

108TH CONGRESS
1ST SESSION

S. 1218

To provide for Presidential support and coordination of interagency ocean science programs and development and coordination of a comprehensive and integrated United States research and monitoring program.

IN THE SENATE OF THE UNITED STATES

JUNE 10, 2003

Mr. HOLLINGS (for himself and Mr. STEVENS) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To provide for Presidential support and coordination of interagency ocean science programs and development and coordination of a comprehensive and integrated United States research and monitoring program.

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

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Oceans and Human
5 Health Act”.

6 **SEC. 2. FINDINGS AND PURPOSES.**

7 (a) **FINDINGS.**—The Congress makes the following
8 findings:

1 (1) The rich biodiversity of marine organisms
2 provides society with an essential biomedical re-
3 source, a promising source of novel compounds with
4 therapeutic potential, and a potentially important
5 contribution to the national economy.

6 (2) The diversity of ocean life and research on
7 the health of marine organisms, including marine
8 mammals and other sentinel species, helps scientists
9 in their efforts to investigate and understand human
10 physiology and biochemical processes, as well as pro-
11 viding a means for monitoring the health of marine
12 ecosystems.

13 (3) The oceans drive climate and weather fac-
14 tors causing severe weather events and shifts in tem-
15 perature and rainfall patterns that affect the density
16 and distribution of disease-causing organisms and
17 the ability of public health systems to address them.

18 (4) The oceans act as a route of exposure for
19 human disease and illnesses through ingestion of
20 contaminated seafood and direct contact with sea-
21 water containing toxins and disease-causing orga-
22 nisms.

23 (5) During the past two decades, the incidence
24 of harmful blooms of algae has increased around the
25 world, contaminating shellfish, causing widespread

1 fish kills, threatening marine environmental quality
2 and resulting in substantial economic losses to coast-
3 al communities.

4 (6) Existing Federal programs and resources
5 support research in a number of these areas, but
6 gaps in funding, coordination, and outreach have im-
7 peded national progress in addressing ocean health
8 issues.

9 (7) National investment in a coordinated pro-
10 gram of research and monitoring would improve un-
11 derstanding of marine ecosystems, allow prediction
12 and prevention of marine public health problems and
13 assist in realizing the potential of the oceans to con-
14 tribute to the development of effective new treat-
15 ments of human diseases and a greater under-
16 standing of human biology.

17 (b) PURPOSES.—The purposes of this Act are to pro-
18 vide for—

19 (1) Presidential support and coordination of
20 interagency ocean science programs; and

21 (2) development and coordination of a com-
22 prehensive and integrated United States research
23 and monitoring program that will assist this Nation
24 and the world to understand, use and respond to the
25 role of the oceans in human health.

1 **SEC. 3. NATIONAL SCIENCE AND TECHNOLOGY COUNCIL.**

2 (a) DIRECTOR OF OFFICE OF SCIENCE AND TECH-
 3 NOLOGY POLICY TO CHAIR COUNCIL.—Section 207(a) of
 4 the National Science and Technology Policy, Organization,
 5 and Priorities Act of 1976 (42 U.S.C. 6616(a)) is amend-
 6 ed—

7 (1) by striking “CHAIRMAN OF FEDERAL CO-
 8 ORDINATING COUNCIL FOR SCIENCE, ENGINEERING,
 9 AND TECHNOLOGY” in the subsection heading and
 10 inserting “CHAIR OF THE NATIONAL SCIENCE AND
 11 TECHNOLOGY COUNCIL”; and

12 (2) by striking paragraph (1) and inserting the
 13 following:

14 “(1) serve as Chair of the National Science and
 15 Technology Council; and”.

16 (b) FUNCTIONS.—Section 401 of the National
 17 Science and Technology Policy, Organization, and Prior-
 18 ities Act of 1976 (42 U.S.C. 6651) is amended to read
 19 as follows:

20 **“SEC. 401. FUNCTIONS OF COUNCIL.**

21 “(a) IN GENERAL.—The National Science and Tech-
 22 nology Council (hereinafter referred to as the ‘Council’)
 23 shall consider problems and developments in the fields of
 24 science, engineering, and technology and related activities
 25 affecting more than one Federal agency, and shall rec-
 26 ommend policies and other measures designed to—

1 “(1) provide more effective planning and ad-
2 ministration of Federal scientific, engineering, and
3 technology programs;

4 “(2) identify research needs, including areas re-
5 quiring additional emphasis;

6 “(3) achieve more effective use of the scientific,
7 engineering, and technological resources and facili-
8 ties of Federal agencies, including elimination of un-
9 warranted duplication; and

10 “(4) further international cooperation in
11 science, engineering and technology.

12 “(b) COORDINATION.—The Council may be assigned
13 responsibility for developing long-range and coordinated
14 plans for scientific and technical research which involve
15 the participation of more than 2 agencies. Such plans
16 shall—

17 “(1) identify research approaches and priorities
18 which most effectively advance scientific under-
19 standing and provide a basis for policy decisions;

20 “(2) provide for effective cooperation and co-
21 ordination of research among Federal agencies; and

22 “(3) encourage domestic and, as appropriate,
23 international cooperation among government, indus-
24 try and university scientists.

1 “(c) OTHER DUTIES.—The Council shall perform
2 such other related advisory duties as shall be assigned by
3 the President or by the Chair of the Council.

4 “(d) ASSISTANCE OF OTHER AGENCIES.—For the
5 purpose of carrying out the provisions of this section, each
6 Federal agency represented on the Council shall furnish
7 necessary assistance to the Council. Such assistance may
8 include—

9 “(1) detailing employees to the Council to per-
10 form such functions, consistent with the purposes of
11 this section, as the Chairman of the Council may as-
12 sign to them; and

13 “(2) undertaking upon the request of the Chair,
14 such special studies for the Council as come within
15 the scope of authority of the Council.

16 “(e) STANDING COMMITTEES; WORKING GROUPS.—
17 For the purpose of developing interagency plans, con-
18 ducting studies, and making reports as directed by the
19 Chairman, standing committees and working groups of the
20 Council may be established.”.

21 **SEC. 4. INTERAGENCY OCEANS AND HUMAN HEALTH RE-**
22 **SEARCH PROGRAM.**

23 (a) ESTABLISHMENT OF COMMITTEE.—

24 (1) The National Science and Technology
25 Council shall coordinate and support a national re-

1 search program to improve understanding of the role
2 of the oceans in human health. In planning the pro-
3 gram, the Council shall establish a Committee on
4 Oceans and Human Health that shall consist of rep-
5 resentatives from those agencies with programs or
6 missions that could contribute to or benefit from the
7 program. The Committee shall consist of at least one
8 representative from—

9 (A) the National Oceanic and Atmospheric
10 Administration;

11 (B) the National Science Foundation;

12 (C) the National Institute of Environ-
13 mental Health Sciences and other institutes
14 within the National Institutes of Health;

15 (D) the Centers for Disease Control;

16 (E) the Environmental Protection Agency;

17 (F) the Food and Drug Administration;

18 (G) the Department of Homeland Security;

19 and

20 (H) such other agencies and departments
21 as the Council deems appropriate.

22 (2) The members of the Committee biennially
23 shall select one of its members to serve as Chair.
24 The Chair shall be knowledgeable and experienced
25 with regard to the administration of scientific re-

1 search programs, and shall be a representative of an
2 agency that contributes substantially, in terms of
3 scientific research capability and budget, to the
4 interagency program.

5 (b) IMPLEMENTATION PLAN.—Within one year after
6 the date of enactment of this Act, the Chair of the Na-
7 tional Science and Technology Council, through the Com-
8 mittee on the Oceans and Human Health, shall develop
9 and submit to the Congress a plan for coordinated Federal
10 activities under the program. In developing the plan, the
11 Committee will consult with the Inter-Agency Task Force
12 on Harmful Algal Blooms and Hypoxia. Such plan will
13 build on and complement the ongoing activities of the Na-
14 tional Oceanic and Atmospheric Administration, the Na-
15 tional Science Foundation, the National Institute of Envi-
16 ronmental Health Sciences, and other departments and
17 agencies and shall—

18 (1) establish, for the 10-year period beginning
19 in the year it is submitted, the goals and priorities
20 for Federal research which most effectively advance
21 scientific understanding of the connections between
22 the oceans and human health, provide usable infor-
23 mation for the prediction and prevention of marine
24 public health problems and use the biological poten-
25 tial of the oceans for development of new treatments

1 of human diseases and a greater understanding of
2 human biology;

3 (2) describe specific activities required to
4 achieve such goals and priorities, including establish-
5 ment of national centers of excellence, the funding
6 of competitive research grants, ocean and coastal ob-
7 servations, training and support for scientists, and
8 participation in international research efforts;

9 (3) identify and address, as appropriate, rel-
10 evant programs and activities of the Federal agen-
11 cies and departments that would contribute to the
12 program;

13 (4) consider and use, as appropriate, reports
14 and studies conducted by Federal agencies and de-
15 partments, the National Research Council, the
16 Ocean Research Advisory Panel, the Commission on
17 Ocean Policy and other entities;

18 (5) make recommendations for the coordination
19 of program activities with ocean and human health-
20 related activities of other national and international
21 organizations; and

22 (6) estimate Federal funding for research ac-
23 tivities to be conducted under the program.

1 (c) PROGRAM SCOPE.—The program shall include the
2 following activities related to the role of oceans in human
3 health:

4 (1) Interdisciplinary research among the ocean
5 and medical sciences, and coordinated research and
6 activities to improve understanding of processes
7 within the ocean that may affect human health and
8 to explore the potential contribution of marine orga-
9 nisms to medicine and research, including—

10 (A) vector- and water-borne diseases of hu-
11 mans and marine organisms, including marine
12 mammals and fish;

13 (B) harmful algal blooms;

14 (C) marine-derived pharmaceuticals;

15 (D) marine organisms as models for bio-
16 medical research and as indicators of marine
17 environmental health;

18 (E) marine environmental microbiology;

19 (F) bioaccumulative and endocrine-dis-
20 rupting chemical contaminants; and

21 (G) predictive models based on indicators
22 of marine environmental health.

23 (2) Coordination with the National Ocean Re-
24 search Leadership Council (10 U.S.C. 7902(a)) to
25 ensure that any integrated ocean and coastal observ-

1 ing system provides information necessary to mon-
2 itor, predict and reduce marine public health prob-
3 lems including—

4 (A) baseline observations of physical ocean
5 properties to monitor climate variation;

6 (B) measurement of oceanic and atmos-
7 pheric variables to improve prediction of severe
8 weather events;

9 (C) compilation of global health statistics
10 for analysis of the effects of oceanic events on
11 human health;

12 (D) documentation of harmful algal
13 blooms; and

14 (E) development and implementation of
15 sensors to measure biological processes, acquire
16 health-related data on biological populations
17 and detect contaminants in marine waters and
18 seafood.

19 (3) Development through partnerships among
20 Federal agencies, States, or academic institutions of
21 new technologies and approaches for detecting and
22 reducing hazards to human health from ocean
23 sources and to strengthen understanding of the
24 value of marine biodiversity to biomedicine, includ-
25 ing—

1 (A) genomics and proteomics to develop
2 genetic and immunological detection approaches
3 and predictive tools and to discover new bio-
4 medical resources;

5 (B) biomaterials and bioengineering;

6 (C) in situ and remote sensors to detect
7 and quantify contaminants in marine waters
8 and organisms and to identify new genetic re-
9 sources;

10 (D) techniques for supplying marine re-
11 sources, including chemical synthesis, culturing
12 and aquaculturing marine organisms, new fer-
13 mentation methods and recombinant tech-
14 niques; and

15 (E) adaptation of equipment and tech-
16 nologies from human health fields.

17 (4) Support for scholars, trainees and education
18 opportunities that encourage an interdisciplinary
19 and international approach to exploring the diversity
20 of life in the oceans.

21 **SEC. 5. NATIONAL OCEANIC AND ATMOSPHERIC ADMINIS-**
22 **TRATION OCEANS AND HUMAN HEALTH PRO-**
23 **GRAM.**

24 (a) ESTABLISHMENT.—As part of the interagency
25 program planned and coordinated under section 4, the

1 Secretary of Commerce shall establish an Oceans and
2 Human Health Program to coordinate and implement re-
3 search and activities of the National Oceanic and Atmos-
4 pheric Administration related to the role of the oceans in
5 human health. In establishing the program, the Secretary
6 shall consult with other Federal agencies conducting inte-
7 grated oceans and human health research and research in
8 related areas, including the Centers for Disease Control,
9 the National Science Foundation, and the National Insti-
10 tute of Environmental Health Sciences. The Oceans and
11 Human Health Program shall provide support for—

- 12 (1) a program and research coordination office;
- 13 (2) an advisory panel;
- 14 (3) one or more National Oceanic and Atmos-
15 pheric Administration national centers of excellence;
- 16 (4) research grants; and
- 17 (5) distinguished scholars and traineeships.

18 (b) PROGRAM OFFICE.—The Secretary shall establish
19 a program office to identify and coordinate oceans and
20 human health-related research and activities within the
21 National Oceanic and Atmospheric Administration and
22 carry out the elements of the program. The program office
23 will provide support for administration of the program
24 and, in cooperation with the oceans and human health ad-
25 visory panel, will serve as liaison with academic institu-

1 tions and other agencies participating in the interagency
2 oceans and human health research program planned and
3 coordinated under section 3.

4 (c) ADVISORY PANEL.—The Secretary shall establish
5 an oceans and human health advisory panel to assist in
6 the development and implementation of the Oceans and
7 Human Health Program. Membership of the advisory
8 group shall provide for balanced representation of individ-
9 uals with multi-disciplinary expertise in the marine and
10 biomedical sciences. The Federal Advisory Committee Act
11 (5 U.S.C. App.) shall not apply to the oceans and human
12 health advisory panel.

13 (d) NATIONAL CENTERS.—

14 (1) The Secretary shall identify and provide fi-
15 nancial support through a competitive process to de-
16 velop, within the National Oceanic and Atmospheric
17 Administration, for one or more centers of excellence
18 that strengthen the capabilities of the Administra-
19 tion to carry out programs and activities related to
20 the oceans' role in human health. Such centers shall
21 complement and be in addition to the centers estab-
22 lished by the National Science Foundation and the
23 National Institute of Environmental Health
24 Sciences.

1 (2) The centers shall focus on areas related to
2 agency missions, including use of marine organisms
3 as indicators for marine environmental health, ocean
4 pollutants, marine toxins and pathogens, harmful
5 algal blooms, seafood testing, drug discovery, and bi-
6 ology and pathobiology of marine mammals, and on
7 disciplines including marine genomics, marine envi-
8 ronmental microbiology, ecological chemistry and
9 conservation medicine.

10 (3) In selecting centers for funding, the Sec-
11 retary will consider the need for geographic rep-
12 resentation and give priority to proposals with
13 strong interdisciplinary scientific merit that encour-
14 age educational opportunities and provide for effec-
15 tive partnerships among the Administration, other
16 Federal entities, State, academic, medical, and in-
17 dustry participants.

18 (e) RESEARCH GRANTS.—

19 (1) The Secretary is authorized to provide
20 grants of financial assistance for critical research
21 and projects that explore the relationship between
22 the oceans and human health and that complement
23 or strengthen Administration programs and activi-
24 ties related to the ocean's role in human health. The
25 Secretary shall consult with the oceans and human

1 health advisory panel established under subsection
2 (c) and the National Sea Grant College Program
3 and may work cooperatively with other agencies par-
4 ticipating in the interagency program under section
5 3 to establish joint criteria for such research and
6 projects.

7 (2) Grants under this subsection shall be
8 awarded through a peer-review process that may be
9 conducted jointly with other agencies participating
10 in the interagency program established in section 3
11 or under the National Oceanographic Partnership
12 Program under section 7901 of title 10, United
13 States Code.

14 (f) DISTINGUISHED SCHOLARS AND
15 TRAINEESHIPS.—

16 (1) The Secretary shall designate and provide
17 financial assistance to support distinguished scholars
18 from academic institutions, industry or State gov-
19 ernments for collaborative work with scientists and
20 facilities of the Administration.

21 (2) In consultation with the Directors of the
22 National Institutes of Health and the National
23 Science Foundation, the Secretary of Commerce may
24 establish a program to provide training and experi-
25 ence to scientists at the beginning of their careers

1 who are interested in the role of the oceans in
2 human health.

3 **SEC. 6. PUBLIC INFORMATION AND OUTREACH.**

4 (a) ESTABLISHMENT.—The Secretary of Commerce,
5 in consultation with the Centers for Disease Control, the
6 Food and Drug Administration, the Environmental Pro-
7 tection Agency and the States, shall design and implement
8 a national public information and outreach program on
9 potential ocean-related human health risks, including
10 health hazards associated with the human consumption of
11 seafood. Under such program, the Secretary shall—

12 (1) collect and analyze information on ocean-re-
13 lated health hazards and illnesses, including infor-
14 mation on the number of individuals affected, causes
15 and geographic location of the hazard or illness;

16 (2) disseminate the results of the analysis to
17 any appropriate Federal or State agency, the public,
18 involved industries, and other interested persons;

19 (3) provide advice regarding precautions that
20 may be taken to safeguard against the hazard or ill-
21 ness; and

22 (4) assess and make recommendations for ob-
23 serving systems to support the program.

24 (b) SEAFOOD SAFETY.—To address health hazards
25 associated with human consumption of seafood, the Sec-

1 retary, in consultation with the Centers for Disease Con-
2 trol, the Food and Drug Administration, the Environ-
3 mental Protection Agency and the States, shall assess
4 risks related to—

5 (1) seafood that is domestically harvested and
6 processed as compared with imported seafood that is
7 harvested and processed outside the United States;

8 (2) seafood that is commercially harvested and
9 processed as compared with that harvested for rec-
10 reational or subsistence purposes and not prepared
11 commercially; and

12 (3) contamination originating from certain
13 practices that occur both prior to and after sale of
14 seafood to consumers, especially those connected to
15 the manner in which consumers handle and prepare
16 seafood.

17 **SEC. 7. AUTHORIZATION OF APPROPRIATIONS.**

18 (a) NOAA OCEANS AND HUMAN HEALTH PRO-
19 GRAM.—There are authorized to be appropriated to the
20 Secretary of Commerce to carry out the NOAA Oceans
21 and Human Health program established under section 5,
22 \$8,000,000 for fiscal year 2004, \$15,000,000 for fiscal
23 year 2005, and \$20,000,000 annually for fiscal year 2006
24 through fiscal year 2008.

1 (b) PUBLIC INFORMATION.—There are authorized to
2 be appropriated to the Secretary to carry out the public
3 information and outreach program established under sec-
4 tion 6, \$5,000,000 for each of fiscal years 2004 through
5 2007.

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