

115TH CONGRESS  
2D SESSION

# S. 2511

To require the Under Secretary of Commerce for Oceans and Atmosphere to carry out a program on coordinating the assessment and acquisition by the National Oceanic and Atmospheric Administration of unmanned maritime systems, to make available to the public data collected by the Administration using such systems, and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

MARCH 7, 2018

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

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## A BILL

To require the Under Secretary of Commerce for Oceans and Atmosphere to carry out a program on coordinating the assessment and acquisition by the National Oceanic and Atmospheric Administration of unmanned maritime systems, to make available to the public data collected by the Administration using such systems, 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; TABLE OF CONTENTS.**

2 (a) SHORT TITLE.—This Act may be cited as the  
3 “Commercial Engagement Through Ocean Technology  
4 Act of 2018” or the “CENOTE Act of 2018”.

5 (b) TABLE OF CONTENTS.—The table of contents for  
6 this Act is as follows:

Sec. 1. Short title; table of contents.

Sec. 2. Definitions.

TITLE I—ASSESSMENT AND ACQUISITION OF UNMANNED  
MARITIME SYSTEMS

Sec. 101. Establishment of program on assessment and acquisition by National  
Oceanic and Atmospheric Administration of unmanned mari-  
time systems.

Sec. 102. Regular assessment of unmanned maritime systems to support Na-  
tional Oceanic and Atmospheric Administration missions.

Sec. 103. Acquisition of unmanned maritime systems.

Sec. 104. Annual report on unmanned maritime systems and effects on mission  
of the National Oceanic and Atmospheric Administration.

Sec. 105. Authorization of appropriations and additional authorities.

TITLE II—AVAILABILITY OF DATA FROM UNMANNED MARITIME  
SYSTEMS

Sec. 201. Public availability of data collected by National Oceanic and Atmos-  
pheric Administration using unmanned maritime systems.

Sec. 202. Public engagement on matters relating to data collected by National  
Oceanic and Atmospheric Administration using unmanned  
maritime systems.

Sec. 203. Facilitating joint projects between National Oceanic and Atmospheric  
Administration and private industry on unmanned maritime  
systems.

7 **SEC. 2. DEFINITIONS.**

8 In this Act:

9 (1) ADMINISTRATION.—The term “Administra-  
10 tion” means the National Oceanic and Atmospheric  
11 Administration.

12 (2) ADMINISTRATOR.—The term “Adminis-  
13 trator” means the Under Secretary of Commerce for

1 Oceans and Atmosphere and Administrator of the  
2 National Oceanic and Atmospheric Administration.

3 (3) COOPERATIVE ACTIVITIES OF THE ADMINIS-  
4 TRATION.—The term “cooperative activities of the  
5 Administration” means cooperative activities be-  
6 tween the Administration and an external entity,  
7 such as the Cooperative Institutes, Sea Grant Col-  
8 leges, National Estuarine Research Reserves, the  
9 National Oceanographic Partnership Program estab-  
10 lished under chapter 665 of title 10, United States  
11 Code, and regional associations of the Integrated  
12 Ocean Observing System.

13 (4) CURATE THE DATA AND DATA CURATION.—  
14 The terms “curate the data” and “data curation”  
15 shall encompass the processes of conducting quality  
16 assurance and quality control measures for data,  
17 capturing associated appropriate meta data, elec-  
18 tronic storage and back up of the data, and ensuring  
19 accessibility of the data.

20 (5) DATA SPECIFICATIONS.—The term “data  
21 specifications” shall refer to the type, resolution, pe-  
22 riodicity, and quality of data required by a program  
23 of the Administration.

24 (6) PROGRAM.—The term “Program” means  
25 the program established under section 101(a).

1 (7) TEST OR TRAINING RANGE.—

2 (A) IN GENERAL.—The term “test or  
3 training range” means an area designated for  
4 operating unmanned maritime systems and  
5 other types of systems for the purpose of—

6 (i) evaluating the performance of such  
7 systems; or

8 (ii) training personnel on operating  
9 procedures for such systems.

10 (B) INCLUSIONS.—The term “test or  
11 training range” may include specialized fixed or  
12 portable instrumentation for the operation of  
13 unmanned maritime systems and other types of  
14 systems.

15 (8) UNMANNED MARITIME SYSTEMS.—

16 (A) IN GENERAL.—The term “unmanned  
17 maritime systems” means remotely operated or  
18 autonomous vehicles produced by the commer-  
19 cial sector—

20 (i) designed to travel in the air, on or  
21 under the ocean surface, on land, or any  
22 combination, and that function without an  
23 on-board human presence; and

24 (ii) that may include associated com-  
25 ponents such as control and communica-

1                   tions, data transmission, and processing  
2                   systems.

3                   (B) EXAMPLES.—The term “unmanned  
4                   maritime systems” includes the following:

5                           (i) Unmanned undersea vehicles.

6                           (ii) Unmanned surface vehicles.

7                           (iii) Unmanned aerial vehicles.

8                           (iv) Autonomous underwater vehicles.

9                           (v) Autonomous surface vehicles.

10                           (vi) Autonomous aerial vehicles.

11 **TITLE I—ASSESSMENT AND AC-**  
12 **QUISITION OF UNMANNED**  
13 **MARITIME SYSTEMS**

14 **SEC. 101. ESTABLISHMENT OF PROGRAM ON ASSESSMENT**  
15 **AND ACQUISITION BY NATIONAL OCEANIC**  
16 **AND ATMOSPHERIC ADMINISTRATION OF UN-**  
17 **MANNED MARITIME SYSTEMS.**

18           (a) ESTABLISHMENT.—The Administrator shall es-  
19 tablish within the Office of Oceanic and Atmospheric Re-  
20 search (OAR) and the Office of Marine and Aviation Oper-  
21 ations (OMAO) a joint program office to coordinate the  
22 Administration’s research, assessment, and acquisition of  
23 unmanned maritime systems. The program established  
24 under this section shall also consider the use of unmanned

1 maritime systems in cooperative activities of the Adminis-  
2 tration.

3 (b) COORDINATION WITHIN THE ADMINISTRA-  
4 TION.—

5 (1) AUTHORITY TO ESTABLISH COORDINATING  
6 COMMITTEE.—The Administrator shall establish a  
7 coordinating committee to ensure that the Program  
8 addresses requirements throughout the Administra-  
9 tion.

10 (2) INCLUDED.—In establishing a coordinating  
11 committee under paragraph (1), the Administrator  
12 shall ensure that representation in the committee is  
13 included from the following:

14 (A) The Office of Ocean Exploration  
15 (OER).

16 (B) The program office of the Integrated  
17 Ocean Observing System.

18 (C) Such other offices of the Administra-  
19 tion as the Administrator determines are ac-  
20 tively engaged with unmanned maritime sys-  
21 tems.

22 (3) DESIGNATION.—A coordinating committee  
23 established under paragraph (1) shall be known as  
24 the “Unmanned Maritime Systems Ocean Tech-  
25 nology Coordinating Committee”.

1 (c) COORDINATION WITH THE NAVY.—

2 (1) IN GENERAL.—In carrying out the Pro-  
3 gram, the Administrator shall—

4 (A) make efforts to coordinate with the  
5 Secretary of the Navy to leverage expertise in  
6 the development and operational transition of  
7 unmanned maritime systems;

8 (B) align with, utilize, and inform the  
9 Deputy Under Secretary of Commerce for Op-  
10 erations and the Oceanographer of the Navy's  
11 strategic and operational priorities, particularly  
12 for missions and geography within the Adminis-  
13 tration's purview;

14 (C) seek to utilize Naval unmanned sys-  
15 tems test or training ranges, such as the Gulf  
16 of Mexico Unmanned Systems Test and Train-  
17 ing Range of the Naval Meteorology and Ocean-  
18 ography Command, and maximize interagency  
19 cooperation and sharing of best practices; and

20 (D) to formalize coordination, execute a  
21 memorandum of understanding with the Sec-  
22 retary of the Navy that includes—

23 (i) incorporating consideration of pri-  
24 orities and requirements of the Adminis-  
25 tration into research and development ac-

1 activities conducted by the Secretary of the  
2 Navy;

3 (ii) consultation intended to encourage  
4 and facilitate efforts by the Administration  
5 to partner with the Navy to procure un-  
6 manned maritime systems and to establish,  
7 instrument, and operate test or training  
8 ranges and related facilities;

9 (iii) adopting procedures defined by  
10 the Secretary of the Navy for the Adminis-  
11 tration to access and utilize test or train-  
12 ing ranges or related Naval facilities for  
13 purposes identified in paragraph (2)(B);  
14 and

15 (iv) such other topics as the Adminis-  
16 trator considers necessary or advisable, in-  
17 cluding mapping, bathymetry, observations,  
18 and ocean exploration.

19 (2) LOCATION.—The Administrator shall, if  
20 practicable, carry out the Program at a facility  
21 where the Navy and the Administration are co-lo-  
22 cated, for the following purposes:

23 (A) Gaining efficiencies through collabora-  
24 tion.



1 (B) Advancing development of unmanned  
2 maritime systems, including—

3 (i) systems research and development;

4 (ii) systems testing;

5 (iii) systems modifications; and

6 (iv) systems integration.

7 (C) Accelerating transition from concept to  
8 manufacturing and acquisition.

9 (d) COORDINATION WITH OTHER FEDERAL AGEN-  
10 CIES.—In carrying out the Program, the Administrator  
11 and the Secretary of the Navy may utilize the National  
12 Oceanographic Partnership Program, established under  
13 chapter 665 of title 10, United States Code, as a mecha-  
14 nism for providing interagency coordination for the ad-  
15 vancement of unmanned maritime systems.

16 (e) COORDINATION WITH ACADEMIC SECTOR.—In  
17 carrying out the Program, to the extent approved by the  
18 Secretary of the Navy, the Administrator or the Secretary  
19 of the Navy may coordinate and co-locate with an aca-  
20 demic research institution, or consortium of academic re-  
21 search institutions, for the following purposes:

22 (1) Maximizing opportunities for research and  
23 development of unmanned maritime systems.

1           (2) Providing training in unmanned maritime  
2 systems as part of an accredited certificate or degree  
3 program of education.

4           (3) Facilitating the commercialization of un-  
5 manned maritime systems through public-private  
6 partnerships that includes academic research institu-  
7 tions, private industry, and public safety agencies.

8           (4) Arranging access to and use of additional  
9 facilities that support testing and assessment of or  
10 training with respect to unmanned maritime systems  
11 under environmental conditions of interest, increas-  
12 ing operational tolerance under such conditions, cer-  
13 tifying operational capacity under such conditions,  
14 whether real or simulated, and training operators of  
15 unmanned maritime systems in real or simulated en-  
16 vironments.

17           (5) Facilitating engagement with other aca-  
18 demic institutions with interest or relevant expertise  
19 in unmanned maritime systems.

20           (6) Promoting information sharing between the  
21 academic, environmental, and military institutions to  
22 lead to more robust, mission-oriented unmanned  
23 maritime systems.

24           (f) ENGAGEMENT WITH THE PRIVATE SECTOR.—  
25 Other than as described in subsection (e) and to the extent

1 approved by the Secretary of the Navy, the Administrator  
2 or the Secretary of the Navy may, in carrying out the Pro-  
3 gram, to the extent practicable, coordinate and consult  
4 with the private sector—

5 (1) to support the commercialization of un-  
6 manned maritime systems; and

7 (2) to assist with their assessment of commer-  
8 cially available unmanned maritime systems to sup-  
9 port the missions and goals of the Navy, the Admin-  
10 istration, and cooperative activities of the Adminis-  
11 tration.

12 **SEC. 102. REGULAR ASSESSMENT OF UNMANNED MARITIME**  
13 **SYSTEMS TO SUPPORT NATIONAL OCEANIC**  
14 **AND ATMOSPHERIC ADMINISTRATION MIS-**  
15 **SIONS.**

16 (a) IN GENERAL.—The Administrator, acting  
17 through the Assistant Administrator for Oceanic and At-  
18 mospheric Research and the Director of the Office of Ma-  
19 rine and Aviation Operations and the National Oceanic  
20 and Atmospheric Administration Commissioned Officer  
21 Corps, shall regularly assess publicly and commercially  
22 available unmanned maritime systems for potential use to  
23 support missions of the Administration.

24 (b) SCIENCE-BASED ASSESSMENTS.—The Adminis-  
25 trator shall carry out subsection (a) through the Assistant

1 Administrator for all matters relating to assessment of the  
2 suitability of unmanned maritime systems to meet data  
3 specifications required by programs of the Administration.

4 (c) ASSESSMENT OF OPERATIONAL UTILITY.—The  
5 Administrator shall carry out subsection (a) through the  
6 Director for all matters relating to assessment of whether  
7 unmanned maritime systems are operationally reliable  
8 enough to make in situ observations required by programs  
9 of the Administration.

10 (d) ENGAGEMENT.—The Assistant Administrator  
11 and the Director shall jointly consult with the heads of  
12 other offices of the Administration, with the academic sec-  
13 tor, and with developers and manufacturers of unmanned  
14 maritime systems to conduct the assessments under sub-  
15 section (a).

16 **SEC. 103. ACQUISITION OF UNMANNED MARITIME SYS-**  
17 **TEMS.**

18 (a) IN GENERAL.—The Administrator shall coordi-  
19 nate and centralize the acquisition by the Administration  
20 of unmanned maritime systems to meet the prioritized list  
21 of data requirements identified under section 104(b)(2).

22 (b) MEMORANDA OF UNDERSTANDING.—In order to  
23 realize greater savings and efficiency, the Administrator  
24 may develop and execute a memorandum of agreement  
25 with the Secretary of the Navy to—

1           (1) participate in procurements conducted by  
2 that Office;

3           (2) accept decommissioned unmanned maritime  
4 systems from that Office;

5           (3) develop policies and procedures to share un-  
6 manned maritime systems; or

7           (4) provide for other means of creating effi-  
8 ciency and savings in Federal acquisition of un-  
9 manned maritime systems.

10       (c) **RULE OF CONSTRUCTION.**—Nothing in this Act  
11 shall be construed to modify Federal procurement law.

12 **SEC. 104. ANNUAL REPORT ON UNMANNED MARITIME SYS-**  
13 **TEMS AND EFFECTS ON MISSION OF THE NA-**  
14 **TIONAL OCEANIC AND ATMOSPHERIC ADMIN-**  
15 **ISTRATION.**

16       (a) **IN GENERAL.**—In carrying out the Program, the  
17 Administrator shall, not later than one year after the date  
18 of the enactment of this Act, and every four years there-  
19 after, submit to the appropriate committees of Congress  
20 a report on the effects of unmanned maritime systems on  
21 the mission of the Administration.

22       (b) **CONTENTS.**—Each report submitted under sub-  
23 section (a) shall include, for the period covered by the re-  
24 port, the following:

1           (1) An inventory of current unmanned maritime  
2 systems used by programs of the Administration, a  
3 summary of the data they have returned, and the  
4 benefits realized from having such data.

5           (2) A prioritized list of data requirements of  
6 the Administration that could be met with un-  
7 manned maritime systems, and the estimated cost of  
8 acquiring such systems and data.

9           (c) APPROPRIATE COMMITTEES OF CONGRESS DE-  
10 FINED.—In this section, the term “appropriate commit-  
11 tees of Congress” means—

12           (1) the Committee on Appropriations, the Com-  
13 mittee on Armed Services, and the Committee on  
14 Commerce, Science, and Transportation of the Sen-  
15 ate; and

16           (2) the Committee on Appropriations, the Com-  
17 mittee on Armed Services, the Committee on Nat-  
18 ural Resources, and the Committee on Science,  
19 Space, and Technology of the House of Representa-  
20 tives.

21 **SEC. 105. AUTHORIZATION OF APPROPRIATIONS AND ADDI-**  
22 **TIONAL AUTHORITIES.**

23           (a) AUTHORIZATION OF APPROPRIATIONS.—There  
24 are authorized to be appropriated such sums as are nec-  
25 essary to carry out this title.

1 (b) ADDITIONAL AUTHORITIES.—In carrying out this  
2 title, the Administrator may—

3 (1) enter into contracts, cooperative agree-  
4 ments, and other transactions;

5 (2) notwithstanding section 1342 of title 31,  
6 United States Code, accept donations and voluntary  
7 and uncompensated services;

8 (3) accept funds from other Federal depart-  
9 ments and agencies;

10 (4) utilize the National Oceanographic Partner-  
11 ship Program established under chapter 665 of title  
12 10, United States Code, to accept funds from other  
13 Federal departments and agencies, to accept dona-  
14 tions, and to enter into contracts and award grants;  
15 and

16 (5) promulgate such rules and regulations as  
17 may be necessary and appropriate.

18 **TITLE II—AVAILABILITY OF**  
19 **DATA FROM UNMANNED MAR-**  
20 **ITIME SYSTEMS**

21 **SEC. 201. PUBLIC AVAILABILITY OF DATA COLLECTED BY**  
22 **NATIONAL OCEANIC AND ATMOSPHERIC AD-**  
23 **MINISTRATION USING UNMANNED MARITIME**  
24 **SYSTEMS.**

25 (a) AVAILABLE TO THE PUBLIC.—

1           (1) IN GENERAL.—Except as provided in para-  
2           graph (2), the Administrator shall make available,  
3           free of charge, to the public all data collected by the  
4           Administrator with the use of unmanned maritime  
5           systems.

6           (2) EXCEPTION.—The Administrator shall not  
7           make data described in paragraph (1) available as  
8           described in such paragraph if—

9                   (A) the Secretary of the Navy determines  
10                  that the data is subject to a restriction on avail-  
11                  ability, in whole or in part and on a term or  
12                  permanent basis, relating to national security;  
13                  or

14                   (B) the Administrator, in consultation with  
15                  the Secretary of the Navy, determines the data  
16                  is subject to a restriction on availability due to  
17                  the need for protection of intellectual property  
18                  or for pre-publication academic use.

19           (b) PROGRAM OF CURATION AND DISTRIBUTION OF  
20           DATA.—

21                   (1) AVAILABILITY.—The Administrator, acting  
22                  through the Assistant Administrator for Satellite  
23                  and Information Services and the Assistant Admin-  
24                  istrator of the National Ocean Service jointly, shall



1 use existing secure infrastructure such as the Inte-  
2 grated Ocean Observing System—

3 (A) to curate, distribute, store, and backup  
4 data described in subsection (a)(1); and

5 (B) to facilitate joint projects under sec-  
6 tion 203.

7 (2) DISTRIBUTION.—In carrying out the pro-  
8 gram required by paragraph (1), the Administrator  
9 shall use efforts that were in effect on the day before  
10 the date of the enactment of this Act, such as the  
11 data management framework of the Integrated  
12 Ocean Observing System for Federal and non-Fed-  
13 eral partnerships, to make data made available  
14 under subsection (a)(1) easily accessible to a wide  
15 range of users and stakeholders.

16 (3) STORAGE AND BACKUP.—In carrying out  
17 the program required by paragraph (1), the Admin-  
18 istrator shall use the data centers of the National  
19 Environmental and Satellite Data Information Serv-  
20 ice and the data assembly centers of the National  
21 Ocean Service that were in effect on the day before  
22 the date of the enactment of this Act to store and  
23 backup the data described in subsection (a)(1).

1 **SEC. 202. PUBLIC ENGAGEMENT ON MATTERS RELATING**  
2 **TO DATA COLLECTED BY NATIONAL OCEANIC**  
3 **AND ATMOSPHERIC ADMINISTRATION USING**  
4 **UNMANNED MARITIME SYSTEMS.**

5 (a) IN GENERAL.—Subject to subsection (b), the As-  
6 sistant Administrator for Satellite and Information Serv-  
7 ices and the Assistant Administrator of the National  
8 Ocean Service shall jointly engage in cooperative activities  
9 of the Administration and with other interested users or  
10 potential users, including users from the academic, com-  
11 mercial, government, and not-for-profit sectors, as well as  
12 the general public to ensure that—

13 (1) data are made available under section 201  
14 in formats that are—

15 (A) useful; and

16 (B) to the extent practicable, consistent  
17 and interoperable with data collected by the In-  
18 tegrated Ocean Observing System;

19 (2) users and potential users of data made  
20 available under section 201 are aware of the range  
21 of data available under such section; and

22 (3) the Administration—

23 (A) develops a better understanding of  
24 data needs from users and potential users; and

25 (B) anticipates future data infrastructure  
26 needs to meet growing demands for access to

1 data sets of the Administration from commer-  
2 cial applications.

3 (b) APPROVAL OF SECRETARY OF THE NAVY.—Coop-  
4 erative activities may be carried out under subsection (a)  
5 only to the extent that the Secretary of the Navy approves  
6 data made available under section 201 for release to the  
7 public after the Secretary determines there are no national  
8 security implications relating to that data.

9 (c) TECHNICAL ASSISTANCE.—The Assistant Admin-  
10 istrator for Satellite and Information Services and the As-  
11 sistant Administrator of the National Ocean Service shall  
12 jointly provide technical assistance to users or potential  
13 users on accessing the data provided under section 201.

14 **SEC. 203. FACILITATING JOINT PROJECTS BETWEEN NA-**  
15 **TIONAL OCEANIC AND ATMOSPHERIC ADMIN-**  
16 **ISTRATION AND PRIVATE INDUSTRY ON UN-**  
17 **MANNED MARITIME SYSTEMS.**

18 (a) IN GENERAL.—In carrying out the program re-  
19 quired by section 201(b)(1), the Administrator shall de-  
20 velop and implement a process to facilitate joint projects  
21 among private industry, research institutions, and other  
22 non-Federal entities with unmanned maritime systems ex-  
23 pertise for the following purposes:

1           (1) Improving ocean observing capabilities to  
2           monitor the physical, chemical, and biological condi-  
3           tions of the ocean.

4           (2) Increasing cost effectiveness of developing  
5           technologies relating to unmanned maritime systems.

6           (3) Seeking efficiencies in data collection and  
7           management through in the development and deploy-  
8           ment of unmanned maritime systems.

9           (4) Expanding global capabilities of ocean tech-  
10          nology.

11          (5) Capitalizing on emerging technological ad-  
12          vances.

13          (b) USE OF EXISTING PARTNERSHIPS.—The Admin-  
14          istrator may consider using partnerships in existence on  
15          the day before the date of the enactment of this Act, such  
16          as such partnerships established through the National  
17          Oceanographic Partnership Program, for carrying out this  
18          section.

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