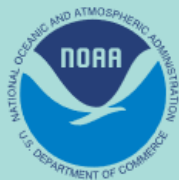


01/17/24



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@FloridaSeaGrant

FLORIDA SEA GRANT'S 2024 SYMPOSIUM: SPOTLIGHTING UF'S ROLE

Session II Resilient Communities and Economies

Holly Abeels

FSG Extension Agent

UF/IFAS Brevard County Extension

01/17/24

Sea Grant
FLORIDA

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NOAA

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FLORIDA SEA GRANT'S 2024 SYMPOSIUM: SPOTLIGHTING UF'S ROLE

Spatial Justice in Neighborhood Revitalization for Adaptation and Resilience

Jason von Meding

Associate Professor

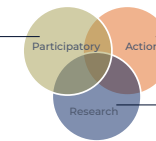
UF DCP/FIBER/Rinker School

01/17/24

Project Overview

- Aim**
 - Integrating community-designed spatial justice principles into Jacksonville's housing infrastructure planning.
- Objectives**
 - Collaborating on cycles of PAR with community
 - Creating spatial justice tools
 - Developing a framework for community-led science
- Goal**
 - Equitable solutions for local revitalization

Society life, communication, collaboration and empowerment through participation



Engagement with real life experience and history, sensation, and the growth of knowledge

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01/17/24

Research Plan

- Our interdisciplinary team:**
 - Built Environment:* Construction Management, Civil Engineering, Urban Planning, Environmental Law.
 - Community Psychology & Health:* Psychology, Immunology, Sociology.
- Project Accomplishments:**
 - Building System of Care with 32209 community
 - Housing and Respiratory Health Assessn
 - Housing Survey and Air Sensors
 - Mapping and Modelling
 - Navigating community-led science!
 - Being a trusted coalition partners



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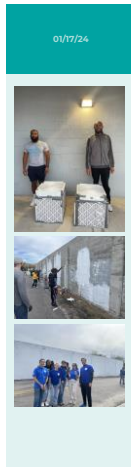
01/17/24

Findings & Impacts

- science outcomes**
 - Workshop at NHW 2022, posters and presentations at NHW 2023
 - Poster at UG Symposium
 - Belonging paper
 - Spatial Justice Collective activities
- end user benefits**
 - YAS outcomes for youth participants and beneficiaries
 - Changes in 32209 - psychologically and physically
 - PAR group coalition building

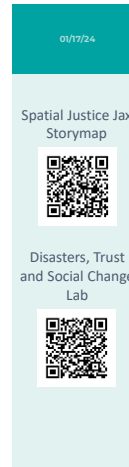
FLORIDA SEA GRANT

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Moving Forward

- Collaborations enabled through this funding
 - C-R Box project
 - Belmont Forum Consortium
 - NAS proposal
- Additional activities
 - Youth Mental Health Summit
 - Collaboration with community stakeholders on local history mural, podcast, videography
- Student training
 - DTSC lab and GatorCorps students connected with 32209
 - research experience through cycles of research



Acknowledgements

- We are grateful for funding from Florida Sea Grant and UF Rinker School that makes this work possible
- Thank you to the project team:
 - Darien Alexander Williams, Thomas Ruppert, David Prevatt, Brian Seymour, Jacqueline Conley, Marjorie Prokosch, Colin Tucker Smith, **Haleh Mehdipour, Christopher Williams, Aidan Bryant, Ava Vellines, Jiayi Zhu, Kelly Currick, Kala Anderson, Jeronda Jenkins, Shania Ewell, Leonora Fallon, Cory Gann, Zelli Pych, Andrew Landsaw, Carmen Sheils, Cory Mendoza, Hana Checketts, Marina McKinstry**
- Community-centered work is only ethical and robust through partnerships. Thanks to ours:
 - Edward Waters University
 - Center for Children's Rights, Jacksonville
 - Unified Community Investors
 - State of the Young People (everyone in the coalition!)





FLORIDA SEA GRANT'S 2024 SYMPOSIUM: SPOTLIGHTING UFG'S ROLE

Plastic-Free Restoration of Oyster Shorelines (PROS): Enhanced Materials and Quantifying Benefits

Mark Clark

Associate Professor

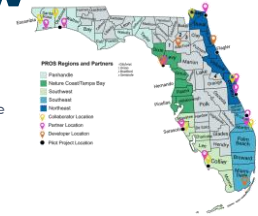
Soil, Water, and Ecosystem Sciences Dept.
Gainesville, FL

#FSGsymp24
@FloridaSeaGrant



Project Overview

- PROS launched in 2020 to:
 - Demonstrate novel artificial oyster substrate called Jute Reinforced Calcium Sulfoaluminate (JR-CSA) and,
 - Cultivate a Community of Practice (CoP) among shoreline restoration researchers and practitioners to facilitate exchange of information and ideas
 - funded by FDEP Coastal Zone Management funding
- FSG funding follow up of PROS focused on
 - Refinement of JR-CSA material
 - Quantification of JR-CSA elements and PROS.



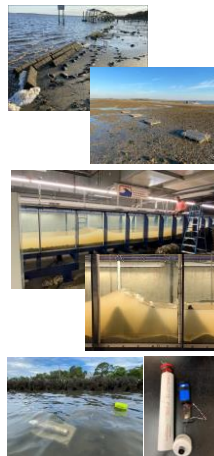
Research Plan

Enhanced materials

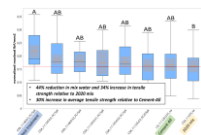
- Improve JR-CSA cement mix and guidance
- Develop oyster reef restoration element "Reef Panels" and provide construction guidance

Quantifying Benefits

- Reef Prism water quality
- Wave attenuation of JR-CSA materials and integrated living shorelines.



Findings & Impacts



Tensile break strength of various enhanced JR-CSA mixes relative to reference mixes

	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
1	1	2	3	4	5	6	7	8	9	10
5	4	9	13	18	22	26	31	35	39	44
10	9	18	26	35	44	53	61	70	79	88
15	13	26	39	53	66	79	92	105	118	131
20	16	31	46	61	76	91	106	121	136	151
25	21	44	66	88	110	131	153	175	197	219
30	26	53	79	105	131	156	181	206	231	256
35	31	61	92	123	154	184	215	245	276	307
40	35	70	105	140	175	210	245	280	315	350
45	39	78	118	158	197	237	276	315	354	394
50	44	88	131	175	219	263	307	351	394	438

Particulate removal rate per prism (1-m²) relative to ambient total suspended solids

JR-CSA material refinement and improvement

- 52 treatments, best treatment 30% increase in tensile strength relative to of the shelf "Cement-All".
- Most cost effective is currently Cement-All.
- Longevity TBD

Reef Panel development and deployment

- Refined reef panels are being evaluated as a reef restoration material where stable substrate is limiting. Results are very promising and scale up underway.

Reef Prism water quality benefits.

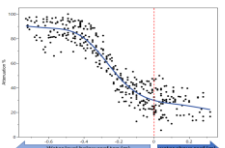
- Filtration studies produced a per prism filtration capacity based on water column particulate loads.

Wave attenuation

- Construction and use of low-cost wave gauges (MSU Sea Grant) showed xx reduction in wave energy using Reef Prisms as part of living shoreline and showed a 15-20% overall reduction in wave energy by living shorelines during Hurricane Idalia in Cedar Key.



Oyster recruitment on Reef Panels deployed on Corigan Reef, Cedar Key, FL



Attenuation of wave energy by reef panels

01/17/24

Just getting started

- PROS demonstration sites and material exposure has led to interest in integrating material and shapes into new oyster restoration and living shoreline projects.
 - Franklin-98, Corrigan Reef restoration, Tampa Bay...
- Continued follow up with collaborators at demonstration sites to evaluate condition.
- New grant funding - TNC SOAR, NOAA Transformational Coastal Restoration
- Student engagement
 - Interns focused on material integrity and filtration capacity,
 - PhD student evaluated JR-CSA material for "oyster gardening" (ranked best in many categories)
 - Another PhD student evaluating Reef Panels and deployment morphometry for restoration and shorebird utilization.



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Gracie Hejmanowski



Elix Hernandez

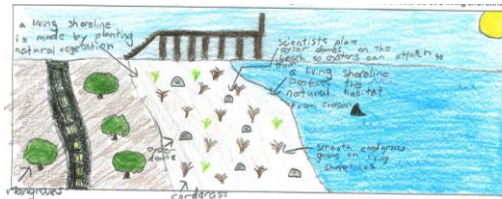
Acknowledgements

- Funding sources
 - Original PROS – FDEP Coastal Zone Management
 - PROS supplemental – FSG
- Project team
 - Savanna Barry – co inventor and PI/Co-PI
 - Elix Hernandez – Post doc
 - Staff – Lauren Griffiths
 - Students/Interns – Gracie Hejmanowski, Molly Allen, Chloe Schwab, Jeremy Geiger, Emory Wellman, Joe Marchionno, Kyle Williams
 - Regional collaborators – Laura Tu (FSG, Walton County); Rachel Gwin (CBA, Ft. Walton Beach), Armondo Ubeda (FSG, Sarasota County), Mike Sipos (FSG, Collier County) Vincent Encomio (FSG, Martin & St. Lucie County), Holly Abeels (FSG Brevard County).
 - Additional collaborators –; Justina Dacey (Duval County Extension/student) Bret Webb (Univ. South Alabama), Marine Resources Center, Oyster Corp, PROS workshop volunteers, members of PROS Community of Practice. Andrew Gude, Lower Suwannee National Wildlife Refuge; Nature Coast Biological Station; Rookery Bay NERR



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Restore the Shore:

Online STEM Engagement and Impacts on Youth

Dr. Jamie Loizzo, Caroline Nickerson, & Caroline Barnett

Associate Professor, Doctoral Students

UF/IFAS Department of Agricultural Education and Communication

RESEARCH PLAN

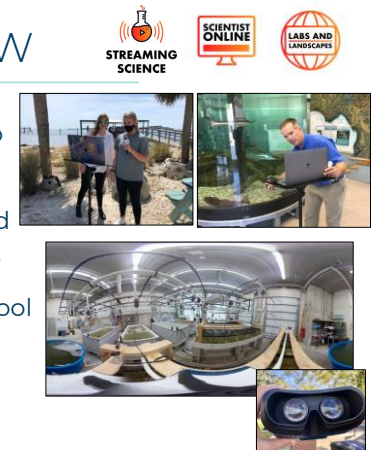
- **RQ1)** What did students list as the top three content knowledge items they learned?
- **RQ2)** When prompted to draw a living shoreline after the program, what key features did students predominantly include in their drawings?
- **RO1)** Determine program impacts on youths' connectedness to water.

Methods:

- Arts-based qualitative visual analysis
- Post-retrospective surveys
- 6 schools, 85 students, grades 6-8th & 11th

PROJECT OVERVIEW

The purpose of this project was to examine the impacts of a *Streaming Science* electronic field trip (EFT) + virtual reality (VR) tour program on middle and high school students' conceptualizations of a living shoreline.

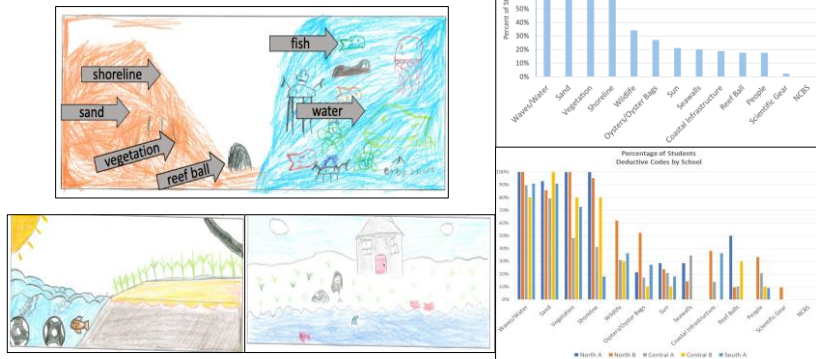


FINDINGS & IMPACTS

Youth's Top Three Learned Content Knowledge Items.	
Content Item	Number of Mentions
Living shoreline	58
Animals/fish	57
Water	20
Oysters/oyster recruitment domes	20
Hermaphrodites	13
Cordgrass/plants	11
Ecosystem/environment	9
Alligator snapping turtle	9
Snook	9
Climate change	9
Fishery	9
Otoliths	8
Beach	5
Erosion	5
Seawall	4
Fish biology	4
Red/UV light	4
Sea level rise	3
Diamondback Terrapin	3
Nets	3
Countershading	1



FINDINGS & IMPACTS



FINDINGS & IMPACTS

Table 5		Students' Pre- and Post-Retrospective CTW Responses			
CTW Index Variables		CTW Index		CTW Index	
		Pre-Mean	Pre-SD	Post-Mean	Post-SD
1. I often feel a sense of oneness with the water around me. (p<0.000)		0.44	0.96	0.80	0.99
2. I think of the water around me as a community to which I belong. (p<0.000)		0.42	0.98	0.76	1.01
3. I appreciate the plants and animals that live in the water around me. (p<0.549)		1.35	0.70	1.40	0.81
4. I feel a relationship with the animals and plants that live in the water around me. (p<0.000)		0.49	1.07	0.94	1.00
5. I feel as though I belong to the water around me as equally as it belongs to me. (p<0.000)		0.38	1.03	0.70	1.01
6. I have a deep understanding of how my actions affect the water around me. (p<0.000)		0.99	0.87	1.33	0.82
7. I often feel part of the water cycle. (p<0.000)		0.05	0.99	0.62	1.07
8. I feel that everyone and everything connected to the water around me shares a common energy. (p<0.000)		0.53	0.97	0.85	1.03
9. Like a drop of water can be part of the ocean, I am connected to the water around me. (p<0.001)		0.36	1.01	0.73	1.05
10. I often feel like I am only a small part of the natural world around me, and that I am no more important than the water in the streams or the fish in the rivers. (p<0.000)		0.40	1.14	0.74	1.25

ACKNOWLEDGEMENTS

- Funded by: FL Sea Grant & USDA Hatch Project 1020962
- Project Team: Dr. Jamie Loizzo, Caroline Nickerson, Caroline Barnett, Taylor Nash, Dr. Savanna Barry, Dr. Micheal Allen, Dr. Laura Warner, & Dr. Mark Clark



QUANTIFYING THE EFFECTIVENESS OF RESILIENCE PLANNING FOR AFFORDABLE HOUSING

William O'Dell
Director
Shimberg Center for Housing Studies – University of Florida, DCP

OVERVIEW

Partnership between:

- UF Shimberg Center for Housing Studies
- UF Levin College of Law's Conservation Clinic
- UF School of Landscape Architecture + Urban and Regional Planning
- Florida Sea Grant Extension Service

Project goals:

- To better spatially determine and **quantify the vulnerability of affordable housing** and vulnerable populations to current and future coastal flooding
- To evaluate and **score spatially-explicit housing-focused planning and policy instruments** in relation to housing and flood vulnerability

Case Study Areas: Pinellas County and City of St. Petersburg



Project Team Members (titles and affiliations at the time of the project)



Harvey Halprin



Alejandro Ramos



Matthew J. Ossorio



Thomas Ankersen, J.D.



Andrea Galinski, CFM, ASLA

Students:

- **Alejandro Ramos**, Master's Candidate, Urban and Regional Planning
- **Harvey Halprin**, J.D. Candidate, UF Levin College of Law, Conservation Clinic Student Associate
- **Matthew J. Ossorio**, J.D. Candidate, UF Levin College of Law, Conservation Clinic Student Associate
- **Alexa Menashe**, J.D. Candidate, UF Levin College of Law, Conservation Clinic Student Associate
- **Bradley Yutch**, J.D. Candidate, UF Levin College of Law, Conservation Clinic Student Associate

Faculty + Research Staff:

- **Thomas Ankersen**, Director, UF Levin College of Law Conservation Clinic
- **Andrea Galinski**, Assistant Scholar, Department of Landscape Architecture
- **William O'Dell**, Director, UF Shimberg Center for Housing Studies
- **Thomas Hawkins**, Program Director and Lecturer, UF Urban and Regional Planning Department

Advisors + Collaborators:

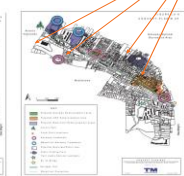
- **Matthew Malacha**, Postdoctoral Research Associate, Department of Landscape Architecture and Urban Planning, Texas A&M University
- **Libby Carnahan**, Pinellas County Extension Agent, Florida Sea Grant
- **Hailey Busch**, Outreach Director, 1000 Friends of Florida

PIRS APPROACH

The Plan Integration for Resilience Scorecard (PIRS) was developed by researchers at the Department of Homeland Security Coastal Resilience Center of Excellence (CRC) in the University of North Carolina

- Plethora of plans problem
- May be little spatial understanding of how policies effect areas of a community including their effects on hazards, such as flood risk
- PIRS is a collaborative approach to holistically understand vulnerability

Hazard Mitigation Plan



Comprehensive Plan

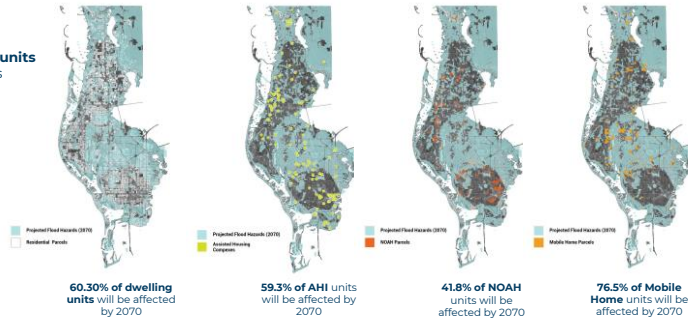
Adapted from presentation by Jaimie Hicks Masterson, AICP (Texas A&M University)

100-year + 500-year floodplains

CBD, waterfront, gateway, redevelopment areas

HOUSING + FLOOD HAZARDS

391,124
dwelling units
in Pinellas
County...



Flood Hazards: 100-year & 500-year floodplains, High-Tide Flooding, 100-Year Storm Surge Event, Sea-level Rise

HOW ARE PLANS RESPONDING?

Plans Included

- The Countywide Plan Strategies
- Pinellas County Comprehensive Plan (Unincorporated Areas)
- Affordable Housing Incentive Plan
- Pinellas County Consolidated Housing Plan (CHP) and the Pinellas County Annual Action Plan (AAP)
- Lealman Community Redevelopment Area (CRA) Plan
- State Housing Initiatives Partnership Program (SHIP) Local Housing Assistance Plan (LHAP)

Policy Evaluation Process

- Step 1:** Determine the relevant policies included in the plans
Is the policy **place-specific**?
Does the policy contain a **policy tool**?
Does the policy **affect vulnerability**?
- Step 2:** Evaluate and score policies
If policies increase vulnerability = **-1** (not good)
If policies decrease vulnerability = **+1** (good!)
If policies decrease vulnerability & are "operationalizable" = **+2** (very good!!)

Map to Hazard Areas

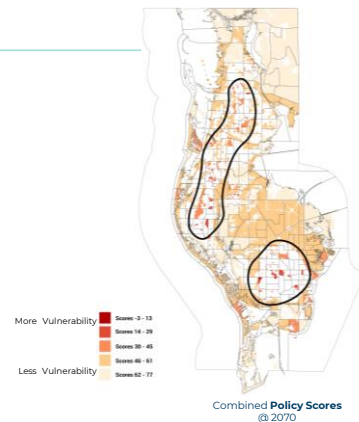


Map place-specific term to hazard districts + tally policy scores

	Example Policy	Place-specific (underline)	Policy Tool (italicize)	Hazard Vulnerability	Score
HO.71	191 Policy: Pinellas County shall continue to allow for licensed group homes in <u>all residential districts</u> and shall encourage their location where there is adequate supporting infrastructure and medical and public facilities, provided that they are not located within a specified distance of a similar facility, or the Coastal Storm Area. [2-10]	x	x	Decrease	+1

RESULTS

- Hazard Districts with lower scores (higher vulnerability) are more located **inland** instead of the coastal zones
- Highest percentage of scorable policies that **increased** hazard zone vulnerability:
 - Comprehensive Plan/ Housing Element** (66%)
 - Pinellas Five-Year Consolidated Plan** (58%)
 - Affordable Housing Incentives** offered through the Pinellas County Land Development Code (50%)
- Important to integrate housing + resilience planning!**



POLICY UPDATES

Housing Annual Action Plan and SHIP Local Housing Assistance Plan:
Adding consideration of flood hazards

Original Policy

- SPAP.3.2. Affordable Housing —
- New Construction:** Assist with the construction of new single-family housing units.

Suggested Changes

- SPAP.3.2. Affordable Housing —
- New Construction:** Assist with the construction of new single-family housing units.
 - SPAP.3.2.1. Provide rebates and incentives to developers and homeowners that utilize flood-proofing techniques in the construction of single-family homes.

Original Policy

- SPAP.7.6. Public Facility Improvements —
- Housing:** Improvements to facilities who provide housing to the homeless, special needs population and low- to moderate-income.

Suggested Changes

- SPAP.7.6. Public Facility Improvements —
- Housing:** Improvements to facilities who provide housing to the homeless, special needs population and low- to moderate-income.
 - SPAP.7.6.1. Ensure that facility improvements include structural and non-structural flood damage mitigation improvements (including, but not limited to, raising foundations, flood proofing utilities, etc.)

Original Policy

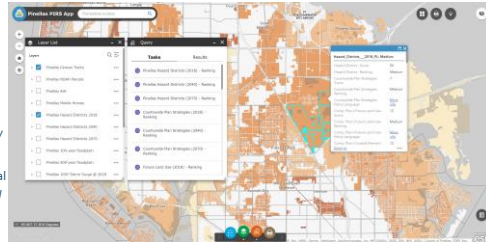
- SPLH.126 M. ...**Rebates for Residential Rehabs**
- Program Implementation:**
 - This program ...uses City funding to encourage renovation of existing housing units in order to provide more affordable housing options in the... CRA district by providing 20% rebates for conducting pre-approved improvements.

Suggested Changes

- SPLH.126 M. ...**Rebates for Residential Rehabs**
- Program Implementation:**
 - This program ...uses City funding to encourage renovation of existing housing units in order to provide more affordable housing options in the... CRA district by providing 20% rebates for conducting pre-approved improvements.
 - [list preapproved improvements that include flood vulnerability reduction, e.g. stormwater enhancement, floodproofing, etc.]

KEY TAKEAWAYS

- **Important to integrate housing + resilience planning!**
- Affordable housing stock will be at *increased exposure* to flood hazards in the future
- *Housing-related plans and policies need to consider flood hazards* (current and future), in addition to promoting housing and community development
- Flood resilience should focus on not only coastal flooding and sea level rise, but *flooding from all sources* (inland, urban, etc.)



PIRS web applications
<https://arcgis/1O995D>



HOUSING + CLIMATE CRISIS?

Florida sees signals of a climate-driven housing crisis

By CHRISTOPHER CLAVELLE
THE NEW YORK TIMES | 7:07 PM EDT, 12/12/2023 AT 11:13 PM

Florida has an affordable housing problem, but can lawmakers solve it?
Legislators have not kept up with new regulations and offer tax breaks for affordable development

'Red-hot' housing market on Space Coast marked by record prices and low inventory

Shrinking inventory, rising rents and \$2 billion loss created Florida's affordable housing crisis
Lawmakers took over \$2 billion from Florida housing trust fund

NEWS · 7:14 AM EST

Tampa Bay renters seeing highest rent surges in the US; tenants search for relief

'We are out of balance:' Orlando housing market soared in 2021 amid low inventory, high demand
December 2021 report shows median price of a home reaches \$340,000

Marion and Levy counties join Citrus County in cries for help after severe flooding

By JAMES HALL

20 November 2023 · 10:00 AM EST · Updated 10:00 AM

Florida Politics
Ed Montanari fears flood insurance rates will 'price people out ...'
But it could be pricing some in St. Pete out of the most affordable homes. In St. Petersburg, 70% of homes in flood zones are not on the...

CLIMATE

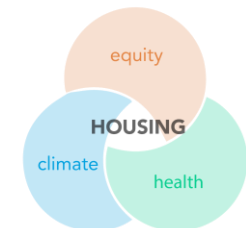
The Federal Government Sells Flood-Prone Homes To Often Unsuspecting Buyers, NPR Finds



"Affordable housing and community development sectors need to approach disaster resilience and climate change adaptation through a cross-sector lens...

...anticipating how a changing climate and their cascading effects will shape housing needs."

Enterprise Community Partners



OVERVIEW

Partnership between:

- UF Shimberg Center for Housing Studies
- UF Department of Landscape Architecture
- Florida Sea Grant

Project goals:

- Advance the awareness of, and planning and preparation for, the impacts of **coastal climate change on affordable housing across Florida**.
- Develop a "Disaster Resilient Florida" (DRF) initiative that focuses on:
 - Advancing local communities' capacities and capabilities
 - Creating experiential educational opportunities for students
 - Expanding partnerships and collaborations
 - Supporting marginalized, racialized, and underserved communities
 - Institutionalizing a focus on issues at the nexus of climate change and affordable housing



DISASTER RESILIENT FLORIDA

The Disaster Resilient Florida (DRF) initiative:

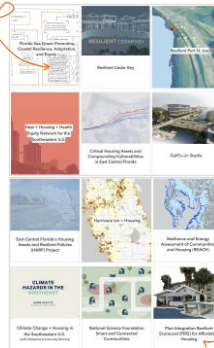
- Provides a platform, structure, and identity that will house the various DRF activities
- Summarizes the challenges we face
- Showcases various ongoing/recently completed projects
- Portal through which other potential partners, stakeholders and communities can learn more about the work



<http://tinyurl.com/disaster-resilient-florida>

DRF PROJECTS

- Florida Sea Grant: Promoting Coastal Resilience, Adaptation, and Equity
- Resilient Cedar Key
- Resilient Port St. Joe
- GulfSouth Studio
- Heat + Housing + Health Equity for the Southeastern U.S.
- Critical Housing Assets and Compounding Vulnerabilities in East Central Florida (HARP II) Project
- East Central Florida's Housing Assets and Resilient Policies (HARP I) Project
- Hurricane Ian + Housing
- Resilient Energy Assessment of Communities and Housing (REACH)
- Climate Change + Housing in the Southeastern U.S.
- Flood Hazard + Housing Practitioner Information Network
- Quantifying the Effectiveness of Resilience Planning for Affordable Housing



EXPANDING RESOURCES



STUDENT RESEARCH PROJECTS

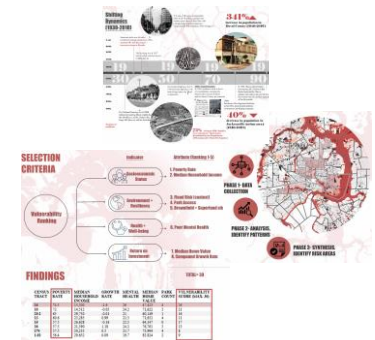
- Grant funded student "competed research" projects
- Open to upper division undergraduate and graduate students in the College of Design Construction and Planning (DCP) to support the completion of a thesis or terminal studio project on a topic related to resilient and equitable housing.
- First round winners:
 - Kaley Arboleda**, Sustainability and Built Environment (SBE),* Capstone on "Empower, Adapt, Thrive: Jacksonville's Journey to Resilience" (SU 2023)
 - Jacob York**, Sustainability and Built Environment (SBE),* Capstone on "Climate Migration Decision-Making Framework and Its Application to Florida" (FA 2023)



Students are enrolled in MURP 4+1 programs (SBE + Master of Urban and Regional Planning).

EMPOWER, ADAPT, THRIVE: JACKSONVILLE'S JOURNEY TO RESILIENCE

- Project serves as a case study to illustrate how vacant land can and should be a source for future resiliency planning and community building in Jacksonville, FL.
- Project shows how decades of detrimental discriminatory housing policies and local government decisions have left out the main component of a city - the people.
- Selected census tracts with the highest poverty rates in the urban core and created an index to determine the most vulnerable or highest priority zones.



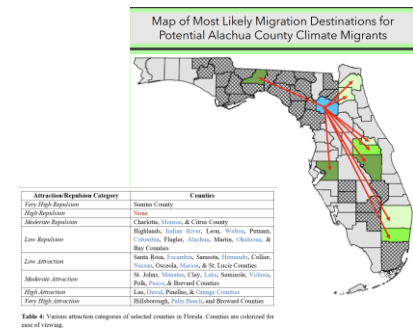
EMPOWER, ADAPT, THRIVE: JACKSONVILLE'S JOURNEY TO RESILIENCE

- Uses the Warren W. Schell JR. Memorial Park to illustrate how flood mitigation projects have the potential to reinvigorate communities while creating buffer zones of protection in flood prone areas.
- Project Awards:**
 - SBE Capstone Best Poster, July 2023
 - Georgia Environmental Conference Finalist, July 2023 (\$250 + conference admission and stay)
 - Florida Student Climate Fellows, May 2023 (\$2500)
 - Disaster Resilient Florida Initiative Scholarship, Nov 2022 (\$4000)



DECISION-MAKING FACTORS FOR CLIMATE MIGRANTS AND AN APPLICATION TO FLORIDA COUNTIES

- It is interesting to note the apparent bias towards existing urban centers.
 - This aligns with previous research that posits that migrants follow economic activity (Malloy & Smith, 2011).
- Likewise, it is interesting to note that a difference in ratio of immigrants to the whole population are positively correlated to migration.
 - This may be indicative of certain geographies being generally more desirable to unestablished residents of different backgrounds.



DECISION-MAKING FACTORS FOR CLIMATE MIGRANTS AND AN APPLICATION TO FLORIDA COUNTIES

- Climate change will cause extensive damage to Florida and will likely force people to relocate. This relocation poses a challenge to both governments that will lose people and those that will gain people.
 - Donor geographies will face a loss of tax revenue
 - Receiver geographies will need to provide infrastructure and housing to absorb new populations
- A framework for migration was determined using the IRS County to County Migration Dataset for:
 - Orleans Parish, Louisiana (2005, Hurricane Katrina)
 - Puerto Rico (2017, Hurricane Maria)
 - Butte County, California (2018, Camp Fire Wildfire)
- Economic and demographic data were collected from the American Community Survey (ACS) 1-Year dataset

Model Design

$$Y = X_1P_1 + X_2P_2 + X_3P_3 + X_4P_4 + X_5P_5 + X_6P_6 + X_7P_7 + X_8P_8 + X_9P_9 + X_{10}P_{10}$$

Equation 1: The number of migrants to a destination (y) is calculated from the sum of the nine variables (x) outlined in Table 2 and their relative weight as determined by multivariate linear regression (p).

$$P_i = \frac{X_i(\text{ORIGIN})}{P_i(\text{ORIGIN})} - \frac{X_i(\text{DESTINATION})}{P_i(\text{DESTINATION})}$$

Equation 2: The absolute difference between ratios of certain demographics between the origin and the destination is separate the specific demographics being examined while p represents the entire population. This was used for variables x_1 , x_2 and x_3 .

Variable	Variable Description	Correlation Type
x_1	Absolute Difference (AD) in Racial Demographics	Negative
x_2	AD in Median Household Income	Positive
x_3	AD in Ratio of Immigrants in Whole Population	Negative
x_4	AD in Ratio of Immigrants in Whole Population	Positive
x_5	AD in Median Home Cost	Negative
x_6	AD in Median Home Cost	Positive
x_7	AD in Unemployment Ratio	Negative
x_8	Distance from Origin	Negative
x_9	Ratio of Population Between Destinations and Origin	Positive

Table 3: The correlation type between selected variables and the number of migrants to a destination.

SUMMARY + NEXT STEPS

- Supporting local communities' capacities and capabilities
 - DRF platform provides more access to housing + climate data, resources, web apps, etc.
- Creating experiential educational opportunities for the next generation of scholars + practitioners
 - Funded 2 undergraduate students' terminal projects
 - Funded 1 graduate student assistantship
 - More to come!*
- Institutionalizing addressing challenges at the nexus of climate change and affordable housing
 - More to come!*



<http://tinyurl.com/disaster-resilient-florida>

Thank You!

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