NOAA Sea Level Rise Viewer Demo – Method for Mapping Wetland Conversion due to SLR

June 20,2016

Overview

- NOAA Sea Level Rise Viewer
  - C-CAP Land Cover
  - Sea Level Rise
  - Confidence
- Methods for Mapping Wetland Change

Preliminary Results

- Data Sources
  - Tidal Mask: NWI Tidal Wetlands + MHHW Shoreline
  - C-CAP 2010
  - NOAA 2 ft SLR
    - 25 yr with low accretion (2mm/yr)
    - 50 yr with low accretion (2mm/yr)
- Results
  - 25 yr → 32.6%
  - 50 yr → 49.4%

Options

- **Option 1**: Calculate a specific area of wetland loss to SLR (Open Water + Unconsolidated Shoreline)
  - NOAA SLR 2 ft. + tidal wetland mask + C-CAP 2001
- **Option 2**: Calculate a range of area wetland loss to SLR
  - Option 2a: Weight Option 1 by the NOAA SLR Confidence Coefficient
  - Option 2b: Spatially Weight Option1 by fractioning C-CAP 2001 by the coverage of NWI
- **Option 3**: Hyrbid Approach that incorporates SLAMM, NOAA SLR, NOAA C-CAP and HR wetland data

Key Parameters to Define

- SLR water depth (e.g. 2 feet)
- SLR Confidence Coefficient
- Accretion Rate
- Time Periods (e.g. 2025 and 2050)
- Degree (e.g. area) of marsh migration (e.g. wetland gain)