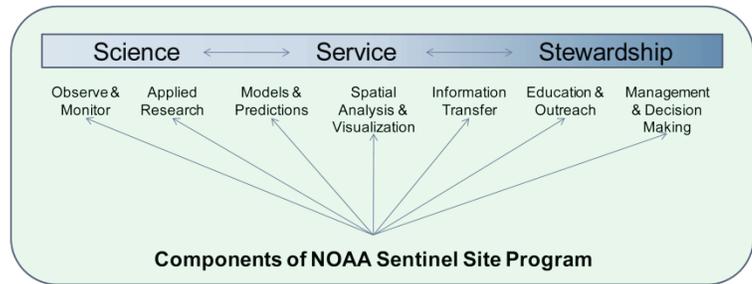


NOAA SENTINEL SITE PROGRAM



Website: <http://oceanservice.noaa.gov/sentinel/sites/>



What is a Sentinel Site Cooperatives?

Sentinel Site Cooperatives are made up of sentinel stations, at least one NERR or Sanctuary, a commerce center, and a ready management community.

Sentinel Stations

Discrete instruments and measurement stations (platforms and sensors) that provide information and data that can be synthesized to provide an understanding of the ecological status and trends in physical and biological variables of interest.

Sentinel Sites

Areas in coastal and marine environments that have the operational capacity for intensive study and sustained observations to detect and understand physical and biological changes in the ecosystems they represent. In most cases, a Sentinel Site will also collect and analyze socioeconomic data. A Sentinel Site should:

- contain one or more sentinel stations;
- have a historical data record sufficient to address local-scale changes;
- be a managed area that is representative of regional ecosystem types;
- be of a size that is practical for testing adaptive management approaches and for education and outreach;
- capacity to attract and leverage partnerships;
- have consistent biological, chemical and physical monitoring referenced to accurate geospatial infrastructure;
- include areas with the management capacity that can support and connect to other regional observing networks;
- facilitate synthesis of information to answer physical and biological questions; and
- have a commitment to uninterrupted, long-term environmental monitoring.

Sentinel Site Cooperatives

Spatial extent for which the outputs, products, and services from all applicable Sentinel Sites are both scientifically relevant and applicable to local management issues. The cooperative bounds not only the physical and biological data, but also the socioeconomic information necessary to deliver useful products to local communities. The extent of the area will encompass the human communities that are targeted to use the information provided by the program and within which relevant socioeconomic and behavioral changes can be measured.

Vision

The NOAA Sentinel Site Program brings to life NOAA's science, service, and stewardship continuum by leveraging existing resources and integrating multiple parallel efforts to promote resilient coastal communities and ecosystems in the face of change. This innovative approach is designed to achieve increased management effectiveness through more coordinated and comprehensive science conducted by many strategic partners including Federal, State, and local governments, academia, and NGOs

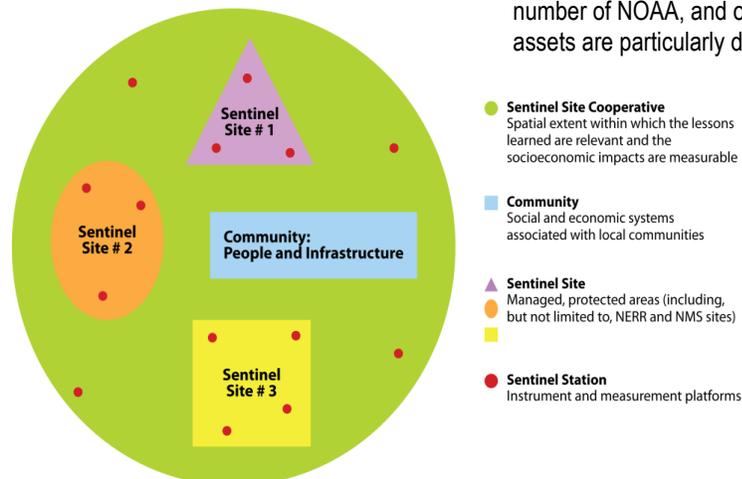
Description

Under current fiscal conditions, the NOAA Sentinel Site Program leverages existing assets and resources in a place-based, issue-driven, approach to identifying and responding to the impacts of stressors on coastal ecosystems and the communities that rely on them. The program has initially focused on climate change impacts, specifically the impacts of sea level change, and the management strategies undertaken to address them.

A fully developed Program will allow NOAA to fulfill its responsibilities as directed by its mandates and laws in a more efficient and comprehensive manner. The program does not detract from existing responsibilities, but instead focuses resources in such a way that multiple goals can be achieved through a single investment through collaborative engagement.

Communities are facing many challenges as the intensity and frequency of storms are increasing and sea levels are rising. The NOAA Sentinel Site Program is working to engage managers and decision makers at the onset to get their feedback before the development of tools and models. This will ensure that we are providing the information they need to make infrastructure and hazard mitigation decisions.

The five Sentinel Site Cooperatives, serve a variety of functions from protecting natural resources to establishing accurate height measurements, are uniquely positioned to support NOS priorities. At coastal locations—particularly in places with dense populations and bustling maritime activity—the number of NOAA, and other Federal and state, assets are particularly dense and bustling, too!



"Scientists are helping to lay the groundwork for a new national network of sentinel sites for climate change research that will provide the valuable climate data essential to providing the sound science on which sound policy must be built."

Dr. Jane Lubchenco, Jugg Bay NERR, April 22, 2009



The NOAA Sentinel Site Cooperatives



Examples of Cooperative Gaps:

- Modeling expertise
- Coordinator
- Socioeconomic information on ecosystem services and SLC
- Downscaled climate models
- Habitat mapping

Information Framework:

An access point for the Cooperatives and local decisions makers to have a one-stop shop for data and information on the topic of sea level change. This framework will build off existing information and pull together a comprehensive set of data that our coastal decisions makers need now. Over time this dynamic site will have the capacity to expand to other topics.

Current Status

Each group brings both its needs and its resources to bear. Some groups bring infrastructure, others bring small amounts of money that can be used to fill the greatest needs, and still others bring primarily the dedicated brainpower of creative, bright people. The limited resources available to each group can be pooled to provide a much more flexible approach than would be achieved individually.

Cooperatives completed implementation plans in FY13, which include clear goals and objectives, roles and responsibilities for all participants, short and long term work plans, resources available and needs identified. Currently, activities critical to achieving success are underway (e.g., creating models and determining availability of necessary data and decision-support tools). Development of a web-based Information Framework is currently underway. It will leverage existing web-based tools by providing a single access point for data sets, inundation models, visualization tools, training, and adaptation planning resources for decision makers to take action.

Future Opportunities

As Sentinel Site Cooperatives mature, innovation will drive their evolution. Together, the limitation of resources, solidarity of mutual needs and urgency to act in the face of declining budgets creates a hotbed for innovative thinking about how to do more with less. By demonstrating through efficient planning and execution that the NOAA Sentinel Site Program approach is effective and fiscally responsible, the likelihood of successfully bringing in additional partners and resources increases dramatically. It is intended that, with limited additional resources, these collaborative efforts will advance coastal community efforts to address key issues. Should additional funds be available, NOAA will judiciously use these funds to strategically further the efforts of Sentinel Site Cooperatives and continue to assist the groups that are leading the way in innovative collaborations.

In order to make larger strides, interagency engagement at the National level is key. Leveraging the capabilities and capacities of other Federal activities will propel innovative strategies for understanding and addressing the impacts of climate change that our Nation is facing now and will continue to face in the future.

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