

Fact Sheet: Washington State Seaweed Aquaculture Economic Potential Analysis

INTRODUCTION

Seaweed farming is a highly sustainable aquaculture method that requires no fresh water, land, fertilizers, or pesticides, and that enhances water quality while providing vital marine habitat. Washington State has potential to support a thriving seaweed industry by leveraging its robust marine environment, established transportation networks, and existing food processing infrastructure. Maritime Blue and Ocean Strategies contracted with Confluence Environmental Company and Greene Economics, LLC to produce an analysis of the economic potential of the seaweed aquaculture industry to the state. The goal was to identify pathways for industry growth and assess economic impacts under different investment scenarios.

OPPORTUNITIES

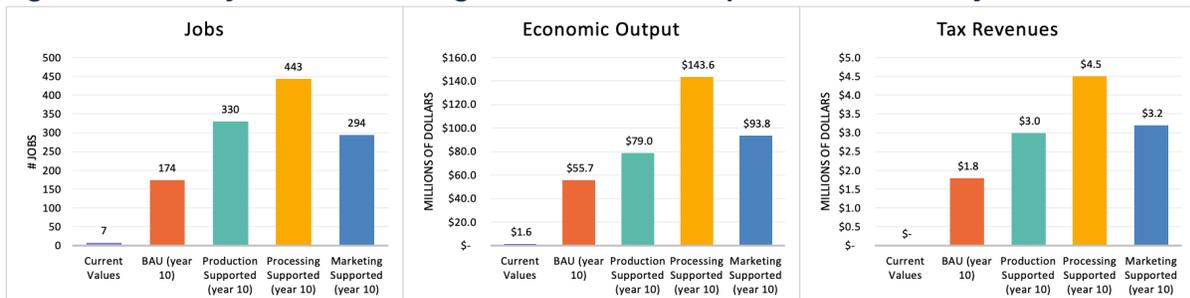
There are several state and market specific advantages that could benefit Washington’s seaweed industry:

- Favorable environment:** The state’s large coastline, sheltered waters, and existing seafood industry provide ideal conditions for seaweed farming.
- Emerging markets:** Biostimulants, cosmetics, and other value-added products show promise for growth, especially if marketed regionally.
- Entrepreneurial capacity:** Industry participants are optimistic about the future of seaweed aquaculture and are actively investing in its development.

KEY FINDINGS

The analysis identified significant opportunities for Washington to become a leader in West Coast seaweed aquaculture, but also highlighted challenges such as regulatory hurdles, limited market demand, and insufficient processing infrastructure.

Figure: Summary of Modeled Regional Economic Impacts in Year 10 by Scenario



The analysis concluded that **targeted investments in processing capacity** would have the most significant benefits to the state’s economy of the evaluated development pathways.

METHODOLOGY

Four scenarios were modeled using the IMPLAN¹ economic analysis program to explore potential industry growth over 10 years and consider the economic ramifications for Washington of different investment pathways. These scenarios are:

- 1. Business as Usual (BAU) Development:**
Assumes slow, natural growth without external support.
- 2. Production Supported Development:**
Focuses on expanding seaweed farming acreage to 2,000 acres.
- 3. Processing Supported Development:**
Prioritizes investment in processing infrastructure, including a large-scale facility to serve as a regional hub for seaweed processing.
- 4. Marketing Supported Development:**
Focus on increasing demand through marketing campaigns, doubling production acreage and building a large processing facility.

RECOMMENDATIONS

To unlock the full economic potential of seaweed aquaculture in Washington, the report provides three key recommendations:

Develop processing infrastructure:

Invest in secondary processing facilities to establish Washington as a regional hub for seaweed processing and distribution. This would support local farmers and attract feedstock from neighboring regions like Alaska and British Columbia.

Streamline permitting processes:

Simplify and accelerate regulatory approvals to make it easier for new farmers to enter the industry. This could include pre-permitted areas or programmatic approvals similar to those used for shellfish aquaculture.

Promote Washington-grown seaweed:

Launch educational campaigns and place-based marketing to increase demand for local seaweed products. For example, biostimulants made from Washington-grown seaweed could be marketed to the state's agricultural industry, emphasizing circularity.

CONCLUSION

With targeted support, Washington's seaweed aquaculture industry could create significant economic benefits for the state, including jobs, revenue, and tax contributions, while enhancing coastal ecosystem health. The "Processing Supported" Scenario modeled here offers the greatest potential for growth, but investments in production and marketing could also help overcome barriers and stimulate demand. By addressing regulatory challenges, developing processing technologies and infrastructure, and promoting local products, Washington could become a leader in the U.S. seaweed industry, contributing to both economic growth and environmental sustainability.

¹IMPLAN stands for IMpact PLANning (or Impact Analysis for Planning). Learn more [here](#).

