

Enhancement of Sentinel Site Capacity Through Collaborative Networks

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Michael P. De Luca

Senior Associate Director

Institute of Marine and Coastal Sciences

Rutgers, The State University of New Jersey

Sentinel Site Network of Networks

- Description of NERRS network
- Enhancement of Sentinel Site Capacity Through Collaborative Networks
- Opportunities for integration with NAML

NERRS Sentinel Site Initiative

- * Develop capacity to monitor sea level rise as a component of the NERRS system-wide monitoring program
- * Enhance sentinel site capacity through collaborative networks

NERRS Sentinel Site Initiative

- * Identify the vulnerability of estuaries and coastal communities to sea level rise
- * Translate impacts of sea level rise to coastal communities to inform adaptation strategies

NERRS Sentinel Site Initiative

- NERRS
 - Understand the impacts of changing patterns of inundation on coastal habitats at reserve sites
 - Capitalize on existing, locally-relevant data
 - Expansion of existing monitoring capacity
 - SETs, vertical control
 - Integrated with federal (NOAA Climate Program Office) sentinel sites program

NERRS Sentinel Site Initiative

- * 8 sites fully operational
- * Remaining sites phasing in
- * No new resources
- * Interest in expanding utility of system-wide monitoring data to meet other management information needs
- * Enhancement of sentinel sites initiative through collaborative networks

Enhancement of Sentinel Site Capacity Through Collaborative Networks

- Broaden use of existing data streams
- Integrate with other networks/data streams
 - Less expensive and efficient
 - Leverage new resources and engage new partners
 - Engage volunteers/friends groups as citizen scientists/environmental stewards
 - Enhance existing decision support tools
 - Position NERRS to integrate with science-based networks

Enhancement of Sentinel Site Capacity Through Collaborative Networks

- Workshop to Integrate Scientific Communities into a Coastal Sentinel Site Network of Networks (8/12)
 - Identify existing data streams/monitoring programs from networks of science agencies and organizations in response to common management issues.
 - Candidate data streams identified prior to the workshop
 - Ocean acidification
 - Shoreline management/sea level rise
 - Ichthyoplankton/larval fish
 - Participants included NERRS, FWS, NPS, USGS, NEP, NAML, NSF/LTER, NEON, NOAA (IOOS, NMFS, NMS, Habitat, CSC, CPO, state and regional agencies)

Enhancement of Sentinel Site Capacity Through National Partnerships

- Influence of ocean acidification on estuaries and estuarine resources
 - Data already being collected by NERRS staff
 - Potential for partnerships with other science-based networks collecting this data (e.g., pH, pCO₂) such as NAML, NEP
 - Key audience (shellfish growers)
 - Potential for new funding

Enhancement of Sentinel Site Capacity Through National Partnerships

- Shoreline management/sea level rise
 - Protocol developed for monitoring shoreline change, transferred to 20 FWS Refuges and several NERRS in the northeast
 - Shoreline position, beach profile monitoring, sediment volumes in special areas of concern
 - Interest in developing a protocol for bayside beaches
 - Key audience (resource management community)

Enhancement of Sentinel Site Capacity Through Collaborative Networks

- Ichthyoplankton/Larval Fish Sampling
 - Citizen data collection
 - Data repository and analysis
 - Partnerships with the academic science community, NMFS, NAML
 - Key audience (fishing and fish management communities)
 - Potential for new funding

Enhancement of Sentinel Site Capacity Through Collaborative Networks

- Three workgroups organized
- Ichthyoplankton workgroup developed proposal which has been funded
 - Simple protocol, citizen scientists
 - 5 labs/field station partners (NERRS, NAML, NMFS)
 - Detect phenological shifts in finfish distribution and abundance
 - Inform updates to fishery management plans at regional/ecosystem scales

Enhancement of Sentinel Site Capacity Through Collaborative Networks

- Capitalize on value of a network
- Enhance applications/utility of existing data streams
- Cost effective
- Generate funding opportunities by being responsive to user information needs
- Many opportunities for NAML
 - Niche
 - Local advantage