



Feedback Report:
Blue Food Workshop
27 July 2022

Background

The Ocean Innovation Africa July Stakeholder Workshop Series was held in honour of African Day of Oceans and Seas. The intention of the workshops was to facilitate action on some of the challenges and solutions raised during discussions at the annual Ocean Innovation Africa summit.

The “Blue Food” workshop looked at key challenges and opportunities for development of sustainable aquaculture in Africa. This report is a summary of points raised during that discussion and as such statements do not necessarily reflect consensus from the workshop participants, nor the viewpoint of Ocean Innovation Africa.

Participants

- Chair: **Siena Crawford**, Aquaculture Stewardship Council (ASC)
- Co-chair: **Sarah Carroll**, University of Cape Town (UCT)/Marihealth
- **Vernon Coyne**, University of Cape Town (UCT)/Marihealth
- **Steven Hermans**, Phyconomy
- **Proscovia Alando**, SAMAKY Hub & Ressect
- **Andrea Bernatzeder**, Department of Forestry, Fisheries and the Environment (DFFE), South Africa
- **Ajibola Olaniyi**, WorldFish
- **Sarah Halse**, Abagold
- **Maryke Musson**, SAAMBR

Introduction

Aquaculture is seen as one of the most promising means of addressing the increasing food needs on the African continent, as well as providing opportunity for economic and social upliftment. The African aquaculture industry is seen globally as having enormous potential for growth but the market and economic context require innovative solutions to achieve this which will hinge on adequate capacity and skills development.

Need for Collaborative Effort

To enable sustainable growth of the African aquaculture sector, more synergy is needed between government, industry, and research organisations to ensure that research is translated into sustainable commercial opportunities. Policies need to be fully considered and implemented to create an enabling environment, including funding constraints, spatial planning, and permissions/licensing. Industry collaboration will also help accelerate development of the sector - the opportunity is large enough to share insights rather than considering one another as competition.

Multi-disciplinary research is needed to integrate strategies for

- knowledge transfer
- testing and improving nutritional value
- waste reduction and beneficiation
- new farmed species
- improving competitiveness
- socio-economic aspects
- markets
- societal acceptance/support

Funding

Access to funding for aquaculture research and startups is limited in Africa at present, with knock-on effects on representativity in the sector. Investor confidence is based in a large part on track record, so initial funding for aquaculture is hard to come by, especially for less established techniques, and African investments are considered higher risk. Additionally, the scale of finance required for African aquaculture projects is considered too small to be of interest to foreign investors.

- Requires educating investors on market opportunities and challenges in African context
- Apply to right investors – innovation, aquatech from Europe

Investor focus in African aquaculture is different. In Europe the focus is on innovation and technology, in Africa it is on food security, and to an extent premium export markets. Export markets are compromised at the moment by high shipping costs, added to which they do not receive government funding and have a heavy carbon footprint. The focus for growth in Africa should be on aquaculture for food security, with room for export markets where carbon footprint is less significant e.g. in North Africa.

Future aquaculture developments will hold animal welfare and social impacts at the heart, and this should be taken into consideration in all planning and strategies for local industry development.

Energy and Carbon Footprints

Commercial, and particularly inland aquaculture have very large energy requirements, which in a country like SA with coal-based energy results in a particularly heavy industry footprint. Small scale aquaculture, and in particular Integrated Multi-Trophic Aquaculture (IMTA), have much better carbon scores.

One barrier to accessing carbon funding is the lack of capacity to carry out the necessary carbon analysis and life cycle assessments at small scale facilities. IMTA is not a feasible goal in many such situations, however there are smaller steps that can be taken towards reducing carbon outputs and achieving circularity, such as waste management.

Funding is needed to develop alternative power models. There are several alternative energy sources available for aquaculture depending on location of the farm/plant but development of alternative energy projects is extremely expensive.

Third-Party Certification

Investment is highly linked to being able to report on sustainability targets – generally through 3rd party certification. Certification is critical for improved market access, but current frameworks are ill-suited to the African context, in particular in terms of financial cost, forming instead a barrier to market entry. Since small-scale aquaculture is much less carbon intensive than commercial or research scale it should be able to benefit from certification.

Obstacles to certification in Africa

- Cost of certification, in particular bringing out European auditors
- Small sector means cost of auditors hard to bring down
- Differing requirements from different certification bodies complicates locally-based auditing
- Lack of skill & capacity for appropriate data collection, monitoring and reporting on small scale farms

Opportunities for action

- Unpack and define the opportunities represented by development of the South African maritime industry
- Investigate means of marketing the opportunity represented by the sector
- Training of local auditors
- Standardisation of requirements between certification bodies
- "improver" certification – ie not full ecolabel but indicative of being on the right track
- Create a platform where farms can do self-audits upfront to learn the steps and see what they still need.

Certification is driven by market demand, and there is not much demand for certification from African markets, therefore lack of motivation from industry to get it. Certification is at times more valuable for brand reputation and development of management tools than for direct market value.

Supply-Chain Improvement

Feed input costs, seed systems/genetic improvement, and biosecurity are all obstacles to industry growth in Africa that need to be addressed. The volume of fish products used in feed relative to the volume produced as end product is an important component of sustainability and feed also has to meet certification requirements for the end product to be certified.

Alternative feed sources are not only a way of reducing costs but also of meeting sustainability targets. Although alternative protein sources are limited at the moment in the number of species for which they can be used, there is a lot of research into food additives to increase fish health and nutritional value of the product. Service industries like proteins, oil, and raw materials also offer market potential and for job creation.

Market Development

While governments, researchers, certification bodies and industry can play significant roles in development of sustainable aquaculture in Africa, at the end of the day industry growth depends on market demand. Africa consumes relatively little seafood and particularly farmed seafood, in part because of culinary culture. This low level of consumption represents opportunity for sector growth, but that will require outreach, finance, skills and capacity to build market demand. At the moment 70% of kelp in SA goes to Abalone feed, 30% to biostimulants. There is some niche buy-in but the key is to figure out market needs and preferences to try get aquaculture products on average household tables.

This involves identifying what the barriers to adoption/consumption are, and how they can be addressed. The solution and its benefits should be demonstrated to communities before training them in how to make use of and develop them. Funding access for small scale aquaculture projects can be improved by providing business development training and forming cooperatives for access to more competitive funding.

Value chain improvement will greatly increase market penetration. This can be in the form of improved nutritional value of product, eg by supplementing feeds with microalgae to replicate more natural nutritional values, or by processing the product to be more palatable to local tastes.

Awareness of the opportunity and benefits of farmed seafood needs to be generated through outreach eg informational videos, health campaigns, school feeding programmes. This includes outreach on potential access to funding through carbon trading/markets.

Themes to explore at OIA 2023:

- Capacity building & skills development
- Government, research & industry synergies, inter and intra collaboration
- Investor education
- Third party certification
 - Bringing down costs
 - Standardisation of criteria between certification bodies
 - Capacity building for necessary data collection, reporting & monitoring
- Growing market demand
 - Outreach
 - Addressing barriers to adoption
 - Value chain addition
 - Training communities in production and business development
- Feed input costs
 - Energy requirements
 - Carbon markets
- Alternative energy sources
- Seed systems & genetic improvement
- Biosafety
- Animal welfare
- Social impact

Thank you to our fantastic workshop participants for getting this discussion going, we look forward to seeing you at the continuation!

