VALUES LINK DIFFERENT INTERESTS TO COASTAL WETLANDS

- Economy
- Community Character
- Water Quality
- Stormwater and Flooding
- Values

Planning Processes
- Engage diverse Stakeholders
- Provide support for Funding
- Offer transparency or support for Decisions

Source: Derek Davis/Staff Photographer of Portland Press Herald
Coastal Wetlands Keep Our States Safe, Healthy & Flourishing

When you protect Coastal Wetlands, you also protect...

**Fishing**
Coastal & estuarine recreational fishing brings up to $542 million annually to NH & ME

**Air & Climate**
Coastal wetlands absorb carbon 3-5x faster than tropical forests

**Shoreline**
Storing sediment & reducing wave energy protects the unspoiled coastline that embodies the NH way of life

**Hazard Adaptation**
During Hurricane Sandy in NH & ME
- prevented over $900,000 in property damages
- protected over 26 miles of major roads

**Beaches & Health**
Absorbing bacteria reduces safety risks & beach advisories, which have a “rainy day” impact on businesses

**Property & Infrastructure**
These habitats raise real estate values by 28%

**Costs for infrastructure like treatment facilities**
Priority Parcels for Multiple Benefit Wetland Restoration
Sheboygan County, WI Parcels Only

Map created, June 2014 by
Laura Flecker, NOAA Digital Coast Fellow
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2013 Sheboygan County Parcels
- Green: For Flood Abatement AND Water Quality
- Yellow: For Flood Abatement
- Blue: For Water Quality
- No Data
- HUC14 Catchments
- Plymouth Township

0 2.5 5 Miles
ROLE OF COASTAL WETLAND VALUES

Awareness → Analysis → Action

https://coast.noaa.gov/digitalcoast/
jane.ballard@nerra.org
<table>
<thead>
<tr>
<th>Tool</th>
<th>What does it do?</th>
<th>How would it be useful?</th>
<th>Example</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>GecoServe</td>
<td>Can search by desired ecosystem service or habitat to get monetary values</td>
<td>to give a sense of monetary values available</td>
<td>Disturbance Regulation = $740/acre of coastal wetland in NH (Costanza 2008)</td>
<td>No link to study; doesn’t allow users to quickly ID which may possibly be appropriate for Benefit Transfer</td>
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<tr>
<td>Coastal County Snapshots</td>
<td>&quot;Wetlands&quot; page focuses on wetland area in county &amp; provides information on the role wetlands play</td>
<td>to help tie the importance of wetland functions with values of communities</td>
<td>Wetlands support fishing economies, which = 373 jobs, $5.5 million in output from businesses &amp; $18.9 million in revenue from self-employed in York County</td>
<td>Info is at county level; not a direct linkage with wetland values &amp; benefits</td>
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<tr>
<td>Eco-Health Relationship Browser</td>
<td>Visually shows relationship between the environment &amp; health impacts</td>
<td>to show link between wetland services &amp; other issues, in this case health, with literature support</td>
<td>Wetlands affect Water Quality, Engagement w/Nature, Water Hazards, Recreation, &amp; in turn these have various health impacts</td>
<td>Focused on general health concerns</td>
</tr>
<tr>
<td>Atlas of Ocean Wealth</td>
<td>Provides information on habitats that provide the services &amp; values</td>
<td>to communicate role of coastal resources in protection, fishing &amp;/or blue carbon</td>
<td>example maps to identify coral restoration priorities at large scale or values of mangroves</td>
<td>limited site applicability, but demonstrates potential with data; does not address a specific management question</td>
</tr>
<tr>
<td>Ecosystem Service</td>
<td>Tool</td>
<td>What does it do?</td>
<td>Management question addressed</td>
<td>Limitations</td>
</tr>
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<td>Nitrogen Retention</td>
<td>OpenNSPECT</td>
<td>assesses impact of LU changes on nutrient/N level &amp; concentration</td>
<td>ID areas impacted by nitrogen under different land use scenarios; compare role of wetlands &amp; other land uses; ID what areas would be best to prioritize as outfalls, as places for water sampling, facility management or retrofits</td>
<td>Data input intensive; pollutant concentrations are averages so don't consider that more pollution could run-off in beginning of event; positive changes like nutrient uptake not considered, run-off diversions must be altered (Rozum 2013)</td>
</tr>
<tr>
<td>blue carbon, nutrient retention, coastal vulnerability, fisheries</td>
<td>InVEST</td>
<td>provides quantitative or qualitative values for selected ecosystem service under user-selected scenarios</td>
<td>Trade-offs of benefits or impacts between different management decisions for models such as Fisheries, Coastal Vulnerability, Water Purification &amp; Nutrient Retention</td>
<td>&quot;lots of work for what you get out of it&quot; &amp; &quot;not transparent enough&quot;; to get at multiple ES, would have to analyze LU change w/several different models</td>
</tr>
<tr>
<td>multiple</td>
<td>Marxan with Zones</td>
<td>the tool helps determine the lowest cost way of achieving a user-selected conservation goal; includes well-being</td>
<td>Helps meet multiple objectives &amp; with multi-use zoning for natural resource management</td>
<td>Requires extensive time &amp; expertise, stakeholder engagement, data acquisition. Needs more quantitative data on ecosystem services portion</td>
</tr>
</tbody>
</table>

From Slide 4 DRAFT infographic

- **Symbol Images**: Child Swimmer: Tracy Saxby, Shore Fishing: Kate Moore; both IAN Image Library (http://ian.umces.edu/imagelibrary/)