

Greenhouse Gas Sequestration Task Force

MINUTES

Wednesday, August 18, 2021

1:30 PM

Zoom Virtual Meeting Room

ATTENDANCE

Members Present (15):

1. Mary Alice Evans, Director, Office of Planning and Sustainable Development as Chair of the Greenhouse Gas Sequestration Task Force
2. Earl Yamamoto, Department of Agriculture on behalf of the Chair, Board of Agriculture
3. Christian Giardina, U.S. Forest Service on behalf of the Chair, Board of Land and Natural Resources
4. Pradip Pant, Statewide Transportation Planning Office on behalf of the Director, Department of Transportation
5. Michael Madsen, DOH Clean Air Branch on behalf of Deputy Director, Department of Health, Environmental Health Administration
6. Danielle Bass, State Sustainability Coordinator
7. David Forman, Director, Environmental Law Program, University of Hawai'i at Mānoa, WSR School of Law
8. Leah Laramee on behalf of Administrator, Division of Forestry and Wildlife, DLNR
9. Justine Nihipali as a Member of the Hawai'i Climate Change Mitigation and Adaptation Commission
10. Susan Crow as researcher from College of Tropical Agriculture and Human Resources, University of Hawai'i at Mānoa
11. Riley Saito as the Mayor's Representative, County of Hawai'i
12. Chane "Makale'a" Ane as the Mayor's Representative, County of Maui
13. Melissa Miyashiro of the Blue Planet Foundation as the Legislative Representative, Environmental Non-Profit
14. Ashley Lukens of the Frost Family Foundation as the Legislative Representative, Environmental Non-Profit
15. Alan Gottlieb of the Hawai'i Cattlemen's Council as the Legislative Representative, Agriculture/Ranching Association

Members Absent (4):

1. Jonathan Deenik as extension agent from College of Tropical Agriculture and Human Resources, University of Hawai'i at Mānoa
2. Benjamin Sullivan as the Mayor's Representative, City and County of Honolulu
3. Vacant, Mayor's Representative, County of Kaua'i
4. Bobby Farias of Hawai'i Meats as the Legislative Representative, Agriculture/Ranching Association

Office of Planning and Sustainable Development Staff Present (1): Brittaney Key, Climate Research Adaptation Specialist, AmeriCorps VISTA.

Public Attendees (31):

Corinne Gallardo, Office of Hawai'i State Senator Mike Gabbard; David Rodriguez, State of Hawai'i Department of Transportation; Rafael Bergstrom, Sustainable Coastlines Hawai'i; Chantal Chung, Mā'ona Community Garden; Evan Lam, Hawai'i Gigatonne Team; Heather McMillen, Kaulunani Urban and Community Forestry Program; Jayme Barton, Healthy Soils Hawai'i; Cody Brooks, RTOInsider; Henry Curtis, Life of the Land; Brad Diaz, Modular Housing Systems; Diana Felton, State of Hawai'i DOH Hazard Evaluation and Emergency Response Office; Glenn Haae, State of Hawai'i DOH Solid and Hazardous Waste Branch; Jessie Hay, State of Hawai'i DOH Solid and Hazardous Waste Branch; Greg Friel, Haleakala Ranch Company; Nicole Galase, Hawai'i Cattlemen's Council; Scott Glenn, Hawai'i State Energy Office; Aarin Gross, Conservation International- Hawai'i; Kevin Hachey, City and County of Honolulu OCCSR AmeriCorps VISTA; Anukriti "Anu" Hittle, State Climate Commission Coordinator; Parker Kushima, Hawai'i State Energy Office AmeriCorps VISTA; Charley Ice, Environmental Caucus of the Democratic Party of Hawai'i; Kalisi Mausio, Hawai'i Farm Trails; Sherry Pollack, 350Hawai'i; Johanie Rivera-Zayas, UH Mānoa; Kate Wiechmann, Kaulunani Urban and Community Forestry Program; Kimberly Willis, Our Children's Trust; Aileen Yeh, Hawai'i Agriculture Research Center; Julie Yunker, Hawai'i Gas; Lisa Hinano Rey, Conservation Council of Hawai'i; G5 (Zoom username; attendee name not identified at meeting); s (Zoom username; attendee name not identified at meeting).

Distributed Material:

- Greenhouse Gas Sequestration Task Force (GHGSTF) meeting agenda for August 18, 2021
 - Draft minutes for May 5, 2021 GHGSTF meeting
 - "Accessing an Online Zoom Meeting" (instructions for downloading and using Zoom)
 - University of Hawai'i at Mānoa College of Tropical Agriculture and Human Resources (UH CTAHR) Project to Develop a Baseline and Benchmarks final report
 - Office of Planning and Sustainable Development's Statewide Sustainability Program's *Hawai'i 2050 Sustainability Plan: Charting a Course for the Decade of Action (2020-2030)*
 - Act 152, Session Laws of Hawai'i 2021: A Bill for an Act Relating to Sustainability
 - Kaulunani Urban and Community Forestry Program presentation slides
 - Mā'ona Community Garden presentation slides
 - Sustainable Coastlines Hawai'i presentation slides
 - Hawai'i 2050 Sustainability Plan presentation slides
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I. Call to order, public notice, quorum

Chair Mary Alice Evans, Director of the Office of Planning and Sustainable Development, called the meeting to order at 1:32pm. The Task Force's August 18, 2021 meeting notice was published on August 4, 2021. At roll call, a quorum of 14 members were present of this 19-member task force.

Chair Evans announced that as of July 1, 2021, Act 152, Session Laws of Hawai'i 2021: A Bill for an Act Relating to Sustainability was in effect, which renames the former Office of Planning as the Office of Planning and Sustainable Development (OPSD). It also incorporates the former Office of Environmental Quality Control (OEQC) into OPSD as the Environmental Review Program, replaces the former OEQC's seat on the Task Force, and with the State Sustainability Coordinator in its place. As such, Chair Evans thanked Ms. Marianne Rossio for her service representing the OEQC on the Task Force and welcomed Task Force member Danielle Bass in her new position. Chair Evans also welcomed Task Force member Benjamin Sullivan in his new position as the Mayor's representative from the City and County of Honolulu (replacing interim representative Matthew Gonser) and noted that the seat for the Mayor's representative from the County of Kaua'i was temporarily vacant.

Climate Research Adaptation Specialist AmeriCorps VISTA Brittaney Key reminded attendees of Zoom best practices before the meeting continued. A link to instructions for using Zoom is available on the GHGSTF's website, and the document was distributed via the Zoom chat. Ms. Key also informed those in attendance that they could direct message her or Task Force member Bass on Zoom if technical assistance was needed. Task Force members were asked to keep their cameras on for transparency.

The procedure for public comments was announced: Chair Evans would ask Task Force members for questions or comments first, and then discussion would be opened to comment from the public for each agenda item.

Task Force members were verbally introduced, and members of the public were invited to introduce themselves and their affiliation in the Zoom chat.

II. Review and approval of May 5, 2021 meeting minutes

The minutes were approved as circulated.

III. Presentations

Chair Evans reminded those in attendance that the Task Force has several mandates to fulfill, including provisions regarding the urban tree canopy, composting, and climate resiliency, and today's presenters would be presenting on these topics. Chair Evans also emphasized the importance of the Task Force's work in light of the findings and projections in the Intergovernmental Panel on Climate Change's 6th assessment.

A. Presentation by Heather McMillen representing Kaulunani Urban and Community Forestry Program

The Task Force welcomed Ms. Heather McMillen, an urban and community forester with the DLNR—Division of Forestry and Wildlife’s Kaulunani Urban and Community Forestry Program (“Kaulunani”). Kaulunani’s website is www.kaulunani.org.

Ms. McMillen presented on the importance of green infrastructure to increase the urban tree canopy and reduce urban heat island effects, as well as discuss the greenhouse gas sequestration and climate adaptation opportunities within the urban area statewide. A copy of the presentation slides was posted to the GHGSTF website and distributed electronically to members. The slides were also linked in the chat.

Ms. McMillen began with an overview of Kaulunani’s impact and programs and the importance of having an urban tree inventory. The number of trees inventoried in Hawai’i is growing, and the inventory utilizes a U.S. Forest Service tool called iTree to quantify the co-benefits of trees, such as gallons of runoff prevented, pounds of carbon sequestered, and therms of heat prevention. Ms. McMillen referenced the special importance of urban trees since the majority of Hawai’i’s residents live in urban areas, and thus an urban tree has the potential to impact many people at once.

Ms. McMillen asserted that trees are essential infrastructure with a positive return on investment, and recommended policy changes to recognize trees as infrastructure. Namely, recognizing trees as infrastructure for capital improvement projects and bonds would open up a new avenue of funding to plant, grow, and maintain more trees. Other policy recommendations include making uniform or consolidated tree ordinances across counties, enforcing existing ordinances, and updating specifications for trees to improve tree growth and health.

Finally, Ms. McMillen gave a preview of what to expect with the new tree canopy interactive tool Kaulunani is preparing to release in collaboration with the U.S. Forest Service and NOAA. Using existing models in California to demonstrate, she showed how the tool allows viewers to see the extent of tree canopy cover overlaid with socioeconomic and health data. Such data layers could help identify the highest priority areas for trees for human and ecological resilience.

Chair Evans thanked Ms. McMillen for her presentation and making the link between the urban tree canopy and social vulnerability in communities before opening the floor to questions. Mr. Henry Curtis was invited to share his question from the Zoom chat first. Mr. Curtis posed the rhetorical question of whether planting a few urban trees while cutting down many wild trees would still count as a net positive and asked for the total tree count in the state of Hawai’i. Task Force member Christian Giardina responded in the chat that Hawai’i has about 1 billion trees. Mr. Charley Ice was identified next and asked if Kaulunani’s tree canopy viewer would have any connections to soil regeneration benefits. Ms. McMillen responded that she did not know the quantified impact that urban trees have on soil regeneration, but the tree canopy viewer would include a layer showing impervious surfaces. Task Force member Susan Crow noted in the chat to consider that where you can see trees on the landscape, there is up to an equal amount of roots below

ground, and that along with the roots are the microbiome that contribute to carbon, nutrients, and energy flow.

Task Force member Riley Saito asked if the tree canopy viewer would denote invasive species that need to be removed, and shared <https://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/albizia> in the chat. Ms. McMillen said that the tree canopy viewer would be able to distinguish between different types of vegetation (e.g. lawn, herbaceous, or tree cover) but not specific species. Task Force member Leah Laramee noted in the chat that there are available GIS layers that, while not tree specific, can tell where there is majority native vs non-native plant coverage. Task Force member Giardina also shared in the chat from the USFS Forest Inventory and Analysis that approximately 29 percent of Hawai'i's large trees are non-native, while about 63 percent of the state's small trees are non-native.

No further questions were raised by the Task Force or public.

B. Presentation by Chantal Chung and Evan Lam representing Mā'ona Community Garden

The Task Force welcomed Ms. Chantal Chung and Mr. Evan Lam, project manager of Mā'ona Community Garden and strategist of the Hawai'i Gigatonne Team, respectively. Mā'ona Community Garden's website is www.facebook.com/maonacommunitygarden.

Ms. Chung and Mr. Lam were asked to present to the task force on the benefits of vermicomposting to reduce greenhouse gas emissions through community-scale waste diversion, improve soil health, and discuss sustainable agriculture promotion and greenhouse gas sequestration opportunities. A copy of the presentation slides was posted to the GHGSTF website and distributed electronically to members. The slides were also linked in the chat.

Mr. Lam opened with the greenhouse gas emission potential of food and cardboard in landfills and noted the additional greenhouse gas footprint of these materials through importing and distribution. Sending these materials to landfills or incinerators also omits an opportunity for value-added products, carbon sequestration potential, and community benefits.

Ms. Chung shared information about Mā'ona Community Garden's thermocomposting and vermicomposting facilities and work to create an adaptive, site-specific model of composting within a standard of best practices. She explained their intent to maximize efficiency and value along each point of the composting production pathway and to take advantage of the agricultural input industry, both from a financial standpoint and as an opportunity to build healthy soils. Ms. Chung also reviewed current policy roadblocks and proposed solutions to overcoming or removing these obstacles.

Mr. Lam explained the role of the Hawai'i Gigatonne Team in scaling Mā'ona Community Garden's composting efforts and listed the team's goals on the slide. Their model relies on site-specific prototypes to rapidly deploy composting units to communities. So far, the

Hawai'i Gigatonne Team reports having abated approximately 30 carbon dioxide equivalent tons of emissions. Mr. Lam and Ms. Chung drew connections between food security, community health, environmental benefits, and composting before concluding their presentation.

Chair Evans thanked Ms. Chung and Mr. Lam for their presentation and opened the floor to questions. Mr. Ice asked Ms. Chung if she had any model legislation to propose that would address the policy roadblocks referenced previously. Ms. Chung recommended looking at previous composting bills that did not pass, such as the copying of California's tiered composting system, as a model for new proposed legislation. She emphasized the benefit of a tiered approach by explaining that Mā'ona Community Garden is subject to the same permitting policies as a large municipal dump, and that composting is currently prohibited on agricultural land which prevents farmers from potentially doing their own on-site composting.

Task Force member Makale'a Ane expressed her support for the need for funding to follow legislation, while also urging the Task Force to consider how it could support composting through legislation reforms similar to Ms. Chung's remarks. Ms. Chung agreed.

In the chat, Task Force member Giardina asked if there was a Standard Operating Procedure available for developing a composting project, what testing requirements there are for composting products, and if the State could support that expense, such as through UH soil testing. Ms. Chung answered that Mā'ona Community Garden is working on developing a Standard Operating Procedure.

No further questions were raised by the Task Force or public.

C. Presentation by Rafael Bergstrom representing Sustainable Coastlines Hawai'i

The Task Force welcomed Mr. Rafael Bergstrom, the executive director of Sustainable Coastlines Hawai'i (SCH). Sustainable Coastlines Hawai'i's website is www.sustainablecoastlineshawaii.org.

Mr. Bergstrom was asked to present to the Task Force on Sustainable Coastlines Hawai'i's (SCH) in-vessel composting pilot project and its benefits to reduce greenhouse gas emissions through industrial-scale waste diversion, improve soil health, and discuss sustainable agriculture promotion and greenhouse gas sequestration opportunities. A copy of the presentation slides and the Canva link were posted to the GHGSTF website and distributed electronically to members. The slides and Canva link were also provided in the chat.

Mr. Bergstrom began by explaining why an ocean organization like SCH is involved in composting and stated that it grew out of SCH's long-standing work in waste diversion with the surfing community. SCH's in-vessel composting pilot project began in 2020 and estimates it will be able to divert almost 300,000 lbs. of organic waste a year. Mr. Bergstrom emphasized the greenhouse gas sequestration and emissions reduction

benefits of composting, in particular by eliminating methane emissions from organic waste. He noted the importance of including food waste and not just green waste in composting effort to obtain carbon-to-nitrogen ratios more ideal for greenhouse gas sequestration and soil health.

Mr. Bergstrom added his support to Ms. Chung's earlier comments on the permitting difficulties of composting and the need for amendments to the law, pointing out that SCH's in-vessel system mitigates the issues that regulating bodies are most often concerned with. He shared the benefit of in-vessel composting's reduction of time and labor compared to traditional composting, as well as the benefit of being able to form a microgrid of local composting sites in incremental investments. Mr. Bergstrom concluded with a remark that SCH would be collecting data on the viability of including compostable plastic alternatives in the compost input recipe and the scalability of in-vessel composting.

Chair Evans thanked Mr. Bergstrom for his presentation and its helpfulness as the Task Force prepares its draft report and noted its connections to findings in Hawai'i Agricultural Research Center's Soil Health Plan pilot and the UH Mānoa's College of Tropical Agriculture and Human Resources (UH CTAHR) final report that the GHGSTF would be receiving later. Chair Evans shared a question in the chat from Ms. Chung regarding the total price of an in-vessel system. Mr. Bergstrom replied that SCH's total costs for this system were approximately \$75,000 and they were working to find ways to reduce startup costs. Ms. McMillen expressed her support for publicizing this cost information as well, to help more institutions get onboard with the project.

Mr. Ice wanted to know the best way to distribute the compost from the compost machine. Mr. Bergstrom said that they use a tractor to dispense compost from the machine into curing piles, and then final distribution methods of the compost is site-specific. Chair Evans called on Task Force member Justine Nihipali next, who shared her question from the chat. Task Force member Nihipali asked if the various composting hubs around the state were coordinating to gather data on waste diversion from landfills and other co-benefits. Mr. Bergstrom replied that the composting movement is still growing and has not coordinated at that scale yet but acknowledged the benefit doing so would provide as the movement expands.

Task Force member Giardina asked if any of the composting programs are experimenting with invasive species green material as a source of nitrogen, and if so, what benefits or challenges had been encountered. Mr. Bergstrom said that their project has not looked at that yet but acknowledged the opportunity potential there. He offered to follow up with Task Force member Giardina to determine potential candidates for compost nitrogen inputs. Ms. Chung added that Mā'ona Community Garden is already experimenting with invasive species, and with some species their seeds are a concern, and with others like African tulip or albizia, the increase in time and labor to the compost process is the issue.

Chair Evans called on Task Force member Crow next, who asked if Sustainable Coastlines Hawai'i had encountered similar issues as Mā'ona Community Garden on land

use classification restrictions, such as limits on bringing in waste, or identified with other issues that Ms. Chung had mentioned. Mr. Bergstrom affirmed that SCH had similar experiences with regulatory barriers to their operations and impressed that policy work was needed to address the particulars of a composting operation, such as allowing composting to occur near residential areas and schools, if composting was to be scalable with diverse locations.

Task Force member Lukens invited Mr. Bergstrom to share more about SCH's planning proposal and expansion work to make this pilot project scalable. Mr. Bergstrom briefly previewed the work SCH anticipates on investigating training needs, how to reduce startup costs, how to apply the knowledge and models of Green Mountain Technologies from Washington State to Hawai'i, and the organizations interested in participating in the expansion of this project.

No further questions were raised by the Task Force or public.

D. Presentation by Danielle Bass representing the Statewide Sustainability Program

The Task Force welcomed Task Force member Bass as its final presenter. Task Force member Bass was invited in her capacity as the State Sustainability Coordinator and head of the Statewide Sustainability Program within OPSD. The Statewide Sustainability Program website is <https://planning.hawaii.gov/sustainability> and the *Hawai'i 2050 Sustainability Plan: Charting a Course for the Decade of Action (2020-2030)* can be viewed at <https://hawaii2050.hawaii.gov>.

Ms. Bass was asked to present to the GHGSTF on recommendations from the *Hawai'i 2050 Sustainability Plan: Charting a Course for the Decade of Action (2020-2030)* ("Hawai'i 2050 Sustainability Plan") to promote sustainable agriculture, improve soil health, increase the urban tree canopy, increase climate resiliency, and sequester greenhouse gas emissions. A copy of the presentation slides and the Hawai'i 2050 Sustainability Plan document were posted to the GHGSTF website and distributed electronically to members. The slides and link to the Hawai'i 2050 Sustainability Plan were also provided in the chat.

Ms. Bass began with an overview of the history of the Hawai'i 2050 Sustainability Plan, up to its most recent decennial update, and the extensive public and stakeholder outreach and coordination involved in the recent revision and update process. The final document, published in June 2021, serves as the State's climate and sustainability strategic action plan and is organized around the United Nations' 17 Sustainable Development Goals (SDGs) and the United Nations declaration for the 2020-2030 decade to serve as the "Decade of Action," with statewide recommendations organized under 38 strategies within 8 focus areas.

Before highlighting recommendations relevant to the Task Force, Ms. Bass provided a summary of key themes and findings from public outreach for a sustainable Hawai'i and sustainable economic recovery from the COVID-19 pandemic, including explicitly addressing equity, economic diversification, investing in communities, and increasing

self-sufficiency. She broke down the public feedback on actions to take by those for government, the private sector, nonprofit organizations, and on the individual level.

For the GHGSTF, Ms. Bass drew attention to recommendations from focus areas regarding economic recovery, greenhouse gas emissions reduction, sustainable community advancement, and natural environment preservation. Specific recommendations and an overall summary of the recommended actions are available on slides 16-20 of her presentation. Respective page numbers from the Hawai'i 2050 Sustainability Plan are also available in the images in the slides.

Chair Evans thanked Ms. Bass for her presentation and opened the floor to questions. Mr. Ice asked if there was something approaching a strategic budget to identify priorities for funding, such as how to distribute monies from green fees. Ms. Bass replied that there is not currently such a plan for distribution but identified it as an opportunity for State agencies to coordinate on during the next legislative session.

Ms. Chung shared her experiences with officials who view the Hawai'i 2050 Sustainability Plan as a paper tiger due to its lack of enforceability or punitive measures, and her struggles with increasing both awareness of and voluntary alignment with the Plan. She asked how Ms. Bass would respond to these negative perceptions and problems. Ms. Bass empathized with Ms. Chung's frustrations and explained that Act 146, Session Laws of Hawai'i 2019 improved agencies' accountability to abide by the Hawai'i 2050 Sustainability Plan and codified its implementation within the Hawai'i State Planning Act as Hawai'i Revised Statutes §226-65. This task of ensuring implementation is executed by OPSD in its role as a coordinating agency.

Mr. Curtis asked in the Zoom chat if the Hawai'i 2050 Sustainability Plan only included goals for 2050, or if it included intermediary targets. Ms. Key responded in the chat that the Hawai'i 2050 Sustainability Plan featured a timeline outlining all of the State's legal and statutory climate and sustainability targets codified within law through 2050, with some targets set as soon as 2025, and directed him to pgs. 14-15 of the Plan to view the specifics.

No further questions were raised by the Task Force or public.

IV. Receipt and discussion of University of Hawai'i at Mānoa College of Tropical Agriculture and Human Resources project to develop a baseline and benchmarks

The UH CTAHR project, led by principal investigator Mr. Joshua Silva, developed data resources required to generate a baseline and short and long-term benchmarks for increasing greenhouse gas sequestration, soil health, and yields in natural and working lands in Hawai'i's agricultural, forestry and other land uses (AFOLU) sector. The Task Force is in receipt of the project's final report, a copy of which was distributed to all Task Force members and made available on the GHGSTF website for public review. Task Force member Nihipali thanked Mr. Silva and Task Force member Crow for their work in creating this report, and Chair Evans also expressed gratitude for their work.

Ms. Kimberly Willis asked the Task Force what the next steps would be for the Task Force to address the gaps identified in the report. Chair Evans responded that due to lack of funding, the Task Force had no capacity or resources currently to conduct a follow-up to this report but invited Task Force member Crow to share her input as an external researcher. Task Force member Crow responded that her research at the University of Hawai'i is often funded federally, which has different objectives from the GHGSTF's local focus, and State funding or matching is often needed for regional issues. She also identified these gaps in the knowledge as an important barrier to implementation or follow-through on actions such as those identified in the Hawai'i 2050 Sustainability Plan.

There were no other comments or questions from the Task Force or public on receipt of this report.

V. 2023 Greenhouse Gas Sequestration Task Force draft report to the State legislature
A. Request for task force members' recommendations in marine use and aquacultural policies

The Task Force is mandated by HRS §225P-4 to identify marine use policies and aquacultural policies that promote increased greenhouse gas sequestration and provide greenhouse gas benefits. While the Task Force has been thus far unable to procure resources for investigation into these topics, Chair Evans invited Task Force members to share if they had policy or action recommendations in these or other mandated areas that the Task Force could identify in its draft report. Task Force member Ane also shared that in her experience, task force reports are more useful when they include specific policy recommendations and identify recommended funding sources and mechanisms that can be cited during the legislative process.

Task Force member Laramée reminded those in attendance that the US Climate Alliance had worked with Senator Mike Gabbard's office in the 2021 legislative session on SB 493 to create a carbon incentive program for agricultural and forestry lands and would be working to improve and reintroduce this bill in the 2022 session. She requested the Task Force's support on this matter and also identified this bill as a policy that could be highlighted in the report as a funding mechanism for land managers.

Chair Evans requested for any interested Task Force members to reach out to Ms. Key via email after the meeting to submit comments regarding marine and aquaculture policies, to be collated and presented at the next meeting.

Task Force member Bass reminded members that Chair Evans was requesting recommendations on marine and aquaculture topics again because of the GHGSTF's mandate to address these areas in its preliminary report to the legislature, due before the 2023 session. Task Force member Alan Gottlieb then asked if there was anyone on the Task Force who represented the aquaculture industry, or if the aquaculture coordinator at the Department of Agriculture had been consulted yet for their input or to present. Chair Evans requested Task Force member Earl Yamamoto to speak with the Department of Agriculture's Aquaculture Business Development Specialist regarding a presentation at the next GHGSTF meeting. Task Force member Yamamoto agreed to reach out to them.

Task Force member Ane stated her desire for the Task Force to promote kelp, algae, or invasive algae removal as a methane reduction method for cattle feed, and cited studies published by entities from the continental United States showing promising results in reduction of methane production in ruminants when kelp or algae are used as a feed source. She also acknowledged the positive potential impact this would have on the state's cattle industry. Chair Evans noted that NELHA has a pilot project on growing algae for methane reduction in cattle feed and could be contacted to present at the next meeting.

Task Force member Saito asked for clarification on the scope of "marine policy." Chair Evans invited Task Force member Lukens to share her insight on the original intent of the statute. Task Force member Lukens replied that the intent was to address greenhouse gas sequestration and emissions relating to industrial fish and food production in the oceans, not marine uses of fossil fuel. She also noted that the Center for Food Safety would be presenting comments at the next meeting on the contributions of industrial aquaculture to climate change. Task Force member Saito and Task Force member Ane confirmed that this was helpful in narrowing the interpretation of "marine policy." Chair Evans also asked Task Force member Nihipali if there were any provisions from the State's Ocean Resources Management Plan, DLNR's 30x30 Plan, or other marine plans that relate to greenhouse gas sequestration. Task Force member Nihipali could not identify relevant items of note from these initiatives or documents.

B. Request for task force members' recommendations in identifying appropriate criteria to measure baselines and increases in aquacultural production

Chair Evans requested for any interested Task Force members to reach out to Ms. Key via email after the meeting to submit comments regarding identifying appropriate criteria to measure baselines and increases in aquacultural production for collation and presentation at the next meeting.

VI. Announcements

Chair Evans invited members of the Task Force to share any announcements. She acknowledged Task Force member Gottlieb, who introduced his colleague from Hawai'i Cattlemen's Council, Ms. Nicole Galase, to share things the cattle industry was doing both locally and nationally relevant to climate change. Ms. Galase shared two pieces of news: first, a link to a review paper published in the Land Journal titled Maintaining the Many Societal Benefits of Rangelands: The Case of Hawai'i. This link, <https://www.mdpi.com/2073-445X/10/7/764>, was made available in the Zoom chat, and the paper outlines the ecosystem services of rangelands and areas for further research. She also shared that the National Cattlemen's Beef Association announced a goal to demonstrate carbon neutrality by 2040, which she believed would be relevant to both the Task Force's goal to sequester atmospheric carbon dioxide in rangelands and cattle farmers' goals to keep agricultural lands in production, and demonstrate the alignment between rangeland production, sequestration, and healthy soils. Task Force member Gottlieb also requested consideration for Ms. Galase to present on these topics in more detail at a future meeting.

Mr. Ice asked Task Force member Gottlieb to consider connections between rangelands and soil regeneration as a potential topic to address should a presentation be given.

A. Next meeting: November 17, 2021 at 1:30pm (location TBD)

Attendees were reminded that the next meeting for the Task Force will be Wednesday, November 17, 2021 at 1:30pm.

Chair Evans requested Task Force members to send any suggestions for the next agenda to Ms. Key for coordination and an attempt would be made to incorporate as many suggestions as feasible into the next agenda. She also reminded members they were welcome to share feedback on meetings to improve their usefulness for Task Force members' own work and that of the State.

Task Force member Laramée requested an opportunity in future meetings for discussion to strategize the drafting of the 2023 preliminary report to the legislature and advancing the Task Force's mandated actions. Chair Evans affirmed that the Task Force would try to provide an opportunity for this at the next meeting.

There were no final questions or remarks from the Task Force or the public.

VII. Adjournment

The meeting adjourned at 3:24pm.