116TH CONGRESS
2D Session

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To establish forestry policies that facilitate reforestation, conservation, international cooperation, and other ecologically sound management practices that reduce atmospheric carbon, to support United States efforts in partnership with the One Trillion Trees Initiative, to encourage the sustainable management, restoration, and conservation of global forests, grasslands, wetlands, and coastal habitats, and for other purposes.

IN THE SENATE OF THE UNITED STATES

Mr. BRAUN (for himself, Mr. COONS, Mr. YOUNG, and Mr. KING) introduced the following bill; which was read twice and referred to the Committee on __________________

A BILL

To establish forestry policies that facilitate reforestation, conservation, international cooperation, and other ecologically sound management practices that reduce atmospheric carbon, to support United States efforts in partnership with the One Trillion Trees Initiative, to encourage the sustainable management, restoration, and conservation of global forests, grasslands, wetlands, and coastal habitats, 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,
SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) Short Title.—This Act may be cited as the “Trillion Trees and Natural Carbon Storage Act”.

(b) Table of Contents.—The table of contents for this Act is as follows:

Sec. 1. Short title; table of contents.
Sec. 2. Sense of Congress.
Sec. 3. Definitions.

TITLE I—CARBON SEQUESTRATION THROUGH FOREST CONSERVATION AND LAND MANAGEMENT ACTIVITIES

Sec. 101. Domestic forest carbon stock objectives.
Sec. 102. Renewable resource assessment and survey update.
Sec. 103. Forest nursery revival program.
Sec. 104. Carbon sequestration through wetland and grassland.
Sec. 105. Carbon sequestration through the healthy forest reserve program.
Sec. 106. National Forest Foundation activities.
Sec. 107. Carbon sequestration on State and private land.
Sec. 108. Carbon sequestration research and monitoring programs.

TITLE II—MARKET INCENTIVES FOR CARBON SEQUESTRATION

Sec. 201. Clarification of research and development program for cellulosic biochemical and bioplastics.

TITLE III—ENGAGING AMERICA’S ALLIES IN CONSERVATION AND STRONGER LAND MANAGEMENT

Sec. 301. Statement of policy.
Sec. 302. International support for conservation.
Sec. 303. Establishment of foundation.
Sec. 304. International sustainable land-use management plans.
Sec. 305. Blue carbon monitoring.
Sec. 306. Report to Congress.
Sec. 307. International forestry cooperation.
Sec. 308. Modifications to authorities relating to tropical forests.

SEC. 2. SENSE OF CONGRESS.

It is the sense of Congress that—

(1) forests and other ecosystems, including grasslands and coastal wetlands, sequester and store atmospheric carbon on climatologically relevant timescales;
conserving, protecting, and restoring forest, grassland, and wetland ecosystems globally would sequester a substantial amount of atmospheric carbon and constitute a pragmatic step towards addressing global carbon emissions and the degradation of biodiversity;

(3) blue carbon habitat can also store a substantial amount of atmospheric carbon and provide numerous other environmental, cultural, and economic benefits;

(4) as methods to address the changing climate, restore ecosystems, and benefit human health, the United States Government should take a leadership role, both domestically and abroad, in—

(A) ending deforestation;

(B) supporting tree planting, natural regeneration, forest landscape restoration, wildfire risk reduction, and sustainable forest management; and

(C) conserving and restoring grasslands, wetlands, blue carbon habitats, and other lands and waters at scale; and

(5) the 1t.org trillion trees platform established by the World Economic Forum, the Global Environment Facility, and other domestic and international
efforts to conserve and expand healthy forest and
tree cover, grasslands, wetlands, and blue carbon
habitats globally should be supported.

SEC. 3. DEFINITIONS.

In this Act:

(1) ADMINISTRATOR.—The term “Administrator” means the Administrator of the United
States Agency for International Development.

(2) BLUE CARBON HABITAT.—The term “blue
carbon habitat” means a coastal habitat in the soils
and vegetation of which carbon is stored, including
a tidal wetland, a mangrove forest, a seagrass bed,
a kelp forest, and other saltwater and estuarine
coastal systems.

(3) CARBON SEQUESTRATION.—The term “car-
bon sequestration” means the processes of capturing
and storing atmospheric carbon dioxide for a cli-
matologically relevant period of time.

(4) FOREST LANDSCAPE RESTORATION.—The
term “forest landscape restoration” means a process
that aims to regain ecological functionality and en-
hance human well-being in deforested or degraded
landscapes.

(5) NATIONAL FOREST SYSTEM.—The term
“National Forest System” has the meaning given
the term in section 11(a) of the Forest and Range-
land Renewable Resources Planning Act of 1974 (16
U.S.C. 1609(a)).

(6) NATURALLY REGENERATE.—The term
“naturally regenerate” means the regeneration of
natural tree growth from—

(A) available seed sources native to the
specific forest area; or

(B) any other natural process that does
not primarily involve planting.

(7) NET CARBON STOCK.—The term “net car-
bon stock” means the absolute quantity of carbon
held within a discrete portion of the biosphere (in-
cluding carbon held within a discrete portion of
aboveground forest biomass and forest soil) at a
specified time.

(8) SECRETARY.—The term “Secretary” means
the Secretary of Agriculture.

(9) SUSTAINABLE.—The term “sustainable”
means the manner in which a land-use activity will,
over the long-term—

(A) satisfy the human and ecological needs
associated with the use of land;
(B) conserve critical habitat and conserve
and enhance the environmental quality of the
land; and

(C) optimize current and future land uses
to ensure any enhancements in productivity are
at a rate and in a manner that does not threat-
en decline.

TITLE I—CARBON SEQUESTRATION THROUGH FOREST CONSERVATION AND LAND MANAGEMENT ACTIVITIES

SEC. 101. DOMESTIC FOREST CARBON STOCK OBJECTIVES.

(a) IN GENERAL.—Not later than 2 years after the
date of enactment of this Act, the Secretary, in collabora-
tion with the Administrator of the National Oceanic and
Atmospheric Administration, shall establish—

(1) objectives for increased net carbon stock for
the forest, grassland, wetland, and coastal blue car-on habitat ecosystems of the United States that are
owned or managed by the Federal Government; and

(2) objectives that shall be developed collabora-
atively between 1 or more non-Federal entities and
1 or more Federal partners for increased net carbon
stock for the forest, grassland, wetland, and coastal
blue carbon habitat ecosystems of the United States
that are owned or managed by a State or local government, an Indian Tribe, or a private person.

(b) REQUIREMENTS.—Objectives established under subsection (a)—

(1) shall be based on the best available scientific and commercial information, including current and reference net carbon stock conditions for each ecosystem;

(2) shall be based on information relating to the maintenance or restoration of the ecological integrity of the ecosystems described in subsection (a), including maintaining or restoring ecologically appropriate forest, grassland, wetland, and blue carbon habitat structure, function, composition, and connectivity;

(3) shall consider naturally regenerated plant growth and planted growth;

(4) shall be established at levels that assist in achieving—

(A) the optimally feasible and ecologically appropriate increase in the total net carbon stock that private domestic, State, and Tribal landowners and the Federal Government can achieve by January 1, 2030, and every 10 years thereafter through January 1, 2100; and
(B) the maximum practicable retention, recruitment, and restoration of critical habitats, as appropriate for the forest type, to the extent that the trees promote increased net carbon stock;

(5) shall be informed by data collected through the Forest Inventory and Analysis program of the Forest Service and other relevant data;

(6) shall not negatively impact forest ecological integrity, forest function, forest composition, forest connectivity, and sustained yield and multiple uses;

(7) shall be published in the Federal Register, after notice and an opportunity for public comment, together with a statement of the basis and justification for the objectives;

(8) shall consider input from and the interests of local stakeholders; and

(9) shall consider—

(A) the conservation of existing ecosystems that sequester carbon; and

(B) the impact that a changing climate may have on—

(i) existing net carbon stocks in forest, grassland, wetland, and coastal blue carbon habitat ecosystems; and
(ii) the carbon sequestration potential
of the ecosystems described in clause (i).

SEC. 102. RENEWABLE RESOURCE ASSESSMENT AND SURVEY UPDATE.

(a) RENEWABLE RESOURCE ASSESSMENT.—Section 3 of the Forest and Rangeland Renewable Resources Planning Act of 1974 (16 U.S.C. 1601) is amended—

(1) in subsection (a)—

(A) in each of paragraphs (4) and (5), by striking “and” at the end;

(B) in paragraph (6), by striking the comma at the end and inserting a semicolon;

and

(C) by adding at the end the following:

“(7) an analysis of the total carbon storage capacity of the National Forest System based on the lifecycle analysis established under section 102(b) of the Trillion Trees and Natural Carbon Storage Act; and

“(8) an analysis of the opportunities to enhance and optimize total net carbon stock (as defined in section 3 of that Act and taking into consideration the requirements described in section 101(b) of that Act) in the National Forest System.”; and

(2) in subsection (c)—
(A) in paragraph (2), by striking “and” at the end;

(B) in paragraph (3), by striking the period at the end and inserting “; and”; and

(C) by adding at the end the following:

“(4) the potential for increased utilization of forest and wood products and byproducts that are sustainable (as defined in section 3 of the Trillion Trees and Natural Carbon Storage Act), including recommendations to Congress for actions relating to those products and byproducts that would lead to increased net carbon sequestration (as defined in that section).”.

(b) LIFECYCLE ANALYSIS.—

(1) LIFECYCLE STORAGE MODEL.—As a part of the assessment required under section 3 of the Forest and Rangeland Renewable Resources Planning Act of 1974 (16 U.S.C. 1601), the Secretary shall develop, using the best available science, including data collected through the Forest Inventory and Analysis program of the Forest Service, computational models to analyze the lifecycle forest and grassland carbon sequestration potential associated with the National Forest System.
(2) CONSIDERATIONS.—In developing the model under paragraph (1), the Secretary shall consider—

(A) the net carbon stock in forests, grasslands, and wetlands, including in wood and forest soils;

(B) the rate of carbon sequestration in new trees and young forests;

(C) the rate of carbon sequestration in old trees and older forests;

(D) the carbon impacts from tree mortality;

(E) the carbon impacts from logging, milling, and other forest management activities;

(F) the carbon impacts from wildfire, pests, and other natural disturbances;

(G) the full lifecycle of carbon impacts from the manufacture of wood-based products, including storage benefits and substitution benefits from the use of wood-based products as compared to the use of more greenhouse-gas-intensive materials, including impacts on forest ecosystem net carbon stocks;

(H) the net carbon impact of a cycle of—

(i) harvest and regeneration; or

(ii) harvest and replanting;
(I) the carbon impacts from ecologically sound active forest management;

(J) the carbon impacts from retention, forest conservation, improved management, and restoration of other landscapes, including grasslands, sagebrush, steppe, wetlands, abandoned mine land, brownfields, and other degraded lands that were historically forested; and

(K) other factors, as determined by the Secretary.

(3) VALIDATION PROGRAM.—

(A) IN GENERAL.—The Secretary shall carry out a program for validation and independent testing of the lifecycle models developed under paragraph (1).

(B) REQUIREMENTS.—In carrying out the validation program under subparagraph (A), the Secretary shall—

(i) regularly perform retrospective assessments comparing model predictions to field data on the carbon stored on the National Forest System; and

(ii) require third-party evaluation and comparison of lifecycle models developed under paragraph (1) against existing mod-
els, including enabling empirical testing of hypotheses regarding the net effects on land and atmospheric carbon stocks and other greenhouse gas impacts.

(4) REPORT.—Not later than 3 years after the date of enactment of this Act, the Secretary shall submit to the Committee on Agriculture of the House of Representatives and the Committee on Agriculture, Nutrition, and Forestry of the Senate a report on the findings of the analysis conducted using the lifecycle models developed under paragraph (1).

SEC. 103. FOREST NURSERY REVIVAL PROGRAM.

(a) In General.—Section 2 of the Act of June 9, 1930 (commonly known as the “Knutson-Vandenberg Act”) (16 U.S.C. 576a) is amended—

(1) by striking the section designation and all that follows through “the Secretary of Agriculture” and inserting the following:

“SEC. 2. FOREST NURSERY REVIVAL PROGRAM.

“(a) In General.—The Secretary of Agriculture shall use amounts made available under subsection (b)”; and

(2) by adding at the end the following:
“(b) Authorization of Appropriations.—There is authorized to be appropriated to the Secretary of Agriculture to carry out subsection (a) $10,000,000 for each of fiscal years 2021 through 2030.”.

(b) Report.—Not later than 3 years after the date of enactment of this Act, the Secretary shall submit to the Committee on Agriculture, Nutrition, and Forestry of the Senate and the Committee on Agriculture of the House of Representatives a report describing the shortcomings of, and barriers to, reforestation activities under section 2 of the Act of June 9, 1930 (commonly known as the “Knutson-Vandenberg Act”) (16 U.S.C. 576a).

SEC. 104. CARBON SEQUESTRATION THROUGH WETLAND AND GRASSLAND.

(a) In General.—The Administrator of the National Oceanic and Atmospheric Administration and the Secretary of the Interior, in consultation with the Secretary and the heads of other relevant agencies, are encouraged to identify and pursue opportunities for the restoration or conservation of grasslands, wetlands, and coastal blue carbon habitats of the United States that are owned or managed by the Federal Government, State or local governments, Indian Tribes, or private persons that will—
15

(1) increase the net carbon stock of the United
States, allowing the United States to reach the ob-
jectives established under section 101(a); and

(2) provide other environmental, cultural, and
economic benefits to the region in which the restora-
tion or conservation is carried out.

(b) BLUE CARBON MONITORING.—In carrying out
subsection (a), the Administrator of the National Oceanic
and Atmospheric Administration, in collaboration with the
Secretary of the Interior and the heads of other relevant
agencies, shall monitor the net carbon stock in blue carbon
habitats.

(c) GRASSLAND CARBON MONITORING.—In carrying
out subsection (a), the Secretary of the Interior, the Sec-
retary, and the heads of other relevant agencies shall col-
laborate to monitor the net carbon stock in grassland.

SEC. 105. CARBON SEQUESTRATION THROUGH THE
HEALTHY FOREST RESERVE PROGRAM.

(a) ESTABLISHMENT.—Section 501(a) of the Healthy
Forests Restoration Act of 2003 (16 U.S.C. 6571(a)) is
amended—

(1) in paragraph (3), by striking “and” at the
end;

(2) in paragraph (4), by striking the period at
the end and inserting “; and”; and
(3) by adding at the end the following:

“(5) to promote, in pursuit of the objectives for increasing net carbon stock established under section 101(a) of the Trillion Trees and Natural Carbon Storage Act—

“(A) first in priority, the conservation and management of existing forests; and

“(B) second in priority, the planting or regeneration of additional trees in an ecologically appropriate manner.”.

(b) Enrollment Priority.—Section 502(f) of the Healthy Forests Restoration Act of 2003 (16 U.S.C. 6572) is amended by striking paragraph (1) and inserting the following:

“(1) In general.—The Secretary of Agriculture shall give priority to the enrollment in the healthy forests reserve program of land that—

“(A) provides the greatest conservation benefit to—

“(i) species listed as endangered or threatened under section 4 of the Endangered Species Act of 1973 (16 U.S.C. 1533); and

“(ii) species that—
“(I) are not listed as endangered or threatened under section 4 of the Endangered Species Act of 1973 (16 U.S.C. 1533); but

“(II)(aa) are candidates for such listing, State-listed species, or special concern species; or

“(bb) are deemed a species of greatest conservation need under a State wildlife action plan;

“(B) promotes the restoration of marginal farmland or degraded forestland into healthy forest ecosystems; or

“(C) promotes the continuation of an ecologically appropriate ecosystem.”.

(e) RESTORATION PLANS.—Section 503(b) of the Healthy Forests Restoration Act of 2003 (16 U.S.C. 6573(b)) is amended by striking paragraph (4) and inserting the following:

“(4) Practices, including reforestation and other forestry practices, to increase net carbon stock (as defined in section 3 of the Trillion Trees and Natural Carbon Storage Act).”.
SEC. 106. NATIONAL FOREST FOUNDATION ACTIVITIES.

(a) PURPOSES OF FOUNDATION.—Section 402(b) of the National Forest Foundation Act (16 U.S.C. 583j(b)) is amended—

(1) in paragraph (2), by striking “and” at the end;

(2) in paragraph (3), by striking the period at the end and inserting a semicolon; and

(3) by adding at the end the following:

“(4) encourage, accept, and administer private gifts of money and of real and personal property for the benefit of, or in connection with, the objectives for optimizing total domestic carbon stocks established under section 101(a) of the Trillion Trees and Natural Carbon Storage Act; and

“(5) carry out the Theodore Roosevelt Jr. Prize for Forest Restoration under section 410.”.

(b) THEODORE ROOSEVELT JR. PRIZE FOR FOREST RESTORATION.—The National Forest Foundation Act (16 U.S.C. 583j et seq.) is amended—

(1) in section 405, by striking “410” both places it appears and inserting “411”;

(2) by redesignating section 410 as section 411; and

(3) by inserting after section 409 the following:
"SEC. 410. THEODORE ROOSEVELT JR. PRIZE FOR FOREST
RESTORATION.

“(a) DEFINITIONS.—In this section:

“(1) SECRETARY.—The term ‘Secretary’ means the Secretary of Agriculture.


“(b) ESTABLISHMENT.—The Foundation shall, in consultation with the Secretary, establish a program to award an incentive prize, to be known as the ‘Theodore Roosevelt Jr. Prize for Forest Restoration’, to support domestic reforestation activities carried out by individuals, communities, nonprofit organizations, and corporations.

“(c) ELIGIBLE RECIPIENTS.—The following entities are eligible to receive the Theodore Roosevelt Jr. Prize:

“(1) A State agency.

“(2) A nonprofit entity that the Secretary determines has a demonstrated expertise in tree planting activity and reforestation.

“(3) Other entities that the Secretary determines to be appropriate, such as a local government or a private owner of land covered by a forest management plan."
“(d) COORDINATION.—In carrying out this section, the Secretary may coordinate on an ongoing basis with appropriate Federal, State, Tribal, and local resource management departments, local nonprofit organizations, private landowners, and corporations—

“(1) to identify land suitable for reforestation;
“(2) to encourage, accept, and administer private gifts of money, technical expertise, and real and personal property for the benefit of the program under this section; and
“(3) to manage and maintain reforested land.”.

SEC. 107. CARBON SEQUESTRATION ON STATE AND PRIVATE LAND.

(a) ADDING NET CARBON STOCK AS A PURPOSE.—

Section 2(b) of the Cooperative Forestry Assistance Act of 1978 (16 U.S.C. 2101(b)) is amended—

(1) by redesignating paragraphs (6) through (10) as paragraphs (7) through (11), respectively; and

(2) by inserting after paragraph (5) the following:

“(6) the encouragement of reforestation, conservation, and related optimization of net carbon stock (as defined in section 3 of the Trillion Trees and Natural Carbon Storage Act and taking into
consideration the requirements described in section 101(b) of that Act;”.

(b) SUPPORT FOR STATE ASSESSMENTS AND STRATEGIES FOR FOREST RESOURCES WHEN CONSIDERING CARBON EMISSIONS.—Section 2A(a)(1) of the Cooperative Forestry Assistance Act of 1978 (16 U.S.C. 2101a(a)(1)) is amended—

(1) by redesignating subparagraphs (C) and (D) as subparagraphs (D) and (E), respectively; and

(2) by inserting after subparagraph (B) the following:

“(C)(i) the net carbon stock (as defined in section 3 of the Trillion Trees and Natural Carbon Storage Act and taking into consideration the requirements described in section 101(b) of that Act) on State land and private land in the State; and

“(ii) opportunities to increase that net carbon stock, taking into consideration the requirements described in section 101(b) of that Act;”.

(c) CARBON STORAGE THROUGH THE FOREST STEWARDSHIP PROGRAM.—Section 5(d)(1) of the Cooperative Forestry Assistance Act of 1978 (16 U.S.C. 2103a(d)(1)) is amended by inserting “carbon sequestration (as defined
in section 3 of the Trillion Trees and Natural Carbon Storage Act),” before “and the aesthetic”.

(d) **Carbon Storage Through the Community Forest and Open Space Conservation Program.**—

Section 7A(c)(1)(B)(ii) of the Cooperative Forestry Assistance Act of 1978 (16 U.S.C. 2103d(c)(1)(B)(ii)) is amended by inserting “, net carbon stock (as defined in section 3 of the Trillion Trees and Natural Carbon Storage Act and taking into consideration the requirements described in section 101(b) of that Act),” before “and wildlife”.

(e) **Carbon Storage Through the Promotion of Forest Health.**—Section 8(a) of the Cooperative Forestry Assistance Act of 1978 (16 U.S.C. 2104(a)) is amended—

(1) by redesignating paragraphs (4) through (6) as paragraphs (5) through (7), respectively; and

(2) by inserting after paragraph (3) the following:

“(4) protect or enhance net carbon stock (as defined in section 3 of the Trillion Trees and Natural Carbon Storage Act and taking into consideration the requirements described in section 101(b) of that Act) on healthy forestland;”.

(1) in subparagraph (C), by striking “and” at the end;

(2) in subparagraph (D), by inserting “and” at the end; and

(3) by adding at the end the following:

“(E) identifying opportunities to increase carbon stored through tree planting and scientific urban forestry management;”.

(g) Carbon Storage Through the State and Private Forest Landscape-Scale Restoration.—Section 13A of the Cooperative Forestry Assistance Act of 1978 (16 U.S.C. 2109a) is amended—

(1) in subsection (e)—

(A) in paragraph (6), by striking “and” at the end;

(B) by redesignating paragraph (7) as paragraph (8); and

(C) by inserting after paragraph (6) the following:

“(7) to improve the potential to increase the net carbon stock (as defined in section 3 of the Trillion
Trees and Natural Carbon Storage Act and taking
into consideration the requirements described in sec-
tion 101(b) of that Act of forest ecosystems
through methods that result in real, measurable, and
verifiable changes in that net carbon stock; and’’;
and
(2) in subsection (l), by striking paragraph (3)
and inserting the following:
“(3) Authorization of Appropriations.—
There is authorized to be appropriated to the Fund
$25,000,000 for the first full fiscal year after the
date of enactment of the Trillion Trees and Natural
Carbon Storage Act and each fiscal year thereafter
through fiscal year 2025, to remain available until
expended.”.

SEC. 108. CARBON SEQUESTRATION RESEARCH AND MONI-
TORING PROGRAMS.

(a) In General.—Section 3 of the Forest and
Rangeland Renewable Resources Research Act of 1978
(16 U.S.C. 1642) is amended—

(1) in subsection (a)—

(A) in the matter preceding paragraph (1),
in the second sentence, by striking “include,”
and all that follows through “subsection.” and
inserting “include the following 6 major areas of renewable resource research:”

(B) in paragraph (1), by inserting “further expanding the understanding of wood product carbon sequestration (as defined in section 3 of the Trillion Trees and Natural Carbon Storage Act), including by developing and improving carbon accounting strategies for specific, ecologically sound forest management practices;” before “and developing”; and

(C) by adding at the end the following:

“(6) Renewable resource assessment research shall include, as appropriate, research activities relating to the sequestration of carbon, including—

“(A) accounting strategies for specific, ecologically sound forest management practices in specific forest types;

“(B) increased carbon storage through reforestation, natural regeneration (as defined in section 3 of the Trillion Trees and Natural Carbon Storage Act) or conservation, and forest and rangeland management; and

“(C) the utilization of wood and other materials derived from forest and rangeland renewable resources to store carbon in building
materials and industrial or consumer products.”;

(2) in subsection (e)—

(A) in paragraph (1)—

(i) in the matter preceding subparagraph (A), by striking “United States” and all that follows through “referred to” and inserting “Chief of the Forest Service, shall carry out a program (referred to in this subsection”;

(ii) in subparagraph (G), by striking “and” at the end;

(iii) in subparagraph (H), by striking the period at the end and inserting a semicolon; and

(iv) by adding at the end the following:

“(I) accelerate and expand existing research efforts to improve forest carbon measurement and monitoring technologies—

“(i) to better predict changes in forest carbon due to a changing climate; and

“(ii) to reduce costs of participation, and increase participation, by private forest landowners in carbon markets; and
“(J) conduct a study to monitor impacts from carbon-enhancing activities.”; and

(B) in paragraph (4)—

(i) by striking subparagraphs (A) and (C);

(ii) by striking “the following reports:” and all that follows through “shall submit” in the matter preceding clause (i) of subparagraph (B) and inserting “, not later than January 15 of each year,”; and

(iii) by redesignating clauses (i) through (iv) as subparagraphs (A) through (D), respectively, and indenting appropriately; and

(3) in subsection (d)(2), by adding at the end the following:

“(F) Carbon sequestration (as defined in section 3 of the Trillion Trees and Natural Carbon Storage Act).”.

(b) TECHNICAL AMENDMENT.—Section 2(c) of the Forest and Rangeland Renewable Resources Research Act of 1978 (16 U.S.C. 1641(c)) is amended by inserting “of Agriculture (referred to in this Act as the ‘Secretary’)” after “‘Secretary’.”.
TITLE II—MARKET INCENTIVES FOR CARBON SEQUESTRATION

SEC. 201. CLARIFICATION OF RESEARCH AND DEVELOPMENT PROGRAM FOR CELLULOSIC BIOCHEMICAL AND BIOPLASTICS.

(a) Definitions.—In this section:

(1) Cellulosic biochemical product.—The term “cellulosic biochemical product” means any biochemical, including bioethanol and its derivatives, that is derived from wood or plant cellulose fiber.

(2) Cellulosic bioplastics product.—The term “cellulosic bioplastics product” means any bioplastic that is derived from wood or plant cellulose fiber.

(3) Institution of higher education.—The term “institution of higher education” has the meaning given the term in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001).

(4) Secretary.—The term “Secretary” means the Secretary, acting through the Research and Development deputy area and the State and Private Forestry deputy area of the Forest Service.

(b) Authorization.—The Secretary shall conduct performance-driven research and development and provide for education and technical assistance for the purpose of
facilitating the use of cellulosic biochemical and bioplastics products in the United States.

(c) ACTIVITIES.—In carrying out subsection (b), the Secretary shall, after collaboration with the wood products and chemical industries, conservation organizations, and institutions of higher education—

(1) conduct research and development, and provide for education and technical assistance, at the Forest Products Laboratory or through the State and Private Forestry deputy area that meets measurable performance goals for the achievement of the priorities described in paragraphs (1) through (4) of subsection (d); and

(2) make competitive grants to institutions of higher education for those institutions to conduct research and development, carry out educational programs, and provide technical assistance.

(d) PRIORITIES.—In awarding grants under subsection (c)(2), the Secretary shall give priority to applications from institutions of higher education proposing projects—

(1) to address ways to improve the commercialization of cellulosic biochemical products and biodegradable cellulosic bioplastics products that, based on the best available science and analyses conducted
using the lifecycle models developed under section 102(b), will allow for an increase in net carbon stock;

(2) to develop advanced biofuels (as defined in section 211(o)(1) of the Clean Air Act (42 U.S.C. 7545(o)(1))) that—

(A) are cellulosic biofuels suitable for use in aviation, shipping, and heavy-duty vehicles; and

(B) based on the best available science and analyses conducted using the lifecycle models developed under section 102(b), will allow for an increase in net carbon stock;

(3) for the conduct of applied research, including projects designed to bring products from benchtop to production scale; or

(4) to address one or more other research areas identified by the Secretary, in consultation with conservation organizations, institutions of higher education, and the wood products industry.

(e) TIMEFRAME.—To the maximum extent practicable, the measurable performance goals for the research and development, education, and technical assistance under subsection (b) shall be achievable within 5 years.
SEC. 202. RURAL FOREST MARKET INVESTMENT PROGRAM.

(a) DEFINITION OF RURAL.—In this section, the term “rural” has the meaning given the term in section 343 of the Consolidated Farm and Rural Development Act (7 U.S.C. 1991).

(b) ESTABLISHMENT OF PROGRAM.—

(1) IN GENERAL.—The Secretary shall establish a program, to be known as the “Rural Forest Market Investment Program”, to guarantee an environmental impact bond, loan, or other investment vehicle, as determined by the Secretary, issued for the sole purpose of financing eligible projects described in subsection (c), to enable rural private forest landowners to participate in an innovative market for forest carbon or other products.

(2) CONSIDERATION.—In establishing the program under paragraph (1), the Secretary may consider ways to ensure that the program minimizes, to the extent practicable, disruptions to traditional forest products markets.

(c) ELIGIBLE PROJECTS.—An eligible project referred to in subsection (b)(1) is a project developed by private entity, or a publicly supported, charitable nonprofit organization, engaged in the aggregation of sustainable forestry practices implemented by rural private forest landowners to facilitate the sale of credits in the voluntary
carbon market or other recognized environmental market,
using a methodology approved by a credible, third-party
entity, as determined by the Secretary.

(d) REQUIREMENTS.—A project described in sub-
section (c) that includes the practice of tree planting may
only be carried out, as determined by the Secretary—

(1) on land that was historically forested;

(2) using tree species that are native to the re-

region and at ecologically appropriate densities; and

(3) in a manner that does not create other neg-

ative impacts to biodiversity or the environment.

(e) GUARANTEE AMOUNT.—The Secretary may guar-
antee not more than $150,000,000 with respect to each
bond, loan, or other investment vehicle under subsection
(b)(1).

(f) REGULATIONS.—Not later than 30 days after the
date of enactment of this Act, the Secretary shall issue
regulations to implement the program established under
subsection (b)(1).

(g) TERMINATION OF AUTHORITY.—The authority
provided by this section terminates on September 30,
2023.
TITLE III—ENGAGING AMERICA'S ALLIES IN CONSERVATION AND STRONGER LAND MANAGEMENT

SEC. 301. STATEMENT OF POLICY.

It shall be the policy of the United States to—

(1) lead the world in creating incentives and investments to protect intact forests, reduce deforestation and support tree planting and forest landscape restoration, conservation, and sustainable management in support of the goal to plant and conserve one trillion trees globally;

(2) support carbon sequestration through sustainable management and restoration of coastal and inland aquatic ecosystems, including wetlands and blue carbon habitats; and

(3) utilize the vast natural assets and technical expertise of the United States to assist with sustainable management and utilization, conservation, and restoration of forests, grasslands, wetlands, blue carbon habitats, and agricultural lands for sequestering carbon globally.

SEC. 302. INTERNATIONAL SUPPORT FOR CONSERVATION.

(a) IN GENERAL.—The Secretary of State (referred to in this title as the “Secretary”), in coordination with
the Administrator, the Secretary of Agriculture, the Admin-
istrator of the National Oceanic and Atmospheric Ad-
ministration, the Director of the United States Fish and
Wildlife Service, the Secretary of the Treasury, and the
heads of other relevant agencies and international organi-
zations, shall prioritize programs to support forest land-
scape restoration, end deforestation, and conserve and re-
store grasslands, wetlands, and blue carbon habitats at
landscape scale, including incorporating these activities
into other programs or forms of assistance.

(b) Prioritization and Types of Assistance.—
In providing the support outlined in subsection (a), the
Secretary, in coordination with the Administrator, the
Secretary of Agriculture, the Administrator of the Na-
tional Oceanic and Atmospheric Administration, and the
Director of the United States Fish and Wildlife Service,
shall—

(1) prioritize partnerships with developing coun-
tries and regions that have experienced significant
levels of deforestation, grassland conversion, wetland
loss, or blue carbon habitat degradation or whose
biodiversity, local economy, and stability has been or
could be significantly impacted by loss of forest and
tree cover, grasslands, wetlands, or blue carbon habi-
tat;
(2) prioritize partnerships that have been determined by agencies and partners with relevant expertise to sequester or have the potential to sequester significant amounts of atmospheric carbon and that will provide other benefits to the region, as determined by the Secretary;

(3) encourage countries receiving relevant aid, as determined by the Secretary, to report transparently information about this aid, including local ownership and benefit sharing of programs;

(4) encourage countries receiving relevant aid, as determined by the Secretary, to adopt legislation or other measures domestically to protect, restore, and sustainably manage forests (both existing and newly planted), grasslands, wetlands, blue carbon habitats, and other ecologically-important lands and waters; and

(5) take a leadership role in ending deforestation and habitat conversion and encouraging the sustainable management, conservation, and restoration of forests, grasslands, wetlands, blue carbon habitats, and other lands and waters at landscape scale.

(c) COORDINATION.—In carrying out the programs authorized by this section, the Secretary and the Adminis-
trator shall, to the maximum extent practicable, make use of public-private partnerships to facilitate engagement by nonprofit organizations and industry partners.

SEC. 303. ESTABLISHMENT OF FOUNDATION.

(a) ESTABLISHMENT OF FOUNDATION.—The Secretary may enter into an agreement, or expand on existing partnerships, with a nonprofit organization to establish an “International Forest Foundation” (in this section referred to as the “Foundation”), which shall not be an agency or instrumentality of the United States Government.

(b) PURPOSES OF FOUNDATION.—The purposes of the Foundation shall be to—

(1) encourage, accept, and administer private gifts of money and of real and personal property for the benefit of, or in connection with, the activities and services carried out by the United States to support forest landscape restoration, end deforestation, and conserve and restore grasslands, wetlands, and blue carbon habitats around the world;

(2) use private funds to support, undertake, and conduct activities that further the goals set forth in section 301; and

(3) undertake, conduct, and encourage educational, technical, and other assistance, and other
activities, that support international goals to increase global carbon sequestration and ecosystem health through the conservation and restoration of healthy forests, grasslands, wetlands, blue carbon habitats, and sustainably managed agricultural land.

(c) Transfer of Funds; Liability.—

(1) Transfer of Funds.—The Secretary may authorize, pursuant to an agreement entered into in accordance with section 302(c), the transfer of funds of the United States to a nonprofit organization for the purpose of offsetting any administrative costs of the Foundation.

(2) Liability.—The United States shall not be liable for any debts, defaults, acts, or omissions of the Foundation. The full faith and credit of the United States shall not extend to any obligations of the Foundation.


(a) In General.—The Secretary, in coordination with the Administrator, the Secretary of Agriculture, the heads of other relevant Federal agencies, and international organizations, shall encourage countries receiving funding or other forms of assistance related to agriculture that is funded or partially funded by the United States to
produce, make publicly available, and adhere to detailed land-use management plans that identify and preserve areas important to ecosystem health and carbon sequestration and prioritize landscape restoration.

(b) **LAND-USE MANAGEMENT PLAN CRITERIA.**—The Secretary shall work with the Administrator, the Secretary of Agriculture, the heads of other relevant Federal agencies, international and nongovernmental organizations, and other relevant experts to work with recipient countries to develop and make publicly available, not later than one year after the date of the enactment of this Act, science-based criteria for land-use management plans that support conservation of critical ecosystems, which may take material or ideas from existing land-use management criteria. The criteria shall prioritize—

(1) identifying and preserving areas important to ecosystem health and carbon sequestration;

(2) conserving critical habitat and other significant areas;

(3) prioritizing conservation and preservation where possible;

(4) restoring forests, grasslands, wetlands, blue carbon habitats, and other lands and waters important for carbon sequestration and ecosystem health; and
(5) stakeholder engagement with local communities, including indigenous communities and marginalized groups, including women.

(c) IDENTIFICATION OF COUNTRIES.—The Secretary shall work with the Administrator, the Secretary of Agriculture, the heads of other relevant United States agencies, international organizations, and other relevant experts to identify and publish on a preexisting website the countries receiving direct funding or benefits derived from United States international aid related to agricultural development, agricultural education, or agricultural trade.

(d) ENCOURAGING USE OF LAND-USE MANAGEMENT PLANS.—The Secretary, in coordination with the Administrator, the Secretary of Agriculture, and the heads of other relevant agencies shall—

(1) encourage identified countries to develop and publish on a preexisting website land-use management plans, or to improve existing land-use management plans, following criteria that include clear annual objectives for achieving the priorities set forth in subsection (b);

(2) consider the progress that countries have made in developing conservation and land-use management plans and the progress these countries have
made in adhering to these plans when determining future aid related to agricultural development;

(3) encourage international organizations that the United States supports and other governments with which it cooperates to support land-use management plans and planning; and

(4) integrate United States financial assistance and support for such plans with the assistance of others to the extent doing so advances their effectiveness.

SEC. 305. BLUE CARBON MONITORING.

The Administrator of the National Oceanic and Atmospheric Administration shall—

(1) collaborate with and provide technical assistance to the Secretary and the Administrator in order to implement best practices for monitoring blue carbon inventory in programs and projects established under this title; and

(2) work in collaboration with the Smithsonian Environmental Research Center to develop a global blue carbon database and ensure data collection and reporting are consistent with the Center’s Coastal Carbon Data Clearinghouse.
SEC. 306. REPORT TO CONGRESS.

Not later than 2 years after the date of the enactment of this Act, and annually thereafter, the Secretary, in consultation with the Administrator, the Secretary of Agriculture, the Administrator of the National Oceanic and Atmospheric Administration, the Director of the United States Fish and Wildlife Service, and the heads of other relevant United States agencies, shall submit a report to Congress that—

(1) outlines funding, activities, and other support provided to advance the priorities outlined in sections 302, 303, 304, and 305 on a country-by-country basis, including work to develop land-use management plan criteria and efforts to encourage identified countries to develop and adhere to land-use management plans consistent with the developed criteria; and

(2) makes use of modern satellite imagery techniques to monitor grassland, forest, and tree canopy cover and track the effectiveness of the programs of the United States Government and its partners.

SEC. 307. INTERNATIONAL FORESTRY COOPERATION.

Section 602(b)(1) of the International Forestry Cooperation Act of 1990 (16 U.S.C. 4501(b)(1)) is amended—
(1) in subparagraph (G), by striking “and” at the end;

(2) in subparagraph (H), by inserting “and” at the end; and

(3) by adding at the end the following new sub-
paragraph:

“(I) carbon sequestration (as de-
defined in section 3 of the Trillion Trees and Natural Carbon Storage Act) activities, including forest land-

scape restoration (as defined in that section) programs, conducted in an ecologically appropriate manner;”.

SEC. 308. MODIFICATIONS TO AUTHORITIES RELATING TO TROPICAL FORESTS.

Section 118 of the Foreign Assistance Act of 1961 (22 U.S.C. 2151p–1) is amended—

(1) in subsection (a)(2), by inserting “, and an increase in global carbon sequestration” before the period at the end;

(2) in subsection (c)—

(A) in paragraph (1), by inserting “, rest-

oration,” after “conservation”;
(B) in paragraph (2)(A), by inserting “and impact on global carbon emissions” after “irreversible losses”;

(C) in paragraph (6), by inserting “(including partnerships to increase and retain carbon sequestration, as defined in section 3 of the Trillion Trees and Natural Carbon Storage Act)” after “sustainable forestry projects and practices”; and

(D) in paragraph (8), by inserting “increase carbon sequestration (as defined in section 3 of the Trillion Trees and Natural Carbon Storage Act) and,” after “other activities to”; and

(3) in subsection (f), by inserting “and a study on the total carbon sequestered through increases in and retention of tropical forest stocks globally as a result of programs, projects, and activities carried out under this section” before the period at the end.