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Concept for an Alaskan Mariculture Research Center as a Key Part of Developing a Successful Mariculture Industry in Alaska

The Research, Development and Environmental Information Advisory Committee of the Governor's Mariculture Task Force is proposing a structure to address the short and long-term R+D needs of the Alaska mariculture industry.

Introduction

Essential elements of research and development activities that support a mariculture industry involve clear articulation of growth, bottlenecks, facilities to carry out the research (labs, hatcheries, farms), people to carry them out, funding to carry out the activities, and cooperation and coordination of activities to achieve successful outcomes.

Historically, the University of Alaska has lacked a cohesive, coordinated and focused approach to supporting mariculture in Alaska . There is no undergraduate or graduate major or minor in mariculture, and limited participation by faculty and students in the field. However, the University has significant capabilities in marine sciences, fisheries and oceanography, seafood technology, engineering, food sciences, and research on commercially important fish, molluscs, crustaceans, and aquatic plants. What is needed is a way to build capacity in the university system, as well as coordinate with federal, state, private, native groups, and the mariculture industry in order to take advantage of significant growth opportunities not only for the mariculture industry itself, but also for federal and private funding for mariculture R+D projects.

Based on other areas where mariculture development is successful, the following components are missing:

- A group representing stakeholders and institutions to facilitate the development of mariculture in the state (i.e. an Alaskan Mariculture Development Council)
- A formal network of facilities capable of doing mariculture R+D as part of their mission statements. This might be an “Alaskan Mariculture Network” which would include the various research centers in Alaska, such as the NOAA Kodiak Lab, Juneau UAS Lab, Juneau NOAA Lab, UAF-CFOS, Kasitsna Bay Laboratory, APSH, and OceansAlaska. The Mariculture Research Center director pulls available resources like these together to assist in meeting the priorities outlined in the comprehensive plan developed by the annual Mariculture R+D Forum.
- Human resources - University of Alaska **Mariculture Research Center** Director, Marine Advisory Program Mariculture Extension Agent, State Government Lead Agency and Point of Contact, Mariculture Industry Representative(s) and the Alaska Mariculture Development Council.
- Funding (to support Mariculture R+D and the human and brick and mortar resources needed, including federal, state, private and nonprofit sources)
- Annual (or semi-annual) Mariculture R+D forum where priorities are set with strong industry input and action plans are developed to achieve outcomes.

Human Resources

A **Mariculture Development Council** (MDC) would be made up of representatives from government agencies, industry groups, economic development agencies, the university, and other stakeholders to facilitate mariculture development goals. The MDC would facilitate all aspects of mariculture including research and development, regulations, workforce training, education, marketing, etc. With respect to R+D, the MDC would meet regularly and work in coordination with the Alaskan Mariculture Research Center staff.

The establishment of an **Alaskan Mariculture Research Center** (MRC) or Research Institute housed in the University of Alaska would initially have two key personnel. One would be the Director of the MRC and would need to be a Ph.D level new hire (who could be an invertebrate physiologist/culturist) who can translate industry needs into research projects in a variety of fields from biology to food sciences to engineering. This person would also host an annual or semi-annual **Mariculture R+D Forum**, where growers and researchers would interact to decide on research priorities and turn these priorities into projects, grant proposals, and outcomes. The new hire will also write proposals to bring in funding from NOAA (Mariculture program,SK program, Sea Grant), NSF, USDA, EDA, SBIR and others. An **MRC advisory board** involving industry members could help guide the projects on which the research center works. The new hire could also provide “matchmaking” services for students and faculty with growers, other groups, and facilities strategically located to provide needed developments in species groups, both for private mariculture and fisheries enhancement.

The University of Alaska MRC will also need a mariculture extension agent to work on applied research projects with growers, take the results from projects to the field, and interact with other stakeholders. This person, who could be a MAP agent under Alaska Sea Grant, would be an integral part of the MRC and would be co-located with the MRC director.

Funding for the MRC staff and support staff must be via “hard” money with a long term commitment. Initial funding will be necessary for salaries for the MRC director, extension agent and an administrative assistant, plus funding for travel and for the initial Mariculture R+D Forum.

The two staff of the MRC could build a core competency in the University system, eventually resulting in a mariculture minor, major, and graduate degree programs. Combined with the guidance of the MDC and the outcomes of the Annual Mariculture R+D Forum, the MRC would bring together industry, university, state, native and other groups in Alaska, and a network of cooperators and cooperating facilities, giving the implementation of an Alaskan mariculture plan a good chance of success.