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organised by:

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Workshop:

Land-Based Aquaculture: Innovation Ecosystem

Date: Thursday, November 16th, 2023

Theme: Aquaculture, Policy and Regulation

Recirculating aquaculture systems (RAS) are not a new concept, however, in recent years it has gained remarkable significance. The initial need to prove the concept of producing high-quality fish in closed-land aquaculture systems has transitioned into a phase focused on scalability, economic viability, and environmental performance. The objective of the session was to discuss the drivers and barriers for RAS development. The session started with a brief presentation by the speakers where they shared their background and current activities, this was followed by a moderated discussion on the current maturity level of the industry and what is needed to bring it forward.

Speakers

Rupert Baur, HanseGarnele and MyFishPlant (DE) | **Ulf Nermark**, WA3RM (SE) | **Thue Holm**, Aquafounders Capital (NL) | **Franziska Fäarber**, Frauenhofer IMTE (DE) | **Thorsten Vammen**, Frea Solutions (DK) | **Brian Thomsen**, Danish Aquaculture Producer Organisation (DK)

Here are the key points discussed:

- There is a need to clearly define recirculating aquaculture systems (RAS) and the diverse factors that need to be considered such as life stage, percentage of water recirculation, marine or freshwater, species, circularity indicators, etc.
- Promote RAS understanding among the public and authorities.
- Advocate for transparency in industry practices and sustainability.
- For new projects, initiate proof of concept with small-scale operations before scaling up.
- Create synergies by pairing RAS with other industries for efficient resource use, e.g. industrial symbiosis setups.
- R&D in RAS facilities is key for the continuous improvement of production systems.
- Acknowledge the importance of human capital, “better to have good staff and a bad system, than having a good system and bad staff.”
- RAS professionals require a different set of skills than other aquaculture production methods, for this is essential to align curricula with industry needs through collaboration with schools and universities.

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Action items mentioned:

- Implement an EU-standardized aquaculture and RAS regulatory framework and a system approach.
- Reclassify RAS side-streams for extended productivity and encourage valorisation, e.g. sludge.
- Integrate RAS into land spatial planning, identifying, and fostering synergies with other industries.
- Raise public awareness about RAS and its advantages.
- Promote aquaculture as an appealing career path for the youth.

Other topics discussed:

- The RAS industry is still immature. Species like trout, shrimp, and salmon proved it is possible to grow high-quality seafood in closed-land-based systems, nevertheless, the focus now is on scalability, economic viability, and environmental performance. High amounts of capital are needed for this, and currently, RAS represents high-risk investments for commercial investors.
- In symbiosis setups, there needs to be a high level of trust between industries. Additionally, every system needs to have redundancy as a preventive measure.