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# 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 aquaculture is a  
2 critical industry in the State's agricultural sector. Recent  
3 statistics reflect that while the aquaculture industry saw  
4 significant growth from 2018 to 2022, it has experienced a  
5 decline in recent years. Further, exports of specific  
6 pathogen-free shrimp broodstock, a globally significant Hawaii  
7 product, has shown a significant decline since 2015. This  
8 decline has occurred despite the State having comparative  
9 advantages in tropical aquaculture, including pristine water  
10 resources, established research infrastructure such as the  
11 Natural Energy Laboratory of Hawaii Authority and the university  
12 of Hawaii, and proximity to premium markets.

13           The legislature recognizes that Act 96, Session Laws of  
14 Hawaii 2025 (Act 96), increased the transient accommodations  
15 tax, colloquially termed a "green fee", to generate revenues for  
16 environmental stewardship, climate and hazard resilience, and  
17 sustainable tourism purposes. The legislature finds that



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

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



1 by establishing career pathways in emerging blue economy  
2 sectors; and environmental justice by supporting community-based  
3 resource management and subsistence practices.

4 Accordingly, the purpose of this Act is to require the  
5 department of agriculture and biosecurity to:

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

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

- 19 (1) Restorative aquaculture operations over non-  
20 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;



- 1 (C) United States Department of Agriculture (USDA)
- 2 Natural Resources Conservation Service programs;
- 3 (D) USDA Rural Energy for America program;
- 4 (E) United States National Science Foundation and
- 5 Department of Energy programs supporting
- 6 sustainable marine systems and climate
- 7 resilience; and
- 8 (F) Other federal programs supporting fisheries
- 9 restoration, watershed management, and blue
- 10 carbon research;
- 11 provided that the department of agriculture and
- 12 biosecurity shall coordinate with the university of
- 13 Hawaii and private sector partners to develop
- 14 competitive grant proposals and manage federal funding
- 15 partnerships;
- 16 (3) Development of not less than twenty-five new or
- 17 significantly expanded restorative aquaculture
- 18 operations, including:
- 19 (A) Planning, design, and construction of shared-use
- 20 hatchery facilities for native and restorative
- 21 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;



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

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

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

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

19 (D) Scholarships and stipends for students pursuing  
20 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



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

5 (c) The department of agriculture and biosecurity shall  
6 submit a report to the legislature no later than twenty days  
7 prior to the convening of the regular sessions of 2027, 2028,  
8 2029, and 2030 on:

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

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

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

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

20 (5) Jobs created, including number of positions, wage  
21 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 established under subsection (a) no later than December 31,  
5 2027. The 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



1 (8) Provide recommendations for program adjustments or  
2 continuation.

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

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

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

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

20 SECTION 4. (a) The department of agriculture and  
21 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 be  
13 appointed by the speaker of the house;

14 (5) One member of the senate, to be 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, to be invited by the  
4 chairperson;
- 5 (9) representatives from Native Hawaiian  
6 organizations engaged in traditional aquaculture  
7 practices, to be invited by the chairperson;
- 8 (10) representatives from environmental organizations  
9 with expertise in marine conservation and restoration,  
10 to be invited by the chairperson; and
- 11 (11) One representative from each county with a  
12 demonstrated interest in restorative aquaculture, to  
13 be invited by the chairperson.
- 14 (b) The restorative aquaculture advisory council shall  
15 meet at least quarterly to:
- 16 (1) Advise on project selection, funding allocation, and  
17 performance metrics;
- 18 (2) Monitor progress toward the restorative aquaculture  
19 development program objectives and environmental  
20 stewardship;



1 (3) Facilitate knowledge exchange and best practice  
2 sharing; and

3 (4) Support federal funding partnerships and grant  
4 applications.

5 (c) The members of the restorative aquaculture advisory  
6 council shall serve without compensation but shall be reimbursed  
7 for expenses, including travel expenses, necessary for the  
8 performance of their duties.

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

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

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

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



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

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

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

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

14 (1) \$ for aquaculture infrastructure  
15 development; provided that twenty-five per cent of  
16 funds shall be directed to support Native Hawaiian  
17 practitioners and traditional aquaculture systems;

18 (2) \$ for aquaculture workforce development and  
19 technical assistance; provided that twenty-five per  
20 cent of funds shall be directed to support Native



1 Hawaiian practitioners and traditional aquaculture  
2 systems;

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

5 (A) Staffing for federal grant identification,  
6 development, and management;

7 (B) Matching funds for competitive federal grants  
8 that may be awarded under the proposed Marine  
9 Aquaculture Research for America Act or related  
10 programs;

11 (C) Consultant services for grant proposal  
12 development;

13 (D) Partnership development with the university of  
14 Hawaii, federal agencies, and private sector  
15 entities; and

16 (E) Compliance with federal grant reporting and  
17 performance requirements;

18 (4) \$ for the establishment, operation, and  
19 monitoring of restorative aquaculture pilot  
20 demonstration sites; and



1 (5) § for the establishment and administration  
2 of the restorative aquaculture development program,  
3 including but not limited to:

- 4 (A) Program coordination activities;
- 5 (B) Restorative aquaculture advisory council support;
- 6 (C) Program technical assistance;
- 7 (D) Program performance reporting; and
- 8 (E) Stakeholder engagement and community outreach.

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

11 SECTION 7. This Act shall take effect on July 1, 2050;  
12 provided that sections 2, 3, and 4 shall be repealed on June 30,  
13 2030.



**Report Title:**

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

**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. Effective 7/1/2050. (SD1)

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