
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 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 temporarily:

- 8 (1) Establish a restorative aquaculture development
9 program to reduce aquaculture permit processing time,
10 support restorative aquaculture infrastructure
11 expansion, increase aquaculture education and its
12 workforce, and pursue federal aquaculture grants;
- 13 (2) Establish three pilot demonstration sites for
14 restorative aquaculture; and
- 15 (3) Convene a restorative aquaculture advisory council.

16 SECTION 2. As used in this Act, "restorative aquaculture"
17 means aquaculture operations that demonstrably improve
18 environmental conditions or provide measurable ecosystem
19 services, including:

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



- 1 (2) Carbon sequestration or cycling through seaweed and
- 2 macroalgae systems;
- 3 (3) Habitat restoration and creation through oyster reef
- 4 structures or macroalgae bed or traditional fishpond
- 5 systems;
- 6 (4) Native species recovery, including indigenous limu
- 7 varieties, ‘ama‘ama (mullet), awa (milkfish), ‘o‘opu,
- 8 and other Native Hawaiian species; and
- 9 (5) Climate resilience infrastructure providing coastal
- 10 wave attenuation, acidification buffering, or adaptive
- 11 food production systems;
- 12 as a primary or co-equal production objective, as determined by
- 13 the department of agriculture and biosecurity in consultation
- 14 with the department of land and natural resources.

15 SECTION 3. (a) The department of agriculture and

16 biosecurity shall establish and implement a restorative

17 aquaculture development program. The program shall prioritize:

- 18 (1) Restorative aquaculture operations over non-
- 19 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 practitioners engaged in Native Hawaiian customary and
6 traditional practices, small-scale producers, and
7 underrepresented communities; and

8 (4) Public-private partnerships that leverage federal
9 funds, foundation support, and private investment.

10 (b) The program shall establish measurable performance
11 objectives to be achieved no later than June 30, 2030,
12 including:

13 (1) Reducing the average aquaculture permit processing
14 time to a target range of twelve to fifteen months;
15 provided that the procedures shall comply with section
16 91-13.5, Hawaii Revised Statutes;

17 (2) Pursuing at least \$10,000,000 in federal competitive
18 grants for aquaculture development from the following
19 sources:

20 (A) National Oceanic and Atmospheric Administration
21 coastal partnership grants;



- 1 (B) National Oceanic and Atmospheric Administration
- 2 aquaculture research competitive grants;
- 3 (C) United States Department of Agriculture Natural
- 4 Resources Conservation Service programs;
- 5 (D) United States Department of Agriculture Rural
- 6 Energy for America program;
- 7 (E) United States National Science Foundation and
- 8 Department of Energy programs supporting
- 9 sustainable marine systems and climate
- 10 resilience; and
- 11 (F) Other federal programs supporting fisheries
- 12 restoration, watershed management, and blue
- 13 carbon research;
- 14 provided that the department of agriculture and
- 15 biosecurity shall coordinate with the university of
- 16 Hawaii and private sector partners to develop
- 17 competitive grant proposals and manage federal funding
- 18 partnerships;
- 19 (3) Development of no less than twenty-five new or
- 20 significantly expanded restorative aquaculture
- 21 operations, including:



- 1 (A) Planning, design, and construction of shared-use
2 hatchery facilities for native and restorative
3 aquaculture species, with priority for
4 small-scale producers and indigenous Native
5 Hawaiian species including limu, ‘ama‘ama, awa,
6 and ‘o‘opu;
- 7 (B) Development of shared-use processing,
8 aggregation, and cold storage facilities
9 accessible to small-scale producers;
- 10 (C) Establishment and support of aquaculture
11 development zones with coordinated permitting and
12 shared infrastructure;
- 13 (D) Development of infrastructure to establish or
14 restore no less than fifteen traditional Native
15 Hawaiian fishponds statewide, integrating
16 subsistence, cultural, and controlled aquaculture
17 production and support for their operations,
18 including water control structures, sluice gates,
19 and educational facilities; and
- 20 (E) Capital improvements at existing state
21 facilities, including the natural energy



- 1 laboratory of Hawaii authority, to accommodate
2 additional aquaculture tenants;
- 3 (4) Facilitating the creation of no less than two hundred
4 fifty direct jobs in aquaculture and related
5 value-chain sectors, especially in rural communities,
6 including:
- 7 (A) Development and delivery of aquaculture training
8 programs and youth engagement, including
9 curriculum for secondary schools and community
10 colleges;
- 11 (B) Apprenticeship programs connecting students with
12 commercial operations, including utilization of
13 the farmer apprentice mentoring program under
14 section 141-15, Hawaii Revised Statutes, with an
15 emphasis on native species, biosecurity, and
16 restoration techniques;
- 17 (C) Technical assistance for small-scale producers
18 and practitioners engaged in Native Hawaiian
19 customary and traditional practices, including
20 business planning, production techniques,
21 regulatory compliance, and market development;



- 1 (D) Scholarships and stipends for students pursuing
- 2 aquaculture education, with priority for students
- 3 studying Native Hawaiian customary and
- 4 traditional practices or economically
- 5 disadvantaged students; and
- 6 (E) Support for traditional knowledge transmission
- 7 through mentorship programs pairing experienced
- 8 practitioners engaged in Native Hawaiian
- 9 customary and traditional fishpond practices with
- 10 new practitioners;
- 11 (5) Achieving measurable environmental benefits including:
- 12 (A) Restoration of no less than two hundred acres of
- 13 coastal aquaculture habitat associated with
- 14 restorative aquaculture systems;
- 15 (B) Deployment of restorative aquaculture systems
- 16 demonstrating water quality improvement in no
- 17 less than three embayments;
- 18 (C) Documentation of carbon sequestration through
- 19 seaweed cultivation totaling no less than two
- 20 thousand five hundred tons of carbon dioxide
- 21 annually by 2030; and



- 1 (D) Establishment of baseline monitoring protocols
2 for long-term assessment of aquaculture ecosystem
3 services; and
- 4 (6) Demonstration of economic viability of restorative
5 aquaculture through production metrics, market
6 development, and value-chain analysis supporting
7 long-term private sector participation.
- 8 (c) The department of agriculture and biosecurity shall
9 submit a report to the legislature no later than twenty days
10 prior to the convening of the regular sessions of 2027, 2028,
11 2029, and 2030 on:
- 12 (1) Progress toward achieving the performance objectives
13 specified in subsection (b), with disaggregated data
14 by island and operation type;
- 15 (2) Federal grant applications submitted and awards
16 received, including funding amounts and project
17 descriptions;
- 18 (3) Infrastructure development projects completed or in
19 progress, including location, capacity, and
20 utilization rates;



- 1 (4) Number of new commercial aquaculture operations
2 supported, categorized by scale and type;
- 3 (5) Jobs created, including number of positions, wage
4 ranges, and demographic characteristics;
- 5 (6) Environmental benefits documented, including:
- 6 (A) Water quality improvements measured through
7 nitrogen, phosphorus, and turbidity reductions;
- 8 (B) Carbon sequestration quantified through biomass
9 production data;
- 10 (C) Habitat restoration acreage by location and
11 habitat type; and
- 12 (D) Native species production volumes;
- 13 (7) Support provided to practitioners engaged in Native
14 Hawaiian customary and traditional practices and
15 traditional aquaculture systems, including number of
16 traditional Native Hawaiian fishponds supported,
17 technical assistance provided, and funding allocated;
- 18 (8) Workforce development activities, including training
19 programs delivered, participants served, and
20 employment outcomes;



1 (9) Stakeholder engagement activities, including advisory
2 council meetings, community consultations, and
3 feedback received;

4 (10) Challenges encountered and strategies for addressing
5 those challenges; and

6 (11) A summary of pilot demonstration site monitoring data
7 collected pursuant to section 4, presented as a
8 distinct section of the report.

9 (d) The department of agriculture and biosecurity shall
10 contract with an independent third-party to conduct an
11 evaluation of the restorative aquaculture development program
12 established under subsection (a) no later than December 31,
13 2027. The evaluation shall:

14 (1) Assess progress toward performance objectives with
15 analysis of factors contributing to success or
16 hindering achievement;

17 (2) Assess return on investment for infrastructure
18 development, including utilization rates and economic
19 impact;

20 (3) Evaluate federal funding leveraged and competitive
21 positioning relative to other states;



- 1 (4) Validate environmental benefits through scientific
2 monitoring and third-party verification;
- 3 (5) Assess economic impact, including jobs created,
4 industry value growth, and multiplier effects;
- 5 (6) Evaluate equity outcomes, including support for
6 small-scale producers and practitioners engaged in
7 Native Hawaiian customary and traditional practices;
- 8 (7) Identify best practices and derive insights to inform
9 future practices; and
- 10 (8) Provide recommendations for program adjustments or
11 continuation.

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

15 SECTION 4. (a) The department of agriculture and
16 biosecurity shall establish three pilot demonstration sites for
17 restorative aquaculture with verified carbon and ecosystem
18 service monitoring protocols. The monitoring protocols shall
19 measure:

- 20 (1) Net ecosystem production and carbon burial rates using
21 accepted field protocols;



1 (2) Water quality improvements;
2 (3) Habitat provision and biodiversity benefits; and
3 (4) Community economic and food security outcomes.
4 Monitoring data shall be made publicly available and used to
5 support voluntary carbon tax credit applications, ecosystem
6 service payment mechanisms, federal funding proposals, and
7 adaptive management decisions. Baseline data collected shall
8 inform long-term climate finance opportunities and blue carbon
9 market participation.

10 (b) For the annual report required under subsection (c) of
11 section 3, the department of agriculture and biosecurity shall
12 include a distinct section that provides an annual summary of
13 the monitoring data collected pursuant to this section.

14 SECTION 5. (a) The department of agriculture and
15 biosecurity shall convene a restorative aquaculture advisory
16 council. The advisory council shall consist of the following
17 members:

18 (1) The chairperson of the board of agriculture and
19 biosecurity, who shall serve as the chairperson of the
20 advisory council;



- 1 (2) Three representatives from relevant state agencies,
2 including the department of land and natural
3 resources, department of health, and office of
4 planning and sustainable development, to be appointed
5 by the respective department heads;
- 6 (3) One representative from each county planning
7 department, to be appointed by the respective county
8 mayors;
- 9 (4) Two representatives from the university of Hawaii with
10 aquaculture research expertise, to be appointed by the
11 president of the university of Hawaii;
- 12 (5) Four representatives from commercial aquaculture
13 operations, including at least one representative from
14 each county, to be invited by the chairperson;
- 15 (6) Four representatives from small-scale aquaculture
16 operations, including no less than two practitioners
17 engaged in Native Hawaiian customary and traditional
18 practices, to be invited by the chairperson;
- 19 (7) One representative from Native Hawaiian organizations
20 engaged in traditional aquaculture practices, to be
21 invited by the chairperson;



1 (8) One representative from environmental organizations
2 with expertise in marine conservation and restoration,
3 to be invited by the chairperson; and

4 (9) One representative from each county with a
5 demonstrated interest in restorative aquaculture, to
6 be invited by the chairperson.

7 (b) The restorative aquaculture advisory council shall
8 meet at least quarterly to:

9 (1) Advise on project selection, funding allocation, and
10 performance metrics;

11 (2) Monitor progress toward the restorative aquaculture
12 development program objectives and environmental
13 stewardship;

14 (3) Facilitate knowledge exchange and best practice
15 sharing; and

16 (4) Support federal funding partnerships and grant
17 applications.

18 (c) The members of the restorative aquaculture advisory
19 council shall serve without compensation but shall be reimbursed
20 for expenses, including travel expenses, necessary for the
21 performance of their duties.



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

5 (1) \$ for aquaculture infrastructure
6 development; provided that twenty-five per cent of
7 funds shall be directed to support practitioners
8 engaged in Native Hawaiian customary and traditional
9 practices and traditional aquaculture systems;

10 (2) \$ for aquaculture workforce development and
11 technical assistance; provided that twenty-five per
12 cent of funds shall be directed to support
13 practitioners engaged in Native Hawaiian customary and
14 traditional practices and traditional aquaculture
15 systems;

16 (3) \$ for the pursuit of federal grants,
17 including:

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

20 (B) Matching funds for competitive federal grants
21 that may be awarded under the proposed Marine



1 Aquaculture Research for America Act or related
2 programs;

3 (C) Consultant services for grant proposal
4 development;

5 (D) Partnership development with the university of
6 Hawaii, federal agencies, and private sector
7 entities; and

8 (E) Compliance with federal grant reporting and
9 performance requirements;

10 (4) \$ for the establishment, operation, and
11 monitoring of restorative aquaculture pilot
12 demonstration sites; and

13 (5) \$ for the establishment and administration
14 of the restorative aquaculture development program,
15 including but not limited to:

- 16 (A) Program coordination activities;
- 17 (B) Restorative aquaculture advisory council support;
- 18 (C) Program technical assistance;
- 19 (D) Program performance reporting; and
- 20 (E) Stakeholder engagement and community outreach.



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

3 SECTION 7. This Act shall take effect on July 1, 2050, and
4 shall be repealed on June 30, 2030.



Report Title:

DAB; Restorative Aquaculture Development Program; Demonstration Sites; Restorative Aquaculture Advisory Council; Reports; Appropriation

Description:

Requires the Department of Agriculture and Biosecurity to: (1) Establish a 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. Sunsets 6/30/2030. Effective 7/1/2050. (SD1)

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