



Food and Agriculture
Organization of the
United Nations

FIAA/R1143 (En)

FAO
Fisheries and
Aquaculture Report

ISSN 2070-6987

Report of the

**WORKSHOP ON INCREASING PUBLIC UNDERSTANDING AND
ACCEPTANCE OF AQUACULTURE – THE ROLE OF TRUTH,
TRANSPARENCY AND TRANSFORMATION**

Vigo, Spain, 10–11 October 2015



Report of the
Workshop on Increasing Public Understanding and
Acceptance of Aquaculture – the role of truth, transparency and transformation
Vigo, Spain, 10–11 October 2015

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.

The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO.

ISBN 978-92-5-109365-8

© FAO, 2016

FAO encourages the use, reproduction and dissemination of material in this information product. Except where otherwise indicated, material may be copied, downloaded and printed for private study, research and teaching purposes, or for use in non-commercial products or services, provided that appropriate acknowledgement of FAO as the source and copyright holder is given and that FAO's endorsement of users' views, products or services is not implied in any way.

All requests for translation and adaptation rights, and for resale and other commercial use rights should be made via www.fao.org/contact-us/licence-request or addressed to copyright@fao.org.

FAO information products are available on the FAO website (www.fao.org/publications) and can be purchased through publications-sales@fao.org.

PREPARATION OF THIS DOCUMENT

This publication describes the outcomes of the FAO Workshop on Increasing Public Understanding and Acceptance of Aquaculture – the Role of Truth, Transparency and Transformation, held in Vigo, Spain, on 10–11 October 2015. The workshop was jointly organized by the Sustainable Trade Initiative, the Global Salmon Initiative, and FAO’s Fisheries and Aquaculture Department.

The workshop was attended by 49 experts from 15 countries, representing a range of sector stakeholders, including different farming systems in developed and developing countries, governments, international organizations, civil society organizations, retailers, consumer groups, marketers, communications experts, social scientists and other academics, certification programmes and the media. The document entitled “Perceptions and misconceptions of aquaculture”¹ served as background document and input to the discussions.

The main purposes of this document are to outline clearly the critical outcomes of the workshop discussions, and to identify the key steps required to ultimately help improve the public’s understanding and acceptance of aquaculture.

This technical workshop may constitute the first of a series of workshops and activities addressing improvements in the public perception of aquaculture. The intended audience for this publication consists of a wide variety of aquaculture industry stakeholders, consumers and the broader community.

The material in the appendixes is reproduced as submitted.

FAO. 2016.

Report of the Workshop on Increasing Public Understanding and Acceptance of Aquaculture – the Role of Truth, Transparency and Transformation, Vigo, Spain, 10–11 October 2015.

FAO Fisheries and Aquaculture Report No. 1143. Rome, Italy.

ABSTRACT

The FAO workshop “Increasing Public Understanding and Acceptance of Aquaculture – the Role of Truth, Transparency and Transformation” was held in Vigo, Spain, in October 2015, and was attended by 49 participants. The workshop covered a number of core topics related to the perceptions of aquaculture, including transparency and ethics, communication, collaboration, responsibilities and new approaches to better management of sector performance and perceptions. Participants included a range of industry stakeholders, including different farming systems in developed and developing countries, governments, international organizations, civil society organizations (CSOs) and non-governmental organizations, retailers, consumer groups, communication experts, social scientists and other academics, certification programmes and the media, giving a wide perspective of views on the discussions.

In a world with an increasing population and a growing demand for healthy and nutritious seafood, aquaculture products are in continuously increasing demand. At the same time, people are becoming more conscious of environmental and social issues related to food production. The fast, and in some cases, unplanned growth of the sector has raised concerns about the environmental impacts of aquaculture. These concerns are often flagged by CSOs and covered in the media, with impacts on public acceptance of aquaculture products. While there may be some examples of poor management and growth, the sector has made much progress in improving production practice and operations, and often the public perception of the industry does not reflect with the reality of improving performance.

In order for the sector to improve consumer understanding and acceptance, it must start to address public perceptions through greater truth, transparency and transformation. By being more truthful, communicating the good and the not so good in a transparent and open forum, the industry can gain credibility and trust. By improving transparency with other stakeholders, and even with one another, companies can start to share and learn from one another, so supporting their evolution as more sustainable enterprises.

This publication covers the topics discussed during this two-part workshop, reporting on first the expert panel presentations, and second on the outcomes from the working groups and final recommendations.

¹ Bacher, K. 2015. Perceptions and misconceptions of aquaculture: a global overview. GLOBEFISH Research Programme, Vol. 120, Rome, FAO. 35 pp. (also available at www.fao.org/in-action/globefish/publications/details-publication/en/c/360636/).

CONTENTS**Page**

PREPARATION OF THIS DOCUMENT	iii
ABSTRACT	iii
ABBREVIATIONS AND ACRONYMS	vi
Background	1
Objectives	2
Workshop development and findings	3
Opening	3
Introduction and presentations	3
Panel discussions	4
Working group sessions	7
Workshop recommendations	10
APPENDIXES:	
1 Workshop agenda	13
2 List of participants	14
3 Presentation: Doris Soto (Senior Aquaculture Officer, FAO)	16
4 Presentation: Bertrand Charron (Editor, Seafood Intelligence)	23
5 Presentation: David Little (Professor, University of Stirling)	38

ABBREVIATIONS AND ACRONYMS

ASC	Aquaculture Stewardship Council
BMPs	better management practices
Code	Code of Conduct for Responsible Fisheries
CSO	civil society organization
FCR	feed conversion ratio
FIT	Farmers in Transition Fund
GAA	Global Aquaculture Alliance
GMO	genetically modified organism
GSI	Global Salmon Initiative
GSSI	Global Sustainable Seafood Initiative
IDH	Sustainable Trade Initiative
IFFO	International Fishmeal and Fish Oil Organization
KPI	key performance indicator
NGO	non-governmental organization

BACKGROUND

Global demand for fish products has increased in recent decades, and this trend is expected to continue due to population growth and increasing wealth, as well as a growing preference for healthy foods. In the context of stable capture fisheries, aquaculture will have to meet most of the future increase in demand for fish. The increasing importance of aquaculture is occurring at a time when the world has become more conscious of environmental and social issues, and consumers have become more aware of, and demand, safer products.

Aquaculture has good development guidance through the Code of Conduct for Responsible Fisheries (the Code) in its provisions pertaining to the sector. Yet the rapid growth of aquaculture production, in some cases not well planned, has caused concerns about environmental impacts, human health and social issues. Some scientific uncertainties and conflicting information about risks of seafood consumption have further confused the public. Moreover, negative reports by the mass media and some civil society organizations (CSOs) have amplified mistrust towards the sector. Industry efforts to promote aquaculture have sometimes increased this mistrust by glossing over difficulties and not addressing environmental problems with frankness. While the negative image is often driven by concerns associated with only a few commodities or certain aquaculture production systems, these can prejudice the whole industry. Aquaculture is still at an early stage of development, and despite many improvements in its production processes towards more sustainability, there is a “perception gap” between how aquaculture is actually done and the public understanding of the sector.

Worldwide, countries have committed to the implementation of the Code. The Code, unanimously adopted by FAO Members in 1995, is widely recognized by governments, international and non-governmental organizations (NGOs) as the international guidance and reference framework for the sustainable development and management of fisheries and aquaculture, and as a standard for reviewing and developing national fisheries and aquaculture legislation and for the planning of the sector’s development.

One response to better address environmental and social issues has been the rise of certification schemes on sustainability of production practices. Certification systems can make a very important contribution and help link improved performance with greater acceptance, but the overall need for providing accurate, updated and objective information on the industry as a whole remains. Food safety surveillance, monitoring, assurance and compliance schemes in the seafood sector are already embedded in national food safety regulations and international food standards. Nonetheless, food safety concerns over aquaculture produce persist.

It might also be useful to better inform consumers and other stakeholders about existing efforts of assessment and monitoring of the performance of the aquaculture sector (i.e. at sectoral levels from national or subnational perspective) in contrast to individual farm or company levels including:

1. global and regional reviews of the state of world aquaculture,² as well as the periodic publication of *The State of the World Fisheries and Aquaculture*;³
2. FAO biennial reporting on aquaculture sector performance in the context of compliance with the Code of Conduct for Responsible fisheries (Code) surveys.⁴

The aquaculture sector needs a more open and broader approach (and, possibly, communication campaigns) to increase transparency and to improve public awareness. It is important for the industry to shape the debate on aquaculture more actively, because a lack of information leaves room for

² FAO. 2016. FAO Aquaculture Global and Regional Reviews. In: *FAO* [online]. Rome. [Cited 14 July 2016].

www.fao.org/fishery/regional-aquaculture-reviews/aquaculture-reviews-home/en/

³ FAO. 2008-2016. Fisheries and Aquaculture topics. The State of World Fisheries and Aquaculture (SOFIA). Topics Fact Sheets. In: *FAO Fisheries and Aquaculture Department* [online]. Rome. [Cited 14 July 2016]. www.fao.org/fishery/sofia/en

⁴ Box 2, p. 70. FAO. 2014. *The State of the World Fisheries and Aquaculture 2014*. Rome. 223 pp. (also available at www.fao.org/3/a-i3720e/index.html).

speculation. In order to offer more balanced information, both scientific risks and benefits need to be acknowledged, including any errors made in the past. There are and have been numerous campaigns to promote aquaculture and aquaculture products in different regions, although the quantity and frequency of such efforts are not representative of the importance and potential of the sector.

Ambiguity and confusion over aquaculture are perhaps also compounded by the fact that the term fisheries applies equally to capture fisheries and aquaculture; yet wild capture and aquaculture remain as different as are hunting and farming for terrestrial animals. In contrast to land-based human food systems however, while the “wild” aspect of the fisheries is perceived as more normal/acceptable, the aquaculture sector has traditionally been considered “the new kid on the block”, and the one facing most scrutiny/criticisms.

The numerous challenges that the aquaculture industry is facing, in order to provide more seafood to meet increasing demand while mitigating the potential environmentally negative effects, may be best addressed by creating more cooperation within the sector and increasing transparency and good communication. The adoption of such initiatives by more aquaculture sectors (subsectors or segments, e.g. shellfish, seabass/seabream, tilapia, *Pangasius*) may also increase the interest from investors towards the industry and promote public–private collaboration and trust.

Therefore, FAO, in collaboration with the Global Salmon Initiative (GSI)⁵ and Sustainable Trade Initiative (IDH),⁷ decided to organize a joint workshop to discuss aquaculture perceptions and how to close the knowledge and communication gap between the sector and other stakeholders, including retailers, consumers, media, other opinion leaders and decision-makers, etc.

OBJECTIVES

This workshop aimed to bring together members of the aquaculture industry (different farming systems in developed and developing countries), governments, international organizations, CSOs, consumer groups, communication experts, social scientists and other academics, certification programmes and the media to facilitate the exchange of ideas and experiences on how to improve public understanding and perception of aquaculture.

The specific objectives were to:

- Discuss main issues and opportunities in aquaculture that can affect public perceptions.
- Discuss what is known about public perceptions in different regions and farming systems, and identify what, where and why the main negative perceptions and misperceptions exist. Highlight the main difficulties in overcoming these negative perceptions.
- Assess the potential impact of negative perceptions and misperceptions about aquaculture on the future development of the sector.
- Acknowledge the importance of frankness and transparency, and the counterproductive impact of “greenwash”.
- Share experiences of public aquaculture communication initiatives and identify the most promising elements in existing campaigns. At the same time, identify and learn from any persistent failures to achieve intended communication goals.
- Foster cooperation among farming companies, small producers and related private initiatives (e.g. associations, clusters) and promote public–private collaborations in order to work towards more transparency and sustainability in the sector.

⁵ The Global Salmon Initiative (GSI) is a joint effort by global farmed salmon producers to make significant progress towards fully realizing a shared goal of providing a highly sustainable source of healthy protein, while minimizing the environmental footprint, and continuing to improve the social contribution (www.globalsalmoninitiative.org/). This initiative takes place within the FAO–GSI cooperation framework under the FAO partnerships programme.

⁷ The Aquaculture Program of the Sustainable Trade Initiative (IDH) aims to increase the supply of responsibly farmed fish and create positive social and environmental impact. With the Farmers in Transition Fund (FIT), the IDH cofunds producers’ efforts to implement more sustainable practices (www.idhsustainabletrade.com/aquaculture-program).

- Agree on future steps to be taken by different stakeholders to improve the public understanding of aquaculture.

WORKSHOP DEVELOPMENT AND FINDINGS

OPENING

Following a welcome to participants and a general introduction to the agenda and format of the event (see Agenda, Appendix 1), Árni M. Mathiesen, Assistant Director-General of the FAO Fisheries and Aquaculture Department, gave an opening speech and set the scene for the workshop. Mr Mathiesen highlighted the fact that aquaculture is a relatively new industry and therefore attracts a lot of attention. Despite genuine improvements in sustainability, there is a perception gap between current practices and the general public's views. Consumers are largely uninformed, and the aquaculture industry needs to increase transparency to improve public perceptions; a better dialogue is needed between industry, the general public and the media. Through the sharing of knowledge in this workshop, it is hoped the future steps required to improve understanding and acceptance of the aquaculture industry can be agreed upon.

INTRODUCTION AND PRESENTATIONS⁸

Doris Soto, Senior Aquaculture Officer, FAO Fisheries and Aquaculture Department, presented an overview of the aquaculture issues that can affect aquaculture perceptions, and discussed whether aquaculture today is complying with the Code. Since the development of the Code 20 years ago, FAO and governments have made efforts to implement the Code, and FAO Members regularly self-assess their compliance with the specific guidelines. The last reporting on aquaculture compliance with the Code was completed in 2015 with 71 countries (90 percent of production) responding. The countries' self-assessments showed generally good progress. However, if CSOs were asked to perform the same evaluation, the scoring would probably be lower, with the reality "on the ground" being somewhere in between. The scoring for some supporting and enhancing mechanisms (e.g. implementation of better management practices [BMPs], ensuring benefits for local communities, integration of aquaculture into coastal development) was much lower than that for essential management measures (policy planning and regulations). This indicates that a gap exists between norms and field implementation, where better integration of aquaculture into the ecosystem is needed. Ecosystem considerations have to be made from the early planning process on in order to understand how much is going in (and where from – sources) and how much is coming out (and where to – sinks) of the aquaculture system process. Aquaculture issues are often related to different parts of these processes, including environmental and social aspects. The main issues affecting public perceptions today include utilizing fish to feed fish, mangrove clearing, food safety, social issues (e.g. equity in income distribution, decent labour) and diseases. While challenges remain in all of these areas, improvements are being made, but the industry is failing to communicate these effectively. Compared with terrestrial livestock production, the environmental footprint of aquaculture is relatively low and should be placed in a comparative perspective. Yet there is great room for improvement. The important role that farmed fish will play in the future, in terms of nutrition and food security as one of the most-efficient converters of feed into high-quality food, needs to be better communicated to the public.

Participants also discussed the need for transparency, including in particular information on product labels, as related to the use of genetically modified organisms (GMOs) in aquaculture.

Avrim Lazar, GSI consultant, presented an overview on how best to deal with industry misperceptions, based on experience from working in different sectors (energy and lumber). Every industry has its own critics, and dealing with misperceptions is a common issue every industry must

⁸ Presentations are available in Appendix 3

face. Simply telling the truth and dealing with facts is not enough, and will not create or change public opinion. A few simple steps can help correct misperceptions:

- Acknowledging a true understanding of the critics' views.
- Acknowledging that current progress is not good enough.
- Acknowledging a path forward of significant continuous improvement.

Recognizing the mistakes the industry has made and accepting that critics have helped set them on the right path have been hugely beneficial in other industries. By telling the truth and being committed to transparency and change, this can help transform perception of the industry. Based on this, the group also discussed the importance of social learning within the industry, and between additional stakeholders as part of this process, and highlighted the view that engaging these stakeholders was crucial to influencing public opinion. "Protocols of respectability" among stakeholders were suggested as was a stronger focus on politicians who influence public opinion.

Bertrand Charron, Editor at Seafood Intelligence, presented an overview of the past and present perceptions of aquaculture in the media. In general, aquaculture has had a bad reputation in the media, particularly in the Western world. This can partly be attributed to the industry's lack of transparency. In the absence of open communication, media are inclined to investigate and uncover information, which historically has worked against the industry. Aquaculture is seen as invading aquatic ecosystems, which are considered a common good and belonging to all. However, recently, the general perception of aquaculture has improved in the media. Perceptions have been shown to differ between the various aquaculture subsectors (salmon, shrimp, tilapia, mussels, etc.) which has led to a lack of consistency in the general perception of aquaculture. Insights from an opinion poll on aquaculture in Ireland demonstrated that perceptions of aquaculture have evolved over time, and that issues surrounding the sector are still poorly understood by the public. Some proposed recommendations to help move towards increased public acceptance, included:

- improving knowledge of perceptions of all stakeholders (including consumers, retailers, politicians, media, producers, suppliers, local communities in aquaculture areas, etc.) to build pathways towards acceptance via consensus.
- building a database of the past, present and future goals and achievements, including cost of impacts (of negative and positive effects, of reactive vs proactive policies) and sustainability key performance indicators (KPIs).
- having a minimum level of industry transparency (as gaps currently exist).

A holistic approach is needed to create a pathway towards the acceptance of aquaculture. By gathering KPI metrics, completing further research and through better education and engagement with stakeholders, this can lead to better public understanding, trust and confidence, and ultimately less negative press. Workshop participants also highlighted the importance of using language the general public understands, and not solely relying on using scientific data to communicate. Large aquaculture companies can afford "sustainability officers" who work to address sustainability concerns voiced by the public. In addition, it was agreed that improvements must be made on an industry-wide level, and that company-specific improvements are not enough to change perceptions. Aquaculture industry segments at times attack and blame competitors supplying aquaculture commodities with a view to gaining market share; such approaches damage the reputation of the entire aquaculture sector.

PANEL DISCUSSIONS

A panel discussion took place to discuss "How can we better address the knowledge and communication gap between the aquaculture industry and the public?" with the following participants: Chris Ninnes (Aquaculture Stewardship Council [ASC])⁹, David Little (University of

⁹ Aquaculture Stewardship Council website: www.asc-aqua.org/

Stirling)¹⁰, Jeremy Dunn (British Columbia Salmon Farmers Association)¹¹, Emiko Terazono (Financial Times)¹² and Ted van der Put (IDH).

Chris Ninnes opened the panel discussion by explaining that the ASC was actively trying to communicate the positive impacts of aquaculture via the ASC certification scheme, and the use of its logo on marketed products. Consumer research on the ASC logo showed that even in markets where there was low recognition of the logo, the majority attributed positive association to the presence of the logo with the underlying brand. The ASC aims to deepen its presence in existing markets and develop its presence where penetration is currently poor. The approach of the GSI to improved cooperation and communication has been well received, and is a model that could be replicated by other aquaculture sectors. It was recognized that perceptions about aquaculture do differ very significantly between different markets, i.e. markets in Northern and Western regions are much more susceptible to sustainability considerations. However, changing consumer perceptions on farmed salmon could help improve the perception towards other aquaculture species and commodities, and towards aquaculture in general. In addition, participants felt that other sectors could learn from the mistakes previously made by the salmon industry. However, it was noted that small-scale farming practices could be very different from those of compared with large-scale producers, making the communication of a unified message challenging.

The group discussed the significant gap in consumers' knowledge of aquaculture in general, and the fact that the majority are not aware of the farmed or wild origin of the seafood they buy. Moreover, there is added confusion at the point of sale, because supermarkets and restaurants do not always specify or differentiate between wild and farmed produce. The way in which information is being communicated to the public is currently not consistent or accurate, causing issues of trust (in particular uncertainty and lack of confidence) between the industry and consumers. Industry failures in the past are a signal of the need for third-party verification to re-gain consumer trust. In addition, workshop participants identified the creation of global multistakeholder platforms as a potential way of disseminating information to resolve the issues outlined.

Ted van der Put commented that the IDH partnered with public and private organizations to help shape the placing of aquaculture in a good environmental light, based on the improvements seen in the industry. When aiming to improve competitiveness and resilience of the industry, it would be useful to discuss with stakeholders of the value chain and to share information transparently. This might well result in less interest by NGOs and media to disseminate negative opinions about aquaculture. Cooperating pre-competitively and learning from experiences in other sectors (e.g. the coffee trade), has been shown to be a promising approach to improve public attitudes. There is need to concentrate on retailers, who often are not aware of details, to address their perceived risks and worries. Focus should not only be on reputation but also on performance.

David Little from the University of Stirling presented an overview of the challenges behind the confusion and lack of awareness about aquaculture seen in the general public. This situation is largely due to the mixed and confused messaging being portrayed by the media, a "deafness" to the steady positive impacts of certification standards and out-of-date reporting of aquaculture. Based on a recent survey of consumer's knowledge of farmed vs wild seafood, it was clear that consumers are confused at the time of purchasing about the choice between the two. Nonetheless, despite such concerns, price is ultimately the main driver. In summary, although there has been a clear rise in the engaged NGO voice of late, some organizations persist in or have developed strident aquaculture views, often supported by outdated information. The continued amplification of incorrect messages and consumer confusion may drive consumers away from seafood consumption in general. There is need to convince opinion leaders, and to recognize potential unintended impacts on poorer consumers globally.

¹⁰ University of Stirling website: www.aquaculture.stir.ac.uk

¹¹ British Columbia Salmon Farmers Association website: <http://bcsalmonfarmers.ca/>

¹² Financial times website: www.ft.com/

Jeremy Dunn from the British Columbia Salmon Farmers Association focused on the importance of learning from past mistakes as a path forward to better addressing the communications gap between industry, media and the general public. The aquaculture industry needs to emphasize its fundamental dependence on good environmental conditions and healthy wild fish stocks and, hence, a shared interest in their maintenance. Independent and trusted science councils are needed to investigate potential negative effects of aquaculture on the environment. Yet, the provision of scientific facts alone is not enough, the aquaculture industry needs to learn to communicate by telling a good story. The key is to deliver a message that can be understood and trusted by the public (e.g. through the collaboration with chefs). Moreover, the industry should highlight the great quality of fresh salmon, not focusing on wild or farmed salmon, but salmon.

At this point of the discussion, some participants stressed that the focus of the meeting needed to be broadened by concentrating more on other aquaculture sectors (apart from salmon farming), such as freshwater aquaculture. While the workshop intended to include all aquaculture sectors in these important discussions, it has to be recognized that the case of salmon farming, as one of the most criticized farming systems, can provide other sectors with important lessons about mistakes to avoid and examples to follow.

Emiko Terazono from the Financial Times provided insights from a media perspective, stating that journalists often had difficulty sourcing easy-to-find, up-to-date facts and information to support their articles. This had significantly contributed to the misunderstanding and gaps in consumers' knowledge around aquaculture, leading to inaccurate perceptions. Similar to the previous panellist, the media representative stressed that there was a lack of good narratives from the aquaculture sector. The media wants to tell a good story with a surprise factor. However, if the sector does not provide interesting stories (e.g. how the aquaculture improves the livelihoods of local communities), there is a vacuum that can be filled by negative press. Even in Norway, where aquaculture is well established, some public opposition exists, demonstrating that misperceptions can occur even in areas where aquaculture has evidently made positive contributions to the local community. Participants highlighted the need to collaborate more closely with the media, providing interesting stories and up-to-date information to better inform the public. At the same time, participants acknowledged that consumers could not be educated comprehensively about all the aspects of the seafood they buy, even though they may be provided with information online in addition to that on product labels. Instead, consumers want to transfer some of this responsibility to the retailers, placing greater responsibility on the role of third-party certifications.

Discussions highlighted a range of other perception and transparency issues and experiences such as:

- The nutritional and food security values of small-sized fish (e.g. pelagics), which are being reduced to fishmeal for feeds for livestock and aquaculture.
- A few large corporate companies (especially in the West) can dominate markets as well as opinions in stark contrast to huge numbers of small-scale farmers in the developing world.
- The focus is too heavy on consumer perceptions in international markets rather than on local acceptance in the developing world.
- Fraud: some species have been sold under different names (e.g. *Pangasius* vs dory), which has caused significant confusion and mistrust among consumers.
- In Bangladesh, the promotion of Global Aquaculture Alliance (GAA) good practices and other better management initiatives have helped address some concerns and campaigns against shrimp aquaculture; conflicts between paddy and ponds are being recognized; good labour practices are being introduced, and lessons for communication and education are slowly being taken up.
- Many consumers face a basic trust problem: airplanes or cars usually do have standards and certificates for safety, while seafood items are not being seen as guaranteed safe products, which affect consumers' trust. The recent example of the diesel-engine emissions scandal has proved and reinforced limits of trust and demonstrates that even globally respected brands may fail to deliver entrenched consumer expectations.

- Salmon are grown in rather similar systems while shrimp are farmed in very different and diverse systems within very diverging social, economic and environmental contexts.
- Global alliances and multistakeholder platforms are important also to help recognize, preempt and address possible trade barriers.
- Fish as an important food source for humanity has finally been recognized by international fora and initiatives such as the Committee on World Food Security, and the Agenda 2030 and the Sustainable Development Goals. However, in the case of salmon farming, the “feeding the world” argument should not be used because salmon does not feed the hungry.
- The need for plans or sustainable aquaculture development is recognized, in particular for countries that want to export aquaculture commodities.
- Significant mistakes have been made by the industry and regulators that have resulted in significant loss of trust (not only with industry but also with regulators and governments that are seen as not competent and not trustworthy), which in turn has stimulated third-party certification.
- Need to rebuild trust and develop opportunities for sharing of success stories, good practices, and examples such as Regal Springs Tilapia efforts involving local communities.
- Consumers need and want to trust; hence, the need for credible trust systems to ensure and enhance consumer confidence. Consistent meeting of consumers’ expectations of claims made remains of critical importance.

WORKING GROUP SESSIONS

For the working group sessions, the participants split into three parallel working groups to discuss three key themes:

- Group 1: The role of transparency and ethics.
- Group 2: Main misperceptions and how to overcome them.
- Group 3: The role of cooperation in the sector.

Each group was asked to discuss the following in relation to their theme:

- the greatest obstacles facing the industry;
- the greatest opportunities for the industry;
- the most important actions to be taken.

Group 1: The role of transparency and ethics

Group 1 identified the following obstacles as being the biggest to be overcome by the industry relating to transparency:

- Fear of transparency, and that if companies disclose data to the general public and other stakeholders, this information could be used against them.
- A lack of international protocols to regulate industry transparency and create a “level playing field”.
 - The group highlighted two examples where the lack of international protocols has contributed to the sector’s bad reputation – the environmental and social challenges in the fishmeal trade, and misleading/inaccurate product labelling.
- The diversity and complexity of the industry, which has a large range of differing company sizes, from smallholders to corporate organizations, can lead to differing levels of transparency.
 - In addition, there are significant costs associated with transparency, including the need for information to be contextualized and also to have third-party organizations verifying transparency claims.

Group 1 identified the following opportunities to overcome these identified transparency obstacles:

- Better engagement with industry and other stakeholders, including media, critics, policy-makers and opinion-makers, and organizing fora to share information and dissemination of BMPs for high social and economic impacts.
 - The group noted a concern about engaging with those with “extremist” views; however, it was agreed that it was important to have a dialogue with all critics, and to try to establish partnerships with pragmatic organizations.
- Developing low-cost approaches that can be used by stakeholders in both developed and developing nations to help improve industry transparency, and utilizing political pressure to expedite this process.
- Industry consolidation, as this can provide more opportunities to be transparent as it can be easier to communicate one unified voice. Yet this is controversial as it may threaten livelihoods of small- and medium-sized operators.
 - The group agreed this approach would in some cases not lead to marginalization of smaller farms, as consolidation may lead to creation of new market space.

Based on this, Group 1 identified one major action the industry should take to help improve transparency:

- Creating a global network of transparent aquaculture, tentatively termed the “Vigo Call for Transparency”; a group of stakeholders and institutions whose collective intent is to increase industry-wide transparency according to three main principles:
 - a. Engaging with local and global stakeholders about improving transparency
 - i. Having a mutual transparency approach with partners, such as NGOs, was deemed to be an important consideration.
 - b. Reporting on key ethical, environmental and social indicators
 - i. It was agreed that communicating aggregated industry data (e.g. by waterbodies) as opposed to company data would be best, and that benchmarking would be important to contextualize the data.
 - c. Promoting enthusiasm for transparency to others in the industry.

The group agreed that this informal approach and attitude towards increasing transparency would be more beneficial than defining specific criteria.

Group 2: Main misperceptions and how to overcome them

Group 2 identified the three main misperceptions facing the industry and determined possible solutions to overcome these.

The three misperceptions identified were:

- Farmed fish are not as good/nutritious for consumers as other foods.
- Aquaculture has a significant negative impact on capture (wild) fisheries.
- Aquaculture significantly pollutes the environment with an irreversible impact.

While debating these topics, the group agreed that one major take-away from the discussions was that these are not misperceptions per se, as they are often true to some extent. However, the misperception is about the extent of their impact, and there is often an important gap between the perception and the reality, i.e. actual facts about given issues. On the other hand, the group underscored the need to put aquaculture within the context of food production systems.

For each misperception, Group 2 then proposed a number of possible solutions the industry could adopt to help overcome them:

1. Farmed fish are not as good/nutritious for people as other foods:
 - Better communicate what is used in production – showing transparent data.

- The industry should follow Norway’s example of publishing transparent and credible data on the amount of active ingredients used in production.
 - FAO could create a global platform where this information is listed per region, per species, per year.
 - Acknowledgment this will not happen quickly, but that a five-year pathway should be created to support the industry in getting to this point.
 - Sectors/companies would then be able to use this information to communicate as they wish.
 - Information should be communicated when produce is rejected, as this will build trust in available products.
2. Aquaculture has a significant negative impact on capture (wild) fisheries:
- Collect accurate data on the amount and type of fishmeal being harvested and used.
 - Make this data easily accessible and searchable – via the International Fishmeal and Fish Oil Organization (IFFO), feed producers and the industry.
 - Demonstrate the decrease in fishmeal use through simple graphs and share with stakeholders to ensure the latest information is circulated.
 - The industry should look to communicate more about the alternatives to fishmeal being used and improving feed conversion ratios (FCRs)
 - In addition, where there are tensions with local fisheries, pursue objective information and look to engage with them in an open dialogue.
3. Aquaculture significantly pollutes the environment with an irreversible impact:
- Provide improved narrative that all food production has an environmental impact (and that many impacts are reversible), and place aquaculture in a comparative perspective with other food production sectors.
 - Work to ensure the impact of aquaculture is minimal through an industry commitment (agreement) on a maximum carrying capacity based on local ecosystems.
 - Document and be transparent on reporting the impact and what is being done to manage this – e.g. site selection, rotation.
 - Demonstrate commitment to clean waters by ensuring all local industries have the same regulation on pollutants.

Following this, Group 2 then agreed on a solution to encompass all of the above – a United Global Aquaculture Industry Vision for Aquatic Farmed Foods. The intention of the vision is to help transform the sector towards a truthful and transparent future. This vision will be centred on continuous improvement and dissemination of best practices and in better and more transparent communication to all stakeholders. The vision will be dynamic and inclusive, ensuring that all actors in the industry may engage, and will specifically foster cooperation among farming companies, small producers and related private initiatives (e.g. associations, clusters). The initiative will also promote public–private collaborations in order to work towards more transparency and sustainability in the sector.

Group 3: The role of cooperation in the sector

Group 3 identified the following obstacles as being the greatest that need to be overcome by the industry to increase cooperation:

- Competition and distrust issues between companies, countries and interest groups, particularly at the local level.
- The lack of a neutral platform and unified message between companies and interest groups.
- Conflicting national and global interests, e.g. competition for markets, trade, resources.

Group 3 identified the following opportunities to overcome the identified obstacles to cooperation:

- Building upon the existing and emerging trust and willingness to cooperate on a global level, as demonstrated by organizations and initiatives such as FAO, GSI, Global Sustainable Seafood Initiative (GSSI) and certification bodies.
- Building on the common cause that everyone's goal is to improve the reputation of aquaculture.
- The growth of the sector, and the opportunities that arise from this growth.

Based on this, Group 3 identified actions that should be taken to help improve cooperation:

- Creating a communications platform for truthful and transparent information, with the intent of having a unified message.
- Broadening the scope and strengthening membership of existing organizations.
- Strengthening national level public–private governance, and creating a dialogue between producers, associations and government bodies to support this.
- Creating a public–private partnership fund and utilizing donors to support producers and associations.
- Strengthening the multistakeholder landscape, to stimulate the conversation and action to allow growth.

The group discussed utilizing the already-established FAO aquaculture networks in various regions as a way of complementing the above approach. It was noted that, in different countries, aquaculture fell under different infrastructures and institutional set-ups, which could give rise to difficulties, and was an important consideration. Participants agreed that better cooperation could lead to better area co-management and ultimately containment of diseases, thereby minimizing costs for the industry. In addition, international scientific committees were identified as another target for better cooperation to ensure an active exchange of information, newest technologies and developments. Finally, the group agreed that respecting national-level stakeholders was key and that acknowledging those “on the ground” would be a crucial first step in improved cooperation.

WORKSHOP RECOMMENDATIONS

Presentations and discussions at the workshop highlighted the great potential for expansion in the aquaculture sector due to increasing demand for healthy foods from a growing population, including consumers in rural areas and urban centres and people with increasing wealth. The future growth of aquaculture to meet these demands also presents tremendous challenges to the sector (including all relevant actors in the aquaculture seafood value chain), policy-makers and the aquaculture community at large. Improving public perceptions of the sector will be instrumental if the full value of the opportunity is to be achieved. To address public concerns more effectively, more social science studies (including, for example, appraisal of consumer preference and markets, cultural and socio-economic context and traditions) are needed to better understand the public and consumer perceptions of aquaculture in different regions. The perception of local communities where aquaculture is taking place is also very important.

Participants agreed that cooperation was a major factor in overcoming current perception challenges, and recommended that a multistakeholder cooperation platform be created to support greater interaction among all stakeholders within the sector itself and also stakeholders from capture fisheries, local communities, the media, retailers, CSOs, NGOs and regulatory bodies. This platform could also be used to encourage more public–private partnerships.

FAO, with the support of IDH and other partners, could contribute to this effort with a “perceptions and facts information system”, addressing the main aquaculture perceptions issues per region, per species, per year by providing available objective information and clarification as needed.

By increasing pre-competitive business-to-business cooperation, the sector can benefit from previous experiences from other stakeholders to support more effective and quicker transformations than would be seen if each company/sector acted alone. Through increasing collaboration, there will also be increased dialogue among different stakeholders, which should prevent the growth and establishment of misperceptions and allow the sector to start to build credibility and trust among key stakeholders. Moreover, technological solutions that integrate advanced systems supported by advanced devices, such as smart sensors, will substantiate the credibility of the information exchanged among the stakeholders with additional data that could facilitate the correct perception of the information.

It was agreed that improving industry transparency would have a significant impact on the perception of the industry. Therefore, the group recommended the development of some form of public declaration or vision on their commitment to improving transparency. It was agreed that a declaration could be drafted that would be reviewed by attendees of the workshop. Once agreed, it would then be made public, inviting organizations and companies to sign up if they wish. The FAO would then support this initiative and invite more people to become involved.

As a practical next step, it was decided that the present report should be circulated to all meeting participants for approval and confirmation that the group shared the same outcomes.

Following agreement, the draft declaration is to be prepared along with a proposal on the establishment of a collaboration network. Both items are to be reviewed, with the intention of announcing them publically in 2016.

Workshop agenda

Day 1	
Saturday, 10 October 2015	
8:30	Registration
9:00	Welcome, overview of workshop objectives and workshop agenda
Session 1: Presentations (ca. 20 min each)	
9:15	Doris Soto (FAO): Aquaculture issues that can affect aquaculture perceptions – Is aquaculture complying with the FAO Code of conduct? Avrim Lazar (GSI/AXON): Dealing with misperceptions – what works and what doesn't; experiences in different sectors (energy, lumber etc.) Bertrand Charron (Seafood Intelligence): Aquaculture and the media: Perceptions of perceptions ...of impacts, opportunities and challenges
10:30	Coffee break
Session 2: Expert Panel discussion	
11:00	How can we better address the knowledge and communication gap between the aquaculture industry and the public? Panel: Chris Ninnes (ASC), David Little (University of Stirling), Jeremy Dunn (BC Salmon Farmers Association), Emiko Terazono (The Financial Times), Ted van der Put (IDH)
12:30	Lunch
Session 3: Introduction to working groups (expected results, groups etc.)	
14:00	Three parallel working groups will discuss three questions: 1. <i>Which are the three biggest obstacles to overcome by the aquaculture industry (both in terms of management problems and perceptions)?</i> 2. <i>Which are the three biggest opportunities?</i> 3. <i>Which are the three most important actions to be taken by the aquaculture industry?</i>
15:30	Coffee break
16:00	Parallel working groups continued
18:00	Closure of the day
20:00	Dinner
Day 2	
Sunday, 11 October 2015	
Session 4: Discussion of results	
9:00	Working groups report their results
10:30	Coffee break
11:00	Final discussion on the way forward
12:45	Closing speech (<i>to be determined</i>)
13:00	Closure of the day

List of participants

Name	Affiliation	E-mail
Alejandro Barrientos	Undersecretariat for Fisheries and Aquaculture (Chile)	abarrientos@subpesca.cl
Andrew Jackson	IFFO	secretariat@iffo.net
Angeles Longa Portabales	Mejillon de Galicia	angeles.longa@mexillondegalicia.org
Arni Mathiesen	FAO	Arni.Mathiesen@fao.org
Audun Lem	FAO	Audun.Lem@fao.org
Avrim Lazar	Global Salmon Initiative (GSI)	avrim@exco2.com
Beatriz Huarte Melgar	Lawyer (Huarte International)	beatriz.huarte@huarte.eu
Bertrand Charron	SeafoodIntelligence	bcharron@seafoodintelligence.com
Brita Gjerstad	AquaAccept Project (Norway)	Brita.Gjerstad@iris.no
Cameron Donald	AXON communications	cdonald@axon-com.com
Chris Ninnes	Aquaculture Stewardship Council (ASC)	chris.ninnes@asc-aqua.org
David Little	University of Stirling (UK)	d.c.little@stir.ac.uk
Doris Soto	FAO	Doris.Soto@fao.org
Elisa Ravagnan	AquaAccept Project (Norway)	Elisa.Ravagnan@iris.no
Eloisa Espinoza	DIGEPESCA (Honduras)	eloisa_espinoza@hotmail.com
Elsa Jesus	Aquasmart Project (UNINOVA Portugal)	ej@uninova.pt
Emiko Terazono	Financial Times	emiko.terazono@ft.com
Erik Hempel	Nor-Fishing Foundation (Norway)	erik.hempel@hempelco.com
Evan Bruner	Aqua Spark (The Netherlands)	evan@aqua-spark.nl
Jackie Alder	FAO	Jacqueline.Alder@fao.org
Javier Ojeda	Aquaculture producer organization Spain (APROMAR)	ojeda@apromar.es
Jeremy Dunn	BC Salmon Farmers Association (Canada)	jeremy@bcsalmonfarmers.ca
Jimmy Young	University of Stirling (UK)	j.a.young@stir.ac.uk
Joao Sarraipa	Aquasmart Project (UNINOVA Portugal)	jfss@uninova.pt
Johan Williams	Ministry of Fisheries and Coastal Affairs (Norway)	Johan-H.Williams@nfd.dep.no
John Connelly	National Fisheries Institute	jconnelly@NFI.org
John Sackton	Seafood.com	jsackton@seafood.com

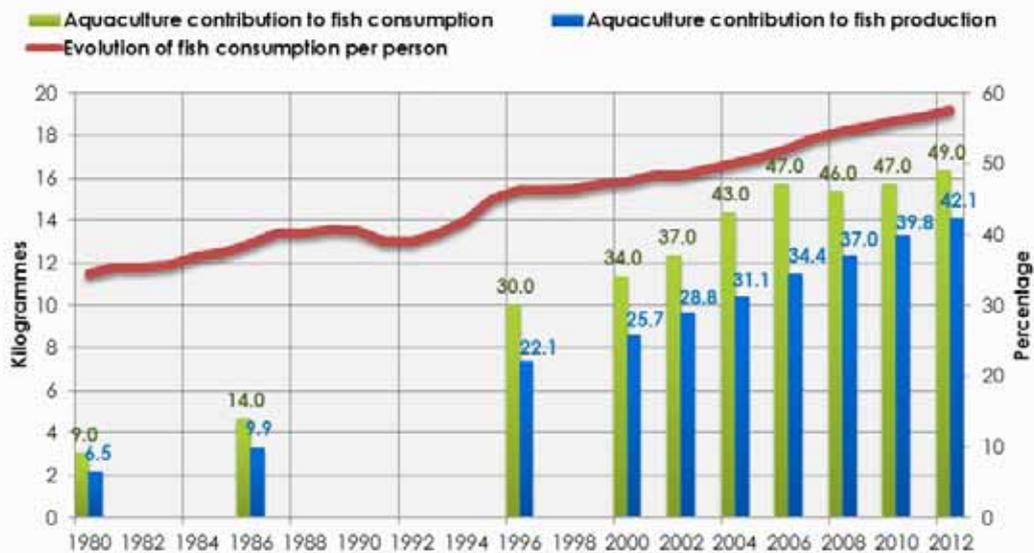
Jonathan Banks	Jonathan Banks Associates (UK)	jonathan@jonathanbanks-associates.co.uk
Jorgen Lund	North Atlantic Seafood Forum A.S.	jjl@nor-seafood.no
Juanjo de la Cerda y L. Baspino	Pescanova	juanjoc@pescanova.es
Kathrin Bacher	FAO	Kathrin.Bacher@fao.org
Mar Romero	Ipacuicultura	mromero@ipacuicultura.com
Marie Christine Monfort	Seafood Marketing expert	marie.monfort@marketing-seafood.com
Matt Brooker	The Fishin' Company (USA)	matt@fishinco.com
Nguyen Huu Dzung	VASEP	dungnh@vasep.com.vn
Paolo Trejo	Undersecretariat for Fisheries and Aquaculture (Chile)	ptrejo@subpesca.cl
Pedro Ferreira	Sustainable Fisheries Partnership	pedro.ferreiro@sustainablefish.org
Pedro Oliveira	Aquasmart Project (UNINOVA Portugal)	pgo@uninova.pt
Rebecca Lochmann	World Aquaculture Society	lochmannr@uapb.edu
Renato Andrés Quiñones Bergeret	University of Concepción (Chile)	rquinone@udec.cl
Rosa Chapela Pérez	CETMAR (Spain)	rchapela@cetmar.org
Roy Palmer	CEO Seafood Experience Australia Ltd	palmerroyd@gmail.com
Shirlene Maria Anthonysamy	Infofish	shirlene@infofish.org
Sophie Ryan	Global Salmon Initiative (GSI)	sryan@axon-com.com
Syed Mahmudul Huq	Bangladesh Shrimp and Fish Foundation	tsi@dhaka.net
Ted van der Put	The Sustainable Trade Initiative (IDH)	vanderput@idhsustainabletrade.com
Uwe Barg	FAO	Uwe.Barg@fao.org
Victor Piñeiro Salgado	Instituto Gallego de Formación en Acuicultura (IGAFA)	victorsalgadopineiro@gmail.com
Yolanda Molares	International cooperation in aquaculture (ICSEM)	yolanda@icsem.es

Presentation: Doris Soto (Senior Aquaculture Officer, FAO)



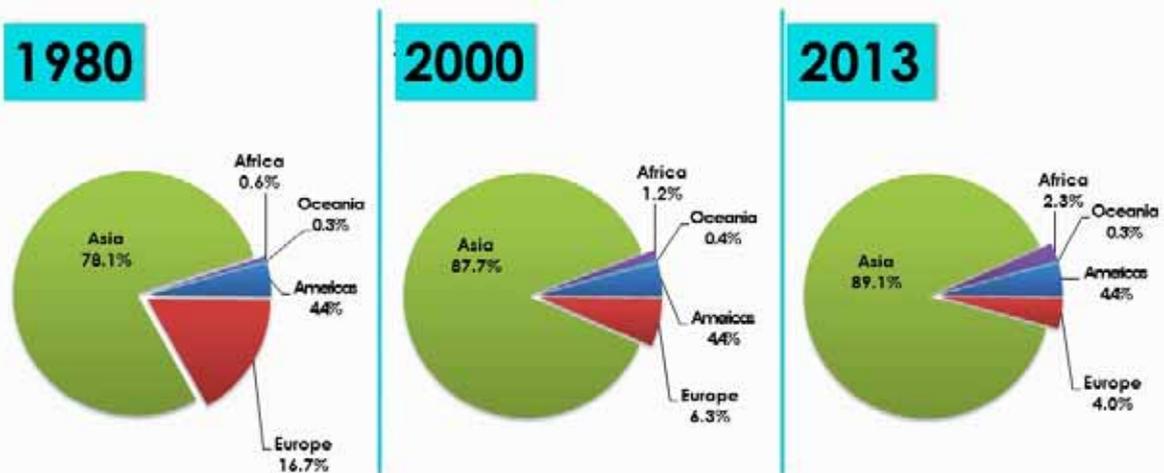
Some facts consumers and general public do not know or do not know enough

World Aquaculture contribution to fish consumption and production



Source: FAO Fishery and Aquaculture Statistics 2012; FAO FISHSAT2; SORA 2014, 2012, 2010, 2008, 2006.

Share of global aquaculture production by region for selected years

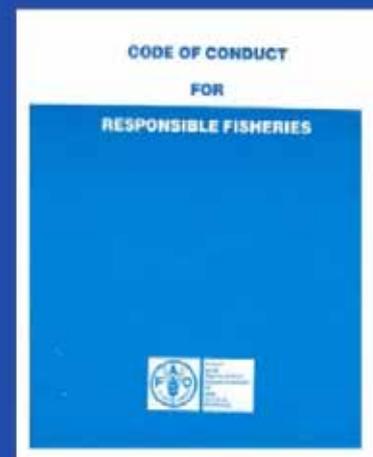


Most aquaculture is produced in Asia, the North American and European share is very small

Source: FAO FISHSTATJ. Data are given in tonnes. Data on World total from 1980 to 1987 includes the countries 'other ref' and USSR. Total fisheries includes production destined for human consumption and for non food-uses (such as reduction for fish meal and oil, etc.). Data excludes production figures for marine mammals, crocodiles, corals, pearls, mother-of-pearl, sponges and aquatic plants.

The Code of Conduct for responsible Fisheries adopted by countries in 1995 has an article (9) that provides guidance to develop aquaculture in a sustainable manner

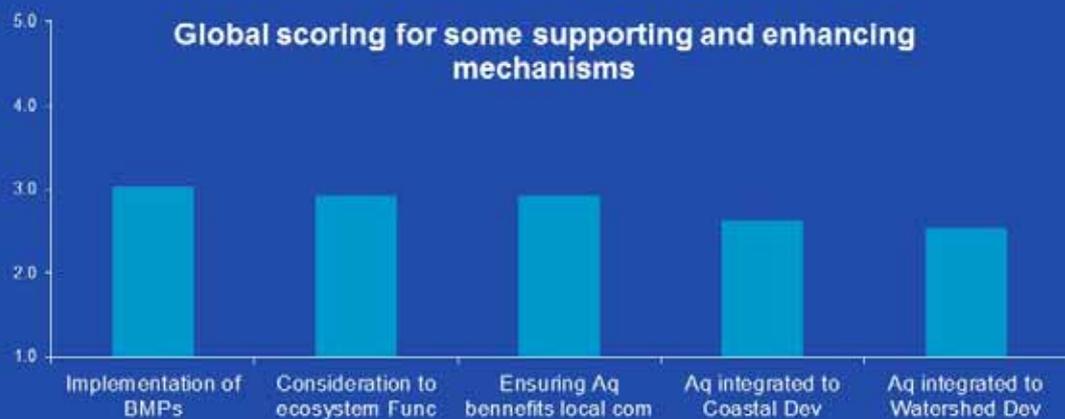
- FAO and government have made efforts to implement the Code and the self assessment done by member countries on their compliance indicates that overall there has been a good progress
- Last reporting on aquaculture compliance with the Code done in 2015, 71 countries = 90% of production



Countries self assessment on their compliance with specific regulations under the Code



Yet if we would ask CSOs to perform this same evaluation probably the scoring would be very different, and the truth at ground level would probably be somewhere in the middle



Aquaculture as a systems process

HOW MUCH IS COMING IN (and source)
AND HOW MUCH IS GOING OUT (and
where)

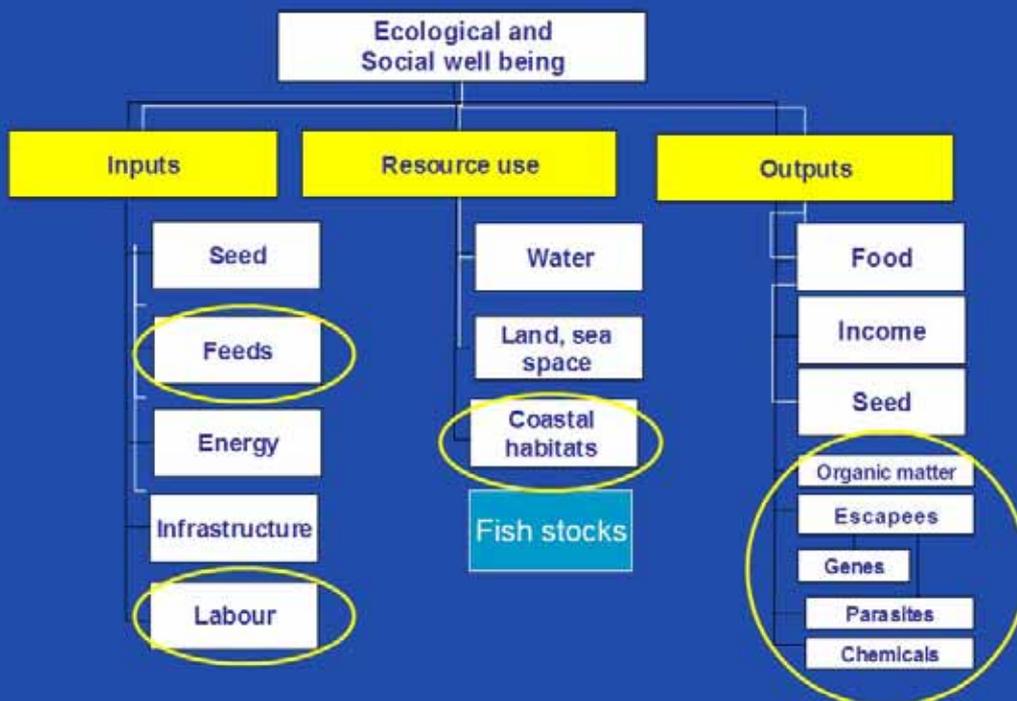
biomass



Therefore ecosystem considerations are needed from the early planning process



Issues are often related to different parts of the process and to the assets in each component of this process



Environmental Issues

Improvements and remaining challenges: some generalities

- Fish to feed fish
 - Huge improvements in some species (e.g. salmon), yet the total fish meal used in aquaculture is not decreasing. Major improvement needed in other species (e.g. FCR), more focus on non-fed sp. Major breakthrough expected re. sources of FM and FO

High (-) perception in the West/N
- Mangrove clearance /deterioration due to aquaculture
 - Main mangrove clearance already in the past decade, now the trend is increasing efficiency and there are also some restoration efforts

Relevant (-) perception in the West/N and elsewhere
- Food Safety
 - In general food safety standards (Codex) being addressed or improving for exports (e.g. antibiotic). Improvements needed regarding local consumption

Relevant (-) perception in the West/N



Issues

Improvements and remaining challenges

- Diseases
 - Relevant improvements in some species in some countries, yet this continues to be one of the major challenges for the industry. Significant improvements on the use of chemotherapeutics but they are still widely used (impacts on aquatic ecosystems not well understood). Broader biosecurity implementation needed.

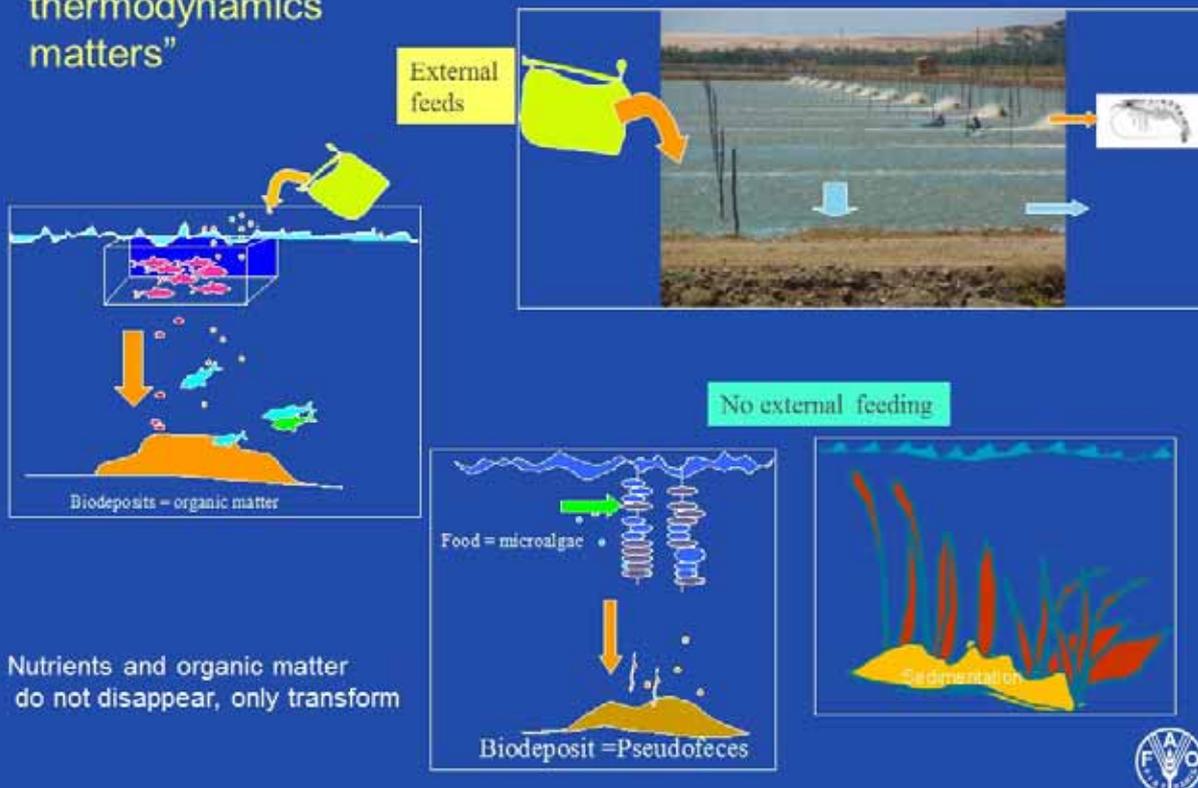
High (-) perception in the West/N
- Organic matter-eutrophication
 - This continues to be a major problem. Better spatial planning needed, production carrying capacity, more focus on non-feed species. Better estimates of ecosystem impacts needed

Relevant (-) perception in the West/N
- Escapes
 - Not well addressed except for some species (salmon). Impacts of escapes only on some sp and systems (e.g. salmon, tilapia)

Relevant (-) perception in the West/N



The first law of thermodynamics matters"



Main social issues of aquaculture (that affect (-) perceptions)

Issues

- Lack of relevant benefits for local communities (permanent labor, services etc.)
- Inequity in the distribution of income (e.g. salaries)
- Unsafe/un healthy working conditions
- Negative interference with local activities e.g. with fisheries, tourism etc.

Improvements and remaining challenges

- Many good examples of positive local impacts but yet not well communicated, and not enough. Further need of effective participatory processes
- Improve social responsibility and ethics in employment. There are good examples of improvement but yet not enough and not well communicated
- Better integration with fisheries and tourism is needed, much room for improvement and creativity

Aquaculture footprints in perspective

SPECIES GROUP	ECOSYSTEMS			WATER			CLIMATE
	HABITAT*	LAND USE (ha / t EDIBLE PROTEIN)*	USE OF WILD FISH IN FEED (FISH-IN / FISH-OUT RATIO)	FRESHWATER CONSUMPTION (m ³ / kg EDIBLE PROTEIN)	WATER POLLUTION (kg P / t EDIBLE PROTEIN)	WATER POLLUTION (kg N / t EDIBLE PROTEIN)	GREENHOUSE GAS INTENSITY (t CO ₂ e / t EDIBLE PROTEIN)
Carps	F	12.0	0.2	61.4	97	329	47.2
Mollusks	M	0.0	0.0	0.0	-148	-136	11.1
Shrimps	B, F, M	16.4	0.8	4.4	104	422	161.7
Tilapias	F, B	7.5	0.7	15.9	82	349	40.7
Catfish	F	9.5	0.4	52.2	97	234	134.8
Salmonids	M, F	2.4	1.9	0.0	48	182	9.8
All six species groups							
World aquaculture	F, M, B	9.1	0.3	40.4	76	273	66.8
TERRESTRIAL LIVESTOCK							
Pork	T	2.0	N/A ^a	56.5	120	800	57.6
Chicken	T	3.0	N/A ^a	34.3	40	300	42.3
Beef	T	50.0–145.0	N/A ^a	112.5	180	1200	337.2

White et al 2014, WRI

Aquaculture must be placed in a comparative perspective

- Considering food production, nutrition, seeds, its future role for food security
- Social and economic benefits
- Environmental impacts considering increasing demand for fresh water (by all food sectors), contribution to pollution and to biodiversity losses



Presentation: Bertrand Charron (Editor, Seafood Intelligence)



**AQUACULTURE & THE MEDIA:
PERCEPTIONS OF PERCEPTIONS...
OF IMPACTS, OPPORTUNITIES &
CHALLENGES**

Bertrand Charron
SeafoodIntelligence.com Editor

Vigo, Spain. October 10-11, 2015

**Increasing Public Understanding & Acceptance
of Aquaculture**

The role of Truth, Transparency & Transformation



Food and Agriculture Organization
of the United Nations



Topics addressed in this presentation:

- ▶ 'The Media'
- ▶ Truths & Impacts
- ▶ Of Perceptions
- ▶ Opinion Poll (2015) Re. Attitudes re. Acceptance/Rejection
- ▶ Towards Acceptance: Recommendations
- ▶ Transparency - Sustainability Reporting
- ▶ Summary & Holistic approach

Where is the Blue Revolution?



“Fish farming has a bad reputation.

As consumers become more aware of the sources and the means of production, they may insist that intensive, modern aquaculture should grow in environmentally sustainable ways.

... The problem is that good independent information about the environmental friendliness of farmed fish is sorely lacking.

... only then will it be clear how green is the blue revolution.”

- August 2003... !



Government accused of bias over controversial salmon farm plans

CONNACHT TRIBUNE

HOME NEWS SPORT BUSINESS FARMING LIFESTYLE OPINION DIGITAL EDITIONS

Minister won't give fish farm timescale



CBCnews Nova Scotia

Cooke Aquaculture says vandals cut fish pens loose in St. Marys Bay

Equipment 'liberally cut away from the site,' says Cooke Aquaculture's Neil Hales

CBC News - Posted May 22 2013 11:46 AM ET - Last Updated May 22 2013 11:46 AM ET



Results...

Médias et désinformation: l'exemple du saumon

Publication: 16/02/2014 17:15 CEST | Mis à jour: 19/12/2014 16:12 CEST

- 25% less sales in France since this one TV show
- More than 1,000 jobs lost in processing in France

All of this based on IMAGE.....

Addicted to antibiotics, Chile's salmon flops at Costco, grocers

Économie

ÉCONOMIE Monde Entreprises Bourse Argent Immobilier Emploi

CAC 40 4 629.74 PTS +3.83 DOW JONES 14 659.31 PTS +1.12 1 EURO 1.12 \$

Alerte rouge sur le saumon

LE MONDE | 22 12 2013 à 21h41 - Mis à jour le 24 12 2013 à 09h17

The Disgusting Truth About Fish And Shrimp From Asian Farms

Source: 11/24/13 11:27 AM EST 2013-12-24 11:27 AM EST

BBC NEWS Sign in News Sport Weather Shop Earth More

Home Video World US & Canada UK Business Tech Science Magazine Entertainment

Scotland Edinburgh Fife & East Glasgow & West Highlands & Islands NE, Orkney & Shetland

Figures reveal salmon farms that shot seals

By Marc Ellison
Data journalist, BBC Scotland

"Scots salmon firms 'dripping with blood of seals.'" (The Scotsman, 31 August 2015)

THE SCOTSMAN
SCOTLAND SUNDAY
Monday 31st August 2015 Sunny spells 8°C / 18°C

Scots salmon firms 'dripping with blood of seals'

"Data reveals the..."

Salmon farming: Calls for boycott of Scottish producers 'dripping with the blood of seals'

"Named and shamed, the Scottish salmon farms shoot..."

THE SALMON FARMS THAT SHOOT SEALS

More than half of Scottish farms

Data reveals third of Scots fish farms have shot seals

10 years on, these comments still apply:

"The media in North America -- particularly journalists who cover health and nutrition - need better information on the scientific facts ... Such inquiry is not always easy, particularly in the race to get the story out first. But neither is such inquiry all that hard."

"The food industry needs to react more quickly and more aggressively to erroneous information reported by the media and activist groups."

"The longer this information remains unchallenged, the more it takes on the quality of "fact" and the more it gets repeated by other media outlets."

"If activists continue to use erroneous information, they will eventually lose credibility in the eyes of the public."

- Patrick Moore (2004)

(General) media 'interested' in?

- ▶ Anything & Everything; always objectively, but...
 - ▶ Revealing a scandal never hurts: it may even help audience & readership
 - ▶ Being the first one to reveal a hidden truth is pretty good
 - ▶ 'Good news' gets less prominence than 'Bad news'; except if it is a first and/or makes the country proud
 - ▶ « Investigative programs »... Uncovering dirty tricks of industries and food production systems.
 - ▶ Balance stories will give pro & con; If industry hasn't done its '*mea culpas*' / redressed situation, old examples will be readily cited...
- ▶ PS: *Don't (always) shoot the messenger...*

What media are perhaps less interested in...

- ▶ **Corrections:** Rarely likes to take a trip down memory lane when *mea culpas* are concerned. At best another story/Letter to the Editor will be used to correct « inaccuracies » but the original story will remain available online, *Ad Vitam Aeternam...*
- ▶ « **Balanced** » news coverage is proportionally rare
- ▶ **Comparing** the various impacts & footprints to those of other commodities / **putting in perspective:** historical / economical context

Media/advocacy groups always interested in discovering ('uncovering') "Truth"



TRUTH... What is it? ... *is it* enough?

"... the quality or state of being true"...

"being in accord with fact or reality"

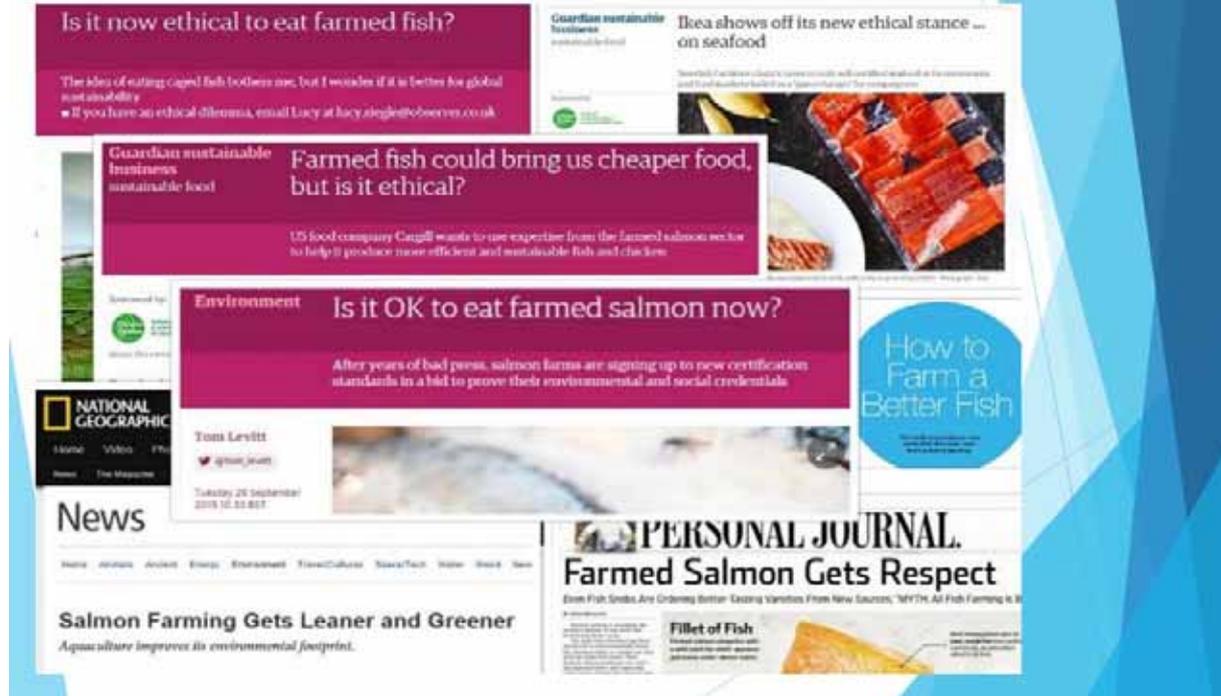
"a fact or belief that is accepted as true"

"... the real facts about something"...

Hypothesis:

Truth (singular) may thus not be **suitable** as a tool for **efficient** communication, multi-stakeholder dialogue and market transformation...

'Perceptibly' more positive coverage post ASC-certifications & GSI



What is a perception?...

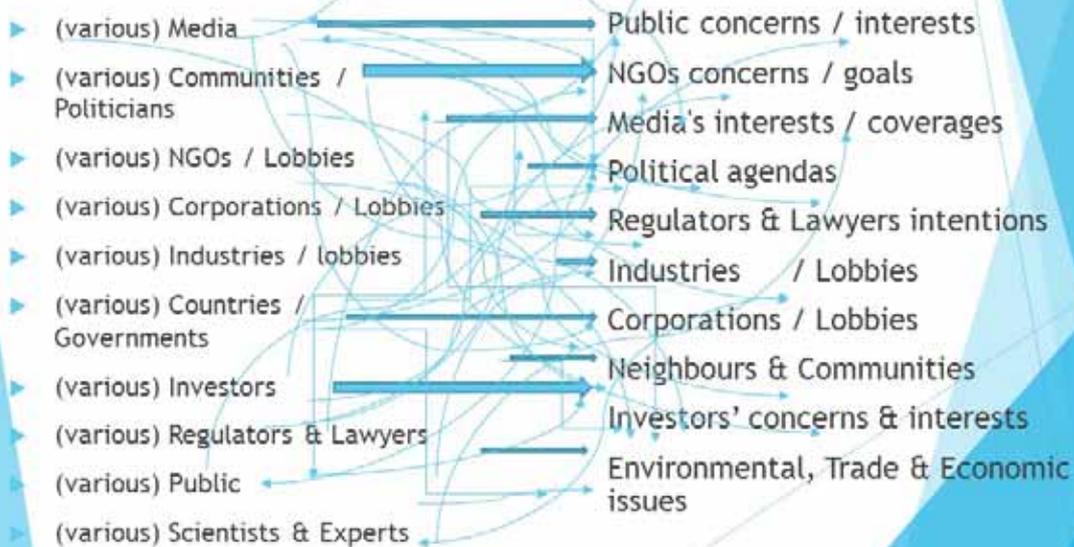
Perceptions by...

of

- ▶ (various) Media → Public concerns / interests
- ▶ (various) Communities / Politicians → NGOs concerns / goals
- ▶ (various) NGOs / Lobbies → Media's interests / coverages
- ▶ (various) Corporations / Lobbies → Political agendas
- ▶ (various) Industries / lobbies → Regulators & Lawyers intentions
- ▶ (various) Countries / Governments → Industries / Lobbies
- ▶ (various) Investors → Corporations / Lobbies
- ▶ (various) Regulators & Lawyers → Neighbours & Communities
- ▶ (various) Public → Investors' concerns & interests
- ▶ (various) Scientists & Experts → Environmental, Trade & Economic issues

Of “Perceptions”...What is a perception ?

PS: this is *not* the final version...



What makes ‘stakeholders’ ‘tick’?

How much time do you have?

First, define stakeholders... (Materiality analysis)
Then define topic, industry, species, country...

- Ethics & Governance:**
 - Transparency, Communities, ethnic minorities, regulatory & environmental compliance, feed sourcing etc...
- Labour, Social:**
 - Health & safety of workers
 - Working & pay conditions
 - Social incl. ethics, slavery, child & forced labour...
- Environmental Issues:**
 - Chemical/antibiotic usage, waste / ecosystems & biodiversity
 - Wildlife interactions (incl. in feed source fisheries)
 - Feed sustainability / source (reduction) fisheries; incl. IUU fish
 - Animal welfare; Disease, parasites, stress, densities
 - Carbon footprint: energy use, GHGe, LCA...
- Food safety (dioxins /PCBs, ethoxyquin in-feed contaminants), etc...**
- Economics:**
 - Employment & wealth creation for region
 - Communities
 - Trade/trade barriers, market access

Social Licence to Operate ?

Back to basics...

- Contributory factor towards a lesser/un-realised aquaculture acceptance is that the seas have been until quite recently/are considered as one of 'the last frontier', belonging to no-one in particular. [Marine] Aquaculture may be perceived as laying some claims on it; this is somewhat novel & this is being 'resisted'...

That conception distinguishes fisheries & aquaculture from other terrestrial food-producing systems, where property rights have been established (most often) for centuries. Whilst the fishing industry has sailed through hundreds of years of history, aquaculture is (relatively-speaking) the 'new kid on the block'.

Last in, First out...?

There may be a belief - rightly or wrongly - that seas are/should be/remain a 'common good' & that aquaculture challenges that notion. This is fuelled by stories of negative environmental (& now labour/human rights) impacts.

Aquaculture can be construed to be taking somebody else's "space..."

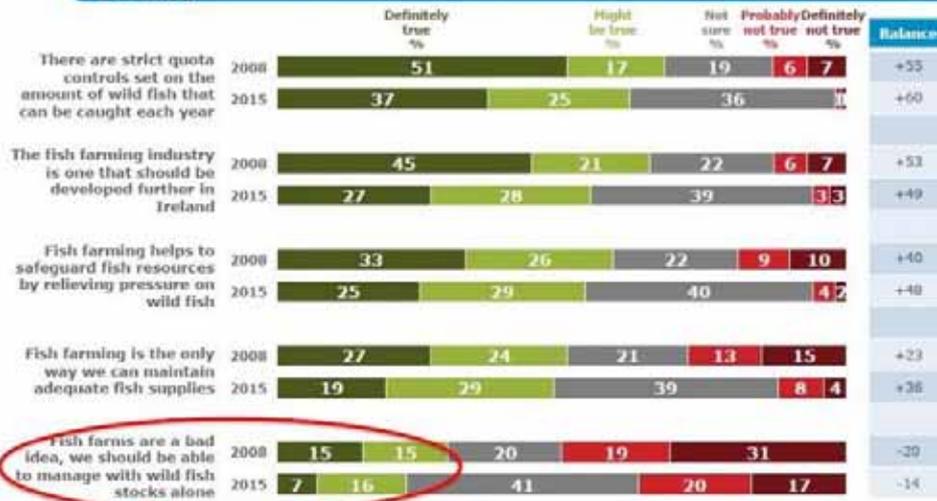
Opinion poll on aquaculture in Ireland (May-June 2015)

Following three slides are courtesy of Richie Flynn/IFA Aquaculture,
who commissioned the survey

Beware: Perceptions to fish farming evolve... (eg. 2015 vs. 2008)

Attitudes to fish farming – II

The issues surrounding fish farming are less well understood compared with seven years ago. Along with this rejection levels of fish farming have also declined.



Base: All adults

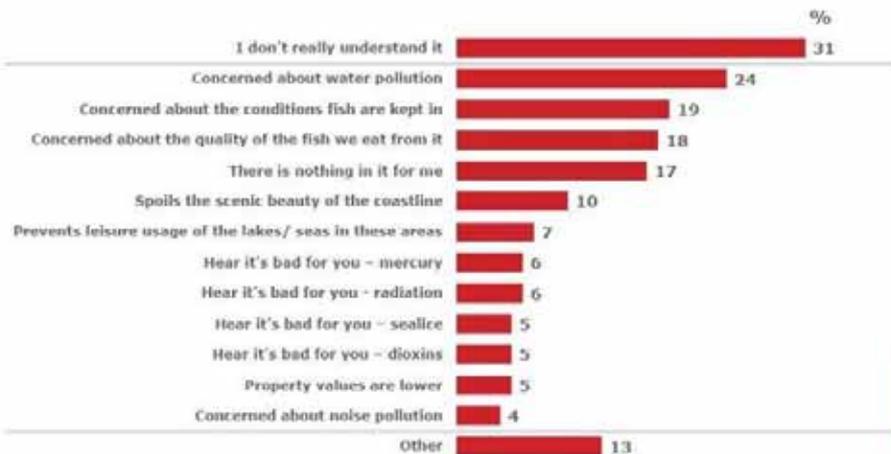


To what extent do you believe that...

Main reasons for **opposition** to a fish farm in Ireland?

Reasons for being against possible fish farm in your area suggest need for a communication programme to help people understand it better.

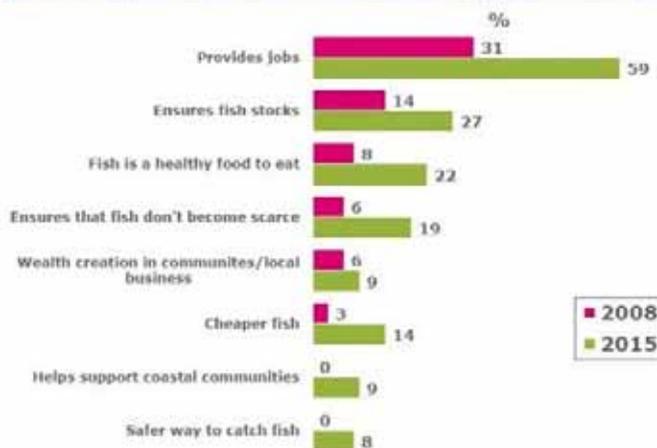
Base: All negative reaction to fish farm being located nearby



IF NEGATIVE Why is that?

Main reasons for support of a fish farm (Ireland, 2008 vs. 2015)

Reasons for acceptance of possible fish farm in area driven by a significant lift in thinking about job creation.
Base: All positive reaction to fish farm being located nearby



Why is that?

Towards 'Acceptance': Recommendations (1)

It would be wise to improve knowledge of stakeholders' perceptions (*not only consumers*) to **build win-win pathways** towards acceptance via consensus:

- ✓ Study '**pan-stakeholder**' perceptions rather than 'multi-stakeholder' (pre-selection stakeholders creates *a priori* bias).
- ✓ Studying objectively & globally the **socio-economic dynamics** which lead to a social acceptance of aquaculture, define "acceptable".
- ✓ Identify KPIs: measure, monitor, report... Those efforts will be rewarded & rewarding.
- ✓ Having **mechanisms in place** to deal with concerns/address falsehoods: regulations, policies, certifications, FIP/AIPs, communications. But also Education & Communication at-large.

Recommendations (2)

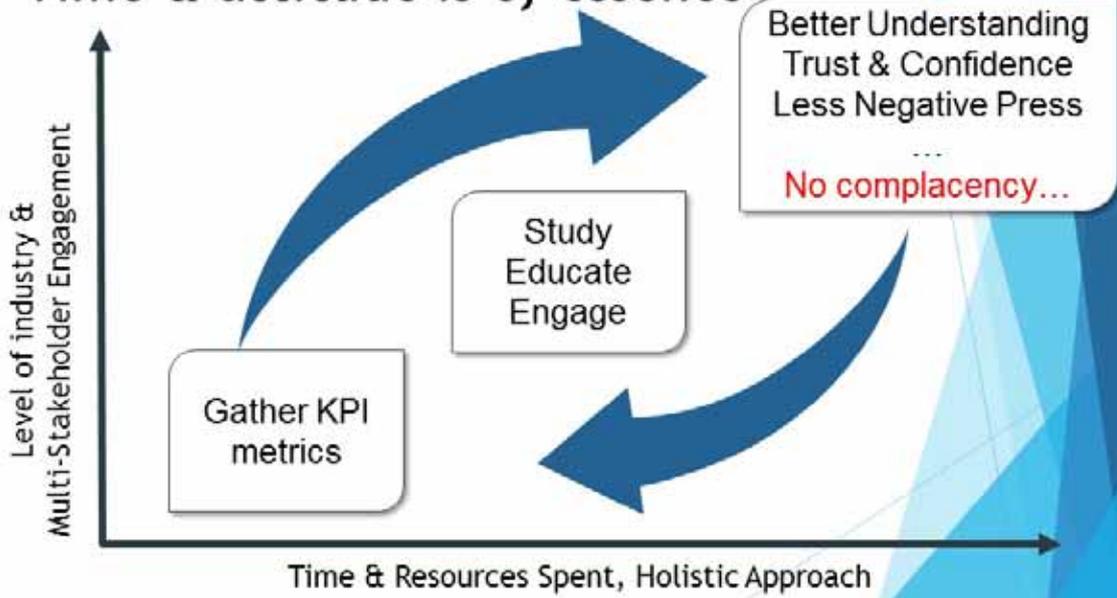
- ▶ Build-up a **database** of the past-present (+ future: goals, achievements [+/- missed]) facts, data & metrics to:
 - ▶ **Cost impacts (\$\$\$)** of negative (and positive) effects; of reactive vs. proactive policies.
 - ▶ **Sustainability KPIs** per industry/country/species etc...
 - ▶ **Consider/anticipate the future importance of LCA** and the comparative usages that will be made of this science for seafood, and competing proteins/other foods.
 - ▶ Don't forget to include **'Ethics'**...
 - ▶ **Keep monitoring & updating (FY-1) regularly!**

Recommendations (3)

Transparency & Sustainability Reporting

- ✓ Have a **minimum level of industry transparency** (corporate, national industry & country, sectoral/global) -> Sustainability & Ethical reporting, Policies.
 - ▶ Stop considering that communication amounts to 'traditional' press relations (or reactive damage-limitation): **be proactive.**
 - ▶ Regulators are increasingly looking into Corporate & Institutional transparency: EU Directive 2014/95/EU on the disclosure of nonfinancial and diversity (CSR) information now in force; U.S. Bill being discussed (eg. Business Supply Chain Transparency on Trafficking & Slavery Act) etc...
 - ▶ **Avoid 'sustainababble'** & greenwashing.
 - ▶ Proactive reporting / disclosures:
 - ▶ **Sustainability Reporting (GRI-indexed [G4])**

Working towards Aquaculture Acceptance... *Time & attitude is of essence*



*Be aware.... Be transparent...
Be proactive*

☺ *Thank you for your attention* ☺



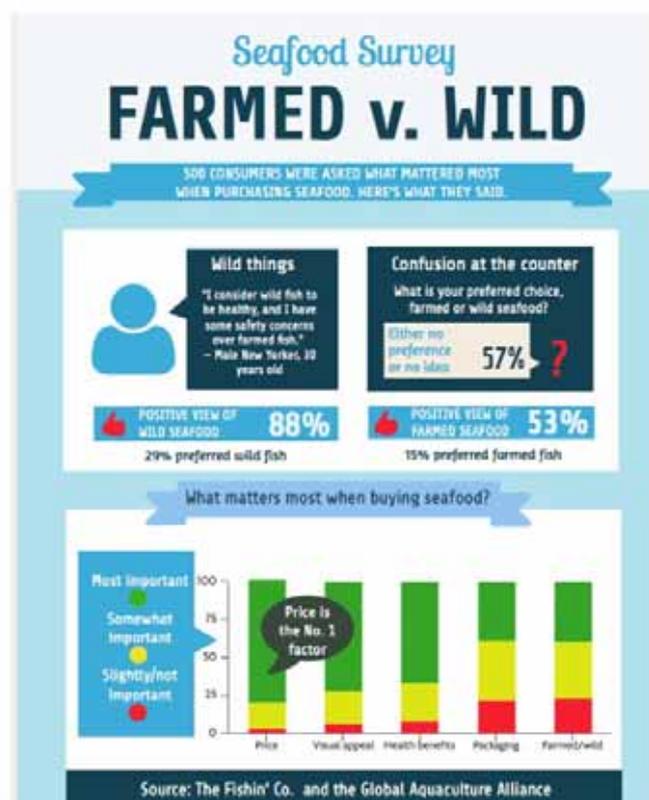
 @Salmoskius

editor@seafoodintelligence.com

Presentation: David Little (Professor, University of Stirling)

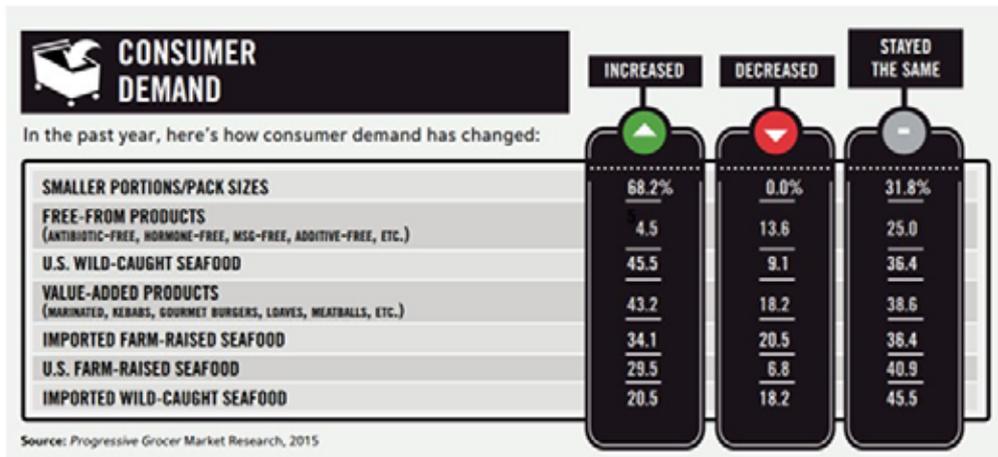
A continuing crisis in perceptions of sustainable seafood ?

- Mixed and confused messaging
- Deafness to the steady positive impacts of standards and certification
- Simplistic and elitist posturing of seafood fashionistas
- 'Local' and 'fresh' messaging contradict reality of global food systems
- Out of date and out of touch reporting of farmed sector



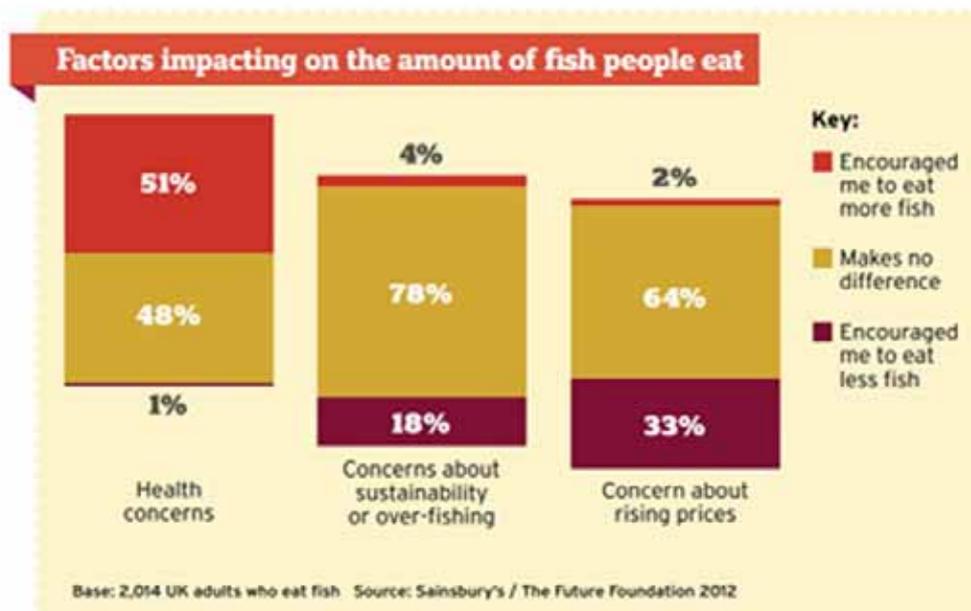
Indicators of consumer demand from the USA

Source: Progressive Grocer Magazine, March 2015.



Factors influencing UK consumer purchases of fish

Source: [http://j-sainsbury.co.uk/media/784085/our future with fish report.pdf](http://j-sainsbury.co.uk/media/784085/our_future_with_fish_report.pdf)



Standards and certification-private sector governance

The screenshot shows the MSC website homepage. At the top, there is a navigation bar with language options (Danish, Deutsch, English, Español, Français, Italiano, Nederlands, Norsk, Português, Svenska, Suomi, 中文, 日本語) and buttons for 'Donate Now' and 'log in'. Below this is the MSC logo and the text 'Marine Stewardship Council Certified sustainable seafood'. A search bar is also present.

The main navigation menu includes: Home, About us, Healthy oceans, Track a fishery, Get certified, MSC's impact, Where to buy, Cook, eat, enjoy, Newsroom, and Documents.

The 'YOU ARE HERE' section shows the current location: Home.

The main content area features a large banner for 'Sustainable Seas, Marine Stewardship Council (April 2012)' with a video player and the text: 'The MSC's fishery certification program and seafood ecolabel recognise and reward sustainable fishing. We are a global organisation working with fisheries, seafood companies, scientists, conservation groups and the public to promote the best environmental choice in seafood.' Below the banner is a link to 'Watch a short film about the science behind the MSC program'.

Below the banner are three columns of content:

- Use the MSC label:** Includes images of salmon and tuna products. Text: 'Businesses: Find a certified supplier' and 'Use the MSC ecolabel'.
- Sustainable fishing:** Includes an image of a fisherman. Text: 'Find a sustainable fishery' and 'Get certified! Fisheries'.
- Cook, eat, enjoy:** Includes an image of seafood. Text: 'Find sustainable fish' and 'Sustainable seafood recipes'.

Conservation and the public

The screenshot shows the MCS website homepage. At the top, there is a navigation bar with 'What we do' and 'Support MCS' buttons. Below this is the MCS logo and a large image of a dolphin.

The main content area features a search bar and a navigation menu: MCS Home, Index, UK Charity protecting our seas, shores and wildlife | Join us today, and Community page.

The main content area is divided into three sections:

- Wildlife Protection:** Includes an image of a dolphin and the text 'Wildlife Protection'.
- Fishing For our Future:** Includes an image of a group of people and the text 'Fishing For our Future'.
- Clean Seas and Beaches:** Includes an image of a beach and the text 'Clean Seas and Beaches'.

At the bottom right, there are logos for 'YOUR M&S' (with the URL 'musbandsupermarkets.com/foreverfish') and 'forever fish'.

Advocating change

GET INVOLVED! LET THE GOVERNMENT KNOW HOW MUCH YOU CARE ABOUT MARINE PROTECTION ...

12.6K 4430 Share 35.7K

SAVE OUR SEAS

Our government musn't squander this vital chance to create a new network of Marine Conservation Zones. If you agree, then let them know!

FISH FIGHT

WATCH FISH FIGHT EPISODES: Now on 400

TWEET ABOUT #FISHFIGHT and earn points

FIND OUT MORE

No cod, no haddock - what fish can we eat with a clean conscience?

Stories of plummeting stocks have turned many consumers away from seafood, but could little fish such as sardines save the day?

The Telegraph

Tuesday 06 October 2015

Gods of the food world including Ferran Adrià, former chef at El Bulli restaurant, Brett Graham of the Ledbury in London and Heston Blumenthal's right-hand man Ashley Palmer-Watts lined up on stage, school-photo style, to commit to putting small fish on their menus – and so inspire other chefs, and ultimately home cooks, to do the same.

OCEANA Protecting the World's Oceans

What We Do

SAVE THE OCEANS. FEED THE WORLD

RESTORING THE OCEANS COULD FEED 1 BILLION PEOPLE A HEALTHY SEAFOOD MEAL EACH DAY

Oceana campaigns worldwide for policy change that can restore and increase

Oceana's message

- Eat small fish
- Eat local fish
- Don't eat farmed fish except bivalve molluscs
- Specifically don't eat shrimp-farmed or wild

If you can't get wild..... eat organic

...There have been a number of improvements in the salmon farming industry recently, however there are still some environmental concerns remaining. When buying farmed salmon, the best choice to make is organic certified. Organic Certification Standards for salmon farming set comprehensive standards for the cultivation of salmon which includes third party auditing; inspection and enforcement procedures; and standards for hatchery production and feed mill operations, to ensure that the number of negative environmental impacts associated with salmon farming are addressed. Buying organically farmed fish ensures their feed is sourced sustainably, stocking densities are reduced and chemical usage minimised. Salmon certified by the RSPCA Freedom Foods scheme ensure that high welfare standards are met during production, including reduced stocking densities. "



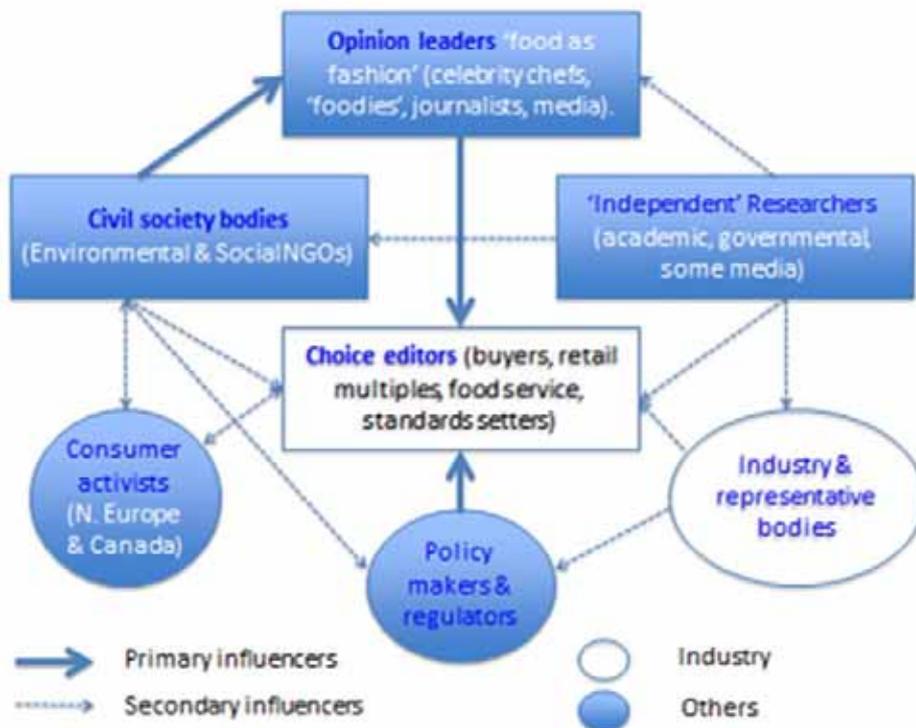
More balanced views from some powerful voices

A Growing Practice

Today, half of the seafood eaten in the U.S. is farmed, and the practice is growing fast. Just as we raise cattle and chickens to eat, we're now raising seafood to meet the growing global demand.

But the environmental impact of fish farming varies widely, depending on the species being farmed, the methods used and where the farm is located. When the environment is considered and good practices are used, it's possible to create sustainably farmed seafood. Such operations limit habitat damage, disease, escapes of non-native fish, and the use of wild fish as feed.

<http://www.seafoodwatch.org/ocean-issues/aquaculture>



From Murray et al, forthcoming

Summary and major challenge

- A rise in the engaged NGO voice but yet to connect to media opinion leading to
 - Continued amplification of incorrect messages
 - Consumer confusion
- Potentially turning consumers off ALL seafood when compared to almost all terrestrial options most wild and farmed sustainability fundamentals are strong (GHG emissions etc)
- Major challenge convincing opinion leaders to 'leave the herd'
- Impacts on poorer consumers globally?

The FAO workshop “Increasing Public Understanding and Acceptance of Aquaculture – the Role of Truth, Transparency and Transformation” was held in Vigo, Spain, in October 2015, and was attended by 49 participants. The workshop covered a number of core topics related to the perceptions of aquaculture, including transparency and ethics, communication, collaboration, responsibilities and new approaches to better management of sector performance and perceptions. Participants included a range of industry stakeholders, including different farming systems in developed and developing countries, governments, international organizations, civil society organizations (CSOs) and non-governmental organizations, retailers, consumer groups, communication experts, social scientists and other academics, certification programmes and the media, giving a wide perspective of views on the discussions.

In a world with an increasing population and a growing demand for healthy and nutritious seafood, aquaculture products are in continuously increasing demand. At the same time, people are becoming more conscious of environmental and social issues related to food production.

The fast, and in some cases, unplanned growth of the sector has raised concerns about the environmental impacts of aquaculture. These concerns are often flagged by CSOs and covered in the media, with impacts on public acceptance of aquaculture products. While there may be some examples of poor management and growth, the sector has made much progress in improving production practice and operations, and often the public perception of the industry does not reflect the reality of improving performance.

In order for the sector to improve consumer understanding and acceptance, it must start to address public perceptions through greater truth, transparency and transformation. By being more truthful, communicating the good and the not so good in a transparent and open forum, the industry can gain credibility and trust. By improving transparency with other stakeholders, and even with one another, companies can start to share and learn from one another, so supporting their evolution as more sustainable enterprises.

This publication covers the topics discussed during this two-part workshop, reporting first on the expert panel presentations, and second on the outcomes from the working groups and final recommendations.

ISBN 978-92-5-109365-8 ISSN 2070-6987



9 7 8 9 2 5 1 0 9 3 6 5 8

I6001E/1/08.16