

108TH CONGRESS
2D SESSION

S. 1218

IN THE HOUSE OF REPRESENTATIVES

MARCH 25, 2004

Referred to the Committee on Science, and in addition to the Committee on Energy and Commerce, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

AN ACT

To provide for Presidential support and coordination of inter-agency 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”.

1 **SEC. 2. FINDINGS AND PURPOSES.**

2 (a) FINDINGS.—The Congress makes the following
3 findings:

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

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

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

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

1 (5) During the past two decades, the incidence
2 of harmful blooms of algae and hypoxia has in-
3 creased in United States coastal waters, including
4 the Great Lakes, and around the world, contami-
5 nating shellfish, causing widespread fish kills,
6 threatening marine environmental quality and result-
7 ing in substantial economic losses to coastal commu-
8 nities.

9 (6) Existing Federal programs and resources
10 support research in a number of these areas, but
11 gaps in funding, coordination, and outreach have im-
12 peded national progress in addressing ocean health
13 issues.

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

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

24 (1) Presidential support and coordination of
25 interagency ocean science programs; and

1 (2) development and coordination of a com-
2 prehensive and integrated United States ocean,
3 coastal, and Great Lakes research and monitoring
4 program that will assist this Nation and the world
5 to understand, use and respond to the role of the
6 oceans in human health.

7 **SEC. 3. INTERAGENCY OCEANS AND HUMAN HEALTH RE-**
8 **SEARCH PROGRAM.**

9 (a) COORDINATION.—The President, through the Na-
10 tional Science and Technology Council, shall coordinate
11 and support a national research program to improve un-
12 derstanding of the role of the oceans in human health.

13 (b) IMPLEMENTATION PLAN.—Within 1 year after
14 the date of enactment of this Act, the National Science
15 and Technology Council, through the Director of the Of-
16 fice of Science and Technology Policy shall develop and
17 submit to the Congress a plan for coordinated Federal ac-
18 tivities under the program. Nothing in this subsection is
19 intended to duplicate or supersede the activities of the
20 Inter-Agency Task Force on Harmful Algal Blooms and
21 Hypoxia established under section 603 of the Harmful
22 Algal Bloom and Hypoxia Research and Control Act of
23 1998 (16 U.S.C. 1451 note). In developing the plan, the
24 Committee will consult with the Inter-Agency Task Force
25 on Harmful Algal Blooms and Hypoxia. Such plan will

1 build on and complement the ongoing activities of the Na-
2 tional Oceanic and Atmospheric Administration, the Na-
3 tional Science Foundation, and other departments and
4 agencies and shall—

5 (1) establish, for the 10-year period beginning
6 in the year it is submitted, the goals and priorities
7 for Federal research which most effectively advance
8 scientific understanding of the connections between
9 the oceans and human health, provide usable infor-
10 mation for the prediction of marine-related public
11 health problems and use the biological potential of
12 the oceans for development of new treatments of
13 human diseases and a greater understanding of
14 human biology;

15 (2) describe specific activities required to
16 achieve such goals and priorities, including the fund-
17 ing of competitive research grants, ocean and coastal
18 observations, training and support for scientists, and
19 participation in international research efforts;

20 (3) identify and address, as appropriate, rel-
21 evant programs and activities of the Federal agen-
22 cies and departments that would contribute to the
23 program;

24 (4) consider and use, as appropriate, reports
25 and studies conducted by Federal agencies and de-

partments, the National Research Council, the Ocean Research Advisory Panel, the Commission on Ocean Policy and other expert scientific bodies;

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

(6) estimate Federal funding for research activities to be conducted under the program.

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

(1) Interdisciplinary research among the ocean and medical sciences, and coordinated research and activities to improve understanding of processes within the ocean that may affect human health and to explore the potential contribution of marine organisms to medicine and research, including—

(A) vector- and water-borne diseases of humans and marine organisms, including marine mammals and fish;

(B) harmful algal blooms and hypoxia (through the Inter-Agency Task Force on Harmful Algal Blooms and Hypoxia);

(C) marine-derived pharmaceuticals;

1 (D) marine organisms as models for bio-
2 medical research and as indicators of marine
3 environmental health;

4 (E) marine environmental microbiology;

5 (F) bioaccumulative and endocrine-dis-
6 rupting chemical contaminants; and

7 (G) predictive models based on indicators
8 of marine environmental health or public health
9 threats.

10 (2) Coordination with the National Ocean Re-
11 search Leadership Council (10 U.S.C. 7902(a)) to
12 ensure that any integrated ocean and coastal observ-
13 ing system provides information necessary to mon-
14 itor and reduce marine public health problems in-
15 cluding health-related data on biological populations
16 and detection of contaminants in marine waters and
17 seafood.

18 (3) Development through partnerships among
19 Federal agencies, States, or academic institutions of
20 new technologies and approaches for detecting and
21 reducing hazards to human health from ocean
22 sources and to strengthen understanding of the
23 value of marine biodiversity to biomedicine, includ-
24 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 used to de-
7 tect, quantify, and predict the presence and
8 spread of contaminants in marine waters and
9 organisms and to identify new genetic resources
10 for biomedical purposes;

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

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

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

22 (d) ANNUAL REPORT.—Beginning with the first year
23 occurring more than 24 months after the date of enact-
24 ment of this Act, the National Science and Technology
25 Council, through the Director of the Office of Science and

1 Technology Policy shall prepare and submit to the Presi-
2 dent and the Congress not later than January 31st of each
3 year an annual report on the activities conducted pursuant
4 to this Act during the preceding fiscal year, including—

5 (1) a summary of the achievements of Federal
6 oceans and human health research, including Feder-
7 ally supported external research, during the pre-
8 ceding fiscal year;

9 (2) an analysis of the progress made toward
10 achieving the goals and objectives of the plan devel-
11 oped under subsection (b), including identification of
12 trends and emerging trends;

13 (3) a copy or summary of the plan and any
14 changes made in the plan;

15 (4) a summary of agency budgets for oceans
16 and human health activities for that preceding fiscal
17 year; and

18 (5) any recommendations regarding additional
19 action or legislation that may be required to assist
20 in achieving the purposes of this title.

21 **SEC. 4. NATIONAL OCEANIC AND ATMOSPHERIC ADMINIS-**
22 **TRATION OCEANS AND HUMAN HEALTH INI-**
23 **TIATIVE.**

24 (a) ESTABLISHMENT.—As part of the interagency
25 program planned and coordinated under section 3, the

1 Secretary of Commerce is authorized to establish an
2 Oceans and Human Health Initiative to coordinate and
3 implement research and activities of the National Oceanic
4 and Atmospheric Administration related to the role of the
5 oceans, the coasts, and the Great Lakes in human health.
6 In carrying out this section, the Secretary shall consult
7 with other Federal agencies conducting integrated oceans
8 and human health research and research in related areas,
9 including the National Science Foundation. The Oceans
10 and Human Health Initiative is authorized to provide sup-
11 port for—

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

19 (b) ADVISORY PANEL.—The Secretary is authorized
20 to establish an oceans and human health advisory panel
21 to assist in the development and implementation of the
22 Oceans and Human Health Initiative. Membership of the
23 advisory group shall provide for balanced representation
24 of individuals with multi-disciplinary expertise in the ma-
25 rine and biomedical sciences. The Federal Advisory Com-

1 mittee Act (5 U.S.C. App.) shall not apply to the oceans
2 and human health advisory panel.

3 (c) NATIONAL CENTERS.—(1) The Secretary is au-
4 thorized to identify and provide financial support through
5 a competitive process to develop, within the National Oce-
6 anic and Atmospheric Administration, for one or more
7 centers of excellence that strengthen the capabilities of the
8 National Oceanic and Atmospheric Administration to
9 carry out its programs and activities related to the oceans’
10 role in human health.

11 (2) The centers shall focus on areas related to agency
12 missions, including use of marine organisms as indicators
13 for marine environmental health, ocean pollutants, marine
14 toxins and pathogens, harmful algal blooms, hypoxia, sea-
15 food testing, drug discovery, and biology and pathobiology
16 of marine mammals, and on disciplines including marine
17 genomics, marine environmental microbiology, ecological
18 chemistry and conservation medicine.

19 (3) In selecting centers for funding, the Secretary will
20 give priority to proposals with strong interdisciplinary sci-
21 entific merit that encourage educational opportunities and
22 provide for effective partnerships among the Administra-
23 tion, other Federal entities, State, academic, medical, and
24 industry participants.

1 (d) EXTRAMURAL RESEARCH GRANTS.—(1) The Sec-
2 retary is authorized to provide grants of financial assist-
3 ance to the scientific community for critical research and
4 projects that explore the relationship between the oceans
5 and human health and that complement or strengthen
6 programs and activities of the National Oceanic and At-
7 mospheric Administration related to the ocean’s role in
8 human health. Officers and employees of Federal agencies
9 may collaborate with, and participate in, such research
10 and projects to the extent requested by the grant recipient.
11 The Secretary shall consult with the oceans and human
12 health advisory panel established under subsection (b) and
13 may work cooperatively with other agencies participating
14 in the interagency program under section 3 to establish
15 joint criteria for such research and projects.

16 (2) Grants under this subsection shall be awarded
17 through a competitive peer-reviewed, merit-based process
18 that may be conducted jointly with other agencies partici-
19 pating in the interagency program established in section
20 3 or under the National Oceanographic Partnership Pro-
21 gram under section 7901 of title 10, United States Code.

22 (e) DISTINGUISHED SCHOLARS AND TRAINEE-
23 SHIPS.—(1) The Secretary is authorized to designate and
24 provide financial assistance to support distinguished schol-
25 ars from academic institutions, industry, State govern-

1 ments, or other Federal agencies for collaborative work
2 with National Oceanic and Atmospheric Administration
3 scientists and facilities.

4 (2) The Secretary of Commerce is authorized to es-
5 tablish a program to provide traineeships, training, and
6 experience to pre-doctoral and post-doctoral students and
7 to scientists at the beginning of their careers who are in-
8 terested in the oceans in human health research conducted
9 under the NOAA initiative.

10 **SEC. 5. PUBLIC INFORMATION AND OUTREACH.**

11 (a) ESTABLISHMENT.—The Secretary of Commerce,
12 in consultation with other appropriate Federal agencies
13 shall design and implement a national information and
14 outreach program on potential ocean-related human
15 health risks, including health hazards associated with the
16 human consumption of seafood. Under such program, the
17 Secretary shall—

18 (1) collect information on the incidence and lo-
19 cations of ocean-related health hazards and illnesses;

20 (2) disseminate such information to any appro-
21 priate Federal or State agency, involved industries,
22 and other interested persons; and

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

1 **SEC. 6. AUTHORIZATION OF APPROPRIATIONS.**

2 (a) NOAA OCEANS AND HUMAN HEALTH INITIA-
3 TIVE.—There are authorized to be appropriated to the
4 Secretary of Commerce to carry out the National Oceanic
5 and Atmospheric Administration Oceans and Human
6 Health Initiative established under section 4, \$12,000,000
7 for fiscal year 2005, \$15,000,000 for fiscal year 2006, and
8 \$20,000,000 for each of fiscal years 2007 and 2008. Not
9 less than 50 percent of the amounts appropriated to carry
10 out the initiative for each fiscal year shall be utilized to
11 support the programs described in subsections (d) and (e)
12 of section 4.

13 (b) PUBLIC INFORMATION.—There are authorized to
14 be appropriated to the Secretary to carry out the public
15 information and outreach program established under sec-
16 tion 5, \$3,000,000 for each of fiscal years 2005 through
17 2007.

Passed the Senate March 24, 2004.

Attest: EMILY J. REYNOLDS,
Secretary.