

# HanseGarnelen® AG

WELCOME TO THE  
WORLD OF  
AQUACULTURE!



**23 a 25 de maio, 2019**  
Marina da Glória - Rio de Janeiro

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# **Burkhard F.W. Hormann**

## **Co-Founder & CEO**

### **HanseGarnelen AG**

**German Corporation developing, financing, building and operating state-of-the-art RAS aquaculture facilities for CO2 neutral, urban fish farming.**

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**“Aquaculture, not the Internet, represents the most promising investment opportunity of the 21st Century.”**

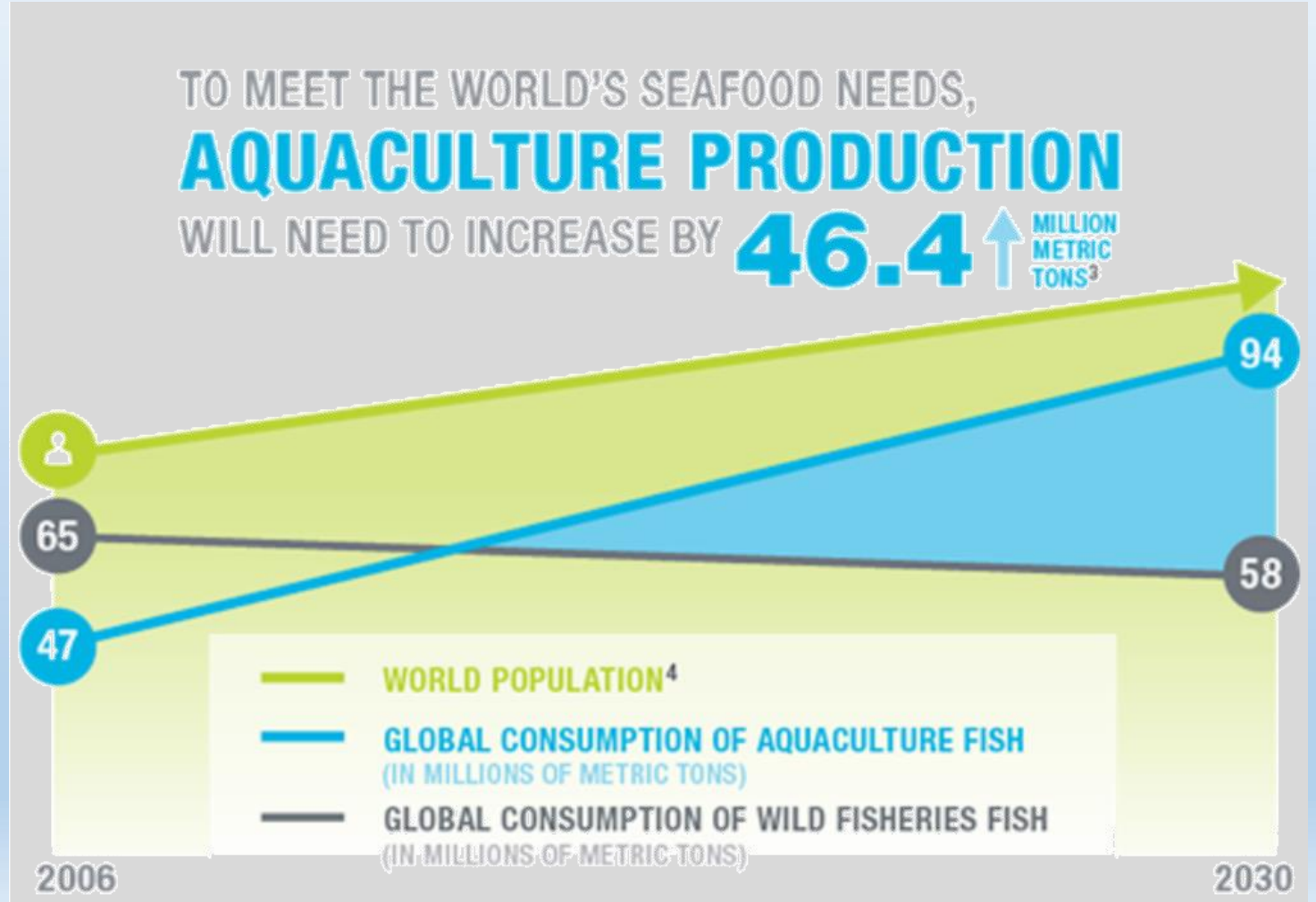
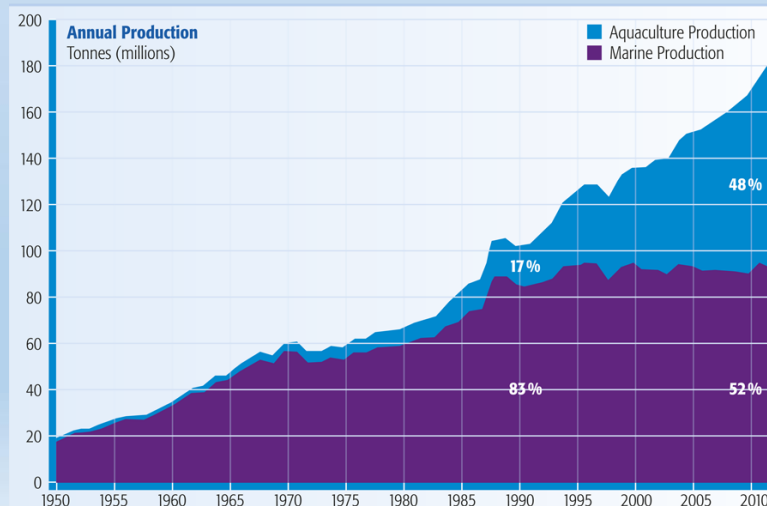
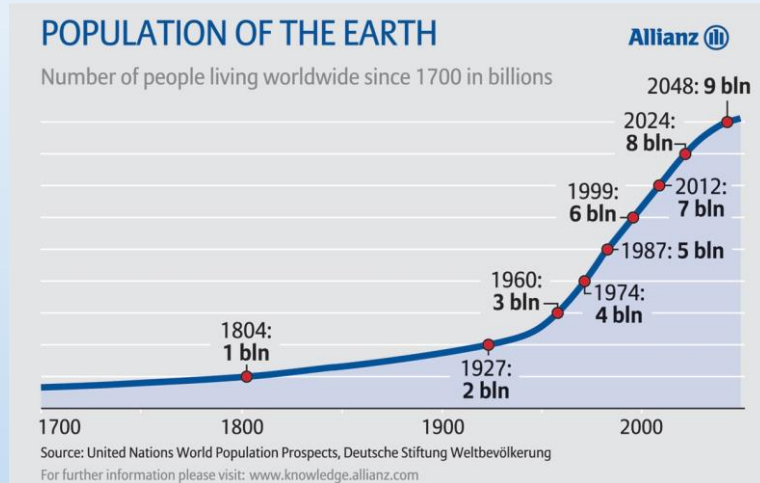
**Peter Drucker,** Management Guru & Economist

# Facts of Global aquaculture prospects

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- World population will be 9 billion by 2045
- By 2030 total seafood demand estimated to be over 200 million tons (**over \$1000 billion**)
- As early **2015**, Aquaculture surpassed fisheries as main producer of fish
- By 2030 **Aquaculture** will supply **63%** of the demand compared with 2012 at **42%**
- China's middle class is expected to reach 375 million by 2025 - greater than the current U.S. Population. Even being biggest producer, China is already now net importer of seafood!
- Global consumption is 19 kg per capita per year (2012) and continuously growing
- Approximately half of all farm-raised fish and seafood for direct consumption of people comes from mariculture

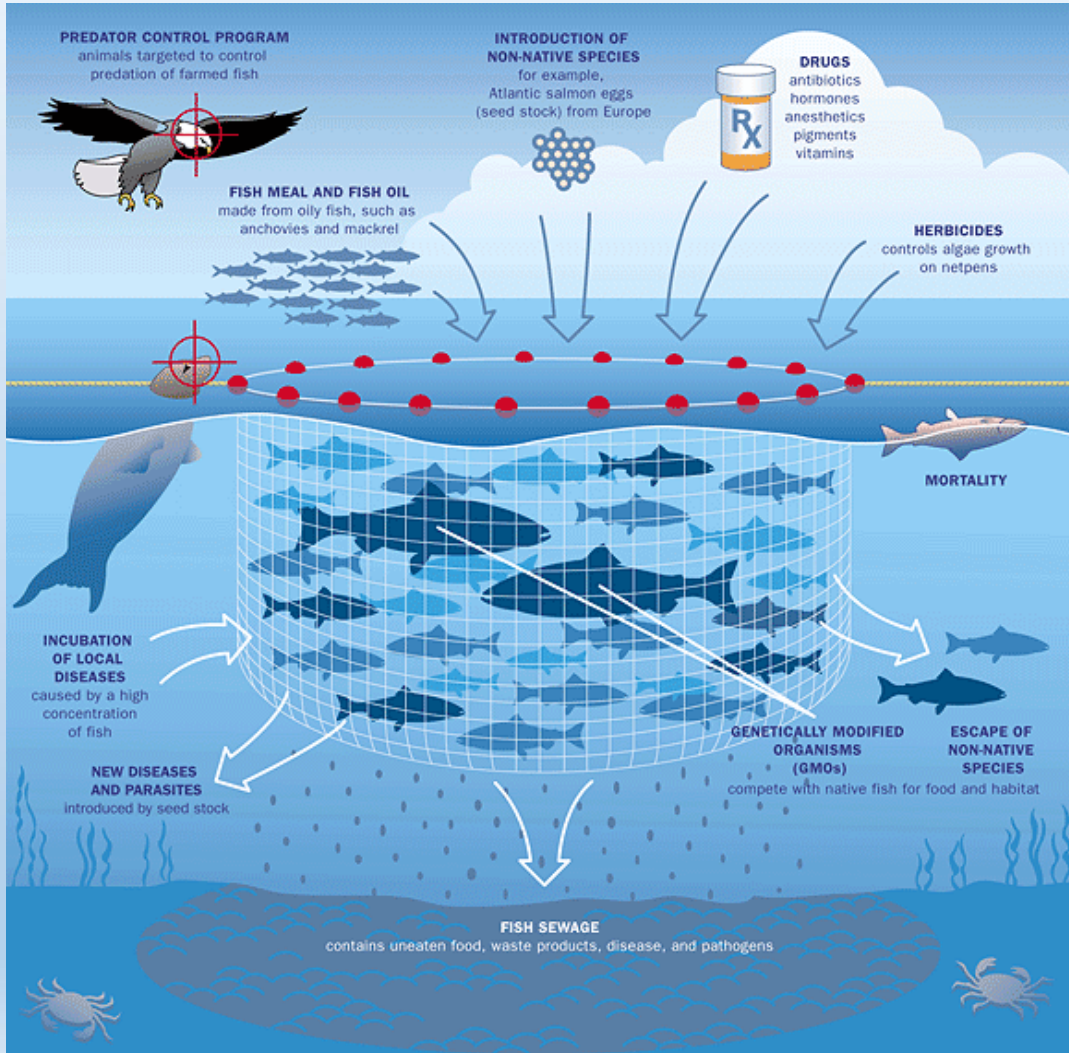
# Global Trends



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# BUT

# Critical aspects of conventional aquaculture



Mariculture  
gives a strong and  
negative impact to the  
environment



## Solution : Cooperation in Agribusiness and Innovation

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**German-Brazilian Initiative for Cooperation in Agribusiness and Innovation (AI)** was founded in 2003

Since 2016 we are **Stakeholder** for all aspects of **Aquaculture at AI**



# Task force at EEBA 2018 in Cologne

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ENCONTRO ECONÔMICO  
BRASIL - ALEMANHA **2018**  
DEUTSCH - BRASILIANSISCHE  
WIRTSCHAFTSTAGE **2018**



Federal Ministry  
of Food  
and Agriculture



abag  
ASSOCIAÇÃO BRASILEIRA  
DO AGRONEGÓCIO



**German-Brazilian Initiative  
for Cooperation in Agribusiness and Innovation**

**Working Session**

# Status Quo

## R&D Project 2018-2021 UFSC LCM, Alfred Wegner Institut, Universität Hamburg; EMBRAPi, BMWI

- German and Brazilian ZIM and EMBRAPi call: “Novel Biofloc system based on biocarriers from biopolymers and self-sufficient measuring and control system for shrimp production”

## UFSC LCM , Florianópolis, 18. - 19.06.2019

- BluEco Net International Industry Forum for the future of sustainable aquaculture production in Brazil





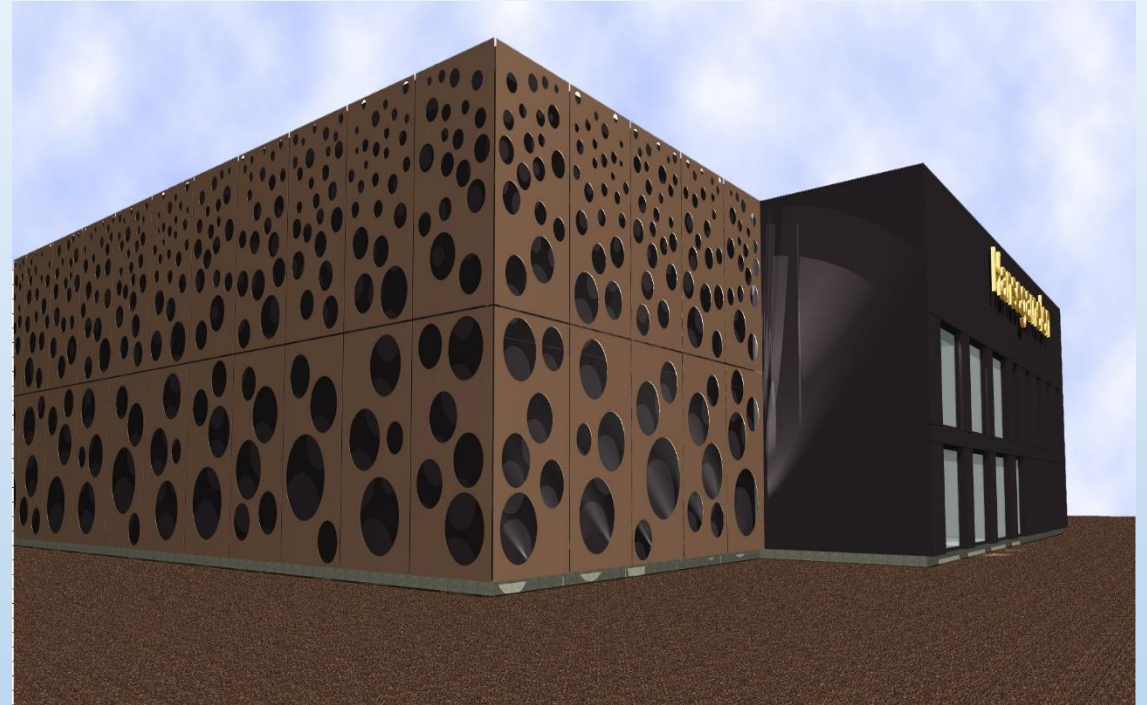
# First CO<sub>2</sub> Neutral Organic Shrimp farm Downtown a Metropol

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# Investment of R\$ 28 Mio. for 70 t Brazilian Species RAS Plant



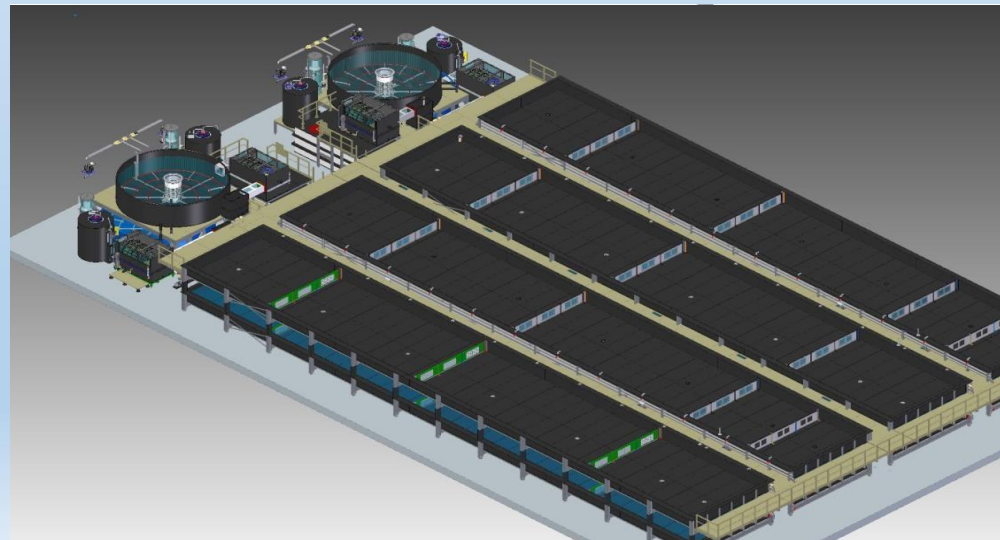


# Some impressions of RAS-plants





# Some impressions of RAS-plants



# Conclusion

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- Knowledge that this actual situation for the German, EU and international organic Shrimp production is not an import issue, but a nationally sovereign task
- Successful installation of an actionable and fast task force that acts interdisciplinary and can submit resolutions in 2018/2019
- Window of opportunity for Brazil to act as a reliable partner for the supply and supply for the production of organic shrimp in Germany and Europe. Later also for other fish species
- Emergency plan for a fast solution of the approval to import and use of dams for European breeding to commercialize as human food
- Start for a better knowledge of Brazilian species to grow in RAS technology in Germany and Brazil



# LET'S GET STARTED!

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Combinamos o conhecimento da Alemanha, com experiência internacional aliadas a conhecimento na America Latina para o sucesso nos projetos de Aquicultura pelo Sistema RAS.

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**Gratos pela sua atenção!**



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# Who we are

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## HanseGarnelen AG

- Based in Hamburg, Germany, with worldwide activities
- Providing state-of-the-art RAS (Recirculating Aquaculture Systems) projects for fish & shrimp production
- Offering all stages of the value chain: Planning, engineering, financing, building, operating, branding, M&S

## Network Partners

- Alfred-Wegener-Institute (AWI); Dr. Matt Slater
- BluEco Net: German-Brazilian initiative for cooperation in aquaculture and innovation
- KNAQ (Competence Network Aquaculture): around 900 members, administrated by Dr. Stephan Meyer
- University of Hamburg, Institute for hydro biology and fishery science (IHF); Dr. Eva Spiel

## HanseGarnelen in Latin America

- Represented by IPDS, São Paulo;
- Consulted by ■ Laboratório de Camarões Marinhos - LCM UFSC; Prof. Dr. Katt R. Lapa, Dr. Felipe Vieira

# The opportunity

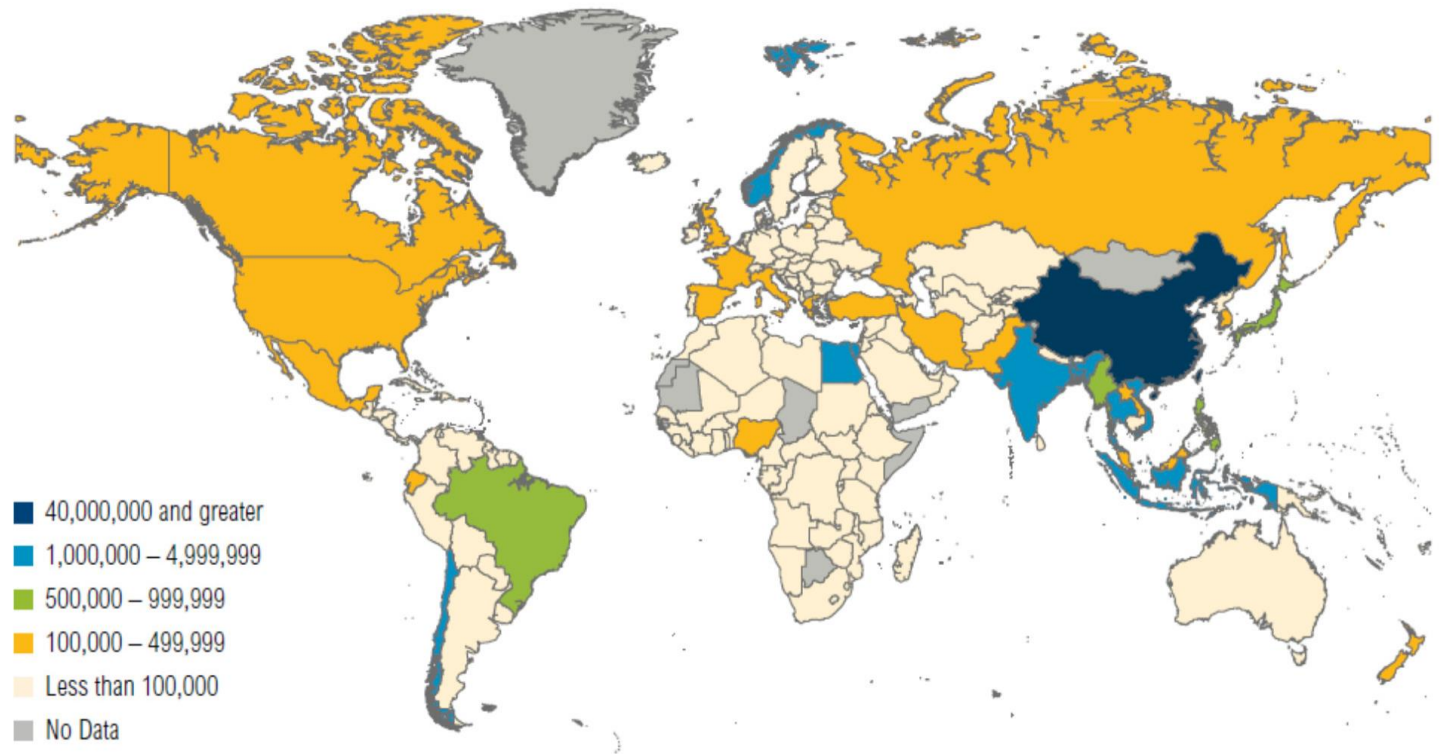
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and  
there  
is **B** **R** **A** **S** **I** **L**

# In the 3rd highest level of aquaculture production

Brasil has the potential to be world leader in RAS produced fish

Figure 4 | Aquaculture production occurs around the world but is concentrated in Asia (tons, 2012)



Source: FAO (2014b).

# Factors of potential

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**Expanding population**

**Expanding national and international markets**

**Highly long term cost effective**

**Buy local – Buy fresh**

**Biosecurity**

**Products**

**Safe**

**Nutritious**

**Healthy**

**Sustainable**

# Challenges

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**Regulations**

**Technology**

**Capital Sources**

**Global Competition**

**Support for Aquaculture**












**Public misunderstanding**

**Wild vs Farm Raised**

**Environmental Assault**





**Government acknowledgement of importance**

# Some species farmed in LatAm. Why not in RAS?

	INGLES	ESPAÑOL	CIENTIFICO	Hi Season	SIZE LB	
1	AMERICAN RED SNAPPER	HUACHINANGO	LUTJANUS CAMPECHANUS	NOVEMBER TO APRIL	1-2, 2-4, 4-6	
2	HOG SNAPPER	BOQUINETE	LACHNOLAIMUS MAXIMUS	DECEMBER - JUN	1-2, 2-4	
3	YELLOW TAIL SNAPPER	CANANE	OCYURUS CHRYSURUS	NOVEMBER TO APRIL	1-2, 2-4	
4	MANGROVE SNAPPER	PARGO MULATO	LUTJANUS GRISEUS	DECEMBER - JUN	1-2, 2-4	
5	LANE SNAPPER	RUBIA	LUTJANUS SYNAGRIS	SEPTEMBER - MAY	1/2-3/4, 3/4-1, 1-2	
6	WHITE GRUNT	CHAC CHIC	HAEMULON PLUMERII	ALL YEAR	1/2-3/4, 3/4-1, 1-2	
7	RED GRUPPER	MERO	EPINEPHELUS MORIO	-----	-----	
8	POMPANO FLORIDA	PAMPANO	TRACHINOTUS CAROLINUS	DECEMBER TO APRIL	1-2, 2-4	
9	BLUE RUNNER	COJINUDA	CARANX CRYsos	ALL YEAR	1/2-3/4, 3/4-1, 1-2	
10	SPECKLED TROUT	CORVINA PINTA	CYNOSCION NEBULOSUS	JANUARY TO JUN	1-2, 2-4, 4-6	
11	SPANISH MACKAREL	SIERRA DEL GOLFO	SCOMBEROMORUS MACULATUS	NOVEMBER TO APRIL	1-2, 2-4, 4-6	
12	CATFISH	BAGRE	BAGRE MARINUS	ALL YEAR	3/4-1, 1-2	



# Some species farmed in LatAm. Why not in RAS?

15	JACK	JUREL	CARANX HIPPOS	ALL YEAR	1-2, 2-4, 4-6, 6-8	
16	BONITO	BONITO	EUTHYNNUS ALLETTERATUS	DECEMBER - JUN	2-4, 4-6, 6-8 8-UP	
17	KING FISH	CARITO - PETO	SCOMBEROMORUS CAVALLA	NOVEMBER TO APRIL	2-4, 4-6, 6-8 8-UP	
18	SNOOK	ROBALO	CENTROPOMUS UNDECIMALIS	NOVEMBER TO APRIL	1-2, 2-4, 4-6, 6-8, 8-UP	
19	LADY FISH	MACABI	ELOPS SAURUS	NOVEMBER TO APRIL	1-2, 2-4	