

## ASC Research Agenda - 2023

Version 1.0 February 2023

Research Topic	Research Questions
Cost benefits of ASC certification	<ul style="list-style-type: none"> <li>- To what extent is the ASC certification programme cost effective for the various stakeholders?</li> <li>- Is there an optimum cost-effective ratio for ASC standard/indicator requirement measurements?</li> </ul>
Area Based Management	<ul style="list-style-type: none"> <li>- How can the maximum carrying capacity of a system be defined?</li> <li>- How can ASC strengthen its Area Based Management (ABM) requirements for the different species and how does that link to the maximum carrying capacity?</li> </ul>
Feed	<ul style="list-style-type: none"> <li>- What are the best/most effective calculation methods for feed efficiency metrics (FFDR, eFCR etc.)?</li> <li>- Should feed efficiency metrics differentiate between the source of FM and FO, and if yes, how?</li> <li>- What are the current and potential supply levels of segregated certified soy and palm oil?</li> <li>- What sustainable sourcing requirements should be set for Processed Animal Proteins (PAPs) ingredients?</li> <li>- What sustainable sourcing requirements should be set for alternative feed ingredients (e.g., insect meal, single cell protein etc.)?</li> </ul>
Health and Welfare	<ul style="list-style-type: none"> <li>- Which factors have a particularly strong effect on the welfare of the individual species?</li> <li>- What are the recommended stocking densities for the different certifiable species in all life stages and across rearing systems?</li> <li>- What are maximum (and minimum) starvation times for different species and life stages?</li> <li>- What should the maximum 'out of water' time be for the different certifiable species for slaughter and handling purposes?</li> <li>- Which practices allow to kill fish (or crustaceans) humanely and which should be avoided? What are the specific values that need to be considered (duration, intensity etc.)?</li> <li>- What could potential Operational Welfare Indicators be for crustaceans?</li> </ul>

Greenhouse gas emissions	<ul style="list-style-type: none"> <li>- What are the GHG emissions from pond sludge and what impact do farm inputs have on those emissions?</li> <li>- What are the potential GHG emissions of ASC-certified production occurring after the farm-gate, particularly from transportation to markets?</li> <li>- How often, and how far, are certified products transported by air?</li> <li>- What are the energy requirements and related GHG emissions of farm production for different species?</li> <li>- What are GHG emissions of ASC products (esp. salmon) relative to non-certified? For which species do we have sufficient data and what needs to be collected?</li> </ul>
Climate change mitigation and adaptation	<ul style="list-style-type: none"> <li>- What are the biggest interventions that would reduce the carbon footprint of the aquaculture industry?</li> <li>- What is the evidence for carbon sequestration within aquaculture production (e.g. Seaweed, IMTA, on-site habitat restoration)?</li> </ul>
Rights Awareness	<ul style="list-style-type: none"> <li>- What are the best mechanisms for raising and measuring awareness and understanding of human rights and labour rights among employees?</li> <li>- Which stakeholders have human rights and labour rights policies and trainings in place and how were these developed and implemented?</li> </ul>
Gender	<ul style="list-style-type: none"> <li>- Does ASC certification contribute to improved gender equality and women's empowerment?</li> <li>- Are there barriers for women's employment and participation in positions of leadership at the farm and if yes, what are these and how do they differ across contexts?</li> <li>- What percentage of employees at farms in a particular location are male or female and how are other marginalised groups represented?</li> <li>- How does the culture of gender in the surrounding communities' impact on what takes place at the farm?</li> <li>- Are there certain roles in aquaculture that are viewed as predominantly male or female?</li> <li>- What is the division of tasks and roles between men and women?</li> </ul>
Forced and bonded labour	<ul style="list-style-type: none"> <li>- Which regions and farming systems are most prone to employing migrant labour?</li> <li>- Which regions are generally at high risk of forced labour and what is the situation on certified farms that are located in the area?</li> <li>- In which areas do (certified) farms use labour brokers?</li> </ul>
Child labour	<ul style="list-style-type: none"> <li>- Which regions are most prone to employ workers under 18?</li> <li>- How are children under 18 employed (conditions of employment) and what type of work do they do?</li> <li>- Identification of contacts/NGO that can provide support regarding forced, bonded and child labour.</li> </ul>

Grievance & Discrimination	<ul style="list-style-type: none"> <li>- What are the impacts of positive discrimination in the workplace?</li> <li>- What does successful remediation of workforce discrimination through the ASC grievance process look like (with examples) and what were key factors for the success?</li> <li>- What are the potential causes for low or very high confidence of employees in grievance policies?</li> </ul>
Working Hours & Wellbeing	<ul style="list-style-type: none"> <li>- Does ASC certification contribute to improved wellbeing for workers? How does this differ across contexts and what are the factors that contribute / hinder this?</li> <li>- What are appropriate safeguards around overtime to protect employees' health and safety?</li> <li>- How are shift patterns handled, especially in remote locations?</li> <li>- What is the best way to address the balance between the protection of employees' health and safety and giving them the opportunity to work overtime to earn money?</li> </ul>
Hygiene & Sanitation	<ul style="list-style-type: none"> <li>- What are key factors for hygiene and sanitation facilities, especially for remote farms or feed mills?</li> </ul>
Community Engagement	<ul style="list-style-type: none"> <li>- Does ASC certification contribute to social change in communities? How does this differ across contexts and what are the factors that contribute/hinder this?</li> <li>- How is the presence of a farm or feed mill viewed by the local community and how do farms or feed mills view their presence?</li> <li>- How much are Indigenous communities taken into account by farm and feed mills and are there differences to 'other' local communities?</li> </ul>
Market	<ul style="list-style-type: none"> <li>- To what extent will certification be required in the future for farms to sell their products?</li> <li>- Which buyers/markets will require certification in the future?</li> <li>- What aspects do consumers consider when purchasing seafood? How can ASC incorporate these into future standard revisions?</li> <li>- What do consumers know about aquaculture? How can we increase understanding to drive purchasing practices?</li> </ul>