

116TH CONGRESS
2D SESSION

S. 3939

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

IN THE SENATE OF THE UNITED STATES

JUNE 11, 2020

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

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 or salt-
8 water wetlands, that have the ability to seques-
9 ter carbon from the atmosphere, accumulate
10 carbon in biomass for years to decades, and
11 store carbon in soils for centuries to millennia.

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

15 (3) COASTAL CARBON DATA CLEARINGHOUSE.—

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

20 (4) INTERAGENCY WORKING GROUP.—The term

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

24 (5) STATE.—The term “State” means each

25 State of the United States, the District of Columbia,

1 the Commonwealth of Puerto Rico, American
2 Samoa, Guam, the Commonwealth of the Northern
3 Mariana Islands, the Virgin Islands of the United
4 States, and any other territory or possession of the
5 United States.

6 **SEC. 3. INTERAGENCY WORKING GROUP ON COASTAL BLUE**
7 **CARBON.**

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

13 (b) PURPOSES.—The Interagency Working Group
14 shall—

15 (1) oversee the development of a national map
16 of coastal blue carbon ecosystems;

17 (2) establish national restoration priorities for
18 coastal blue carbon ecosystems;

19 (3) assess the biophysical, social, and economic
20 impediments to restoration of coastal blue carbon
21 ecosystems;

22 (4) study the effects of climate change and en-
23 vironmental and human stressors on sequestration
24 rates; and

1 (5) preserve the continuity of coastal blue car-
2 bon data.

3 (c) MEMBERSHIP.—The Interagency Working Group
4 shall be comprised of senior representatives from—

5 (1) the National Oceanic and Atmospheric Ad-
6 ministration;

7 (2) the Environmental Protection Agency;

8 (3) the National Science Foundation;

9 (4) the National Aeronautics and Space Admin-
10 istration;

11 (5) the United States Geological Survey;

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

13 (7) the National Park Service;

14 (8) the Bureau of Indian Affairs;

15 (9) the Smithsonian Institution;

16 (10) the Army Corps of Engineers;

17 (11) the Department of Agriculture;

18 (12) the Department of Energy;

19 (13) the Department of Defense;

20 (14) the Department of Transportation; and

21 (15) the Federal Emergency Management
22 Agency.

23 (d) CHAIRPERSON.—The Interagency Working
24 Group shall be chaired by the Administrator.

1 (e) RESPONSIBILITIES.—The Interagency Working
2 Group shall—

3 (1) oversee the development, updates, and
4 maintenance of a national map and inventory of
5 coastal blue carbon ecosystems, including habitat
6 types, with a regional focus in analysis that is usable
7 for local-level protection, planning, and restoration;

8 (2) develop a strategic assessment of the bio-
9 physical, social, statutory, regulatory, and economic
10 impediments to protection and restoration of coastal
11 blue carbon ecosystems;

12 (3) develop a national strategy for foundational
13 science necessary to study, synthesize, and evaluate
14 the effects of climate change and environmental and
15 human stressors on sequestration rates and capabili-
16 ties of coastal blue carbon ecosystems protection;

17 (4) establish national protection and restoration
18 priorities for coastal blue carbon ecosystems, includ-
19 ing an assessment of Federal funding being used for
20 restoration efforts; and

21 (5) ensure the continuity, use, and interoper-
22 ability of data assets through the Coastal Carbon
23 Data Clearinghouse.

24 (f) SUBMISSIONS TO CONGRESS.—

1 (1) REPORT.—Not later than 1 year after the
2 date of the enactment of this Act, the Interagency
3 Working Group shall submit to the Committee on
4 Commerce, Science, and Transportation of the Sen-
5 ate, the Committee on Science, Space, and Tech-
6 nology of the House of Representatives, and the
7 Committee on Natural Resources of the House of
8 Representatives a report containing the following:

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

13 (i) the budget for each such activity;

14 and

15 (ii) a description of the progress made
16 by each such activity in advancing the na-
17 tional priorities established under section
18 5(a)(4)(A).

19 (B) An assessment of biophysical, social,
20 statutory, regulatory, and economic impedi-
21 ments to restoration of coastal blue carbon eco-
22 systems.

23 (2) STRATEGIC PLAN.—

24 (A) IN GENERAL.—The Interagency Work-
25 ing Group shall create a strategic plan for Fed-

1 eral investments in basic research, development,
2 demonstration, long-term monitoring and stew-
3 ardsip, and deployment of coastal blue carbon
4 ecosystem projects for the 5-year period begin-
5 ning on the date on which the first fiscal year
6 after the date on which the report is submitted
7 under paragraph (1) begins.

8 (B) ASSESSMENT.—The plan shall include
9 an assessment of the use of Federal programs
10 existing as of the date of the enactment of this
11 Act to protect and preserve coastal blue carbon
12 ecosystems.

13 (C) TIMING.—The Interagency Working
14 Group shall—

15 (i) on a date that is not later than 1
16 year after the enactment of this Act and
17 not earlier than the date on which the re-
18 port is submitted under paragraph (1),
19 submit to the Committee on Commerce,
20 Science, and Transportation of the Senate,
21 the Committee on Science, Space, and
22 Technology of the House of Representa-
23 tives, and the Committee on Natural Re-
24 sources of the House of Representatives

1 the strategic plan under subparagraph (A);
2 and

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

6 (D) FEDERAL REGISTER.—Not later than
7 90 days before the date on which the strategic
8 plan or any revised version of such plan is sub-
9 mitted under subparagraph (C), the Inter-
10 agency Working Group shall—

11 (i) publish such plan in the Federal
12 Register; and

13 (ii) provide an opportunity for submis-
14 sion of public comments for a period of not
15 less than 60 days.

16 **SEC. 4. NATIONAL MAP AND INVENTORY OF COASTAL BLUE**
17 **CARBON ECOSYSTEMS.**

18 (a) IN GENERAL.—The Interagency Working Group
19 shall produce, update, and maintain a national-level map
20 and inventory of coastal blue carbon ecosystems, includ-
21 ing—

22 (1) the types of habitats and species in such
23 ecosystems;

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

4 (3) the size of such ecosystems;

5 (4) the salinity boundaries of such ecosystems;

6 (5) the tidal boundaries of such ecosystems;

7 (6) an assessment of carbon sequestration po-
8 tential, methane production, and net greenhouse gas
9 reductions with respect to such ecosystems;

10 (7) an assessment of cobenefits of ecosystem
11 and carbon sequestration;

12 (8) the potential for landward migration as a
13 result of sea level rise;

14 (9) any upstream restrictions detrimental to the
15 watershed process and conditions such as dams,
16 dikes, and levees;

17 (10) the conversion of such ecosystems to other
18 land uses and the cause of such conversion; and

19 (11) a depiction of the effects of climate
20 change, including sea level rise, environmental
21 stressors, and human stressors on the sequestration
22 rate, carbon storage, and potential of such eco-
23 systems.

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

1 (1) incorporate, to the extent practicable, exist-
2 ing data, as determined on the date of enactment of
3 this Act, collected through federally funded research
4 by a Federal agency, State agency, Tribe, or local
5 agency, including data collected from—

6 (A) the Coastal Change Analysis Program
7 of the National Oceanic and Atmospheric Ad-
8 ministration;

9 (B) the National Wetlands Inventory of
10 the United States Fish and Wildlife Service;

11 (C) the Landcarbon program of the United
12 States Geological Survey; and

13 (D) the National Coastal Blue Carbon As-
14 sessment of the Department of Agriculture; and

15 (2) engage regional technical experts in order to
16 accurately account for regional differences in coastal
17 blue carbon ecosystems.

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

21 (1) to assess the carbon sequestration potential
22 of different coastal blue carbon ecosystems and ac-
23 count for any regional differences;

1 (2) to assess and quantify emissions from de-
2 degraded and destroyed coastal blue carbon eco-
3 systems;

4 (3) to develop regional assessments and to pro-
5 vide technical assistance to—

6 (A) regional, State, Tribal, and local gov-
7 ernment agencies; and

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

12 (4) to assess degraded coastal blue carbon eco-
13 systems and the potential for restoration of such
14 ecosystems, including developing scenario modeling
15 to identify vulnerable land areas where management,
16 protection, and restoration efforts should be focused;
17 and

18 (5) to produce predictions relating to coastal
19 blue carbon ecosystems and carbon sequestration
20 rates in the context of climate change, environmental
21 stressors, and human stressors.

22 **SEC. 5. RESTORATION OF AND PROTECTIONS FOR EXIST-**
23 **ING COASTAL BLUE CARBON ECOSYSTEMS.**

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

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

3 (2) coordinate monitoring and research efforts
4 among Federal agencies in cooperation with State,
5 Tribal, and local governments, international part-
6 ners, and nongovernmental organizations;

7 (3) assess the feasibility and potential of—

8 (A) establishing a national goal of con-
9 serving at least 30 percent of the ocean and
10 coastal blue carbon ecosystems within the terri-
11 tory of the United States by 2030, including
12 the effects of climate change and sea level rise
13 on such goal; and

14 (B) as appropriate, setting targets for res-
15 toration of degraded coastal blue carbon eco-
16 systems;

17 (4) in coordination with the Interagency Work-
18 ing Group, and as informed by the report under sec-
19 tion 3(f)(1), identify—

20 (A) national protection and restoration pri-
21 orities for coastal blue carbon ecosystems that
22 would produce the highest rate of carbon se-
23 questration and greatest ecosystem benefits,
24 such as flood protection, soil and beach reten-
25 tion, erosion reduction, biodiversity, water puri-

1 fication, and nutrient cycling, in the context of
2 other environmental stressors and climate
3 change; and

4 (B) ways to improve coordination and to
5 prevent unnecessary duplication of effort among
6 Federal agencies and departments with respect
7 to research on coastal blue carbon ecosystems
8 through existing and new coastal management
9 networks; and

10 (5) in coordination with State, Tribal, and local
11 governments and coastal stakeholders, develop inte-
12 grated pilot programs to restore degraded coastal
13 blue carbon ecosystems in accordance with sub-
14 section (b).

15 (b) INTEGRATED PILOT PROGRAMS TO RESTORE
16 DEGRADED COASTAL BLUE CARBON ECOSYSTEMS.—

17 (1) IN GENERAL.—In carrying out subsection
18 (a)(5), the Administrator shall establish one or more
19 integrated pilot programs that—

20 (A) develop—

21 (i) best management practices, includ-
22 ing design criteria and performance func-
23 tions for restoration of coastal blue carbon
24 ecosystems;

1 (ii) nature-based adaptation strate-
2 gies;

3 (iii) restoration areas that intersect
4 with built environments as green-gray in-
5 frastructure projects; and

6 (iv) management practices for land-
7 ward progression or migration of coastal
8 blue carbon ecosystems; and

9 (B) identify potential barriers to restora-
10 tion efforts.

11 (2) LOCATIONS.—The Administrator shall en-
12 sure that pilot programs under paragraph (1) cover
13 geographically and ecologically diverse locations
14 with—

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

20 (B) maximum potential for greenhouse gas
21 emission reduction.

22 (3) APPLICATION REVIEW.—The Administrator
23 shall establish a procedure for reviewing applications
24 for pilot programs under paragraph (1).

1 (4) COMMUNICATION.—The Administrator shall
2 ensure, through consultation with the Interagency
3 Working Group, that the goals and metrics for pilot
4 programs under paragraph (1) are communicated to
5 the appropriate State, Tribal, and local govern-
6 ments, and to the general public.

7 (5) COORDINATION.—The Administrator shall
8 coordinate with relevant Federal agencies and de-
9 partments specified under section 3(c) to prevent
10 unnecessary duplication of effort among such agen-
11 cies and departments with respect to restoration
12 programs.

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

14 (a) DEFINITION OF SECRETARY.—In this section, the
15 term “Secretary” means the Secretary of the Smithsonian
16 Institution.

17 (b) IN GENERAL.—The Secretary, in coordination
18 with the Administrator and members of the Interagency
19 Working Group, shall provide for the long-term steward-
20 ship of, and access to, data relating to coastal blue carbon
21 ecosystems and national mapping, by supporting the
22 maintenance of the Coastal Carbon Data Clearinghouse.

23 (c) COASTAL CARBON DATA CLEARINGHOUSE DU-
24 TIES.—The Secretary, in coordination with the Adminis-
25 trator and members of the Interagency Working Group,

1 shall, through the Coastal Carbon Data Clearinghouse,
2 process, store, archive, provide access to, and incorporate
3 (to the extent practicable) all data relating to coastal car-
4 bon collected through federally funded research by a Fed-
5 eral agency, State, Tribe, or local agency, an academic in-
6 stitution, or another relevant entity.

7 (d) GLOBAL AND NATIONAL DATA ASSETS.—The
8 Secretary, in coordination with the Administrator and
9 members of the Interagency Working Group, shall ensure
10 that existing global and national data assets, as deter-
11 mined on the date of enactment of this Act, are incor-
12 porated into the Coastal Carbon Data Clearinghouse, to
13 the greatest extent practicable.

14 (e) ESTABLISHMENT OF STANDARDS, PROTOCOLS,
15 AND PROCEDURE.—The Secretary, in coordination with
16 the Administrator and members of the Interagency Work-
17 ing Group, shall establish—

18 (1) standards, protocols, and procedures for the
19 processing, storing, and archiving of, and providing
20 access to, data in the Coastal Carbon Data Clearing-
21 house; and

22 (2) best practices for sharing such data with
23 State, local, and Tribal governments, coastal stake-
24 holders, non-Federal resource managers, and aca-
25 demia.

1 (f) DISSEMINATION; DIGITAL TOOLS AND RE-
2 SOURCES.—

3 (1) DISSEMINATION.—The Administrator shall
4 work to disseminate the data available through the
5 Coastal Carbon Data Clearinghouse to the greatest
6 extent practicable.

7 (2) DIGITAL TOOLS AND RESOURCES.—The
8 Secretary, in coordination with the Administrator
9 and members of the Interagency Working Group,
10 shall develop digital tools and resources to support
11 the public use of the Coastal Carbon Data Clearing-
12 house.

13 **SEC. 7. NATIONAL ACADEMY OF SCIENCES ASSESSMENTS**
14 **OF CARBON DIOXIDE STORAGE IN DEEP**
15 **SEAFLOOR ENVIRONMENTS AND OF COASTAL**
16 **CARBON MARKETS.**

17 Not later than 90 days after the date of the enact-
18 ment of this Act, the Administrator shall seek to enter
19 into an agreement with the National Academy of Sciences
20 to conduct—

21 (1) a comprehensive assessment of—

22 (A) the long-term effects of containment of
23 carbon dioxide in a deep seafloor environment
24 on marine ecosystems; and

1 (B) the integrity of existing storage tech-
2 nologies, as determined on the date of enact-
3 ment of this Act;

4 (2) a comprehensive assessment of pathways,
5 methods, and technologies able to directly remove
6 carbon dioxide from the oceans by the removal of
7 dissolved carbon dioxide from seawater through engi-
8 neered or inorganic processes, including filters,
9 membranes, phase change systems, or other techno-
10 logical pathways; and

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

15 (A) environmental and economic effects on
16 coastal communities;

17 (B) durability and cost per ton of carbon
18 dioxide sequestered using coastal macroalgae
19 cultivation and sustainable coastal wetlands
20 management in a variety of regions of the
21 United States, including Alaska, the Gulf
22 Coast, the Mid-Atlantic, and the Pacific North-
23 west;

24 (C) research, data, resource management,
25 monitoring, reporting, and verification improve-

1 ments necessary to develop a carbon market
2 around coastal macroalgae cultivation and sus-
3 tainable coastal wetlands management or res-
4 toration; and

5 (D) relevant successes and failures of car-
6 bon markets in agriculture, forestry, and wet-
7 lands and how such successes and failures
8 might apply to a future coastal carbon market.

9 **SEC. 8. AUTHORIZATION OF APPROPRIATIONS.**

10 There are authorized to be appropriated to the Ad-
11 ministrators to carry out this Act \$15,000,000 for each of
12 the fiscal years 2021 through 2025.

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