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Restoring Aquaculture Industry Advocacy in Hawaii State Government

Executive Summary

This White Paper presents the need for action to attain the significant benefits of restoring aquaculture development and advocacy as an economic development priority for Hawaii. The Hawaii Aquaculture and Aquaponics Association (HAAA) has worked closely with the State Legislature and State and County governments to provide industry advocacy and support since 1975. The 2017 aquaculture industry farm gate value of \$76.4 million dollars now places the industry third in diversified agriculture's contribution to the economy. Support is needed to achieve greater benefits to the Hawaii economy, provide healthy seafood for local markets and export, generate good jobs, complement tourism and maintain rural communities. Hawaii is recognized as a national leader in aquaculture research, planning and development. An important reason has been the proactive policy and financial support from the State government that made aquaculture a priority in the State's portfolio of economic development initiatives. Implementation was in large part through the establishment of an Aquaculture Development Program (ADP), as the industry advocate within State government. However, with declined support, ADP lost its critical advocacy role to assist industry's economic development focus. By 2018, ADP had been downsized and made a section under the Animal Industry Division of DOA and the new mission emphasized product marketing rather than broad spectrum industry development.

ADP needs to be restored to the program in the Chairpersons' Office, Department of Agriculture (DOA) to provide the high-level visibility and stature to work across Departments on a variety of issues. Encouraging commercial aquaculture is consistent with long-term State goals to enhance food security, encourage sustainable industries, diversify the economy, and support rural development. We recommend reestablishment of aquaculture and aquaponics as State priorities and components of all economic development strategies and policies to reflect this strong commitment. We recommend reestablishment of the Aquaculture Development Program to be an effective aquaculture industry facilitator and advocate within State government for statewide sustainable development and provide staffing and budget commensurate with the statewide responsibility of growing new aquaculture businesses to advance the foals described above. The HAAA Board of Directors would be pleased to provide discuss aquaculture information, and details related to implementation of these goals.

1.0 Background, Aquaculture's Role in the Economy

The Hawaii Aquaculture and Aquaponics Association (HAAA) and its predecessor organizations have provided industry advocacy and support since 1975. Over the years, HAAA has worked closely with the State Legislature, State and County governments, the University of Hawaii (UH) and private partners like the Oceanic Institute (OI), on a shared mission to foster the sustainable statewide expansion of commercial aquaculture and more recently aquaponics. We understand that further development and expanding the diversity of species and technologies can achieve greater benefits to the Hawaii economy, provide healthy seafood for the local market and export, generate good jobs, complement tourism and help maintain rural spaces, life styles and communities.

Past success is underscored by the 2017 aquaculture industry farm gate value of \$76.4 million dollars, that places the industry as high as 3rd in Diversified Agriculture's contribution to the economy, behind seed crops and livestock. To highlight a few bright spots: the diversity of species grown at the Natural Energy Laboratory of Hawaii Authority (NELHA), establishment of the Pacific Aquaculture and Coastal Resources Center in Hilo, internationally impactful marine shrimp and fish research at UH and OI, establishment of the Center for Tropical and Subtropical Aquaculture that serves Hawaii and the U.S. Flag Islands, the emergence of aquaponics, a resurgence of interest in restoring ancient Hawaiian fishponds, and the recent State funding for an Aquaculture Business Incubator at NELHA to foster entrepreneurship **(HAAA would be happy to provide more industry details and organize facility visits).**

2.0 Status of Government Support

Recently, the Board of Directors (BOD) of HAAA reviewed current industry support available from State government and UH and compared it to previous years, circa 2000 to the present. We note there has been virtually no growth in industry value since 2014. In recent years, the State has made significant investments in aquaculture research, planning and infrastructure, recognizing the growing global need for aquatic protein and the opportunities for sale of seafood products, technology and technical services, as well as offering educational opportunities.

State funds also leveraged large amounts of Federal and private research funding that have widespread benefit to the economy. The islands sub-tropical climate, geographic isolation, and natural resources provide production advantages to certain types of aquaculture. The BOD review concluded that tangible State support of development has been reduced significantly in recent years, particularly with respect to direct, hands on assistance to existing and prospective business investment.

Historically, Hawaii was recognized as a national leader in aquaculture research, planning and development, particularly in marine (salt water) aquaculture or mariculture. One important reason was the proactive expansion policy and significant financial support from the Legislature and State government, that made aquaculture a priority in the State's portfolio of economic

development initiatives. Implementation was in large part through the establishment of an Aquaculture Development Program (ADP), as the lead program and industry advocate within State government. However, support has shrunk significantly since 2000 and HAAA believes the Program has lost its economic development focus. ADP has had to drastically curtailed its critical advocacy role and capacity to assist industry by virtue of major changes in organization, staffing, and budget.

- **Change in Organizational Placement-** ADP at the beginning of the 21 st Century was a program in the Chairpersons' Office, Department of Agriculture (DOA) – essentially at Division level. Reporting to the Chair of DOA provided the high-level visibility and stature to work across Departments on a variety of issues, as well as represent the State at national and international forums.

By 2018, ADP had been downsized and made a Section under the Animal Industry Division, DOA (see Staffing discussion). In addition, the responsibilities of the Program were changed by adding support for the Livestock Industry (e.g., cattle and pigs) to its role and it was renamed Aquaculture and Livestock Support Services (ALSS). Importantly, the new placement and mission emphasized product marketing rather than broad spectrum industry development.

- **Reduction in Staff-** In 2000 ADP had a staff of seven. The seven positions were: Manager, Secretary, Aquaculture Specialist, Marketing Specialist, Aquaculture Veterinarian, and two veterinary technicians (Prior to 1997 the Program also had an Information Specialist and a Clerk Typist). This Staff handled: planning and policy; industry support services and direct assistance (i.e., finding sites, facilitating permits, providing information, marketing of products and technical services and disease prevention and management); and a small research and extension budget to match a yearly UH Sea Grant research and extension program.

Today the Program consists of a Manager, Aquaculture Specialist, and Economic Development Specialist. The Veterinarian and one technician remained in the Animal Industry Division supervised by the Division Head and focused on managing one important industry segment the disease-free shrimp certification program that helps private farms and OI export certified Specific Pathogen Free (SPF) shrimp broodstock to the mainland, South America and Southeast Asia. The unit no longer focuses on general disease diagnosis and prevention services to aquafarmers statewide. Amplifying the impact of this loss of ADP staff assistance was the loss of three key statewide technical extension positions in the UH Sea Grant Program, which were co-funded by ADP.

- **Reduced ADP Budget-** As with all State program budgets, after staff salaries are covered, there must be sufficient operating funds to provide for needed equipment,

supplies, travel, etc. to do the work; accomplish the industry expansion mission. In 2000, ADP was in the DOA and consisted of 7 positions previously described. The overall annual budget was \$502, 050, including salaries and operating funds.

In 2018 there were 3 positions and an overall budget of \$437, 913, a reduction of \$64,137. The combined staff and funds reduction have severely reduced the scope of Program activities and its ability to work with its partners and leverage additional resources.

3.0 Why a New Aquaculture Focus

3.1 Fits Long-term State Goals

Encouraging commercial land based and ocean farming is consistent with long-term State goals for the future, as defined by the Governor and the Legislature.

- **Enhance Food Security-** Hawaii imports around 90 % of its food overall and 70 % of the seafood consumed. The Governor wants to increase Island food production and self-sufficiency so that we would be less impacted by the interruption of imports. Considering Hawaii's per capita seafood consumption is nearly 3 times the U.S. mainland (46 lbs. per person), with a large and growing tourist market component, expanding commercial aquaculture makes sense as a component of a food security strategy.
- **Encourage Sustainable Industries-** Hawaii must continue to grow and diversify its economy and generate good jobs for its citizens. However, business development should fit with conservation of our natural resources and community desires for sustainable industries, that help preserve a quality environment and quality of life for future generations. Modern aquaculture technologies offer a variety of valuable fresh, brackish and saltwater species for culture and likewise a variety of land-based and ocean farming systems that have been demonstrated sustainable. While finding sites for farms can be challenging on land and in the ocean, suitable locations do exist on all islands.
- **Support Rural Development-** In economic development terms, Hawaii's urban centers offer the preponderance of jobs. Rural communities around the state have more limited options to grow and maintain needed commerce, e.g., various tourist destination models and agriculture farming by families and corporations. Aquaculture adds another farming option for job generation in rural areas that can preserve preferred life styles and open space.

3.2 A New National Aquaculture Initiative

With the change in Administrations in Washington DC and a Congress interested in growing the economy and job generation, aquaculture development has gotten increased attention. Congress is very concerned that 90 % of U.S. seafood is imported, largely from Third World

countries, and domestic seafood production must be increased. HAAA believes it is very timely for the State to strengthen its commitment to expanding the Island industry.

A number of recent actions by the Administration and Congress illustrate this new momentum. There have been significant increases in research funding for aquaculture in the National Sea Grant Program, Department of Commerce and the Regional Aquaculture Center Program, Department of Agriculture. The Office of Aquaculture in NOAA Fisheries has funding for a National Marine Aquaculture Initiatives for fish and shellfish and there is a new announcement for Saltonstall-Kennedy funding targeting aquaculture topics. The Department of Energy has a large research/demonstration grant program focused on growing seaweeds in the ocean for energy generation – a Hawaii company got one of the grants. These R&D efforts are being complemented by nationwide efforts to streamline the federal government regulatory process for commercial aquaculture.

The most exciting recent occurrence deals with the introduction in 2017 of the Advancing the Quality and Understanding of American Aquaculture Act (AQUAA), S 3138, by Senator Roger Wicker of Mississippi. The bill would among other things establish a lead agency for marine aquaculture in NOAA that could issue permits for siting commercial farms in U.S. Federal waters, the Exclusive Economic Zone, and assist state-level development. More important to Hawaii aquaculture interests, the bill authorizes \$350 million dollars over 5 years to implement the legislation. Suitable areas to farm in the EEZ would be identified and subject to a Programmatic Environmental Impact Statement and research would target high leverage technical bottlenecks and demonstration of applied technologies.

Hawaii with its experienced University and private sector marine aquaculture research community and infrastructure could greatly benefit from the bill. Particularly relevant is the state's track record in commercial, open ocean aquaculture - Hawaii currently has the only open ocean fish farm in the U.S. – and the growing opportunity to attract additional private investment, which is on the rise all around the world.

4.0 Conclusions and Recommendations

HAAA agrees with the United Nations and strongly believes in clearly evident national and global trends that increases in seafood supply must come from aquaculture and the next frontier for development is the open ocean. The U.S. is beginning to embrace these ideas and recent actions by the Administration and Congress underscore that conclusion. The Hawaii aquaculture community can realize many future benefits from the increasing national commitment to freshwater and marine aquaculture and HAAA has two recommendations to position the state to realize these benefits:

- 1) Re-establish aquaculture and aquaponics as State priorities and a component of all economic development strategies, policies and plans, so State and County governments, the University of Hawaii and private universities, the private investment and technology sectors, and the general public understand this strong commitment.**

- 2) Rebuild the Aquaculture Development Program as an effective aquaculture industry facilitator and advocate within State government for statewide sustainable development. Give the Program Division status within DOA and provide staffing and a budget commensurate with the statewide responsibility of siting and growing new aquaculture businesses.**

The HAAA BOD would be happy to discuss the information in this White Paper and provide additional information.