

Integrated Ocean Observing System (IOOS) Certification Criteria

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Table of Contents

- Executive Summary** 3
- Certification Criteria** 4
 - Introduction 4
 - Organizational Structure..... 6
 - Strategic Operational Plan 7
 - Gaps Identification 8
 - Financial Oversight..... 8
- Appendix A. Definitions** 9
- Appendix B. Relevant ICOOS Act Sections**..... 10

Executive Summary

This report provides the criteria to be certified as a regional governance entity with the associated civil liability protection arising from the dissemination and use of IOOS data. In order to be integrated into IOOS, an entity must demonstrate certain attributes and meet requirements called out in the Integrated Coastal and Ocean Observing System Act of 2009 (ICOOS Act). The criteria in this document have been formally adopted by the IOOC as the final non-federal certification criteria. NOAA, as the lead federal agency for IOOS, will provide program guidelines to direct certification applicants at a later date.

To be certified an applicant must meet the *Governance and Management* criteria which addresses a RICE's organizational requirements. These requirements are based on historical Regional Association management documents and map to the five legislative requirements for RICEs in the ICOOS Act. The five categories include: Organizational Structure, Gaps Identification, Strategic Operational Plan, Partnership Collaboration, and Financial Oversight. Meeting the criteria is necessary to coordinate non-federal assets in order to fulfill regional observation missions and priorities.

Upon meeting the specific criteria, entities will have demonstrated their ability to sustain organizational capacity and supply quality data necessary for operating under the auspices of IOOS. Advantages to becoming certified include federal liability protection for the use of their data as well as ancillary benefits when engaging in requests or proposals, the entity can advertise that they have received federal approval.

Introduction

By definition in the ICOOS Act, RICEs are responsible for coordinating State, Federal, local, and private interests at a regional level and engaging the private and public sectors in designing, operating, and improving regional coastal and ocean observing systems in order to ensure the provision of data and information that meet the needs of user groups from the respective regions. The IOOC therefore focused on identifying *governance* and *management* criteria necessary to coordinate non-federal assets in order to fulfill regional observation missions and priorities. The criteria and related information presented in the following sections are linked directly to the ICOOS Act.

Governance refers to the regional representation of stakeholder interests, and is the organizational body that directs and oversees management so the regional system achieves desired outcomes. *Management* refers to the group of people who are given the authority by the governing body to achieve results and defines the actions they take to do so. This includes assuring that the necessary policies, standards, data, information, and services associated with the IOOS sub-systems are appropriately established, coordinated, overseen and enforced. The governance and management functions of each RICE must improve the Nation's capability to measure, track, explain, and predict events related directly and indirectly to weather and climate change, natural climate variability, and interactions between the oceanic and atmospheric environments along the US Oceans, Coasts, and Great Lakes, and promote regional-to-national scale innovation and system improvements. Since the coastal component of IOOS is comprised of a national network of regional systems, both the regional governance and management bodies are accountable to the larger U.S. IOOS program.

The IOOC researched other models for governance and management certification, considered historical IOOS documents such as the System Development Plan (2006) and the Regional Association Maturity Index (2010), along with other previously developed, but not adopted or implemented, regional certification criteria. This helped shape IOOC deliberations and clarified not only what was being certified, but also what was required for certification. The IOOC developed governance and management criteria within the context of the five provisions contained in the ICOOS Act section 12304(c)(4), which requires that a certified RICE:

1. Demonstrate an organizational structure capable of gathering required System observation data, supporting and integrating all aspects of coastal and ocean observing and information programs within a region and that reflects the needs of State and local governments, commercial interests, and other users and beneficiaries of the System and other requirements specified under this subtitle and the System Plan;
2. Identify gaps in observation coverage needs for capital improvements of Federal assets and non-Federal assets of the System, or other recommendations to assist in the development of annual and long-terms plans and transmit such information to the Interagency Ocean Observing Committee via the Program Office;
3. Develop and operate under a Strategic Operational Plan that will ensure the efficient and effective administration of programs and assets to support daily data observations for integration into the System, pursuant to the standards approved by the Council;

4. Work cooperatively with governmental and non-governmental entities to identify and provide information products of the System for multiple users within the service area of the regional information coordination entities; and
5. Comply with all financial oversight requirements established by the Administrator, including requirements relating to audits.

Once an entity is certified as a RICE, they will be a designated non-Federal IOOS regional partner. With regard to governance, a RICE must:

- Exist for the purpose of facilitating interests and needs related to the collection, use, and dissemination of coastal and ocean observations and related data and products within a specified geographic region.
- Be responsible for engaging both the public and private sector in the design, operation, and improvement of a regional coastal ocean observing system.

Certification Criteria

I. Organizational Structure

Section 12304(c)(4)(A)(i) Demonstrate an organizational structure capable of gathering required System observation data, supporting and integrating all aspects of coastal and ocean observing and information programs within a region and that reflects the needs of State and local governments, commercial interests, and other users and beneficiaries of the System and other requirements specified under this subtitle and the System Plan;

To demonstrate this requirement, the RICE must meet the criteria below as prescribed by the NOAA program guidelines;

1. Show documentation of an organizational structure:

- a. Pursuant to the article of incorporation in the home state, or binding agreement that includes a legal mechanism for:
 - i. Accepting and disbursing funds, that includes the establishment and use of criteria for distributing funds based on a well-defined system for setting observing system priorities;
 - ii. Entering into contracts, grants, and cooperative agreements;
 - iii. Addressing issues of accountability and liability.
- b. Create and maintain a representative Governing Board with the power and responsibility to ensure its autonomy. The Governing Board shall:
 - i. Operate with bylaws, signed articles of agreement, or similarly binding agreements that:
 1. Provide for the formulation and implementation of a Strategic Operational Plan and budget, as described in Section II and the System Plan, Appendix F;
 2. Provide procedures for calling meetings of the Board, decision-making, establishing policies, and amending by-laws.
 - ii. Articulate a process used to solicit/receive advice on RICE membership diversity, stakeholder coordination and engagement strategies, and requirements to ensure the provision of data and information that meet the needs of user groups;
 - iii. Describe methods for assessing user satisfaction with the system, including the adequacy of the system and subsystems to meet needs; and procedures for responding to user feedback
 - iv. Ensure decisions about the priorities and the overall design of the system are transparent and available;

2. Devise and adopt a Membership policy that:

- a. Articulates the process by which individuals or organizations may become members, maintain their membership, or lose their membership, including qualification for membership, categories of membership, and rights and responsibilities of membership;

- b. Strives for organizational diversity to include intra-regional geographic representation, and a diversity of member activities and interests from both public and private sectors;
- c. Allows for non-voting or advisory members from adjacent regions or nations.

II. Strategic Operational Plan

Section 12304(c)(4)(A)(iii) develop and operate under a strategic operational plan that will ensure the efficient and effective administration of programs and assets to support daily data observations for integration into the System, pursuant to the standards approved by the Council;

To demonstrate this requirement a RICE must develop a Strategic Operational Plan which fully describes the operations of the regional coastal ocean observing system, including specific subsystems, and consists of the following:

- 1. Background and Context, including a description of:**
 - a. The role of the RICE in the region and within U.S. IOOS
 - b. The processes that will be used to update and maintain the Strategic Operational Plan
 - c. The primary RICE assets and partners
- 2. Goals and Objectives of the RICE, including a description of:**
 - a. How the observing system will serve to meet IOOS societal goals in the region;
 - b. The major objectives that address priorities for data collection and management, development of products and services, research and development, and education and outreach to meet user needs and improve system capacity.
- 3. Operational Plan for the Observing System, including a description of:**
 - a. How the individual elements--data collection and management, development of products and services, research and development, and education and outreach--come together as an integrated system;
 - b. A strategy for ongoing system operations that demonstrates those responsible for current and future operations have appropriate skills and experience to successfully deliver observations;
 - c. A strategy for ongoing system operations that demonstrates proper equipment management procedures including the nature and schedule for calibration, testing, and other quality management factors;
- 4. A development strategy** to sustain and enhance the system that balances long-term observations with changing user needs and requirements.
- 5. Data Management and Communications (DMAC) Plan, including a description of:**
 - a. Documentation of the personnel and processes dedicated to data management to ensure data usability, documentation, quality, preservation, and accessibility;
 - b. Data sharing policy including any special exceptions to an open data sharing policy or any ethical or intellectual property issues that must be independently managed by the RICE;

- c. The Council approved protocols that have been adopted by the RICE to integrate data into the System;
- d. Documentation of a strategy to address how data collected by the RICE is preserved for future users and is independently understandable by them.

6. Budget Plan:

- a. The RICE shall annually update its budget plan to include a description of:
 - i. The current and projected sources of funding and in-kind support;
 - ii. The plans and strategies for diversifying the funding base;
 - iii. The apportionment of funding across all RICE activities, and project future funding shortfalls and associated risks.

III. Gaps Identification

Section 12304(c)(4)(A)(ii) identify gaps in observation coverage needs for capital improvements of Federal assets and non-Federal assets of the System, or other recommendations to assist in the development of the annual and long-term plans created pursuant to subsection (c)(2)(A)(i) and transmit such information to the Interagency Ocean Observing Committee via the Program Office;

To demonstrate this requirement, the RICE must:

- 1. Identify gaps in observation coverage within the region by:**
 - a. Identifying gaps in the spatial and temporal coverage of the existing observation network, both federal and non-federal, and including in the Strategic Operational Plan priorities and options for addressing these gaps.

IV. Financial Oversight

Section 12304(c)(4)(A)(v) comply with all financial oversight requirements established by the Administrator, including requirements relating to audits;

To demonstrate this requirement, the RICE must:

- 1. Fulfill requirements for financial oversight and compliance including audits detailed in the grant, contract, Cooperative Agreement or other vehicle for the exchange of funds.**
- 2. Document, the budget for operating and maintaining regional observation assets, platforms, sensors, etc. owned and operated by the RICE.**

Appendix A. Definitions

Criteria:

Standards on which a judgment or decision may be based.

Data Management Maturity Criteria:

Standards reflecting the quality and validity of data.

Federal Assets:

All relevant non-classified civilian coastal and ocean observations, technologies, and related modeling, research, data management, basic and applied technology research and development, and public education and outreach programs, that are managed by federal agencies.

Non-Federal Assets:

All relevant coastal and ocean observation technologies, related basic and applied technology research and development, and public education and outreach programs that are integrated into the System and are managed through States, tribes or tribal government, regional organizations, universities, nongovernmental organizations, or the private sector.

Program Office:

Within the National Oceanic and Atmospheric Administration, an Integrated Ocean Observing Program Office utilizes personnel from member agencies participating on the Interagency Ocean Observation Committee, to oversee daily operations and coordination of the System.

Regional Coastal Ocean Observing System (RCOOS):

A network of observations, DMAC, data analysis and modeling that links the needs of users to observations of coastal marine and estuarine environments and the Great Lakes on regional scales. This definition is located in the System Plan in Appendix B.

Regional Information Coordination Entities:

An organizational body that is certified or established by contract or memorandum by the lead Federal agency designated in the Integrated Coastal and Ocean Observation System Act of 2009, and that coordinates State, Federal, local, and private interests at a regional level with the responsibility of engaging the private and public sectors in designing, operating, and improving regional coastal and ocean observing systems in order to ensure the provision of data and information that meet the needs of user groups from the respective regions.

System Elements:

A national system that contains: (A) Federal assets to fulfill national and international observation missions and priorities; (B) non-Federal assets, including a network of regional information coordination entities, to fulfill regional observation missions and priorities; (C) data management, communication, and modeling systems for the timely integration and dissemination of data and information products from the System; (D) a research and development program. The research and development program consists of (i) basic and applied research and technology development to improve understanding of coastal and ocean systems and their relationships to human activities and to ensure improvement of operational assets and products, including related infrastructure, observing technologies, and information and data processing and management technologies; and(ii) large scale computing resources and research to advance modeling of coastal and ocean processes.

System Plan:

Ocean. US Publication No. 9, The First Integrated Ocean Observing System (IOOS) Development Plan.

Verification:

The process to establish the truth, accuracy, or reality of a claim; e.g. that of data quality.

Appendix B. Relevant ICOOS Act Sections

Section 12303(6):

IN GENERAL- The term 'regional information coordination entity' means an organizational body that is certified or established by contract or memorandum by the lead Federal agency designated in section 12304(c)(3) of this subtitle and coordinates State, Federal, local, and private interests at a regional level with the responsibility of engaging the private and public sectors in designing, operating, and improving regional coastal and ocean observing systems in order to ensure the provision of data and information that meet the needs of user groups from the respective regions.

CERTAIN INCLUDED ASSOCIATIONS- The term 'regional information coordination entity' includes regional associations described in the System Plan.

Section 12303(9):

(9) SYSTEM PLAN- The term 'System Plan' means the plan contained in the document entitled 'Ocean. US Publication No. 9, The First Integrated Ocean Observing System (IOOS) Development Plan', as updated by the Council under this subtitle.

Section 12304(c)(2)(D):

The Council shall establish or designate an Interagency Ocean Observing Committee which shall – establish protocols and standards for System data processing, management and communication.

Section 12304(c)(2)(E):

The Council shall establish or designate an Interagency Ocean Observation Committee which shall – develop contract certification standards and compliance procedures for all non-Federal assets, including regional information coordination entities, to establish eligibility for integration into the System and to ensure compliance with all applicable standards and protocols established by the Council, and ensure that regional observations are integrated into the System on a sustained basis.

Section 12304(c)(3)(C):

The National Oceanic and Atmospheric Administration shall – promulgate program guidelines to certify and integrate non-Federal assets, including regional information coordination entities, into the System to provide regional coastal and ocean observing data that meet the needs of user groups from the respective regions.

Section 12304(c)(4)(A) (i):

REGIONAL INFORMATION COORDINATION ENTITIES- To be certified or established under this subtitle, a regional information coordination entity shall be certified or established by contract or agreement by the Administrator, and shall agree to meet the certification standards and compliance procedure guidelines issued by the Administrator and information needs of user groups in the region while adhering to national standards and shall--

(i) demonstrate an organizational structure capable of gathering required System observation data, supporting and integrating all aspects of coastal and ocean observing and information programs within a region and that reflects the needs of State and local governments, commercial interests, and other users and beneficiaries of the System and other requirements specified under this subtitle and the System Plan;

(ii) identify gaps in observation coverage needs for capital improvements of Federal assets and non-Federal assets of the System, or other recommendations to assist in the development of the annual and long-term plans created pursuant to subsection (c)(2)(A)(i) and transmit such information to the Interagency Ocean Observing Committee via the Program Office;

(iii) develop and operate under a strategic operational plan that will ensure the efficient and effective administration of programs and assets to support daily (why daily?) data observations for integration into the System, pursuant to the standards approved by the Council;

(iv) work cooperatively with governmental and non-governmental entities at all levels to identify and provide information products of the System for multiple users within the service area of the regional information coordination entities; and

(v) comply with all financial oversight requirements established by the Administrator, including requirements relating to audits.

Section 12304(e):

Civil Liability – For purposes of determining liability arising from the dissemination and use of observation data gathered pursuant to this section, any non-Federal asset or regional information coordination entity incorporated into the System by contract, lease, grant, or cooperative agreement under subsection (c)(3)(D) that is participating in the System shall be considered to be part of the National Oceanic and Atmospheric Administration. Any employee of such a non-Federal asset or regional information coordination entity, while operating within the scope of his or her employment in carrying out the purposes of this subtitle, with respect to tort liability, is deemed to be an employee of the Federal Government.