

NOAA Observing Systems Committee

Terms of Reference

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A. Governance and Purpose

1. The NOAA Observing Systems Committee (OSC), a committee of the NOAA Observing Systems Council (NOSC), conducts activities in support of NOAA's integrated observing systems portfolio (user observation requirements, architectures, trades, emerging technologies, and investments). The NOSC serves as the principal advisory body to the Under Secretary of Commerce for Oceans and Atmosphere (NOAA Administrator).
2. NOAA's observing systems portfolio contains nearly 200 systems, which account for approximately half of NOAA's budget. Many of these systems were designed for a single purpose using multiple networks, data formats, and dissemination methods. Analyses, including consolidation and/or integration efforts, are an important means to address potential inefficiencies and opportunities in this portfolio. These activities and efforts should seek to continually refine and optimize existing and proposed portfolios via a process that is linked to NOAA's goals, programs, outcomes, and services. A balance of observing systems and methods must be achieved for an optimal and efficient portfolio that serves NOAA's mission. The NOSC chartered the OSC to oversee this process.
3. The OSC supports the continuous development and agency-wide utilization of observing systems portfolio management tools to conduct analyses and make progress toward achieving a mission-effective, integrated, adaptable, and affordable observing system architecture to meet NOAA's current and future missions. The NOSC has an obligation to NOAA leadership and the public to show a high return on investment of service outcomes and societal benefits for the substantial resources committed. Therefore, the OSC will provide:
 - a. Comprehensive and continuous assessment and analysis of the observing systems portfolio, and
 - b. Specific recommendations to the NOSC for changes to the configuration of NOAA's observing systems and overall portfolio to maximize the benefit to NOAA and its end users.
4. Consistent with NOAA Administrative Order (NAO) 212-16 and its associated procedural directives, the OSC will:
 - a. Capture and maintain information regarding the current observing systems portfolio and leveraged capabilities used by NOAA,
 - b. Provide recommendations to the NOSC for changes to NOAA's observational requirements, architectures, trades, and investments based on annual planning activities and long-term trends,

- c. Understand and validate the assumptions underpinning the Technology, Planning and Integration for Observation (TPIO) analysis methods and databases, as well as their linkages with NOAA's goals for services and outcomes,
 - d. Lead the development of the biennial "NOAA's Observation Enterprise Portfolio Outlook" report on behalf of the NOSC, which shall identify key observing system issues, challenges, opportunities, or innovations emerging within the NOAA services enterprise initiatives and policy focus areas,
 - e. Assess the impact on mission outcomes of NOAA's proposed investments in observing systems for the current budget cycle upon request from the NOSC,
 - f. Assess the impact of proposed investments for any out-of-budget-cycle recommendations in observing systems upon request from the NOSC,
 - g. Ensure that its data management practices are consistent with those of the NOAA Data Governance Committee (DGC) to ensure maximal use/benefit of NOAA's environmental information assets,
 - h. Coordinate with the Quantitative Observing System Assessment Program (QOSAP) for the planning and execution of quantitative assessments requested by the NOSC on the design and implementation of optimal observing systems, and
 - i. Undertake tasks as assigned by NOSC.
5. In the long term, the OSC will:
- a. Continuously monitor the life-cycle impact on outcomes of NOAA's investments in observing systems,
 - b. Monitor the life-cycle impact of OSC recommendations implemented regarding investments in observing systems,
 - c. Support the assessment of new technologies produced by industry, academia, and NOAA laboratories for inclusion into the observing systems portfolio,
 - d. Facilitate, coordinate, and enable observing system configurations and portfolios, including alternatives and estimates of life-cycle costs that are linked to NOAA's goals for outcomes and services in support of NOAA's strategic planning.
 - e. Establish best practices and guidelines to coordinate with non-Federal entities, as well as interagency and international partners, to optimize national and international observations, as needed,
 - f. Engage with the Science Council, Fleet Council, Oceans and Coastal Council, and

the DGC to harmonize roles and responsibilities as appropriate.

B. Membership

1. Co-Chairs: Two Line Office executive-level leaders will serve as co-chairs.
2. Executive Secretariat: The Executive Secretariat will be appointed by the Co-Chairs.
3. Members: A principal and alternate representative from each Line Office are appointed by the Line Office NOSC representative(s):
 - a. National Environmental Satellite, Data, and Information Service (NESDIS)
 - b. National Marine Fisheries Services (NMFS)
 - c. National Ocean Service (NOS)
 - d. National Weather Service (NWS)
 - e. Office of Oceanic and Atmospheric Research (OAR)
 - f. Office of Marine and Aviation Operations (OMAO)
4. Advisors:
 - a. Technical Advisor: TPIO representative
 - b. Observing System (Simulation) Experiments (OSE and OSSE) Advisor: QOSAP Director or designee

C. Task Teams/Working Groups

The OSC may form task teams or working groups to achieve specific tasks as needed. The membership of these task teams or working groups include representatives from relevant NOAA programs, and the tasks focused on, among other things, assessing the impact(s) of any proposed changes to NOAA's observing systems architecture(s) and portfolio(s) on the services NOAA provides to its end users.

D. Roles and Responsibilities

1. Co-Chairs: The Co-Chairs will regularly report to and receive guidance from the NOSC. The Co-Chairs will provide direction to the Members, Advisors, and Executive Secretariat as appropriate.
2. Executive Secretariat: The Executive Secretariat will support all administrative functions as determined by the OSC Co-Chairs.

3. Members: OSC members will:
 - a. Attend Committee meetings,
 - b. Ensure NOAA requirements (to include user requirements and observation requirements) are identified and documented by Line and Staff Offices,
 - c. Represent Line Office observing system capabilities,
 - d. Provide a NOAA-wide perspective, and
 - e. Accomplish tasking as directed by Co-Chairs.
4. Advisors: OSC advisors will:
 - a. Provide advice on the types of analyses to perform and technical direction for the OSC,
 - b. Provide analyses as required to accomplish Committee tasks,
 - c. Engage appropriate OSC members when conducting analyses based on customer requests or the NOSC/OSC work plan items related to that Line or Staff Office and provide completed analyses for their information, and
 - d. Provide advice on future observing capabilities, architecture-level trades, and opportunities to incorporate contributions from commercial, federal, and international partners into the observing systems portfolio to increase efficiency and reduce costs.

E. Meeting Frequency

Committee meetings are held monthly at the discretion of the Co-Chairs. The Executive Secretariat will meet with the Co-Chairs and Technical Advisor approximately two weeks prior to the monthly Committee meeting to discuss the agenda and any items that require Co-Chair consultation.

F. Decision-Making Process

Decisions will normally be reached by informed consensus. If consensus is not achieved among the Committee, the Co-Chairs shall decide the outcome or present the issue to the NOSC for resolution.