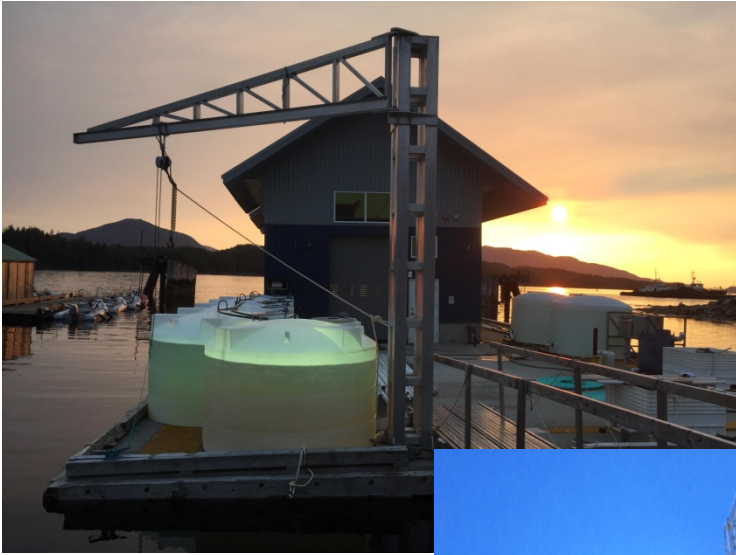


An underwater photograph of a kelp forest. The image shows large, textured green kelp leaves and several yellowish-orange spherical fruits (kelp bladders) attached to the stems. The background is a clear blue water surface with some light reflections.

*Mariculture + Innovation =
Opportunity*

Mariculture + Innovation = Opportunity



*Presented to:
Southeast Conference
September 13, 2018*

*Presented by:
Julie Decker
ED, AFDF & Chair, MTF*





Alaska Fisheries Development Foundation, Inc.

A blue, multi-pointed starburst graphic with a white outline, containing the text "Since 1978" in white, sans-serif font.

Since
1978

Mission - to identify problems common to the Alaska seafood industry & develop efficient, sustainable solutions that provide benefits to the economy, environment and communities

Creating Value

Areas of focus:

- 1) Alaska Symphony of Seafood (product development)
- 2) 100% Club (full utilization)
- 3) Sustainability certification (RFM, MSC, social responsibility)
- 4) Fishing vessel energy efficiency
- 5) Maritime workforce development
- 6) **Mariculture development**





*Annual competition for new products made with Alaska Seafood;
encourages and rewards product development*

Call for Product released & available here:

www.afdf.org/symphony-of-seafood/

Deadline to enter new products:

October 19, 2018



What is **Mariculture**?

In Alaska, mariculture is NOT...



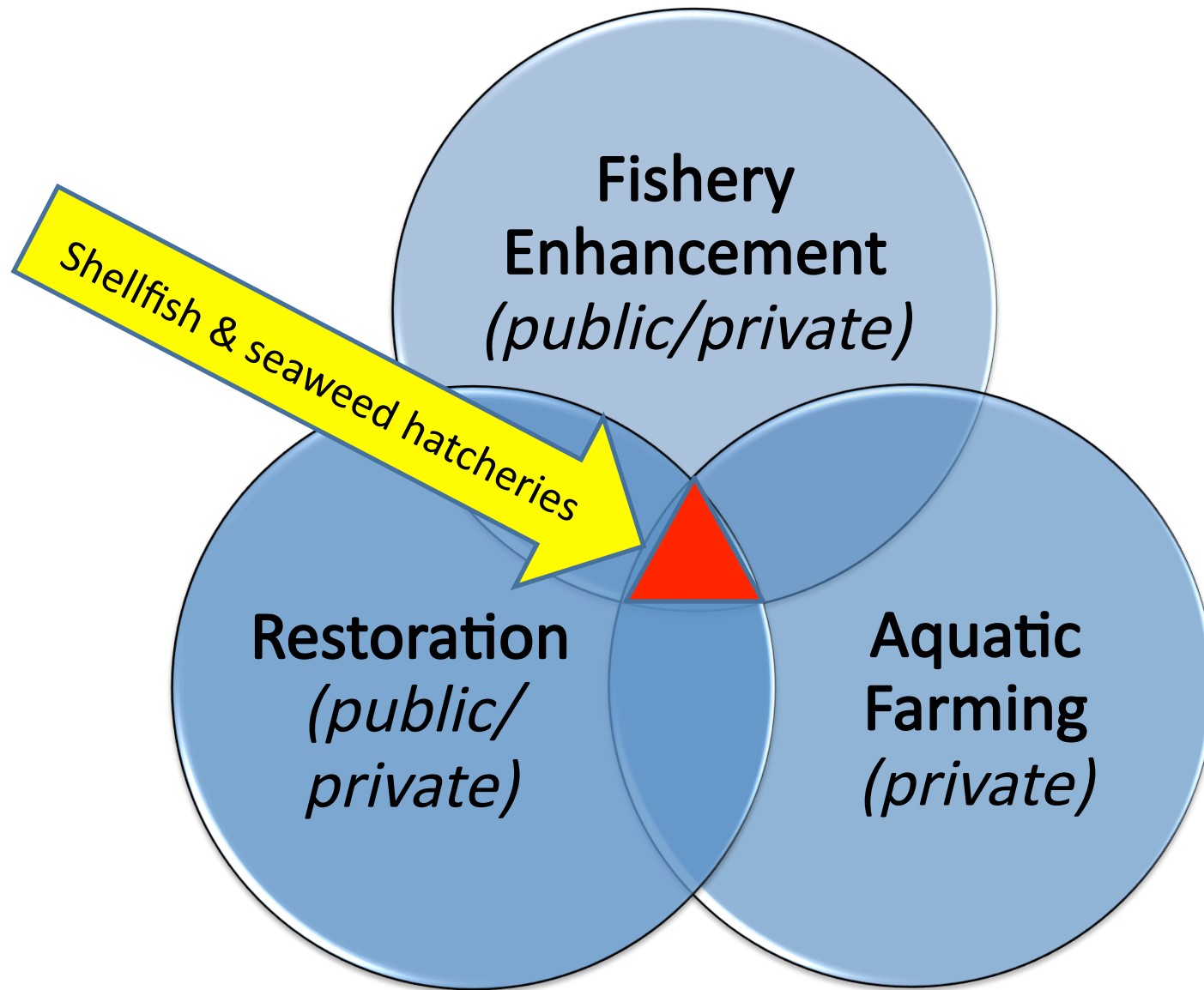
Finfish Farming

In Alaska, mariculture is...

*Species = local (shellfish + invertebrates + aquatic plants)
+ Pacific oysters*



Mariculture is...



Alaska Mariculture Task Force

[Administrative Order #280](#): Governor Walker established the Alaska Mariculture Task Force (AMTF) by AO #280 in 2016.

Directive - “To develop a comprehensive plan for a viable and sustainable mariculture industry producing shellfish and aquatic plants for the long-term benefit of Alaska’s economy, environment and communities.”

Why? **Opportunities &
Benefits for Alaskans**



ALASKA
MARICULTURE
DEVELOPMENT PLAN



STATE OF ALASKA
MARCH 23, 2018

Mariculture: Latest Developments

Available at: www.afdf.org

IN BRIEF

Alaska Mariculture Development Plan

2018



"Aquatic plants and shellfish present 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

Alaska Mariculture Development Plan

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.



Alaska Mariculture Development Plan



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

SCOPE: For the purpose of this plan, mariculture is defined as enhancement, restoration, and farming of shellfish (marine invertebrates) and seaweeds (macroalgae). Finfish farming is not legal in Alaska waters.

COORDINATION & 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.

*Beach at St. George Island, Alaska.
Photo by Joshua Propiokoff.*

Alaska Mariculture Development Plan

PRIORITY RECOMMENDATIONS

The priority recommendations of this comprehensive plan are listed below:

Secure seed supply through hatcheries

- Pass State legislation to A) help fund hatcheries through the Mariculture Revolving Loan Fund, and B) allow shellfish enhancement

- Establish an Alaska Mariculture Development Council

- Establish a Mariculture Research Center at the University of Alaska

- Fill key positions to enable the growth of the industry: NOAA Aquaculture Coordinator in Alaska and Alaska Sea Grant Mariculture Specialist

Bull kelp forest. Photo by
©"TheMarineDetective.com".

Mariculture: Latest Developments



Administrative Order #297 signed – reauthorizing the Mariculture Task Force to begin implementation of the comprehensive Plan

Mariculture: Latest Developments



HB 76 signed into law
– amending
Mariculture
Revolving Loan Fund;
next step is
promulgation of
regulations;
OceansAlaska will
apply for a loan

Mariculture: Latest Developments



Adding two new mariculture positions in Alaska (in policy & research)

Marine Aquaculture Act introduced on June 26, 2018 in the U.S. Senate



Adding a mariculture research lead position in Kodiak



MaricultureMap – coming soon!

The screenshot displays the MARINER AquaMapper web application interface. The browser address bar shows the URL: noaa.maps.arcgis.com/apps/webappviewer/index.html?id=4f12cbde0c22488196dda69d495116cc. The application header includes the NOAA logo, the title "MARINER AquaMapper Coastal Aquaculture Screening Tool", and navigation links for "NCCOS | Coastal Aquaculture Planning Portal | ARPA-e MARINER Program".

The interface features a left-hand sidebar with a "Data Layers" panel. The "All Data Layers" section is expanded, showing a list of layers with checkboxes and menu icons:

- Cetacean Biologically Important Areas - Migratory Corridor
- Cetacean Biologically Important Areas - Reproduction
- Cetacean Biologically Important Areas - Small and Resident Population
- Artificial Reefs
- Deep Sea Coral Observations
- Shipping Lanes and Regulations
- Principal Ports
- Anchorage Areas
- Pilot Boarding Areas
- Submarine Cables

The main map area shows a bathymetric chart of the Gulf of Alaska. Several anchor icons are overlaid on the map, indicating specific locations. The map includes a search bar at the top with the text "Find address or place" and a magnifying glass icon. A scale bar at the bottom indicates a distance of 200 miles. The map is powered by Esri, GEBCO, DeLorme, and NaturalVue. The bottom right corner of the map area contains the text "Esri, GEBCO, DeLorme, NaturalVue | General Bathymetric Chart o..." and the Esri logo.

Mariculture: Latest Developments

New Food Products

*Kelp Beer
from Kodiak Brewery!*



Blue Evolution™
BACK TO THE SOURCE



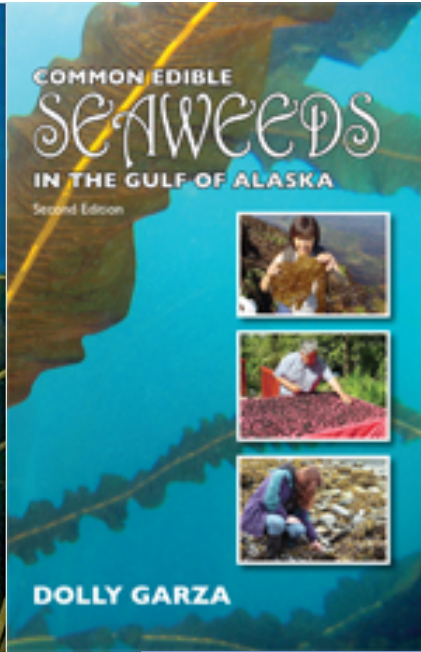
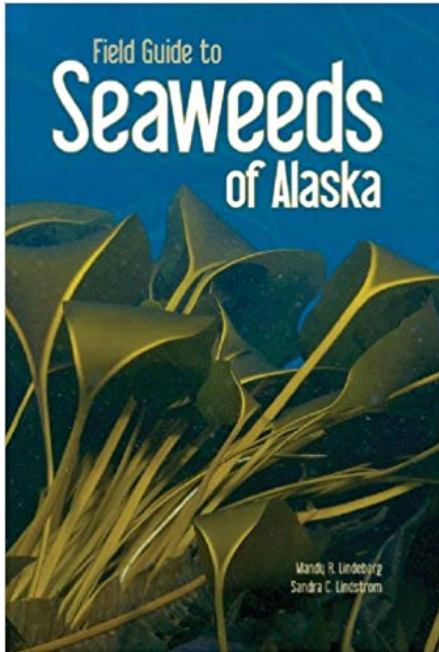
Mariculture: Latest Developments Sea Cucumber Research

- *Economic feasibility analysis of enhancement ongoing (SARDFA & McDowell Group)*
- *Future joint project between SARDFA & Hump Island Oyster Company*



Seaweed Farming 101

- Learn to identify seaweed species (get a book)
- Find a site & determine which species are available w/in 50 km of the site (walk the beaches, take a boat ride)
- Learn about Alaska Dept. of Natural Resources (ADNR) Aquatic Farm Program & Lease Application Process: <http://dnr.alaska.gov/mlw/aquatic/>
- Find a market / product form
- Develop a business plan
- Find seed supply (Blue Evolution, OceansAlaska)
- Consider layout / design of farm



Seaweed Farming in Alaska



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Alaska Sea Grant Marine
Advisory Program
Fairbanks, Alaska
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907-224-4051

SEAgram

ALASKA SEA GRANT
MARINE ADVISORY PROGRAM
ASG-63 2017
<https://sea.gram.org/110-630716a-2017>

Kelp Farming Manual

A Guide to the Processes, Techniques, and Equipment for Farming Kelp in New England Waters



Katie Flavin
Nick Flavin
Bill Flahive, PhD

Ocean
APPROVED
FARMING THE NORTH ATLANTIC

PACIFIC SEAWEEDS

A GUIDE TO COMMON SEAWEEDS OF THE WEST COAST
UPDATED AND EXPANDED EDITION



LOUIS D. DRUEHL &
BRIDGETTE E. CLARKSTON

AFDE

Mariculture: Latest Developments

Premium Aquatics receives approval for 127 acre farm site near Craig/Klawock

