Australia's Premium Native Fish

ASX Code: MCA

Murray Cod
Australia Limited

www: murraycodaustralia.com

A Unique Opportunity – Land Based Aquaculture

Environmental and economic pressure on irrigation & declining wild fish stocks

Global demand for protein – especially for fish protein

Innovation via existing local infrastructure and a rare premium native fish

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What is Murray Cod

- One of the world's largest freshwater fish
- Historically it was a Premium Table Fish
- It has a creamy white flesh with firm texture and mild taste (similar to Soon Hock)
- In 1880's highly profitable commercial fisheries sprang up in the Murray-Darling Basin and Australia consumed estimated >500 tonnes per annum.
- By 1950's wild catch was down to 311 tonnes and declined to less than 30 tonnes by late 1960's and it became forgotten by Australian metropolitan consumers
- Currently listed a vulnerable species and commercial fishing of the species is prohibited in Australia
- Current growth in demand for our farmed cod is outstripping growth in supply

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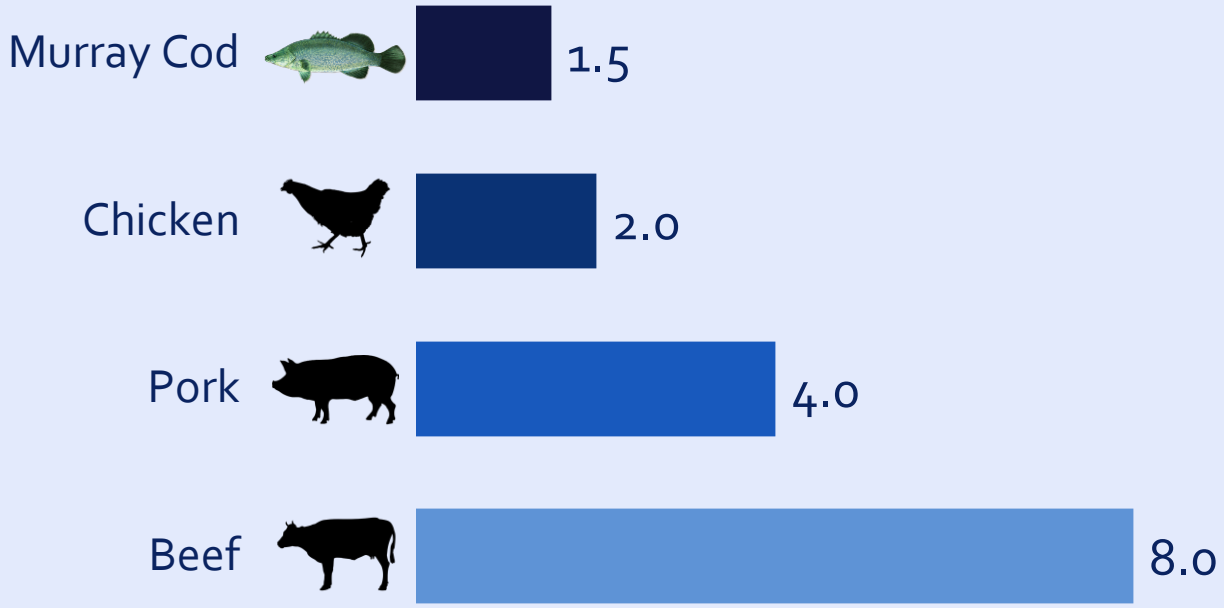
Murray Cod Suitability to Aquaculture

- High stocking density tolerance
- Tolerance for handling and grading
- Medium – fast growth rate (1kg in 12 month)
- Easy to wean to artificial diets
- Have relatively broad water quality requirements
- Efficient food conversion (1.5:1)
- Existing/latent domestic and export potential
- Similar species to marine groupers and mandarin fish (Asian markets) (Soon Hock)
- Existing R&D and extension networks and infrastructure in commercialisation of Murray Cod

High Feed Conversion Ratio

- Fish are efficient converters of low-grade feed into high-value protein
- Current production rates indicate Murray cod conversion is 1.5:1
- Feed conversion into protein is **twice as high** for commercial aquaculture as land-based protein production systems.



http://www2.deloitte.com/au/en/pages/consumer-business/articles/the-growth-of-aqua-culture-fishy-business.html

Lower input costs and higher feedstock to protein ratio

Other Major Farmed Species in Australia

Murray Cod Premium White Flesh	Barramundi White Flesh	Salmon Pink Flesh
• Only exists in Murray Darling Basin of Australia - Grows nowhere else in the world • No wild catch to compete with • No other significant farms to compete with. • Wholesale price $18-$22/kg	• Widely Spread throughout Northern Australia and Asia • 22,000 tonnes pa consumed in Australia alone • 2,000 tonnes pa wild caught • 5,000 tonnes pa farmed in Australia • 15,000 tonnes pa imported from South East Asia • Wholesale price $8- $10/kg	• Widely spread around Northern Hemisphere • 55,000 tonnes of production in Australia (Tasmania) • Large Wild Catch worldwide • Farmed in Northern and Southern Hemispheres (Norway alone produces 1.2 million tonnes) • Wholesale price $12-$14 kg

Barriers to Entry

- Murray Cod is globally unique to Murray Darling River System. These fish grow in no other river system in the world
- Commercial fishing in the river system is banned, listed by EPBC as Vulnerable*
- Difficulty in sourcing brood stock
- Limited spawning production facilities in existence
- Ideal environmental growing conditions are limited to the Murray Darling basin. Intellectual property of "cage/pond system" is unique
- The region's availability of good quality water and land suitable for dam construction make it unique.

* http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=66633

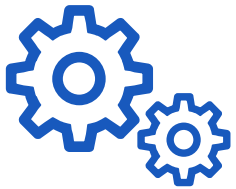
MCA- Investment Proposition

- **Luxury Product:** highly sought after as a table fish by consumers and chefs
- **Price premium:** Higher wholesale prices paid for Murray cod (>$20kg/kg)* than other farmed species in Australia and Asia (~$10/kg)
- **High Growth:** Production capacity 20 tonnes in 2014 (currently 450 tonnes)** growing to 1000 tonnes in 2021. Aiming for 10,000 tonnes in 2030
- **Green & sustainable:** Grown in natural habitat, strong synergies with irrigated agriculture, and low environmental footprint
- **Value creation:** growing demand, high profit margin and high barriers to entry

* Source http://www.dpi.nsw.gov.au/fishing/aquaculture/publications/species-freshwater/murray-cod-aquaculture-prospects
** Including contract growers and MCA capacity

Limited Competition

Murray Cod Australia Limited



Market is in infancy stage with existing production limited to small scale private enterprises and "backyard" producers (Except for MCA)

It was estimated in 2015, aquaculture production of Murray Cod was less than 176 tonnes per annum in NSW*

Re-introduction of Cod in Australia to raise market awareness is showing significant increases in demand by consumers

Several studies by Austrade and the Department of Primary Industries have shown great prospects for exporting to South-East Asia**

* http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0004/638068/aquaculture-production-report-2014-2015.pdf
** http://agriculture.vic.gov.au/fisheries/aquaculture/murray-cod-aquaculture

Business Model

Hatchery

35mm

Nursery

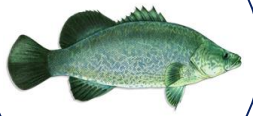
Stock is kept in recirculated tanks with environment controlled until 100 grams in size

Cages Sold to Contract Growers

Fingerlings to MCA ponds for grow-out

In 12 Mths 1-1.5Kg Murray Cod is harvested by MCA

Fingerlings sold to Contract Growers for grow-out est. @ $4 each



Distributor

www: murraycodaustralia.com

Current Sales & Expansion Plans

- Current productive capacity of MCA is 300,000 Kg
- Current productive capacity from contract growers is 150,000 Kg
- Objective is to be a 1 million kg per year producer by 2021.
- Aiming for 10 million kg by 2030
- Additional revenue from sales of cage systems and fingerlings to contract growers
- Costs are falling from synergies and economies of scale from merging the three businesses

* The current price should not be taken as a reflection of future prices as future prices are likely to fluctuate

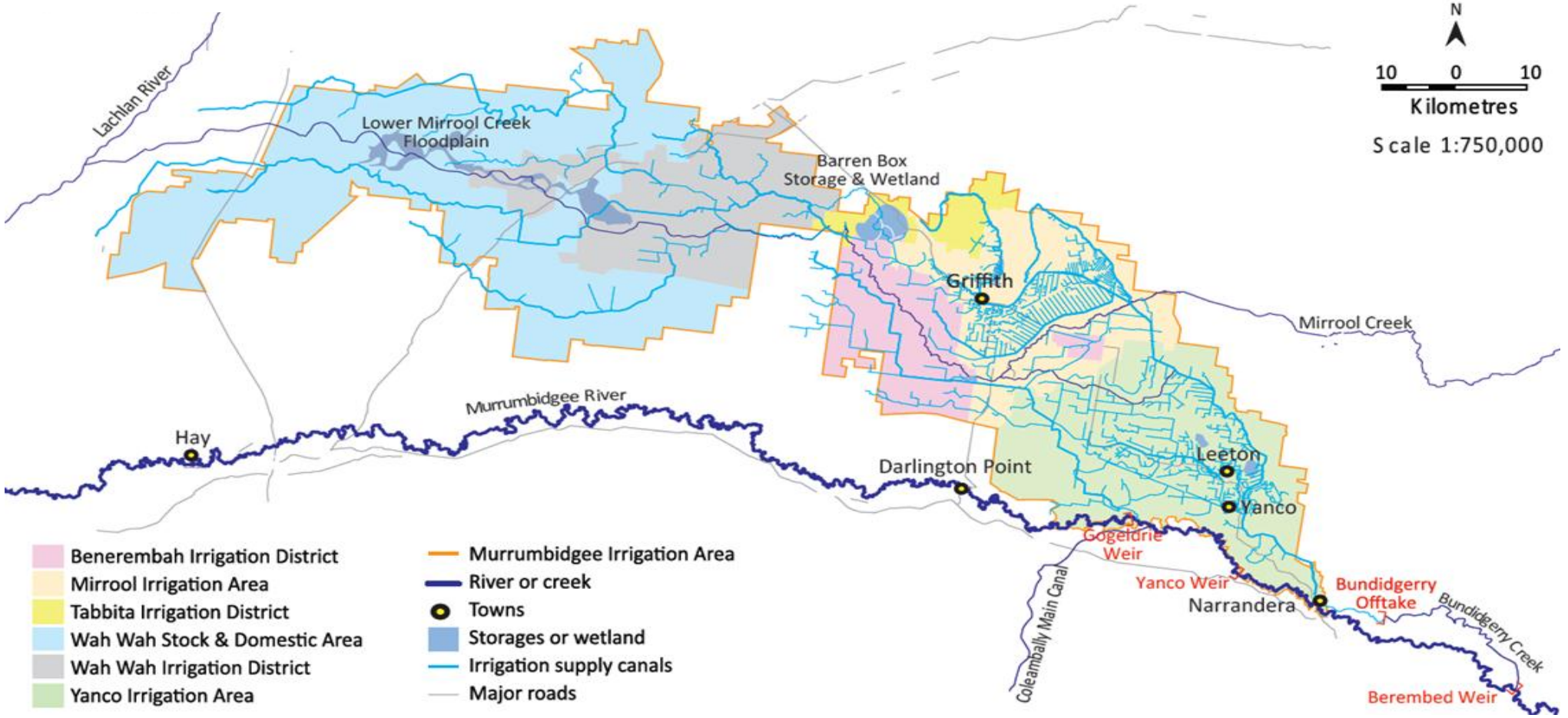
Current Capital Structure

Current Market Cap approx. $21 million AUD	Shares on issue	Options	Deferred Consideration Shares & Performance Rights
Existing	**63,939,969**		
Issued in Capital Raise (re-listed 31 January 2017)	200,000,000		
Grow Out Farm, Nursery and Hatchery assets, comprising tangible assets of:-	81,285,715	64,000,000 (2)	26,428,571 (3)
➢ Two freehold farming properties including water rights, fixtures and fittings & aquaculture infrastructure (1)			
➢ Fish stock (various sizes)			
➢ Plant and equipment			
Lead Manager & Advisor Options	1,000,000	5,350,000	
Directors Incentive Options		21,000,000 (2)	
TOTAL ON COMPLETION	**346,225,684**	**90,350,000**	**41,428,571**
MARKET CAP ON COMPLETION	$17,311,284	(indicatively at $0.05 per share)	

(1) $1.6M to be used by the vendors to settle bank loans
(2) Exercise price of $0.075 each, expiring 5 years from the date of issue and vesting upon production of 100 tonnes of Murray Cod within 4 years
(3) Converting 1:1 to ordinary shares upon production of 100 tonnes of Murray Cod within 4 years

Location Advantage

Irrigation supply network of Murrumbidgee Irrigation Area (MIA)



www.mirrigation.com.au

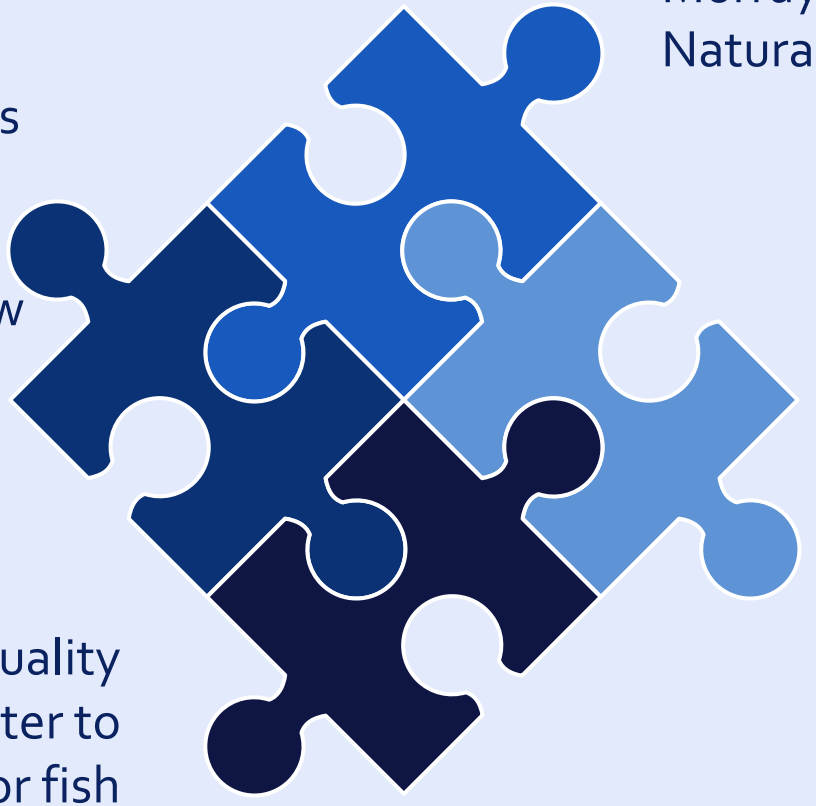
Where is the Murrumbidgee Irrigation Area?

MIA – Infrastructure Ready for Aquaculture

Advantages of the MIA

Murray Cod's Natural Habitat

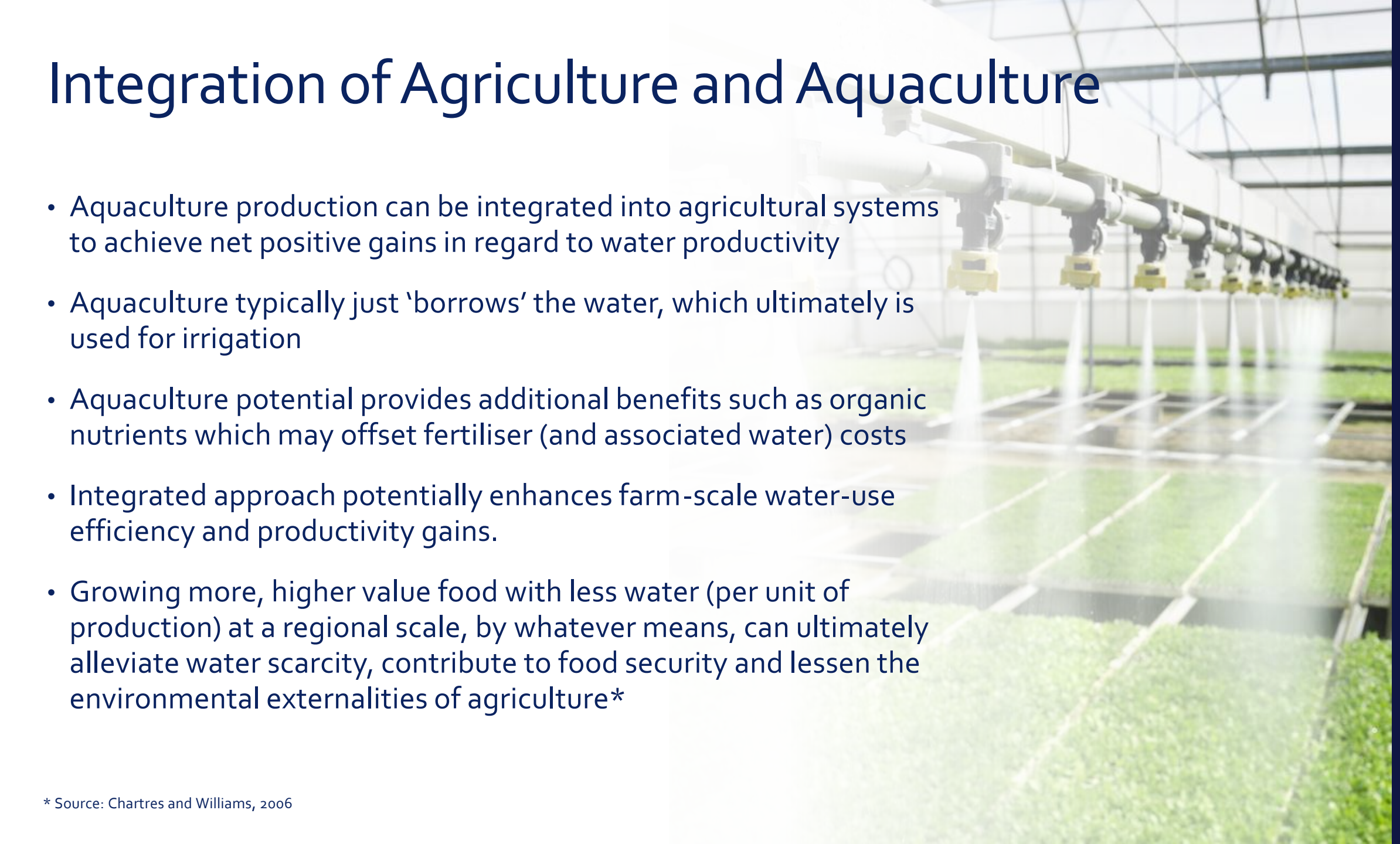
Global Capital Inflows and existing farmers who are willing to invest capital in a new industry



Ideally suited to make use of existing farm infrastructure (e.g. power, water inputs & drainage systems)

Reliable high quality water source. Water to be used twice: for fish and on irrigation farms

Integration of Agriculture and Aquaculture



- Aquaculture production can be integrated into agricultural systems to achieve net positive gains in regard to water productivity
- Aquaculture typically just 'borrows' the water, which ultimately is used for irrigation
- Aquaculture potential provides additional benefits such as organic nutrients which may offset fertiliser (and associated water) costs
- Integrated approach potentially enhances farm-scale water-use efficiency and productivity gains.
- Growing more, higher value food with less water (per unit of production) at a regional scale, by whatever means, can ultimately alleviate water scarcity, contribute to food security and lessen the environmental externalities of agriculture*

* Source: Chartres and Williams, 2006

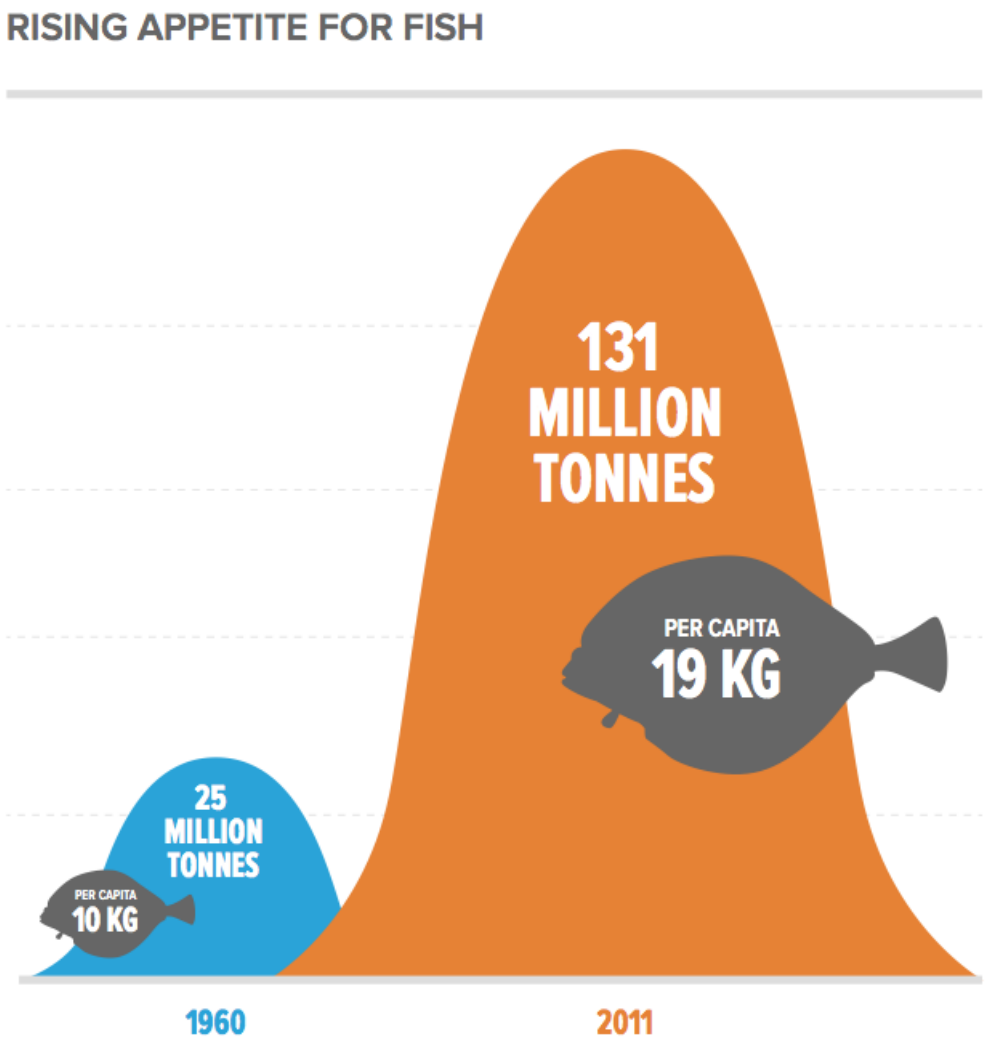
Aquaculture – Global Blue Revolution

Seafood is the most widely traded animal protein globally. With an estimated traded value of over US$140 billion in 2014, exports have nearly doubled in value in the last five years.*

Aquaculture is world's fastest growing food production sector. In the last three decades (1980–2010), world food fish production of aquaculture has expanded by almost 12 times, at an average annual rate of 8.8 percent, and it continues to outpace population growth**

* Source Rabobank World Seafood Trade Map 2015 https://far.rabobank.com/en/sectors/animal-protein/world-seafood-trade-map.html
** http://www.fao.org/3/a-i3720e.pdf

Global Consumption of Fish is Rising

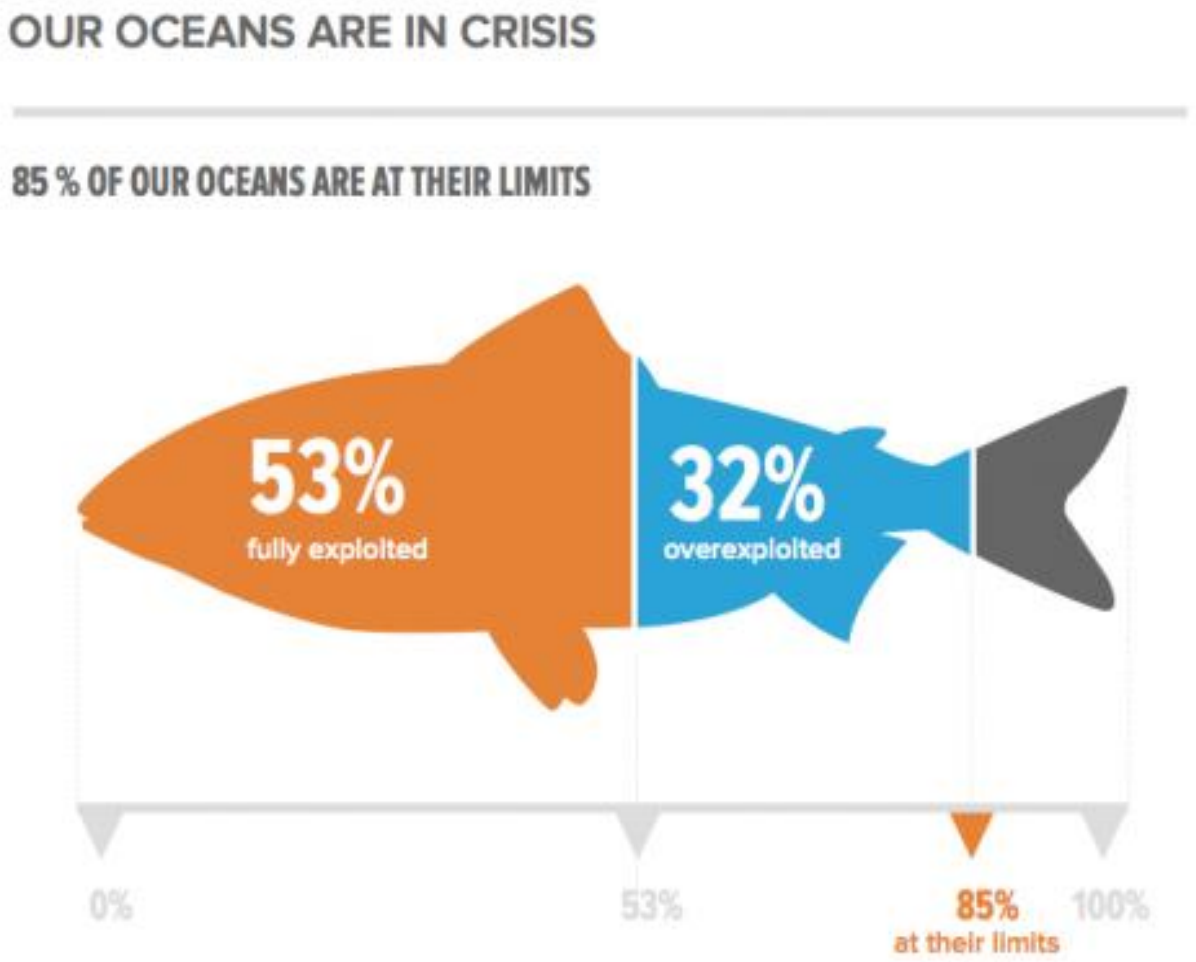


Source: http://www.aqua-spark.nl/why-aquaculture/market/

But Wild Catch is Falling

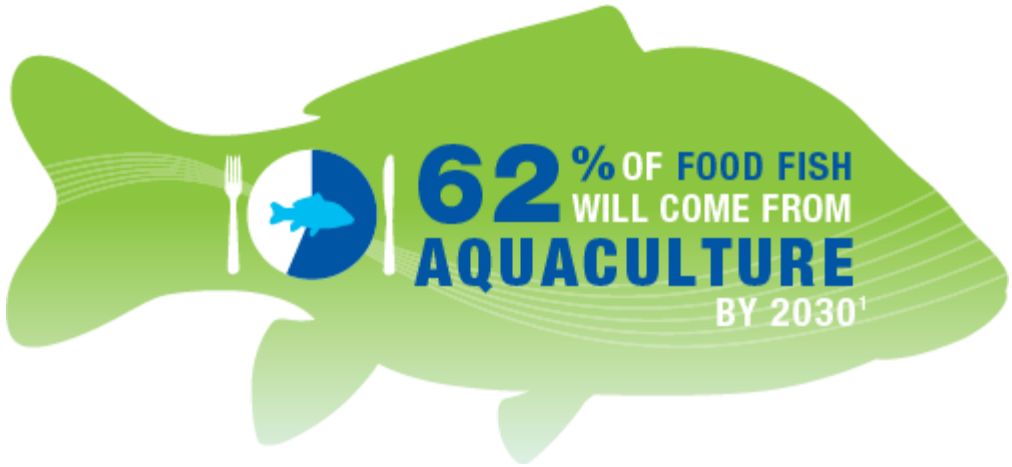
https://www.bloomberg.org/press/infographics/worlds-fish-growing-demand-shrinking-supply/

Ocean Fisheries are at Risk



Source: http://www.aqua-spark.nl/why-aquaculture/market/

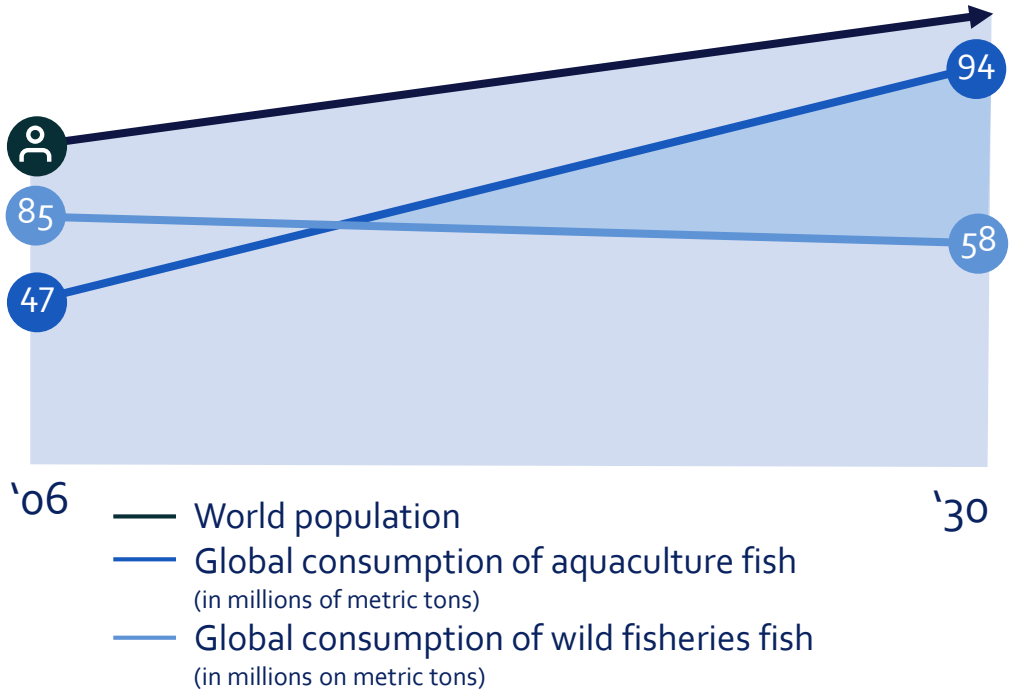
Aquaculture currently provides nearly half (46.5%) of all fish consumed by humans and by 2030 aquaculture is projected to provide 62 percent of global seafood



To meet the world's seafood needs

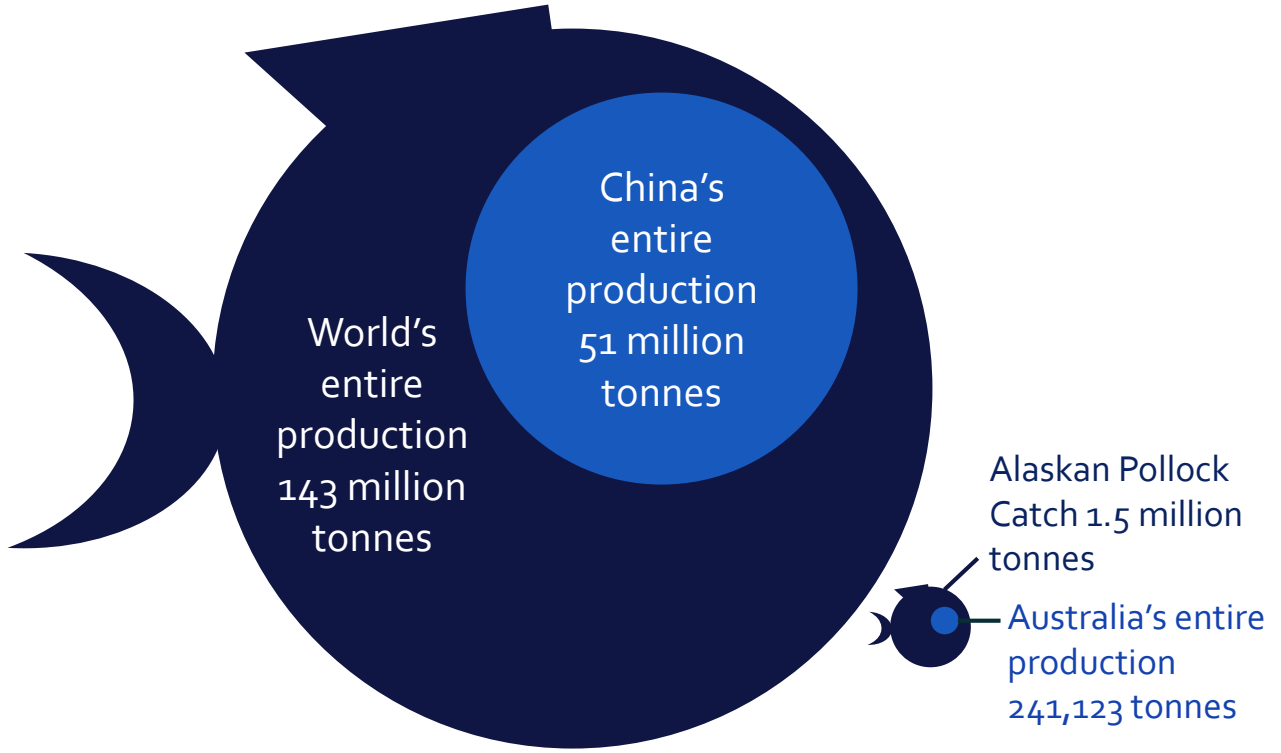
AQUACULTURE PRODUCTION

will need to increase by **46.4** Million metric tons



http://gaalliance.org/what-we-do/why-it-matters/

The increasing demand for Australian native species and the proximity to Asia, together with internationally recognised seafood quality and standards, means Australian aquaculture is competitively positioned to deliver high value aquaculture products*.



* Source:Aquaculture-and-fisheries-Industry-Capability-Report%20(2).pdf

Summary

				
Global consumption of fish is rising while wild catch is falling. Aquaculture must grow!	Strong demand and premium pricing for the Murray Cod	Eco friendly & sustainable operations supported Government and Environmentalist	Presently high profit margin business with high barriers to entry	Huge growth potential for Murray cod aquaculture with industry in its infancy

View of Our Operations

Fish being Processed for market

Overhead view of our Ponds with new construction shown in background

More of a View…

Above: Mathew Ryan our Managing Director on the ponds.
Left: Staff undertaking daily check on fish health and water quality

More of a View continued…

View of the cage systems we manufacture

Inside our nursery. We built most of it ourselves.

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