The Aquaculture Dialogues

Creating standards for responsible aquaculture

Christoph Mathiesen, WWF

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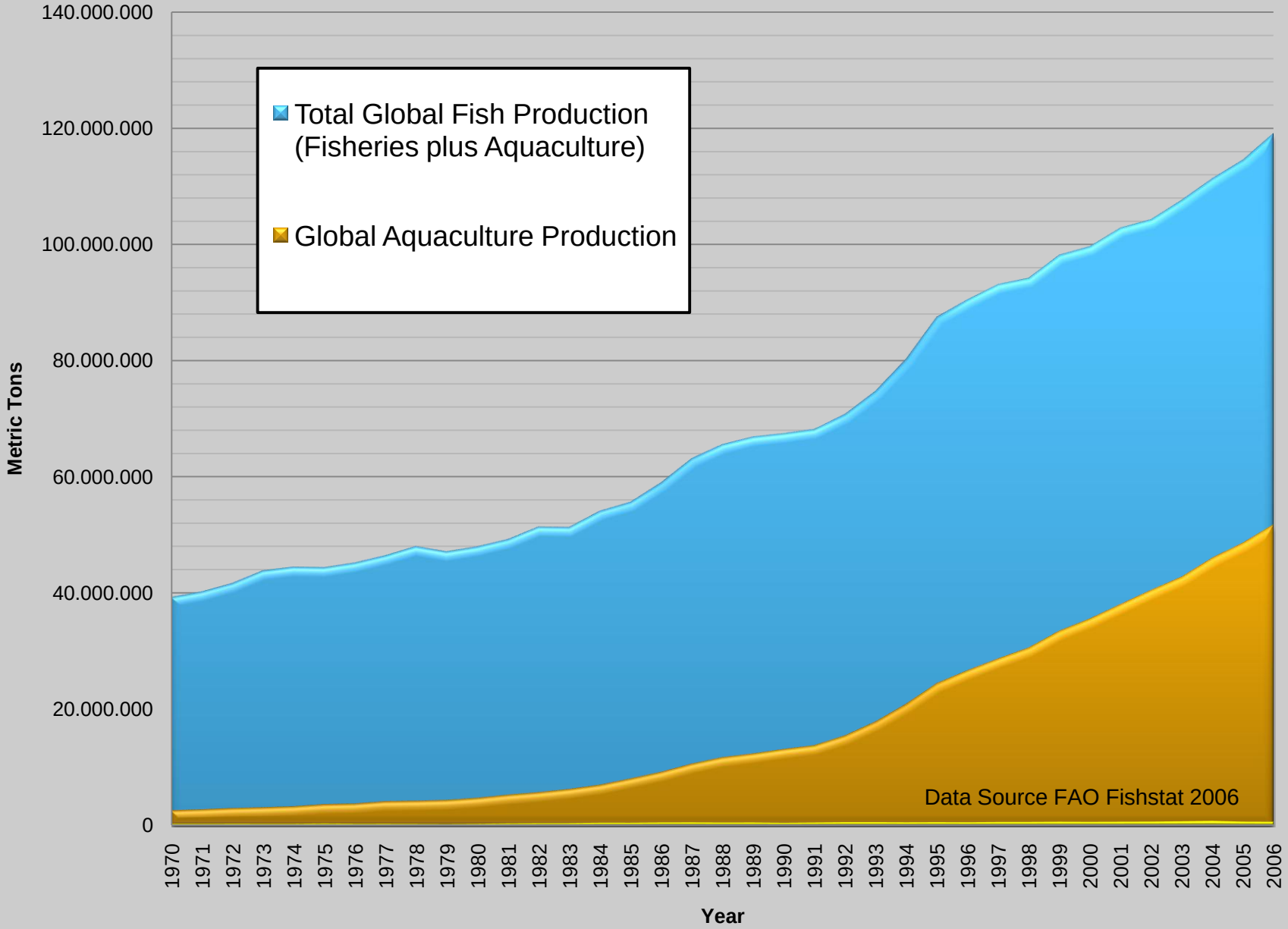
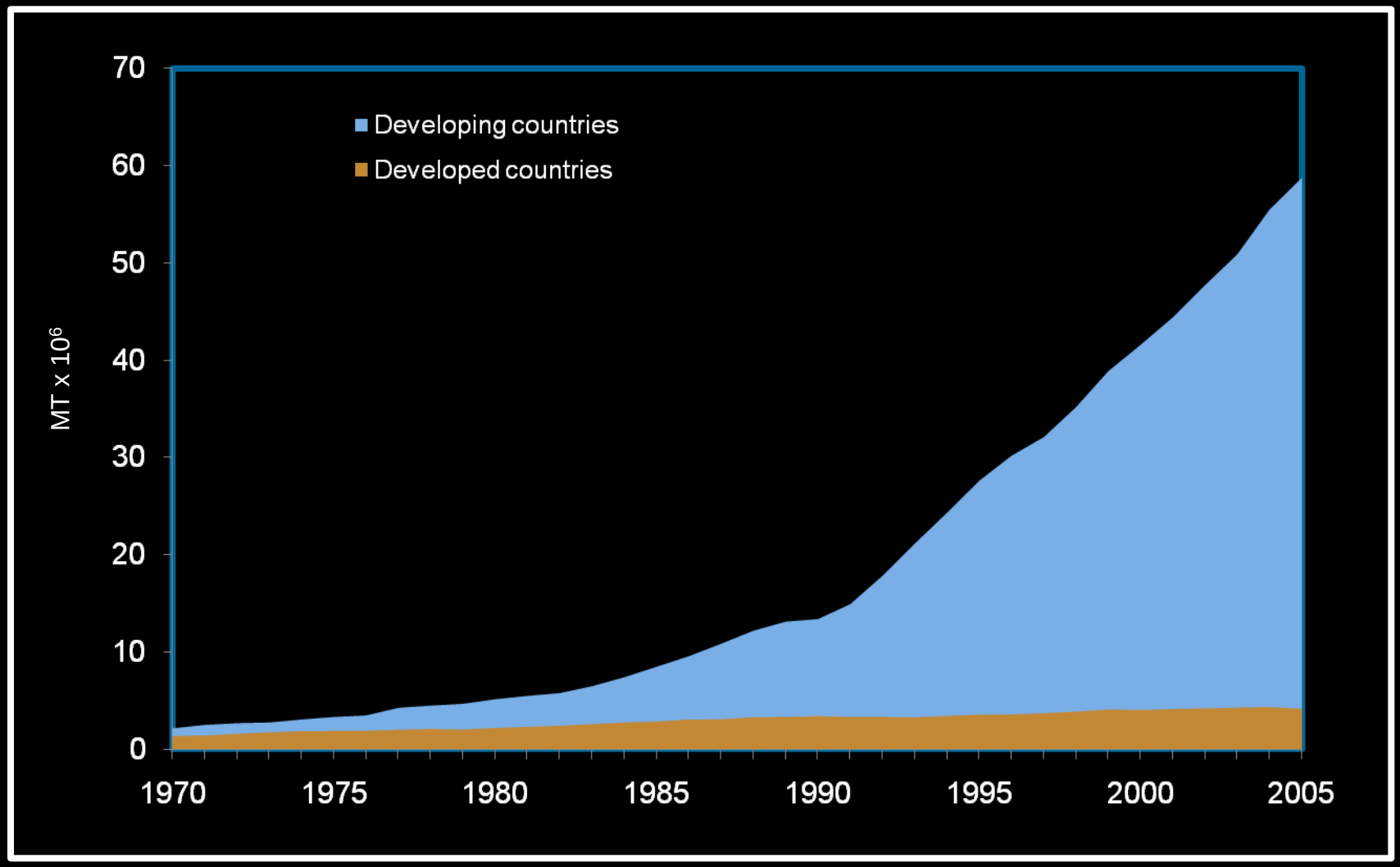
Almost half of seafood is produced on a farm



Fastest growth is in tropical countries



WWF and Aquaculture

- Focus on aquaculture began with shrimp
- We looked at impacts and realized they could be reduced
- Evolved into multi-stakeholder development of performance-based, voluntary standards
- An aquaculture eco-label should cover a suite of species

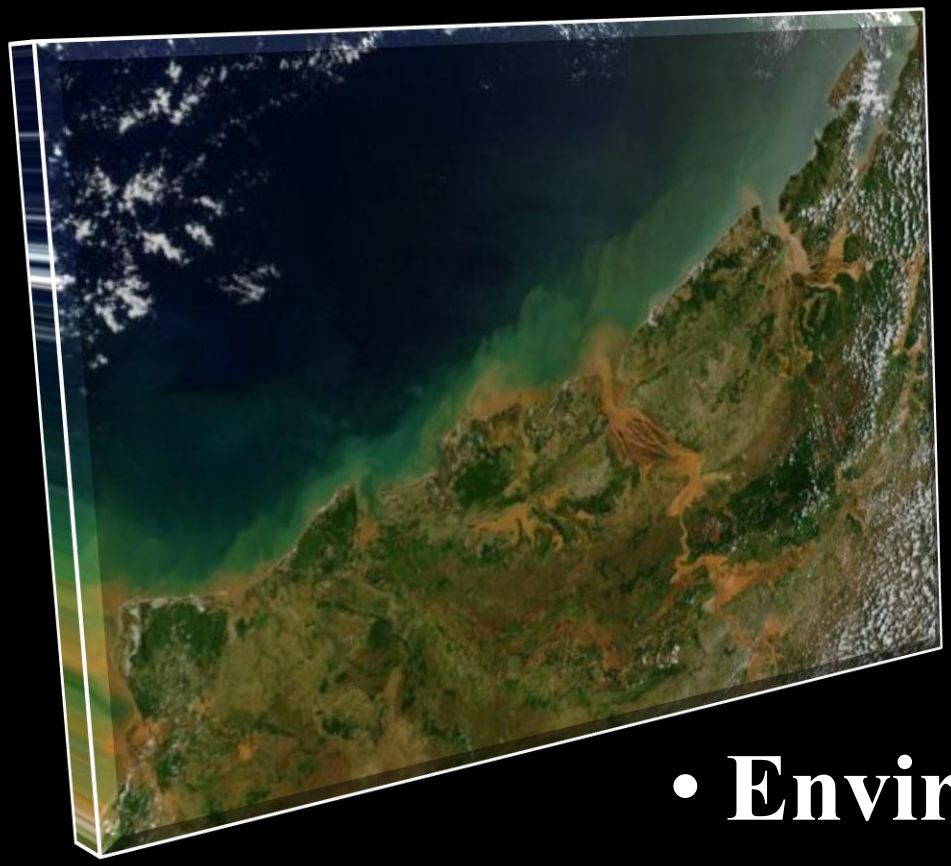
Goal of the Aquaculture Dialogues

Create measurable standards for environmentally and socially responsible aquaculture

Industry should remain economically viable!

Why Create Standards?

Minimize aquaculture's impact on:



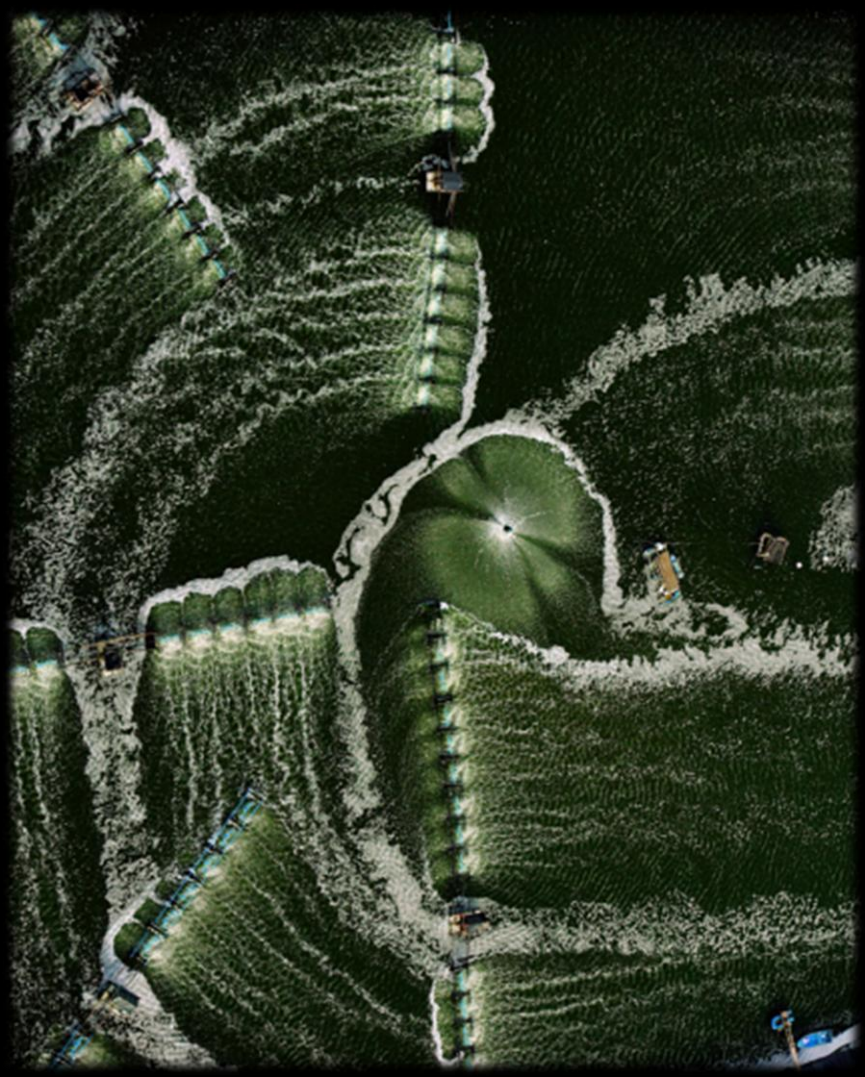
- **Society**
- **Environment**

Key Impacts Across Multiple Species

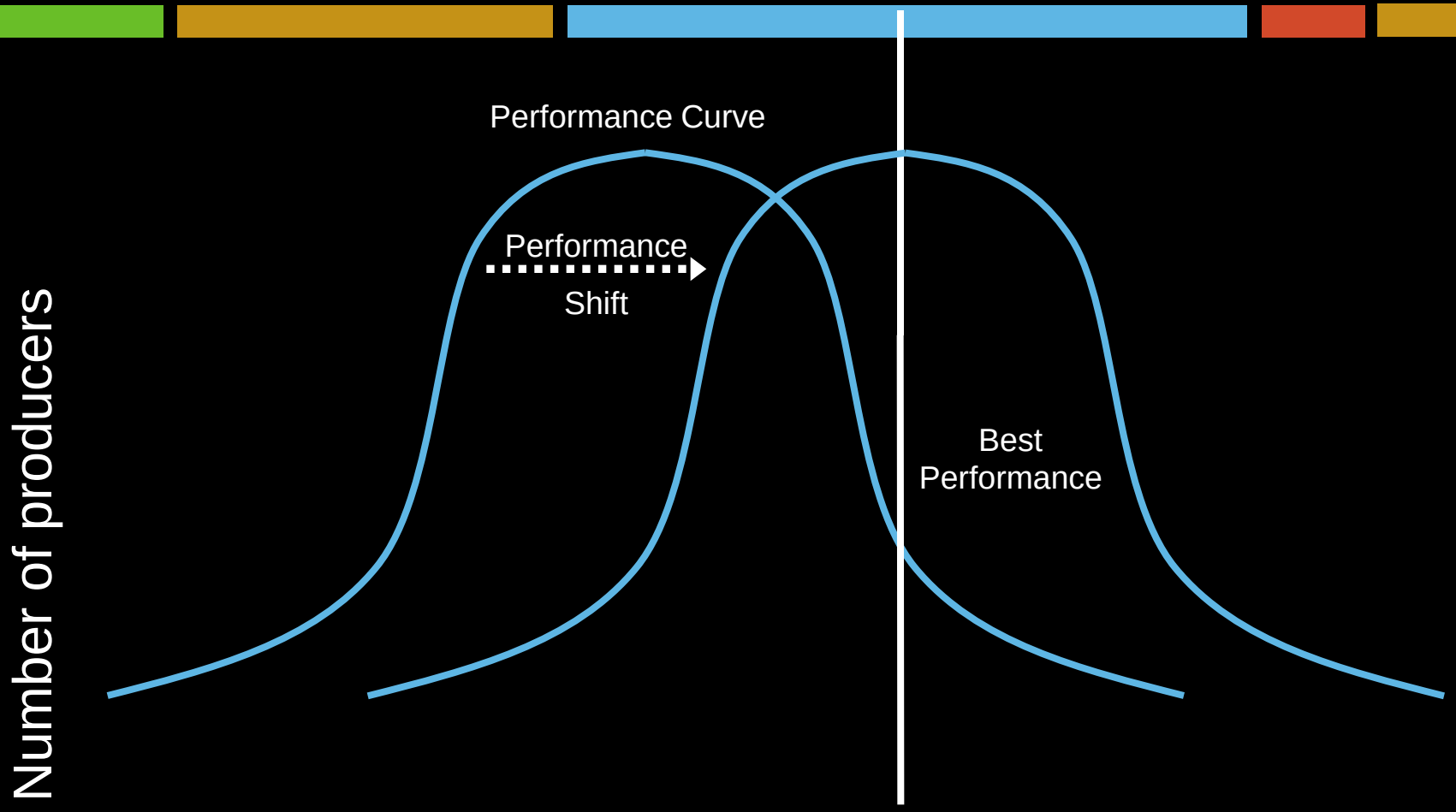
- Water pollution
- Feed management
- Escapes and genetic impacts
- Use of water
- Habitat conversion
- Disease and parasite transfer
- Energy efficiency and carbon footprint
- Social/community impacts and user conflicts

Use standards to transform aquaculture

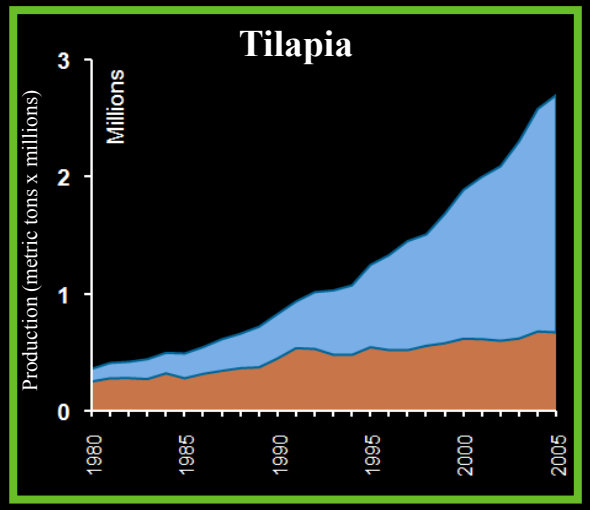
- Certify producers (ASC)
  - robust, make difference
- Benchmark other standards
- Incorporate into government programs
- Create foundation for lending and investment screens

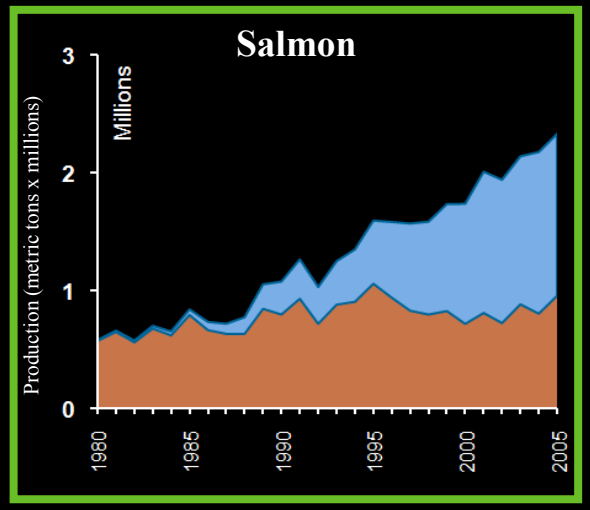


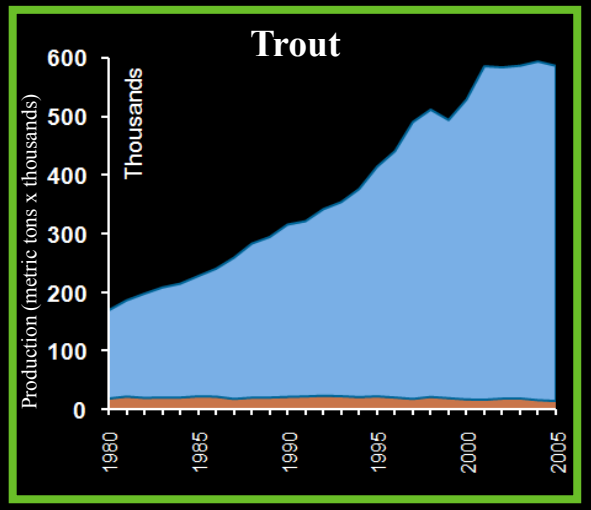
Standards will encourage innovation



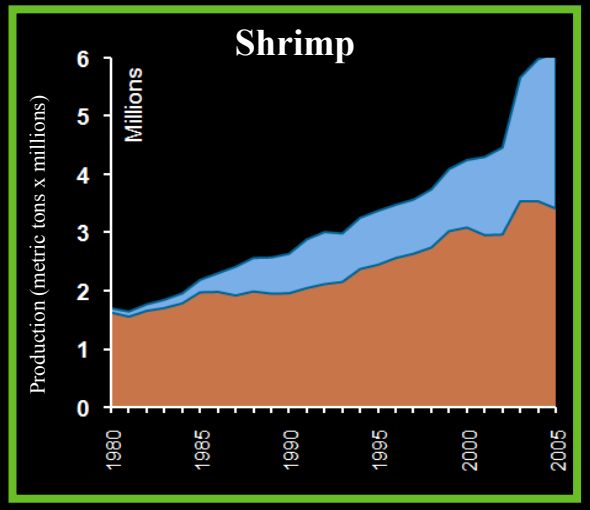
Standards to be created for 12 species

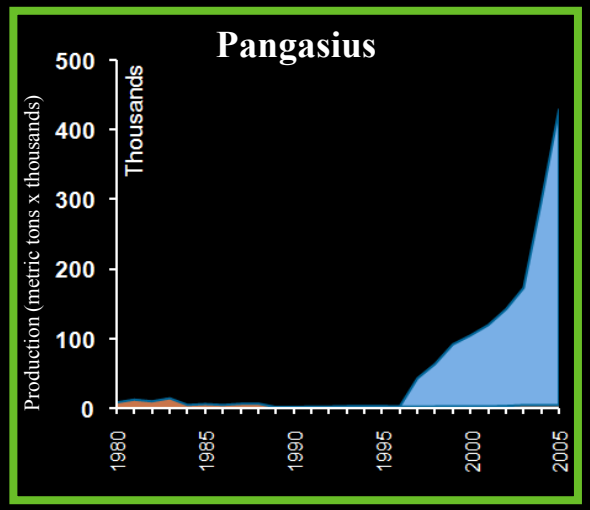


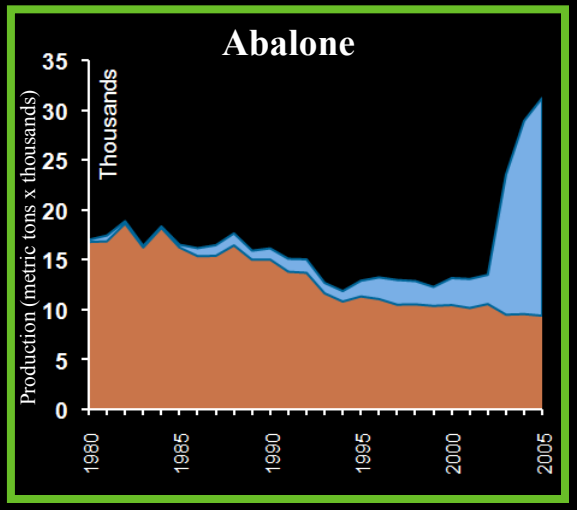




Aquaculture Capture

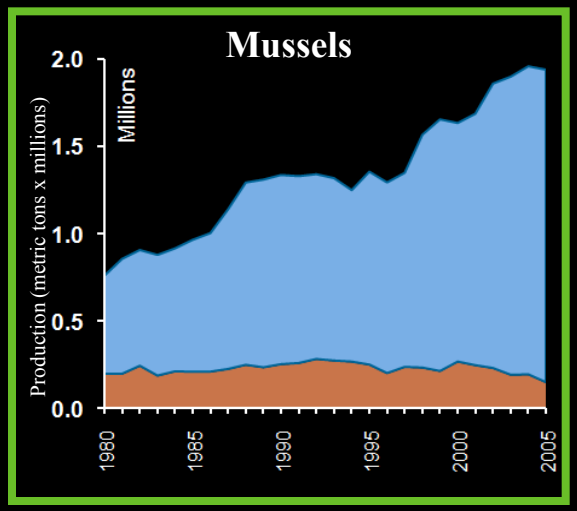


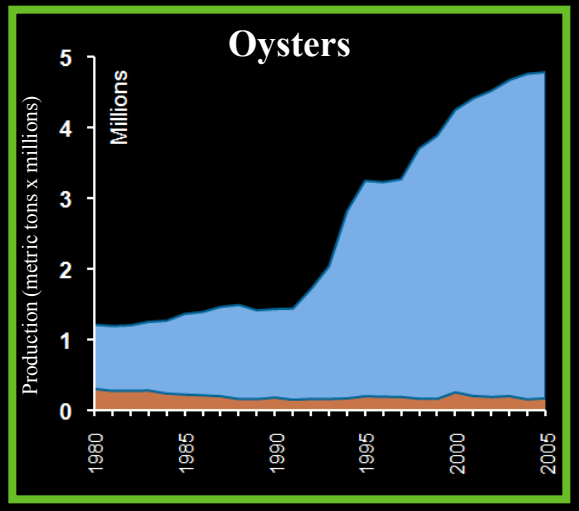


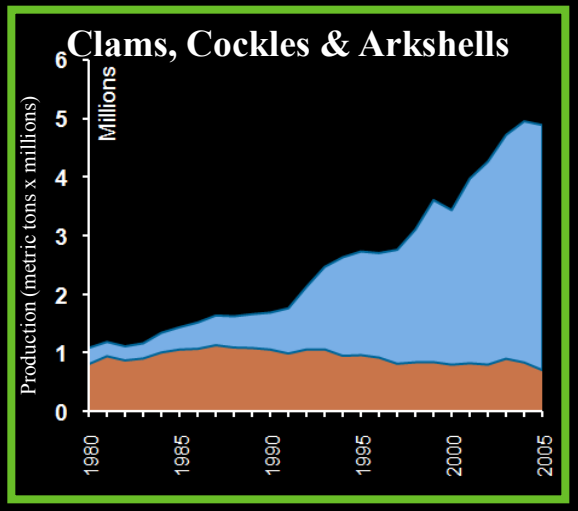


Source: FAO FishStat – Aquaculture Production: Quantities 1950-2005 and Capture Production: 1950-2005

Standards to be created for 12 species







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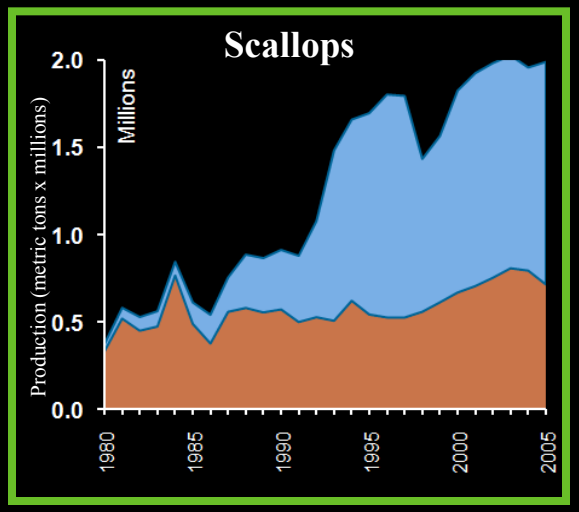

Seriola/cobia Aquaculture Dialogue – in development

Source: FAO FishStat – Aquaculture Production: Quantities 1950-2005 and Capture Production: 1950-2005

WWF has the expertise to create standards

- Rainforest Marketing – 1980s
- Forest Stewardship Council – 1990s
- Marine Stewardship Council – 1990s
- Marine Aquarium Council – 1990s
- Protected Harvest – 2000
- Climate Savers - 2000s
- Aquaculture Dialogues – 2000s
- Aquaculture Stewardship Council 2011

Aquaculture Dialogue Process

Dialogue process

- Multi-stakeholder
- Consensus oriented
- Transparent
- Based on sound science
- Performance-based
- Measurable standards
- ISEAL compliant

-multi stakeholder, transparency, public hearing,

-review on relevance and effectiveness

How do we create “standards”?

- **Impact:** The problem we want to minimize
- **Principle:** The guiding principle for addressing the impact
- **Criteria:** The area to focus on to address the impact
- **Indicator:** What to measure in order to determine the extent of the impact
- **Standard:** The number and/or performance level to reach to determine if the impact is being minimized

"Piranha" Aquaculture Dialogue

Principle : Protect worker health and safety

Criteria:

Accidents on the farm

Indicator:

The number of lost fingers per month

Standard:

No more than 2 lost fingers per month

Examples from Pangasius Aquaculture

Impact: *Water pollution*

Principle: *Minimize the negative impact of pangasius farming on water resources.*

Criteria:

- Water quality of effluents

Indicators:

- Percentage change of total phosphorus between pond and inlet
- Percentage change of total nitrogen between pond and inlet

Standards:

- Total phosphorus: maximum 150 percent change (inlet to outlet)
- Total nitrogen: maximum 120 percent change

Aquaculture Dialogue Standards Expected Timeline

- Tilapia …… Q4 2009
- Pangasius …….. Q1 2010
- Oysters …… Q2 2010
- Clams ……..…… Q2 2010
- Mussels ……..…… Q2 2010
- Scallops ……... Q2 2010
- Abalone …… Q3 2010
- Shrimp ……. Q2 2010
- Salmon …… Q3 2010
- Freshwater trout ……. Q3 2010