



# AMBERSEA

Healthy, sustainable and delicious seafood!

## BACKGROUND

1

Water shortage in various regions of the Blue Planet. Heavy weather phenomena, viruses and bacteria destroy harvests. Dependency on seafood imports. High demand in controlled and traceable high-quality food and industrial raw materials.

## SCOPE

2

AMBERSEA is a seawater aquaponics solution designed to grow **Greater Amberjack** and **Yellowtail Kingfish** (*Seriola sp.*), highly valued fishery resources, together with **macroalgae** (sea lettuce and nori seaweed). It uses a unique set of innovations and technologies in a new Integrated Multi Trophic Aquaculture (IMTA) circular technology with positive Water-and Carbon-Footprints. By copying nature-based cycles, major ecologic and economic synergies are achieved. Vertical macroalgae modules serve as low-energy waterfall aerators, which saturate the seawater with oxygen while taking up the CO<sub>2</sub> generated by finfish and bacteria converting it to nutritious superfood algae biomass. The seawater, which gets evaporated and cooled in this process, is recovered in a Sorption-Condensation-Process, allowing controlled low-energy heating of seawater to provide optimum growth conditions for the selected species and co-produce freshwater. Unproductive barren land is converted into fruitful property with water availability.

300 tons/year

## BUSINESS CASE

Each AMBERSEA sustainable factory has a payback period of about 2.5 years and is secured by land-ownership and development. The main market is the high quality seafood market. Sources of income are:

1. Certified fresh **G. Amberjack** or **Yellowtail** with a current B2B market price of \$11/kg
2. Certified **Macroalgae** at constant quality with an average B2B price of \$10/kg
3. **Freshwater**, e.g. for nearby conventional greenhouse horticulture projects
4. **Cooling energy**, e.g. for nearby greenhouse horticulture or solar power plants
5. **Organic compost**, e.g. for nearby organic horticulture

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940 tons/year

## IMPLEMENTATION

**1<sup>st</sup> step:** demonstration project of 7,000 sqf as proof of technical and financial viability.

**2<sup>nd</sup> Step:** AMBERSEA Seawater Sustainable Seafood Factory of about 4.6 acres.

**Further steps:** Replication, Upscaling, Other species, Franchise Structure.

ANNUAL PRODUCTION

Size	7000 sqf	5 Acres	5 x 5 Acres
CAPEX	\$539.000	\$14.500.000	\$72.500.000
OPEX Year #1	\$133.000	\$2.100.000	\$10.222.800
FINANCING DEMAND	\$560.000	\$15.200.000	\$76.000.000
Revenues per Year *	\$284.000	\$14.750.000	\$73.750.000
Net Profit per Year *	\$24.909	\$7.288.700	\$36.768.025
Net Profit on Sales *	9%	49%	50%
ROI *	5%	50%	51%
Payback period	6 years	2 years	2 years
FTE	3	31	150
Fresh finfish	6 tons	300 tons	1.500 tons
Organic fresh seaweed	19 tons	940 tons	4.700 tons
Volume of water recovery	180.000 liter	15.000.000 liter	75.000.000 liter
CO <sub>2</sub> emissions reduction	28 tons	1.400 tons	6.900 tons

	DEMONSTRATOR	SERIES A (1 FULL SCALE UNIT)	SCALE UP (5 UNITS)
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\* Considering revenues only from finfish and seaweed sales. 5-year average from the 2nd year onwards.

## TEAM

The team is built of experts in aquaculture, biology, engineering, water treatment, renewable energies and finance, with more than two decades of experience.

## INVESTMENT OPPORTUNITY

We are seeking funding for the **demonstrator first**.

Technology and development by:



ambersea@gloasis.com

Call us!

# SEAWATER SUSTAINABLE SEAFOOD FACTORIES

Get in touch with us and ask for the detailed business plan!