

Canadian Aquaculture Sustainability Forum – A Report

Presented at Aquaculture Canada 2012, May 30
2012, Charlottetown, PE



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Aquaculture Canada^{OM} 2012 – Canadian Aquaculture Sustainability Forum – A Report of the 29th Annual General Meeting of the Aquaculture Association of Canada, Charlottetown, Prince Edward Island, May 27–30, 2012.

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Canadian Aquaculture Sustainability Forum – Transparency, Science and Communications

Background & Rationale

A number of critical issues surround seafood sustainability including what the market demands are for sustainable seafood, uncertainty how this is reported or measured in terms of public reporting, voluntary market standards (e.g., WWF Salmon Aquaculture Dialogue), and how transparent are actual standards. In many cases, standards appear to be driven by ENGOs with alternate agendas, and not necessarily based on state-of-the-art scientific information. This raises concerns about transparency of the whole process. Science may have difficulty in expressing itself adequately on issues related to sustainability, and this is a concern. Governments would like to be seen as supporting sustainable seafood production in terms of public reporting and in terms of trade relations. In addition, the seafood producing sector (i.e., fish and shellfish farmers) are all seeking certification of one kind or the other to address perceived, if not real market demands, and which standards will provide them with reliable and defensible market access. The whole issue surrounding which certification schemes are founded on transparent and realistic approaches to seafood sustainability was debated on several panels at the recent World Fisheries Congress in Scotland.

A national Forum on aquaculture sustainability was organized and hosted during Aquaculture Canada 2012, on May 30, 2012 in Charlottetown, PE, to address some of the aforementioned issues surrounding sustainable farmed seafood production. More specifically, we were able (1) to provide an overview of certification schemes for farmed seafood including shellfish and finfish standards, (2) to examine some of the drivers for seafood sustainability, (3) to discuss issues surrounding transparency in developing the schemes, in particular as they relate to the science aspects of standards development, and (4) to discuss what is the role of government in supporting certification schemes and farmed seafood sustainability.

Experts were invited to the session to present their views and then sat on a panel at the end of their presentations to address specific questions related to the above goals, and provided attendees with a broad range of opinions.

Description of the Forum

The Forum brought together experts from industry, government and academia to discuss issues related to seafood sustainability and scientifically defensible certification

standards. The relationship with science, as a means of providing transparency in the development of seafood standards, will be explored as well.

The Forum's outline is provided in Appendix A.

Several key questions were discussed and reported upon during and at the end of the Forum by the panel:

- Q1. It is often said that demonstrating sustainability is important for market access as well as social license. Are these two separate audiences that require different tools, or can they be served at the same time?
- Q2. In recent years, aquaculture production and products have often been publicly scrutinized to a level that has not really occurred with other food production and products. Are governments and industry going in the right direction to address the challenges of this scrutiny? What specifically needs more work?
- Q3. What are a) the challenges and b) the various roles (of industry, government and academic institutions) to ensure science related information is communicated effectively to the general public? What can be done to improve? Give examples of where/when science has been communicated effectively – and examples of when it has not.

Attendance at the Forum ranged from 325 during Dr. Marty's plenary to a full session, standing-room-only of 125 delegates from industry, government and academia from several countries, including France, USA, Canada, the UK, and elsewhere.

Feedback was received from over a dozen delegates, and they thought the session was very well organized, attended and worthwhile.

The following pages provide a summary of each presentation during the Forum, as well as a report on the facilitated discussion session. The slide presentations for each presenter can be found in Appendix B herein; please refer to these for greater detail.

Presentation Summaries

Developing a Strategic Approach to Aquaculture Certification Schemes

Carson Roper, Seafood Sustainability Consultant, France

Overview: Roper covered the basics of certification schemes, why they are important as third party (non-governmental) validation of sustainability for public concerns. He proceeded to clarify the confusion surrounding sustainable aquaculture certification and

explores certification as a means of market access. The speaker discussed the implications of the certification scheme on animal health and welfare, food safety and environmental and social considerations and emphasized the ultimate importance of brand credibility in the marketplace. Standards that are developed in an open, transparent manner, global in nature, involving multiple stakeholders, and encompassing continuous improvement attributes, are seen as most credible.

Some certification schemes may be seen as trade barriers by some countries, and small producers often do not have direct access to such schemes. Work is underway for group certification schemes.

There is a need for harmonization of schemes and benchmarking amongst the varieties. Important to have a chain of custody component and self-improvement component in a credible scheme.

Questions

Audience: Tilapia is currently the largest sector of growth. How do you think this sector should proceed in order to avoid the same challenges faced by other aquaculture producers?

Response (Roper): Buyers are not interested in the hassle of reading labels. They want to go to bed at night knowing the food chain is safe and sustainable. The tilapia producers are doing excellent work which is translating with the product.

An Update on Sustainable Production and Certification

William (Bill) More, BAP Program Director, Global Aquaculture Alliance, USA

Overview: Sustainable development, including aquaculture, must meet the needs of the present without compromising future generations while remaining profitable and not negatively impacting natural or local environments. The major constraints of the industry today in meeting the goals of environmental, social, economic and production sustainability are availability of financial working capital, unpredictable market price and production risks including disease or contaminated product. Third party accreditation provides standards, accreditation, certification and traceability components on a wholly voluntary basis. Best Aquaculture Practices (BAP) today encompass everything from the feed to processing in salmon, shrimp, tilapia, pangasius, and channel catfish, with further standards under development for marine fish, mussels and hatchery/seed production. For retailers, there are numerous inputs into the supply chain, and they generally want a one stop-shop for demonstrating sustainability of products, in keeping with the Global Food Safety Initiative (GFSI). Improvements in farm production also need to be recognized in the market place somehow, and communications of the benefits of BAP and other certifications schemes remains a challenge along the value chain.

Questions

Audience: What do you mean by “responsible manner”, etc...?

Response (More): In the BAP these do reflect set levels, what needs to be tested, frequency of testing, and even the appropriateness of the lab who runs the tests. All of the standards and procedures are available to the public via our website at <http://www.gaalliance.org/bap/standards.php>.

Certification Options for Canadian Aquaculture

Ruth Salmon, Executive Director, CAIA, Canada

Overview: A look at who the Canadian Aquaculture Industry Association (CAIA) represents and its goals. She discussed the recent release (May 9, 2012) of the Canadian Organic Aquaculture Standards for Canadian farmed seafood, its developmental processes and long-term evolution to adapt to an ever-changing industry. Finally, a short review of the FAO-based aquaculture certification model for Canadian producers being developed for the first time ever, was presented. This is the only standard based primarily on governance and it is important to the aquaculture sector.

Questions

Audience: With respect to organics, how do you suggest we overcome resistance?

Response (Salmon): The system will have to be set-up for tracking and accountability, etc.

Aquaculture Sustainability Reporting Initiative (ASRI)

Dr. Jamey Smith, Director Sustainability, DFO AMD, Canada

Overview: Governments are typically not very good at reporting on aquaculture sustainability. Dr. Smith presented an overview ASRI, a new reporting system for the Canadian aquaculture sector launched in January 2012 for reporting conditions and trends with the purpose of providing regular cycles of sustainability information in the areas of Ecosystem Health, Animal Health and Welfare, Safe and Healthy Products, Resource Use, Social Responsibility, and Economic Viability from a qualitative perspective. Plans for the future development of ASRI include improvement of current indicators, the development of new indicators and expanding the shellfish data as well as adding new species. The ASRI report, Aquaculture in Canada 2012, is available on through the Department of Fisheries and Oceans website at <http://www.dfo-mpo.gc.ca/aquaculture>.

Questions

Audience: You referred to data collection and reporting. How will you deal with the confidentiality issue of the data itself?

Response (Smith): In this matter we would follow the CFIA's lead in protecting any confidential data.

A Fish Pathologist's View of Science Communication

Dr. Gary Marty, Veterinary Pathologist, BCMAFF, Canada

Overview: Summary of Dr. Marty's dialogue with various media outlets following the misrepresentation of facts and statements in the wake of the Cohen Commission. Dr. Marty outlined the need for a rapid professional response to the misrepresentation of information in the media to salmon aquaculture farming data and the ethical responsibility aquaculture professionals have in providing it.

Discussion Panel and Questions

Question 1: Do different audiences require different tools?

It is often said that demonstrating sustainability is important for market access as well as social license. Are these two separate audiences that require different tools, or can they be served at the same time?

Responses:

Roper: Yes, they are separate audiences. Certification provides the positive message of the benefits of certification schemes.

Salmon: I agree. Third party certification is crucial though. The consumer trust doesn't lie with the industry. We need to take advantage of the helpful responses by scientists such as Dr. Marty and perhaps engage a suite of scientists to speak on a variety of aquaculture issues as the need arises.

Audience: I agree that we do have a good story to tell, particularly with sustainability. We have made great strides in the last 20 years. We need to align with people whose perceived credibility is higher than that of ours [industry]. There is still work to be done to get the message to consumers and the general public.

Roper: To build upon that, we need to be cognizant of the limitation of certification schemes. We need honest and open communication as to the limits that it can provide.

Smith: There needs to be an emphasis on the pros and the cons, and timelines are necessary. Some things need an immediate message and we need a platform for that

message. Consistency is very important and the overall message must remain consistent and not contradictory.

Question 2: Are stakeholders going in the right direction to address the challenges of this scrutiny?

In recent years, aquaculture production and products have often been publicly scrutinized to a level that has not really occurred with other food production and products. Are governments and industry going in the right direction to address the challenges of this scrutiny? What specifically needs more work?

Responses:

Salmon: Aquaculture has responded rapidly as compared to agriculture. That being said, I'm not sure we're "there" yet. We need to be better at it, smarter at it and use social media tools. We need to continue to work with scientists to build these alliances that help communicate our message to the public. Communication can always be refined and improved.

Smith: Yes, to the direction; no, I do not think we have reached the end point. The question needs to be, what the end point is? People are still buying and wanting farmed salmon. The scrutiny is not from all the public. It's an issue of the squeaky wheel.

Salmon: The media is not reflective of the overall opinion of the population. Polling has been positive. People still support and want the farms. We need to respond to the media, but also recognize this support.

Audience to Smith: Can you define the end point?

Smith: We are getting better at understanding where we need to be. We have regulatory and science issues though that we still need to address

Audience: The introduction of soy will muddy the water.

More: Third world countries tend to over-regulate the processing plants and under-regulate the farming. I might suggest that Canada may be doing the opposite. There is a need to look at the industry as a whole. Are the processing plants sustainable?

Question 3: What are the challenges and roles to ensure effective science communication?

What are a) the challenges and b) the various roles (of industry, government and academic institutions) to ensure science related information is communicated effectively

to the general public? What can be done to improve? Give examples of where/when science has been communicated effectively – and examples of when it has not.

Responses:

Smith: There is a need to improve on it.

Salmon: The challenge is that scientists aren't always the best communicators. There is a gap there to take the science to the public. It is critical that we respond to this gap. Communication is key and is really needed. We need people who understand the sciences to communicate it to the public.

Open Question Period: Who is going to do the auditing and what will that cost?

Responses:

Salmon: There are governing bodies that do this and it is their role. Looking at cost, I cannot give you an exact amount. I can say though that producers are working these costs into their budgets, and yes it is costly.

Smith: There are 3 areas of cost. The first the cost of compliance at the farm level to comply. Secondly, there is the certification. There is a cost associated with paying a certification body to send an auditor to the site. How much depends on the time spent at the site and the more prepared you are, the less it may cost. There is a push to harmonize this. Then there is the cost of licensing and logo fees.

More: The cost varies between species. Through our organization, the fee is only for the audition portion. The organization does not profit. The cost of certification isn't that great when you consider you are getting more per pound of product.

Audience: I do not agree. I don't think this premium for the product does exist, at least in the case of salmon. At best, you're hoping for improved market access.

More: That may be true for salmon. In shrimp you do see the premium.

Question 5 (from audience): This more more of a comment, but wouldn't access to the farms improve public trust?

Smith: Yes, the need to reach out to the community and interact is important.

Salmon: Industry is actively doing this on both coasts actually. Outbreaks of disease can interrupt that for biosecurity, but yes it is occurring.

Appendix A

Sustainability Forum – Transparency, Standards and Science Communication

Wednesday 30 May 2012

Aquaculture sustainability requires access to timely, science-based information on production, health management, and socioeconomic inputs. A variety of indicators may be used to define sustainability, but the bottom line is that they all need to be transparent, open for debate, and not confounded with biased interpretation, or one-sided. The panel will discuss the need for science-based criteria for standards, for communication in relation to ongoing sustainability issues for the industry, the need for transparency from all science sectors, and how can we improve the communication of aquaculture science to industry, the public and the government.

Chair and Moderator: *Cyr Couturier, Memorial University*

08:15 Building A Supply Chain Business Case For Aquaculture Certification Schemes

Carson Roper, Seafood Sustainability Consultant, France

08:55 Best Aquaculture Practices - An Update on Sustainable Production and Certification

William More, Global Aquaculture Alliance, USA

Plenary Presentation

09:45 Communicating Science – The Pitfalls and Need for Transparency

Dr. Gary Marty, Animal Health Center, Ministry of Agriculture, BC

10:30 Health Break

11:00 Providing Options for Canadian Farmed Seafood Suppliers - Canadian Organic Farmed Seafood Standards and FAO-Based Certification Option

Ruth Salmon, Executive Director, CAIA, Ottawa

11:20 The Aquaculture Sustainability Reporting Initiative – Reaching Out to Canadians (TBC)

Dr. Jamey Smith, Director DFO AMD

11:40 A Fish Pathologist's View of Science Communication

Dr. Gary Marty, BCMAFF

12:20 Discussion panel & questions

- Q1. It is often said that demonstrating sustainability is important for market access as well as social license. Are these two separate audiences that require different tools, or can they be served at the same time?
- Q2. In recent years, aquaculture production and products have often been publicly scrutinized to a level that has not really occurred with other food production and products. Are governments and industry going in the right direction to address the challenges of this scrutiny? What specifically needs more work?
- Q3. What are a) the challenges and b) the various roles (of industry, government and academic institutions) to ensure science related information is communicated effectively to the general public? What can be done to improve? Give examples of where/when science has been communicated effectively – and examples of when it has not.

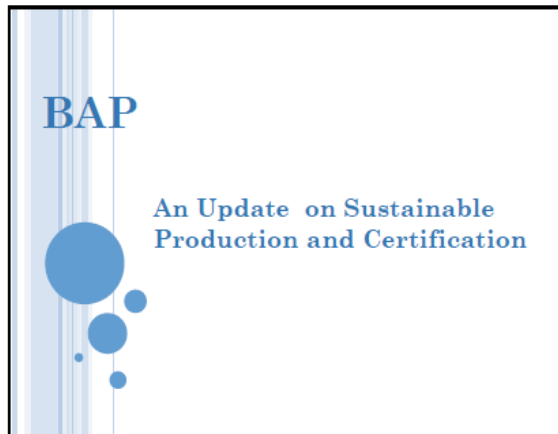
Appendix B

Presentations at the Canadian Aquaculture Sustainability Forum

Carson Roper – not available without permission

Dr. Gary Marty, Plenary presentation – not available without permission

Presentation: Bill More, GAA



Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

The most important challenge facing aquaculture today is the need to insure sustainability on a long term basis:

- * must be profitable
- * must be viable long term
- * must not have a negative effect on the natural resources and local community.

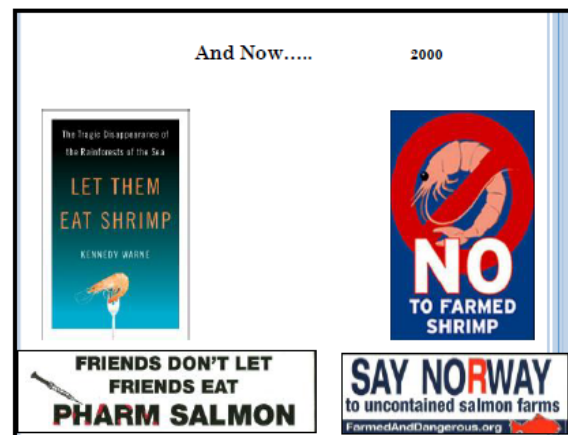
Sustainable Issues in Aquaculture

1. Environmental – long term protection of the environment and ecological sustainable development

1. Economic – Economic viability of the industry

2. Social – Resource sharing with other users.

3. Production – Appropriate level of production for technology deployed and resources available.



Major Risks and Constraints

1. Availability of financing and working capital.
2. Unpredictable market price.
3. Production risks (diseases, contaminated product).

International Concern Over Global Aquaculture Development

The Economist:
2003

"An internationally recognized certification scheme is urgently needed to alert consumers about the sustainability (or lack thereof) of the seafood products they purchase."



Attributes of Standards Development

Necessary for credible scheme

- Balanced, multi-stakeholder
- Consensus-based
- Transparent and inclusive
- International guidelines: FAO, ISO, GFSI

Governance Schemes

Wild Caught Seafood No Food Safety Component

* Primarily Chain of Custody

Farmed Seafood Food Safety Component

- * Aquaculture Certification Schemes
- * 3rd Party Certification
- * Government Regulation



GLOBALG.A.P.
Global Good Agricultural Practices

Credible Aquaculture Schemes Third Party

4 Main Components

- * Standards
- * Accreditation (recognition of qualified body to carry out certification) and an accreditation system
- * Certification (CB to verify compliance with standards) and conformity assessment
- * Traceability and verification

Certification Program Options

Currently, a proliferation of schemes and eco-labels



GLOBALG.A.P.



Why Certification is Important

- * Programs addresses the growing concerns of consumers, buyers and NGO's regarding social, environmental and food safety issues.
- * Certification of responsible aquaculture practices is necessary to compete in today's market with new demands and low prices
- * Promotes practices for sustainability

What's Driving Certification?



"Retailers, not consumers, are the driving force behind corporate social responsibility and farmed seafood certification"
.....said Peter Redmond, the Global Aquaculture Alliance's VP of development, administration and communications. Redmond was addressing attendees at the World Aquaculture Society's Aquaculture 2010 conference in San Diego.

Certification Guidelines

Consider a range of issues relevant for Aquaculture Certification

- * Fish meal and fish oil conservation
- * Animal health/welfare
- * Sediment and water quality
- * Food safety
- * Social, economic and environmental sustainability and integrity
- * National and international legal framework (disease control, biodiversity, conservation, control of escapes and use of GMO's)

What The BAP Standards Address:

The "four pillars" of the Best Aquaculture Practices (BAP) standards

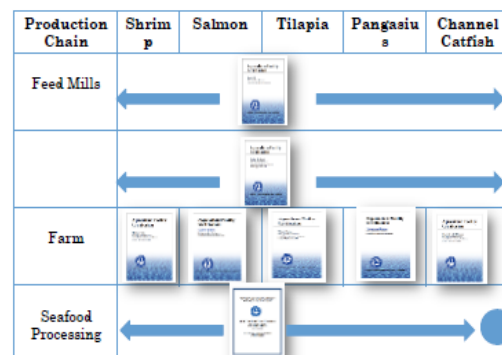
- Legal Compliance
- Social Responsibility
- Environmental Stewardship
- Food Safety – Including traceability

It is the long-held GAA belief that these elements are essential to sustainability

BAP Scope

	Feed	Hatchery	Farm	Processing
✓ Salmon				
✓ Shrimp				
✓ Tilapia				
✓ Pangasius				
✓ Channel catfish				
Social ethics	✓	✓	✓	✓
Environment	✓	✓	✓	✓
Animal welfare		✓	✓	✓
Food safety & Quality	✓	✓	✓	✓
Traceability	✓	✓	✓	✓

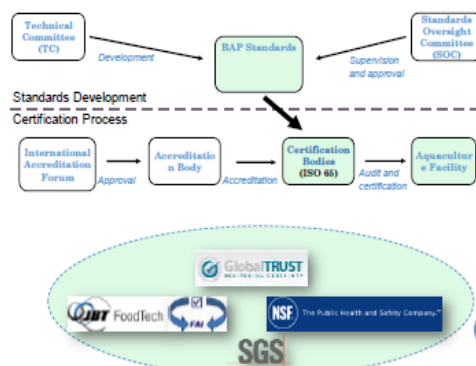
Range of BAP Standards



Download free copies of standards

www.gaalliance.org/bap/standards.php

BAP Certification Process



BAP Certification Management

- Founded in 2002, The BAP Program is the one of the largest aquaculture certification programs worldwide.
- As of May 1st, 169 seafood processing plants certified providing 854,000 MT of BAP certified product.
- 232 BAP farms certified providing 174,000 MT farm shrimp, 97,000 MT of farm Tilapia, 23,600 MT of farm Pangasius 23,000 MT of farm Salmon
- 32 certified Shrimp hatcheries
- 5 Feed Mills
- Total BAP product available = 1176 MT
- Certified facilities are located in 18 countries

BAP Aquaculture Certification: Statistics

BAP Certified Facilities		
	No. Plants	Number Farms
Thailand	33	133
China	49	29
Vietnam	22	20
Indonesia	11	5
Ecuador	3	4
India	22	14
Bangladesh	4	2
Nicaragua	2	7
Guatemala	1	1
Honduras	1	2
Malaysia	2	3
Canada	1	7
Chile	3	1
USA	6	1
Colombia	1	2

BAP Certification Mark (Logo)

Example: BAP Retail Logo* for Two Star Product

* BAP Processor = 1 Star

* BAP Processor plus BAP Farm = 2 Star

- Packaging logo designs and placement must be approved by BAP Program Manager.

- Certified BAP facilities appear on the BAP website.



BAP Salmon Standard

Implemented in August 2011

Standard 1 – Community Property Rights and Regulatory Compliance

Standard 2 – Community relations

Standard 3 – Worker Safety and Employee Relations

Standard 4 – Sediment and Water Quality

Farms shall be located and operated in such a way that they do not have significant negative impacts on sediment quality outside a defined sediment impact zone, or on water quality within the general vicinity of the farm.

Standard 5 – Fishmeal and Fish Oil Conservation

Farms shall use feeds and feed ingredients produced by responsible methods, accurately monitor feed inputs and make efficient use of fishmeal and fish oil derived from wild fisheries.

Specifies a fish in fish out ration calculation

Standard 6 – Control of Escapes

Salmon farms shall take all practical steps to prevent escapes and minimize possible adverse effects on aquatic wildlife if escapes occur.

Requires a fish containment plan and inventory account system

Standard 7 – Predator and Wildlife Interactions

Farms shall manage physical interactions with wildlife and not reduce the biodiversity of other ecosystems

Must have a written wildlife interaction plan

Standard 8 – Storage and Disposal of Farm Supplies

Feed, fuel, lubricants and chemicals shall be stored and disposed of in a safe and responsible manner. Paper and plastic refuse shall be disposed of in a sanitary and responsible way.

Standard 9 – Animal Health and Welfare

Producers shall demonstrate that all operations on farms that involve fish are conducted with animal welfare in mind. Employees shall be trained to provide appropriate levels of husbandry and care.

Includes issues related to water quality, harvest, transport and production density

Standard 10- Biosecurity and Disease Management

Farms shall operate with the aim of preventing disease outbreak, but when diseases or parasites infect farmed fish, diagnosis and treatment shall be carried out promptly and judiciously under the supervision of a fish health professional in a manner that minimizes impacts on the environment

Requires written procedures for disease diagnoses and treatment of diseases and sea lice

Records must be maintained on the use of antibiotics and chemicals, withdrawal time, dosage and harvest

Area Water Quality and Management Plans

- Following
- Bio security
- Data sharing and monitoring
- Sea lice management plan
- Program to manage escapes (escape response plan)
- Water quality benthic impact management techniques
- Performance based measurements to address sensitive habitat
- Manage over feeding
- No restriction of water movement

Standard 11- Control of Residues and Contaminants

Chemical residues and contaminants shall be controlled and kept below regulatory limits through good farming practices and regular monitoring. Banned antibiotics, drugs and other chemical compounds shall not be used

Documentation from feed manufacturers that antibiotics or other drugs are not present in non medicated feed and that antibiotics are not used as growth promoters.

Applies to smolt production in fresh and saltwater and harvest and transport of fish

Requires SOP's and SSOP's in place at farm – HACCP concept

Traceability and Record Keeping Requirement

Traceability records shall be maintained using a BAP approved chain of custody system. Records on origin of smolts, feed and other production inputs must be documented.

BAP Standards under development



Marine Fish



Hatchery/Seed production



Mussels

Seed Production Standard

Units Covered:

Brood stock; egg collection and fertilization;
Egg incubation and hatchery; first finding to point where juvenile animals are moved to secondary growing facilities to grow them up to a size at which are stocked in the final growing facility.

Seed Production Standard

Components covered 11 – to include Community (3), Environmental (6) and Food Safety (2)

Includes:

Effluent Management Requirements
Fishmeal and fish oil conservation
Genetics
Control of escapes and predators
Animal Welfare
Biosecurity and disease surveillance
Disease treatment and use of drugs
Chemicals and hormones
Harvest and transfer
Traceability

Mussels Standards

To be released in Fall 2012

Standard Covers:

- Community, worker safety and employee relations, storage and disposal of supplies
- Predator and wildlife interactions
- Sediment effects
- Carrying capacity
- Bio security and disease management
- Seed supply
- Food Safety
- Traceability

SUMMARY

Supply dynamics continue to dominate product demand and markets for aquaculture product remains fragmented due to trade barriers, litigation and consumer concerns regarding the safety of the product they eat and the effect of farming practices on the environment. Responsible, properly conducted certification programs like Best Aquaculture Practices (BAP) benefit the flow of responsibly produced safe goods into the market place, promote sustainability and increases buyer and consumer confidence in the way the product is produced and traced back to its origin.

Globally, BAP is the largest process certification program for aquaculture products. Over 600 seafood processing plants, farms, hatcheries and feed mills have been certified since the BAP program was implemented in 2006.

As of April 1, 2012, more than 1.13 million metric tons of BAP certified farmed shrimp, tilapia, Pangasius, catfish and salmon were available worldwide.

A new mussel standard developed by the standard owner Global Aquaculture Alliance (GAA) will be implemented in the fall of 2012.



Presentation: Ruth Salmon, CAIA




CANADIAN AQUACULTURE
ORGANISME DE LAQUACULTURE

Farming Canadian Waters with Care

How was the standard developed?

- Developed by a committee established by the Canadian General Standards Board (CGSB)
- Committee included representatives from industry, regulatory bodies, consumer advocacy groups, First Nations, and environmental groups.
- Transparent process; two extensive public reviews
- 75% of eligible voting members voted and 81.48% of those votes were in favour.




CANADIAN AQUACULTURE
ORGANISME DE LAQUACULTURE

Farming Canadian Waters with Care

What are the major differences between organic and conventionally raised seafood?

- Antibiotics are prohibited. Treated animals may not be sold as organic.
- Stocking density of animals is limited according to the species under production.
- GMO aquatic animals and plants are prohibited.
- Pesticide treatments are carefully restricted
- No chemical antifoulants




CANADIAN AQUACULTURE
ORGANISME DE LAQUACULTURE

Farming Canadian Waters with Care

What are the major differences between organic and conventionally raised seafood?

- Feed is controlled:
 - No growth-promoting hormones
 - No GMO feed ingredients
 - No artificial coloring (must be from organic or natural sources)
 - No synthetic appetite or flavor enhancers
 - Fish meal and fish oil must be organic, when commercially available.




CANADIAN AQUACULTURE
ORGANISME DE LAQUACULTURE

Farming Canadian Waters with Care

How do we respond to our opponents?

- Aquaculture relies on plant and animal husbandry – so it is possible to apply organic growing and rearing principles to all systems of food production – including both shellfish and finfish farming, on land and in the water
- Just like traditional terrestrial farming, the organic aquatic sector uses specific farming protocols which minimize the input of synthetic substances and maximizes local environmental quality.



CANADIAN AQUACULTURE
ORGANISME DE LAQUACULTURE

Farming Canadian Waters with Care

How do we respond to our opponents?

- Our opponents are ideologically opposed to fish farming in the ocean
- The benchmark was to always hold organic fish farming to an ideal that parallels that of organic agriculture
- Any aquaculture operations (whether in water or on land) - that successfully achieves the organic designation - are models for ecological sustainability within their community.



CANADIAN AQUACULTURE
ORGANISME DE LAQUACULTURE

Farming Canadian Waters with Care

What other jurisdictions have Organic Standards for aquaculture?

- At least 14 countries now have organic aquaculture standards.
- The EU which applies to all 21 EU member states.
- In addition, Norway, Australia, New Zealand and Japan have voluntary standards.
- The National Organic Standards Board (NOSB) in the US has prepared a draft standard, which is in the process of becoming a formal standard.
- The province of Quebec also has organic standards for aquaculture – regulated, but only within the province.



CAIA's FAO-based Responsible Aquaculture Management Certification Project


Recent AAFC approval [DFO Support] for CAIA to explore development of an internationally recognized FAO-based management certification model for interested Canadian sectors

September 2011 – March 2013



Why develop an FAO-based Aquaculture certification model?

To provide a cost effective & credible certification option for interested sectors of the Canadian aquaculture industry



FAO Aquaculture Technical Guidelines are Comprehensive

Minimum Substantive Criteria across four broad categories:

1. **Animal Health and Welfare** – Eight (8) Criteria
2. **Food Safety** – Ten (10) Criteria
3. **Environmental Integrity** – Sixteen (16) Criteria
4. **Socio-economic** – Five (5) Criteria

Detailed platform against which Canadian excellence may be measured and demonstrated

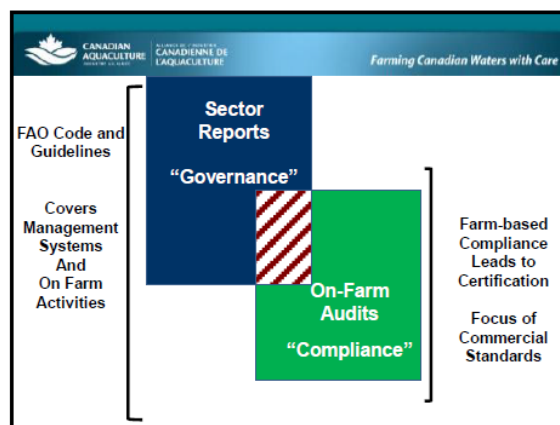
Very few standards address all, or even most, factors across all four categories ...

The ONLY standard Examining Governance

Very few standards address governance and program management (in any kind of detail)

Most standards appear to take systemic governance for granted


Canadians typically look to Government; FAO model highlights government's role



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Sector Approach

- Regional / sector approach vs. company approach; therefore cost effective option
- Most standards are geared towards the larger scale operations & do not address the smaller scale producers
- Stated Intent of UN FAO Guidelines, that Aquaculture Standards and Certification should be accessible to all producers.

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Stakeholder Feedback (e.g. retailers)

- Importance of developing Peer Reviewed Sector Reports - a formal review of the management framework of a jurisdiction + details on the farm audits
- Importance of ENGO Consultation (NEAquarium)

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Timelines

- Development of draft assessment tool used in pilot audits – done & posted on website
- Pilot audits (PEI mussels; NL mussels; Ontario trout) over summer
- Further consultation in fall (industry; other stakeholders)
- Preliminary plans for rollout; who owns and implements the standard

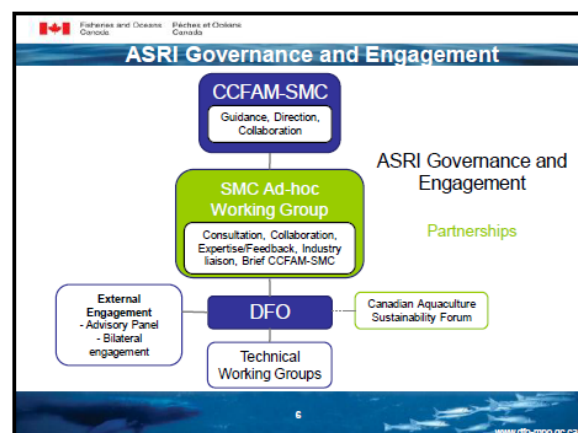
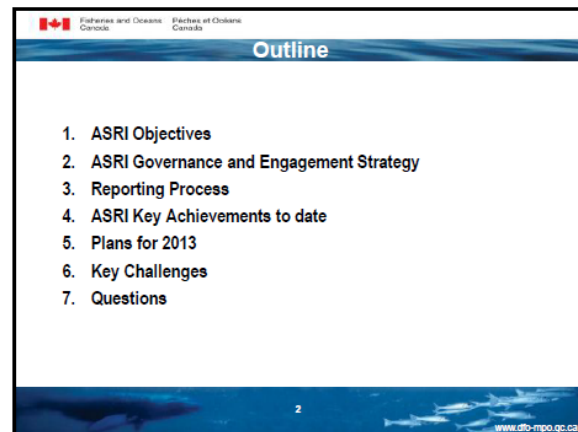
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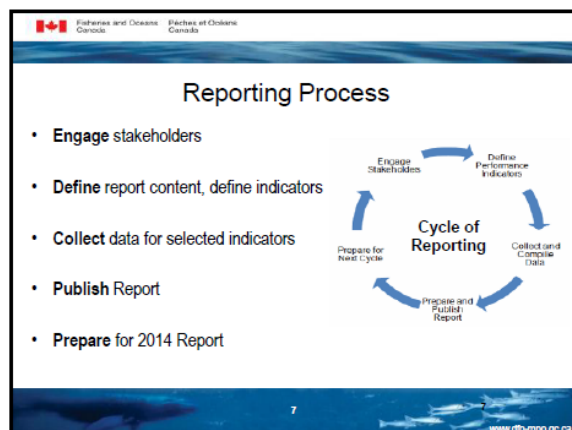
Thank-you



Canadian Aquaculture Industry Alliance

Presentation: Dr. Jamey Smith, Aquaculture Sustainability Reporting Initiative





ASRI Key Milestones

Report to Launch the Aquaculture Sustainability Reporting Initiative

- Released January 2012
- Provided background on reporting process
- Snapshot of aquaculture sector
- Outlined the management and regulatory framework

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ASRI Key Milestones

Aquaculture in Canada 2012: A Report on Aquaculture Sustainability

- Released May 2012
- Key issues of sustainability organized into 6 themes:
 - Maintaining Healthy and Productive Ecosystems
 - Maintaining Animal Health and Welfare
 - Ensuring Safe and Healthy Products of Aquaculture
 - Using Resources Efficiently
 - Encouraging Social Responsibility
 - Ensuring an Economically viable and successful industry.
- More detailed focus on regulatory & management process

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ASRI Key Milestones

Technical Working Groups, October 2011

- Established for each of the key themes
- Developed a short list performance indicators
- Identified data sources, gaps and data sharing opportunities
- Suggested methodologies for collecting indicators

Sub working group meetings, May 2012

- Following up on recommendations of TWG
- Gathering subject matter experts
 - further define specific indicators
 - data collection
 - methodologies

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Plans for 2013 Report

- Developing new indicators
- Improving indicators already used
- Including more information on shellfish and other species

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Plans for 2013 Report

Stakeholder engagement will continue to be central to the process

- Sub-technical working groups of experts to determine how to collect, report on, analyze data for specific indicators
- Technical Working Groups for each theme to continue to develop future indicators

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Key Challenges
Data Collection & Information Management

Data Confidentiality

- To enable sharing of information
- Solutions costly and require long lead times to implement

Data Comparability

- Establish common data collection methodologies
- Goal is to easily compare information across the country and from year to year
- Explore linkages between data collection for ASRI and industry FAO-based certification program



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Report to Launch the Aquaculture Sustainability Reporting Initiative
Aquaculture in Canada 2012: A Report on Aquaculture Sustainability


Available online:
www.dfo-mpo.gc.ca/aquaculture



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How can you contribute to this process?

- Feedback on 2012 Report and process:
ASRI-HRDA@dfo-mpo.gc.ca
- Technical Working Groups



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Questions ?



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Presentation: Dr. Gary Marty, BC Ministry of Agriculture

A Fish Pathologist's View of Science Communication

Gary D. Marty

May 30, 2012

Animal Health Centre, Ministry of Agriculture,
1767 Angus Campbell Rd., Abbotsford, BC



The Problem:

- Most BC farm medical records from 2000 – 2009 were released to the public by the Cohen Commission (late August 2011).
- These records were misrepresented in this column.
- The BC government does not allow employees to speak freely with the media.

The Solution:

- Veterinarians have an ethical responsibility to educate the public in manners relating to the health of animals.
- Being a licenced veterinarian is a requirement of my job.
- The duty to my profession supersedes any duty to my employer (the BC government).
- The BC Public Affairs Bureau agreed.

Letter to the editor:

Victoria Times-Colonist (9:14am, Sept. 7, 2012)

"I was disappointed to read Times-Colonist columnist D.C. Reid's Sept. 6 column, 'Hell to pay for letting ISA virus into the Pacific'. I am the board-certified veterinary pathologist that Mr. Reid referred to as the 'province's fish-table pathologist'. Mr. Reid also attributed to me a statement that I did not make: 'ISA, what ISA?' False attributions like these mislead the public."

Goal – the editor should have done some fact checking.

Letter to the editor:

Victoria Times-Colonist (9:14am, Sept. 7, 2012)

"Mr. Reid wrote that 'You will be staggered by how many hundreds of times... [classic symptoms of ISA] ...were found in fish farm Atlantic salmon.' In my view, the public is also misled when a common 'symptom' is attributed to a disease that does not occur in BC."

- Dry cough.

Letter to the editor:

Victoria Times-Colonist (9:14am, Sept. 7, 2012)

"Indeed, every one of the hundreds of fish with 'classic symptoms of ISA' in the provincial fish health database was tested for the ISA virus using a highly sensitive and specific PCR test. All fish tested negative—no virus. From 2003 – 2010, the Province tested 4,726 dead farm fish for the ISA virus, and all fish tested negative—no virus."

- Wording overcomes ethical prohibition against guarantees.

Letter to the editor:

Victoria Times-Colonist (9:14am, Sept. 7, 2012)

Publicly available PCR test results for infectious salmon anaemia virus (ISAV) in British Columbia farmed salmon over the past 8 years (2003 – 2010). Data were compiled as part of the BC Fish Health Auditing and Surveillance Program.

Year	# Positive	# Negative
2003	0	648
2004	0	675
2005	0	580
2006	0	644
2007	0	763
2008	0	580
2009	0	585
2010	0	237
TOTAL	0	4,726

Sources:
 BC Animal Health Centre web site:
http://www.ahc.gov.bc.ca/ahc/fish_health/index.htm
 BC Centre for Aquatic Health Sciences web site:
http://www.caahs.ca/ahs/ahc/fish_health/index.htm

Letter to the editor:

Victoria Times-Colonist (9:14am, Sept. 7, 2012)

"The provincial database that contains 'classic symptoms of ISA' is now available to the public as part of the Cohen Commission proceedings. However, any public comment on these medical records needs to respect ethical guidelines as outlined by the College of Veterinarians of BC (<http://www.cvbc.ca/cfm/index.cfm?it=100&id=115>)."

Goal – in publishing D.C. Reid's column, has the editor violated journalist ethics?

Response:

Victoria Times-Colonist (12pm, Sept. 7, 2012)

Times Colonist website screenshot showing a "Corrections" section. The article title is "B.C. FARMED SALMON NOT POSITIVE FOR ISAV". The text states: "The infectious salmon anaemia virus (ISAV) has never been found in a herd of farmed salmon in British Columbia. Over 4,700 tests were performed between 2003 and 2010, and there has never been a positive result. Tests for ISAV are done on a regular basis. Incorrect information appeared in a column by D.C. Reid on page C1 in the Tuesday Times Colonist."

Response:

Victoria Times-Colonist

- My letter published in the Sept. 8, 2011 paper
- Also, an independent letter from Ruth Salmon
- Result – D.C. Reid's column no longer refers to fish farm issues
- Take Home Message – one person can make a difference

Dr. Marty's Response Policy:

(September 9, 2011 10:14 AM e-mail)

"The release of farm salmon medical records directly into the public domain represents a new and uncharted frontier in medicine. I anticipate that these medical records will be misrepresented to the public."

When that occurs "...I am committed to respond rapidly, vigorously, and professionally to protect my interests, your interests, and the public."

CBC Halifax:

(Wednesday, October 12, 2011 8:49 AM e-mail to me)

"you need to listen to the Morton CBC [Halifax] interview—she names you"

CBC Halifax:

(e-mail sent 2011-10-12 11:50am)

Alexandra Morton based her conclusion on her analysis of "all the disease records for the salmon farming industry" that were released for the first time; she "read every single line". She explained the difference in scientific opinion among the experts:

"But I went a layer deeper and looked directly at the reports of the man, Dr. Gary Marty, who was actually looking at the fish. And he's saying...he's not only seeing over a 1,000 signs of Infectious Salmon Anemia..."

CBC Halifax:

(e-mail sent 2011-10-12 11:50am)

I am Dr. Gary Marty, the board-certified veterinary pathologist that created every line of the database Alexandra Morton examined.

I want to clarify that I did not diagnose Salmon Leukemia in these fish. Instead...

CBC Halifax Response:

Taped interview aired October 18, 2011 (1 day after ISAV positive PCR results reported for sockeye salmon in BC)

**Lillooet News Response:**

(letter to editor published May 2, 2012)

"Alexandra Morton (who is not a veterinarian) sent supermarket samples of BC farmed Atlantic salmon to veterinary microbiologist Dr. Fred Kibenge at UPEI. His test results included an important disclaimer: 'the presence of PRV sequences in the tissue samples does not imply that the subject fish had HSMI [heart and skeletal muscle inflammation]'."

Lillooet News Response:

(letter to editor published May 2, 2012)

"Contrary to Dr. Kibenge's disclaimer, Alexandra Morton reported to the public that the 'lab also reports that we had piscine reovirus, heart and skeletal muscle inflammation...'; 'it's a nasty heart virus', and the fish 'had heart and skeletal inflammation virus...' (Apr. 21 speech at U. Vic.)."

Lillooet News Response:

(letter to editor published May 2, 2012)

"To avoid misinterpretation of test results, I do not recommend that anyone—including salmon farmers—provide samples from their pets or livestock to people that are not veterinarians."

Other Example: ISAV

Problem: October 17, 2011 announcement of still unconfirmed PCR positive results for ISAV

Solution: October 20, 2011; information sheet provided to fish health professionals (mostly Americans)

Result: many points included in the sheet were included in information put out by those fish health professionals

SUMMARY

- Professionals have an ethical responsibility to ensure that their data and conclusions are correctly reported in the media
- When necessary, respond rapidly, vigorously, and professionally
- One person can make a difference (as part of the communications team)