

JAN 21 2026

A BILL FOR AN ACT

RELATING TO AQUACULTURE DEVELOPMENT.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The legislature finds that the State's
2 aquaculture industry has experienced significant decline over
3 the past decade. Recent statistics reflect that the aquaculture
4 industry's value decreased seventeen per cent from 2018 to 2023
5 and a stagnant number of aquaculture farms have been operating
6 over the past decade. Further, exports of specific
7 pathogen-free shrimp broodstock, a globally significant Hawaii
8 product, has shown a significant decline since 2015. The
9 legislature further finds that this decline has occurred despite
10 the State having comparative advantages in tropical aquaculture,
11 including pristine water resources, established research
12 infrastructure such as the Natural Energy Laboratory of Hawaii
13 Authority and the university of Hawaii, and proximity to premium
14 markets.

15 The legislature recognizes that Act 96, Session Laws of
16 Hawaii 2025 (Act 96), increased the transient accommodations
17 tax, colloquially termed a "green fee", to generate revenues for



1 environmental stewardship, climate and hazard resilience, and
2 sustainable tourism purposes. The legislature finds that
3 aquaculture development, particularly restorative aquaculture
4 emphasizing ecosystem services, directly advances all three
5 purposes intended for the funds generated via Act 96, with
6 documented benefits including: water quality improvement through
7 bivalve filtration and seaweed nutrient uptake; carbon
8 sequestration through seaweed cultivation; ocean acidification
9 buffering through localized pH elevation during seaweed
10 photosynthesis; habitat provision through oyster reef and
11 fishpond structures; support for native species including
12 'ama'ama (mullet), awa (milkfish), and indigenous limu varieties;
13 and support for local food systems that reduce environmental
14 impacts from food transportation while enhancing visitor
15 experiences through authentic agricultural tourism.

16 The legislature further finds that sustainable aquaculture
17 expansion simultaneously addresses multiple state policy
18 priorities, including: food security by reducing the State's
19 ninety per cent food import dependency; climate resilience by
20 providing nature-based coastal protection and adaptive food
21 production systems less vulnerable to terrestrial climate



1 impacts; rural economic development by creating employment
2 opportunities in underserved communities; workforce development
3 by establishing career pathways in emerging blue economy
4 sectors; and environmental justice by supporting community-based
5 resource management and subsistence practices.

6 Accordingly, the purpose of this Act is to require the
7 department of agriculture and biosecurity to:

8 (1) Establish a four-year restorative aquaculture
9 development program to reduce aquaculture permit
10 processing time, support restorative aquaculture
11 infrastructure expansion, increase aquaculture
12 education and its workforce, and pursue federal
13 aquaculture grants;

14 (2) Establish three pilot demonstration sites for
15 restorative aquaculture; and

16 (3) Convene a restorative aquaculture advisory council.

17 SECTION 2. (a) The department of agriculture and
18 biosecurity shall establish and implement a restorative
19 aquaculture development program. The program shall prioritize:

20 (1) Restorative aquaculture operations over non-
21 restorative commercial aquaculture;



- 1 (2) Native species and traditional Native Hawaiian
2 systems, including loko i'a, indigenous limu varieties,
3 and endemic Native Hawaiian aquatic species;
- 4 (3) Equitable participation and benefit-sharing with
5 Native Hawaiian practitioners, small-scale producers,
6 and underrepresented communities; and
- 7 (4) Public-private partnerships that leverage federal
8 funds, foundation support, and private investment.
- 9 (b) The program shall establish measurable performance
10 objectives to be achieved no later than June 30, 2030,
11 including:
- 12 (1) Reduction of average aquaculture permit processing
13 time to a target range of twelve to fifteen months,
14 provided that the procedures shall comply with section
15 91-13.5, Hawaii Revised Statutes;
- 16 (2) Pursuing at least \$10,000,000 in federal competitive
17 grants for aquaculture development from the following
18 sources:
- 19 (A) National Oceanic and Atmospheric Administration
20 (NOAA) coastal partnership grants;
- 21 (B) NOAA aquaculture research competitive grants;



(C) United States Department of Agriculture (USDA)
Natural Resources Conservation Service programs;

(D) USDA Rural Energy for America program;

(E) United States National Science Foundation and
Department of Energy programs supporting
sustainable marine systems and climate
resilience; and

(F) Other federal programs supporting fisheries
restoration, watershed management, and blue
carbon research;

provided that the department of agriculture and
biosecurity shall coordinate with the university of
Hawaii and private sector partners to develop
competitive grant proposals and manage federal funding
partnerships;

(3) Development of not less than twenty-five new or
significantly expanded restorative aquaculture
operations, including:

(A) Planning, design, and construction of shared-use
hatchery facilities for native and restorative
aquaculture species, with priority for



1 small-scale producers and indigenous Native
2 Hawaiian species including limu, 'ama'ama, awa,
3 and 'o'opu;

4 (B) Development of shared-use processing,
5 aggregation, and cold storage facilities
6 accessible to small-scale producers;

7 (C) Establishment and support of aquaculture
8 development zones with coordinated permitting and
9 shared infrastructure;

10 (D) Development of infrastructure to establish or
11 restore not less than fifteen traditional Native
12 Hawaiian fishponds statewide, integrating
13 subsistence, cultural, and controlled aquaculture
14 production and support for their operations,
15 including water control structures, sluice gates,
16 and educational facilities; and

17 (E) Capital improvements at existing state
18 facilities, including the Natural Energy
19 Laboratory of Hawaii Authority, to accommodate
20 additional aquaculture tenants;



(4) Facilitating the creation of not less than two hundred fifty direct jobs in aquaculture and related value-chain sectors, especially in rural communities, including:

(A) Development and delivery of aquaculture training programs and youth engagement, including curriculum for secondary schools and community colleges;

(B) Apprenticeship programs connecting students with commercial operations, including utilization of the farmer apprentice mentoring program under section 141-15, Hawaii Revised Statutes, with an emphasis on native species, biosecurity, and restoration techniques;

(C) Technical assistance for small-scale and Native Hawaiian practitioners, including business planning, production techniques, regulatory compliance, and market development;

(D) Scholarships and stipends for students pursuing aquaculture education, with priority for Native



- 1 Hawaiian or economically disadvantaged students;
2 and
3 (E) Support for traditional knowledge transmission
4 through mentorship programs pairing experienced
5 traditional Native Hawaiian fishpond
6 practitioners with new practitioners;
7 (5) Achieving measurable environmental benefits including:
8 (A) Restoration of not less than two hundred acres of
9 coastal aquaculture habitat associated with
10 restorative aquaculture systems;
11 (B) Deployment of restorative aquaculture systems
12 demonstrating water quality improvement in not
13 less than three embayments;
14 (C) Documentation of carbon sequestration through
15 seaweed cultivation totaling not less than two
16 thousand five hundred tons of carbon dioxide
17 annually by 2030; and
18 (D) Establishment of baseline monitoring protocols
19 for long-term assessment of aquaculture ecosystem
20 services; and



(6) Demonstration of economic viability of restorative aquaculture through production metrics, market development, and value-chain analysis supporting long-term private sector participation.

(c) The department of agriculture and biosecurity shall submit a report to the legislature no later than twenty days prior to the convening of the regular sessions of 2027, 2028, 2029, and 2030 on:

(1) Progress toward achieving the performance objectives specified in subsection (b), with disaggregated data by island and operation type;

(2) Federal grant applications submitted and awards received, including funding amounts and project descriptions;

(3) Infrastructure development projects completed or in progress, including location, capacity, and utilization rates;

(4) Number of new commercial aquaculture operations supported, categorized by scale and type;

(5) Jobs created, including number of positions, wage ranges, and demographic characteristics;



- 1 (6) Environmental benefits documented, including:
- 2 (A) Water quality improvements measured through
- 3 nitrogen, phosphorus, and turbidity reductions;
- 4 (B) Carbon sequestration quantified through biomass
- 5 production data;
- 6 (C) Habitat restoration acreage by location and
- 7 habitat type; and
- 8 (D) Native species production volumes;
- 9 (7) Support provided to Native Hawaiian practitioners and
- 10 traditional aquaculture systems, including number of
- 11 traditional Native Hawaiian fishponds supported,
- 12 technical assistance provided, and funding allocated;
- 13 (8) Workforce development activities including training
- 14 programs delivered, participants served, and
- 15 employment outcomes;
- 16 (9) Stakeholder engagement activities including advisory
- 17 council meetings, community consultations, and
- 18 feedback received; and
- 19 (10) Challenges encountered and strategies for addressing
- 20 those challenges.



1 (d) The department of agriculture and biosecurity shall
2 contract with an independent third-party to conduct an
3 evaluation of the restorative aquaculture development program
4 under subsection (a) no later than December 31, 2027. The
5 evaluation shall:

6 (1) Assess progress toward performance objectives with
7 analysis of factors contributing to success or
8 hindering achievement;

9 (2) Assess return on investment for infrastructure
10 development, including utilization rates and economic
11 impact;

12 (3) Evaluate federal funding leverage achieved and
13 competitive positioning relative to other states;

14 (4) Validate environmental benefits through scientific
15 monitoring and third-party verification;

16 (5) Assess economic impact including jobs created,
17 industry value growth, and multiplier effects;

18 (6) Evaluate equity outcomes including support for
19 small-scale and Native Hawaiian practitioners;

20 (7) Identify best practices and derive insights to inform
21 future practices; and



(8) Provide recommendations for program adjustments or continuation.

The findings of the evaluation shall be submitted to the legislature no later than twenty days prior to the convening of the regular session of 2028.

SECTION 3. The department of agriculture and biosecurity shall establish three pilot demonstration sites for restorative aquaculture with verified carbon and ecosystem service monitoring protocols. The monitoring protocols shall measure:

- (1) Net ecosystem production and carbon burial rates using accepted field protocols;
- (2) Water quality improvements;
- (3) Habitat provision and biodiversity benefits; and
- (4) Community economic and food security outcomes.

Monitoring data shall be made publicly available and used to support carbon tax credit applications, federal funding proposals, and adaptive management decisions. Baseline data collected shall inform long-term climate finance opportunities and blue carbon market participation.

SECTION 4. (a) The department of agriculture and biosecurity shall convene a restorative aquaculture advisory



1 council. The advisory council shall consist of the following
2 members:

3 (1) The chairperson of the board of agriculture and
4 biosecurity, who shall serve as the chairperson of the
5 advisory council;

6 (2) representatives from relevant state agencies,
7 including the department of land and natural
8 resources, department of health, and office of
9 planning and sustainable development;

10 (3) representatives from each county planning
11 department;

12 (4) One member of the house of representatives, to
13 appointed by the speaker of the house;

14 (5) One member of the senate, to appointed by the
15 president of the senate;

16 (6) representatives from the university of Hawaii
17 with aquaculture research expertise;

18 (7) representatives from commercial aquaculture
19 operations, including at least one representative from
20 each county, to be invited by the chairperson;



- 1 (8) representatives from small-scale aquaculture
2 operations, including not less than two Native
3 Hawaiian practitioners;
- 4 (9) representatives from Native Hawaiian
5 organizations engaged in traditional aquaculture
6 practices, to be invited by the chairperson;
- 7 (10) representatives from environmental organizations
8 with expertise in marine conservation and restoration,
9 to be invited by the chairperson; and
- 10 (11) One representative from each county with a
11 demonstrated interest in restorative aquaculture, to
12 be invited by the chairperson.
- 13 (b) The restorative aquaculture advisory council shall
14 meet at least quarterly to:
- 15 (1) Advise on project selection, funding allocation, and
16 performance metrics;
- 17 (2) Monitor progress toward the restorative aquaculture
18 development program objectives and environmental
19 stewardship;
- 20 (3) Facilitate knowledge exchange and best practice
21 sharing; and



(4) Support federal funding partnerships and grant applications.

SECTION 5. As used in this Act, "restorative aquaculture" means aquaculture operations that demonstrably improve environmental conditions or provide measurable ecosystem services, including:

(1) Water quality improvement through bivalve filtration or nutrient reduction via macroalgae cultivation;

(2) Carbon sequestration or cycling through seaweed and macroalgae systems;

(3) Habitat restoration and creation through oyster reef structures or macroalgae bed or traditional fishpond systems;

(4) Native species recovery, including indigenous limu varieties, 'ama'ama (mullet), awa (milkfish), 'o'opu, and other Native Hawaiian species; and

(5) Climate resilience infrastructure providing coastal wave attenuation, acidification buffering, or adaptive food production systems;



1 as a primary or co-equal production objective, as determined by
2 the department of agriculture and biosecurity in consultation
3 with the department of land and natural resources.

4 SECTION 6. There is appropriated out of the general
5 revenues of the State of Hawaii the sum of \$4,500,000 or so much
6 thereof as may be necessary for fiscal year 2026-2027 to be
7 expended as follows:

8 (1) \$2,000,000 for aquaculture infrastructure development;
9 provided that twenty-five per cent of funds shall be
10 directed to support Native Hawaiian practitioners and
11 traditional aquaculture systems;

12 (2) \$600,000 for aquaculture workforce development and
13 technical assistance; provided that twenty-five per
14 cent of funds shall be directed to support Native
15 Hawaiian practitioners and traditional aquaculture
16 systems;

17 (3) \$1,000,000 for the pursuit of federal grants,
18 including:

19 (A) Staffing for federal grant identification,
20 development, and management;



- 1 (B) Matching funds for competitive federal grants
2 that may be awarded under the proposed Marine
3 Aquaculture Research for America Act or related
4 programs;
- 5 (C) Consultant services for grant proposal
6 development;
- 7 (D) Partnership development with the university of
8 Hawaii, federal agencies, and private sector
9 entities; and
- 10 (E) Compliance with federal grant reporting and
11 performance requirements;
- 12 (4) \$500,000 for the establishment, operation, and
13 monitoring of restorative aquaculture pilot
14 demonstration sites; and
- 15 (5) \$400,000 for the establishment and administration of
16 the restorative aquaculture development program,
17 including but not limited to:
- 18 (A) Program coordination activities;
- 19 (B) Aquaculture advisory council support;
- 20 (C) Program technical assistance;
- 21 (D) Program performance reporting; and



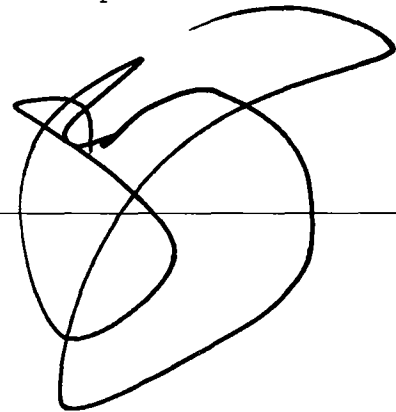
1 (E) Stakeholder engagement and community outreach.

2 The sum appropriated shall be expended by the department of
3 agriculture and biosecurity for the purposes of this Act.

4 SECTION 7. This Act shall take effect on July 1, 2026;
5 provided that sections 2, 3, and 4 shall be repealed on June 30,
6 2030.

7

INTRODUCED BY: _____

A large, stylized handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke extending to the right.

S.B. NO. 2349

Report Title:

DAB; Restorative Aquaculture Development Program; Workforce Development; Restorative Aquaculture Advisory Council; Appropriation; Reports

Description:

Requires the Department of Agriculture and Biosecurity to: (1) Establish a four-year Restorative Aquaculture Development Program to reduce aquaculture permit processing time, support aquaculture infrastructure expansion, increase the aquaculture workforce, and pursue federal aquaculture grants; (2) Establish three pilot demonstration sites for restorative aquaculture; and (3) Convene a Restorative Aquaculture Advisory Council. Requires reports to the Legislature. Appropriates funds.

The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.

