

Aquaculture Common Issues Group (ACIG)

Note of meeting held at Friends House, London. Wednesday 18 September 2019.

For the Aquaculture Common Issues Group minutes and meeting presentations see:

<https://www.seafish.org/article/aquaculture-common-issues-group>

1. Welcome, introductions and apologies

Lee Cocker welcomed everyone to the meeting.

Attendees

Alice Moore	Marine Conservation Society
Alicia Gibson	Environmental Finance
Andrew Rowley	ARCH UK
Beccy Redrup	Defra
Bernadette Clarke	Cardiff University
Caitlin Schindler	Bidfresh
Carly Daniels	National Lobster Hatchery
Caroline Roberts	ABPmer
Catherine Miller	Food Standards Agency
Chris Ryder	Lyons Seafoods
Clave Cavers	FIDRA
Dan Lee	Global Aquaculture Alliance
Daniel Philips	Ocean Matters
Dave Little	University of Stirling
David Fletcher	RAS Aquaculture Research Ltd
Dawn Purchase	Marine Conservation Society
Eleanor Adamson	Fishmongers' Company
Elena Piana	Sea Farms
Fergal Guilfoyle	SAI Global
Geraint Thomas	Food Standards Agency
Huw Thomas	Offshore Shellfish Ltd
Ian Carr	Veramaris
Inge Verwoerd	Agricultural Industries Confederation
Ingrid Lupatsch	AB Agri Ltd
Jacintha McIvor	SAI Global
James Fox-Davies	Fowey Shellfish
James Mansfield	Environmental Finance
James Taylor	ARCH UK
Janet Brown	The Grower
Jeffrey Eneberi	Sustainable Seaweed
Jonathan Newman	Flo-Gro Fresh
Karen Green	Seafish (Minutes)
Kate Burns	Islander Rathlin Kelp
Kelly Bateman	Cefas
Kevin Mulholland	Neogen
Lee Cocker	Seafish (Chair)
Liam Darcy	University of Exeter

Lisa Bettington	UK NERC
Lyndsay Christie	Cefas
Martin Syvret	Dorset Coast Forum
Maud van den Haspel	Aquaculture Stewardship Council
Mike Berthet	Aquasea
Oliver Tanqueray	ClientEarth
Owen Stevens	FishWise Limited
Piers Hart	WWF
Rebecca Kaye	Mindfully Wired Communications
Remko Oosterveld	GlobalG.A.P.
Robert Ellis	University of Exeter
Robert Whiteley	Natural England
Ross Brown	University of Exeter
Sahil Shah	Sustainable Seaweed
Sara Catahan	Defra
Sarah Clark	Devon and Severn IFCA
Stephen Craig	Sustainable Feeds Ltd
Stuart McLanaghan	Seafish
Veronique Jamin	IFFO

Apologies were received from:

Aoife Martin	Seafish
Birgit Oidtmann	Defra
Cameron Moffat	Young's Seafoods
Craig Burton	Seafish
David Cracknell	Food Standards Agency
David Moore	Oritain
Donna Page	Milford Marina
Fingal McKiernan	Northern Lighthouse Board
John McGuigan	DAERA
Jonathan Shepherd	Seafish Board
Martin Jaffa	Callander McDowell
Martin Sutcliffe	Dorset and East Devon FLAG
Neil Auchterlonie	IFFO
Ruth Hoban	New England Seafood
Samantha Davis	Cornwall Inshore Fisheries & Conservation Authority
Tristan Hugh-Jones	Rossmore Oysters Ltd

2. Minutes of the previous meeting on 30 April 2019 and outstanding actions. Lee Cocker, Seafish.

The final minutes were accepted as a true reflection of the meeting and have been added to the [Seafish 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.

Theme 1 – Innovative practitioners in the UK.

3. RAS. Fresh Prawns Produced in Lincolnshire. Dr Jonathan Newman, Flo-Gro Fresh.

https://seafish.org/media/1569243066-ACIG_Sept2019_FloGroFresh.pdf

Jonathan explained the background and history. There have been issues over growth rates varying considerably, feed selection, tank design, recirculation, temperature and pH/alkalinity stability. However the biggest issue has been unreliable *L. vannamei* post larvae (PL) supply with under shipment of numbers in 90% of batches received and obvious shipping stresses with acclimatisation not possible in a short enough time to guarantee high survival rates. We need to be able to guarantee a regular and good quality PL supply and to do this we need to be self-sufficient and really need to be able to produce our own (and avoid issues over quality / disease). We see a real opportunity to share experience and encourage collaboration across Europe on this.

4. Wrasse and lumpfish. Daniel Philips, Ocean Matters.

https://seafish.org/media/1569243175-ACIG_Sept2019_OceanMatters.pdf and

https://seafish.org/media/1569243102-ACIG_Sept2019_MowiAnglesey.pdf

Ocean Matters is the largest UK lumpfish producer. They are located on Anglesey, far from Scottish salmon sea cages, and on a site well connected to major UK road and ferry networks with a very stable water source. It utilises RAS (Recirculating Aquaculture System) technology. Annual production is currently around 2 million 25g juveniles. Investment in coming years will allow expansion space (they are currently using only 40% of the site) to produce up to 8 million 25g juveniles annually. The production system was explained, with October to March the key production period. The 'Mowi Anglesey Wrasse' project was explained. The site is located just 300m from Ocean Matters and has a varied background. Mowi purchased facility with the intention of converting it into a Ballan Wrasse production facility. They are planning for the first egg intake in January 2020 with the first deployment in May 2021. The aim is to become the largest marine RAS in the UK when finished.

5. Progress with European Spiny Lobster. David Fletcher, RAS Aquaculture Research Ltd.

https://seafish.org/media/1569243201-ACIG_Sept2019_SpinyLobster.pdf

The European spiny lobster is classed as 'Vulnerable' by the IUCN. It is identified as a Species of Conservation Importance with a conservation objective of recovery within several Marine Conservation Zones (MCZs). In England landings have been falling from a peak in 1969 at over 100 tons to only 12 tons in 2014, but there have been reports off the south coast Ireland of large numbers of juveniles and signs of recovery in Devon and Cornwall. Culture success requires serial changes in tank design, specific water quality parameters and feed type and nutrient profile. This is a possible high value seafood species for diversification of EU coastal aquaculture. This work will address the international need for hatchery and ongrow RAS technology for spiny lobster culture to address the very significant current unsustainable fishing/culture practices.

6. Offshore shellfish. Huw Thomas, Offshore Shellfish Ltd.

https://seafish.org/media/ACIG_Sept2019_OffshoreShellfish.pdf

Offshore Shellfish Ltd (OSL) is an offshore mussel farm in Lyme Bay, Devon. When fully developed, the farm will cover an area of 15 square kilometres and is between 5 to 10km offshore. In terms of harvest it is on course to be >2,000MT for 2019/20 season with sales focussed on bulk whole live mussel for UK and European markets. OSL are still on a learning curve but can see clear opportunities including: 1. Displace imported mussel meat into UK/EU from Chile, Denmark and New Zealand. 2. Exploit traditional marine ingredient market demand (fishmeal/pet food). 3. Explore markets such as nutraceuticals/muscle powder (whey replacement) – however there are clear

barriers. OSL will continue to address the legislative blocks to future development to ensure that coastal local authorities (and LEP's, Development Agencies, etc.) are aware of the National Government strategies for development/labour/facilities and to create an enabling culture. It called for Seafish, or a trade body, to facilitate the coordination of 'UK mussel' or 'UK Shellfish PLC' opportunities. In addition there is the need to strategically access One Health and agri-tech funding and development opportunities, and to explore offshore wind/repurposing decommissioned oil/gas platforms as processing/farm service hubs.

Discussion

- **Question.** Is there a market to de-shell the mussels for aqua feed? Is this economically viable? **Answer.** It is possible, the meat is key, but you need to be able to farm enough mussels which could go straight to feed production if you had a meat processing facility.
- **Q.** Is there a market for the shell? **A.** Yes there are all sorts of options including as a plastic replacement product but you need a critical mass

7. The potential for UK seaweeds. Kate Burns, Islander Rathlin Kelp.

https://seafish.org/media/1569243094-ACIG_Sept2019_Kelp.pdf

Whilst there is a lot of foraging for kelp there is very little insight into how to make farmed kelp economically viable. With trial and error we have demonstrated that it can be produced all year round. Farming kelp is expensive and is currently marketed as a premium product which means it is not aimed at the animal feed or fertiliser markets. They do not currently market it in the UK, sales are currently in the Republic of Ireland, the Netherlands and Switzerland.

Discussion

- **Question.** How does licensing impact on what you can do? How do you determine the best market? **Answer.** It is very expensive and the re-working of the licensing system in NI has not happened. We are working with Government to redress this. There is no easy answer to how best to market kelp but we know there are markets out there; identifying and exploiting them is key to the future growth and success of the industry

Overall discussion

- **Question.** There has been a lot of talk about finding out for yourself from experience and trial and error what works. Could academia help with this? **Answer.** The UK lacks an Innovation Centre and concrete support on how we develop products. We have a disparate band of entrepreneurs but the process is disjointed and there needs to be more joined up thinking. The strategies are there but we need to develop more of a plan to bring this all together and move UK aquaculture forward.
- There needs to be better co-ordination between industry and academia and now could be a very good time to make this happen. There was mention of difficulty in accessing research materials and the need to make research relevant. There needs to be a more concrete ask from industry and there were even calls for a Government Department for Seafood Science. We are not a 'United' Kingdom, and with the future political map uncertain, we need a better way forward.

8. Seafish update. Lee Cocker, Seafish.

https://seafish.org/media/1569243142-ACIG_Sept2019_Seafish.pdf

Lee highlighted some of the key Seafish work that is underway, as well as presented aquaculture updates from the Devolved Administrations.

- Continuing work with the Devolved Aquaculture Leadership Groups

- Commissioning new work to look at the 'Size of the Prize' – the growth potential of the UK aquaculture sector. This will be in two phases: 1. Bivalve shellfish (mussels and oysters). 2. Finfish; other crustacea/marine gastropod molluscs (e.g. abalone); macro-algae/seaweed.
- Maintain and update the aquaculture profiles.
- Developing an Assurance Scheme for Shellfish and Human Health (DASSHH) Project.
- 'Aquaculture and Climate Change' project, plus exploring shellfish ecosystem services.
- Identifying gaps and exploring training and guidance to support good occupational health and safety in UK aquaculture businesses.
- The Seafish onshore training programme.

ACTION: Circulate appropriate links.

Theme 2 – Consumer perceptions

9. Fish welfare guidelines. Dan Lee, Global Aquaculture Alliance.

https://seafish.org/media/1569243073-ACIG_Sept2019_GAA.pdf

Dan outlined the scope of the 'Open Philanthropy Project' – a three-year, US\$435,000 project. It aims to evaluate current and where needed develop and recommend improved, fish welfare best practices as well as propose improvements to fish welfare standard organisations with a focus on internationally traded species (e.g. channel catfish, tilapia, salmon). This covers five labels and has highlighted that there are difficulties: in comparing standards where there are different ones for different species and processes; how prescriptive standards should be; whether standards should aim to be globally applicable and consistent, or more country and species specific; whether indicators are consistently handled in the audit process; and whether there are directly auditable welfare indicators.

10. GLOBALG.A.P: Balancing demand and assurance. Remko Oosterveld, GlobalG.A.P.

https://seafish.org/media/1569243087-ACIG_Sept2019_GlobalGAP.pdf

Remko covered how GlobalG.A.P is balancing demand and assurance. This covered the role of certification; the components of the GLOBALG.A.P. certification programme; and the implementation of new criteria.

11. Algae-based products containing Omega-3 EPA and DHA. Ian Carr, Veramaris.

https://seafish.org/media/1569243244-ACIG_Sept2019_Veramaris.pdf

Ian looked at the consumer needs for EPA and DHA (the global EPA and DHA status map shows low levels for most of the world); the animal needs for EPA and DHA (with a need to ensure the health and welfare of farmed salmon in particular); whether we can just rely on fish oil (where limited fish oil is spread thinly across increasing volumes of aqua feed); and what are the alternative sources of EPA and DHA. Marine algae are the original producers of Omega-3 EPA and DHA. For consideration a number of questions were suggested re. farmed seafood sourcing: How much EPA and DHA does it contain? How will you sustain or restore these levels in future? Are you prepared for new regulatory limits on PCBs and Dioxins in farmed seafood? How much wild fish is used to produce 1kg of farmed seafood? What claims are you making already?

12. The Sustainable Seafood Consumption Initiative. Dave Little, University of Stirling.

https://seafish.org/media/1569243226-ACIG_Sept2019_SSCI.pdf

The Sustainable Seafood Consumption Initiative (SSCI) is an interdisciplinary coalition of researchers working across a range of areas, including food safety, nutrition, aquaculture, behaviour change, and sustainability. They have come together to explore the role of seafood in global food security. The initiative aims to produce high-quality research that can be used by policy-makers

when developing sustainable food security strategies, and create interdisciplinary and cross cultural connections to further understand the important issues around sustainable seafood consumption, worldwide. As a starting point you need to understand consumption before you can address the challenge of increasing consumption – in reality we have increasing value but declining volume; an aging customer base; the strong demand for other ‘protein’ categories; and average seafood consumption at less than 1 portion/week (2016).

ACTION: Circulate appropriate link.

Overall discussion

- **Question.** There has been a very rapid growth in the vegan movement. Can we learn from that ‘energy’? Are there lessons to be learnt? **Answer.** The seafood sector does need to make more noise.
- **Q.** Do you think the artisanal angle is not so obvious with seafood? **A.** A lot of aquaculture concerns globally are family-run businesses and that could be a point of distinction. The retailers and foodservice sector could make more of this.
- **Q.** There was mention in the SSCI presentation of a study in Glasgow with a varied socio-economic composition. In the poorest areas access to seafood was through canned fish. Do you think that canned fish constitutes access to good seafood? **A.** It is more about availability than quality per se. The fact that it is even a stock item means that it is being eaten.
- We need to be careful when we are talking about EPA and DHA because the balance of the two is crucial. We should not lose sight of the fact that fish is an excellent protein source and we should be considering micronutrients, protein **and** EPA/DHA as a whole.

13. The future of the group going forward.

Lee summed up that it was great to see UK businesses pushing boundaries and looking at market demand. The challenge remains to balance policy, skills and investment. It was also refreshing to see the emphasis was on a positive future for UK aquaculture.

Attendance has been great today and we want to keep the agenda fresh and current. We would like to form a Steering Group made up of ACIG representatives from across the aquaculture sector and broadly indicative of whole sector interests. The ACIG Steering Group will help Seafish plan the direction of the group and specifically the agenda topics we cover at the meetings. We are also considering appointment an Industry Chair for the group.

ACTION: Please fill in the feedback forms to express interest in joining the Steering Group.

14. Date of the next meeting.

Lee thanked all the speakers for their insight, and the attendees for their participation. Discussion about the aquaculture industry always raises passionate interest and the speakers all presented inter-linked ideas. The next meeting will be in April/May 2020. Date TBC.