



Standardization and the Canadian Aquaculture Sector: A DFO Perspective

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Overview

This presentation will focus on the following areas:

- A global context for fisheries and aquaculture production
- A look at the Canadian aquaculture sector
- DFO and the Federal Government's role in aquaculture
- The role of standards in an environmental regulation context
- International standard initiatives and the work of ISO TC 234





Wild capture fisheries are the historic base for global seafood markets...

Yet wild stocks under increasing pressure

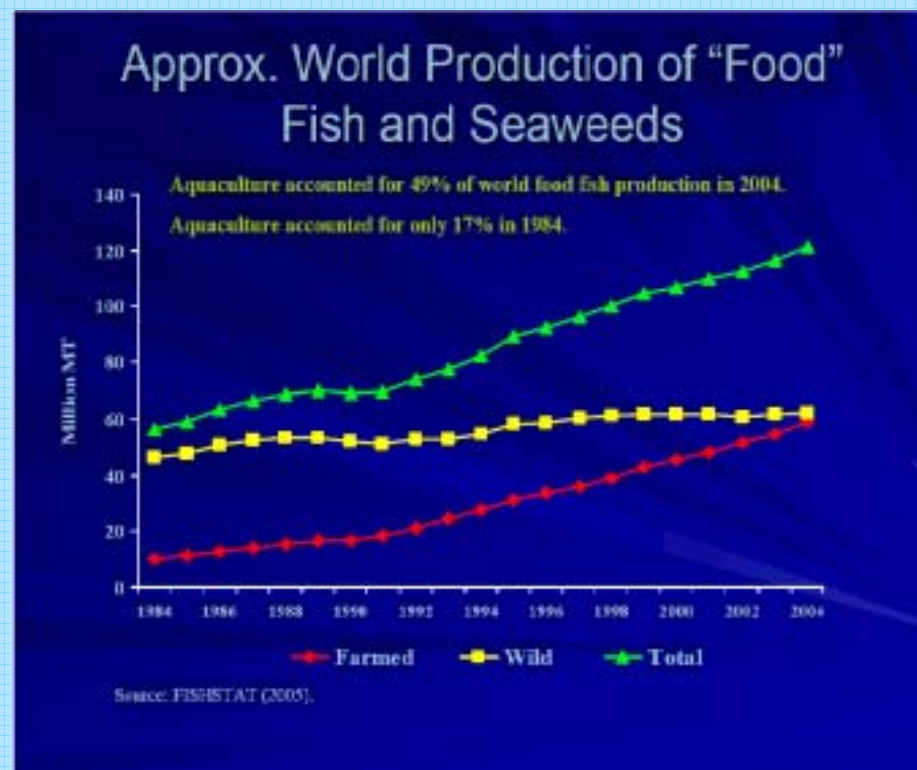
- Many stocks either fully or overexploited
- Significant technological advances and investment leading to overcapacity
- Illegal, Unreported and Unregulated (IUU) activity on the high seas
- Bottom line is that major production increases from wild fisheries are unlikely





Globally, aquaculture has been growing steadily and is the only realistic means of addressing the gap between seafood production and demand

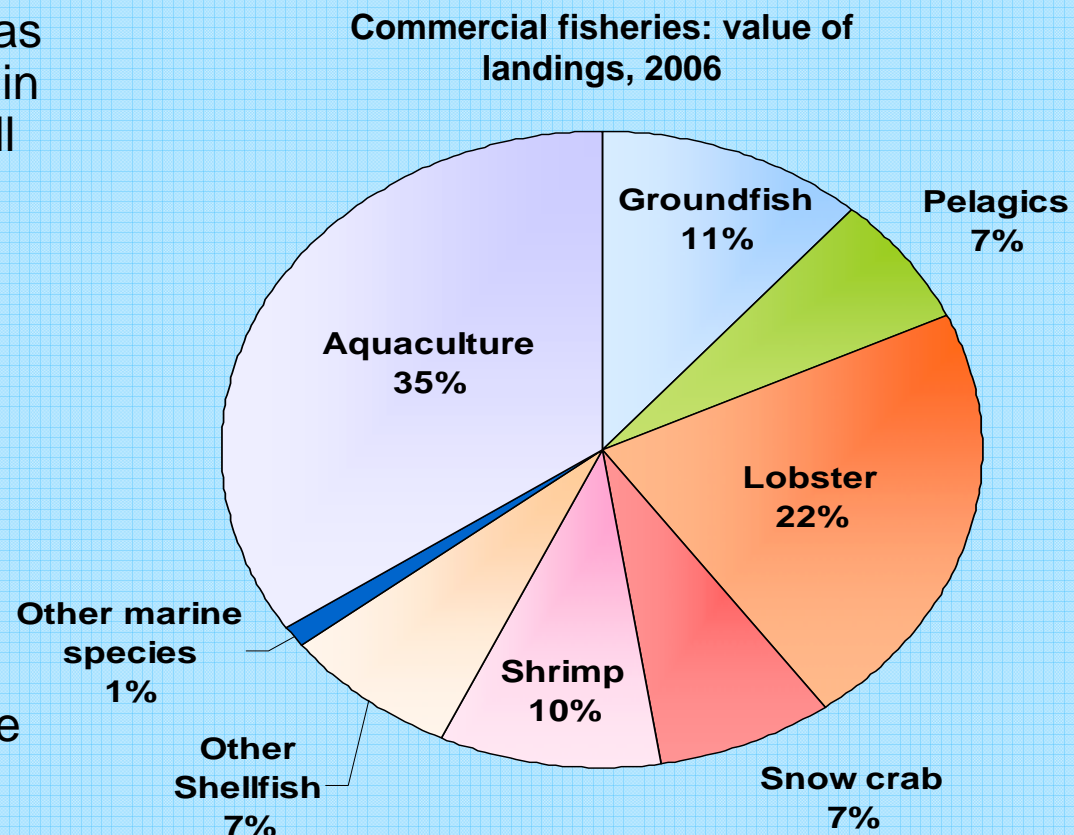
- The demand for fish and seafood is exceeding supply from traditional fisheries – only aquaculture can fill the growing gap (by 2030, 50-70 million tonnes, FAO)
- Aquaculture is the fastest-growing food production sector in the world (9% per annum over the past 3 decades)





The Canadian aquaculture sector has grown steadily from its origin in early seventies

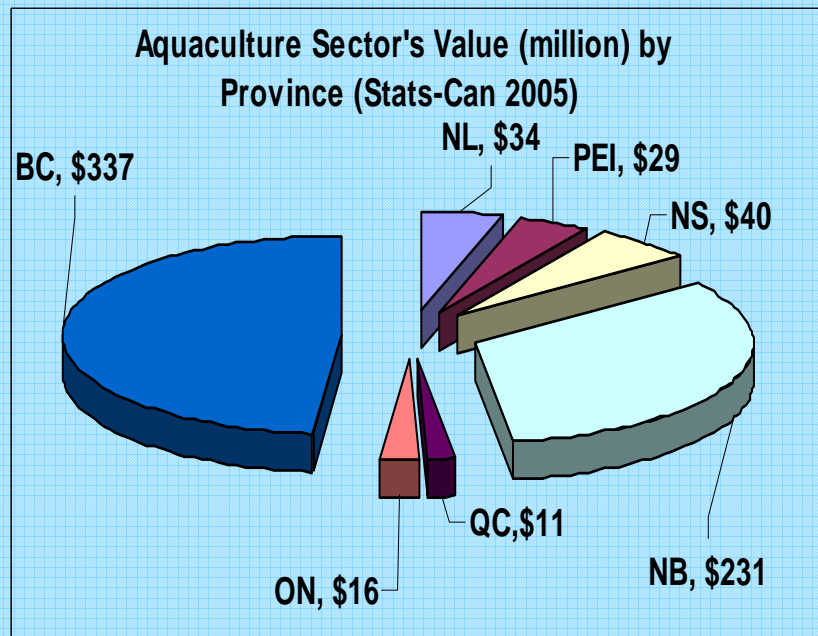
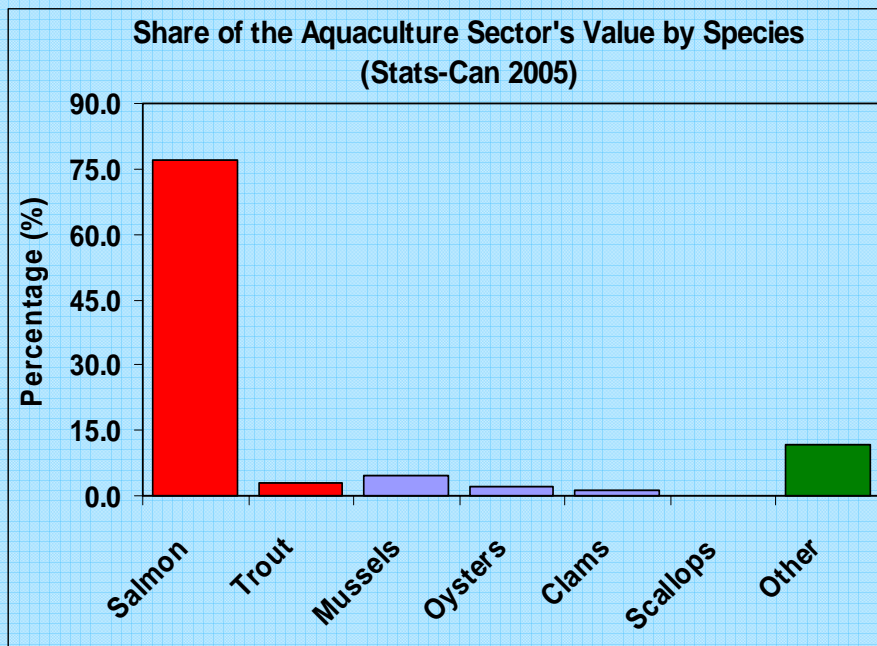
- Value of production in 2006 was over \$912 M – up from \$35 M in 1986. Aquaculture occurs in all provinces
- Accounts for 14% of total Canadian fisheries production and 35% of its value
- Over 16,000 Canadians are employed in the industry
- 2/3 of all workers are under the age of 35





The Canadian aquaculture sector has grown steadily from its origin in early seventies

Aquaculture occurs in all 10 provinces plus the Yukon; and while it is dominated by salmon, it implicates a number of species





As the lead federal agency for aquaculture DFO ...

is responsible for regulation of the sector with respect to its legislation:

- Related to:
 - conservation & protection
 - environment
 - habitat protection
 - aquatic animal health
- Coordinating its responsibilities with other regulators:
 - Canadian Food Inspection Agency (food safety, animal health under the Health of Animals Act)
 - Transport Canada (protection of navigable waters)
 - Environment Canada (water quality)
 - Provinces (coastal zone management, site leasing, environmental performance)





DFO is also responsible for ...

Helping improve the business climate for aquaculture by:

- Ensuring laws and regulations are clear, efficient, effective, and consistently applied to the sector;
- Investing in aquaculture science and research & development;
- Working in partnership with P/T's to develop a proactive process for site approvals; and
- Supporting industry development programs consistent with DFO's mandate and objectives.





Canada is a world leader in sustainable seafood production ...

With a solid aquaculture regulatory management regime to protect the environment...

- Canada also continues to seek to improve performance in order to be better positioned to respond to:
 - Negative media articles and ENGO campaigns with respect to environmental and food safety issues
 - Investor complaints about a poor investment climate due to a complex and costly regulatory system





Canada is a world leader in sustainable seafood production; and continues to seek to improve performance

In aquaculture, our strategy to support an internationally competitive sector is based on 4 key elements:

1. Governance and environmental/site management regulatory renewal
 - Long-term sustainable use of fisheries and aquaculture resources
 - Healthy and productive aquatic ecosystems
2. Increased regulatory science
3. Innovation
4. Market certification





International and domestic standards will play a key role in moving forward ...

In the environmental regulatory sphere, while Canada has a solid aquaculture management regime, there is a recognized need for:

- Greater transparency in the overall risk management of issues
- Enhanced environmental monitoring and surveillance programs
- Enhanced, and standardized, reporting of information
- Enhanced and coordinated enforcement and compliance regimes and technologies
- Improved international governance systems





International and domestic standards will play a key role in moving forward ...

Standardization will be particularly important for Canada with respect to regulation and market-driven certification

- In the market place, retailers are beginning to look for “eco” or “sustainability” certified food products that come from companies who are going beyond government regulation into areas such as:
 - Organic production
 - Energy consumption
 - Carbon footprinting
 - Etc.





There will be a number of players in setting these international and domestic standards

Internationally...

- The UN FAO Subcommittee on Aquaculture is drafting Guidelines for the Certification of Aquaculture products
- Codex (food safety) and OIE (animal health) continue to develop standards and guidelines in their area of responsibility
- ISO TC 234 has been formed to develop Fisheries and Aquaculture Standards





There will be a number of players in setting these international and domestic standards

Domestically...

- Framework for Aquaculture Environmental Risk Management (FAERM)
 - Consistent with ISO best practices in risk management
- Organic standards for aquaculture





Recently the ISO Technical Committee 234 – Fisheries and Aquaculture Standards was formed

Proposals have been made to TC 234 to establish 3 working groups focusing on the following areas:

1. Aquaculture technology
2. Aquaculture production data
3. Traceability





| The Aquaculture Technology WG would focus on...

Developing standards for equipment and services used in aquaculture with respect to:

- environmental loads,
- design criteria,
- requirements for operation and maintenance, and
- user limitations





The Aquaculture Production Data WG would focus on...

Developing standards for:

- sampling & analyses,
- registrations,
- measurements,
- calculations & conversions and
- effective data exchange





The Traceability WG would focus on...



Developing whole chain standards for:

- Naming and classifying all relevant links in the respective supply chains (vessel, processor, breeder, hatchery, fish farm, etc).
- Choosing identifiers for all relevant links and a classification of all relevant 'objects' (individual fish, cases, boxes, pallets, shipments, etc.) that pass between the links.
- Defining a standard way of documenting transformations so that splitting, joining or renaming of food items does not cause information to be lost



ISO TC 234's Current Status

- Preliminary meeting held in Bergen, Norway in fall 2007
- Proposals for the 3 WG's were discussed, but a workplan has not yet been approved
- Sponsoring countries are currently re-drafting their proposals



Thank you

