FLOATING FOOD SYSTEMS

floating islands

THE CHALLENGES OF FARMING IN THE DESERT

TRADITIONAL FARMING

Land and water scarcity

TERRESTRIAL GREENHOUSES

Energy intensive for cooling

VERTICAL FARMING

High energy demand,
Expensive infrastructure

THE SOLUTION - FLOATING FARMS

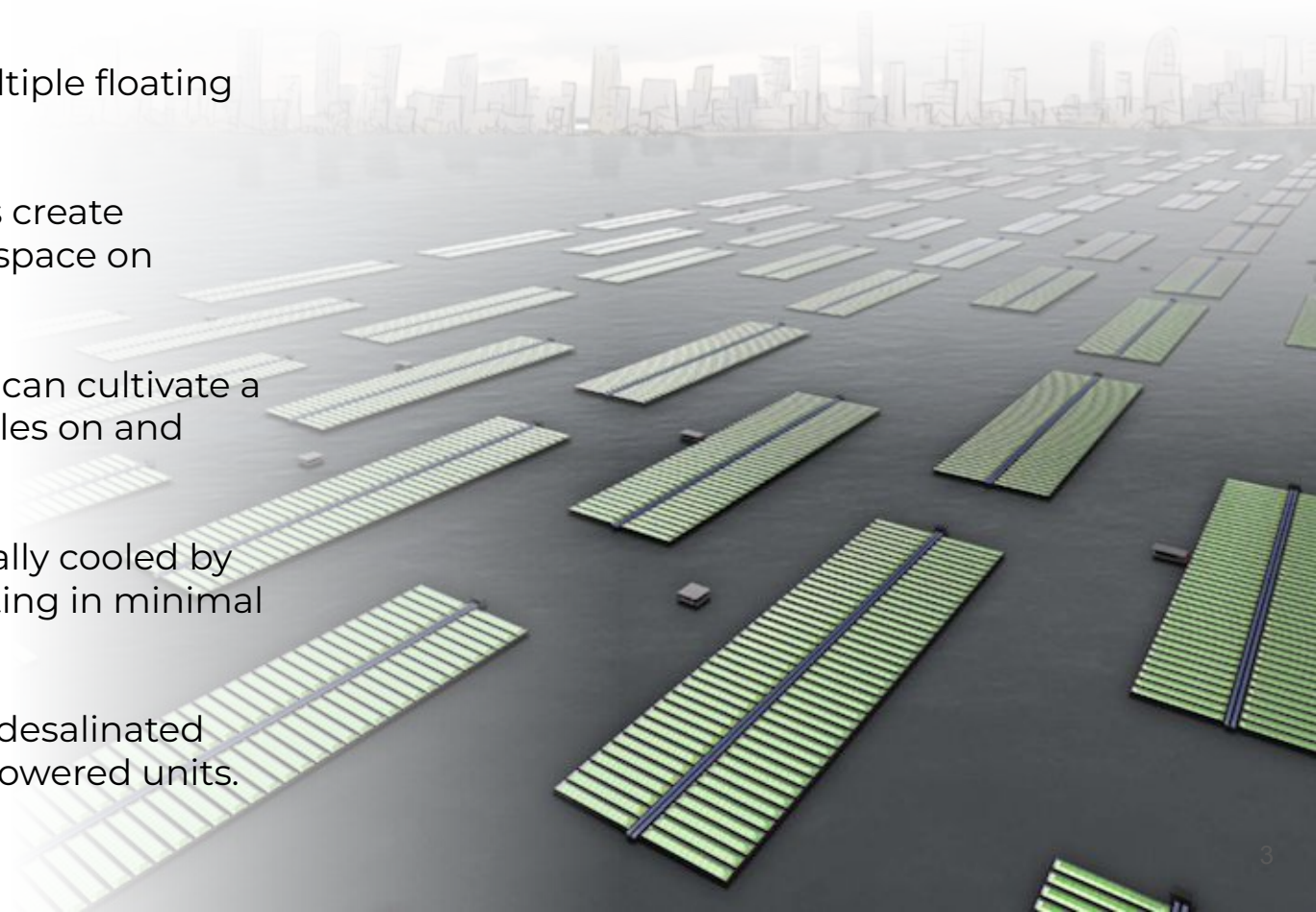
Floating clusters of multiple floating farm units.

Together these clusters create hectares of cultivating space on unused water surfaces.

Floating Food Systems can cultivate a wide variety of vegetables on and with water surfaces.

The modules are naturally cooled by underlying water resulting in minimal use of energy.

Water for cultivation is desalinated and recycled by solar-powered units.



THE SOLUTION - FLOATING FARMS

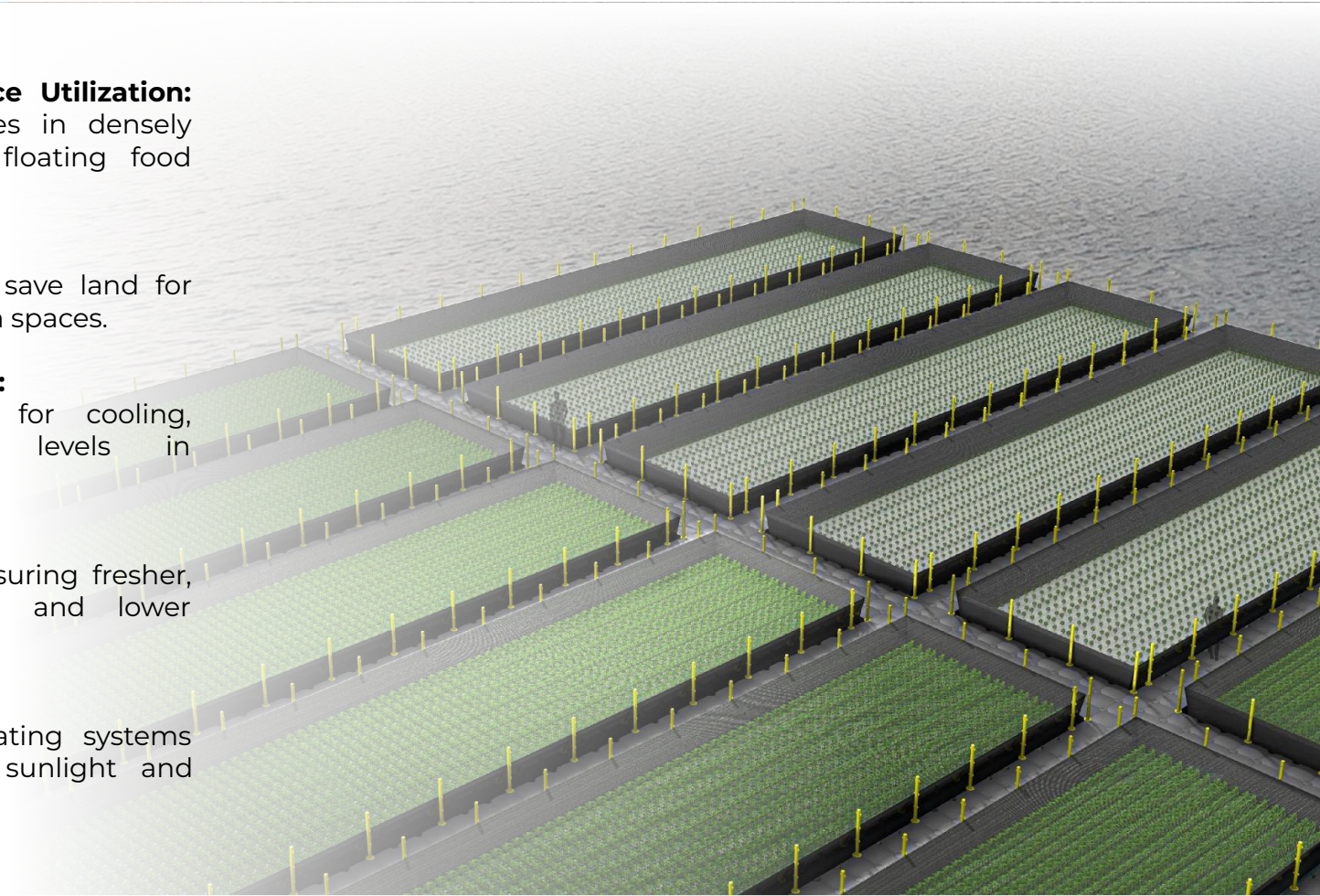
Unused Water Surface Utilization:
Exploits water surfaces in densely populated areas for floating food cultivation systems.

No Land Use:
Floating greenhouses save land for housing or urban green spaces.

Natural Water Cooling:
Uses water surface for cooling, enhancing oxygen levels in cultivation water.

Close to Consumers:
Reduces transport, ensuring fresher, nutrient-rich produce and lower environmental impact.

Flexible Design:
Movable, modular floating systems that can adjust for sunlight and rotate with the sun.



WORLD-CLASS EXCELLENCE

Floating Food Systems is a member of a Government-funded research consortium in the Netherlands led by Wageningen University

CORE TEAM

MARTIN HUBERS
Co-Founder Floating Islands, Netherlands

Martin began his work by launching a program to empower individuals with disabilities through building a floating garden. He has since devoted himself to developing the concept of floating farms.

SÖREN KNITTEL
Co-Founder & CTO Floating Islands, Netherlands

An accomplished mechanical engineer, deeply committed to designing products and structures that are not only sustainable and intelligent but also commercially viable and future-proof.

MANO DEMEURE
Advisory Board Member, Belgium

With over forty years of leading projects from inception to completion in challenging international environments, focusing on tree crop plantations in Nigeria and Indonesia, where he held key management and executive positions for 15 years.

In addition, an expert group of agronomists from Wageningen University and Aeres University have an ongoing involvement in the development of Floating Food Systems hydroponic cultivation.

BALDWIN BERGES
Partner Floating Islands, Belgium

With 30 years in finance, he specializes in emerging markets, development finance, impact investing, and public-private funding integration, crafting innovative narratives and developing revolutionary financial strategies for major projects.

CHRISTOPHE DETILLOUX
Partner Floating Islands, United Arab Emirates

30 years experience in floating infrastructure, has impacted projects worldwide with a focus on solutions for climate adaptation and water management, enhancing maritime sector efficiency and addressing key environmental and logistical challenges.

VERONIQUE DERROUAZI
Business Development Strategist

Veronique is an innovative leader in organic Mediterranean agriculture and a business development strategist for organic products. She expertly blends sustainable farming knowledge with strategic insights to advance the organic sector, aligning traditional methods with modern demands.

JEAN-MARC DERROUAZI
Partner Floating Islands, United Arab Emirates

With three decades in floating infrastructure across Europe, Asia, Africa, and the MENA region, he provides comprehensive solutions for climate adaptation and water management, boosting maritime efficiency and tackling various environmental and logistical challenges.

CORE RESEARCH TEAM

Eng. Arjan Dekking
Action Researcher Rural Innovation

Dr. Mirka Macel
Research Resilient Plants

Dr. Marian Stuiver
Team Leader Green Cities

Linda Nol
Team Leader Earth & Water, Applied Biology

Eng. Marcel Vijn
Research Agriculture & Society

Eng. Filip Van Noort
Crop Specialist

Joke Dufourmont
Program Developer Circularity in Urban Regions

Dr. Alexander Laarman
Business Development WUR & AMS

Eng. Jan-Eeklo Jansma
Researcher, Feeding the city

AERES HOGESCHOOL ALMERE

AMS
AMSTERDAM INSTITUTE FOR ADVANCED METROPOLITAN SOLUTIONS

WAGENINGEN UNIVERSITY & RESEARCH

AREAS OF INNOVATION

- **Floating hydroponics**, eliminating the need for land usage.
- **5-10 harvests annually**, far exceeding conventional farming yields.
- **Natural cooling from underlying water** maintains optimal crop growth conditions.
- **Operates on renewable energy sources**, reducing environmental impact.
- **Minimal use of traditional fertilizers** promotes sustainability and water conservation.
- **Nearness to urban centers** minimizes carbon emissions during produce delivery.
- **Modular design** enables flexible adaptation to specific needs and space limitations.
- **Shifting agriculture to water surfaces** allows for reforestation, combating climate change.

POSITIVE IMPACT - ADDRESSING SERIOUS CHALLENGES

Food Insecurity
Difficulty accessing affordable, nutritious food in low-income city areas contribute to health issues.

CO2 Footprint
Companies need to make structural changes to reduce their CO2 emissions and combat climate change.

Climate Change & Food Systems
Cities must adapt to the impacts of climate change on food security and sustainability.

Fresh Water Shortage
Increasing scarcity due to climate change; solutions like local desalination and hydroponics are needed.

Urban Agriculture Challenges
Lack of space, zoning issues, and environmental concerns hinder urban farming efforts.

Food Spoilage in Warm Climates
High temperatures and humidity cause spoilage, exacerbated by long transport and poor storage.

Imported Food Quality Risks
Quality affected by handling, contamination, and exposure to elements during transportation.

Health Risks from Foodborne Illnesses
Warm climates increase the risk of illnesses from contaminated or poorly handled food.

Supply Chain Vulnerabilities
Reliance on imports in warm climates risks disruptions, leading to shortages and price hikes.

Environmental Impact of Food Transport
Long-distance transport contributes to emissions, pollution, and deforestation.

REACHING 14 OF THE 17 UN SUSTAINABLE DEVELOPMENT GOALS

1 **No Poverty:** Create job opportunities, reducing urban poverty.

2 **Zero Hunger:** Provide local, steady food supply, addressing urban food insecurity.

3 **Good Health and Well-being:** Offer fresh produce, promoting healthier diets.

4 **Quality Education:** Serve as educational platforms for sustainable agriculture.

6 **Clean Water and Sanitation:** Efficient water usage through hydroponics.

7 **Affordable and Clean Energy:** Renewable energy, supporting sustainable energy solutions.

8 **Decent Work and Economic Growth:** Generate employment, fostering economic growth.

9 **Industry, Innovation, and Infrastructure:** Represent innovative agricultural practices.

10 **Reduced Inequalities:** Improve food access and job availability in urban areas.

11 **Sustainable Cities and Communities:** Efficient use of urban water spaces, sustainable urban development.

12 **Responsible Consumption and Production:** Promote sustainable food production with minimal waste.

13 **Climate Action:** Reduce greenhouse gas emissions through localized food production.

15 **Life on Land:** Preserve land resources by utilizing water surfaces for agriculture.

17 **Partnerships for the Goals:** Involve collaborations across various sectors for sustainable development.

FLOATING FOOD IS PROFITABLE

Distinctive advantages:

Floating Farms do not use land

5-10 harvests per year

Cultivation water is naturally cooled by the underlying water

Powered by renewable energy

No use of traditional polluting fertilizers

Production close to the consumer

Floating Farms are modular and scalable

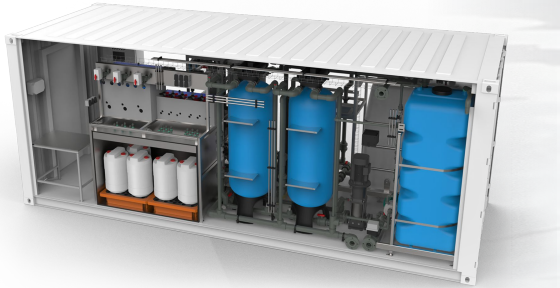
Frees up traditional farmland for reforestation

WATER RECYCLING & DESALINATION

The water in the farms is obtained from a containerised desalination and/or purification process.

It is then treated for optimal conditions and recycled multiple times.

Floating Food Systems works with several technical partners that provide stat-of-the-art modular water treatment solutions.



DEMONSTRATED INCREASE IN YIELD

5 - 10 HARVESTS EVERY YEAR

WEEK 1

WEEK 2

WEEK 3

WEEK 4

CROPS VARIETY


GREEN BEANS


PAK CHOI


CABBAGE


TOMATOES


GREEN ONION


SPINACH


EDAMAME


SAWI JEPUN


KALE


RADISH


CELERY


BASIL


MINT


CUCUMBERS


PEPPERS


STRAWBERRIES


ZUCCHINI


MELONS

YIELD OF A 2HA FLOATING FARM

Daily yield example of Pak Choi:

Two harvesters plant and harvest 10 food modules a day.

2.880 plants x 10 modules = 28.800 plants /day.

28.800 plants / day x 1.8 lbs = 51.840 lbs / per day.

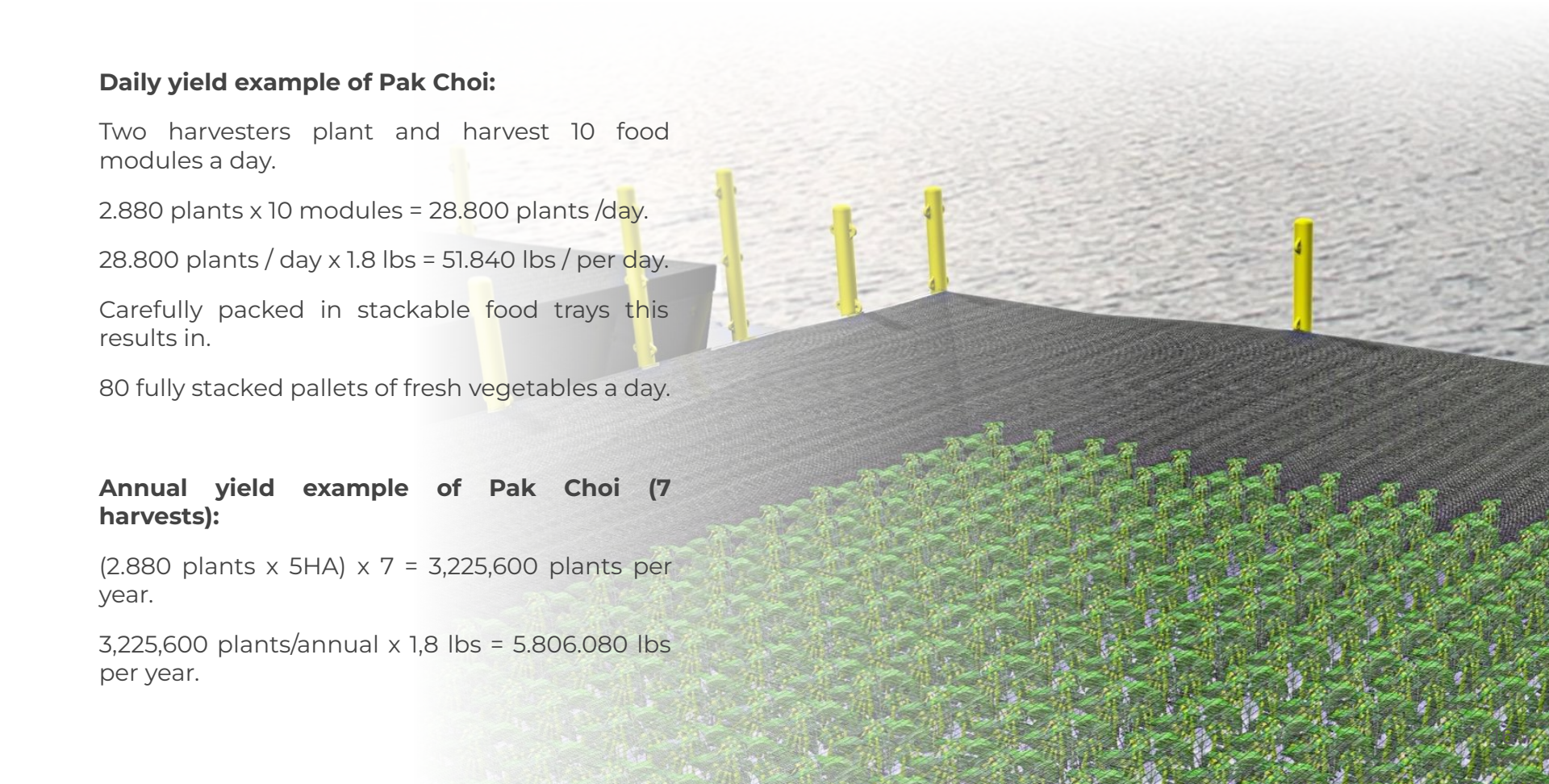
Carefully packed in stackable food trays this results in.

80 fully stacked pallets of fresh vegetables a day.

Annual yield example of Pak Choi (7 harvests):

(2.880 plants x 5HA) x 7 = 3,225,600 plants per year.

3,225,600 plants/annual x 1,8 lbs = 5.806.080 lbs per year.



Thank you!

A more detailed business plan is available upon request.

Feel free to contact us on team@pross.ae or via our website www.pross.ae

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