DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

KA ʻOIHANA HOʻOMOHALA PĀʻOIHANA, ʻIMI WAIWAI A HOʻOMĀKAʻIKAʻI

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Statement of
JAMES KUNANE TOKIOKA
Director
Department of Business, Economic Development, and Tourism
before the
HOUSE COMMITTEE ON AGRICULTURE AND ENVIRONMENT
HOUSE COMMITTEE ON ECONOMIC DEVELOPMENT AND TECHNOLOGY

Monday, February 9, 2026
3:05 PM
State Capitol, Conference Room 224

In consideration of
SB2374
RELATING TO A BLUE ECONOMY

Chairs Gabbard and DeCoite, Vice Chairs Richards and Wakai, and members of the Committees: The Department of Business, Economic Development & Tourism (DBEDT) offers comments on SB2374, which establishes a Blue Economy Working Group to study how best to develop and support marine-based economic activities that align with the State's decarbonization and restorative food production goals.

DBEDT appreciates the intent of this measure. Hawaiʻi's Blue Ocean Economy presents a strategic opportunity to integrate climate mitigation, ecosystem restoration, sustainable food production, and economic diversification. A coordinated framework to evaluate policy, funding mechanisms, and cross-sector collaboration is timely and aligned with the State's long-term resilience goals.

DBEDT notes that several State entities are currently engaged in planning efforts related to the Blue Economy:

- The Natural Energy Laboratory of Hawaiʻi Authority (NELHA) continues to serve as a hub for ocean technology, aquaculture, and marine research infrastructure, and is actively exploring expansion of ocean-based innovation and commercial activities.

- The Agribusiness Development Corporation (ADC) is engaged in discussions regarding land and coastal resource utilization to support integrated and regenerative food production systems, including marine aquaculture.
- The Hawai‘i Technology Development Corporation (HTDC) is evaluating innovation, commercialization, and cluster development strategies that may support emerging ocean-based industries.

These agencies are in varying stages of outlining an economic framework for Hawai‘i’s Blue Ocean Economy. SB2374 may provide a formal mechanism to consolidate these efforts, improve interagency alignment, and support a more comprehensive economic development strategy.

DBEDT respectfully suggests that, to maximize effectiveness, the Working Group should:

1. Clearly leverage and synthesize existing planning efforts and research to avoid duplication;
2. Consider measurable economic benchmarks alongside environmental and climate objectives;
3. Evaluate workforce development and commercialization pathways necessary to scale emerging ocean-based industries; and
4. Ensure sufficient coordination capacity to support timely development of actionable recommendations.

With thoughtful alignment to ongoing agency initiatives, SB2374 can strengthen planning capacity and accelerate the development of a sustainable and competitive Blue Economy for Hawai‘i.

Thank you for the opportunity to provide comments on this measure. DBEDT looks forward to continued collaboration with the Legislature and partner agencies on advancing Hawai‘i’s Blue Ocean Economy.

JOSH GREEN, M.D.
Governor

SYLVIA LUKE
Lt. Governor

SHARON HURD
Chairperson
Board of Agriculture & Biosecurity

DEAN M. MATSUKAWA
Deputy to the Chairperson

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TESTIMONY OF SHARON HURD
CHAIRPERSON, BOARD OF AGRICULTURE AND BIOSECURITY

BEFORE THE SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT AND THE SENATE COMMITTEE ON ECONOMIC DEVELOPMENT AND TOURISM

MONDAY, FEBRUARY 9, 2026
3:05 PM
CONFERENCE ROOM 224

SENATE BILL NO. 2374
RELATING TO A BLUE ECONOMY

Chairs Gabbard and DeCoite, Vice Chair Richards and Wakai, and Members of the Committees:

Thank you for the opportunity to testify on Senate Bill 2374. The bill establishes the Blue Economy Working Group to study how to develop and support marine-based economic activities that align with the State's decarbonization and restorative food production goals and requires a report to the Legislature. The Department of Agriculture and Biosecurity (DAB) supports this measure and offers comments.

The proposed blue economy working group is an appropriate and timely mechanism to advance the DAB's mandate to develop climate-smart, ocean-based food systems that contribute to Hawaii's food security and rural economic resilience. The group will be able to include the results of the survey conducted by the Hawaii Aquaculture and Aquaponics Association (HAAA) to consider in their study, which is expected in June 2026.

By focusing on marine ecosystem restoration, decarbonization, and restorative food production, SB2374 provides a structured governance forum to align the department's restorative aquaculture initiatives authorized under the 2026 Bill SB2349 with broader blue economy planning, investment strategies, and regulatory modernization. The requirement to analyze "Hawaii's Ocean Opportunity" and other blue economy models will strengthen the policy evidence base for integrating departmental priorities with emerging climate finance, carbon accounting, and natural climate solutions frameworks.

SB2374 is further justified because it convenes the key economic, energy, climate, and natural-resource agencies and HAAA industry feedback necessary to design coherent cross-sector policies for coastal restoration, restorative aquaculture, and low-carbon marine industries. The working group's responsibility to evaluate funding mechanisms, public-private partnerships, and best practices for blue economy projects directly supports the DAB's efforts under the 2026 Bill SB2349 to secure federal grants, implement restorative aquaculture pilot sites, and prioritize Native Hawaiian and community-based operations. Adoption of SB2374 will embed restorative aquaculture within an integrated state blue economy framework and ensure that departmental programs are used effectively as policy instruments to advance Hawaii's climate, food production, and equity objectives.

Thank you for the opportunity to provide testimony on this measure.

FEBRUARY 9, 2026

SENATE BILL 2374

CURRENT REFERRAL: EDT/AEN

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POSITION: SUPPORT

Imua Alliance supports SB 2374, relating to a blue economy, which establishes the Blue Economy Working Group to study how to develop and support marine-based economic activities that align with the State's decarbonization and restorative food production goals.

Imua Alliance is a Hawai‘i-based organization dedicated to ending exploitation of both people and our planet. Accordingly, as the link between gender violence and the climate crisis is becoming clearer and more urgent, we support measures that advance Hawai‘i’s engagement in the blue economy, a sustainable ocean-linked economic framework that harnesses marine resources for economic growth, climate mitigation, job creation, and community well-being.

What is the blue economy and why it matters. The blue economy refers to the sustainable use of ocean resources for economic growth, improved livelihoods, and job creation while preserving the health of marine ecosystems. It encompasses traditional ocean industries like fisheries, tourism, and maritime transport, and emerging sustainable sectors such as renewable ocean energy, aquaculture, and marine biotechnology. According to economic analysts, the ocean economy is valued globally at roughly $1.5 trillion annually and could grow to $3 trillion by 2030, presenting a major economic frontier for sustainability-aligned development.

Blue economic ventures align directly with our state’s economic and climate goals. In Hawai‘i, the ocean is not just a backdrop for tourism. It is a resource critical to food security, cultural heritage, transportation, and energy independence. The blue economy encourages responsible stewardship that supports economic resilience without degrading the very ecosystem upon which the visitor industry relies.

Blue economy and decarbonization. Oceans and coastal ecosystems play a central role in climate mitigation and adaptation. Marine-based ecosystems sequester carbon at rates up to five times greater than many terrestrial forests,

helping reduce atmospheric CO_2 while protecting shorelines from erosion and storm impacts. The expansion of marine renewable energy—such as offshore wind, tidal, wave, and ocean thermal energy conversion—holds significant promise for Hawai‘i’s transition to a decarbonized future. Such ocean-based technologies can diversify the state’s clean energy portfolio and reduce reliance on imported fossil fuels, advancing the State’s statutory climate goals under to achieve net negative emissions.

Economic diversification and job creation. A blue economy strengthens economic opportunity by supporting jobs in ocean renewable energy, sustainable aquaculture, marine data science, and maritime technology. Globally, blue economic sectors are projected to deliver substantial growth and employment opportunities. For example, maritime transport, renewable ocean energy, and marine biotechnology are seen as growth engines within sustainable economies, with growing private and public investment backing innovation in these areas.

Global and jurisdictional examples. Small island and coastal nations have already integrated blue economy strategies into their climate and economic planning. In parts of the Caribbean and Pacific region, governments and are leveraging blue economic development and marine renewable energy to meet climate commitments under the Paris Agreement, while simultaneously building resilient local economies. These efforts demonstrate how sustainable ocean economies can protect natural capital while expanding economic opportunity and boosting carbon sequestration efforts.

Hawai‘i’s strategic advantage. As a state defined by its ocean geography and culture, Hawai‘i is uniquely positioned to lead in blue economy innovation. This bill would help catalyze private investment, support workforce development, and establish clear policy frameworks that ensure blue economic growth is environmentally sustainable, socially just, and economically robust. Investing in the blue economy is not just good environmental policy. It is sound economic strategy that aligns with our climate goals and enhances long-term prosperity for Hawai‘i’s people and future generations.

With aloha,

Kris Coffield

President, Imua Alliance

HAWAI'I FOOD+ POLICY
Honolulu, HI 96813
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February 12, 2026

To: Chair Lynn DeCoite, Chair Mike Gabbard, Vice Chair Glenn Wakai, Vice Chair Tim Richards, and the Senate Committees on Economic Development and Tourism, and Agriculture and Environment

Subject: **SB2374** Relating to a Blue Economy

Aloha,

I am writing in **support of SB2374** *with comments*. This measure establishes the Blue Economy Working Group to study how to develop and support marine-based economic activities that align with the State's decarbonization and restorative food production goals. Hawai‘i Food + Policy recognizes the need to restore ecosystems, uplift indigenous knowledge, and build long-term resilience in the face of climate change.

Research done by Hatch Innovations Lab, in collaboration with the Department of Agriculture and Biosecurity, emphasizes the cultural importance of sustainable food systems in Hawai‘i. As such, I request that the legislature consider amending SB2374 Section 1.c. to ***explicitly include*** a nonprofit public organization specializing in Native Hawaiian culture. Explicitly including an organization that specializes in Native Hawaiian culture would aid the working group with their task to: “Identify favorable public policies and best practices for developing successful projects that follow blue economic principles and align with Hawai‘i’s cultural foundations”.

HF+P appreciates the various opportunities research from the Blue Economy Working Group could provide, especially practices helping the state in terms of sustainable local food production and economic revenue[1].

Thank you for the opportunity to testify on this matter.

Mahalo,
Sydney Haas & the Food+ Policy Team
#fixourfoodsystem

[1] “Hatch Innovation Services Www.Hatch.Blue Hawaii’s Ocean Opportunity,” Hatch Innovation Services - Hawaii’s Ocean Opportunity, https://dab.hawaii.gov/ai/files/2022/06/Restorative-Aquaculture -Hawaiis-Ocean-Opportunity-HATCH-Final-Report-4.7.22.pdf.

The Food+ Policy internship develops student advocates who learn work skills while increasing civic engagement to become emerging leaders. We focus on good food systems policy because we see the importance and potential of the food system in combating climate change and increasing the health, equity, and resiliency of Hawai‘i communities.

In 2026, the cohort of interns are undergraduate and graduate students and young professionals working in the food system. They are a mix of traditional and nontraditional students, including parents and veterans, who have backgrounds in education, farming, public health, nutrition, and Hawaiian culture.

SB 2374 and SB 2907 In Support

Testimony of Ron Tubbs B.S.N.D. UHM In Support of Marine Fisheries

Amazing Videos Must Watch: Educational; Proof of Low Impact "Model" Sustainable Aquarium Fishery:

West Hawaii Commercial Aquarium Fishery Presentations Department Of Land and Natural Resources DAR State of Hawaii presentation confirming the low impact of the fishery on April 12th, 2024, presentation. DAR Researchers recommend giving out aquarium fish permits. BLNR does not give out permits!

Non-embedded hyperlink: https://www.youtube.com/watch?v=djjtIsvg7qs&t=11s

Aquarium Fishery; Scientists Hawaii Speak Out Researchers explain how Earth justice lies in closing the fishery and expose Rene Umber and Snorkel Bob's misinformation campaign against it. The DAR head explained decades of research on fishery.

Non-embedded hyperlink: https://www.youtube.com/watch?v=AU_WZOyJzqk&t=9s

Fishery Sustainable Dr. Bill Walsh, Richard Pyle and NOAA Video

Non-embedded hyperlink: https://www.youtube.com/watch?v=50L6JcMOVLQ&t=219s

8 years and 800,000 In An environmental review for the aquarium fishery revealed:

Meta-Analysis Hawaii & Pacific Fisheries, Environmental Review, and Global Warming 2025 Report

Sustainability is Key to Hawaii's future. As the world's most isolated island, Hawaii is overly dependent on tourism, the military, and other unsustainable, unreliable economic sources.

Marine fish are Hawaii's most renewable resource. Opah Moon Fish produces 300 million eggs a year per pair. Each female Tuna produce 5 million to 15 million fry per female per spawn. Reef fish produce tens of thousands to millions of fry per spawn per female. Fish can be sustainably harvested and maintained if appropriately managed. We must support a managed, sustainable fishery to create a more sustainable society, especially in isolated Hawaii.

Since the first humans arrived in Hawaii in 400 A.D., land-based species have led to the endangerment or extinction of over 100 endemic plant species, 30 bird species, 74 insect species, and 41 tree snails. Insects, Birds, snails, and many others are listed as Hawaii IUCN red species of concern. In 2023, 8 more birds were removed from the Federal Lists of Endangered and Threatened Wildlife and Plants due to their confirmed extinction.

Marine Fish are more immune to global warming impacts, and **no Pacific marine fish species have become extinct over the past historical period.** Looking at marine species extinctions across the past five global extinction-level events, marine fish are more resilient to global impacts and will out-survive terrestrial species. It should be noted, however, that marine mammals and their long reproductive cycles make them more vulnerable than broadcast-spawning highly reproductive marine fish species.

Marine fish's vast geographic distribution, driven by broadcast breeding and larval dispersal over as much as 5,000 miles and into other oceans such as the Atlantic and Indian Oceans from Hawaii, makes them much *less vulnerable* to fishing and environmental impacts. Marine fish are more resistant to global warming temperature changes, pH changes, salinity changes, and other ecological changes than land-based species. Ocean Depth habitat range, the latitude of the Hawaiian Islands chain from 19 degrees to 28 degrees latitude, and 1500 miles of 132 atolls, reefs, and shoals create a vast, unique habitat range protecting Hawaii's ocean biodiversity. Seventy percent of the Earth is ocean, making marine fish in Hawaii less vulnerable to point-source pollution and global warming.
No fishery has ever resulted in the extinction of any marine fish species!

Source in-text links and now below:

https://www.fisheries.noaa.gov/national/sustainable-fisheries/status-stocks-2022#:~:text=Under%20this%20law%20the%20United,ensure%20they%20do%20not%20continue.

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Raup DM (1991) A kill curve for Phanerozoic marine species. *Paleobiology*. 17:37–48.

https://www.nationalgeographic.com/animals/article/animals-with-most-offspring-fish-eggs-reproduction

Forsgren, Kristy, et al. "Reproductive biology of the ocean sunfishes." *The Ocean Sunfishes* (2020): 87- 104.

Rønsted, Nina, et al. "Extinction risk of the endemic vascular flora of Kauai, Hawaii, based on IUCN assessments." *Conservation Biology* 36.4 (2022): e13896.)

https://www.imf.org/en/Publications/fandd/issues/2020/12/impact-of-the-pandemic-on-tourism-behsudi)

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De Robertis, Alex, and Nils Olav Handegard. "Fish avoidance of research vessels and the efficacy of noise-reduced vessels: a review." *ICES Journal of Marine Science* 70.1 (2013): 34-45.

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(https://www.iucnredlist.org/

Effectiveness of the West Hawai'i Regional Fishery Management Area (WHRFMA) that overall fish populations of targeted aquarium fish species increased significantly in West Hawaii over 20 years. “Overall Yellow Tang abundance in the 30’-60’ depth range over the entire West Hawai'i coast is estimated to have increased by over 3.4 million fish from 1999/2000 to 2017/2018 (150% increase) to a current population of about 5.7 million fish within this depth range alone. Over time, management and habitat increases due to coral growth contribute to increased fish populations. Overall Kole abundance in the 30’-60’ depth range over the entire West Hawai'i coast is estimated to have increased 118% (>5.1 million fish) during this time period with a current estimated population of almost 9.6 million fish. As with Yellow Tang, summer 2014 recruitment for Kole in many areas was very strong.

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Aquarium Sciences and Conservation 3 (2001): 151-169.

Tissot, Brian N., William J. Walsh, and L. E. Hallacher. "The effectiveness of marine protected areas and the impacts of aquarium fish collecting in Hawai'i." *Hawaii Coral Reef Initiative, University of Hawaii* 1 (2002).

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Hoggarth, Daniel D. *Stock assessment for fishery management: A framework guide to the stock assessment tools of the fisheries management and science programme*. No. 487. Food & Agriculture Org., 2006.

DAR BLNR Presentation 2024 https://youtu.be/djjtIsvg7qs?feature=shared

Oahu there is a much greater refuge area than West Hawaii. Sources; 2013 By
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Meta-Analysis Hawaii, & Pacific Fisheries, Environmental Review, and Global Warming 2025 Report

Sustainability is Key to Hawaii's future. As the most isolated island in the world, Hawaii is too dependent on tourism, the military, and other non-sustainable, unreliable economic sources.

Marine fish are Hawaii's most renewable resource. Opah Moon Fish produces 300 million eggs a year per pair. Tuna produce 5 million to 15 million fry per female per spawn. Reef fish produce tens of thousands to millions of fry per spawn per female. Fish can be sustainably managed and renewed through current fishing practices. We must support a managed sustainable fishery to create a more sustainable society, especially in isolated Hawaii.

In 2022, **90 percent of all US fishery stocks** did not exceed their annual catch limits and **are considered sustainable,** according to a NOAA report. US managed fisheries are the best managed fisheries in the world. Yet we import 80 percent of our seafoods into Hawaii! Why?

Since the introduction of the first men to Hawaii in 400 A.D., land-based species have resulted in over 100 endemic plant species, 30 bird species, 74 insect species, and 41 tree snails becoming endangered or extinct. Insects, Birds, snails, and many others are listed as Hawaii IUCN red species of concern. In 2023 8 more birds were removed from the Federal Lists of Endangered and Threatened Wildlife and Plants due to their confirmed extinction.

Marine Fish are more immune to global warming impacts, and **No Pacific marine fish species have become extinct over the past historical period. No marine fish are on the IUCN red list of endangered species. Moreover, almost all of Hawaii's marine fishes are listed as species of IUCN "Least Concern." The lowest conservation level there is.**

Looking at the marine species extinctions of the past five global extinction-level events, marine fish are more immune to global impacts and will out-survive land-based species. It should be noted, however, that some larger lower reproductive predators, especially marine mammals, and their low, long reproductive cycles make them more vulnerable than broadcast-spawning highly reproductive marine fish species.

Marine fish's vast geographical distribution, due to broadcast breeding and larval distribution over as much as five thousand miles and even other oceans like the Atlantic and Indian Ocean from and to Hawaii, makes them much *less vulnerable* to fishing and environmental impacts. Marine fish studied in aquariums show that they are more resistant to global warming temperature changes, pH changes, salinity changes, and other ecological changes than land-based species. For example, Tuna and many other species are found in all oceans of the world. Ocean Depth habitat range, the latitude of the Hawaiian Islands chain from 19 degrees to 28 degrees latitude, and 1500 miles of 132 atolls, reefs, and shoals create a vast, unique habitat range protecting Hawaii's ocean biodiversity. Seventy percent of the earth is ocean, making marine fish in Hawaii less vulnerable to point-source pollution and global warming.

The Hawaii Sustainable Seafood Industry and fisheries generate around $867 million in annual sales impacts, making it a significant contributor to the state's economy, with the majority of this value coming from the high-value, a low-volume longline fishery that is considered the largest food-producing industry in Hawaii. Small Nearshore fisheries without the Aquarium Fishery 53 million benefits are worth 16 million annually, and the Tuna Fishery is worth 100 million annually.

Along with agriculture, Managed Marine Fishing and Mariculture could be very valuable and sustainable resources for Hawaii's increased sustainability. Pisciculture is a type of aquaculture that consists of fish farming to obtain fish products as food, and this could greatly lessen our dependence on imported foods and the carbon footprint imports create.

Reports show **global aquaculture production** (including aquatic plants) in 2016 was 110.2 million tonnes, with the first sale value estimated at US$244 billion. Three years later, in 2019, the reported output from global aquaculture operations was over 120 million tonnes, valued at US$274 billion. Increased Aquafarming and managed fisheries should be Hawaii's "Blue Revolution" sustainable future.

Hawaii could greatly benefit from the 2.15 billion per year ornamental marine fish trade and the **207- billion-dollar** United States pet trade, which has grown from 100 billion in just a few years.

The value of Hawaii's nearshore oceans is worth 15.3 billion dollars in highly renewable resources in 2024, with a current 50% estimated increase every 20 years, which means one of The state of Hawaii's most valuable resources is our Ocean. *Tourism impacts are Hawaii's biggest ocean ecological offender and the largest source of Carbon Footprint and is not sustainable*.

Reports show global aquaculture production (including aquatic plants) in 2016 was 110.2 million tonnes, with the first sale value estimated at US$244 billion. Three years later, in 2019 the reported output from global aquaculture operations was over 120 million tonnes valued at US$274 billion. Managing fisheries to their safest environmental output, improved ocean marine management science, and Aquafarming should be Hawaii's "Blue Revolution" to ensure a sustainable future.

The aquarium fishery, with its higher biomass value, lower biomass remaoval and sustainable, highly renewable resources, should be utilized to its fullest to aid the state's plan for a sustainable future.

University of Hawai‘i Economic Research Organization report in 2024 by UHERO.

“Hawai‘i‘s economy depends heavily on tourism and is therefore vulnerable to sudden drops in visitor numbers and inconsistent and slow growth in tourism revenue for the past 30 years”. The University of Hawai‘i Economic Research Organization (UHERO) analyzes the variety of industries across counties in the U.S. and Hawai‘i to identify potential opportunities to diversify the state's economy.

What UHERO found based on industries already in Hawai‘i, the study shows Hawai‘i has great potential for ocean- based industries—such as *fishing, fish farming* and hatcheries, boat building, port and harbor operations, and seafood packaging. Diversifying into these industries can create long-term stability and support growth beyond tourism.”

With science supporting the sustainability of the aquarium fishery an approval of fishery permits could aid the state in its greatly needed shift to sustainable renewable resource uses.

Out of the national 277-billion-dollar pet industry, Hawaii pet owners spent 355 million dollars on pets in 2021. Providing 21.8 million state tax revenues and 27.3 million local tax revenues. Hawaii residents have 1.7 pets per household on average. Nearly 57% of Hawaii households have one pet. That is 11% of U.S. household’s fish. Taping into the sustainable renewable income aquarium fishing can provide sustainable economic benefits. **Marine fish used as pets are worth per fish as much as % 400 more than those similar fish used for food purposes.** Pet fish leave breeders' sizes to make it a “**Model Fishery**.” Declines in food fish near shore near humane populated areas have not been seen in reef fish used for aquarium purposes.

DNA Genetic Biodiversity and Hawaii Fisheries.

The key to lowering the huge carbon footprint of the most isolated populated area in the world is using our renewable resources to their maximum potential while maintaining sustainability. While tourism is essential to our economy, **it is not sustainable**, it is vulnerable, and it is Hawaii’s largest carbon footprint source.

Human survivability and a sustainable future depend heavily on transitioning to and maximizing renewable resources while understanding and managing our dependence on non-renewable resources.

The idea that DNA genetic diversity in Hawaii's aquarium fishery is significantly affected does not hold water scientifically.

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***Broadcast-breeding marine fish are the most biodiverse species on the planet due to their ability to disperse new DNA diversity over long distances and interconnect all the Hawaiian Islands*.**

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Support sustainable, highly renewable, valuable fisheries (Ocean Value is well over 14 billion of sustainable, highly renewable resources). However, their significant economic contributions to Hawaii are not being used due to user conflict, bias, and propaganda. Science is being perverted, and facts are being distorted. DAR's and numerous scientists' recommendations, at every BLNR hearing to pass the EIS and at every legislature Bill regarding the fishery to give out aquarium fish permits, have been politically stalled by BLNR and the Hawaii State Legislature. **Facts, not Fiction, should be the basis of decision-making.**

I highly suggest you also utilize fishermen in a working group to aid this stock assessment. We must understand our stocks to maintain fisheries sustainably and maximize their economic benefits to the state, so funding DAR on this is more essential than any other Earth Day topic you will address!

If overall populations were declining, deeper reserves were affected, and statewide populations were affected, then DNA diversity could be impacted. But Hawaii's aquarium fishery shows population increases, not declines.

Marine species from deeper areas can repopulate. Many species, like yellow tangs, can be found at depths exceeding 200 feet, and many collected fish live in ecosystems as deep as 600 feet. Also, baby fry returns to Hawaii's reefs at very deep depths and slowly migrates to the shallows. Yellow tangs have been found as far away as the north Philippines Islands, and there is genetic connectivity.

All of Hawaii's collected marine fish species are broadcast breeders. Fish thousands of miles away can contribute new DNA to fish populations. Many of Hawaii's fish species came in on ocean currents from Japan 4000 miles away. Breeding biodiversity in areas where fishing occurs is not affected because of deeper "**Deep Refuge**" areas hold reserve marine fish in uncollected areas. Fish are not monogamous and breed in groups, creating more biodiversity than other species.

In areas where aquarium fish collection occurs both on Oahu and in West Hawaii closed to fishing reserves provide a source for new genetic biodiversity. Fish migrate along the coast, and many species have migrated hundreds of miles in search of food, even between Islands.

Larger breeder fish and smaller fish provide DNA sources that remain in collected areas; generally, only smaller fish are collected to ensure long-term DNA biodiversity and high populations of quick population-renewing breeders.

Conclusion: Multiple fish sources for renewed DNA biodiversity are available to ensure reef fish genetic biodiversity counter the harvest in Hawaii aquarium fish collection.

Renewable Resources:

These resources can be replenished naturally over time, often at a rate that matches or exceeds consumption. Examples include solar energy, wind power, water, and sustainably harvested timber.

Why is Transitioning to Renewable Resources Key?

- **Sustainability:**

  Renewable resources are inherently sustainable because they can be replenished, unlike non-renewable resources which are finite and can be depleted.

□ □ **Environmental Benefits:**

Burning fossil fuels for energy releases harmful greenhouse gasses, contributing to climate change and air pollution. Renewable energy sources, on the other hand, produce significantly lower emissions, helping to combat climate change and improve air quality.

□ □ **Energy Security:**

Relying on a limited number of non-renewable resources can make a country vulnerable to price fluctuations and geopolitical instability. Diversifying energy sources with renewables can improve energy security.

□ □ **Economic Opportunities:**

The renewable energy sector is growing rapidly, creating new jobs and economic opportunities.

□ □ **Health Benefits:**

Switching to clean energy sources like wind and solar can help reduce air pollution, which is a major cause of respiratory and cardiovascular diseases.

□ □ **Resource Depletion:**

Continued reliance on non-renewable resources leads to their depletion, which can have serious consequences for future generations

The Hawaii Sustainable Seafood Industry and fisheries generate around $867 million in annual sales impacts, making it a significant contributor to the state's economy, with the majority of this value coming from the high-value, a low-volume longline fishery

that is considered the largest food-producing industry in Hawaii. Small Nearshore fisheries without the Aquarium Fishery 53 million benefits are worth 16 million annually, and the Tuna Fishery is worth 100 million annually.

Along with agriculture, Managed Marine Fishing and Mariculture could be very valuable and sustainable resources for Hawaii's increased sustainability. Pisciculture is a type of aquaculture that consists of fish farming to obtain fish products as food, and this could greatly lessen our dependence on imported foods and the carbon footprint imports create.

Reports show **global aquaculture production** (including aquatic plants) in 2016 was 110.2 million tonnes, with the first sale value estimated at US$244 billion. Three years later, in 2019, the reported output from global aquaculture operations was over 120 million tonnes, valued at US$274 billion. Increased Aquafarming and managed fisheries should be Hawaii's "Blue Revolution" sustainable future.

Hawaii could greatly benefit from the 2.15 billion per year ornamental marine fish trade and the **207- billion-dollar** United States pet trade, which has grown from 100 billion in just a few years.

The value of Hawaii's nearshore oceans is worth 15.3 billion dollars in highly renewable resources in 2024, with a current 50% estimated increase every 20 years, which means one of The state of Hawaii's most valuable resources is our Ocean. *Tourism impacts are Hawaii's biggest ocean ecological offender and the largest source of Carbon Footprint and is not sustainable*.

Reports show global aquaculture production (including aquatic plants) in 2016 was 110.2 million tonnes, with the first sale value estimated at US$244 billion. Three years later, in 2019 the reported output from global aquaculture operations was over 120 million tonnes valued at US$274 billion. Managing fisheries to their safest environmental output, improved ocean marine management science, and Aquafarming should be Hawaii's "Blue Revolution" to ensure a sustainable future.

The aquarium fishery, with its higher biomass value, lower biomass remaoval and sustainable, highly renewable resources, should be utilized to its fullest to aid the state's plan for a sustainable future.

University of Hawai'i Economic Research Organization report in 2024 by UHERO.

"Hawai'i's economy depends heavily on tourism and is therefore vulnerable to

sudden drops in visitor numbers and inconsistent and slow growth in tourism revenue for the past 30 years". The University of Hawai'i Economic Research Organization (UHERO) analyzes the variety of industries across counties in the U.S. and Hawai'i to identify potential opportunities to diversify the state's economy.

What UHERO found based on industries already in Hawai'i, the study shows Hawai'i has great potential for ocean- based industries—such as *fishing, fish farming* and hatcheries, boat building, port and harbor operations, and seafood packaging. Diversifying into these industries can create long-term stability and support growth beyond tourism."

With science supporting the sustainability of the aquarium fishery an approval of fishery permits could aid the state in its greatly needed shift to sustainable renewable resource uses.

Out of the national 277-billion-dollar pet industry, Hawaii pet owners spent 355 million dollars on pets in 2021. Providing 21.8 million state tax revenues and 27.3 million local tax revenues. Hawaii residents have 1.7 pets per household on average. Nearly 57% of Hawaii households have one pet. That is 11% of U.S. household's fish. Taping into the sustainable renewable income aquarium fishing can provide sustainable economic benefits. **Marine fish used as pets are worth per fish as much as % 400 more than those similar fish used for food purposes.** Pet fish leave breeders' sizes to make it a "**Model Fishery**." Declines in food fish near shore near humane populated areas have not been seen in reef fish used for aquarium purposes.

DNA Genetic Biodiversity and Hawaii Fisheries.

The key to lowering the huge carbon footprint of the most isolated populated area in the world is using our renewable resources to their maximum potential while maintaining sustainability. While tourism is essential to our economy, **it is not sustainable**, it is vulnerable, and it is Hawaii's largest carbon footprint source.

Human survivability and a sustainable future depend heavily on transitioning to and maximizing renewable resources while understanding and managing our dependence on non-renewable resources.

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What About the Survivability of Aquarium Fishes

Why is it OK to Kill a fish but not OK to keep the same fish in an Aquarium?

"fish can and do live much longer lives in captivity than in the wild, not surprising given the absence of predators (in most cases), the unlimited amount of food available, and the lack of disease." Link to full article: https://reefs.com/magazine/aquarium-fish-longevity/

The Emily Munday study followed 200 yellow tangs from West Hawaii for two years, and there was 100% survivability.

Watch these educational, **amazing videos** from Hawaii's Marine biologist researchers.

Amazing Videos Must Watch: Educational

West Hawaii Commercial Aquarium Fishery Presentations Department Of Land and Natural Resources DAR State of Hawaii presentation confirming the low impact of the fishery on April 12th, 2024, presentation. DAR Researchers recommend giving out aquarium fish permits. BLNR does not give out permits!

Non-embedded hyperlink: https://www.youtube.com/watch?v=djjtIsvg7qs&t=11s

Aquarium Fishery; Scientists Hawaii Speak Out Researchers explain how Earth justice lies in closing the fishery and expose Rene Umber and Snorkel Bob's misinformation campaign against it. The DAR head explained decades of research on fishery.

Non-embedded hyperlink: https://www.youtube.com/watch?v=AU_WZOyJzqk&t=9s

Fishery Sustainable Dr. Bill Walsh, Richard Pyle and NOAA Video

Non-embedded hyperlink: https://www.youtube.com/watch?v=50L6JcMOVLQ&t=219s

Source in-text links and now below:

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Oahu there is a much greater refuge area than West Hawaii. Sources; 2013 By Friedlander, Alan M. (Alan Marc) ; Donovan, Mary K. ; Stamoulis, Kostantinos ; ... https://repository.library.noaa.gov/view/noaa/907/noaa_907_DS1.pdf

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TESTIMONY ON SB2374 WITH SERIOUS CONCERNS
Establishing the Blue Economy Working Group

House Committee on Economic Development & Technology
Friday, February 6, 2026

Aloha Members of the Agriculture and Environment Committee and Members of the Economic Development and Tourism Committee,

I support Hawai‘i's blue ocean economy, but I have serious concerns about SB2374 as currently written. While this bill only establishes a temporary working group to study marine-based economic activities, the framework it creates could pave the way for policies that **fast-track extractive industries while sidelining environmental protections under the banner of "removing barriers to innovation."**

The working group is tasked with evaluating opportunities to expand funding for blue economy projects and identifying "favorable public policies" for development. Without clear guardrails in the bill's language, this process could recommend eliminating regulatory and permitting requirements that currently protect our ocean ecosystems. Environmental impact assessments, water quality reviews, and cultural requirements could all be labeled as barriers and targeted for removal in the working group's final recommendations.

The working group's composition raises serious concerns about **whose voices will shape these recommendations**. Of the eleven core members, six are government agency heads focused on economic development, energy, and agriculture, with only two seats explicitly dedicated to environmental perspectives, one for marine ecosystem restoration/management and one for environmental preservation nonprofits. **There are no guaranteed seats for subsistence fishers, coastal community representatives, or independent marine scientists** who aren't tied to development interests. The chairperson from the Department of Business, Economic Development, and Tourism holds discretionary power to invite additional members, but community voices should be mandatory, not optional.

The bill instructs the working group to evaluate projects that "align with the State's decarbonization and restorative food production goals" and identify practices that follow "blue economic principles" aligned with "Hawaii's cultural foundations." **These phrases sound promising, but the bill provides no definitions,** science-based metrics, or enforcement mechanisms to ensure recommendations actually protect our ocean ecosystems. Without these guardrails, "sustainable" and "restorative" become whatever industry says they are, and we could see harmful recommendations for industrial aquaculture polluting coastal waters with fish antibiotics, reef damage, and deep-sea mining framed as climate innovation while devastating ocean ecosystems.

The bill also fails to **ensure meaningful community engagement in this study process.** The working group will submit one report to the Legislature before dissolving in June 2027, but there are no requirements for public hearings, community input periods, or transparency mechanisms during the study phase. Communities won't know what recommendations are being developed until the report is already submitted to lawmakers. By then, it may be too late to influence the policy direction.The bill needs to explicitly center regenerative systems like fishponds, limu cultivation, and community-based fisheries management, traditional methods that have sustained and can continue to sustain Hawai‘i's food system without degrading our ocean resources.

Without these protections, I respectfully but firmly oppose SB2374. **As currently written, the bill sets up a study process that prioritizes economic growth over ecosystem health and biodiversity.** As the extinction capital of the world, Hawai‘i cannot afford a blue economy framework that fails to center

environmental balance and community wellbeing. **With the right amendments, this working group could instead develop recommendations that truly strengthen our local food systems in ways that sustain our population, honor traditional practices, and reinvest locally by creating a meaningful multiplier effect for our communities.**

Respectfully,

Merideth Welch
Policy Advocacy Committee Chair,
U.S. Youth Leadership Council for Our Ocean

SB-2374
Submitted on: 2/6/2026 2:28:21 PM
Testimony for EDT on 2/9/2026 3:05:00 PM

Submitted By	Organization	Testifier Position	Testify
Glen Kagamida	Individual	Support	Written Testimony Only

Comments:

SUPPORT

SB-2374
Submitted on: 2/11/2026 3:42:07 PM
Testimony for EDT on 2/13/2026 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Jacob Wiencek	Individual	Support	Written Testimony Only

Comments:

Aloha Committee Members,

I **SUPPORT** this proposal to help sustainably manage and develop our natural resources and I urge the committee to **SUPPORT** this proposal.