



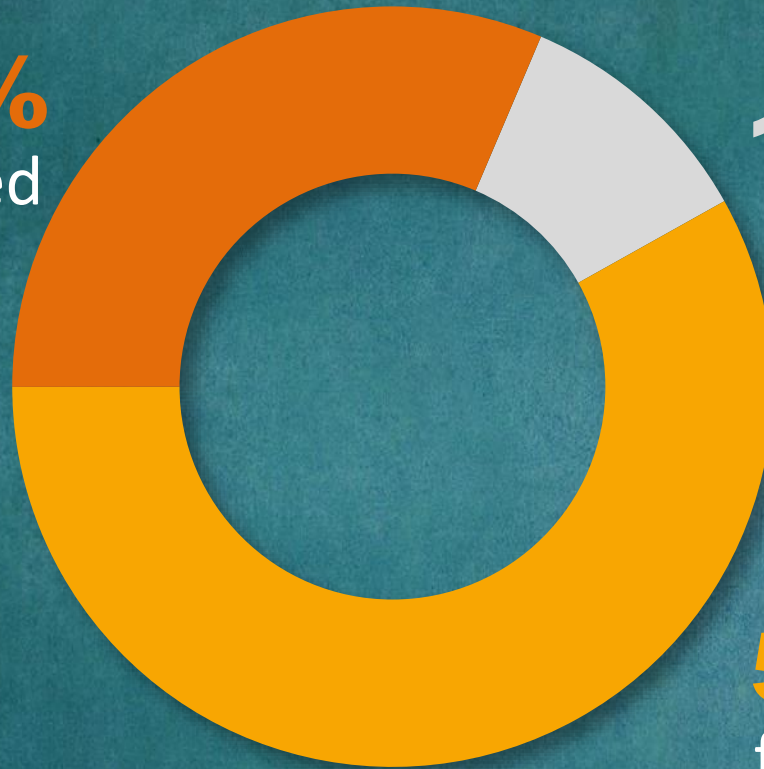
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# Status of world fisheries in 2014

**31.4%**  
over exploited



**10.5%**  
not fully exploited

**58.1%**  
fully exploited

Source: FAO (2016). The State of World Fisheries and Aquaculture, 2016. FAO, Rome.



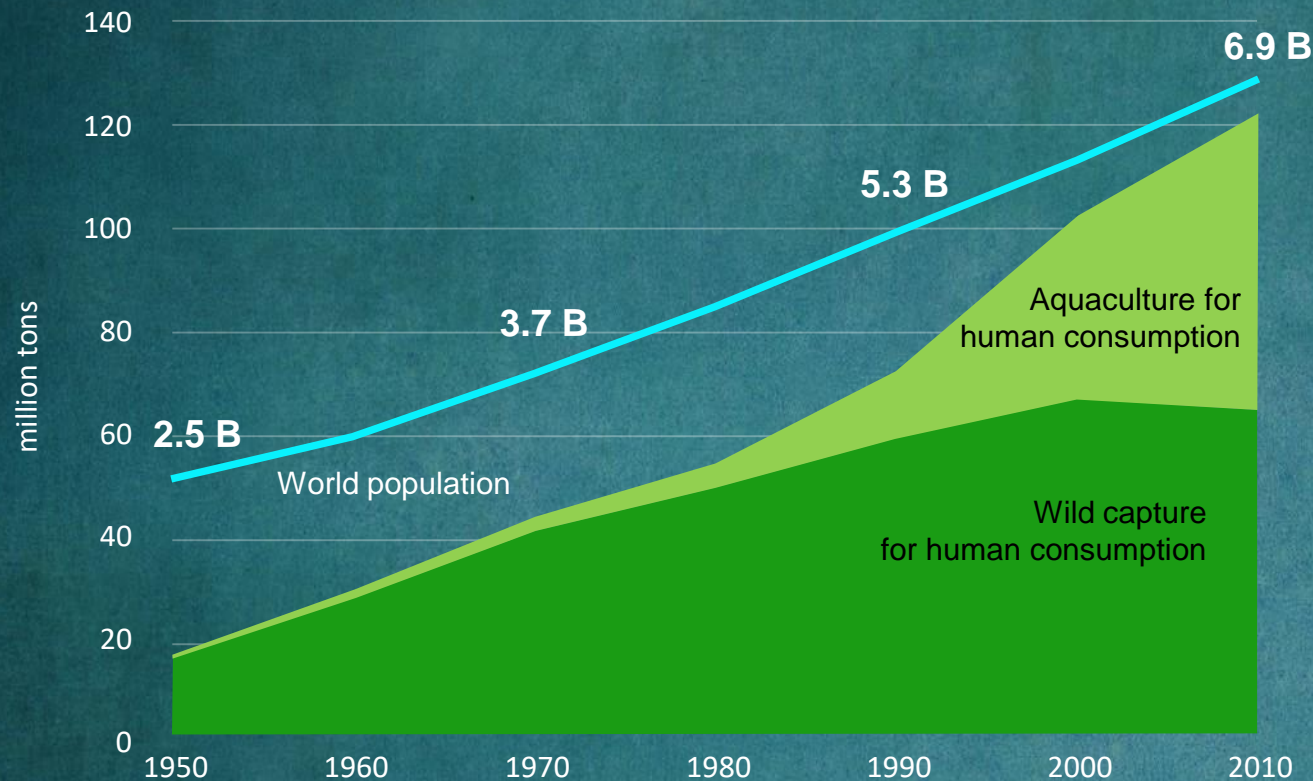
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# The Blue Revolution



Aquaculture is one of the fastest growing food sectors



**Aquaculture:**  
Annual growth of **8.7%** per year for the past 30 years

Source: FishStat – FAO Fishery and Aquaculture Global Statistics 2012 , via World Wildlife Fund (WWF-US) 2017

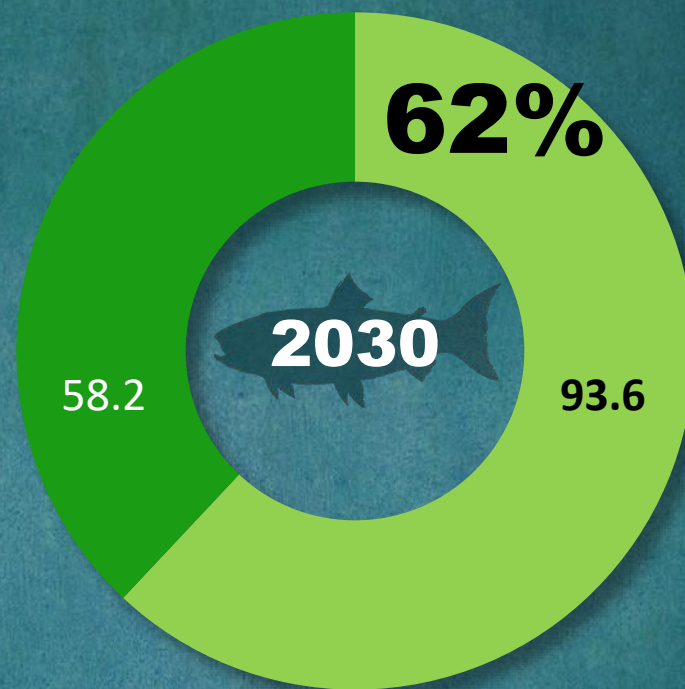
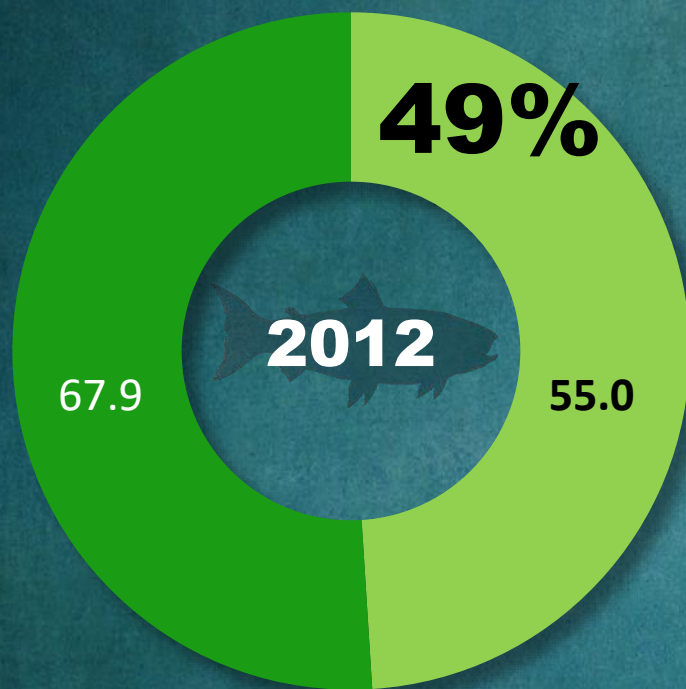


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# Global seafood production & consumption



(million tons)

farm raised

wild caught

Source: FAOSTAT (2014)// *Fish to 2030* (2013) , via World Wildlife Fund (WWF-US) 2017



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# Fish Consumption in Asia & the World

Country	Production (million tonnes)	World ranking in production	*Per capita consumption (kg)
Hong Kong	-	-	62.0
South Korea	-	-	52.5
Malaysia	1.3	16	53.0
Japan	4.4	6	48.8
Thailand	2.8	9	32.7
Philippines	2.2	11	27.0
China	17.3	1	26.5
Singapore	-	-	23.5
Brunei	-	-	22.0
Indonesia	4.7	5	21.6
<b>Average (2012)</b>	-	-	<b>19.2</b>

Sources: FAO Fishstat, \*Dey et al. 2007, \*\*Dey et al. 2009



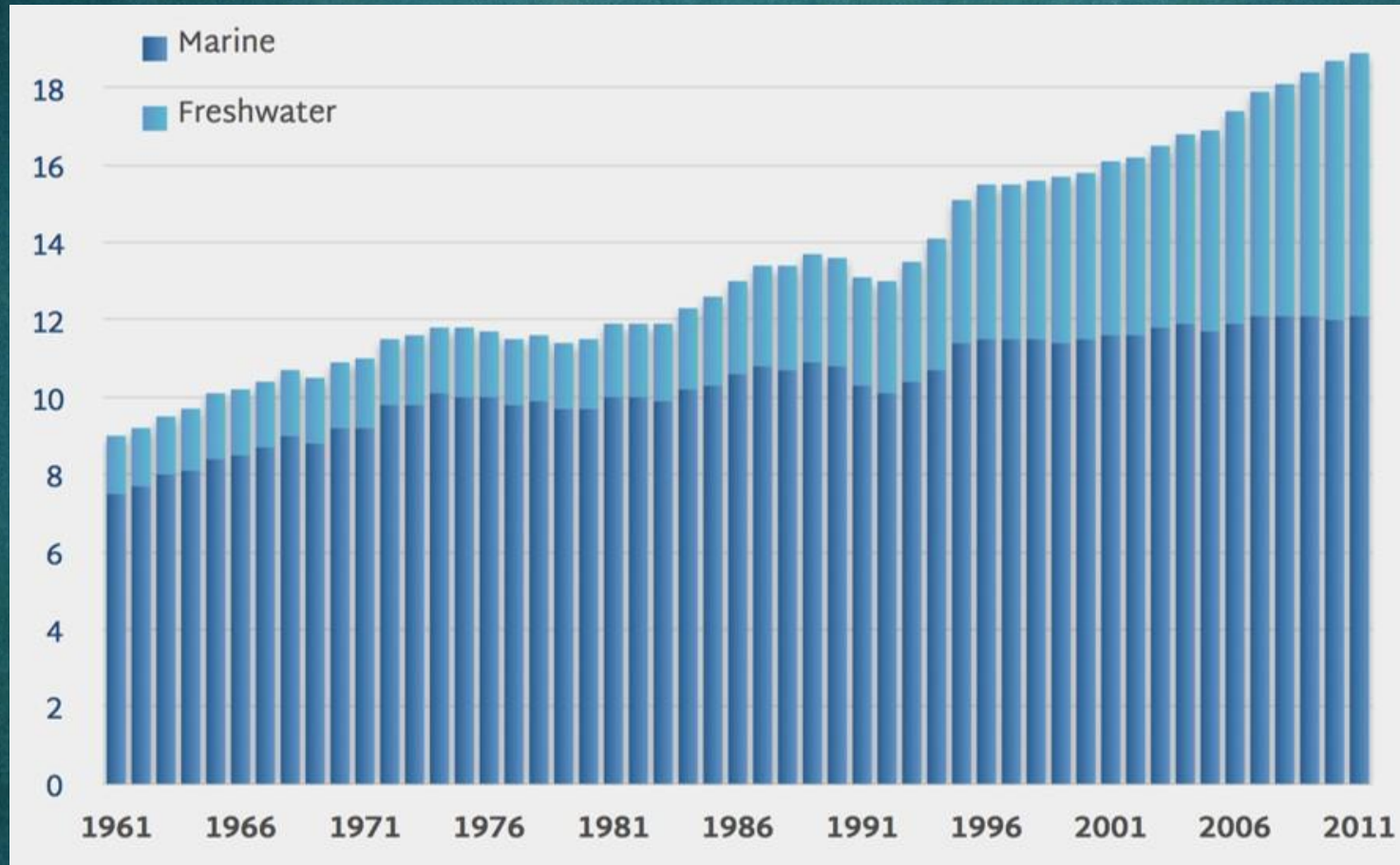
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# Fish Consumption in Asia & the World

Global consumption of marine and freshwater fish per capita (kg)



Sources: FAO Fishstat, \*Dey et al. 2007, \*\*Dey et al. 2009



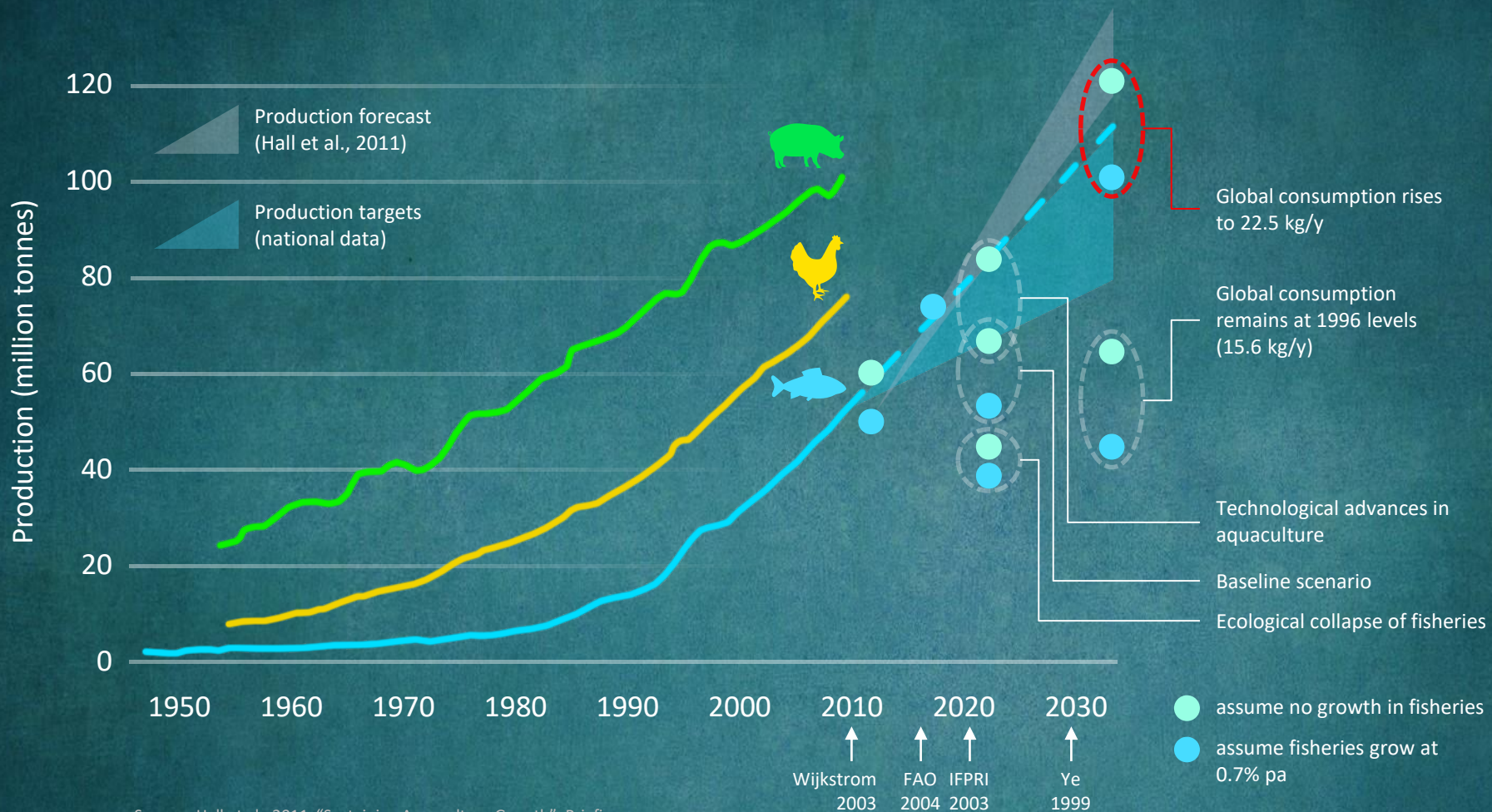
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# Aquaculture production forecast



Source: Hall et al., 2011; "Sustaining Aquaculture Growth", Briefing Paper 2, Fishing For A Future, 2013



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$$\times 1 = 7$$



$$\times 2 = 18$$



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# Purpose of 3<sup>rd</sup> Party Seafood Certification

- Identify those seafood products that **meet or exceed** minimum thresholds defined within a Standard
- Providing purchasers a **degree of certainty** about social and environmental credentials of the product
- Incentivize producer level improvements by rewarding better performance thru **market access** and “potential” price premiums
- **Third party certification** essential for truthfulness, credibility, reliability and fairness of “sustainability” claims
- Acceptance by major **(International)** markets

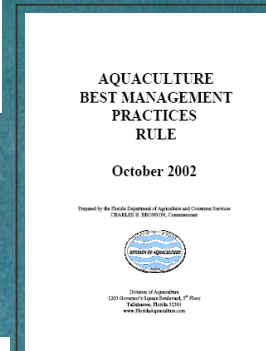


# Rise of certification / standards

Wild-caught



Farmed



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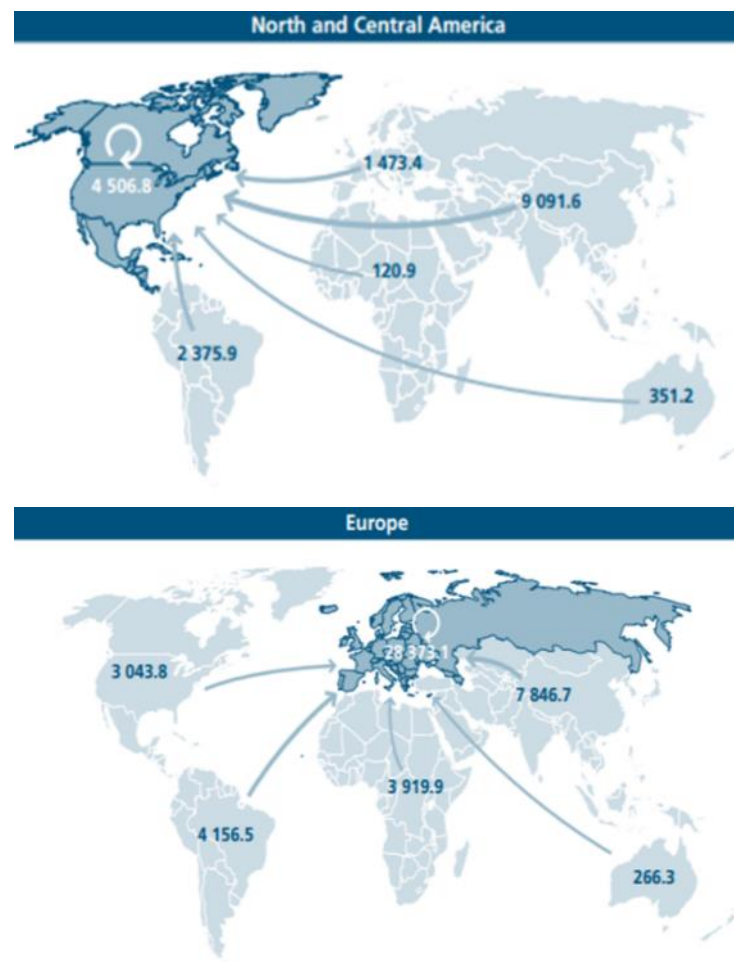
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# Demand for certified seafood

- Over half the World's seafood from developing countries
- High volumes of seafood from developing countries into Europe and US
- Demand for sustainable seafood in these markets



# Demand Side Commitments

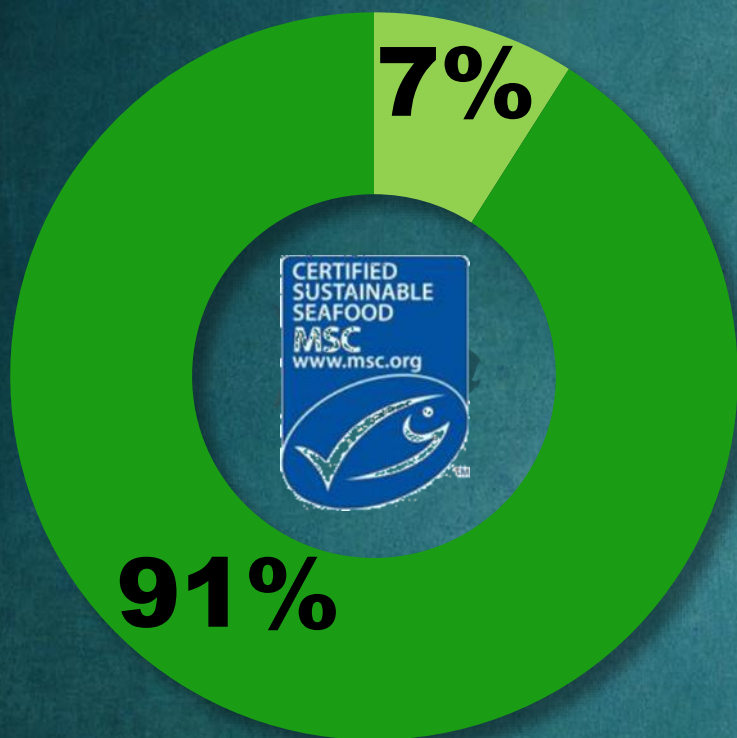


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# Certified Fisheries and Aquaculture Farms



- Certified fisheries developing
- Certified fisheries developed

Species	Certified Volume	% Certified
Salmon	560,571	26.9%
Pangasius	209,400	16.9%
Shrimp	97,039	2.8%
Tilapia	120,305	3.3%
Trout	12,588	1.5%
Bivalves	19,452	0.2%
Abalone	650	0.6%
<b>Total</b>	<b>1,020,005</b>	<b>4.7%</b>



# ETHICAL CONSUMERISM



Looking  
behind the  
packaging  
to choose  
Products that  
“do less harm”



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# Domestic Outlet Market Share

Country	All Food and Drinks		The Reality for Fresh Seafood	
	Modern Trade *	Traditional **	Modern Trade	Wet Markets
China (PRC)	40% (Urban)	60% (Urban)	15% (Urban)	85% (Urban)
India	4%	96%	Minuscule	Over 99%
ASEAN:				
• Indonesia	28%	72%	5% to 10%	85% to 90%
• Malaysia	45%	55%	30%	70%
• Philippines	30%	70%	Minuscule	Over 99%
• Thailand	70%	30%	45% to 50%	50% to 55%
• Vietnam	9%	91%	Minuscule	Over 99%
Pakistan	2%	98%	Minuscule	Over 99%

\*: Modern trade includes supermarkets, hypermarkets and convenience stores.

\*\*: Traditional includes small family run shops and markets.

Source: National Governments, Retail Trade Associations, Past Surveys and Trade Estimates.

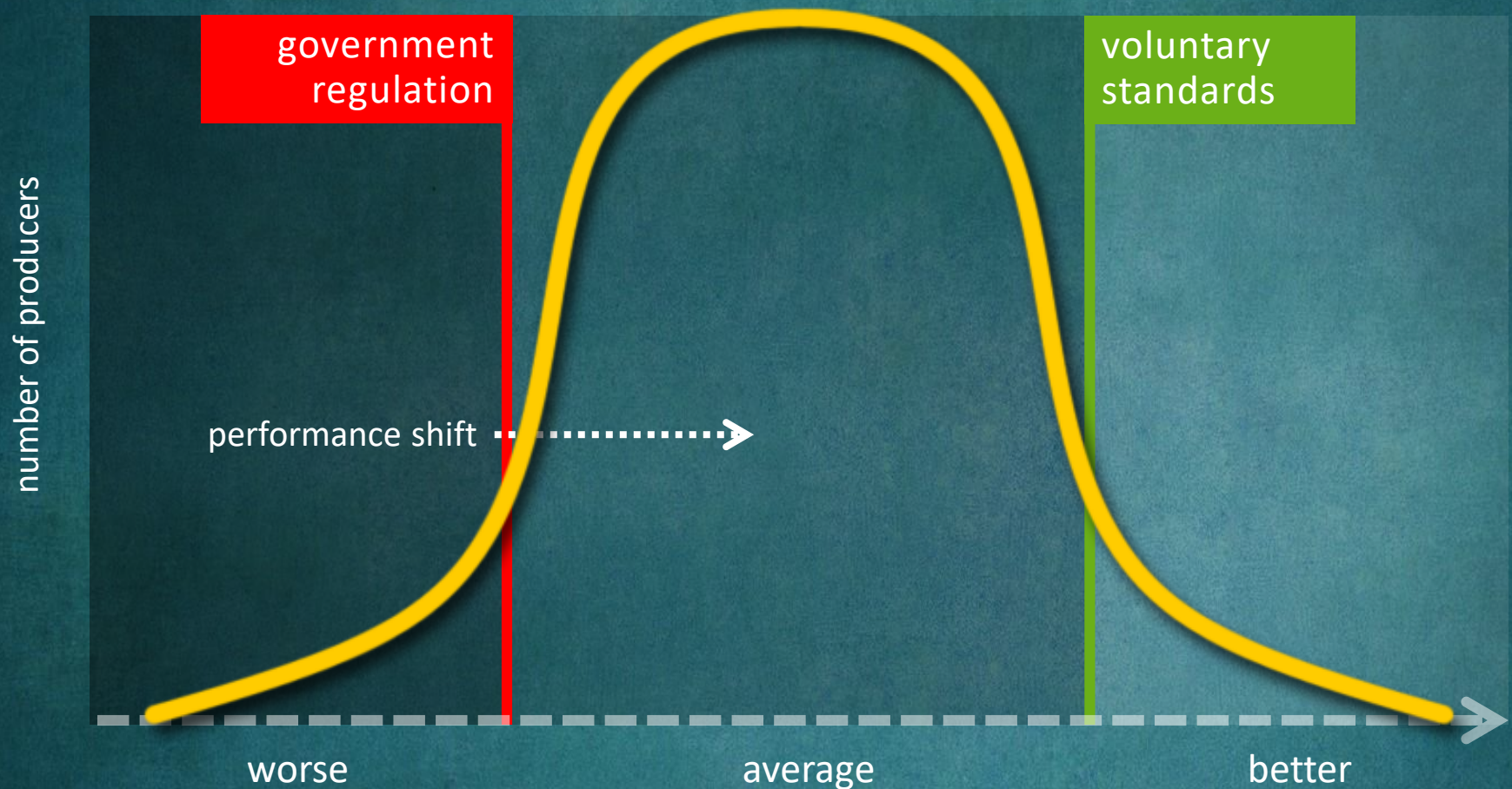


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# Reward the best and move the rest



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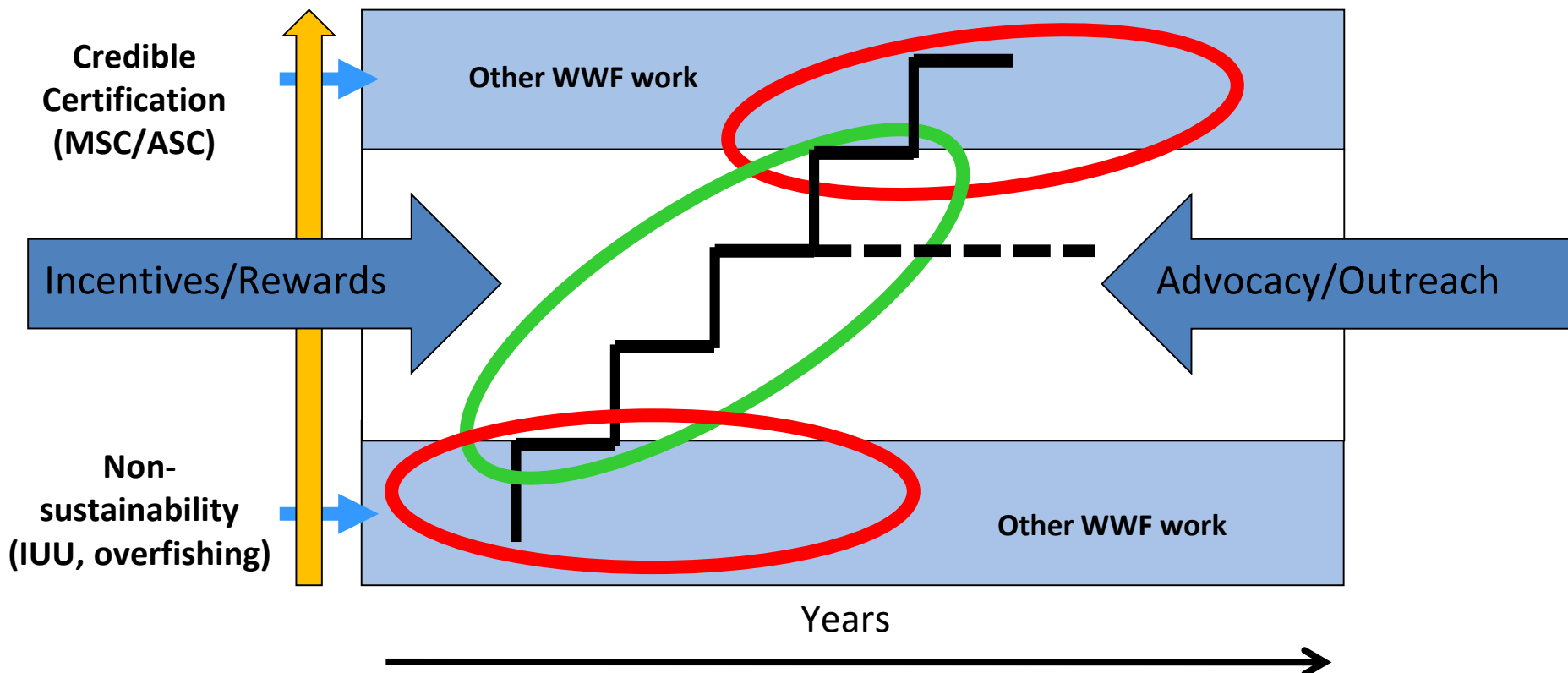
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# Continual Improvement Model

“Ladder of Progression”



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# Partnership Program Toward Sustainable Tuna

## Mindoro Occidental



Involves Six Municipalities:  
Around 2,000 direct tuna vessels  
- With 4,000 – 5,000 fishers

## Lagonoy Gulf



Involves 15 Towns & 3 Provinces:  
With about 2000 direct tuna vessels  
and 3,000 - 4000 fishers



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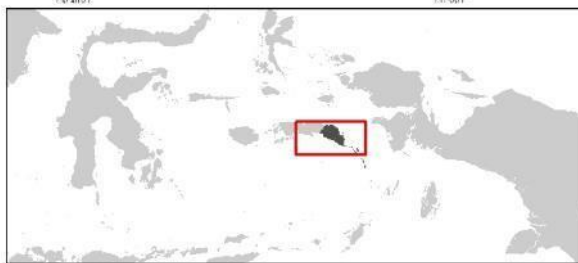


# Recovering a Tropical Reef Fishery

## Marine Conservation Agreement in Koon, East Seram



-  Marine Conservation Agreement
-  Proposed Marine Protected Area
-  Area influenced by Koon MCA
-  Seram Bagian Timur



Source:

1. Head of East Seram District Decree No 523/189/KEP/2011
2. Mous et al., 2011. Concise report on a survey of the reefs around Koon island, Maluku, Indonesia, towards conservation of a reef fish spawning aggregation
3. Landsat7 ETM+, acquisition date on 27 September 2002. Courtesy of the U.S. Geological Survey
4. Indonesian Basemap year 2008



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# Issues and Challenges – Policy Incentives

- Increase investment in technological innovation and transfer (breeding, feeds, production systems)
- Shift incentives to reward improvements in productivity and environmental performance (regulations, standards, subsidies, certification)
- Leverage technology to drive gains in productivity and environmental performance
- Policy to shift consumption toward low-trophic farmed species



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# Issues and Challenges - Performance

- Low receptiveness of local markets to certified seafood
- In the absence of certified products what types of mechanism are needed to:
  - promote “responsible” in absence of credible eco-label?
  - Reward best practices (i.e. access, price)
- Potential issues for concerns are those that lead to:
  - Lowering of minimum standards - “race to bottom”
  - Rejection of “regional brands”
  - Diluted standards through political or industry influence
- Verification to distinguish “credible” from non-credible
- Access to capital to raise production performance





# THANK YOU



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