

117TH CONGRESS  
1ST SESSION

# S. 3245

To establish the Interagency Working Group on Coastal Blue Carbon, and  
for other purposes.

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IN THE SENATE OF THE UNITED STATES

NOVEMBER 18, 2021

Ms. MURKOWSKI (for herself and Mr. WHITEHOUSE) 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 establish the Interagency Working Group on Coastal Blue  
Carbon, 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,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Blue Carbon for Our  
5 Planet Act”.

6 **SEC. 2. DEFINITIONS.**

7 In this Act:

8 (1) ADMINISTRATOR.—The term “Adminis-  
9 trator” means the Under Secretary of Commerce for  
10 Oceans and Atmosphere in the Under Secretary’s

1 capacity as the Administrator of the National Oce-  
2 anic and Atmospheric Administration.

3 (2) COASTAL BLUE CARBON ECOSYSTEMS.—

4 (A) IN GENERAL.—The term “coastal blue  
5 carbon ecosystems” means vegetated coastal  
6 habitats, including mangroves, tidal marshes,  
7 seagrasses, kelp forests, and other tidal, fresh-  
8 water, or salt-water wetlands, that have the  
9 ability to sequester carbon from the atmos-  
10 phere, accumulate carbon in biomass for years  
11 to decades, and store carbon in soils for cen-  
12 turies to millennia.

13 (B) INCLUSIONS.—The term “coastal blue  
14 carbon ecosystems” includes autochthonous car-  
15 bon and allochthonous carbon.

16 (3) COASTAL CARBON DATA CLEARINGHOUSE.—

17 The term “Coastal Carbon Data Clearinghouse”  
18 means the Coastal Carbon Data Clearinghouse oper-  
19 ated by the Smithsonian Environmental Research  
20 Center.

21 (4) INTERAGENCY WORKING GROUP.—The term

22 “Interagency Working Group” means the Inter-  
23 agency Working Group on Coastal Blue Carbon es-  
24 tablished under section 3(a).

1           (5) STATE.—The term “State” means each  
2           State of the United States, the District of Columbia,  
3           the Commonwealth of Puerto Rico, American  
4           Samoa, Guam, the Commonwealth of the Northern  
5           Mariana Islands, the Virgin Islands of the United  
6           States, and any other territory or possession of the  
7           United States.

8   **SEC. 3. INTERAGENCY WORKING GROUP ON COASTAL BLUE**  
9                           **CARBON.**

10          (a) ESTABLISHMENT.—The Subcommittee on Ocean  
11          Science and Technology of the National Science and Tech-  
12          nology Council shall establish an interagency working  
13          group, to be known as the “Interagency Working Group  
14          on Coastal Blue Carbon”.

15          (b) MEMBERSHIP.—The Interagency Working Group  
16          shall be comprised of senior representatives from—

17                 (1) the National Oceanic and Atmospheric Ad-  
18                 ministration;

19                 (2) the Environmental Protection Agency;

20                 (3) the National Science Foundation;

21                 (4) the National Aeronautics and Space Admin-  
22                 istration;

23                 (5) the United States Geological Survey;

24                 (6) the United States Fish and Wildlife Service;

25                 (7) the National Park Service;

- 1 (8) the Bureau of Indian Affairs;
- 2 (9) the Smithsonian Institution;
- 3 (10) the Army Corps of Engineers;
- 4 (11) the Department of Agriculture;
- 5 (12) the Department of Energy;
- 6 (13) the Department of Defense;
- 7 (14) the Department of State;
- 8 (15) the Department of Transportation;
- 9 (16) the Federal Emergency Management
- 10 Agency; and
- 11 (17) the Council on Environmental Quality.

12 (c) CHAIRPERSON.—The Interagency Working Group  
13 shall be chaired by the Administrator.

14 (d) RESPONSIBILITIES.—The Interagency Working  
15 Group shall—

16 (1) oversee the development, updates, and  
17 maintenance of a national map and inventory of  
18 coastal blue carbon ecosystems, including habitat  
19 types, with a regional focus in analysis that is usable  
20 for local-level conservation, planning, and restora-  
21 tion;

22 (2) develop a strategic assessment of the bio-  
23 physical, chemical, social, statutory, regulatory, and  
24 economic impediments to conservation and restora-  
25 tion of coastal blue carbon ecosystems, including the

1 vulnerability of coastal blue carbon ecosystems to cli-  
2 mate impacts, such as sea-level rise and ocean and  
3 coastal acidification, and other environmental and  
4 human stressors;

5 (3) develop a national strategy for foundational  
6 science necessary to study, synthesize, and evaluate  
7 the effects of climate change and environmental and  
8 human stressors on sequestration rates and capabili-  
9 ties of coastal blue carbon ecosystems conservation,  
10 with input from the National Academies of Sciences,  
11 Engineering, and Medicine;

12 (4) establish national conservation and restora-  
13 tion priorities for coastal blue carbon ecosystems, in-  
14 cluding an assessment of Federal funding being used  
15 for conservation and restoration efforts;

16 (5) ensure the continuity, use, and interoper-  
17 ability of data assets, including data assets available  
18 through the Coastal Carbon Data Clearinghouse;  
19 and

20 (6) assess legal authorities in effect as of the  
21 date of the enactment of this Act to conserve and re-  
22 store coastal blue carbon ecosystems.

23 (e) SUBMISSIONS TO CONGRESS.—

24 (1) REPORT.—Not later than 1 year after the  
25 date of the enactment of this Act, the Interagency

1 Working Group shall submit to the Committee on  
2 Commerce, Science, and Transportation of the Sen-  
3 ate, the Committee on Science, Space, and Tech-  
4 nology of the House of Representatives, and the  
5 Committee on Natural Resources of the House of  
6 Representatives a report containing the following:

7 (A) A summary of federally funded re-  
8 search, monitoring, conservation, and restora-  
9 tion activities relating to coastal blue carbon  
10 ecosystems, including—

11 (i) the budget for each such activity;

12 and

13 (ii) a description of the progress made  
14 by each such activity in advancing the na-  
15 tional priorities identified under section  
16 5(a)(3)(A).

17 (B) An assessment of biophysical, chem-  
18 ical, social, statutory, regulatory, and economic  
19 impediments to conservation and restoration of  
20 coastal blue carbon ecosystems, including the  
21 vulnerability of coastal blue carbon ecosystems  
22 to climate impacts, such as sea-level rise and  
23 ocean and coastal acidification, and other envi-  
24 ronmental and human stressors.

25 (2) STRATEGIC PLAN.—

1 (A) IN GENERAL.—The Interagency Work-  
2 ing Group shall create a strategic plan for Fed-  
3 eral investments in basic research, development,  
4 demonstration, long-term monitoring and stew-  
5 ardsip, and deployment of coastal blue carbon  
6 ecosystem projects for the 5-year period begin-  
7 ning on the date on which the first fiscal year  
8 after the date on which the report is submitted  
9 under paragraph (1) begins.

10 (B) ELEMENTS.—The plan required by  
11 subparagraph (A) shall—

12 (i) include an assessment of the use of  
13 Federal programs existing as of the date of  
14 the enactment of this Act to conserve and  
15 restore coastal blue carbon ecosystems; and

16 (ii) identify any additional authorities  
17 or programs that may be needed to con-  
18 serve and restore such ecosystems.

19 (C) TIMING.—The Interagency Working  
20 Group shall—

21 (i) on a date that is not later than 1  
22 year after the date of the enactment of this  
23 Act and not earlier than the date on which  
24 the report required by paragraph (1) is  
25 submitted, submit to the Committee on

1 Commerce, Science, and Transportation of  
2 the Senate, the Committee on Science,  
3 Space, and Technology of the House of  
4 Representatives, and the Committee on  
5 Natural Resources of the House of Rep-  
6 resentatives the strategic plan required by  
7 subparagraph (A); and

8 (ii) submit a revised version of such  
9 plan not less frequently than once every 5  
10 years thereafter.

11 (D) PUBLICATION AND PUBLIC COM-  
12 MENT.—Not later than 90 days before the date  
13 on which the strategic plan or any revised  
14 version of such plan is submitted under sub-  
15 paragraph (C), the Interagency Working Group  
16 shall—

17 (i) publish such plan in the Federal  
18 Register; and

19 (ii) provide an opportunity for submis-  
20 sion of public comments for a period of not  
21 less than 60 days.

22 **SEC. 4. NATIONAL MAP AND INVENTORY OF COASTAL BLUE**  
23 **CARBON ECOSYSTEMS.**

24 (a) IN GENERAL.—The Interagency Working Group  
25 shall produce, update, and maintain a national-level map



1 and inventory of coastal blue carbon ecosystems, includ-  
2 ing—

3 (1) the types of habitats and species in such  
4 ecosystems;

5 (2) the condition of such habitats, including  
6 whether a habitat is degraded, drained, eutrophic, or  
7 tidally restricted;

8 (3) the type of public or private ownership and  
9 any protected status of such ecosystems;

10 (4) the size of such ecosystems;

11 (5) the salinity boundaries of such ecosystems;

12 (6) the tidal boundaries of such ecosystems;

13 (7) an assessment of carbon sequestration po-  
14 tential, methane production, and net greenhouse gas  
15 reductions with respect to such ecosystems, includ-  
16 ing consideration of—

17 (A) quantification;

18 (B) verifiability;

19 (C) comparison to a historical baseline as  
20 available; and

21 (D) permanence of those benefits;

22 (8) an assessment of co-benefits of ecosystem  
23 and carbon sequestration;

24 (9) the potential for landward migration as a  
25 result of sea level rise;

1           (10) any upstream restrictions detrimental to  
2 the watershed process and conditions such as dams,  
3 dikes, levees, and other water management practices;

4           (11) the conversion of such ecosystems to other  
5 land uses and the cause of such conversion; and

6           (12) a depiction of the effects of climate  
7 change, including sea level rise, environmental  
8 stressors, and human stressors on the sequestration  
9 rate, carbon storage, and potential of such eco-  
10 systems.

11       (b) DATA INCORPORATION; ENGAGEMENT.—In car-  
12 rying out subsection (a), the Administrator shall—

13           (1) incorporate, to the extent practicable, exist-  
14 ing data, as determined on the date of the enact-  
15 ment of this Act, collected through federally funded  
16 research by a Federal agency, State agency, Tribe,  
17 or local agency and peer-reviewed published works,  
18 including data collected from—

19                   (A) the Coastal Change Analysis Program  
20 of the National Oceanic and Atmospheric Ad-  
21 ministration;

22                   (B) the National Wetlands Inventory of  
23 the United States Fish and Wildlife Service;

24                   (C) the LandCarbon program of the  
25 United States Geological Survey;

1 (D) the LiDAR information coordination  
2 and knowledge program of the Federal Emer-  
3 gency Management Agency;

4 (E) the Biological and Environmental Re-  
5 search Program of the Department of Energy;  
6 and

7 (F) the National Coastal Blue Carbon As-  
8 sessment of the Department of Agriculture; and

9 (2) engage regional experts, State agencies,  
10 Tribes, and additional data and information re-  
11 sources in order to accurately account for regional  
12 differences in coastal blue carbon ecosystems.

13 (c) USE OF MAP AND INVENTORY.—The Interagency  
14 Working Group shall use the national map and inventory  
15 produced under subsection (a)—

16 (1) to assess the carbon sequestration potential  
17 of different coastal blue carbon ecosystems and ac-  
18 count for any regional differences;

19 (2) to assess and quantify emissions from de-  
20 graded and destroyed coastal blue carbon eco-  
21 systems;

22 (3) to develop regional assessments in partner-  
23 ship with, or to provide technical assistance to—

24 (A) regional, State, Tribal, and local gov-  
25 ernment agencies; and

1 (B) regional information coordination enti-  
2 ties (as defined in section 12303(6) of the Inte-  
3 grated Coastal and Ocean Observation System  
4 Act of 2009 (33 U.S.C. 3602));

5 (4) to assess degraded coastal blue carbon eco-  
6 systems and the potential for restoration of such  
7 ecosystems, including developing scenario modeling  
8 to identify vulnerable land areas and living shore-  
9 lines where management, conservation, and restora-  
10 tion efforts should be focused;

11 (5) to produce predictions relating to coastal  
12 blue carbon ecosystems and carbon sequestration  
13 rates in the context of climate change, environmental  
14 stressors, and human stressors; and

15 (6) to inform the creation by the Administrator  
16 of the Environmental Protection Agency of the an-  
17 nual Inventory of U.S. Greenhouse Gas Emissions  
18 and Sinks.

19 **SEC. 5. RESTORATION AND CONSERVATION OF EXISTING**  
20 **COASTAL BLUE CARBON ECOSYSTEMS.**

21 (a) IN GENERAL.—The Administrator shall—

22 (1) lead the Interagency Working Group in im-  
23 plementing the strategic plan under section 3(e)(2);

24 (2) coordinate monitoring and research efforts  
25 among Federal agencies in cooperation with State,

1 Tribal, and local governments, academic institutions,  
2 international partners, and nongovernmental organi-  
3 zations;

4 (3) in coordination with the Interagency Work-  
5 ing Group, and as informed by the report under sec-  
6 tion 3(e)(1), identify—

7 (A) national conservation and restoration  
8 priorities for coastal blue carbon ecosystems  
9 that would produce the highest rate of carbon  
10 sequestration and greatest ecosystem benefits,  
11 such as flood protection, soil and beach reten-  
12 tion, erosion reduction, biodiversity, water puri-  
13 fication, and nutrient cycling, in the context of  
14 other environmental stressors and climate  
15 change; and

16 (B) ways to improve coordination and to  
17 prevent unnecessary duplication of effort among  
18 Federal agencies and departments with respect  
19 to research on coastal blue carbon ecosystems  
20 through existing and new coastal management  
21 networks; and

22 (4) in coordination with State, Tribal, and local  
23 governments and coastal stakeholders, develop inte-  
24 grated pilot programs to restore degraded coastal

1 blue carbon ecosystems in accordance with sub-  
2 section (b).

3 (b) INTEGRATED FEDERAL PILOT PROGRAMS TO  
4 RESTORE DEGRADED COASTAL BLUE CARBON ECO-  
5 SYSTEMS.—

6 (1) IN GENERAL.—In carrying out subsection  
7 (a)(4), the Administrator shall establish 1 or more  
8 integrated Federal pilot programs that—

9 (A) further develop—

10 (i) best management practices, includ-  
11 ing design criteria and performance func-  
12 tions for restoration of coastal blue carbon  
13 ecosystems;

14 (ii) nature-based adaptation strate-  
15 gies;

16 (iii) restoration areas that intersect  
17 with built environments as green-gray in-  
18 frastructure projects;

19 (iv) management practices for land-  
20 ward progression, migration, or loss of  
21 coastal blue carbon ecosystems;

22 (v) best management practices to ac-  
23 count for latitudinal biogeographic factors;  
24 and

1 (vi) best management practices for  
2 restoration of—

3 (I) hypersaline coastal eco-  
4 systems; and

5 (II) estuarine ecosystems; and

6 (B) identify potential barriers to restora-  
7 tion management efforts.

8 (2) LOCATIONS.—The Administrator shall en-  
9 sure that pilot programs under paragraph (1) cover  
10 geographically, socioeconomically, and ecologically  
11 diverse locations with—

12 (A) significant ecological, economic, and  
13 social benefits, such as flood protection, soil and  
14 beach retention, erosion reduction, biodiversity,  
15 water purification, and nutrient cycling to re-  
16 duce hypoxic conditions; and

17 (B) maximum potential for greenhouse gas  
18 emission reduction, taking into account—

19 (i) quantification;

20 (ii) verifiability;

21 (iii) additionality, as compared to an  
22 appropriate historical baseline determined  
23 by the Interagency Working Group; and

24 (iv) permanence of those benefits.

1           (3) APPLICATION REVIEW.—The Administrator  
2 shall—

3           (A) establish a procedure for reviewing ap-  
4 plications for pilot programs under paragraph  
5 (1);

6           (B) encourage applications from minority  
7 serving institutions; and

8           (C) consider proposals from institutions  
9 that may not have adequate resources.

10          (4) COMMUNICATION.—The Administrator shall  
11 ensure, through consultation with the Interagency  
12 Working Group, that the goals and metrics for pilot  
13 programs under paragraph (1) are communicated to  
14 the appropriate State, local, and Tribal govern-  
15 ments, coastal stakeholders, non-Federal resource  
16 managers, academia, and the general public.

17          (5) COORDINATION.—The Administrator shall  
18 coordinate with—

19           (A) relevant Federal agencies and depart-  
20 ments specified under section 3(b) to prevent  
21 unnecessary duplication of effort among such  
22 agencies and departments with respect to res-  
23 toration programs; and

24           (B) relevant State, Tribal, and local gov-  
25 ernment entities.



1           (6) PRIORITY.—In carrying out pilot programs  
2 under paragraph (1), the Administrator shall give  
3 priority to proposed eligible restoration activities  
4 that would—

5           (A) result in long-term sequestration of  
6 carbon stored in coastal and marine environ-  
7 ments;

8           (B) conserve key habitats for fish, wildlife,  
9 and the maintenance of biodiversity;

10          (C) provide coastal protection from storms,  
11 flooding, and land-based pollution;

12          (D) restore optimal salinities and chloro-  
13 phyll levels in estuarine and coastal environ-  
14 ments or lead to other improvements to water  
15 quality; and

16          (E) conserve coastal resources of national,  
17 historical, and cultural significance.

18          (7) NON-FEDERAL COST SHARE.—The Adminis-  
19 trator may accept, but shall not give priority to, of-  
20 fers to share the cost of a project under a pilot pro-  
21 gram under paragraph (1) from State, Tribal, local,  
22 and nongovernmental applicants.

23          (8) REQUIREMENT.—Any project performed  
24 under a pilot program under paragraph (1) shall be

1 conducted within the territorial boundaries of the  
2 United States.

3 **SEC. 6. COASTAL CARBON DATA CLEARINGHOUSE.**

4 (a) DEFINITION OF SECRETARY.—In this section, the  
5 term “Secretary” means the Secretary of the Smithsonian  
6 Institution.

7 (b) IN GENERAL.—The Secretary, in coordination  
8 with the Administrator and members of the Interagency  
9 Working Group, shall provide for the long-term steward-  
10 ship of, and access to, data relating to coastal blue carbon  
11 ecosystems and national mapping, by supporting the  
12 maintenance of the Coastal Carbon Data Clearinghouse.

13 (c) COASTAL CARBON DATA CLEARINGHOUSE DU-  
14 TIES.—The Secretary, in coordination with the Adminis-  
15 trator and members of the Interagency Working Group,  
16 shall, through the Coastal Carbon Data Clearinghouse,  
17 process, store, archive, provide access to, and incorporate  
18 (to the extent practicable) all data relating to coastal car-  
19 bon collected through federally funded research by a Fed-  
20 eral agency, State, Tribe, or local agency, an academic in-  
21 stitution, or another relevant entity.

22 (d) GLOBAL AND NATIONAL DATA ASSETS.—The  
23 Secretary, in coordination with the Administrator and  
24 members of the Interagency Working Group, shall ensure  
25 that existing global and national data assets, as deter-

1 mined on the date of the enactment of this Act, are incor-  
2 porated into the Coastal Carbon Data Clearinghouse, to  
3 the greatest extent practicable.

4 (e) ESTABLISHMENT OF STANDARDS, PROTOCOLS,  
5 AND PROCEDURE.—The Secretary, in coordination with  
6 the Administrator and members of the Interagency Work-  
7 ing Group, shall establish—

8 (1) standards, protocols, and procedures for the  
9 processing, storing, and archiving of, and providing  
10 access to, data in the Coastal Carbon Data Clearing-  
11 house; and

12 (2) best practices for sharing such data with  
13 State, local, and Tribal governments, coastal stake-  
14 holders, non-Federal resource managers, and aca-  
15 demia.

16 (f) DISSEMINATION; DIGITAL TOOLS AND RE-  
17 SOURCES.—

18 (1) DISSEMINATION.—The Administrator shall  
19 work to disseminate the data available through the  
20 Coastal Carbon Data Clearinghouse to the greatest  
21 extent practicable.

22 (2) DIGITAL TOOLS AND RESOURCES.—The  
23 Secretary, in coordination with the Administrator  
24 and members of the Interagency Working Group,  
25 shall develop digital tools and resources to support

1 the public use of the Coastal Carbon Data Clearing-  
2 house.

3 **SEC. 7. NATIONAL ACADEMY OF SCIENCES ASSESSMENTS**  
4 **OF CARBON DIOXIDE STORAGE IN DEEP**  
5 **SEAFLOOR ENVIRONMENTS AND OF COASTAL**  
6 **CARBON MARKETS.**

7 Not later than 90 days after the date of the enact-  
8 ment of this Act, the Administrator shall seek to enter  
9 into an agreement with the National Academy of Sciences  
10 to conduct—

11 (1) a comprehensive assessment of—

12 (A) the long-term effects of containment of  
13 carbon dioxide in a deep seafloor environment  
14 on marine ecosystems;

15 (B) the socioeconomic effects of such con-  
16 tainment on existing ocean users and commu-  
17 nities; and

18 (C) the integrity of existing storage tech-  
19 nologies, as determined on the date of the en-  
20 actment of this Act;

21 (2) a comprehensive assessment of pathways,  
22 methods, and technologies able to directly remove  
23 carbon dioxide from the oceans by the removal of  
24 dissolved carbon dioxide from seawater through engi-  
25 neered or inorganic processes, including filters,

1 membranes, phase change systems, or other techno-  
2 logical pathways; and

3 (3) a comprehensive assessment of the viability  
4 of using coastal macroalgae cultivation and sustain-  
5 able coastal wetlands management and restoration  
6 for carbon sequestration, which shall consider—

7 (A) environmental and socioeconomic ef-  
8 fects on coastal communities;

9 (B) durability and cost per ton of carbon  
10 dioxide sequestered using coastal macroalgae  
11 cultivation and sustainable coastal wetlands  
12 management in a variety of regions of the  
13 United States, including Alaska, the Gulf  
14 Coast, the Mid-Atlantic, and the Pacific North-  
15 west;

16 (C) research, data, resource management,  
17 monitoring, reporting, lifecycle assessment, and  
18 verification improvements necessary to develop  
19 a carbon market around coastal macroalgae cul-  
20 tivation and sustainable coastal wetlands man-  
21 agement or restoration; and

22 (D) relevant successes and failures of car-  
23 bon markets in agriculture, forestry, and wet-  
24 lands and how such successes and failures  
25 might apply to a future coastal carbon market.

1 **SEC. 8. RULE OF CONSTRUCTION.**

2 Nothing in this Act shall be construed as providing  
3 new authority—

4 (1) to expand Federal land acquisition in pur-  
5 suit of the goal described in section 216 of Executive  
6 Order (86 Fed. Reg. 7627; relating to tackling the  
7 climate crisis at home and abroad); or

8 (2) to conserve or protect Federal lands or  
9 waters without prior written approval from the Gov-  
10 ernor of an affected State.

11 **SEC. 9. AUTHORIZATION OF APPROPRIATIONS.**

12 There is authorized to be appropriated to the Admin-  
13 istrator to carry out this Act \$15,000,000 for each of fis-  
14 cal years 2022 through 2026.

○