

Implementing an integrated, wireless monitoring network to enhance decision making in communities impacted by environmental and industrial change

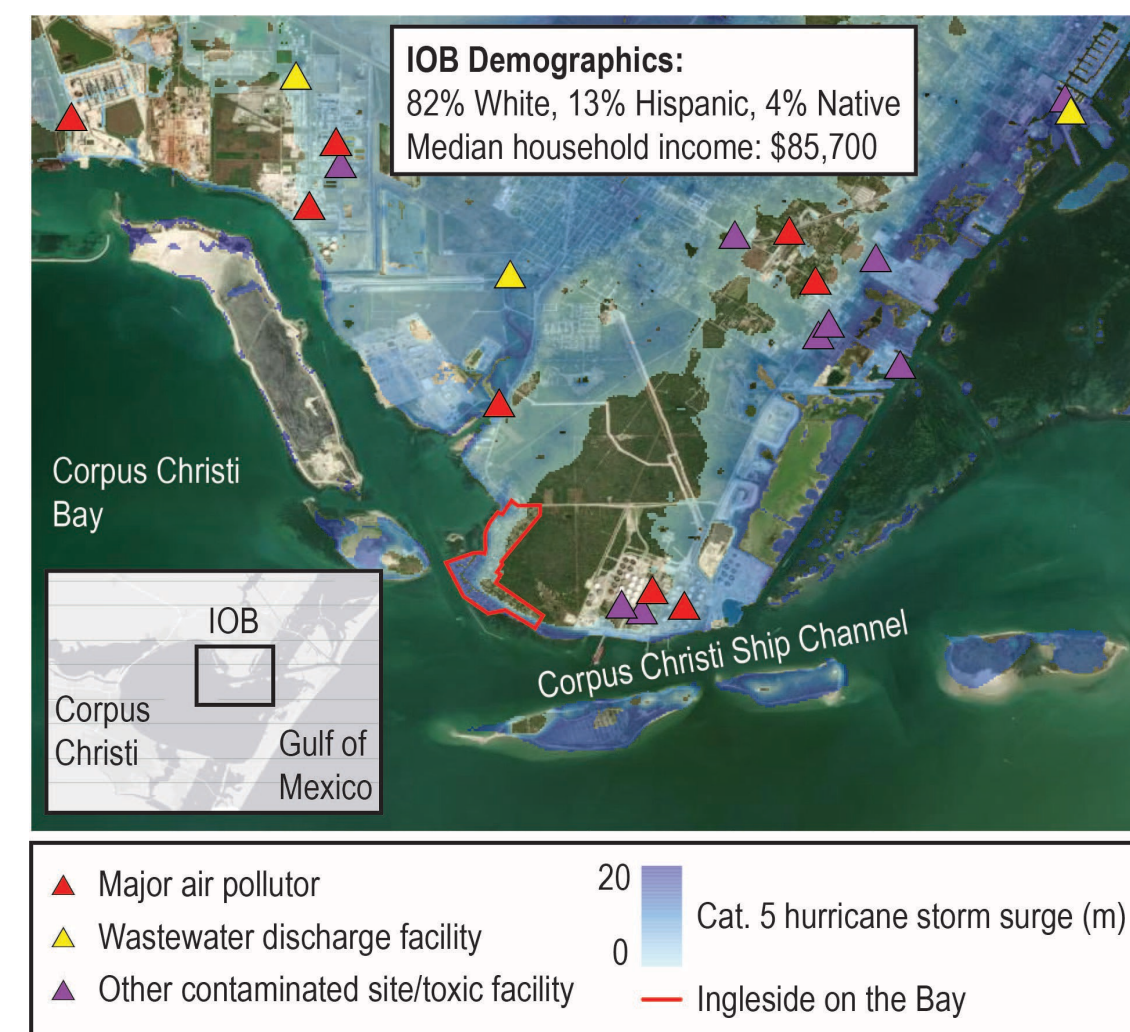
Michelle Hummel¹, Karabi Bezboruah¹, Oswald Jenewein¹, Yonghe Liu¹, Kathryn Masten²

¹University of Texas at Arlington, ²Maritimatrix
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Partner Community

- Ingleside on the Bay, Texas
- Population: 800 residents
- Located along the shore of Corpus Christi Bay on the Gulf Coast
- Non-profit IOB Coastal Watch Association



Community-Identified Challenges

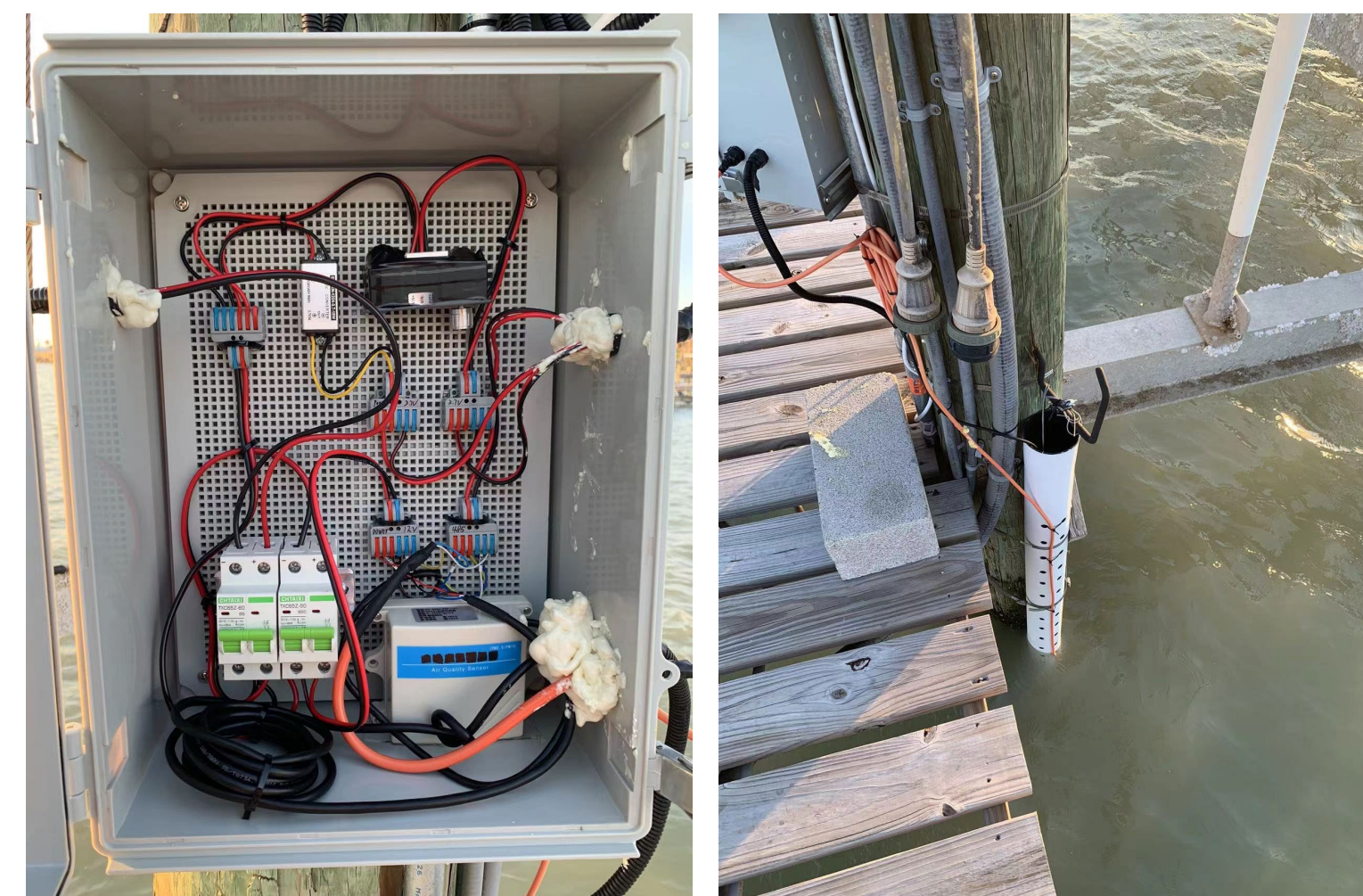
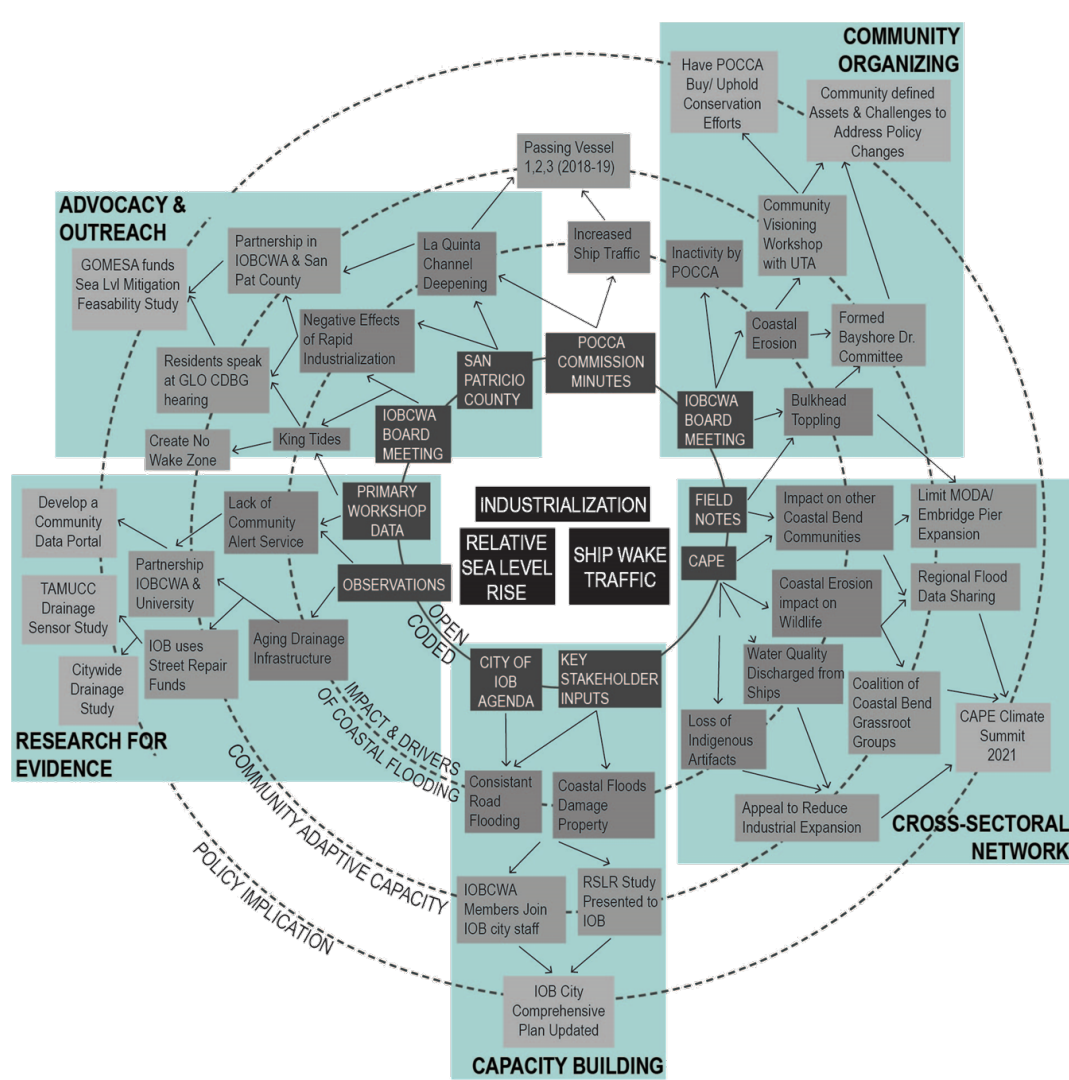
- Impacts of climate change and industrial development on air and water quality and shoreline flooding.
- Lack of monitoring data to support sustainable planning.



Intellectual Merit

- Demonstrated the feasibility of integrating wireless sensor and data visualization technologies to monitor local-level environmental conditions.
- Analyzed how community network structures develop in response to environmental threats, with a particular focus on the role of rural, community-based nonprofits.

Project Activities



Broader Impacts

- Increase knowledge and awareness of environmental conditions among residents.
- Train community members to operate and maintain sensor network.
- Inform public policies regarding climate adaptation and industrial permitting.

Next Steps

- Expand this work to the broader Corpus Christi Bay area through a new IRG.
- Evaluate the role of smart and connected technologies in supporting regional decision making and building adaptive capacity.

