

STAFF SUMMARY OF OCEAN CLIMATE SOLUTIONS ACT  
DISCUSSION DRAFT

The Ocean Climate Solutions Act was introduced on October 20, 2020 and is based on a discussion draft released on July 28. As of the briefing book deadline, the bill number and cosponsors were unavailable. Raúl Grijalva, Chair of the House Committee on Natural Resources, noted in a hearing on October 20 that the bill will continue to be shaped in the next Congressional session.

The bill incorporates many separate (and often bipartisan) bills that were introduced during the 116<sup>th</sup> Congress. The sponsors of these bills are familiar to the Council – Roger Wicker, Jared Huffman, Lisa Murkowski, Suzanne Bonamici, Don Young, Marco Rubio, and more. The sources of these sections are noted below when possible.

Please note that this is an exceptionally detailed bill. See the bill text for the specifics associated with each section. “Administrator” refers to the Secretary of Commerce working through NOAA.

**Title I: BLUE CARBON.** This section comes from H.R. 5589 (Bonamici, D-OR) and S. 3939 (Murkowski, R-AK). “Coastal blue carbon ecosystems” are defined as vegetated coastal habitats including mangroves, tidal marshes, kelp forests, and other tidal or saltwater wetlands that have the capacity to sequester atmospheric carbon.

Sec. 101. **Calls for the creation of a Blue Carbon program within NOAA** to further conservation objectives for fish and wildlife habitat conservation, restoration, and coastal resilience, including finding ways to incorporate ecosystem services from carbon storage into existing policies. Calls for collaboration among Federal and state agencies, tribes, and nongovernmental agencies. Would develop a database of blue carbon stocks, explore the potential for a market for carbon credits for restoration initiatives, raise awareness of blue carbon, and protect and restore habitats that are carbon sinks or that will be subject to habitat change as a result of climate change, and more.

Sec. 102. **Calls for creation of a map and inventory** of blue carbon ecosystems.

Sec. 103. **Requires a biennial report** on blue carbon in the U.S.

Sec. 104. **Creates a blue carbon partnership grant program.**

Sec. 105. **Calls for pilot programs to restore degraded blue carbon ecosystems.**

Sec. 106. **Establishes an interagency working group** on blue carbon. Details membership and responsibilities.

Sec. 107. **Requires the designation of “coastal carbon areas of significance.”**

Sec. 108. **Authorizes Smithsonian Institution activities** related to blue carbon.

Sec. 109. **Authorizes appropriations.**

Sec. 110. **Definitions.**

**Title II: MARINE PROTECTED AREAS.** This section is similar to California Governor Newsom’s Executive Order N-82-20 (C.4, Att. 4) that strives to conserve at least 30 percent of California’s land and coastal waters by 2030 (“30x30”).

- Sec. 201 **States that “it is the policy of the United States 1) to prohibit any commercial extractive or destructive human activity and minimize the impact from human activity on 30 percent of the ocean” under U.S. jurisdiction by 2030;** and 2) “to support the adoption of a global goal to protection [sic] 30 percent of land and ocean areas by 2030 under the Convention on Biological Diversity.” Defines important areas to be protected (pristine areas, areas that represent biodiversity, critical breeding and feeding habitats, interconnected networks, wildlife migration corridors, and areas that will help mitigate climate change impacts). Details the considerations for carrying out this policy.
- Sec. 202. **Establishes a “30x30 Interagency Task Force”** including representatives from the Council on Environmental Quality, Commerce, Interior, Defense, Dept. of State, Dept. of Energy, Homeland Security, and Office of Science and Technology Policy. This Task Force is charged with developing a plan (within one year) consistent with the policies in Sec. 201, including updating the Marine Protected Area Inventory and identifying candidate areas for protection. The Task Force shall conduct an inventory of areas under U.S. jurisdiction that are subject to both a prohibition on all bottom-tending fishing gear and a prohibition on all fishing gear with bycatch rates that adversely affect marine wildlife populations, and identify additional prohibitions on nonfishing commercial activities in those areas. Requires an annual report and agency plans that are subject to public comment and carried out in consultation with the Regional Fishery Management Councils.
- Sec. 203. **Commerce shall begin designating the areas identified in NOAA’s Inventory of Successful Nomination as a national marine sanctuary** within 180 days of enactment. On the west coast, this includes the Chumash Heritage site off Morro Bay and San Luis Obispo.
- Sec. 204. **Secretary of Commerce must designate as a Deep Sea Coral Marine Conservation Area any area in the EEZ or on the Outer Continental Shelf** where a Council has prohibited the use of bottom-contact gear, trawls, hydraulic dredges, or seines (except for purse-seine). The following activities would be prohibited in these areas: oil exploration or production, poisons and explosives used to harvest marine resources; introduction of non-native species; anchoring on living or dead coral; drilling or altering the sea floor; use of bottom trawl nets or other bottom-tending fishing gear; and deliberate dumping of noxious substances. Exceptions are allowed for scientific activities, emergencies, lawful military activities. Every two years, the Administrator (NOAA) shall provide recommendations to the Councils regarding whether additional areas should be protected from certain fishing gear.
- Sec. 205. **Marine biodiversity gap analysis.** Requires a Commerce/Interior/agency report that assesses types of habitats, species, and ecosystems are necessary to protect in order to protect biodiversity and mitigate and provide resilience to the impacts of climate change. Biennially, Commerce and Interior shall publish a report on candidate areas for protection and progress for advancing protection. Authorizes appropriations to achieve this goal.

**Title III: OFFSHORE ENERGY.** This section reflects several introduced bills to limit offshore oil and gas exploration and leasing.

*Subtitle A: Oil and Gas Leasing in the Outer Continental Shelf*

Sec. 301. **Prohibits oil and gas leasing in all areas of the Outer Continental Shelf**, unless the lease was issued before enactment of the Act.

*Subtitle B: Offshore Renewable Energy*

Sec. 311. **States that it is the “sense of Congress” that the U.S. should rapidly build out its offshore wind resources** as a key part of achieving net zero emissions, and that offshore wind leases should be determined through a robust stakeholder process.

Sec. 312. **Calls for Interior to permit “not less than 12.5 gigawatts” of offshore wind energy** on the Outer Continental Shelf by 2025, and not less than 25 gigawatts by 2030. Requires a report to Congress on progress.

Sec. 313. **Amends the MSA to ease data sharing** related to offshore wind projects.

Sec. 314. **Increases funding for cooperative research** on the interactions between wind development, fisheries, protected species, and other topics.

Sec. 315. **Allows Interior to accept public and private funds** for use by the Bureau of Ocean Energy Management to conduct work on offshore wind development.

Sec. 316. **Calls for National Academies to report on research and best practices** for offshore wind development and wildlife management.

Sec. 317. **Relates to the application of the Outer Continental Shelf Lands Act to Territories.**

Sec. 318. **Amends the Energy Independence and Security Act of 2007.** Adds definitions, calls for increased research and development of marine energy technology, authorizes marine energy grants, authorizes appropriations.

Sec. 319. **Requires 30 percent of lease revenue to be deposited in the National Oceans and Coastal Security Fund** for coastal conservation and resilience.

#### **TITLE IV: CLIMATE-READY FISHERIES, EFFICIENT FISHERY VESSELS, AND BUY AMERICAN SEAFOOD**

Sec. 401. **A “Sense of Congress” statement on the importance and sustainability of American-caught seafood**, the fact that it has a low carbon footprint, and that any executive agency that purchases seafood products should buy local American-caught or harvested seafood in order to reduce the greenhouse gas emissions associated with the supply chain of seafood products.

Sec. 402. **Allows grants for research on seafood harvesting and processing, marketing, and promotion.**

Sec. 403. **Amends the Bipartisan Congressional Trade Priorities and Accountability Act of 2015 to prohibit subsidies** that contribute to overcapacity, overfishing, or IUU fishing.

Sec. 404. **Calls for an increase in fuel efficiency for fishing vessels.**

Sec. 405. **Amends the MSA to establish a Climate and Fisheries Research and Management Program** with the consultation of the Councils. The program shall “identify, develop, and implement adaptive strategies... to improve the management of fisheries under... climate change.” The Secretary shall:

- 1) expand and improve fisheries science, monitoring, and data collection to support integrated, climate-informed fishery management
- 2) prepare fishery management for climate change by promoting a precautionary approach to management, supporting the use of relevant science and management tools (including forecasting, scenario planning, management strategy evaluations, and other methods);
- 3) improve agency understanding of stock shifts
- 4) promote the use of climate-informed stock assessments
- 5) provide guidance on the use of climate-responsive control rules
- 6) promote management that increases resilience, including programs to protect genetic diversity and age structure, protect marine habitat, minimize bycatch, and incorporate the ecological role of forage fish into the marine food web
- 7) increase understanding of the socioeconomic impacts of climate change on fishing participants and related industries
- 8) coordinate with NOAA on related issues
- 9) ensure that racial and socioeconomic equity is considered with respect to outcomes
- 10) promote the incorporation of climate change into fisheries management at regional fishery management organizations and other international bodies
- 11) advance other climate change fishery science and management as appropriate.

Calls for the Secretary, in consultation with the Councils, to do an independent review every three years on steps taken to meet these goals.

Sec. 406. **Establishes a Climate-Ready Fisheries Program**, including grants, to develop tools and approaches to increase the capacity of fishery management to adapt to climate change. Calls for Administrator to:

- 1) Develop science and management approaches that address regional and national management priorities under current and anticipated climate impacts
- 2) Provide for routine consultation with fishery managers and scientists
- 3) Promote adoption of measures developed under the program in Council FMPs
- 4) Provide information and outreach to the private sector to encourage development of tools and approaches to manage the effects of climate change in fisheries
- 5) Provide information and outreach to fishery participants to increase understanding and encourage adoption of these tools and approaches.

The Administrator shall coordinate with NMFS regional offices and science centers, Councils, SSCs, and other relevant programs. This includes establishing multi-year research priorities and transmitting regular reports to Congress.

Sec. 407. **Establishes a Shifting Stocks Task Force** (including one member recommended by each Council and Highly Migratory Species Advisory Panel, and one appointed by the Secretary). Within one year after enactment, the Task Force shall:

- 1) develop (with NOAA and the Councils) science-based decision-making criteria to make management decisions that minimize the risk of overfishing and maximize stock and ecosystem resilience to the effects of climate change, consistent with the MSA and other applicable law.
- 2) Make recommendations to NOAA and the Councils for the allocation and distribution of fishing privileges based on the criteria developed under 1).

Any member of the public may submit a petition to review a potentially shifting stock. The Task Force would then (if the petition is approved) review its jurisdiction and allocation concerns for the stock, conduct a public hearing, and submit recommendations to the relevant Council on allocation and fishing privileges. At that point, NOAA shall work with the Councils regarding changes to relevant FMPs. Within 180 days after the receipt of the recommendation, NOAA shall ensure publication of a compliant FMP.

Sec. 408. **Amends the MSA's essential fish habitat provisions**, adding a requirement that no Federal agency could take, fund, or authorize an action that would have an adverse effect on EFH, unless a consultation with the Secretary determined that the action was being undertaken in a manner designed to mitigate its effects on EFH. In addition, no Federal agency could take, fund, or authorize an action that would adversely affect a HAPC. Councils must be informed of such consultations and may comment as currently directed under the MSA. Federal, state and local agencies must respond to Councils in detail regarding actions taken to meet recommendations. Secretary must recommend avoidance/mitigation measures when state and Federal actions may have an adverse effect on EFH.

Sec. 409. **Establishes an Ocean Aquaculture Research and Policy Program** to address opportunities, challenges, innovation, etc. in regard to restorative ocean aquaculture development, siting, and operations in coastal waters and the EEZ. Includes investments in research, best management practices, use of existing programs, reports, etc.

## **Title V: COASTAL BARRIER RESOURCE ACT AMENDMENTS**

Sections 501-502 amend the Coastal Barrier Resources Act in relation to sand mining, coastal barriers and coastal hazard projects (not applicable to West Coast).

Sec. 503. Calls for the Secretary to submit a report to Congress on expanding the Coastal Barrier Resource Act to the Pacific Coast and Pacific territories.

Sec. 504. Requires disclosure to prospective buyers that a property is in the Coastal Barrier Resources System.

Sec. 505. Improves Federal compliance with the Coastal Barriers Resources Act.

Sec. 506. Relates to excess Federal property.

Sec. 507. Authorizes appropriations.

**Title VI: COASTAL ZONE MANAGEMENT ACT AMENDMENTS (H. Res. 748, Morelle (D-NY))**

- Sec. 601. **Authorizes grants for achievement of tribal coastal zone objectives.**
- Sec. 602. **Includes Washington, D.C. under the Coastal Zone Management Act.**
- Sec. 603. **Creates a Coastal and Estuarine Land Conservation Program** to protect important coastal and estuarine areas that are of significant value or that are threatened.
- Sec. 604. **Establishes a Coastal Zone Management Fund** to provide grants to coastal states and tribes to respond to severe coastal hazards and flood events. Provides detail on types of grants, eligibility, etc.
- Sec. 605. **Authorizes appropriations.**
- Sec. 606. **Amends the National Estuarine Research Reserve System Program.** Designates “not less than five new national estuarine reserves” within five years. Amends the Coastal Zone Management Act to require establishment of a long-term data monitoring program to track the impacts of climate change on estuaries, lakes, and sea levels. Promotes other estuarine research.

**Title VII: INSULAR AFFAIRS**

This section relates to coastal management, climate change research, coral reefs, mapping, and other activities in U.S. territories and freely associated states.

**Title VIII: STRENGTHENING MARINE MAMMAL CONSERVATION**

- Sec. 801. **Amends the Marine Mammal Protection Act to require Climate Impact Management Plans** for species at risk from climate change, and strategies to mitigate risks. Establishes a monitoring program.
- Sec. 802. **Vessel speed restrictions in marine mammal habitat.** Authorizes Administration, working with Coast Guard, to designate areas of importance to marine mammals and sea turtles where there will be a vessel speed limit of 10 knots or less for all vessels that are 49 feet long or longer. Provides certain exemptions for safety, etc. Requires automatic identification systems for “self-propelled commercial vessels over 49 feet overall in length,” certain vessels carrying passengers; towing vessels over 26 feet in length, and other vessels the Secretary deems eligible. Includes penalties.
- Sec. 803. **Monitoring ocean noise for marine mammal health.** Calls for Administrator to maintain and expand an Ocean Noise Reference Station Network to provide grants to expand observation systems that measure ocean noise. Authorizes appropriations.
- Sec. 804. **Grants for seaports to establish programs to reduce the impacts of vessel traffic and port operations on marine mammals.**

**TITLE IX: INTERNATIONAL AGREEMENTS, EFFORTS IN THE ARCTIC, AND BUREAU OF INDIAN AFFAIRS TRIBAL RESILIENCE PROGRAM**

- Sec. 901. States that it is the sense of the House of Representatives that the Senate should give its advice and consent to the ratification of the United Nations Convention on the **Law of the Sea.**

*Subtitle B: Efforts in the Arctic*

- Sec. 911. **Reinstates Executive Order 13754** (Northern Bering Sea Climate Resilience Area).
- Sec. 912. **Finds that black carbon is a highly potent greenhouse gas** that is likely responsible for about a quarter of Arctic warming. Requires State Dept., EPA, NOAA, and Transportation to develop a plan for the U.S. to cut black carbon emissions by 25-33% below 2013 levels by 2025.

*Subtitle C: Bureau of Indian Affairs Tribal Resilience Program*

- Sec. 921. **Establishes a Bureau of Indian Affairs Tribal Resilience Program** to improve tribes' resilience to climate change, support Native American leaders in building strong, resilient communities, ensure trust responsibilities are fulfilled, and ensure the development of modern, cost-effective infrastructure. Establishes a related grant program.

**Title X: COASTAL RESILIENCY AND ADAPTATION** (S. 1730, Living Shorelines Act, Harris (D-CA); H.R. 3115, Pallone (D-NJ))

- Sec. 1001. **Establishes a Living Shoreline Grant Program** to implement small- and large-scale climate-resilient living shoreline projects. Details eligibility, etc.
- Sec. 1002. **Coastal science and assessment: competitive external research.** Calls for NOAA to carry out an extramural competitively awarded grants program focused on interdisciplinary coastal resilience and sustainability.
- Sec. 1003. **Establishes a grant program to conduct research on conservation, restoration, and management of oysters** in estuarine ecosystems. Details eligibility, etc.
- Sec. 1004. **Refines definitions in the National Oceans and Coastal Security Act.** Adds definition of blue carbon. Establishes a fund to carry out the goals of the Act. Details eligibility, etc.
- Sec. 1005. **Shovel-ready restoration grants for coastlines and fisheries.** Establishes a grant program to carry out certain habitat restoration projects, particularly those that can stimulate the economy, are "shovel-ready," and that can employ fishermen who have been negatively impacted by COVID-19 or whose vessel can be leased for the project. Details eligibility, etc.
- Sec. 1006. **Establishes a Strategic Climate Change Relocation Initiative and Program** to coordinate Federal agency activities to assist communities that are interested in relocating due to climate change impacts such as floods and wildfires.

**Title XI: OCEAN HEALTH: OCEAN ACIDIFICATION AND HARMFUL ALGAL BLOOMS**

*Subtitle A: Coastal Communities Ocean Acidification Act.* (H.R. 1716, Pingree (D-ME) and S. 778, Murkowski (R-AK)).

- Sec. 1101. **Defines** states and the United States (in terms of territories).

Sec. 1102. **Amends the Federal Ocean Acidification Research and Monitoring Act** of 2009 to require OA coastal community vulnerability assessments every seven years. Describes contents of such reports.

*Subtitle B: Ocean Acidification Act* (H.R. 1921, Ocean Acidification Innovation Act, Kilmer (D-WA))

Sec. 1111. **Allows a prize program related to OA resilience** innovation, management, research and monitoring.

*Subtitle C: COAST Research Act* (H.R. 1237, Bonamici (D-OR))

Sec. 1121. **Makes minor amendments** to the Federal Ocean Acidification Research and Monitoring Act (FOARMA) of 2009.

Sec. 1122. **Definitions.**

Sec. 1123. **Amends FOARMA** in regard to the function and membership of the Joint Subcommittee on Ocean Science and Technology of the National Science and Technology Council. Establishes an Ocean Acidification Advisory Board. Describes its duties and membership.

Sec. 1124. **Makes additional amendments** to FOARMA.

Sec. 1125. **NOAA OA activities:** amends FOARMA in regard to NOAA's OA research and monitoring activities and responsibilities.

Sec. 1126. **National Science Foundation OA activities:** amends FOARMA in regard to the NSF's OA research and monitoring grants.

Sec. 1127. **NASA OA Activities.** Amends FOARMA in regard to the NASA's OA data collection.

Sec. 1128. **Authorizes appropriations.**

*Subtitle D: South Florida Clean Coastal Waters* (S. 10, Rubio (R-FL) and H.R. 335, Mast (R-FL))

Sec. 1131. Relates to the South Florida Harmful Algal Blooms and Hypoxia Assessment and Action Plan.

*Subtitle E: Protecting Local Communities from Harmful Algal Blooms* (H.R. 414, Rooney (R-FL))

Sec. 1141. Amends the Stafford Disaster Relief and Emergency Assistance Act by including algal blooms as a disaster.

*Subtitle F: Harmful Algal Bloom Essential Forecasting* (H.R. 3297, Rooney (R-FL))

Sec. 1151. **Designates certain harmful algal bloom services as excepted services** under the Anti-Deficiency Act.

Sec. 1152. **Designates organizations as Centers for Excellence in Harmful Algal Bloom Research,** prevention, response, and mitigation.



## **Title XII: NATIONAL OCEAN POLICY, DATA, AND COORDINATED WEBSITE FOR GRANT PROGRAMS**

*Subtitle A: Regional Ocean Partnerships (S. 2166, Wicker (R-MS) and H.R. 5390, Crist (D-FL))*

- Sec. 1201. **Findings regarding the importance of partnerships** to protecting ocean and coastal waters. “Sense of Congress” statement that these partnerships should be supported. Authorizes Regional Ocean Partnerships as intergovernmental coordinators.
- Sec. 1202. **Defines Regional Ocean Partnerships.** The West Coast Ocean Alliance is designated as a Regional Ocean Partnership. Discusses governance, function, ability to provide grants, purposes, reports, funding.

*Subtitle B: Data and Scientific Coordination (H.R. 3548, Bonamici (D-OR))*

- Sec. 1211. **Calls for increased coordination among agencies with respect to data and monitoring.** Directs Interagency Ocean Observation Committee, Federal Geographic Data Committee, Interagency Committee on Ocean and Coastal Mapping.
- Sec. 1212. **Establishes Interagency Ocean Exploration Committee** to cultivate public-private partnerships, coordinate existing innovative technologies to promote ocean mapping and science.
- Sec. 1213. **Establishes Committee on Ocean Policy** to succeed the Ocean Policy Committee established under the Obama Administration and carry out the same activities.
- Sec. 1214. **Building data sources:** The Administrator shall establish opportunities to engage indigenous, subsistence, and fishing communities to understand their needs and provide improved products and services, including collecting and integrating traditional ecological knowledge and narrative records into national datasets. Requires a report to Congress within one year. Includes opportunities for partnership, such as providing fishermen with sensors that can collect data through fishing gear.
- Sec. 1215. **National sea level rise risk analysis.** Establishes a National Coastal Data Information System to combine existing data, develop and strengthen partnerships, produce new data products, etc. Requires report to Congress.

*Subtitle C: Digital Coast (S. 1069, Baldwin (D-WI) and H.R. 2189, Ruppersberger (D-MD))*

- Sec. 1221. **Definitions.**
- Sec. 1222. **Establishes a program (the Digital Coast) that integrates geospatial data,** decision support tools, training, best practices, etc. to address coastal management issues and needs.

*Subtitle D: Integrated Coastal and Ocean Observation System (H.R. 1314, Young (R-AK))*

- Sec. 1241. **Calls for staggered terms** for the National Integrated Coastal and Ocean Observation System Advisory Committee.
- Sec. 1242. **Relates to cooperative agreements.**
- Sec. 1243. **Reauthorizes Coastal and Ocean Observation System Act** of 2009.

Sec. 1244. **Calls for NOAA and the National Academy of Sciences to consider establishing an Advanced Research Projects Agency-Oceans (ARPA-O) program** to help overcome barriers in the development of ocean technologies.

*Subtitle E: Centralized Website for Resiliency Grants*

Sec. 1251. **Calls for NOAA to maintain a publicly available website that includes links to all NOAA grants** to assist states and communities with resiliency, adaptation, and mitigation of climate change and sea level rise.

**Title XIII: WETLANDS**

*Subtitle A: Coastal Wetlands*

Sec. 1301. **Definitions.**

Sec. 1302. **Establishes a Coastal and Estuary Resilience Grant Program** to fund wetland restoration projects.

Sec. 1303. **Requires NOAA to maintain a coastal wetland restoration database** to collection information about projects that receive grants under the program above.

Sec. 1304. **Requires NOAA to create a technical assistance program** to help entities outside of NOAA in their coastal wetland restoration project work.

Sec. 1305. **Calls for NOAA to award grants to conduct coastal wetland restoration on 1.5 million acres over 10 years.**

Sec. 1306. **Relates to contractor wages.**

Sec. 1307. **Call for Interior to conduct coastal wetland restoration** on its lands and National Park lands in order to sequester carbon dioxide, halt ongoing carbon dioxide and methane emissions, etc.

**Title XIV: MEASURES TO ADDRESS GREENHOUSE GAS POLLUTION FROM SHIPPING VESSELS**

**Sec. 1401. Greenhouse gas emissions from shipping.** Requires monitoring, reporting, and verification of greenhouse gas emissions for vessels of 5,000 gross tons or more calling at, leaving, or transiting between U.S. ports, regardless of flag.

**Sec. 1402. Quiet Seas and Clear Skies Vessel Speed Reduction Award Program.** Establishes a Safer Seas and Skies Program to reduce air pollution, harmful underwater acoustic impacts, and the risk of fatal marine mammal and sea turtle strikes by encouraging voluntary reduction in the speed of eligible vessels operating within National Marine Sanctuaries. Awards “Excellence Awards” for compliance.

**Title XV: STUDIES**

Sec. 1501. Calls for NOAA/National Academies study of **greenhouse gas emissions from deep sea mining.**

Sec. 1502. Calls for National Academies assessment of **oceanic blue carbon.**

Sec. 1503. Calls for NOAA report on **impacts of climate change on the ocean and coastal ecosystems**, and steps the U.S. is taking to minimize them.

- Sec. 1504. Calls for NOAA and State Dept. to report on the **ecological and economic effects of high seas fishing in the ocean areas beyond national jurisdiction.**
- Sec. 1505. Calls for National Academies assessment of **public access to the coasts.**
- Sec. 1506. Calls for National Academies study of **impacts of ocean acidification and other environmental stressors on estuarine environments.**