The Future Of South Carolina Working Waterfronts: A Community Partnership Exploring Priorities

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Jennifer Calabria – Clemson University
Tola Adeyemo – The Baldwin Group at NOAA Office for Coastal Management
Alex Braud – SC Sea Grant Consortium and College of Charleston
Agenda

1. Project Overview
2. Engaging Working Waterfront Communities on Priority Issues
3. Exploring Economic Contributions of Working Waterfront Communities
4. Community Perspectives on the Past, Present, and Future of Working Waterfronts
South Carolina Working Waterfronts
- Traditionally commercial fisheries
- Increasing competition for waterfront space and access
  - Recreational fishing
  - Tourism
  - Commercial and residential development
- Increasing vulnerability to changes in climate
  - Infrastructure
  - Biological changes

Project Questions
- How do communities define working waterports in SC?
- What are top priorities for working waterfront communities?
- What are the main economic drivers in working waterfront communities?
- How do communities envision the future of their working waterfronts?
Community Profile: Murrell’s Inlet

- Began as a fishing village
  - “Creek rats”
- Charter fishing
- Popular tourist and retirement location
- Finding their identity
  - Hammock Coast?
- 2010 Census
  - Population: 8,547 people
  - Median income: $39,877
  - Per capita income: $28,197
- Georgetown County
Community Profile: Georgetown

- Third oldest city in South Carolina
- Second largest seaport in South Carolina
- Initial profits from indigo and rice
- Shift to lumber mills
  - Atlantic Coast Lumber Co, largest lumber mill on East Coast early 20th century
- Shift to steel mill
  - Large component of waterfront, closed permanently in August 2015
- Fire on waterfront
- 2010 Census
  - Population: 9,163 people
  - Median income: $29,424
  - Per capita income: $14,568
  - Georgetown County
Community Profile: McClellanville

- Small fishing town
  - “The Village”
  - Well known for shrimping fleet
  - “Septic system for a purpose”
- Located on Jeremy Creek
- Ground zero for Hurricane Hugo in 1989
- 2010 Census
  - Population: 499 people
  - Median income: $42,500
  - Per capita income: $22,425
- Charleston County
Community Profile: Shem Creek

• Located in Mount Pleasant
  • 4th fastest growing community in U.S.
• Feeds into Charleston Harbor
• Began as a working creek
  • Lime kiln and other mills before Civil War
  • Seafood industry in 20th century
    • Shrimping after WWII
• Now a popular destination for tourists – many competing interests
• 2010 Census
  • Population: 67,843 people (2014: 77,796)
  • Median income: $61,054
  • Per capita income: $30,823
• Charleston County
Community Profile: Port Royal

- Began as a port, with railroads to connect to Charleston and Savannah
- Port vitality declined as SC focused on Charleston
  - Port officially closed in 2004
  - Purchase and redevelopment of port property has been slow
- Seafood industry
  - July 2015 fire at seafood market and docks
- 2010 Census
  - Population: 3,950
  - Median income: $36,599
  - Per capita income: $18,163
  - Charleston County
Exploring SC Working Waterfront Priorities through Focus Groups

Jennifer Calabria
The Participants
The Format
Big maps + Written Q&A + Discussion guided by questions + “Voting”
The Topics

- How do communities define working waterfronts in SC?
- What are top priorities for working waterfront communities?
Defining the Working Waterfront
Murrell’s Inlet: The Priorities

1. Land for commercial usage
   • Fish house
   • Dockage

2. Parking

1. Safety
   • Cars
   • People

2. Funds for dredging
Georgetown: Top Priorities

1. Redevelopment on the waterfront
   • Steel mill site redevelopment
   • Port property

2. Derelict boats

1. Capture ICW traffic
   • Lack of public docks/moorings

2. Infrastructure to support water-related tournaments

1. Dredging
FOCUS GROUPS

McClellanville: Top Priorities

1. Dredging

1. Profitability
   • Outlets for product
   • Price for product

2. Value added facilities

1. Relationships with agencies
   • Marketing
Shem Creek: Top Priorities

1. Dockage security
2. Water traffic control
3. Parking for customers/crew
4. Commercial infrastructure
   • Ice
   • Unloading dock
   • Cold storage

Other issues:
• Lack of retail space
• Lack of leasable space
• Dockage
• The next generation
• Product price
Port Royal: Top Priorities

1. Commercial dock operations
   • Funding
   • Management

2. Outlet for product

1. Off-shore testing

1. Development in the area
   • Inhibited by state regulations
The Priorities: Reoccurring Themes
1. Commercial infrastructure
2. Dredging
South Carolina’s Waterfronts at Work

Tola Adeyemo
National Working Waterfronts and Waterways Symposium
November 17, 2015
Overview

• Economic Context

• Profiles of Charleston and Georgetown’s ocean economy

• Economics: National Ocean Watch (ENOW)
Economic Context

• Current state
  – Industries (sectors)
  – Employment, self-employment, wages

• Trends
  – Local
  – State and national

• The “Big Picture”
Ocean Jobs Snapshot
Charleston County, South Carolina

Ocean Jobs = A Healthy Economy
In 2012, ocean-related businesses provided 12.4% of the total jobs in Charleston County. This represents a 30% increase in ocean jobs since 2005. Nationwide, ocean jobs represent double the number of jobs supported by agriculture.

Charleston County ocean jobs account for
- 26,817 employees
- $618m in wages
- $1b in goods & services in 2012

Ocean Jobs by Sector
Comparing Charleston County’s ocean sectors to the state and nation shows how local concerns may or may not coincide with state and national priorities.

Charleston County Percentages
- Tourism and Recreation (84.9%)
- Living Resources (0.2%)
- Ship and Boat Building (3%)
- Offshore Mineral Extraction (0.1%)
- Marine Transportation (8.6%)
- Marine Construction (0.9%)

Charleston County Percentages
- Tourism and Recreation (89.9%)
- Living Resources (3.2%)
- Ship and Boat Building (1.5%)
- Offshore Mineral Extraction (0.1%)
- Marine Transportation (71.3%)
- Marine Construction (5.5%)

Charleston County Percentages
- Tourism and Recreation (84.6%)
- Living Resources (2.1%)
- Ship and Boat Building (3%)
- Offshore Mineral Extraction (0.1%)
- Marine Transportation (14.5%)
- Marine Construction (5.2%)
- Suppressed (2.3%)
Ocean Jobs Snapshot
Georgetown County, South Carolina

Ocean Jobs = A Healthy Economy
In 2012, ocean-related businesses provided 15% of the total jobs in Georgetown County. This represents a 9% increase in ocean jobs since 2005. Nationwide, ocean jobs represent double the number of jobs supported by agriculture.

Georgetown County ocean jobs account for

- 3,238 employees
- $55m in wages
- $118m in goods & services in 2012

Ocean Jobs by Sector
Comparing Georgetown County’s ocean sectors to the state and nation shows how local concerns may or may not coincide with state and national priorities.

Georgetown County Percentages
- Tourism and Recreation (98.4%)
- Living Resources (1.2%)
- Offshore Mineral Extraction (NA)
- Marine Transportation (NA)
- Marine Construction (NA)

South Carolina Percentages
- Tourism and Recreation (89.9%)
- Living Resources (3.2%)
- Offshore Mineral Extraction (0.1%)
- Marine Transportation (5.8%)
- Marine Construction (14.5%)

Nation Percentages
- Tourism and Recreation (71.3%)
- Living Resources (5.5%)
- Offshore Mineral Extraction (5.2%)
- Marine Transportation (1.5%)
- Marine Construction (2.1%)
- Suppressed (0.4%)
Jobs in Living Resources, 2012
Charleston County, SC

<table>
<thead>
<tr>
<th>EMPLOYMENT BREAKDOWN</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>65</td>
</tr>
<tr>
<td>Self Employed</td>
<td>213</td>
</tr>
<tr>
<td><strong>Total Employment</strong></td>
<td><strong>278</strong></td>
</tr>
</tbody>
</table>

- **Living Resources**: 77%
- **Total Ocean Economy**: 98%
- **Self-Employed**: 2%

![Employed and Self-Employed icons]

![Graph showing jobs over years]

![Pie chart showing employment breakdown]
Jobs in Living Resources, 2012
Georgetown County, SC

EMPLOYMENT BREAKDOWN

<table>
<thead>
<tr>
<th>Employed</th>
<th>39</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Employed</td>
<td>83</td>
</tr>
<tr>
<td><strong>Employment Total</strong></td>
<td><strong>122</strong></td>
</tr>
</tbody>
</table>

- Living Resources: 32% (40 jobs)
- Total Ocean Economy: 95% (114 jobs)

Employed 
Self-Employed
## Jobs in Living Resources, 2012
### South Carolina

### Employment Breakdown

<table>
<thead>
<tr>
<th>Category</th>
<th>Jobs</th>
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<tbody>
<tr>
<td>Employed</td>
<td>243</td>
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<tr>
<td>Self-Employed</td>
<td>582</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>825</strong></td>
</tr>
</tbody>
</table>

- **Living Resources:** 29% (710 jobs)
- **Total Ocean Economy:** 98% (825 jobs)

![Employment Breakdown Chart](chart.png)

![Jobs by Year Chart](chart.png)
Jobs in Living Resources, 2012
United States

**Employment Breakdown**

<table>
<thead>
<tr>
<th>Employment</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>61,608</td>
</tr>
<tr>
<td>Self Employed</td>
<td>56,002</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>117,610</strong></td>
</tr>
</tbody>
</table>

**Chart:**
- **Living Resources:** 52%
- **Total Ocean Economy:** 96%
- Historical data for years 5 to 12.
Importance of Ocean Economy Data

- Competing uses and pressures
- Stakeholders
Economics: National Ocean Watch (ENOW)

Data Sources

- U.S. Bureau of Labor Statistics
- U.S. Bureau of Economic Analysis
- U.S. Census Bureau
Economics: National Ocean Watch

Indicators

Employment Statistics
- Business establishments
- Number of employees
- Wages paid to employees
- Gross domestic product

Statistics for Self-Employed Workers
- Number of self-employed workers
- Gross receipts of self-employed workers
What is the Ocean and Great Lakes Economy?

SIX SECTORS

Living Resources  Marine Construction  Marine Transportation  Offshore Mineral Extraction  Ship and Boat Building  Tourism and Recreation

8 30 ~400
Regions Coastal States Coastal Counties

2005 to 2012
ENOW’s Six Sectors:
Living Resources
ENOW’s Six Sectors: Marine Construction
ENOW’s Six Sectors: Marine Transportation
ENOW’s Six Sectors:
Offshore Mineral Extraction
ENOW’s Six Sectors:
Ship and Boat Building
ENOW’s Six Sectors: Tourism and Recreation
# Strengths and Limitations

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Limitations</th>
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</thead>
<tbody>
<tr>
<td>ENOW data are national in scope</td>
<td>data suppressions at county level</td>
</tr>
<tr>
<td>ENOW data are consistent over time and space</td>
<td>does not capture nuances of local areas</td>
</tr>
</tbody>
</table>
## ENOW NAICS Codes

<table>
<thead>
<tr>
<th>Sector</th>
<th>Industry</th>
<th>NAICS Code</th>
<th>NAICS Industry</th>
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</thead>
<tbody>
<tr>
<td>Living Resources</td>
<td>Fish Hatcheries and Aquaculture</td>
<td>112511</td>
<td>Finfish Farming and Fish Hatcheries</td>
</tr>
<tr>
<td></td>
<td></td>
<td>112512</td>
<td>Shellfish Farming</td>
</tr>
<tr>
<td></td>
<td>Fishing</td>
<td>114111</td>
<td>Finfish Fishing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>114112</td>
<td>Shellfish Fishing</td>
</tr>
<tr>
<td></td>
<td>Seafood Processing</td>
<td>311711</td>
<td>Seafood Canning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>311712</td>
<td>Fresh and Frozen Seafood Processing</td>
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<tr>
<td></td>
<td>Seafood Markets</td>
<td>445220</td>
<td>Fish and Seafood Markets</td>
</tr>
</tbody>
</table>
ENOW Sectors

The NAICS-based definitions allow for

– Scalability across multiple geographies

– Transferability across data sets
Accessing the ENOW Resources

See
- Ocean Jobs Snapshot
- Story Maps

Interact
- ENOW Explorer

Get
- Quick Report Tool

www.coast.noaa.gov/digitalcoast/data/enow
What’s Next?

- ENOW data are starting point
- Used with local data and knowledge
Questions?
Need Technical Support?

Tola Adeyemo at Tola.Adeyemo@noaa.gov
www.coast.noaa.gov/digitalcoast/data/enow
Exploring Economic Contributions of Working Waterfront Communities

By: Alex Braud
South Carolina Sea Grant Consortium
ENOW Data

- Charleston County
  - Shem Creek & McClellanville
- Georgetown County
  - Georgetown & Murrells Inlet

Can we dive deeper into these communities?

ENOW - Charleston Establishments

- Living Resources: 12
- Tourism & Recreation: 22
- Ship & Boat Building: 6
- Marine Construction: 15
- Offshore Mineral Extraction: 67
- Marine Transportation: 1001

ENOW - Charleston Employment

- Living Resources: 822
- Tourism & Recreation: 263
- Ship & Boat Building: 33
- Marine Construction: 2421
- Offshore Mineral Extraction: 22973

Georgetown Establishments

<table>
<thead>
<tr>
<th>Sector</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living Resources</td>
<td>6</td>
</tr>
<tr>
<td>Tourism &amp; Recreation</td>
<td>180</td>
</tr>
<tr>
<td>Ship &amp; Boat Building</td>
<td>Suppressed</td>
</tr>
<tr>
<td>Marine Construction</td>
<td>Suppressed</td>
</tr>
<tr>
<td>Offshore Mineral Extraction</td>
<td>Suppressed</td>
</tr>
<tr>
<td>Marine Transportation</td>
<td>Suppressed</td>
</tr>
<tr>
<td>All Ocean Sectors</td>
<td>194</td>
</tr>
</tbody>
</table>
How can we squeeze down the data?

• ENOW Zip Code Business Pattern
  ▫ Does not include Self-Employment Workers
  ▫ Made accessible by the U.S. Census Bureau
  ▫ Approximate number of employees
  ▫ Dependent on the zip code boundary
• Business Analyst
• ReferenceUSA
Business Analyst

- Dunn & Bradstreet
- ESRI Subscription
- Easy and functional to all sizes
- Individual business data
- Subscription dependent year data
  - (2012, 2014)
- Field Examples
  - Owner Information, NAICS, Employee Size, Sales Volume
Business Analyst

Establishments

- Living Resources: 13
- Tourism & Recreation: 3

Employment

- Living Resources: 425
- Tourism & Recreation: 18
ReferenceUSA

- Public data if accessible
  - Charleston County Public Library
- Can obtain yearly data
  - (2003-Present)
- Time intensive for large datasets
  - 100 or 250 listings per download
- Individual business listings
  - Latitude, Longitude Fields
- Search Primary or All NAICS
- Field examples
  - Owner Information, NAICS, Employee Size, Sales Volume
ReferenceUSA

Establishments

ReferenceUSA Establishments

- Living Resources: 12
- Tourism & Recreation: 2

Employment

ReferenceUSA Employees

- Living Resources: 10
- Tourism & Recreation: 380
ReferenceUSA Precautions

- **Multiple Entries**
  - Different downloads, same business
  - All NAICS – can double count if two different sectors
- **NAICS Misclassification (Particularly multiple years)**
- **Repetitive Data (Different Years, Same Numbers)**
- **Make your own judgments**
### Economic Conclusions

- Choose the one that works for you
- Different methods, different results

#### ENOW

- **Geographic Level**: County
- **Skill Level**: Easy
- **Cost**: Free
- **Accessibility**: Online
- **Years**: 2005-2012
- **Other**: Self-Employment

#### ENOW ZBP

- **Geographic Level**: Zip Code
- **Skill Level**: Moderate
- **Cost**: Free
- **Accessibility**: Online Download
- **Years**: 1998-2013
- **Other**: Approximate Employee Size

#### Business Analyst

- **Geographic Level**: User Defined
- **Skill Level**: Moderate
- **Cost**: Expensive
- **Accessibility**: Within ArcGIS
- **Years**: 2012, 2014
- **Other**: Individual Businesses

#### ReferenceUSA

- **Geographic Level**: User Defined
- **Skill Level**: Difficult
- **Cost**: Free
- **Accessibility**: Depends
- **Years**: 2003-2015
- **Other**: Individual Businesses
Community Perspectives on the Past, Present, & Future of Working Waterfronts

A Follow-Up to Workshops
Interview Process

• Structured Interview Questions
  ▫ What is your definition of a Working Waterfront?
  ▫ How would you rate the change over the past 25 years; 10 years?
  ▫ What are the current needs?
  ▫ What does it take to have a successful working waterfront?

• Interviewees
  ▫ Seafood Market Owner/Fisherman
  ▫ Planners
  ▫ Kayak Guide
  ▫ Charter Fisherman
  ▫ Tourism Director
What is your definition of a working waterfront?

• “I think of those activities that serve as resources, economic resources to the community, whether it be ecotourism, whether it be industry, whether it be people coming on their boats via the Intracoastal water way.” – Land Resource Manager

• “Where there are actually businesses, restaurants that are in business on the waterfront, as well as the fishermen that are coming in and out and selling the product that they catch.” – Nonprofit Community Director

• “Waterfront where there’s access to fishing and recreation and retail, a great gathering place for everything to be together like that.” – Tourism Director

• “Have active economic based industries or recreation type uses right there on the water. Working for the community, providing some type of value to the community.” - Planner
What number would you pick to represent the change in your working waterfront during the last 25 years?

- Murrells Inlet
- Shem Creek
- Georgetown
- McClellanville
What number would you pick to represent the change in your working waterfront during the last 10 years?

- Murrells Inlet
- Shem Creek
- Georgetown
- McClellanville
How do you rate the impact of the local community on your working waterfront?
How do you rate the impact of the commercial fishing industry on your working waterfront?
How do you rate the impact of tourism on your working waterfront?
How do you rate the impact of land (re)development on your working waterfront?

- Murrells Inlet
- Shem Creek
- Georgetown
- McClellanville
What factors make a working waterfront successful?

**Economic**
- Income Opportunity
- Providing a good product
- A balance between the actual industries and non-industrial uses
- Providing people with other options while they’re there
- Flexible fishery year round

**Community**
- Harmony
- Community support
- Teamwork
  
  **Access**
  - Having convenience, availability, access
  - Easy access, coupled with safe access
  - Can actually watch fishermen bring in what they caught. It’s very visible

**Environmental**
- Activities that are sustainable in terms of the economics as well as the environment
- Maintaining the water quality
- Gives back to the environment
- Balance has to be contributed
What is your vision for your working waterfront?

**Shem Creek**
Boardwalk, parking, monitor boat traffic, added boat launch, shift motorboats or commercial fleet

Turbulent Change

**McClellanville**
Keep everything the same; maintain the status quo

Limiting Change

**Georgetown**
Steel Mill redevelopment, Goat Island access

Ripe for Change

**Murrells Inlet**
Full boardwalk, added commercial fishing waterfront

Identity Issue
How would you rate the impacts of climate change on the success of your vision for a working waterfront?
Murrell’s Inlet

Focus group – no mention of concern over future weather or climate changes

Interviews – extremely negative impact of climate change on working waterfront (1, on scale of 1-15)

-- “pretty big shift on species right now... catching tilefish and groupers in places we’ve never...”

-- “it [sea level rise] is a viable threat, but no one wants to believe it”

-- “[sea level rise] would be detrimental to our economy”

-- “more aware of storms than sea level rise”

-- community is doing “nothing” to adapt
Focus group – no mention of concern over future weather or climate changes

Interviews – mixed concern over impacts of climate change on working waterfront (1 & 8, on scale of 1-15)

-- “the sea level rise issue will impact infrastructure and is impacting infrastructure”

-- “if sea levels rise a foot, we’re starting to look like Venice”

-- “both [infrastructure impacts and biological changes] are major threats”

-- any measures to adapt? “not that I’m aware of”
McClellanville

Focus group – no mention of concern over future weather or climate changes

Interviews – negative impact of climate change on working waterfront
(4, on scale of 1-15)

-- “if there is a change in species and they aren’t able to harvest them, that would have a more negative impact” [than infrastructure, which can be adapted]

-- “stormwater management system are all the tidal ditches, so if it [sea level] rises, they’re not built to take a whole lot”

-- any measures to adapt? “no, because they don’t like regulation”
Focus group – no mention of concern over future weather or climate changes
Interviews – mixed concern over impact of climate change on working waterfront (4 & 8, on scale of 1-15)

-- “we’re dealing with it within fishery management right now”
-- “tides are coming higher than normal, in the next 5 years we’ll see more”
-- “my storage building never had water in it before, now it does”
-- “[sea level rise] it will have an impact on the docks”
-- “I’m not qualified to speak on that”
What is your vision for your working waterfront?

**Shem Creek**
Boardwalk, parking, monitor boat traffic, added boat launch, shift motorboats or commercial fleet

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Ripe for Change

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Identity Issue
Thank you!

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Jennifer Calabria: jj3@clemson.edu