

**Note of Aquaculture Common Issues Group meeting held at Friends House,
London. Thursday 14 April 2016**

For minutes and further information see:

<http://www.seafish.org/industry-support/aquaculture/aquaculture-groups/aquaculture-common-issues-group>

<http://www.seafish.org/industry-support/aquaculture/aquaculture-support/guides-and-information>

1. Welcome and apologies

Jonathan Shepherd welcomed everyone to the Aquaculture Common Issues Group meeting.

Attendees

Andrew Rowley	Swansea University
Beverley Küster	Food Standards Agency
Caroline Roberts	ABPmer
Chris Williams	New Economics Foundation
Clare Blacklidge	Environment Agency
Colette Connor	DARD
Contessa Kellogg-Winters	Aquaculture Stewardship Council
Craig Burton	Seafish
David Jarrad	Shellfish Association of Great Britain
Eleni Papathanasopoulou	Plymouth Marine Laboratory
Grant Stentiford	Cefas
Greg Clifford	Scallop Ranch Ltd
Heather Jones	SAIC
Ian Pike	Consultant
Ian Rolmanis	Sustainable Fisheries Partnership
Ingrid Lupatsch	AB Agri Ltd
Jamie Smith	Scottish Salmon Producers Organisation
Joanna Gosling	SAIC
Jodie Mitchell	NERC
John Holmyard	Offshore Shellfish Ltd
Jonathan Shepherd	Seafish Board (Chair)
Jose Constantino	Welsh Government
Karen Green	Seafish (Minutes)
Keith Jeffery	Cefas
Lee Cocker	Seafish
Mark McCaughan	DARD
Martin Jaffa	Callander McDowell
Melony Nichols	Thomas Shellfish Limited
Michael Ford	Landfish Ltd
Michael Gubbins	Defra
Mike Berthet	GAA
Mike Kendrick	Sealord
Oliver Robinson	British Trout Association
Piers Hart	WWF

Polly Bianchi-Borham	WWF
Richard Slaski	SARF
Rob Whiteley	Natural England
Stacey Clarke	MMO
Stephen Woodgate	Beacon Research
Sue Evans	Hambrey Consulting
Tom West	ClientEarth

Apologies were received from:

Andrew Lakeman	Ocean Fish
Chris Brown	Asda
Clare Dodgson	Seafish Board
David Mortimer	FSA
Dawn Purchase	Marine Conservation Society
Emi Kato	MRAG
Estelle Brennan	Lyons Seafoods
Jeremy Langley	Waitrose
Kate Wolfenden	WWF
Mandy Pyke	Seafish
Martin Syvret	Aquafish Solutions Limited
Neil Auchterlonie	IFFO
Roger Hall	Porlock Bay Oysters
Simon Kershaw	Cefas
Steve Bracken	Marine Harvest
Tom Pickerell	Seafish
Tristan Hughes-Jones	Loch Ryan Oyster

2. Minutes from previous meeting held on 15 September 2015.

The final minutes were accepted as a true reflection of the meeting and have been added to the ACIG web page. Attendees were asked to take note of the meeting guidelines. In the following minutes Seafish will provide a link to the various presentations given at the meeting but not summarise the whole presentation. In the main we do not attribute the comments made at the meeting.

Matters arising:

Various links were all circulated and there were a number of topics suggested for the next meeting which are being covered today.

3. Aquaculture - The Bigger Picture. Aquatic food security: insights into challenges and solutions. Grant Stentiford, Cefas.

http://www.seafish.org/media/1623218/acig_april2016_cefasfoodsecurity2.pdf

The food security challenge is: a population of 9bn by 2050; 300m more 'middle class' (\$10-\$100 day-1); currently 1 in 7 are underfed, 1 in 7 are overfed; and increasing competition for land, water etc. The Food and Agriculture organisation has stated that aquaculture production must double by 2050 to satisfy global demand for aquatic protein, but EU aquaculture is not growing at the same rate as aquaculture in the Asia. It is likely that seafood will continue to be highly traded, some nations will net import, we will see a growing middle class in Asia and Latin America, there will be increased south-south trading, there will be climate related shifts in wild stock abundance and ultimately supply chains will alter to 2050. The five elements of global supply that contribute to food security were covered focussing on food safety and shock-proofing the supply chain. Emerging diseases were highlighted as one of the key issues and the vast quantities

that were being lost – the yield-loss from disease in aquaculture was estimated at >\$6bn per annum (FAO, 2014). These diseases need to be managed and there has to be a strong focus on mitigation.

The presentation highlighted a number of key questions for UK aquaculture:

- Will the UK population eat its own aquatic produce? Arguably the UK produces enough to be self-sufficient – but supply will always follow the cash.
- Will the UK consumption of aquatic protein be sustained by relying on imports? The UK is a net importer of seafood with shrimp the most valuable import.
- What is the optimal balance between food production and national marine conservation objectives? Lyme Bay, although a small production area for mussel farming, is a very efficient model.
- What will be the optimal balance of aquaculture and fisheries production in the UK? Coastal infrastructures based on legacy fishing industries may be well suited for development of mariculture.
- Will biotech play as important a role as nets and cages in future aquatic production? Nutritional benefits of consuming aquatic protein may be achieved from other sources such as algae.
- What is the role of policy in setting the vision for national production? Aquaculture policy in the UK is a devolved matter, with the separate administrations of Wales, England, Northern Ireland and Scotland responsible for its collective oversight. There are questions over how much a role policy plays.

Discussion

- This was a masterly survey of a massive area.
- There was reference to the level of salmon exported. Whilst 40-45% is exported the UK is still the biggest market for Scottish salmon.
- There are concerns over how Cefas perpetuates the myth that Norovirus comes from oysters when this is a negligible source. The vast majority of Norovirus cases are from person to person contact, with 1 in 6 people shedding Norovirus at any given time.
- Disease control is the number one priority and the idea of zone management is crucial to help understand collective disease prevention.
- The figures shown today for production losses due to disease are staggering and whilst the solutions are being driven by industry, NGOs and the standard bodies, the responsibility really lies with Government to take notice and drive action.
- **Q.** Is there now a guaranteed norovirus-free oyster? **A.** There are two developments in progress – one uses an extended depuration period and the second a new technology (with patent pending).
- **Q.** To what extent are the disease problems we are seeing with shrimp due to the conditions under which they are kept? **A.** The main problem is the very low genetic diversity in the stock.
- One solution is to focus on nutritional security rather than food security or aquaculture for the people where everyone ate what they produced. But fish will always go to where the money is – it is driven by economics.
- **Q.** Is food security only an issue when there is a crisis? **A.** The UK is a relatively strong trading market but a crisis will alter the market.

Action: Circulate link to the report.

4. Seafish-led projects and initiatives. Lee Cocker, Seafish.

http://www.seafish.org/media/1623188/acig_april2016_seafishactivities.pdf

4a. Seafish report: Analysis of the Economic Contribution and Value of the Major Aquaculture Sub-Sectors and Most Important Farmed Aquatic Species in England, Northern Ireland and Wales.

Government and DAs now require deeper understanding of the contribution that the main aquaculture sub-sectors make to home nation economies and at more localised scales. This report, commissioned by Seafish and undertaken by Hambrey Consulting will define and demonstrate quantitatively the economic performance of the sector and how the situation could be improved and capacity increased. The final document is expected by the end of Q1 2016.

Actions

- Circulate link to questionnaire.
- Circulate link to report once published.

4b. Seafish report: UK Shellfish Production: The Contribution and Value of Several and Regulation (and Hybrid) Orders (SRO) in Relation to the Sectors Past Development and Future Growth.

Several, Regulating and Hybrid Order powers derive from Sea Fisheries Act (Shellfish) 1967. They are a legislative legacy and inhabit a 'grey area' within the legislative landscape in regards to 'enhanced fisheries', and /or 'capture-based aquaculture' and 'aquaculture' per se. The aim is to demonstrate the value of SROs to shellfish producers via case studies; to highlight shortcomings/failings of the current SRO system; to explore the advantages/disadvantages of SROs and IFCA bylaws; to put forward recommendations for the future of SROs; to assist Defra in plans to update SRO guidance and procedures. The final document is expected by the end of Q1 2016.

Discussion

- Security of tenure is so important for long-term investment. There is a real value in SROs but this is an antique system and needs addressing from the legislative viewpoint.
- The SRO is paramount to investment and is a huge help and is often the only way to secure investment.

Action: Circulate link to report once published.

4c. Strategic Investment Fund (SIF).

<http://www.seafish.org/industry-support/funding-and-awards/funding/strategic-investment-fund>

SIF was established at the request of the Seafish Sector Panels and Board and was intended to be a flexible, 'light touch' means of commissioning R&D. The fund opened in July 2015 with a call for proposals. There were two successful aquaculture applications which have been taken forward – the first in SW England with 'The Feasibility of an Aquaculture and Fisheries Research and Development Centre' at the Brixham Laboratory; a two-day workshop is planned to aid this work. The second is in South Wales entitled 'Closing the Circle – A Blueprint for Sustainable Aquaculture in Tidal Lagoons from Hatchery to Plate' which aims to inform and enable the development of new aquaculture businesses in both the world's first, man-made, energy generating lagoon and other similar sheltered water sites including disused areas of commercial ports and natural embayments.

4d. Developments of the England Aquaculture Consultation Group – now to be called the Domestic Aquaculture Advisory Committee (SDAAC) or similar.

Many issues pertinent to England are not 'standalone' but cross-border and frequently apply UK-wide so the EACG has decided to reform an advisory committee – with a wider membership and with representation from all four nations. This will provide stakeholders with a mechanism for directing the work areas/resource allocation of the Domestic Aquaculture Strategy Programme. All members are invited to participate in discussions but resource decisions will be limited to levy-payers. Potential members have been contacted with the first meeting scheduled for 6 May 2016.

4e. Aquaculture in Seafish Risk Assessment for Sourcing Seafood (RASS).

As at January 2016 there were 310 wild fish profiles online and RAS had 4,000+ users. RASS Aquaculture Profiles are currently being developed for the 15+ most important farmed groups/ species to the UK market. The RASS Steering Group met in March 2016 and Seafish is currently working on the first three farmed profiles with Cefas. A visualisation for Atlantic salmon was shown.

Discussion

- The various buying guides all seem to focus on the 'negatives'. We should focus on the good. The general public do not generally distinguish between wild caught and farmed fish.
- RASS is aimed at buyers and the aim is to distinguish between different production areas and we want the content to be evidence-based. It is important to realise that the buyers are crucial for the marketplace and need unbiased, scientifically based information.
- In terms of consumer communication there are lots of campaigns to promote the consumption of seafood as a whole.

4f. Cefas regulatory toolbox. Keith Jeffery, Cefas.

<http://www.seafish.org/industry-support/aquaculture/aquaculture-regulatory-toolbox-for-england>

There have been concerns about the regulatory framework underpinning aquaculture in England. To address this Cefas has brought together guidance on regulatory requirements for new aquaculture businesses in England covering both existing and emerging sectors which is now available on the Seafish website. The toolbox is made up of 13 individual aquaculture sector PDFs with summary information, links and contacts on the type of licences, authorisations and permissions required to set up and run a specific type of aquaculture business. Six subject areas have been suggested for 2016-2017, as well as regulators guidance.

Action: Circulate link to toolbox.

5. Reports from the devolved administrations.

5a. Aquaculture sector in Wales

http://www.seafish.org/media/1623191/acig_april2016_welshgovt.pdf

The Wales National Marine Plan (WNMP), aquaculture policy, EMFF and an aquaculture industry network were presented. Challenges and opportunities include: marine co-location (with a new requirement for new applications to indicate whether this is co-located); water quality particularly for shellfish; skills development; industry diversification with a very low base in Wales as to what is actually currently produced.

5b. Aquaculture sector in Northern Ireland

http://www.seafish.org/media/1623194/acig_april2016_dard.pdf

In Northern Ireland there are five main loughs mainly growing mussels and oysters, and one off shore salmon farm. In 2014, finfish (Atlantic salmon, rainbow trout and brown trout and carp) production equated to 1,117 tonnes valued at £5.1 million. Shellfish (mussels, Pacific oysters, scallops and periwinkles) production was 3,240 tonnes to the value of some £4.7 million – there is big growth in mussel farming in the Belfast Lough. A new department, the Department of Agriculture, Environment and Rural Affairs (DAERA) will be created on Monday 9 May 2016. There is a dedicated and integrated application process. By the time the application is actually received it will already have been discussed and is likely to be approved.

5c. Aquaculture sector in England

http://www.seafish.org/media/1623197/acig_april2016_defra.pdf

Aquaculture (finfish and shellfish) production in the UK was worth around £800m in 2014 with Scottish salmon production (£720 million), mussels (£31 million), trout (£30 million), Pacific oyster (£4 million); and seabass (£1.1 million). There is a push from the EU to expand aquaculture under its Blue Growth programme, there are opportunities under the Multi Annual National Plan for aquaculture, and there is support under the European Maritime and Fisheries Fund (EMFF). Defra are encouraging the industry lead development of efficient, competitive and sustainable aquaculture industries whilst protecting the health status and conservation of UK farmed and wild freshwater fish and shellfish. Defra welcomes feedback on what projects could be funded and is keen to encourage more interaction between industry and Government.

Research, Projects, Initiatives and Issues

6. The impact of salmon farming on wild fish – sea lice. Martin Jaffa, Callander McDowell.

http://www.seafish.org/media/1623200/acig_april2016_sealice.pdf

This looked at whether there was the evidence to support the view that when net pens are located near the migration routes of wild fish populations, there is the potential for on-farm diseases to be transmitted to passing wild fish, and that salmon farming does not necessarily have the negative impact portrayed in the media. The focus was on sea lice and looked at the evidence from Loch Maree and River Ewe and the annual rod catches of sea trout and brown trout, Loch Hope and River Hope, and the Solway Rivers in particular. This showed that fisheries can collapse for other reasons and the evidence (including an ICES report) does not support the inferences made.

7. Shellfish network. Andrew Rowley, Swansea University.

http://www.seafish.org/media/1623203/acig_april2016_shellfishnetwork.pdf

BBSRC/NERC are supporting one or two aquaculture networks and the Shellfish Aquaculture Network for the United Kingdom (SANUK) has submitted a dedicated shellfish network bid. Over 38 individuals from universities, research centres and industry have agreed to participate with a wide expertise from engineering through to socioeconomics. It is a mix of experienced aquaculturists, new researchers ('early career') and individuals coming into the field. It has organisations from throughout the U.K. reflecting the location of industry and has strong stakeholder engagement.

Discussion on the concept of networks

- Industry over the years has not always helped itself at a local level. Local issues have on occasion stifled some collaborative initiatives.

- Over the years there have been approaches and questions over what research was needed and for a lot of small businesses it is the basic monitoring work that we really need and is what is missing. The 'bread and butter' science does not get the credit it is due. Networks could help with this and potentially influence policy.

Action: Provide contact details.

8. Blue New Deal. Chris Williams, New Economic Foundation.

http://www.seafish.org/media/1623206/acig_april2016_nefbluenewdeal.pdf

In the context of the economic and social decline of coastal communities the Blue New Deal supports good jobs, economic sustainability and resilience for coastal communities through a healthier coastal and marine environment. At the moment the New Economics Foundation is collaborating with a range of voices and interests in the UK to develop an action plan with long-term solutions to help transform. Sectoral working groups are being formed for energy, coastal management, fisheries and aquaculture and tourism to decide what needs to happen in order to deliver the vision and produce the economic analysis to support it. Inspiration will come from positive case studies and stories. There is now the opportunity to collaborate on the fisheries and aquaculture working group. The aim is to launch an action plan in autumn 2016.

Discussion

- **Q.** There was mention of a cross-party aquaculture initiative. How far advanced is this? **Answer.** This has not been developed yet but we are open to ideas on how best to proceed.
- The idea of a Coastal Producer Organisation linking fishing and aquaculture is a good one. The Shetland Coastal PO has 400 vessel members – only capture at the moment.

Action: Circulate links to the Blue New Deal and report.

Funding opportunities

9. Scottish Aquaculture Innovation Centre. Heather Jones, SAIC.

http://www.seafish.org/media/1623209/acig_april2016_saic.pdf

In the first 18 months SAIC has funded nine projects worth £9.4m (SAIC spend £2.4m) looking at sea lice control: cleaner fish – wrasse and lumpsuckers; rapid diagnostics; and sustainable shellfish spat: mussel hatchery. SAIC is currently evaluating applications for proposals in sustainable feeds and rapid diagnostics. SAIC has set up Aquaculture Vision 2030 covering the entire supply chain in Scotland. This is industry-led involving equipment suppliers, producers and processors. They have also put forward an application to NERC for the ARCH UK network to support industry relevant pure research drawing on best UK academic expertise to cover shellfish and finfish.

Action: Provide link.

10. Scottish Aquaculture Research Forum. Richard Slaski, SARF.

http://www.seafish.org/media/1623212/acig_april2016_sarf.pdf

SARF has funded 89 min projects since 2004/5 (£5.4M). This presentation focussed on a recent SARF project: SARF SP008 about shortening the salmon production phase in net pens. This was undertaken by Cefas and the premise was salmon production is normally almost 2 years of growth in marine net pens so every site licenced only produces every second year and has a short fallow period between 'crops'. If bigger 'smolts' could be produced – or part-grown salmon – elsewhere, and put into net pens, it might be possible to shorten the cycle in open net pens to less than 12 months.

Discussion

- This route has already been adopted in Norway and this route does appear to have an environmental benefit in that sea lice problems (if there are any) usually occur in year two.

Action: Provide contact details.

11. BBSRC-NERC. Jodie Mitchell, NERC.

http://www.seafish.org/media/1623215/acig_april2016_nerc.pdf

This joint BBSRC-NERC programme, co-funded by Marine Scotland Science, Cefas, Food Standards Agency and Food Standards Scotland, aims to develop a healthy, safe and sustainable UK aquaculture system. Funding of £6 million is available over five years. There are currently two project calls for projects to start between October and December 2016. The first (worth £1.2m) for projects which use or translate existing data, knowledge, expertise, techniques and technologies into new tools and solutions which meet a specific end-user need or support decision-making, and the second (worth £600K for one or two networks in finfish and shellfish to deliver a research and innovation strategy. There will be further funding calls.

Action: Provide contact details.

12. EMFF Guidance and forms available now

<https://www.gov.uk/guidance/european-maritimeand-fisheries-fund-emff-before-you-apply>

A paper was tabled which detailed the articles that are open now for funding, eligibility and the application process. The Marine Management Organisation will be attending the SAGB Annual Conference on 24 and 25 May. MMO staff will be available to offer general advice and, in addition, are running 'one to one surgeries' offering specific advice on specific possible applications – all aimed at helping industry access the funding.

Action:

- Circulate paper and link re EMFF and aquaculture.
- Circulate details on SAGB conference.

13. Date and topics for next meeting

Aquaculture meetings are held twice a year to dovetail with the CLG. The next meeting is on 14 September 2016. The group was canvassed for agenda topics at this meeting. Suggestions included:

- Update on Blue New Deal Action Plan (Sept 2016)
- Aquaponics – trials and opportunities
- SRO's in practice – case studies
- Hatcheries potential
- Lobster project – offshore growing (cage)
- Lobster grower project, Cornwall
- Review of how all projects link together (I saw many links/overlaps today)
- Water quality issues across the UK
- Response from salmon and trout association to Martin Jaffa
- Norwegian R&D systems for offshore aquaculture
- Working aquaculture projects
- What are the barriers to the use of land animal protein (LAPs) in aquaculture (safety, nutrition, cost, consumer confidence etc)