Vision

A comprehensive plan for development of a viable and sustainable mariculture industry producing shellfish and aquatic plants for the long-term benefit of coastal communities.

Goal

Grow a $100 million mariculture industry in 20 years.

Guiding Principles

- Effective implementation of this comprehensive plan requires coordination and commitment of time and resources from local, state, federal, and tribal governments, industry, communities, the University, and other interested stakeholders.
- Sustainability: Development of mariculture will be compatible with sustainability principles to maintain and improve environmental integrity, as required by the Alaska Constitution and ADF&G management practices.
- Alaska Native Participation: Mariculture development will benefit from the involvement of Alaska Natives in every element of the process.
- Innovation: Developers will look globally to applicable research and solutions to apply to Alaska’s circumstances and create new markets.
- Compatibility: Implementation of this plan must protect existing marine uses, such as subsistence, commercial fishing, and recreation. It will also utilize Alaska assets and infrastructure.
- Environmental stewardship: This plan will use and build on Alaska’s existing environmental protection measures.
- Equity: This plan will take into account the diverse and unique needs of coastal communities.

What is Mariculture?

Enhancement, restoration, and farming of shellfish (marine invertebrates) and seaweeds (macroalgae).

Why Mariculture?

Economic Benefits

- Adds jobs in primary, secondary, and support sectors.
- Increases trade domestically and internationally.
- Provides additional income for coastal communities.
- Complements existing traditions and customs in coastal communities.

Environmental Benefits

- Shellfish and seaweed provide essential habitat and support diverse ecosystems.
- Shellfish and seaweed remove excess nutrients.
- Shellfish and seaweed filter and clean the water allowing light to penetrate.
- Seaweed adds primary and secondary production.
- Combats ocean acidification in local waters.
- Complements existing traditions and customs in coastal communities.

Cultural Benefits

- Complements existing skill sets.
- Provides additional income for coastal communities.
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With Mariculture:

- Enhancements in local waters.
- Enhanced natural resource management.
- Economic opportunities.
- Increased export opportunities.
- Increased co-opative efforts.
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IN BRIEF

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Alaska Mariculture Development Plan

2018

ALASKA MARICULTURE TASK FORCE

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Alaska Mariculture Task Force

“Mariculture presents a significant and sustainable economic opportunity for coastal Alaska communities. I support this comprehensive plan and commit the State of Alaska to work in partnership with stakeholders and agencies toward its implementation.”

—Governor Bill Walker

“This plan is intended to increase profitability, expand participation, and provide coordination...the Task Force members remain committed and are enthusiastic about expanding Alaska’s mariculture industry.”

—Alaska Mariculture Task Force
**Vision**
Develop a viable and sustainable mariculture industry producing shellfish and aquatic plants for the long-term benefit of Alaska’s economy, environment, and communities.

**Goal**
Grow a $100 million mariculture industry in 20 years.

**Guiding Principles**

**Coordination and Leadership**
Effective implementation of this comprehensive plan requires coordination and commitment of time and resources from local, state, federal and tribal governments, industry, communities, the University, and other interested stakeholders.

**Sustainability**
Development of mariculture will be compatible with sustainability principles to maintain and improve environmental integrity, as required by the Alaska Constitution and ADF&G management practices.

**Alaska Native Participation**
Mariculture development will benefit from the involvement of Alaska Natives in every element of the process.

**Innovation**
Alaska presents many unique challenges, and developers will look globally to applicable research and solutions to apply to Alaska’s circumstances and geography.

**Compatibility**
Implementation of this plan must protect existing marine uses, such as subsistence, commercial fishing, and recreation. It will also utilize Alaska assets and infrastructure.

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**What is Mariculture?**
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**Why Mariculture?**

**Economic Benefits**
- Adds jobs in primary, secondary, and support sectors.
- Adds money and commerce flowing through coastal communities.
- Increases trade domestically and internationally.

**Environmental Benefits**
- Shellfish filter and clean the water allowing light to penetrate.
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- Shellfish and seaweed help mitigate ocean acidification in local waters.

**Cultural Benefits**
- Complements existing traditions and customs in coastal communities.
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This synopsis of the 2018 Alaska Mariculture Development Plan presents results of a two-year planning process by the Governor’s Mariculture Task Force (MTF).

The MTF, including advisory committees, held public meetings, conducted outreach, and completed an economic analysis as part of the planning process. The economic analysis included case studies of successful mariculture industries, an economic framework for developing the Alaska mariculture industry, and a cost/benefit analysis of the economic impacts of mariculture industry development.

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Secure and Promote Investment in Mariculture
- Increase the Mariculture Revolving Loan Fund principal as utilization increases.
- Secure private investment.
- Coordinate federal and state funding sources.
- Fund business planning, start-ups, and structures.
- Leverage utilization of existing coastal infrastructure.
- Develop a web-based mapping tool.
- Encourage financial support for State agencies to properly manage and timely process farm applications.
- Develop options for self-assessments, taxation, or other fee mechanisms to support growth.

Establish an Alaska Mariculture Development Council (AMDC)
- Extend the MTF and its advisory committees for three years, with a new directive to begin implementation of the comprehensive plan and creation of the AMDC.

Maximize Innovation and Growth Through Research
- Establish a Mariculture Research Center to address research priorities and continually update needs.
- Fill the UAF Alaska Sea Grant Mariculture Specialist position.
- Fill the Alaska Region NOAA Aquaculture Coordinator position.

Develop New Mariculture Markets and Products
- Coordinate mariculture marketing through trade associations and consider joining with ASMI through self-assessment.
- Encourage ASMI to expand marketing to include mariculture products.
- Engage in product form research and development and market research.
- Support economic data collection and research.

Build Public Understanding and Support for Mariculture
- Inform about maintaining existing uses, preserving the environment, preventing genetic issues, and avoiding market competition with wild-caught seafood.
- Conduct public outreach to multiple audiences.
- Identify and communicate with all community stakeholders early in the process.
- Coordinate information and advocacy through a central body.

Promote Success Through Alaska Native Participation
- Conduct outreach to Alaska Native organizations related to mariculture opportunities and relevant technical and financial support.
- Seek tribal engagement through local outreach during the farm permitting process.
- Develop collaborative workforce development programs between tribes, Alaska Native Corporations, industry, and other relevant partners.
- Integrate mariculture topics and studies in relevant educational programs.

Secure Seed Supply Through Shellfish and Seaweed Hatcheries
- Fund hatchery operating costs until the industry is self-sustaining.
- Develop long-term funding options to support hatchery production.
- Allow and encourage shellfish and seaweed hatcheries to utilize the Mariculture Revolving Loan Fund.
- Provide technical assistance to existing and new hatcheries.

Grow and Develop the Mariculture Workforce
- Provide mariculture skill-building resources and professional development opportunities to growers, available both remotely and in-person.
- Offer an "Introduction to Shellfish/Seaweed Farming" boot camp.
- Utilize the University of Alaska’s Sea Grant Mariculture Specialist position.
- Develop a mariculture apprenticeship/mentorship program.
- Participate in industry career awareness activities.
- Evaluate and track participant progress and include mariculture workforce impacts in economic and employment analyses.

20-Year Annual Economic Impact
- $100 million+ in industry sales
- 1,500 total jobs
- $38 million in direct wages
- $49 million in total labor income

Note: 2017 dollars

20-Year Annual Revenue Goals
- OYSTERS 9% $6,500,000
- SEA CUCUMBERS 40% $30,000,000
- MUSSELS 10% $7,500,000
- KING CRAB 7% $5,700,000
- SEAWEED 21% $15,700,000
- GEDUCK 13% $10,000,000

$100 Million Alaska Mariculture Industry in 20 Years

Pathway to a Viable and Sustainable Industry
Priority Recommendations Highlighted in Red

Long-Range (20-Year) Annual Production Goals
- 45 million Pacific oysters (count)
- 500,000 Geoducks (count)
- 48 million Kelp (lbs.–wet)
- 1.8 million Blue mussels (lbs.)
- 565,000 Red king crab (lbs.)
- 1.9 million Sea cucumbers (lbs.)

Made in Alaska/Mariculture graph provided by Alaska Department of Commerce, Division of Economic Development and artist Craig Updegrove.
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Compatibility

Mariculture development will complement and support diverse ecosystems.

Shellfish and seaweeds help mitigate ocean acidification in local waters.

Shellfish and seaweeds can serve as coastal protective structures.

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Economic benefits include increased jobs and commerce.

By providing goods and services that support existing industries, mariculture can complement and expand existing economic sectors.

With Mariculture

In brief

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