

conduct research, monitoring, and other activities consistent with the strategic research and implementation plan developed by the Subcommittee under section 3704 of this title that—

(1) includes—

(A) interdisciplinary research among the ocean and atmospheric sciences, and coordinated research and activities to improve understanding of ocean acidification;

(B) the establishment of a long-term monitoring program of ocean acidification utilizing existing global and national ocean observing assets, and adding instrumentation and sampling stations as appropriate to the aims of the research program;

(C) research to identify and develop adaptation strategies and techniques for effectively conserving marine ecosystems as they cope with increased ocean acidification;

(D) as an integral part of the research programs described in this chapter, educational opportunities that encourage an interdisciplinary and international approach to exploring the impacts of ocean acidification;

(E) as an integral part of the research programs described in this chapter, national public outreach activities to improve the understanding of current scientific knowledge of ocean acidification and its impacts on marine resources; and

(F) coordination of ocean acidification monitoring and impacts research with other appropriate international ocean science bodies such as the International Oceanographic Commission, the International Council for the Exploration of the Sea, the North Pacific Marine Science Organization, and others;

(2) provides grants for critical research projects that explore the effects of ocean acidification on ecosystems and the socioeconomic impacts of increased ocean acidification that are relevant to the goals and priorities of the strategic research plan; and

(3) incorporates a competitive merit-based process for awarding grants that may be conducted jointly with other participating agencies or under the National Oceanographic Partnership Program under section 7901 of title 10.

**(b) Additional authority**

In conducting the Program, the Secretary may enter into and perform such contracts, leases, grants, or cooperative agreements as may be necessary to carry out the purposes of this chapter on such terms as the Secretary considers appropriate.

(Pub. L. 111–11, title XII, §12406, Mar. 30, 2009, 123 Stat. 1440.)

**§ 3706. NSF ocean acidification activities**

**(a) Research activities**

The Director of the National Science Foundation shall continue to carry out research activities on ocean acidification which shall support competitive, merit-based, peer-reviewed proposals for research and monitoring of ocean acidification and its impacts, including—

(1) impacts on marine organisms and marine ecosystems;

(2) impacts on ocean, coastal, and estuarine biogeochemistry; and

(3) the development of methodologies and technologies to evaluate ocean acidification and its impacts.

**(b) Consistency**

The research activities shall be consistent with the strategic research plan developed by the Subcommittee under section 3704 of this title.

**(c) Coordination**

The Director shall encourage coordination of the Foundation's ocean acidification activities with such activities of other nations and international organizations.

(Pub. L. 111–11, title XII, §12407, Mar. 30, 2009, 123 Stat. 1441.)

**§ 3707. NASA ocean acidification activities**

**(a) Ocean acidification activities**

The Administrator of the National Aeronautics and Space Administration, in coordination with other relevant agencies, shall ensure that space-based monitoring assets are used in as productive a manner as possible for monitoring of ocean acidification and its impacts.

**(b) Program consistency**

The Administrator shall ensure that the Agency's research and monitoring activities on ocean acidification are carried out in a manner consistent with the strategic research plan developed by the Subcommittee under section 3704 of this title.

**(c) Coordination**

The Administrator shall encourage coordination of the Agency's ocean acidification activities with such activities of other nations and international organizations.

(Pub. L. 111–11, title XII, §12408, Mar. 30, 2009, 123 Stat. 1441.)

**§ 3708. Authorization of appropriations**

**(a) NOAA**

There are authorized to be appropriated to the National Oceanic and Atmospheric Administration to carry out the purposes of this chapter—

- (1) \$8,000,000 for fiscal year 2009;
- (2) \$12,000,000 for fiscal year 2010;
- (3) \$15,000,000 for fiscal year 2011; and
- (4) \$20,000,000 for fiscal year 2012.

**(b) NSF**

There are authorized to be appropriated to the National Science Foundation to carry out the purposes of this chapter—

- (1) \$6,000,000 for fiscal year 2009;
- (2) \$8,000,000 for fiscal year 2010;
- (3) \$12,000,000 for fiscal year 2011; and
- (4) \$15,000,000 for fiscal year 2012.

(Pub. L. 111–11, title XII, §12409, Mar. 30, 2009, 123 Stat. 1441.)

**CHAPTER 51—CLEAN HULLS**

**SUBCHAPTER I—GENERAL PROVISIONS**

Sec.  
3801. Definitions.