

****DRAFT**Guidance for the Establishment of Regional Associations **DRAFT****
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Design and Implementation of the Coastal Component of the U.S. Integrated Ocean
Observing System

Guidance for the Establishment of Regional Associations and the National Federation of
Regional Associations

1. Introduction

The purpose of this document is to describe functions of Regional Associations (RAs) and a National Federation of Regional Associations (NFRA) and the criteria that must be met to become an RA. The business and governance plans required to meet these requirements are to be determined by stakeholders in each region. A brief summary of potential governance models is appended.

1.1 Background

The operational goal of the Integrated Ocean Observing System (IOOS) is the routine and timely provision of comprehensive data and information on past, present and future states of the oceans, the nation's Exclusive Economic Zone (EEZ), the Great Lakes, and the nation's estuaries. This will be achieved through the coordinated development of observing and prediction systems that efficiently link observations to the data and information needs of multiple user groups through integrated data management¹ on global, national, regional, and local scales. User groups² play critical roles in the design and evaluation of the system and must be involved in the governance of the IOOS from the beginning.

The IOOS consists of two closely related and interdependent components. The global (basin scale) component is the U.S. contribution to the global ocean-climate module of GOOS. The coastal component is developing as a national "backbone" for the nation's EEZ with regional coastal ocean observing³ systems that include the nation's estuaries and bays as well as the open waters of the coastal ocean. Given that the characteristics of coastal environments and data and information requirements of user groups vary from region to region, the national backbone cannot, in itself, provide all of the data and information required to detect and predict changes in all of the phenomena of interest.⁴

The backbone provides data and information on core variables required by all regional systems, establishes a network of sentinel and reference stations, networks the regions into a national federation, and links environmental changes that propagate across regional and global scales. Based on the data and information needs of multiple user groups within each region, regional observing systems enhance the national backbone by increasing the time-space resolution of measurements and the number of variables measured and products produced.

1.2 Governance Considerations

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Under the oversight of the NORLC and its bodies, Ocean.US is responsible for the design and coordinated development of the IOOS as a whole. This requires collaboration among federal agencies, state agencies, the private sector, NGOs, and academia on both regional and national scales. Regional Associations (RAs) provide the primary framework for orchestrating the required collaboration within each region and are responsible for the design and coordinated operation of regional coastal ocean observing systems. A National Federation of Regional Associations (NFRA) is needed to coordinate the development of regional observing systems, to represent the interests of RAs at the federal level, and to provide a mechanism for federal guidance on the development of regional observing systems as part of the IOOS as a whole.

Ocean.US manages the process by which RAs are certified initially and the development of the NFRA, including the formulation of terms of reference and the Federation's charter. Once chartered, the Federation will become responsible for maintaining and updating its charter and the re-certification of RAs.

The national backbone will develop through a partnership between NOPP Agencies and the NFRA in which both contribute to and benefit from its development (e.g., the federally operated network of tide gauges and the development of a national network of HF radar nodes through coordinated development within regions). A more detailed description of the IOOS governance structure is given at the following url:

www.ocean.us/documents/docs/ioos_plan_6.11.03.pdf

2. Regional Associations

2.1 Responsibilities

RAs are responsible for the design and coordinated development and operation of Regional Coastal Ocean Observing Systems (RCOOSs) that are responsive to the needs of multiple user groups and improve as new knowledge and technologies become available. There will be a fixed number of RCOOSs governed by an equal number of RAs (~ 10 nationwide). Within each RCOOS, there may be several observing system elements, and it is the responsibility of RAs to ensure that (1) their respective RCOOSs develop as an integrated system (not just an collection of elements) and (2) each observing system element is represented in the planning and operation of the RCOOS.

An RA is a partnership or consortium of data providers and users² from both private and public sectors that use, depend on, study and manage coastal environments and their resources in a region.³ State agencies responsible for environmental protection, resource management and coastal zone management should be represented by RAs as appropriate. RAs are formed to

- oversee and manage the design and sustained operation of integrated⁵ observing systems that provide data and information required to achieve one or more of the seven societal goals;⁶

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- establish geographic boundaries as described in section 2.4;
- obtain and disperse funds required to operate and improve regional observing systems; and
- ensure the timely provision of quality controlled data and information in forms specified by user groups.

2.2 Rules of Engagement

Successful implementation of the IOOS requires that RAs follow a common set of guidelines and “rules of engagement” for the common good. To qualify as an RA, the following criteria must be met:

- Proof of a governance structure that can deliver an integrated and sustained system by incorporating, enhancing and supplementing existing infrastructure and expertise in the region.

This must specify what classes of entities are to be members of the association and give their rights and responsibilities as members. It must describe the governing body of the association and how its members are determined. Consideration should be given to the roles of the private sector, federal agencies, state agencies, research organizations, academic institutions, and non-governmental organizations. The plan must specify the general rules for making decisions. It must specify the executive body of the association (responsible for implementing decisions of the governing body) and procedures for determining and modifying the association’s budget, changing the association’s rules, and strategic planning.

- Provision of an acceptable business plan that has been endorsed by stakeholders (data and product providers and users) from the region.

The plan must articulate objectives in terms of the seven societal goals,⁶ specify products and customers, identify sources of revenue (from government, users, or others), and present a prototype budget (including sources) for year 1 and over a 5 year planning horizon. It should describe expected benefits for users and how products and services will be evaluated periodically (e.g., annually) in terms of the timely provision of data, data quality, user satisfaction, system integration, and the achievement of the RA’s objectives.

The plan must show that the observing system will (1) conform to national standards and protocols established for data communication and management, including free and open access to non-proprietary data; (2) be capable of routine, sustained, 24/7 operations, including (but not limited to) the provision of data and data-products (e.g., a forecast) in real-time or near real-time as required by user groups; (3) provide services that include the collection and dissemination of data and development of useful products that are delivered in a timely fashion; and (4) establish or participate in programs that make effective use of the observing system to enhance public awareness and education.

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The business plan is expected to evolve into a strategic plan. It is version 1 of the strategic plan. Version 2 and beyond will consider changes in the elements of the business plan periodically. RAs should be prepared to do this from the beginning.

- Describe the process(es) by which governance and business plans were developed.

This should include a description of how governance and business plans were formulated, who participated in the process, and the affiliations of the participants. This should document broad based support for the system by the user community the organizations that have committed to manage and operate the system.

2.3 RA Development

Regional groups are forming around the country³ to develop organizations intended to qualify as IOOS Regional Associations. Under the guidance of Ocean.US, these groups will form a provisional National Federation that will perform the functions described below. Given the criteria above (2.2), it is expected that 2 to 3 years will be needed to become eligible to be certified as an RA. Initial certification will be made by an *ad hoc* committee consisting of the Director of Ocean.US (chair) and representatives from user groups and participating NOPP agencies (e.g., the Executive Committee of Ocean.US). Certification will be based on an examination of the completeness and logic of the governance plan, the extent to which the business plan meets the minimum specifications for products, the extent to which the business plan specifies additional products beyond the minimum, the timing of bringing products on line, and the plausibility of the financing scheme.

Once the NFRA has been established as described below and initial certification of all RAs has been completed, the Federation will assume the responsibility for re-certification of RAs. The certification of all RAs will be reviewed at 5 year intervals and renewed based on the above criteria and progress toward meeting regional priorities.

2.4 Regional Boundaries and Collaboration

Regional boundaries will be both fixed and flexible as follows:

- for purposes of administration, funding and accountability, fixed geographic boundaries between regions will be needed;
- for purposes of detection and prediction, boundaries will vary depending on the space scale of the phenomena of interest, and they will often transcend fixed geographic boundaries.

Clearly, regional associations must collaborate with each other and adjacent countries (e.g., Canada, Mexico, and countries of the Caribbean) to address those problems that transcend fixed geographic boundaries. For example, the goal of developing ecosystem-based, adaptive management practices for fisheries management (and for environmental protection) requires a regional approach such as the Large Marine Ecosystems program.

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This will be especially important in research and pilot project stages where a particular species can be targeted and used to specify requirements for spatial boundaries, variables to measure and the time-space resolution of estimated fields. Such an approach also provides an important mechanism for fisheries managers (in this example) to partner with RAs via fishery management councils and fisheries research laboratories.

3. National Federation of Regional Associations (NFRA)

To ensure the development of a system that meets regional and national data and information requirements (including DMAC standards and protocols), groups working to establish RAs that have been recognized by Ocean.US (and endorsed by its Executive Committee) should be engaged in the planning process as early in IOOS development as possible. The vehicle for providing guidance (and, therefore, for enabling State agencies, the private sector, and academia to contribute to and benefit from an IOOS that is relevant to local, state and regional needs) is the provisional NFRA.

Once RAs for 5 or more regions have been established, a National Federation of Regional Associations will be formalized. The NFRA will include representatives from all RAs and participating NOPP agencies. The NFRA is a national union of RAs formed to:

- promote the implementation and development of RCOOSs nationwide;
- enable effective communications between NOPP agencies and Regional Associations;
- work with RAs to establish geographic boundaries as needed;
- promote collaboration among regions (e.g., to enable effective transfer of technologies and knowledge);
- guide the development of a national backbone that is responsive to regional needs;
- influence the development of national standards and protocols for measurements and data management and communications; and
- enable the implementation of national standards and protocols.

The process of establishing the NFRA will begin with a national meeting during spring, 2004.

4. Funding

The long-term sustainability of Regional Associations is critical to the success of the IOOS. This will require creativity and flexibility as this new enterprise becomes established. Successful development will depend on the establishment of a diversity of funding streams from both public and private sectors. Ocean.US is working with NOPP agencies to solidify federal support mechanisms. Once funded, RAs must be nurtured to success and the mechanism(s) and criteria for sustained funding (including matching funds from States and other stakeholders in the region) must be carefully considered.

Footnotes

¹ The global ocean component, the national backbone and regional observing systems consist of three closely linked subsystems: (1) measurements (observations, monitoring, sensing) and data telemetry, (2) data management and communications, and (3) data analysis and modeling.

² Users include State and Federal Agencies, NGOs, private enterprises that use or depend on marine and estuarine systems, educators and scientists. Users may also be data providers.

³ Although actual boundaries are being defined by regional groups as they work to form Regional Associations, the following regions are given to indicate the spatial scale on which regional observing systems are expected to develop:

- Alaska (Gulf of Alaska, Bering Sea, Chukchi Sea and Bristol Bay)
- Insular Pacific (Hawaii and the west Pacific Trust Territories)
- Northwest (Canadian border to Point Arena)
- Central West Coast (Point Arena to Point Conception)
- Southern California (Point Conception to the Mexican border)
- Gulf of Mexico (Mexican border to the Florida Keys)
- Southeast (Florida Keys to Cape Hatteras)
- Mid-Atlantic Bight (Cape Hatteras to Cape Cod)
- Gulf of Maine (Cape Cod to Canadian Border)
- Great Lakes

4

SOCIETAL GOALS	PHENOMENA OF INTEREST
Marine Operations, Natural Hazards, Climate Change, National Security	Changes in sea state (surface waves), sea level, coastal circulation, water temperature and salinity, and shallow water bathymetry; Coastal flooding and erosion
Public Health	Seafood contamination, Exposure to pathogens
Ecosystem Health	Habitat modification & loss, Changes in biodiversity, Coastal eutrophication, Harmful algal events, Invasive species, Biological responses to chemical contamination, Disease & mass mortalities of marine organisms
Living Resources	Changes in abundance of exploitable living marine resources, harvest of living marine resources, aquaculture production

⁵ An integrated system is one that (1) efficiently and effectively links user demand for data and information to observations, (2) is multidisciplinary, and (3) serves many user groups.

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⁶ Improve (1) the efficiency and safety of marine operations, (2) national and homeland security, (3) predictions of natural hazards and their effects, (4) predictions of climate change, (5) public health, (6) protection and restoration of healthy ecosystems, and (7) the sustainability of living resources.