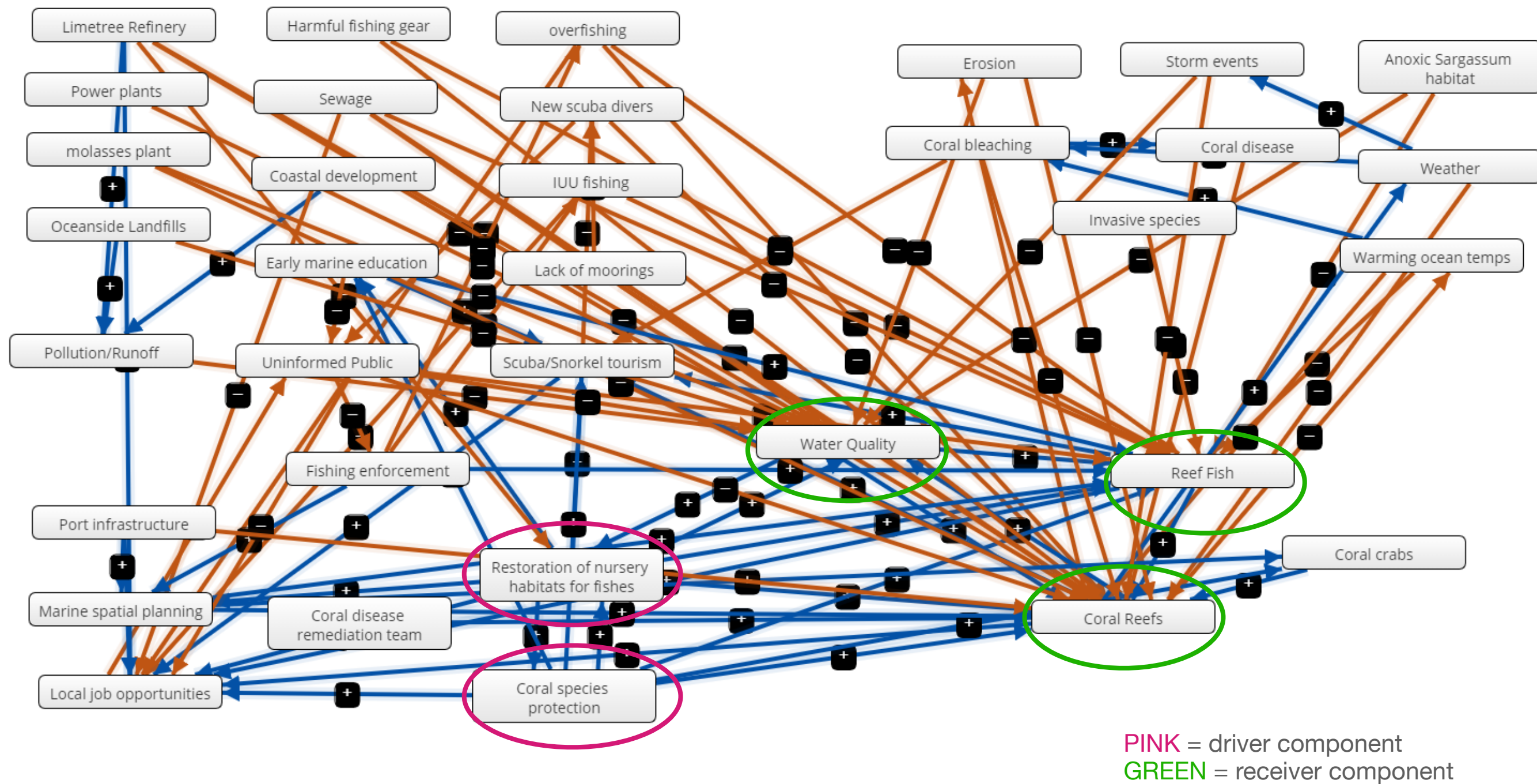
Environmental Nongovernmental Community



PINK = driver component
GREEN = receiver component

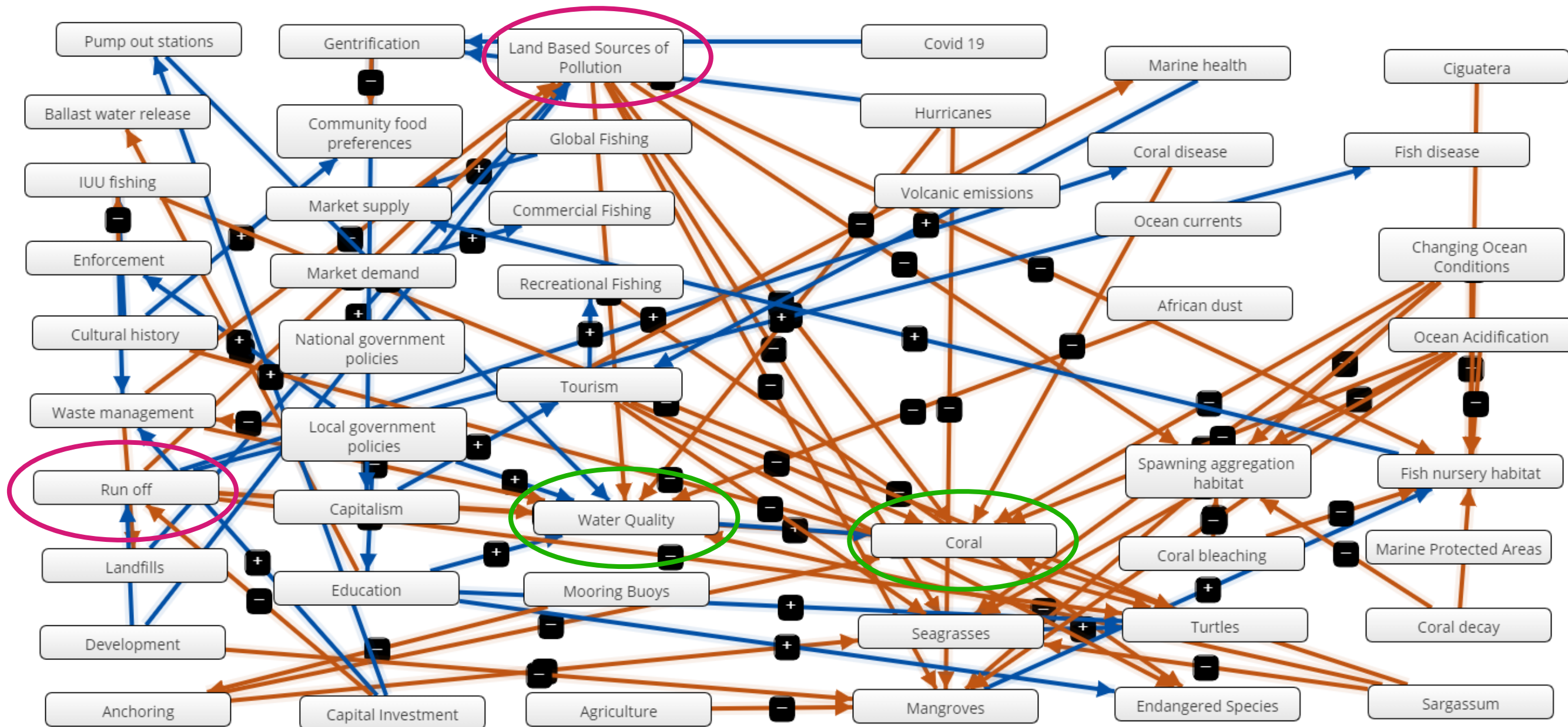
St. Croix

Coastal Business Community

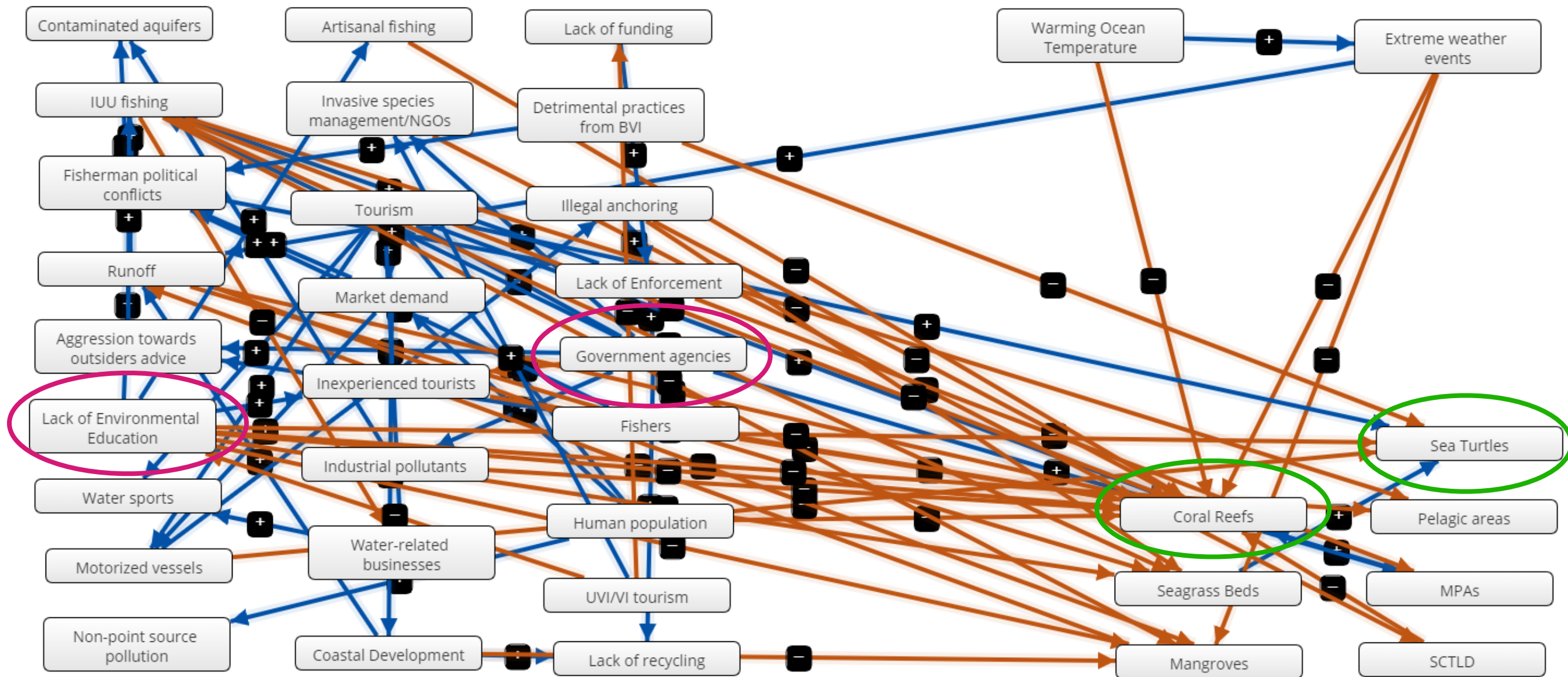


St. Thomas/St. John

Environmental Nongovernmental Community



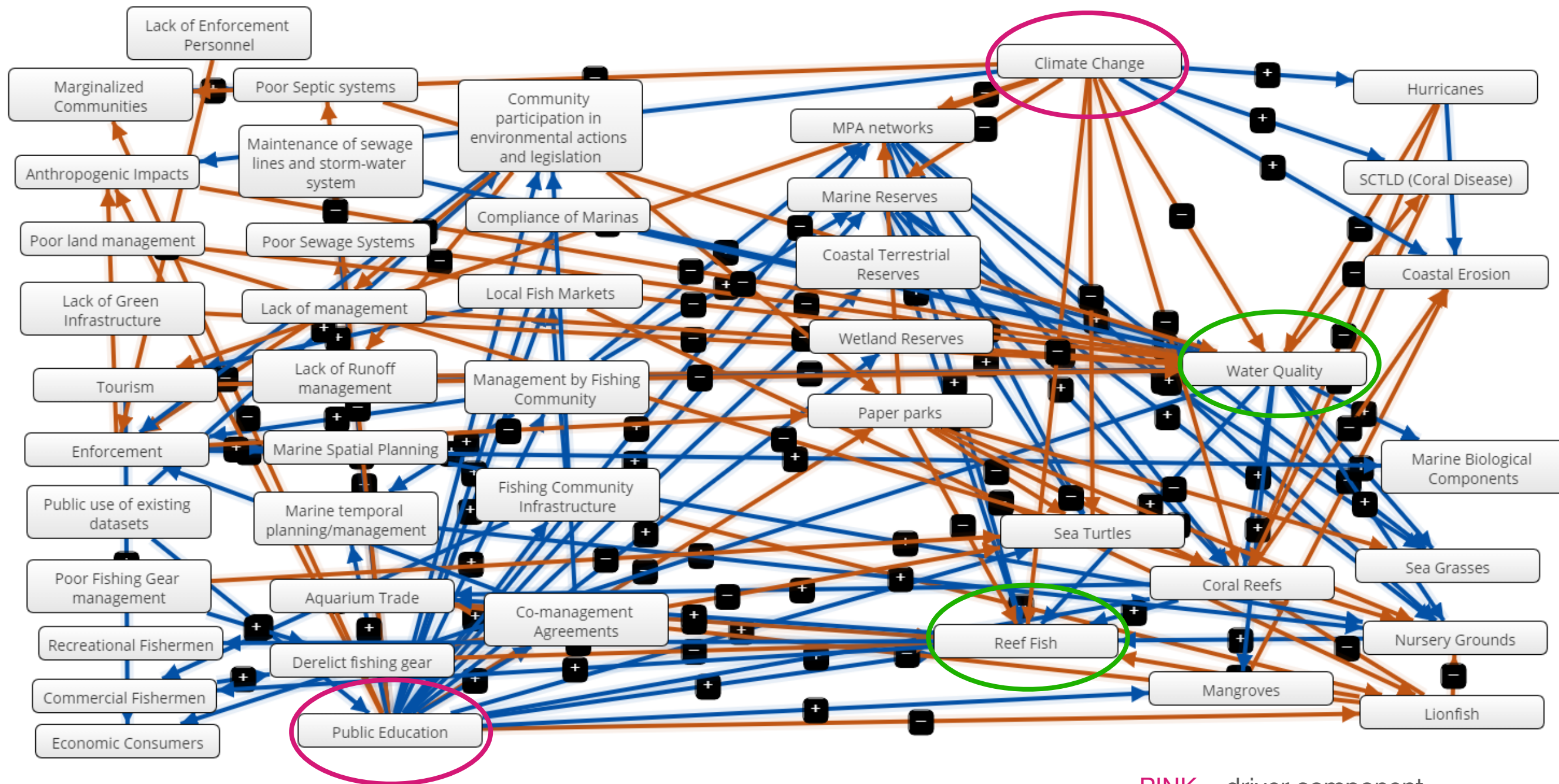
St. Thomas/St. John Coastal Business Community



PINK = driver component
GREEN = receiver component

Puerto Rico

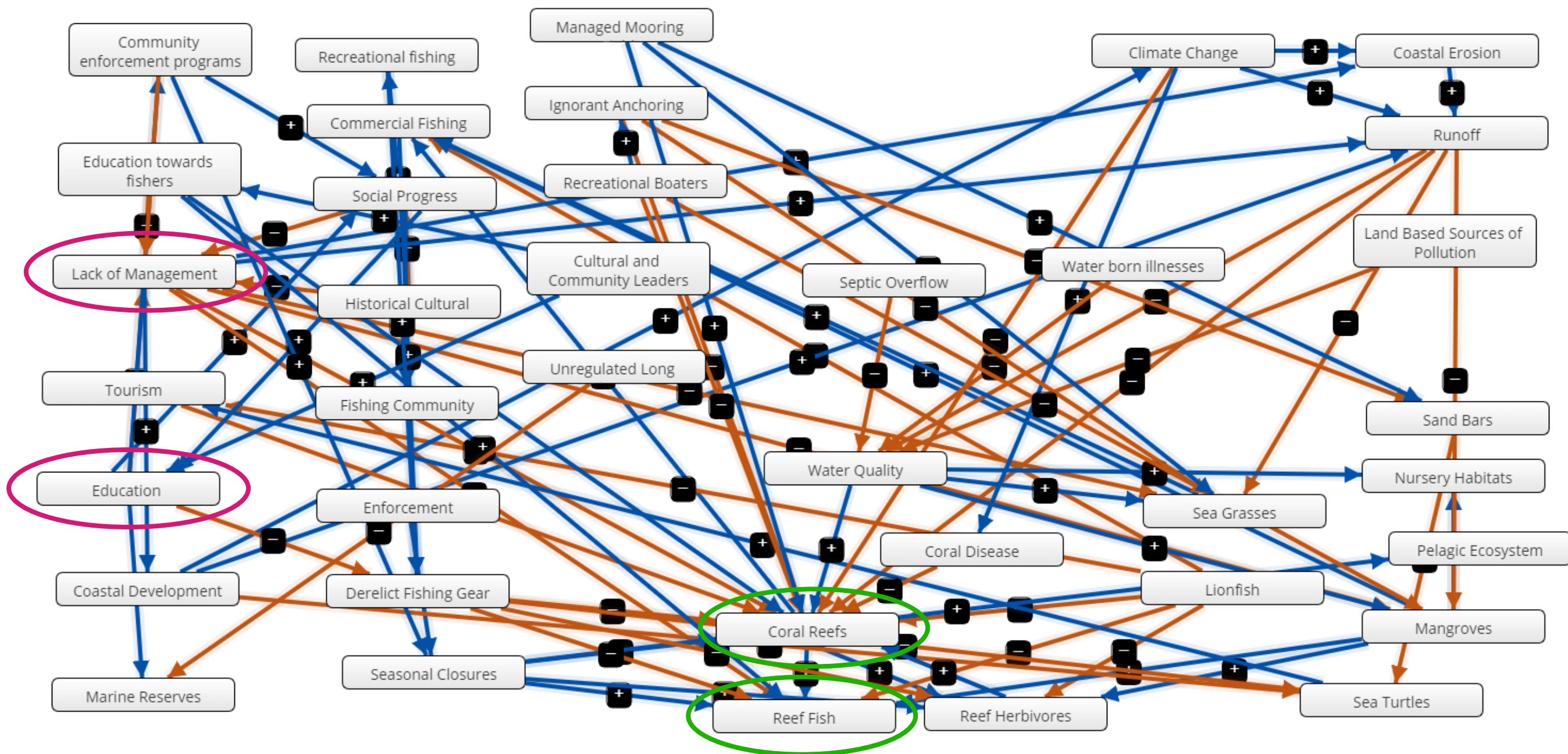
Environmental Nongovernmental Community



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Puerto Rico

Coastal Business Community



Conceptual Models

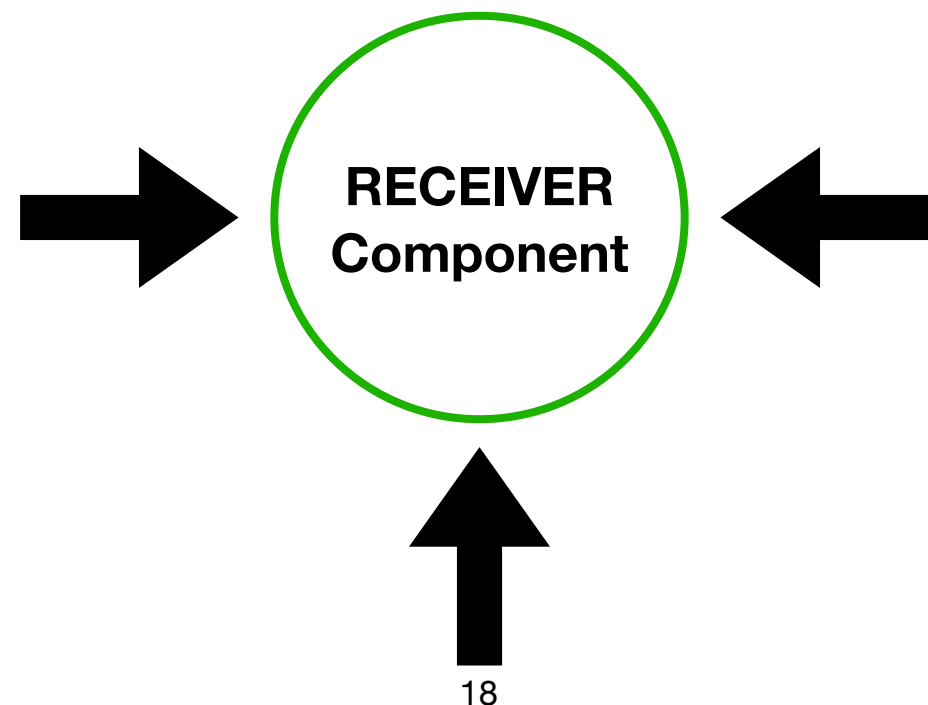
Common Themes

- Education
- Enforcement
- Fishing activities and/or gear
- Pollution and waste management (e.g., runoff, erosion, point source/non-point source pollution, etc)
- Ocean, climate, and/or weather conditions
- Marine habitats (various types)
- *Tourism (except STX NGO)*
- *Water quality (except STT/STJ coastal business)*

Conceptual Models

Common Themes

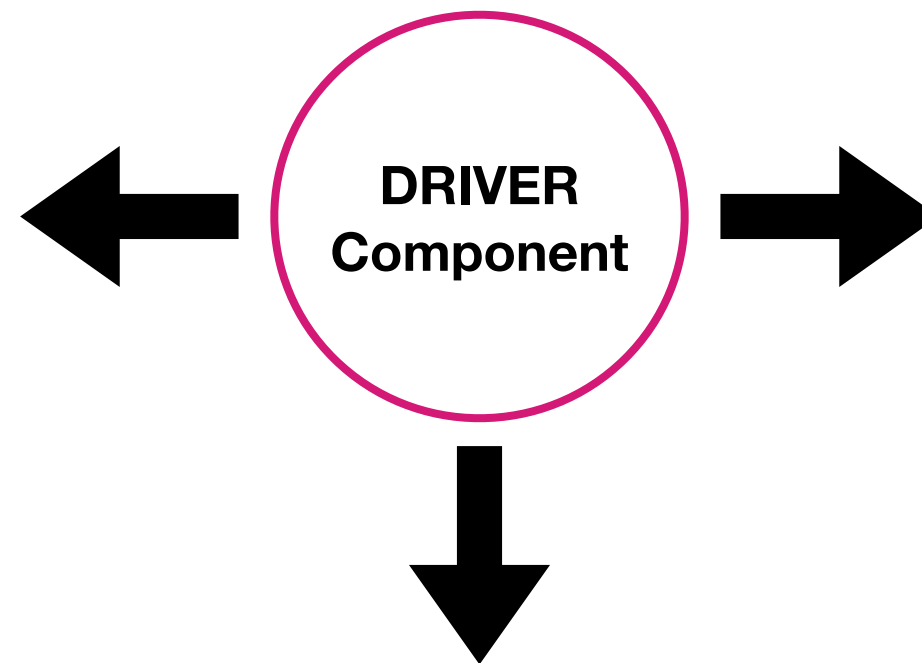
- Components that were affected by the most other components
 - Water Quality: STX eNGOs, STX Businesses, STT/STJ eNGOs, PR eNGOs
 - Coral/Coral Reefs: STX eNGOs, STX Businesses, STT/STJ eNGOs, STT/STJ Businesses, PR Businesses
 - Reef Fish: PR eNGOs, PR Businesses



Conceptual Models

Common Themes

- Components that affected the most other components
 - Education: PR Businesses, PR eNGOs, STT/STJ Businesses
 - Government/Regulatory Agencies/Management: PR Businesses, STT/STJ Businesses, STX NGOs



Project conclusion

- Council briefing on workshops (July 2021)
- Report completion (August 2021)
- Next steps: Incorporation of models into Council's overall melded conceptual model by the TAP

Questions?

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