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To develop and maintain an integrated system of coastal and ocean observations for the Nation's coasts, oceans, and Great Lakes, to improve warnings of tsunami, hurricanes, El Niño events, and other natural hazards, to enhance homeland security, to support maritime operations, to improve management of coastal and marine resources, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 21, 2007

Ms. SNOWE (for herself, Ms. CANTWELL, Mr. INOUE, Mr. STEVENS, Mrs. BOXER, Mr. CARDIN, Mr. KERRY, Mr. MENENDEZ, Ms. COLLINS, Mr. LAUTENBERG, Mr. LOTT, Mrs. FEINSTEIN, Mr. NELSON of Florida, and Ms. MURKOWSKI) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To develop and maintain an integrated system of coastal and ocean observations for the Nation's coasts, oceans, and Great Lakes, to improve warnings of tsunami, hurricanes, El Niño events, and other natural hazards, to enhance homeland security, to support maritime operations, to improve management of coastal and marine resources, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Coastal and Ocean
3 Observation System Act of 2007”.

4 **SEC. 2. FINDINGS AND PURPOSES.**

5 (a) FINDINGS.—Congress finds the following:

6 (1) The United States Commission on Ocean
7 Policy recommends a national commitment to a sus-
8 tained and integrated coastal and ocean observing
9 system and to coordinated research programs which
10 would provide vital information to assist the Nation
11 and the world in understanding, monitoring, and
12 predicting changes to the ocean and coastal re-
13 sources and the global climate system, enhancing
14 homeland security, improving weather and climate
15 forecasts, strengthening management and sustain-
16 able use of coastal and ocean resources, improving
17 the safety and efficiency of maritime operations, and
18 mitigating the impacts of marine hazards.

19 (2) The continuing and potentially devastating
20 threat posed by tsunami, hurricanes, storm surges,
21 and other marine hazards requires immediate imple-
22 mentation of strengthened observation and commu-
23 nications, and data management systems to provide
24 timely detection, assessment, and warnings and to
25 support response strategies for the millions of people

1 living in coastal regions of the United States and
2 throughout the world.

3 (3) Safeguarding homeland security, conducting
4 search and rescue operations, responding to natural
5 and manmade coastal hazards (such as oil spills and
6 harmful algal blooms), and managing fisheries and
7 other coastal activities each require improved under-
8 standing and monitoring of the Nation's waters,
9 coastlines, ecosystems, and resources, including the
10 ability to provide rapid response teams with real-
11 time environmental conditions necessary for their
12 work.

13 (4) The 95,000-mile coastline of the United
14 States, including the Great Lakes, is vital to the Na-
15 tion's prosperity, contributing over \$117 billion to
16 the national economy in 2000, supporting jobs for
17 more than 200 million Americans, handling \$700
18 billion in waterborne commerce, and supporting com-
19 mercial and sport fisheries valued at more than \$50
20 billion annually.

21 (5) Ensuring the effective implementation of
22 National and State programs to protect unique
23 coastal and ocean habitats, such as wetlands and
24 coral reefs, and living marine resources requires a
25 sustained program of research and monitoring to

1 understand these natural systems and detect
2 changes that could jeopardize their long term viability.
3

4 (6) Many elements of a coastal and ocean observing system are in place, but require national investment, consolidation, completion, and integration
5 among international, Federal, regional, State, and
6 local elements.
7

8 (7) In 2003, the United States led more than
9 50 nations in affirming the vital importance of timely, reliable, long-term global observations as a basis
10 for sound decision-making, recognizing the contribution of observation systems to meet national, regional, and global needs, and calling for strengthened cooperation and coordination in establishing a
11 Global Earth Observation System of Systems, of
12 which an integrated coastal and ocean observing system is an essential part.
13

14 (8) Protocols and reporting for observations, measurements, and other data collection for a coastal and ocean observing system should be standardized to facilitate data use and dissemination.
15

16 (9) Key variables, including temperature, salinity, sea level, surface currents, and ocean color,
17

1 should be collected to address a variety of informa-
2 tional needs.

3 (b) PURPOSES.—The purposes of this Act are to es-
4 tablish an integrated national system of ocean, coastal,
5 and Great Lakes observing systems to address regional
6 and national needs for ocean information and to provide
7 for—

8 (1) the planning, development, implementation,
9 and maintenance of an integrated coastal and ocean
10 observing system that provides data and information
11 to sustain and restore healthy marine, coastal, and
12 Great Lakes ecosystems and manage the resources
13 they support, aid marine navigation safety and na-
14 tional security, support economic development, en-
15 able advances in scientific understanding of the
16 oceans and the Great Lakes, and strengthen science
17 education and communication;

18 (2) implementation of research, development,
19 education, and outreach programs to improve under-
20 standing of the marine environment and achieve the
21 full national benefits of an integrated coastal and
22 ocean observing system;

23 (3) implementation of a data, information man-
24 agement, and modeling system required by all com-
25 ponents of an integrated coastal and ocean observing

1 system and related research to develop early warning
2 systems to more effectively predict and mitigate im-
3 pacts of natural hazards, improve weather and cli-
4 mate forecasts, conserve healthy and restore de-
5 graded coastal ecosystems, and ensure usefulness of
6 data and information for users; and

7 (4) establishment of a network of regional asso-
8 ciations to operate and maintain regional coastal
9 and ocean observing systems to ensure fulfillment of
10 national objectives at regional scales and to address
11 state and local needs for ocean information and data
12 products.

13 **SEC. 3. DEFINITIONS.**

14 In this Act:

15 (1) ADMINISTRATOR.—The term “Adminis-
16 trator” means Administrator of the National Oce-
17 anic and Atmospheric Administration.

18 (2) COUNCIL.—The term “Council” means the
19 National Ocean Research Leadership Council estab-
20 lished by section 7902 of title 10, United States
21 Code.

22 (3) INTEGRATED OCEAN OBSERVING PROGRAM
23 OFFICE.—The term “Integrated Ocean Observing
24 Program Office” means a program office within the
25 National Oceanic and Atmospheric Administration

1 to integrate its ocean observing assets and imple-
 2 ment the requirements under section 4(d).

3 (4) INTERAGENCY PROGRAM OFFICE.—The
 4 term “Interagency Program Office” means the office
 5 established under section 4(e).

6 (5) NATIONAL OCEANOGRAPHIC PARTNERSHIP
 7 PROGRAM.—The term “National Oceanographic
 8 Partnership Program” means the program estab-
 9 lished under section 7901 of title 10, United States
 10 Code.

11 (6) OBSERVING SYSTEM.—The term “observing
 12 system” means the integrated coastal, ocean, and
 13 Great Lakes observing system to be established by
 14 the Council under section 4(a).

15 (7) SECRETARY.—The term “Secretary” means
 16 the Secretary of Commerce, acting through the Na-
 17 tional Oceanic and Atmospheric Administration.

18 **SEC. 4. INTEGRATED COASTAL AND OCEAN OBSERVING**
 19 **SYSTEM.**

20 (a) ESTABLISHMENT.—The President, acting
 21 through the Council, shall establish and maintain an inte-
 22 grated system of coastal and ocean observations, data
 23 communication and management, analysis, modeling, re-
 24 search, education, and outreach designed to understand
 25 current conditions and provide data and information for

1 the timely detection and prediction of changes occurring
2 in the ocean, coastal and Great Lakes environment that
3 impact the Nation's social, economic, and ecological sys-
4 tems. The observing system shall provide for long-term,
5 continuous and quality-controlled observations of the Na-
6 tion's coasts, oceans, and Great Lakes in order to—

7 (1) understand the effects of human activities
8 and natural variability on and improve the health of
9 the Nation's coasts, oceans, and Great Lakes;

10 (2) measure, track, explain, and predict climatic
11 and environmental changes and protect human lives
12 and livelihoods from hazards such as tsunami, hurri-
13 canes, storm surges, coastal erosion, levy breaches,
14 and fluctuating water levels;

15 (3) supply critical information to marine-related
16 businesses such as marine transportation, aqua-
17 culture, fisheries, and offshore energy production
18 and aid marine navigation and safety;

19 (4) support national defense and homeland se-
20 curity efforts;

21 (5) support the sustainable use, conservation,
22 management, and enjoyment of healthy ocean, coast-
23 al, and Great Lakes resources, better understand the
24 interactions of ocean processes within the coastal

1 zone, and support implementation and refinement of
2 ecosystem-based management and restoration;

3 (6) support the protection of critical coastal
4 habitats, such as coral reefs and wetlands, and
5 unique ecosystems and resources;

6 (7) educate the public about the role and im-
7 portance of the oceans, coasts, and Great Lakes in
8 daily life; and

9 (8) support research and development to ensure
10 improvement to ocean, coastal, and Great Lakes ob-
11 servation measurements and to enhance under-
12 standing of the Nation's ocean, coastal, and Great
13 Lakes resources.

14 (b) SYSTEM ELEMENTS.—In order to fulfill the pur-
15 poses of this Act, the observing system shall consist of the
16 following program elements:

17 (1) A national program to fulfill national and
18 international observation priorities.

19 (2) A network of regional associations to man-
20 age the regional coastal and ocean observing and in-
21 formation programs that collect, measure, and dis-
22 seminate data and information products.

23 (3) Data management, communication, and
24 modeling systems for the timely integration and dis-

1 semination of data and information products from
2 the national and regional systems.

3 (4) A research and development program con-
4 ducted under the guidance of the Council; including
5 projects under the National Oceanographic Partner-
6 ship Program, consisting of the following:

7 (A) Basic research to advance knowledge
8 of coastal and ocean systems and ensure im-
9 provement of operational products, including re-
10 lated infrastructure, observing technology, and
11 information technology.

12 (B) Focused research and technology de-
13 velopment projects to improve understanding of
14 the relationship between the coasts and oceans
15 and human activities.

16 (C) Large scale computing resources and
17 research to advance modeling of coastal and
18 ocean processes.

19 (5) A coordinated outreach, education, and
20 training program that integrates and augments ex-
21 isting programs (such as the National Sea Grant
22 College Program, the Centers for Ocean Sciences
23 Education Excellence program, and the National Es-
24 tuarine Research Reserve System), to ensure the use
25 of data and information for improving public edu-

1 cation and awareness of the Nation's coastal and
2 ocean environment and building the technical exper-
3 tise required to operate and improve the observing
4 system.

5 (c) COUNCIL FUNCTIONS.—The Council shall serve
6 as the oversight body for the design and implementation
7 of all aspects of the observing system. In carrying out its
8 responsibilities under this section, the Council shall—

9 (1) adopt plans, budgets, and standards that
10 are developed and maintained by the Interagency
11 Program Office in consultation with the regional as-
12 sociations;

13 (2) coordinate the observing system with other
14 earth observing activities including the Global Ocean
15 Observing System and the Global Earth Observing
16 System of Systems;

17 (3) coordinate and approve programs of intra-
18 mural and extramural research, technology develop-
19 ment, education, and outreach to support improve-
20 ments to and the operation of an integrated coastal
21 and ocean observing system and to advance the un-
22 derstanding of the oceans;

23 (4) promote development of technology and
24 methods for improving the observing system;

1 (5) support the development of institutional
2 mechanisms and financial instruments to further the
3 goals of the program and provide for the capitaliza-
4 tion of the required infrastructure;

5 (6) provide, as appropriate, support for and
6 representation on United States delegations to inter-
7 national meetings on coastal and ocean observing
8 programs, including those under the jurisdiction of
9 the International Joint Commission involving Cana-
10 dian waters; and

11 (7) in consultation with the Secretary of State,
12 support coordination of relevant Federal activities
13 with those of other nations.

14 (d) LEAD FEDERAL AGENCY.—The National Oceanic
15 and Atmospheric Administration shall be the lead Federal
16 agency for implementation and administration of the ob-
17 serving system and to carry out the responsibilities of this
18 Act, in consultation with the Council, the Interagency Pro-
19 gram Office, other Federal Agencies that maintain por-
20 tions of the observing system and the Regional Associa-
21 tions, shall—

22 (1) establish an Integrated Ocean Observing
23 Program Office;

24 (2) integrate, improve, and extend existing pro-
25 grams and research projects, and ensure that re-

1 regional associations are integrated into the oper-
2 ational observation system on a sustained basis;

3 (3) integrate the appropriate capabilities of the
4 National Oceanic and Atmospheric Administration,
5 and other appropriate centers, into the observing
6 system for the purpose of assimilating, managing,
7 disseminating, and archiving data from regional ob-
8 servation systems and other observation systems;

9 (4) provide for the migration of scientific and
10 technological advances from research and develop-
11 ment to operational deployment;

12 (5) provide for opportunities to contract with
13 private sector companies in designing, developing,
14 integrating, and deploying ocean observation system
15 elements;

16 (6) establish efficient and effective administra-
17 tive procedures for allocation of funds among Fed-
18 eral agencies, contractors, grantees, and regional as-
19 sociations in a timely manner, and contingent on ap-
20 propriations according to the budget adopted by the
21 Council;

22 (7) develop and implement a process for the
23 certification and assimilation into the national ocean
24 observations network of the regional associations
25 and their periodic review and recertification and cer-

1 tify regional associations that meet the requirements
2 of subsection (f); and

3 (8) develop a data management and commu-
4 nication system, in accordance with the established
5 standards and protocols, by which all data collected
6 by the observing system regarding coastal waters of
7 the United States are integrated and available.

8 (e) INTERAGENCY PROGRAM OFFICE.—

9 (1) ESTABLISHMENT.—The Council shall estab-
10 lish an Interagency Program Office housed within
11 the National Oceanic and Atmospheric Administra-
12 tion.

13 (2) RESPONSIBILITIES.—The Interagency Pro-
14 gram Office shall be responsible for program plan-
15 ning and coordination of the implementation of the
16 observing system.

17 (3) DUTIES.—The Interagency Program Office
18 shall report to the Council via the Secretary and
19 shall—

20 (A) prepare annual and long-term plans
21 for consideration and approval by the Council
22 for the design and implementation of the ob-
23 serving system that promote collaboration
24 among Federal agencies and regional associa-
25 tions in developing global, national, and re-

gional observing systems, including identification and refinement of a core set of variables to be measured by all systems;

(B) coordinate the development of agency and regional associations priorities and budgets to implement, operate, and maintain the observing systems;

(C) establish and refine standards and protocols for data collection, management and communications, including quality control standards, in consultation with participating Federal agencies and regional associations; and

(D) establish a process for assuring compliance for all participating entities with the standards and protocols for data management and communications, including quality control standards.

(f) REGIONAL ASSOCIATIONS OF COASTAL AND OCEAN OBSERVING SYSTEMS.—

(1) The Secretary shall initiate a rulemaking proceeding to establish a process for the certification of regional associations to be responsible for the development and operation of regional coastal and ocean observing systems to meet the information needs of user groups in the region while adhering to

1 national standards. To be certified a regional asso-
2 ciation shall meet the certification standards devel-
3 oped by the Interagency Program Office in conjunc-
4 tion with the regional associations and approved by
5 the Council and shall—

6 (A) demonstrate an organizational struc-
7 ture capable of supporting and integrating all
8 aspects of coastal and ocean observing and in-
9 formation programs within a region and that
10 reflects broad representation from state and
11 local government, commercial interests, and
12 other users and beneficiaries of marine informa-
13 tion;

14 (B) operate under a strategic operations
15 and business plan that details the operation and
16 support of regional coastal and ocean observing
17 systems pursuant to the standards approved by
18 the Council; and

19 (C) work with governmental entities and
20 programs at all levels to identify and provide in-
21 formation products of the observing system for
22 multiple users in the region to advance outreach
23 and education, to improve coastal and fishery
24 management, safe and efficient marine naviga-
25 tion, weather and climate prediction, to enhance

1 preparation for hurricanes, tsunami, and other
2 natural hazards, and other appropriate activi-
3 ties.

4 (2) For the purposes of this Act, employees of
5 Federal agencies may participate in the functions of
6 the Regional Associations.

7 (g) CIVIL LIABILITY.—For purposes of section
8 1346(b)(1) and chapter 171 of title 28, United States
9 Code, and chapters 309 and 311 of title 46, United States
10 Code, any regional coastal and ocean observing system
11 that is a designated part of a regional association certified
12 under this section shall, with respect to tort liability aris-
13 ing from the dissemination and use of the data, in car-
14 rying out the purposes of this Act, be deemed to be part
15 of the National Oceanic and Atmospheric Administration,
16 and any employee of such system, while operating within
17 the scope of his or her employment in carrying out such
18 purposes, shall be deemed to be an employee of the Gov-
19 ernment.

20 **SEC. 5. PROCESS FOR TRANSITION FROM RESEARCH TO**
21 **OPERATION.**

22 The National Oceanic and Atmospheric Administra-
23 tion, in consultation with the Council, shall formulate a
24 process by which—

1 (1) funding is made available for intramural
2 and extramural research on new technologies for col-
3 lecting data regarding coastal and ocean waters of
4 the United States;

5 (2) such technologies are tested including—

6 (A) accelerated research into biological and
7 chemical sensing techniques and satellite sen-
8 sors for collecting such data; and

9 (B) developing technologies to improve all
10 aspects of the observing system, especially the
11 timeliness and accuracy of its predictive models
12 and the usefulness of its information products;
13 and

14 (3) funding is made available and a plan is de-
15 veloped and executed to transition technology that
16 has been demonstrated to be useful for the observing
17 system is incorporated into use by the observing sys-
18 tem.

19 **SEC. 6. INTERAGENCY FINANCING.**

20 The departments and agencies represented on the
21 Council are authorized to participate in interagency fi-
22 nancing and share, transfer, receive, obligate, and expend
23 funds appropriated to any member of the Council for the
24 purposes of carrying out any administrative or pro-
25 grammatic project or activity under this Act or under the

1 National Oceanographic Partnership Program, including
2 support for the Interagency Program Office, a common
3 infrastructure, and system integration for a coastal and
4 ocean observing system. Funds may be transferred among
5 such departments and agencies through an appropriate in-
6 strument that specifies the goods, services, or space being
7 acquired from another Council member and the costs of
8 the same.

9 **SEC. 7. APPLICATION WITH OUTER CONTINENTAL SHELF**
10 **LANDS ACT.**

11 Nothing in this Act supersedes, or limits the author-
12 ity of the Secretary of the Interior under, the Outer Conti-
13 nental Shelf Lands Act (43 U.S.C. 1331 et seq.).

14 **SEC. 8. AUTHORIZATION OF APPROPRIATIONS.**

15 There are authorized to be appropriated to the Na-
16 tional Oceanic and Atmospheric Administration for the
17 implementation of this Act, \$150,000,000 for each of the
18 fiscal years 2008 through 2012 and such additional sums
19 as may be necessary for each of the fiscal years 2008
20 through 2012. The Administrator shall provide such sums
21 as are necessary to the regional associations certified
22 under section 4(f) for implementation of regional coastal
23 and ocean observing systems. Sums appropriated pursuant
24 to this section shall remain available until expended.

1 **SEC. 9. IMPLEMENTATION PLAN.**

2 Not later than 12 months after the date of the enact-
3 ment of this Act, the Secretary shall submit to the Con-
4 gress and the Council a plan for implementation of this
5 Act, including for—

6 (1) coordinating activities of the Secretary
7 under this Act with other Federal agencies; and

8 (2) distributing, to regional associations, funds
9 available to carry out this Act.

10 **SEC. 10. REPORT TO CONGRESS.**

11 (a) REQUIREMENT.—Not later than 2 years after the
12 date of the enactment of this Act and every 2 years there-
13 after, the Administrator shall prepare and the President
14 acting through the Council shall approve and transmit to
15 the Congress a report on progress made in implementing
16 this Act.

17 (b) CONTENTS.—The report shall include the fol-
18 lowing:

19 (1) A description of activities carried out under
20 the implementation plan and this Act.

21 (2) An evaluation of the effectiveness of the ob-
22 serving system.

23 (3) Benefits of the program to users of data
24 products resulting from the observing system (in-
25 cluding the general public, industry, scientists, re-

1 source managers, emergency responders, policy mak-
2 ers, and educators).

3 (4) Recommendations concerning—

4 (A) modifications to the observing system;
5 and

6 (B) funding levels for the observing system
7 in subsequent fiscal years.

8 (5) The results of a periodic external inde-
9 pendent programmatic audit of the observing sys-
10 tem.

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