AquaOptima AS
RAS supplier
since 1993

NITR, Global Business Day 4.4.2017

Idar Schei
CEO 1993-2016
Senior adviser-CFO 2016 -

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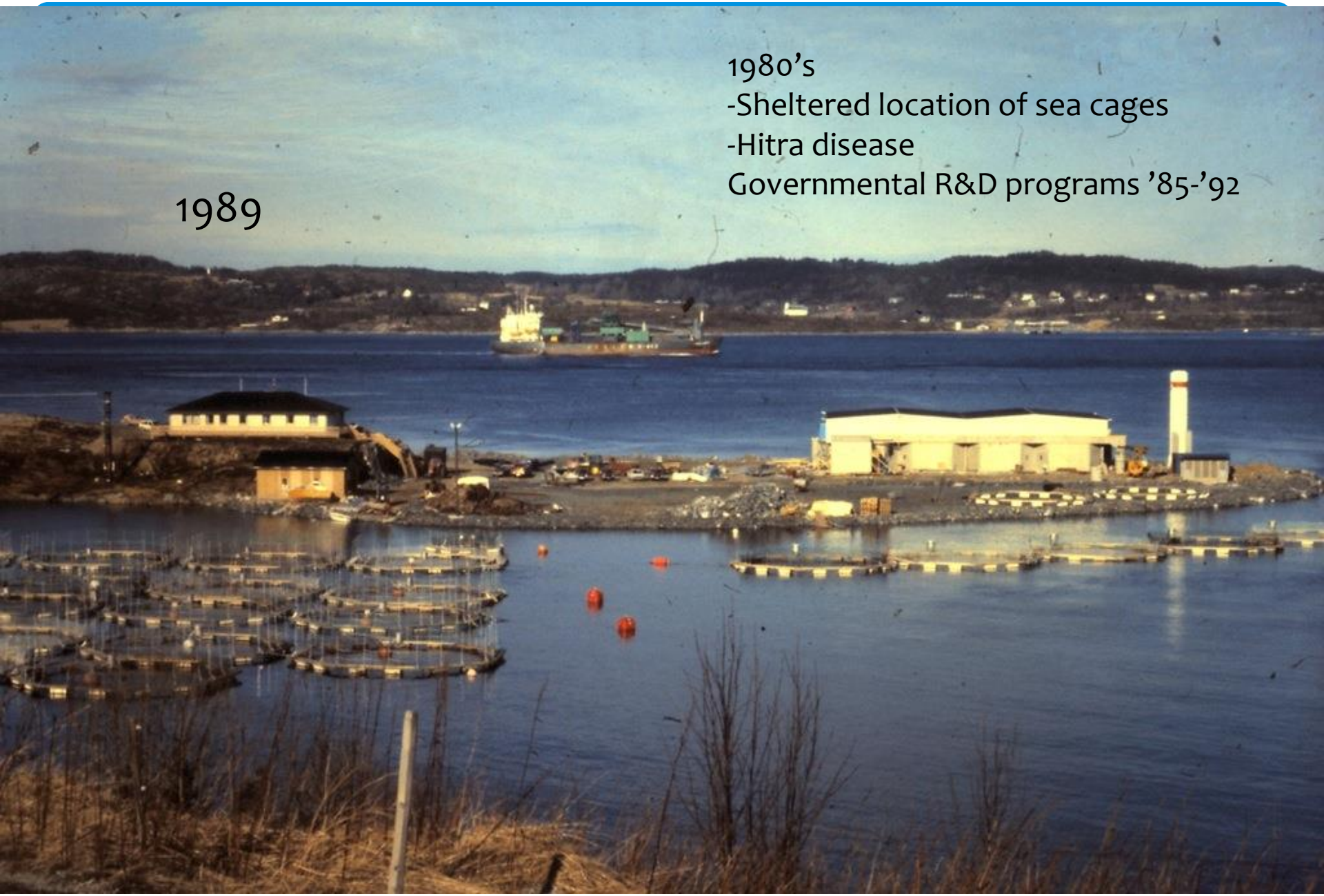
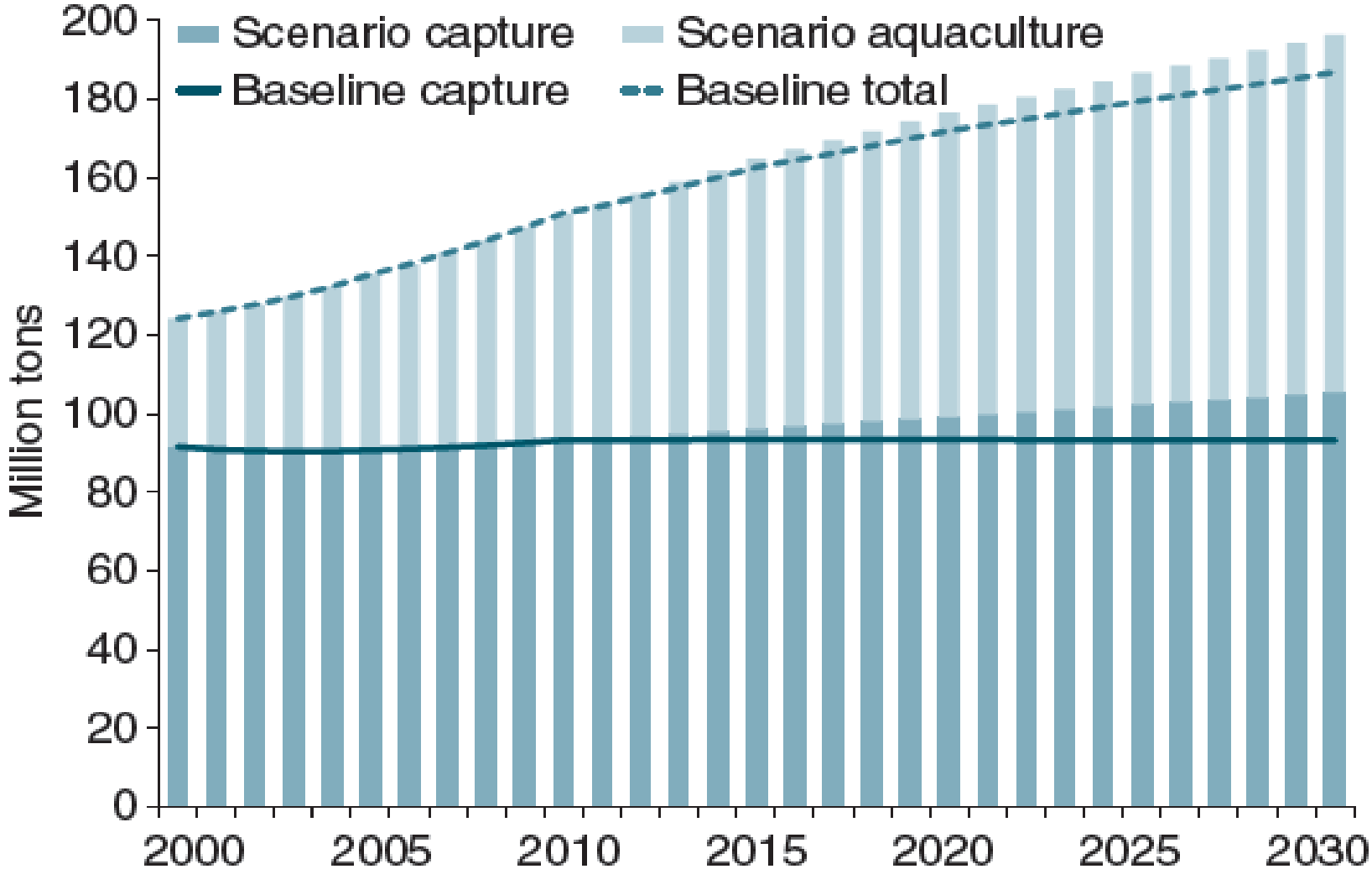

1980's
-Sheltered location of sea cages
-Hitra disease
Governmental R&D programs '85-'92
1989

Salg av slaktet matfisk i mengde

FIGURE 4.6: Global Fish Supply under Improved Productivity, 2000–30



Sources: FishStat and IMPACT model projections.

Potential using RAS

Healthy food production with minimal use of water

Minimal water discharge

Zero discharge possible

- *Waste can be used as fertilizer in agriculture*
- *Cultivation of algae for production of biofuel or other products of industrial value*

Sustainable industry !

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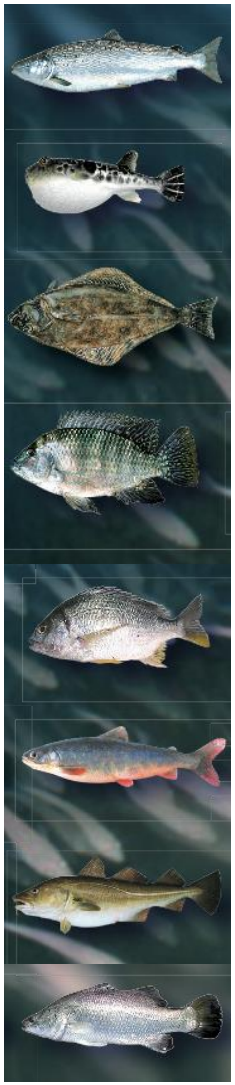

AquaOptima business idea

Preferred for know-how and technology landbased fish-farming

- *Feasibility studies*
- *Detailed design, engineering*
- *Equipment supply RAS*
- *On-site support of installation, commissioning/start-up*
- *Operational management*

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Sales and Marketing Strategy

Few RAS suppliers world wide
Few potential clients spread world wide

- International magazines, journals
- International Exhibitions / Conferences
- www
- Documentation of technology

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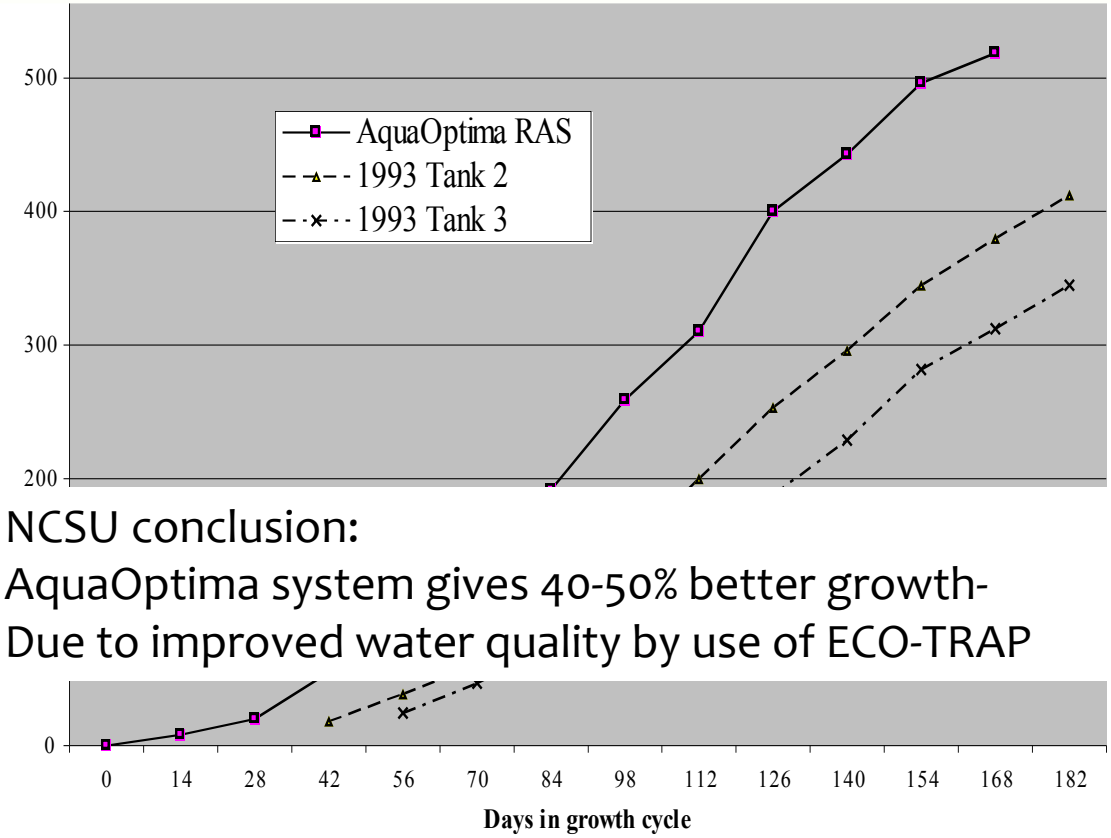
Eco-Trap documentation

Growth comparison of Tilapia in different types of recirculation systems, NCSU
Ref. Losordo (1995)

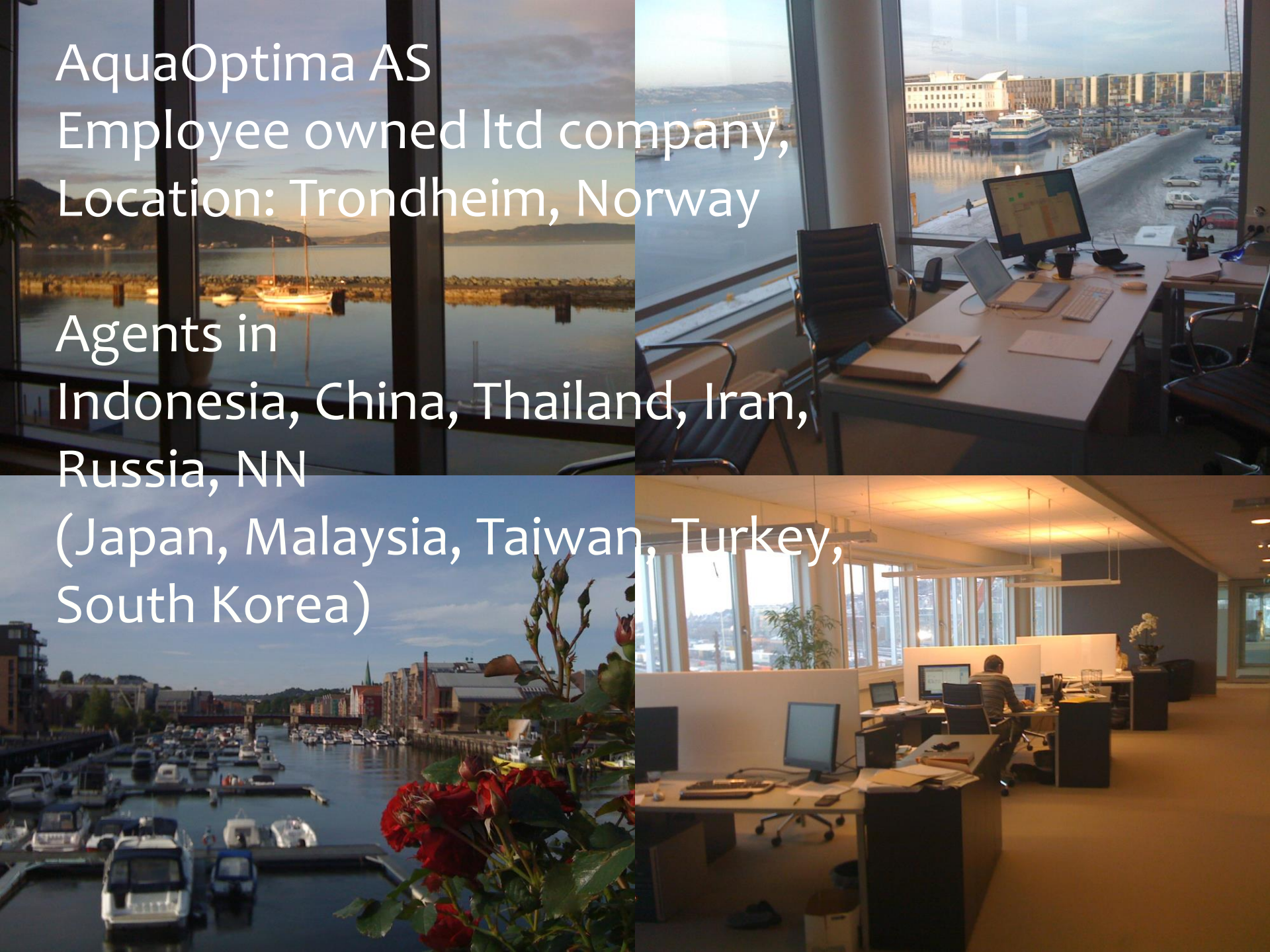


NCSU conclusion:
AquaOptima system gives 40-50% better growth-
Due to improved water quality by use of ECO-TRAP

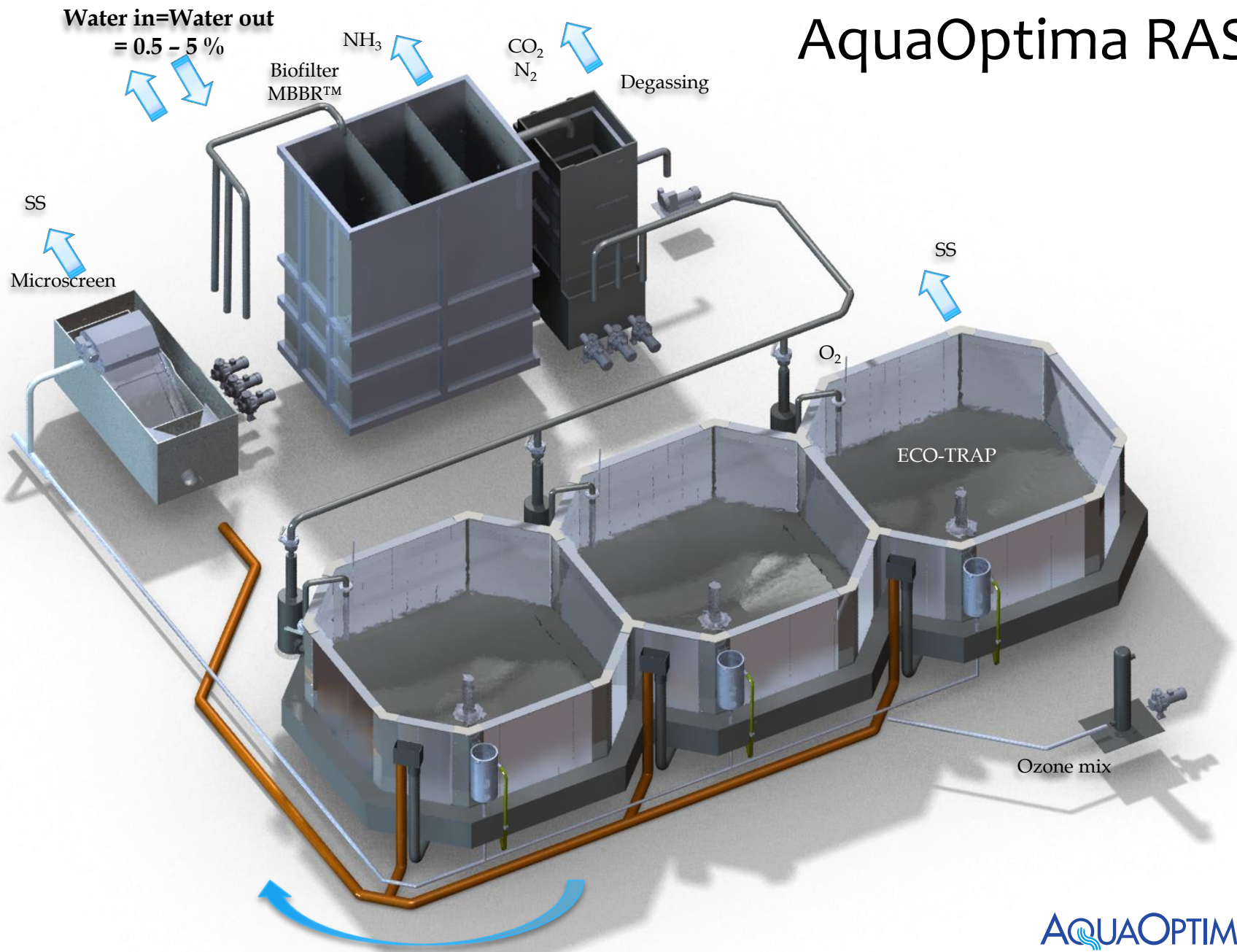
AQUAOPTIMA

AquaOptima AS
Employee owned ltd company,
Location: Trondheim, Norway

Agents in
Indonesia, China, Thailand, Iran,
Russia, NN
(Japan, Malaysia, Taiwan, Turkey,
South Korea)



AquaOptima RAS



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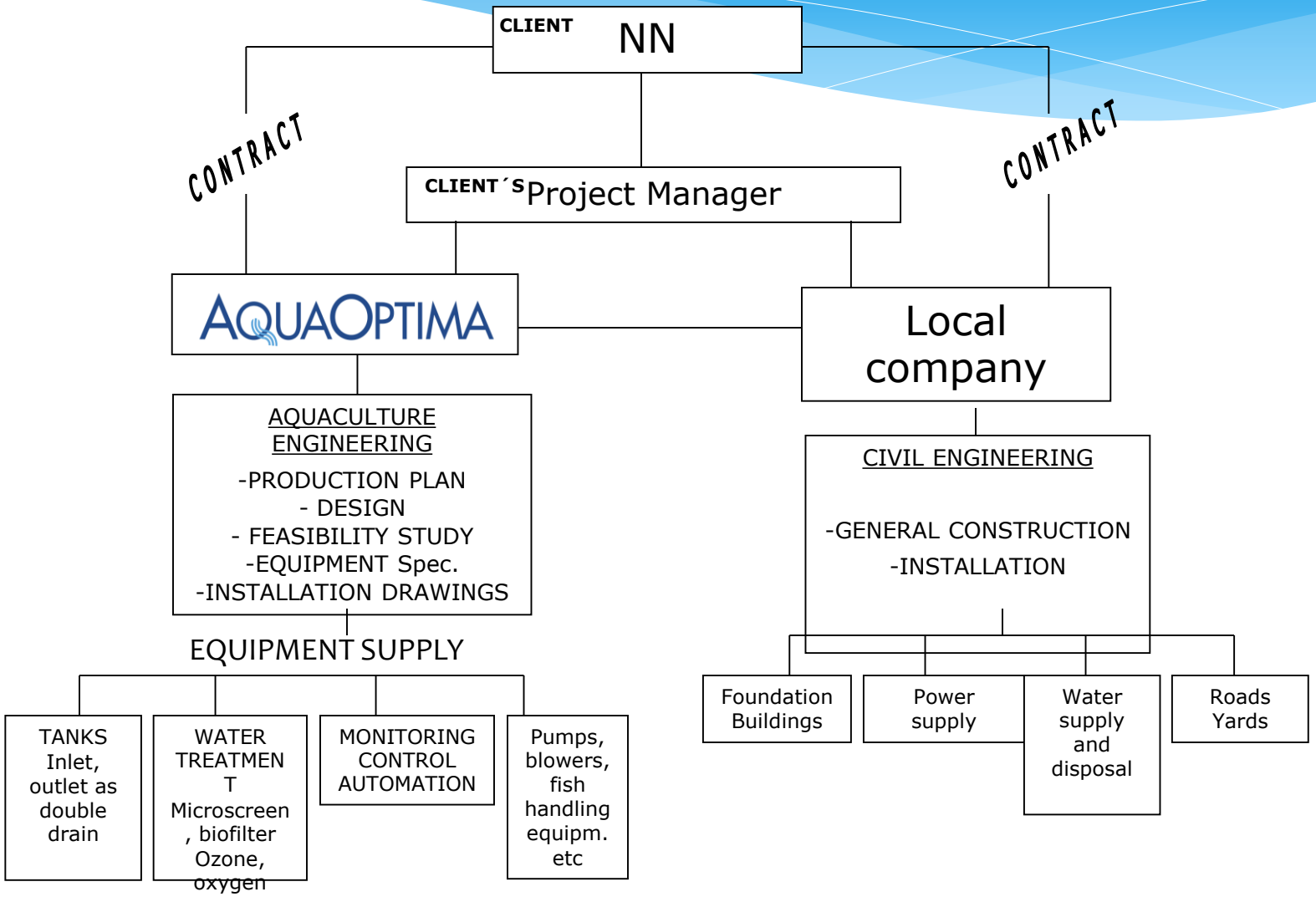
PROJECT ORGANIZATION



SUPERVISING DURING CONSTRUCTION,
ASSISTANCE DURING OPERATION

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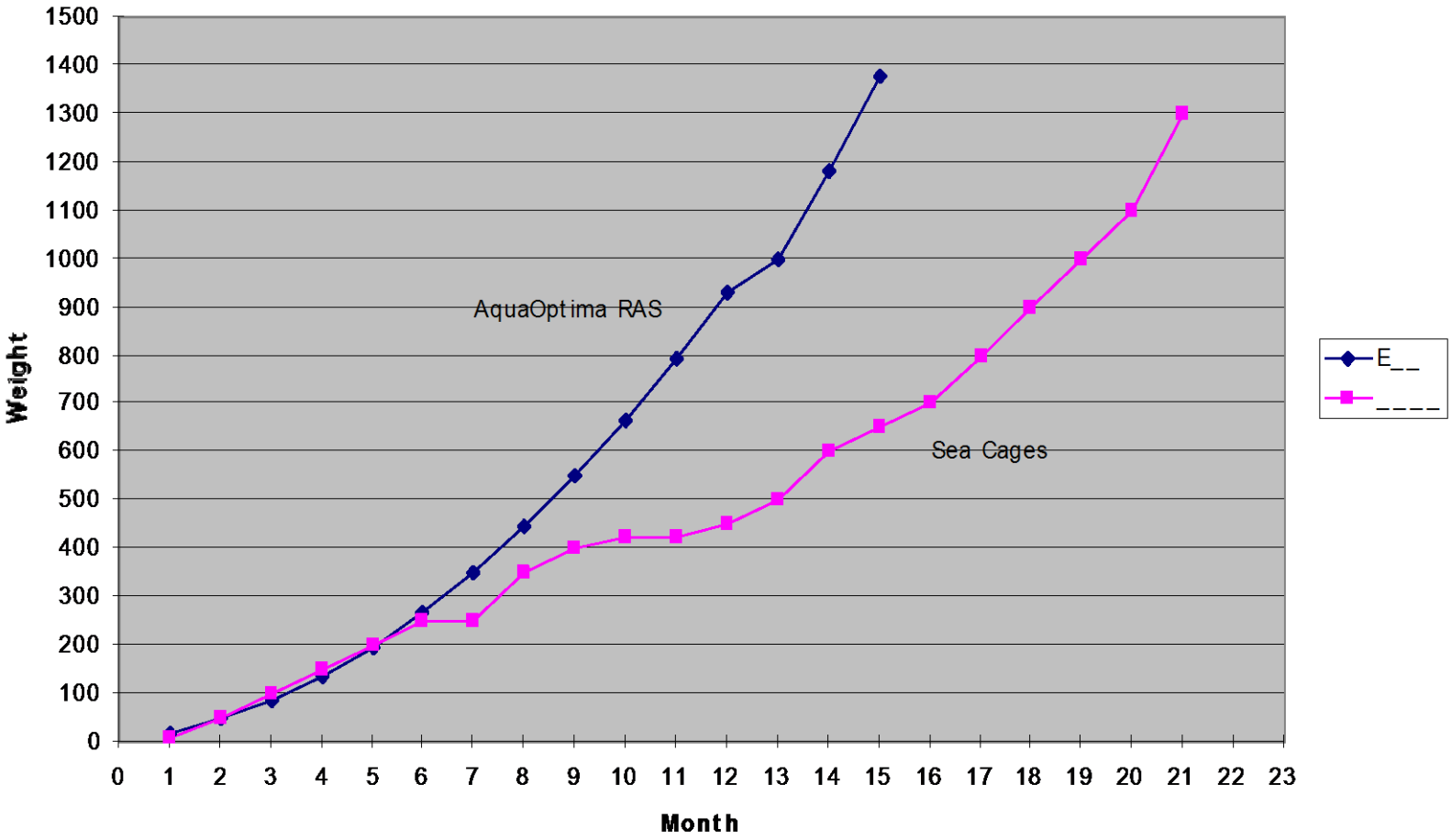
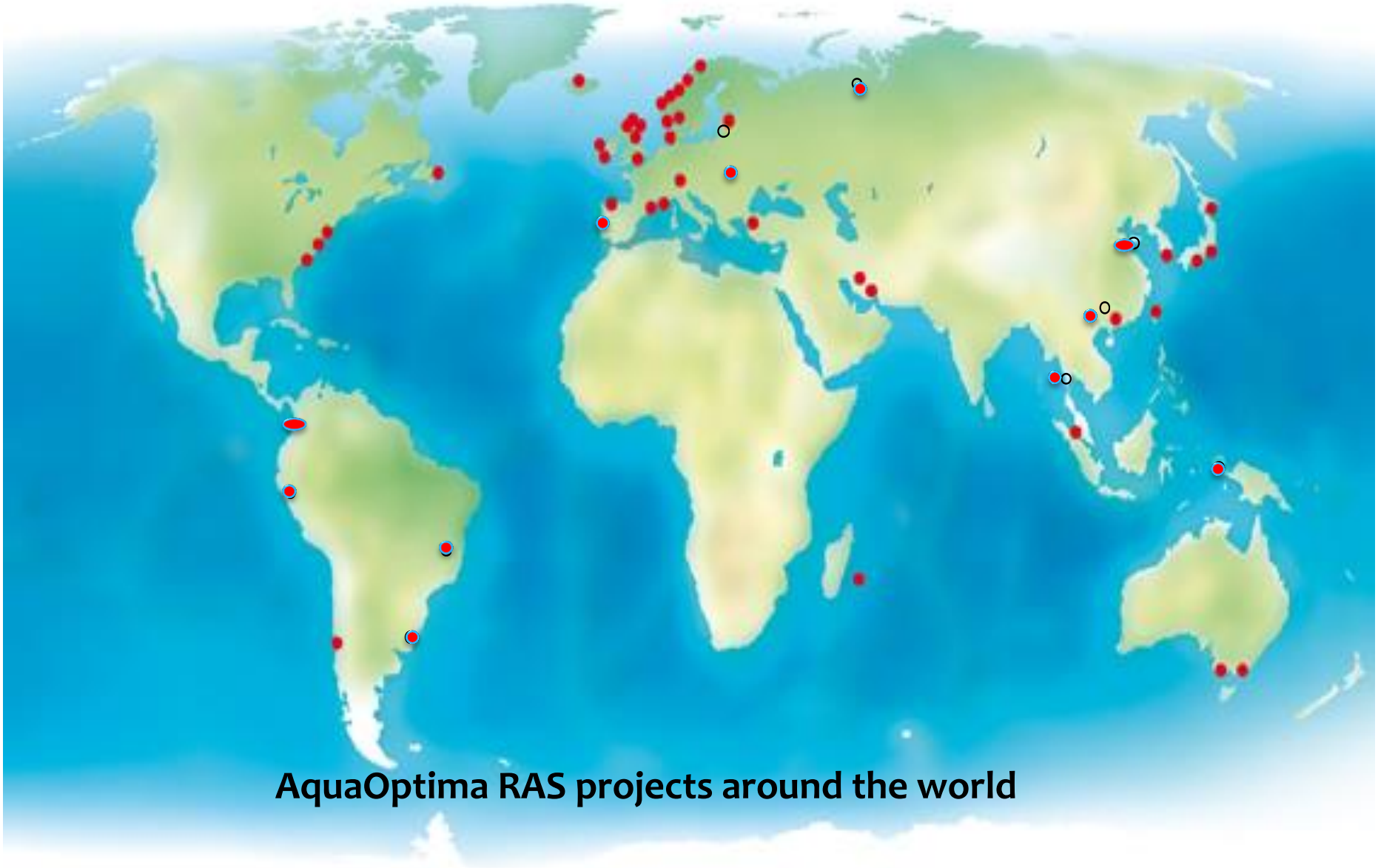
Kanmonkai Aquafarm Japan

Tiger Puffer Fish





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AquaOptima working with RAS world wide

Countries

* Norway
* Iceland
* Faroe Islands
* Russia
* Portugal
* Spain
* Estonia
* Scotland
* England
* Ireland
* France
* Bulgaria
* Croatia
* Greece
* Turkey
* Switzerland
* Argentina
* Brazil
* Chile
* Peru
* Cuba
* USA
* Canada
* Le Reunion
* Mauritius
* Iran
* Oman
* Japan
* China
* Taiwan
* Malaysia
* Philippines
* South Korea
* Indonesia
* Thailand
* India

Species

* Atlantic Salmon
* Halibut
* Atlantic Cod
* Seabass
* Seabream
* Barramundi
* Tiger puffer fish
* Arctic Char
* Rainbow trout
* Tilapia
* Eel
* Sturgeon
* Pollock
* Pike Perch
* Whitefish
* Cobia
* Japanese flounder
* Turbot
* Grouper
* Koi

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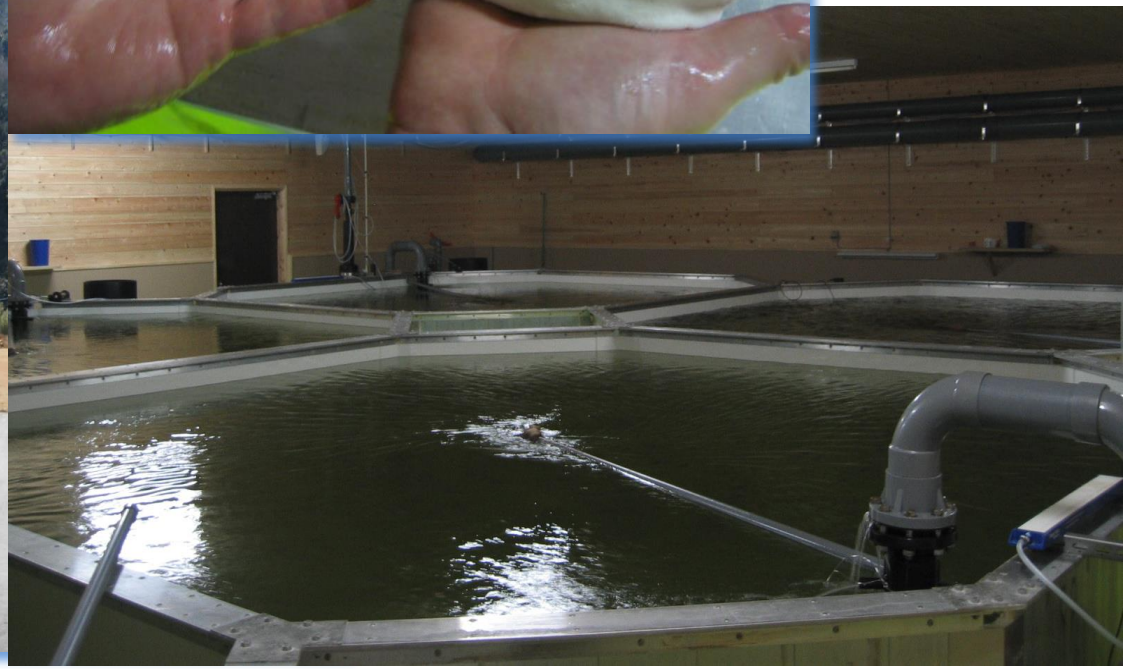
Optima Foods, Japan

Tiger puffer fish

Nursery and Grow-out department, 100 tons/y

In operation since 2005



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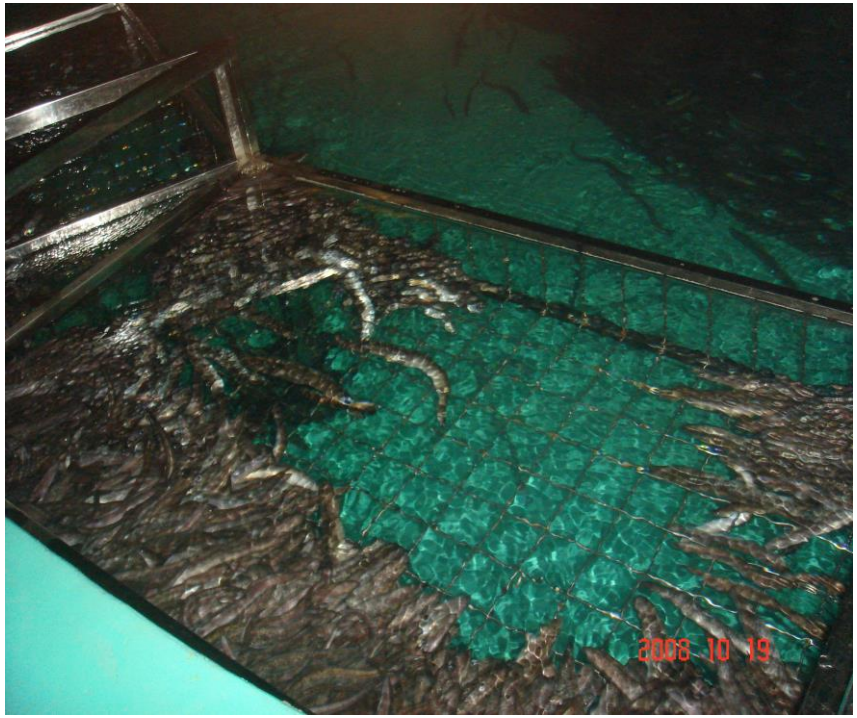
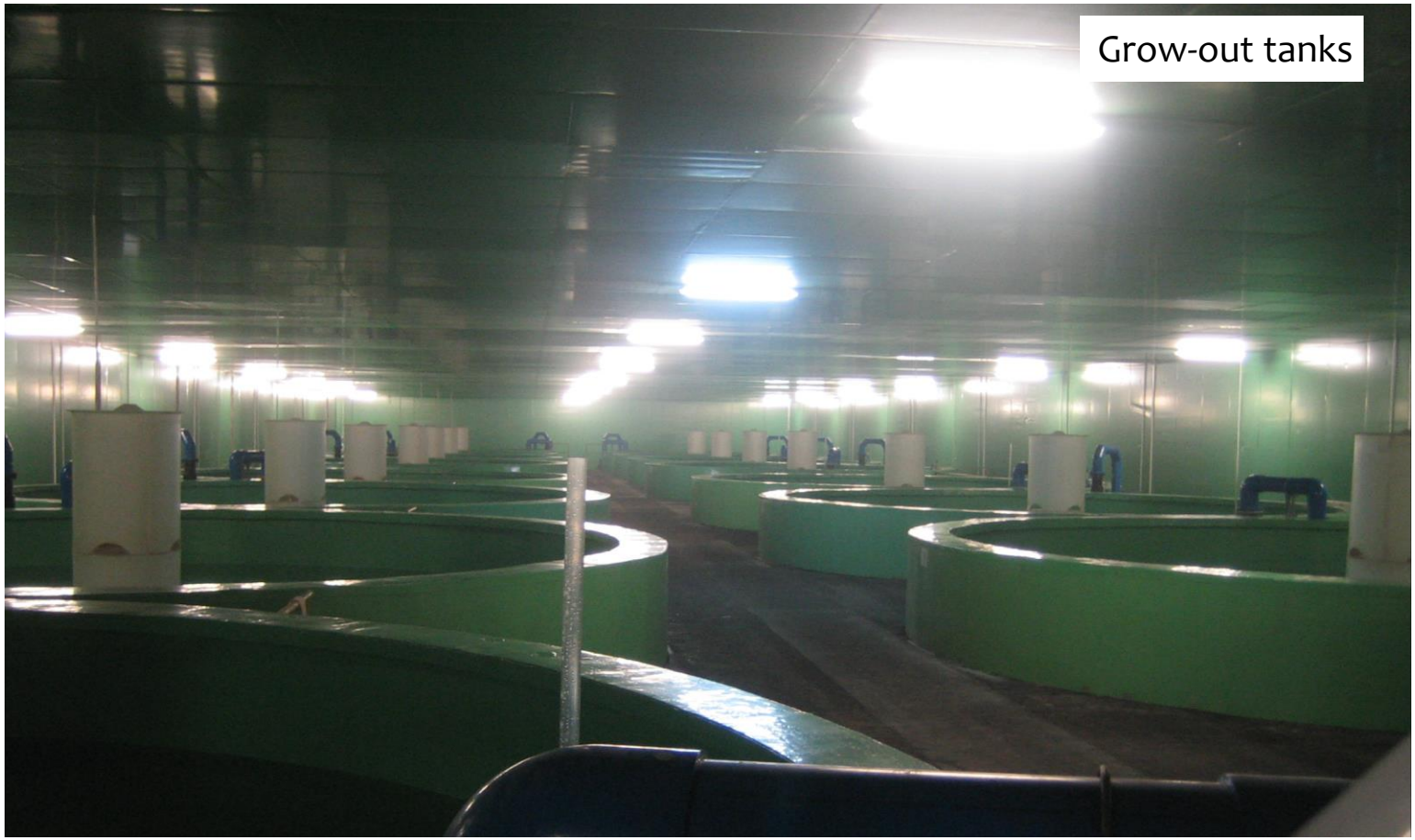
Shauguan Liran,China Eel, 2007



Opening ceremony!

AQUAOPTIMA

Shauguan Liran,China
Eel



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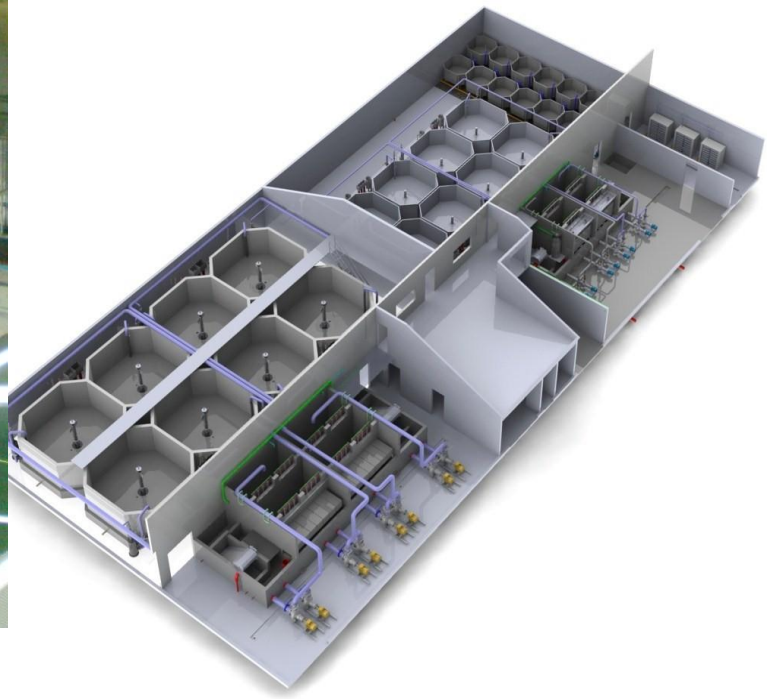
Yantai Salmon Farm, China

FIRST LANDBASED SALMOM FARM in RAS
Since Jan 2012 salmon of 3-5 kg on the market



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NOFIMA

The world's largest R&D facility for RAS

Fish welfare, water quality requirements

NOFIMA chose AquaOptima technology
In operation since 2010

AQUAOPTIMA

Рыбоводный завод на р. Собь ЯНАО

SibInvestStroy, Russia

Whitefish, Sturgeon, Caviar

Инвестор:
ООО "НПО СРЗ"
Заказчик-застройщик:
ООО "СибИнвестСрой"

Разрешение на строительство
№ RU 89507104
Площадь застройки:
92447 м²

Экспликация зданий и сооружений

№ п/п	Наименование	Площадь, м²
1	Главный корпус	6133,7
2	АВК	1430,4
3	Гараж	309,25
4	Блок бытовых помещений	285,6
5	Насосная станция	107,2
6	Зда ис Бонов запрудыа карпа	146,8
7	ТП	22,7
8	ДЭС	14,75
9	КНС	9,0
10	Канализ. сброса осадка	
11	Жилой дом на 8 квартир	693,6

SibInvestStroy

In operation since 2016, One of two similar Larvae departments

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FindFresh S.A, Portugal, Eel,

In operation since May 2016, 500 tons/y

Footprint
7000 m2

AQUAOPTIMA

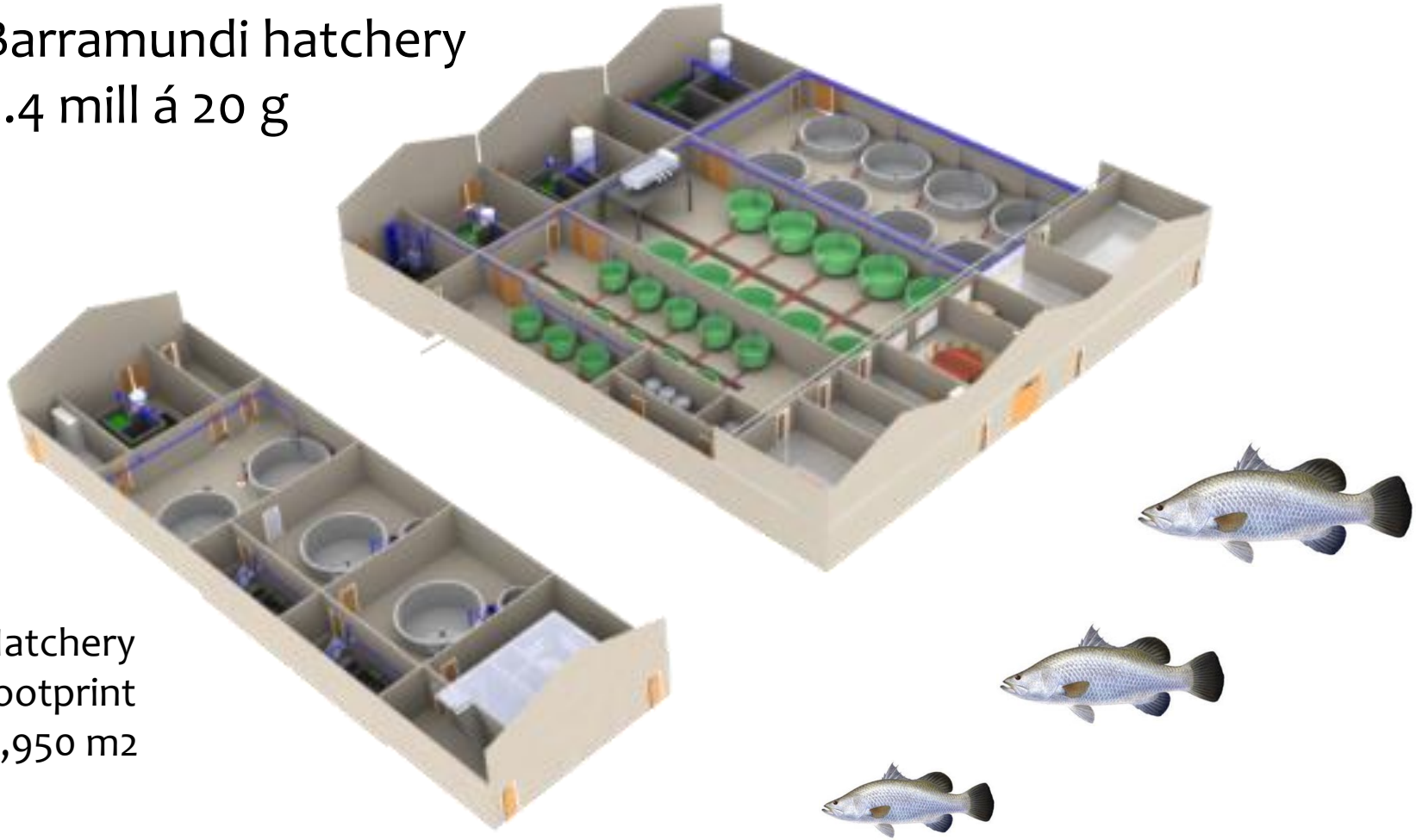
FindFresh, Portugal, Eel

AQUAOPTIMA

PT Yapen MS, Indonesia

In operation from summer 2017

Barramundi hatchery
2.4 mill á 20 g



Hatchery
footprint
1,950 m2

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AquaTropical, Ecuador 2016

Thank you for your attention!

-and enjoy!

AQUAOPTIMA