



AquaLoop International Conference Success Story Report



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TABLE OF CONTENTS

PREAMBEL	3
AQUALOOP PROJECT & AQUALOOP INTERNATIONAL CONFERENCE PRIORITIES.....	4
<i>AquaLoop project objective</i>	<i>4</i>
<i>AquaLoop project focus and approach</i>	<i>4</i>
<i>AquaLoop project structure.....</i>	<i>4</i>
<i>PilotLoops – Circular aquaculture South Baltic pilots activities</i>	<i>5</i>
<i>TrainingLoop – Circular aquaculture training pool.....</i>	<i>7</i>
<i>SupportLoop – Circular aquaculture stakeholder support</i>	<i>7</i>
<i>AquaLoop International Conference aims.....</i>	<i>7</i>
<i>AquaLoop International Conference Organisers</i>	<i>8</i>
<i>AquaLoop International Conference structure and content</i>	<i>9</i>
AQUALOOP PROJECT & AQUALOOP INTERNATIONAL CONFERENCE COMMUNITY.....	10
<i>AquaLoop project community</i>	<i>10</i>
<i>AquaLoop International Conference Participants</i>	<i>11</i>
<i>Participants’ distribution</i>	<i>11</i>
<i>Participants’ expectations.....</i>	<i>12</i>
THEMATIC ANALYSIS OF CONFERENCE SESSIONS & FEEDBACK	13
<i>Opening Session.....</i>	<i>13</i>
<i>Closing the Nutrient Loop & Byproduct Valorisation Session</i>	<i>14</i>
<i>Valorisation approach feedback analysis</i>	<i>15</i>
<i>Readiness to explore or apply side- stream valorisation approaches feedback analysis.....</i>	<i>15</i>
<i>Stakeholder Support & Consumer Perspective Session</i>	<i>17</i>
<i>Stakeholder support most critical for scaling side-stream valorisation in aquaculture feedback analysis.....</i>	<i>18</i>
<i>Barrier to consumer acceptance of products from aquaculture side-streams feedback analysis</i>	<i>18</i>
<i>Training and Capacity Building in the Circular Economy Session</i>	<i>20</i>
<i>Skills Needed to Strengthen Circular RAS Aquaculture and Side-Stream Valorisation feedback analysis</i>	<i>21</i>
<i>Training formats most effective for building capacity in circular aquaculture feedback analysis</i>	<i>21</i>
<i>Beyond the program</i>	<i>23</i>
<i>Study visits</i>	<i>23</i>
<i>Event satisfaction</i>	<i>24</i>
<i>Project & Aquaculture Community Recommended Future Focus.....</i>	<i>24</i>
CONCLUSION & RECOMMENDATIONS	26

PREAMBEL

On 25 February 2026, the AQUALOOP International Conference, titled **“Strengthening Circular Economy and Valorisation of Side Streams in RAS”** was held at Klimahaus Bremerhaven in Germany, as well as online. The event brought together over 70 participants from academia, industry, and public administration within the aquaculture sector. Discussions focused on key challenges related to aquaculture side streams, including pilot solutions, stakeholder support tools, and training initiatives.

Overall, the conference marked an important milestone for the AquaLoop Interreg South Baltic project and **serves as a success story of the project**, demonstrating its ability to bring together relevant stakeholders, facilitate knowledge exchange, and promote practical approaches to strengthening circular economy and valorisation of side streams in RAS aquaculture. **This report**, complemented by the **conference video**, documents the event and captures its key outcomes, discussions, and achievements.



Photo 1: AquaLoop International Conference Participants (photo credit: Klimahaus Bremerhaven)

➤ More on AquaLoop

- [Project](#)
- [AquaLoop International Conference](#)



AQUALOOP PROJECT & AQUALOOP INTERNATIONAL CONFERENCE PRIORITIES

AquaLoop project objective

The objective of the AquaLoop project is to develop, promote, and support the concept of circular economy within aquaculture in the South Baltic region for the green transition, with a focus on nutrient loop containment with by-products production towards responsible consumption.

AquaLoop project focus and approach

- Cooperation with partners and joint development of tailored solutions for boosting human resource capacities through development of 3 cross-border pilots, testing innovative methods and tools through *PilotLoops – Circular aquaculture South Baltic pilots activities*;
- Training students and professionals in the area of innovative aquaculture methods, exchanging knowledge and experience related to human resource capacities for the circular aquaculture sector through *TrainingLoop – Circular aquaculture training pool activities*;
- Investigating best practices, experiencing the cross-sector cooperation possibilities in an international setting and forming international networks with organizations pursuing the same mission through *SupportLoop – Circular aquaculture stakeholder support activities*.

AquaLoop project structure

The unique composition of the AquaLoop consortium, bringing together universities, municipalities, associations and SMEs reflects the strong interest and link between research, education, awareness raising and application in industry, essential to develop and implement circular economy based aquaculture in practice.

The foreseen actions are designed so as to develop and showcase original, innovative solutions, prepare present and future employees, business sector and customers for the circular aquaculture, by providing:

- 3 cross-border pilots concentrating on testing, demonstration, and communication of the circular economy approach;
- Jointly developed solutions including: pilots' protocols, training methodologies and support assessments.

➤ More on AquaLoop project:

- Reason & Objective
- Focus and Approach
- Structure

PilotLoops – Circular aquaculture South Baltic pilots activities

The project focused on developing and promoting circular economy solutions in aquaculture through three cross-border pilot activities. These pilots tested and demonstrated innovative production methods aimed at reducing waste and water use, while generating valuable by-products and lowering environmental impacts. The work involved in-depth analysis and close cooperation with associated partners, enabling the exchange of data and practical solutions and supporting testing from lab to farm scale. This collaboration was supported by the use of commercially relevant technologies and enabled a continuous exchange of data and solutions. In addition, the project will deliver jointly developed protocols to support further uptake by enterprises. These outputs also provided important input for the project's training and support activities, helping to ensure that the results could be effectively applied in practice.



- **AquaLoop Pilot 1 – TARAS** - Testing Algae Applications in Recirculating Aquaculture Systems (RAS) to improve aquaculture circularity potential in the SB region, Coordinating partner: University of Gdańsk (PL). The aim of the pilot was to further develop technology on cultivation of shrimps and specific strains of microalgae, for RAS facilities, effluent purification, while producing high-value algal biomass, and to demonstrate applications of the biomass produced. The TARAS logo, featuring a stylized green plant growing from a blue circular base, with the text 'taras' in a blue, lowercase, sans-serif font.
- **AquaLoop Pilot 2 – NEMATIC** - Increasing the nutrient efficiency of commercial aquaculture through increased application of circular economy concepts, Coordinating partner: University of Rostock (DE). The idea of the pilot was to research and test the unused residues from fish production. Specifically, the biochemical composition of the gonads, livers and skins of African catfish (*Clarias gariepinus*), rainbow trout (*Oncorhynchus mykiss*) and pikeperch (*Sander lucioperca*) will be investigated, and possible and practical potential paths of utilization will be tested. The NEMATIC logo, featuring a stylized green plant growing from a blue circular base, with the text 'nematic' in a blue, lowercase, sans-serif font.
- **AquaLoop PILOT 3 – FISHVISA** - Development of the Fish-Shrimp-Vegetables integrated system of aquaponics to showcase the potential of circular economy principles in RAS, Coordinating partner: Klaipeda University (LT). The main activities were related to FISHVISA technology testing at the Marine Research Institute Fisheries and Aquaculture Laboratory. The small demo aquaponics system in a glasshouse was developed, and tested with rainbow trout, crayfish and salads, where crustaceans expect to use solid wastes, and vegetables use nutrients from fish and crustaceans, to develop a zero-waste RAS technology. The FISHVISA logo, featuring a stylized green plant growing from a blue circular base, with the text 'fishvisa' in a blue, lowercase, sans-serif font.



Photo 2: TARAS pilot (photo credit: University of Gdańsk)



Photo 3: NEMATIC pilot (photo credit: University of Rostock)



Photo 4: FISHVISA pilot (photo credit: University of Klaipeda)

TrainingLoop – Circular aquaculture training pool

The project aimed to prepare school pupils, students, and professionals for circular economy approaches, with a focus on aquaculture production and consumption. It sought to support their career development while contributing to both ecological and economic progress in the region. This was based on results from INTERREG projects, the consortium's strong training expertise, advanced facilities, and a well-established network of partners across academia, industry, and public institutions. The project developed joint curricula and manuals, and delivered cross-border training and awareness-raising activities to support skills development in the sector.



- TrainingLoop programme for school youth;
- TrainingLoop programme for students – AquaLoop Cross-Border Student Exchange Program;
- TrainingLoop programme for professionals.

SupportLoop – Circular aquaculture stakeholder support

The project aimed to demonstrate the potential and challenges of establishing land-based RAS aquaculture on existing agricultural farms, thus contributing to the reduction of nutrient impacts from sea-cage production in the South Baltic region. It documented the economic and environmental conditions required across the region and supported stakeholder engagement through workshops and the organization of study visits to commercial and pilot sites. In addition, the project provided tools and recommendations for professionals, SMEs, associations, and authorities, including protocols and guidance.



- SupportLoop assessments;
- SupportLoop study visits and workshops;
- AquaLoop platform and conference.

AquaLoop International Conference aims

- Showcase partner outputs on side-stream valorisation, as well as other examples of circular economy RAS concepts, and capacity building in the South Baltic;
- Present results from three pilot initiatives, training activities and stakeholder support recommendations as well as other success stories from the region;
- Provide networking opportunities with partners, decision-makers, and industry stakeholders, while increasing international visibility of circular aquaculture.

➤ More on AquaLoop

- [TrainingLoop](#)
- [SupportLoop](#)

AquaLoop International Conference Organisers

The event was organized by AquaLoop Interreg South Baltic Lead Partner - University of Rostock (DE), and University of Gdańsk (PL), with the contribution of all the project partners:

- Klaipėda University (LT)
- Guldborgsund Municipality (DK)
- Fish Market Development Association (PL)
- Scandinavian Aquasystems AB (SE)
- VKST (DK)





"Strengthening Circular Economy and Valorisation of side-streams in RAS Aquaculture"

AQUALOOP International Conference

interreg South Baltic

Co-funded by the European Union

25 Feb 2026, 9:30-17:00
(Local study visit: 26 Feb, morning)

Klimahaus Bremerhaven
(Am Längengrad 6, 27568 Bremerhaven, Germany)

Hybrid (English), Free
Registration required

Register

Registration is still open. In-person attendance is very limited.

Once in-person capacity is reached, participants may still register to attend online. Online registration will remain open until 20 February 2026.



Conference sessions

- Closing nutrient loops & by-product valorisation
- Stakeholder support & consumer perspectives
- Training & capacity building in the circular economy

Audience
business professionals, researchers, farmers, students, young professionals, policymakers, and innovators

Join the final event of the INTERREG South Baltic project AquaLoop. The event presents key results on circular RAS solutions, aquaculture side-stream valorisation, training activities, and recommendations, with networking opportunities in an international forum on sustainable aquaculture.

Organisers
LP University of Rostock (DE), University of Gdańsk (PL), Klaipėda University (LT), Guldborgsund Municipality (DK), Fish Market Development Association (PL), Scandinavian Aquasystems AB (SE), VKST (DK)











Photo 5: AquaLoop International Conference banner and venue (project & photo credit: Basia Dmochowska)

AquaLoop International Conference structure and content

The program of the AquaLoop International Conference was structured into four sessions: an opening session, and three thematic sessions reflecting the project's core priorities. a session on closing the nutrient loop and by-product valorisation, a stakeholder support and consumer perspectives session, and a training and capacity building session—providing a clear framework for presentations and discussions:

- **Opening session**
- **SESSION 1: Closing the Nutrient Loop & By-product Valorisation**
 - Session objective: Highlight innovative examples of valorising aquaculture side streams through practical pilots and commercial initiatives
 - Session format: Mix of short presentations and a panel discussion (with Q&A)
 - Key takeaways: Innovative solutions to valorise aquaculture side streams
 - SESSION 1 PANEL DISCUSSION: Aquaculture circular solutions and side streams valorisation
- **SESSION 2: Stakeholder Support & Consumer Perspectives**
 - Session objective: Explore strategies, recommendations, consumer perspective and regulatory frameworks across countries to enable side stream valorisation
 - Session format: Mix of short presentations and a panel discussion (with Q&A)
 - Key takeaways: Practical recommendations for industry adoption
 - SESSION 2 PANEL DISCUSSION: Harmonizing policies, and practices to encourage innovation
- **SESSION 3: Training and Capacity Building in Circular Economy**
 - Session objective: Focus on skills development and practical knowledge transfer to enhance RAS aquaculture and side stream valorisation
 - Session format: Mix of short presentations and a panel discussion (with Q&A)
 - Key takeaways: Knowledge and practical skills in RAS aquaculture and for converting aquaculture side streams into valuable products
 - SESSION 3 PANEL DISCUSSION: Building skills for circular aquaculture - training needs and practical implementation
- **Networking/ Mini exhibition & "RAS tasting"**

➤ **More on AquaLoop International Conference [agenda](#)**

AQUALOOP PROJECT & AQUALOOP INTERNATIONAL CONFERENCE COMMUNITY

AquaLoop project community

The AquaLoop community brings together a wide and diverse network of actors working to advance sustainable aquaculture. It includes project partners, associated partners, and Advisory Board members, who jointly shape and support the project's direction and outcomes.

The community also connects a broad range of stakeholders such as aquaculture researchers and academics, students, policy, funding, and advisory professionals, aquaculture students, farmers, as well as companies from the feed, biotech, and processing sectors. In addition, it integrates business representatives, NGOs, administrative bodies, and participants from other INTERREG and European initiatives, enabling continuous cross-sectoral and cross-project knowledge exchange.

The AquaLoop LinkedIn group, with **450 members**, further strengthens this community by providing an ongoing platform for communication, collaboration, and dissemination beyond formal project activities.



AquaLoop Interreg SB

To develop, promote, and support circular aquaculture in the South Baltic region for the green transition.

Education Administration Programs · Gdynia, pomorskie · 446 followers · 11-50 employees

Photo 6: AquaLoop Interreg SB LinkedIn (project credit: Basia Dmochowska)

➤ More on AquaLoop:

- [Partners](#)
- [Associated Partners](#)
- [Advisory Board](#)
- [AquaLoop Community – AquaLoop Interreg SB LinkedIn Group](#)



AquaLoop International Conference Participants

As the final event of the INTERREG South Baltic project AquaLoop, the conference brought together more than **70 participants** from across Europe, a high number of aquaculture researchers and academics, policy, funding, and advisory professionals, aquaculture students, aquaculture farmers, feed, biotech, and processing companies.

The event featured presentations from the **AquaLoop project partners, Advisory Board, Associated Partners, and various groups of project's stakeholders:** researchers, students, business representatives, NGOs, and administrative bodies, as well as representatives from other INTERREG and European projects, fostering cross-sectoral, cross-generational, and cross-project discussions.

Participants' distribution

The **participant breakdown** (Figure 1) showed that the AquaLoop International Conference brought together stakeholders from a wide range of sectors across aquaculture.

While researchers and academics represented the largest group (58%), there was also meaningful participation from policy, funding, and advisory professionals (14%), as well as students (12%). In addition, industry stakeholders including farmers, feed/biotech/processing companies, and technology providers were present, contributing practical and commercial perspectives.

This mix of participants highlighted the interdisciplinary nature of the conference, with representation spanning research, policy, education, and industry. Overall, the event provided a platform for exchange between different parts of the aquaculture sector, supporting collaboration and dialogue across disciplines.

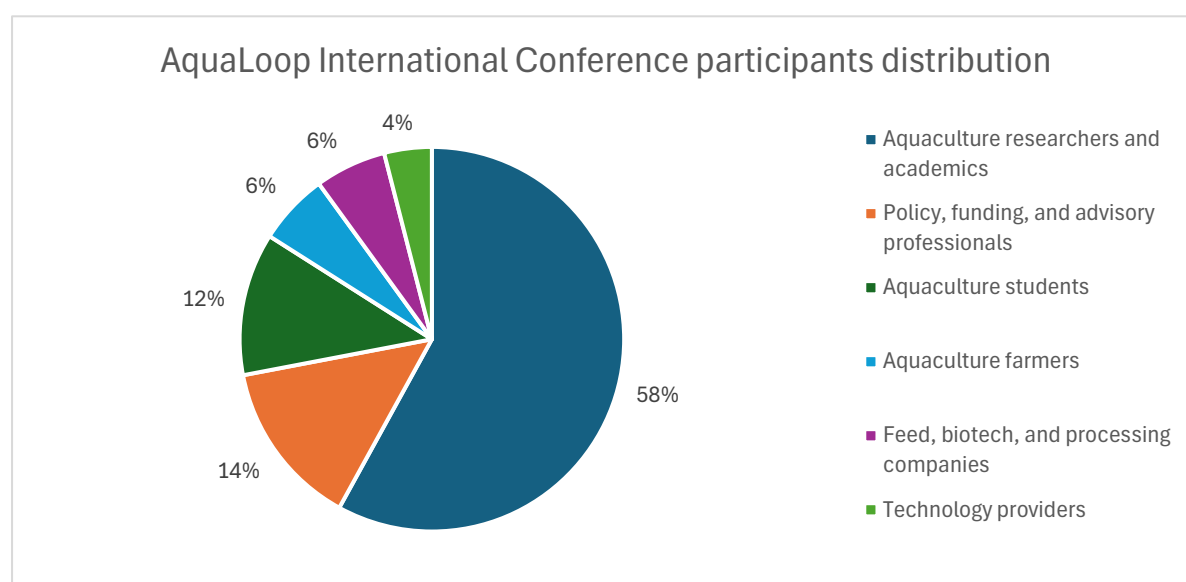


Figure 1: AquaLoop International Conference Participants distribution (SLIDO poll, 50 responses)

Participants' expectations

The results of the responses to the question ***“What are your main expectations from this event?”*** (Figure 2) showed that participants primarily attended the event ***to build connections***, with nearly half (48%) identifying networking and collaboration as their main expectation. This highlights the importance of the conference as a platform for bringing people together and fostering partnerships across the sector.

A significant share of participants (28%) were also interested in ***learning about new technologies and innovative approaches in circular RAS***, indicating strong demand for forward-looking solutions and technical developments. Practical aspects were also relevant, with 14% seeking concrete solutions for nutrient loop closing and by-product valorisation. This suggests an interest in applying circular economy principles in real-world settings.

Overall, the results suggest that the event was expected to be both a space for collaboration and as a source of innovation, with a balance between strategic networking and practical, solution-oriented interests, which closely aligned with the event's initial aims.

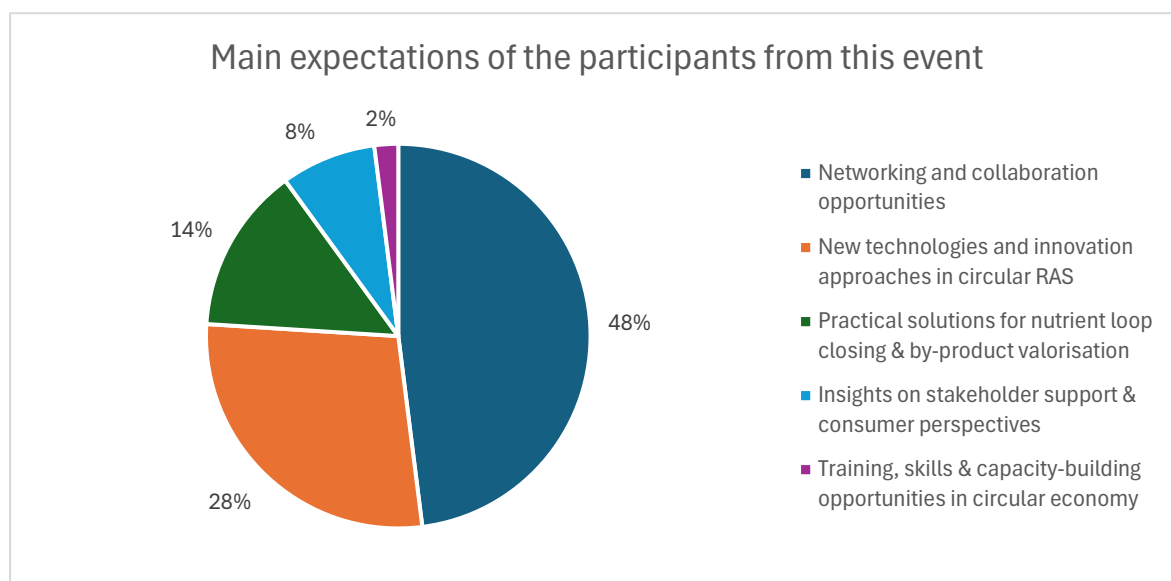


Figure 2: AquaLoop International Conference Participants' expectations (SLIDO poll, 50 responses)

THEMATIC ANALYSIS OF CONFERENCE SESSIONS & FEEDBACK

Opening Session

Keynote speakers of the AquaLoop International Conference provided a broader overview and essential background for the subsequent thematic sessions, highlighting both the urgency of transitioning towards a resource-efficient circular economy and the practical challenges of applying these principles in commercial aquaculture. The presentations addressed the constraints and barriers faced by producers when implementing circular economy approaches, while also underlining the broader need for more sustainable and resource-efficient systems.

These key messages were delivered through the keynote presentations ***“The need for a resource-efficient circular economy – for today’s challenges & tomorrow’s legacy”*** and ***“Challenges and constraints of implementing circular economy into commercial aquaculture production.”***

In addition, the AQUALOOP initiative was presented as a platform to support exchange and cooperation among experts, helping to bridge the gap between concept and practice in circular aquaculture.



Photo 7: Keynote presentations (project credit: Björn Suckow, Harry W. Palm & Adrian Bischoff-Lang)

➤ Opening session presentations:

- Challenges and constraints of implementing circular economy into commercial aquaculture production
- The Need for a Resource-Efficient Circular Economy
- AQUALOOP – Aquaculture expert floor for circular economy practice

Closing the Nutrient Loop & Byproduct Valorisation Session

The first thematic session of the conference focused on innovative approaches to transforming aquaculture waste streams into valuable resources, with a particular emphasis on circular economy solutions such as microalgae cultivation, nutrient recovery, and sludge mitigation. The session highlighted how waste outputs from aquaculture systems can be re-conceptualised as inputs for new production cycles, thereby improving resource efficiency and contributing to more climate-resilient production systems.

This was demonstrated through a series of presentations, including *“Utilization potential of microalgae cultivated in processing water from shrimp recirculating aquaculture systems (RAS)”*, *“By-products characterization and valorisation of African Catfish (Clarias gariepinus Burchell, 1822)”*, *“Crustaceans in multitrophic freshwater RAS for sludge mitigation”*, *“Capturing and valorising freshwater aquaculture waste streams to enhance climate resilience and resource efficiency”*, and *“Valorisation of marine RAS effluents for nutrient recovery and Ulva sp. cultivation”*.

The session concluded with an expert panel discussion titled *“Aquaculture circular solutions and side-stream valorisation”*, which brought together all presenters from the session as well as the keynote speakers, providing a comprehensive platform to reflect on the presented approaches and discuss their practical relevance, scalability, and potential for integration into existing aquaculture systems. The panel enabled an in-depth exchange between experts and participants on key enablers and barriers for implementing circular economy solutions in different production contexts, with particular attention to technological readiness, economic viability, and sector-specific constraints.

This was followed by a participant survey designed to capture stakeholder perspectives on the most applicable valorisation approaches within their respective fields of work, as well as their readiness and willingness to explore or implement such strategies in practice, thereby providing valuable feedback to inform future research and innovation activities.

➤ Session 1 presentations:

- Utilization potential of microalgae cultivated in processing water from shrimp recirculating aquaculture systems (RAS)
- By-products characterization and valorisation of African Catfish (*Clarias gariepinus* Burchell, 1822)
- Crustaceans in multitrophic freshwater RAS for sludge mitigation
- Capturing and valorising freshwater aquaculture waste streams to enhance climate resilience and resource efficiency
- Valorisation of marine RAS effluents for nutrient recovery and *Ulva* sp. cultivation

Valorisation approach feedback analysis

The results of the survey question **“Which valorisation approach presented in Session 1 do you see as most applicable to your own work or region?”** (43 responses) reflect how participants assessed the approaches presented during the session in relation to their own contexts. The highest share of responses (37%) was given to **waste stream capture for resource efficiency**, followed by **by-product valorisation (fish/crustacean components)** at 30%. These were the two most frequently selected options among participants.

Overall, the distribution of responses shows that all approaches presented in Session 1 were considered applicable by at least some participants, with varying levels of relevance depending on their specific work or regional context.

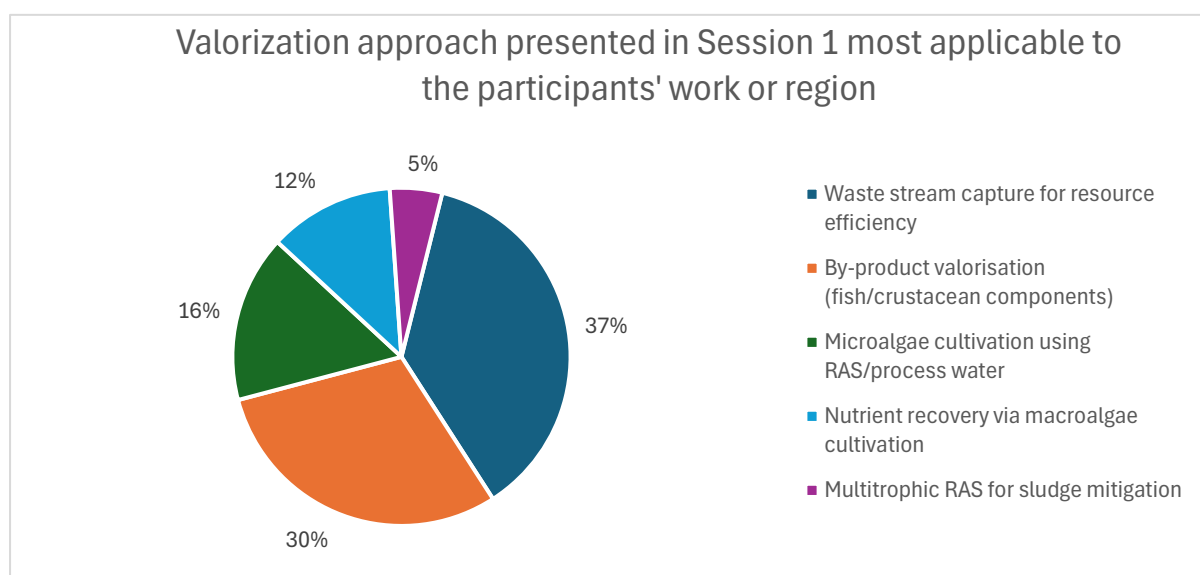


Figure 3: Vaporization approach presented in session 1 most applicable to the participants' work or region (SLIDO poll, 43 responses)

Readiness to explore or apply side- stream valorisation approaches feedback analysis

The results of the survey question **“How ready do you feel to explore or apply side-stream valorisation approaches in your context?”** (Figure 4) suggest, that participants generally perceive themselves as being at an intermediate stage of readiness. The largest group (41%) indicated they are **moderately ready and could start exploring options**, while a further 36% reported being **somewhat ready but in need of more guidance**. Together, these responses show that a clear majority of participants are open to engaging with side-stream valorisation approaches, although many still require additional knowledge, support, or practical direction before moving forward.

A smaller proportion of respondents expressed a higher level of readiness, with 13% stating they are **ready and can see concrete next steps**, and 10% indicating they are **very ready and planning to take action**. Notably, none of the respondents selected **not ready yet**,

suggesting that all participants have at least a basic level of awareness and interest in the topic.

Overall, the results indicate a positive level of engagement with side-stream valorisation approaches among participants, with most positioned in an exploratory phase and a smaller group already approaching implementation.

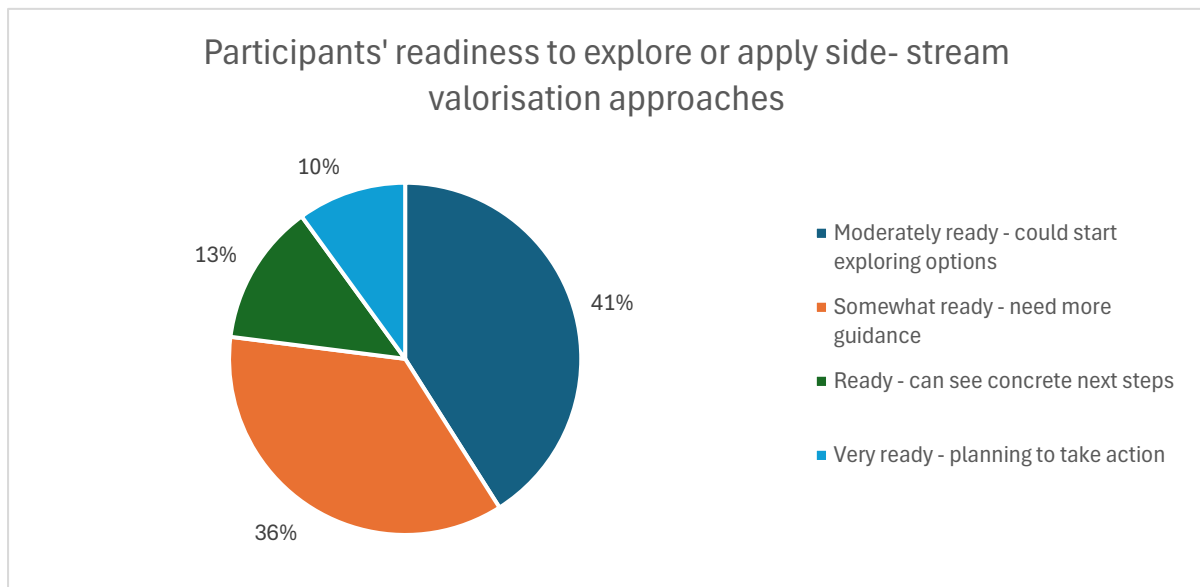


Figure 4: Participants' readiness to explore or apply side-stream valorisation approaches (SLIDO poll, 39 responses)

Stakeholder Support & Consumer Perspective Session

The second session, *Stakeholder Support & Consumer Perspectives*, focused on the enabling environment for circular economy concepts in aquaculture, including policy frameworks, business development strategies, and consumer attitudes. It highlighted how cooperation between producers, academia, and institutions can support the uptake of circular solutions and strengthen the development of the sector. These aspects were addressed through a series of presentations: *“Gårdsfisk – An integrated, land-based circular fish farming – Swedish case and the potential for side-stream utilization”*, *“Transferring the Swedish concept of RAS fish on farms to Denmark – similarities and differences, next steps”*, *“The value of project participation in business development”*, *“The significance of producers associations and cooperation with academia for aquaculture development and support of RAS farming – perspective from the Polish Trout Breeders Association”*, and *“Stakeholder support, knowledge transfer and consumer perception – evidence from Polish aquaculture.”*

Together, these presentations illustrated different dimensions of stakeholder support, from practical farm-level implementation and cross-country knowledge transfer to the role of networks, associations, and projects in fostering innovation and business growth. They also highlighted the importance of consumer awareness and perception in shaping market opportunities for products derived from RAS systems.

The session concluded with an expert panel discussion titled *“Harmonizing policies and practices to encourage innovation”*, which brought together the session speakers to reflect on the presented topics and discuss how policy alignment, institutional cooperation, and knowledge exchange can better support the adoption of circular economy practices. This was followed by a participant survey exploring both the most critical types of stakeholder support needed to scale side-stream valorisation in aquaculture and the main barriers to consumer acceptance of products derived from aquaculture side-streams, providing insight into both supply-side and demand-side challenges.

➤ Session 2 presentations:

- [Gardsfisk - An integrated, land-based circular fish farming – Swedish case and the potential for side-stream utilization](#)
- [Transferring the Swedish concept of RAS fish on farms to Denmark – similarities and differences, next steps](#)
- [The value of project participation in business development](#)
- [The significance of producers associations and cooperation with academia for aquaculture development and support of RAS farming – perspective from the Polish Trout Breeders Association](#)
- [Stakeholder support knowledge transfer and consumer perception- evidence from Polish aquaculture](#)

Stakeholder support most critical for scaling side-stream valorisation in aquaculture feedback analysis

In response to the question, **“Which type of stakeholder support is most critical for scaling side-stream valorisation in aquaculture?”** (Figure 5), a clear majority of respondents (62%) identified **clear and harmonized regulatory frameworks** as the most critical factor. This underscores the central role of regulatory uncertainty and fragmentation as key barriers, including challenges related to approval processes and the classification of side-streams. Secondary importance was attributed to **strong producer associations and industry networks** (18%), suggesting that improved coordination and collective action are necessary to facilitate knowledge exchange, supply chain development, and advocacy efforts. Other factors received comparatively limited attention. Notably, technology provider partnerships were not identified as a barrier, indicating that technological solutions are largely considered mature and accessible.

Overall, the findings suggest that the sector is not constrained by innovation capacity or financing, but rather by system-level and regulatory barriers. Addressing these will be essential to unlock large-scale implementation.

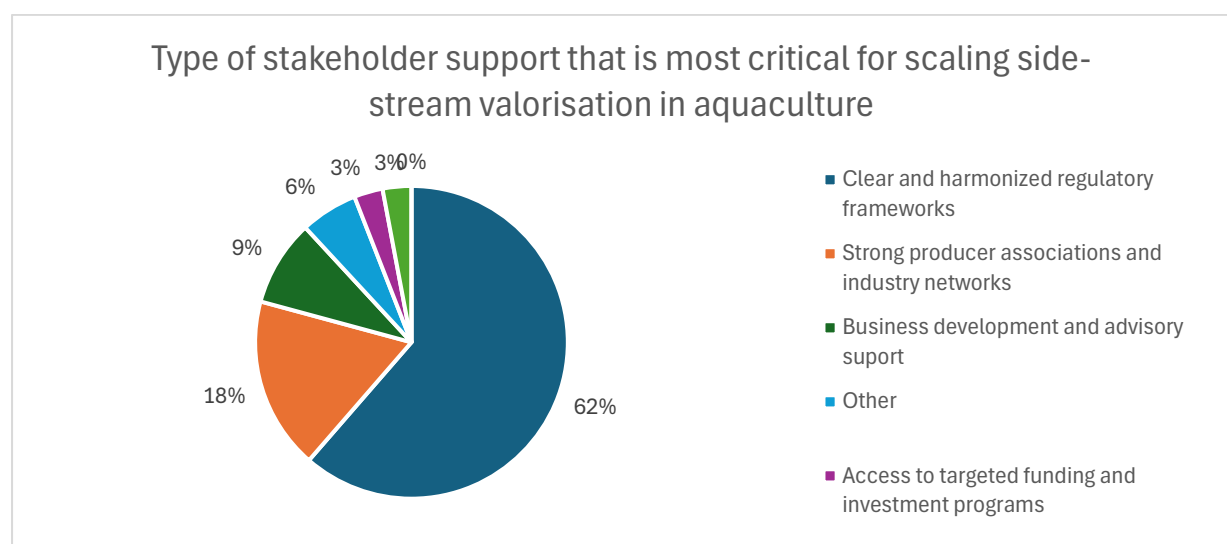


Figure 5: Type of stakeholder support that is most critical for scaling side-stream valorisation in aquaculture (SLIDO poll, 34 responses)

Barrier to consumer acceptance of products from aquaculture side-streams feedback analysis

In response to the question, **“What is the biggest barrier to consumer acceptance of products from aquaculture side-streams?”** (Figure 6), the most frequently identified barrier was lack of **consumer awareness and understanding** (47%). This indicates that limited knowledge about the nature, benefits, and safety of side-stream-derived products remains the primary constraint to market uptake. **Price competitiveness** compared to conventional products was the second most cited barrier (24%), suggesting that even where awareness exists, cost remains a significant factor influencing consumer choice. Perceptual challenges also play an important role. **Negative perceptions of “waste-based” products** accounted for 18% of responses, highlighting the impact of terminology

and consumer attitudes toward products derived from by-products. Concerns related to safety and quality were mentioned by 9% of respondents, indicating a lower but still relevant level of consumer trust issues. In contrast, limited market availability was seen as a minor constraint, while insufficient labeling and transparency and other factors were not identified as significant barriers.

Overall, the findings suggest that consumer acceptance is primarily constrained by knowledge gaps and perception issues, rather than structural market limitations. Addressing these barriers will require targeted communication strategies, consumer education, and positioning efforts to improve understanding and trust.

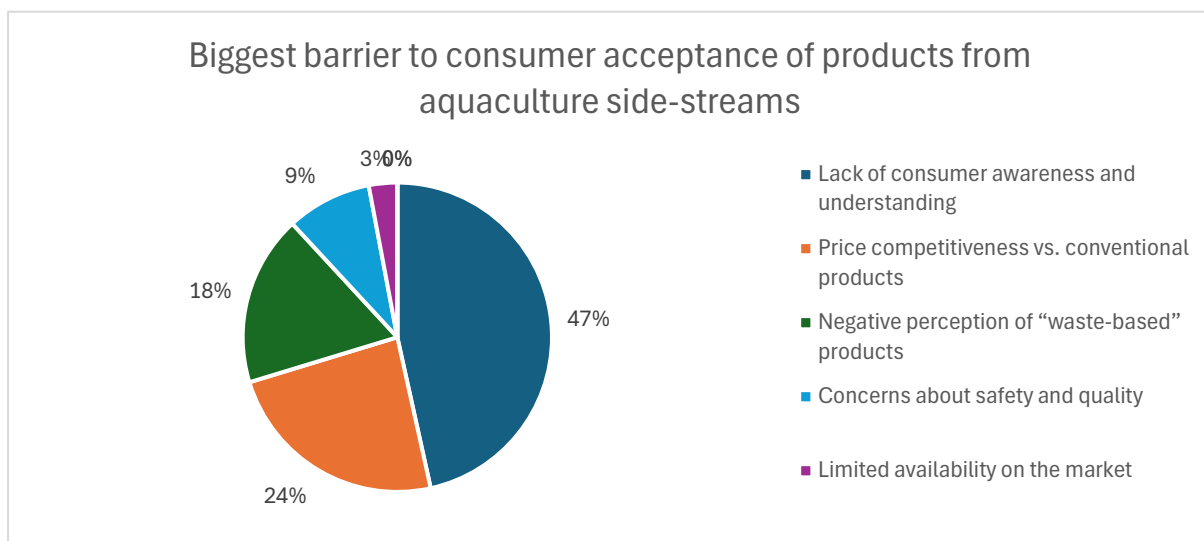


Figure 6: Type of stakeholder support that is most critical for scaling side-stream valorisation in aquaculture (SLIDO poll, 34 responses)

Training and Capacity Building in the Circular Economy Session

The final session addressed education and skills development, highlighting AquaLoop's efforts to support capacity building for a sustainable and circular aquaculture sector. The session featured four presentations: *"AquaLoop cross-border student exchange program," "Developing skills for the circular economy – a PhD student perspective based on AquaLoop and other circular economy projects," "Employer's perspective – skills in demand,"* and *"BBT MOOC: Advancing Skills in Aquaculture and Other Blue Bioeconomy Sectors."*

The session concluded with an expert panel discussion titled *"Building skills for circular aquaculture – training needs and practical implementation."* This was followed by a participant survey examining the key skills needed to strengthen circular RAS aquaculture and side-stream valorisation, as well as the most effective training formats for capacity building. The final session addressed education and skills development, highlighting AquaLoop's training initiatives, student exchange program, and the competencies needed for the future of sustainable aquaculture.

➤ Session 3 presentations:

- [AquaLoop cross-border student exchange program](#)
- [Developing skills for the circular economy – a PhD student perspective based on AquaLoop and other circular economy projects](#)
- [Training and Capacity Building in Circular Economy](#)
- [BBT MOOC Advancing Skills in aquaculture and other blue bioeconomy](#)

Skills Needed to Strengthen Circular RAS Aquaculture and Side-Stream Valorisation feedback analysis

In response to the question, “**Which skills are most needed to strengthen circular RAS aquaculture and side-stream valorisation?**” (Figure 7), a clear majority of respondents (73%) identified **cross-disciplinary technical skills combining biology, engineering, and data analysis** as the most critical competence. This highlights the increasing complexity of circular RAS systems and the need for integrated, systems-based expertise.

Business and entrepreneurship skills ranked a distant second (13%), indicating a secondary need to support commercialization, innovation uptake, and market development. Other responses were limited. Notably, side-stream processing and product development skills and circular economy and resource efficiency knowledge were not identified as key gaps.

Overall, the results suggest that the main skills challenge lies not in specialized or isolated competencies, but in the ability to integrate knowledge across disciplines. This reinforces the need for interdisciplinary education and training approaches to support the effective implementation and scaling of circular aquaculture systems.

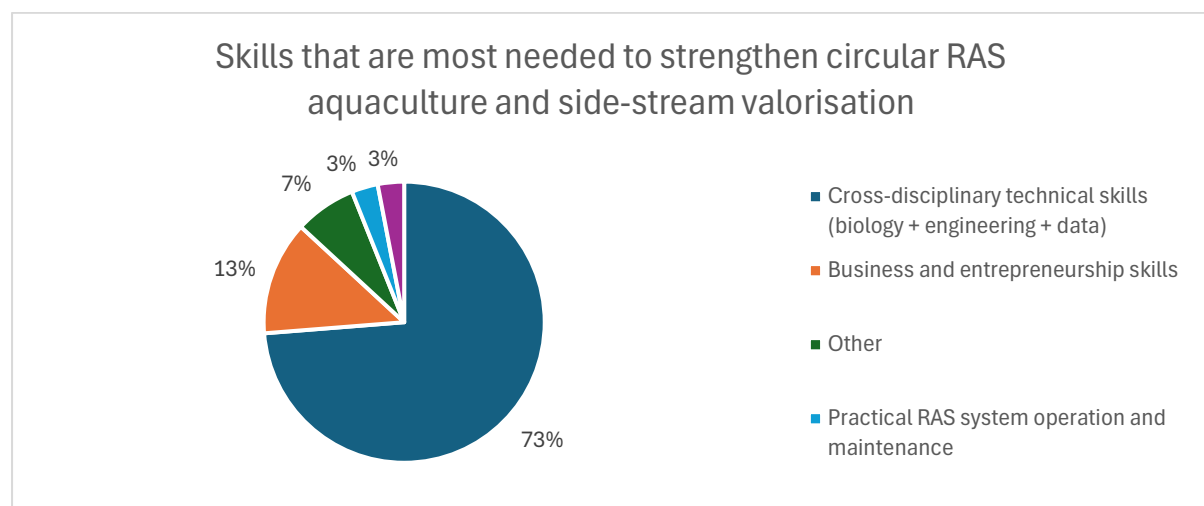


Figure 7: Skills that are most needed to strengthen circular RAS aquaculture and side-stream valorisation (SLIDO poll, 30 responses)

Training formats most effective for building capacity in circular aquaculture feedback analysis

In response to the question, “**Which training formats are most effective for building capacity in circular aquaculture?**” (Figure 8), a majority of respondents (53%) identified **hands-on practical training and pilot facilities** as the most effective format. This underscores the importance of experiential learning and direct engagement with real-world systems in developing the competencies required for circular aquaculture.

Industry placements and internships (22%) and **joint academia-industry training programs** (19%) were also considered important, highlighting the value of close

collaboration between education providers and industry in ensuring relevance and applicability of skills. Notably, cross-border student exchange programs, online courses and MOOCs, and short professional certification courses were not perceived as effective primary formats for capacity building in this context.

Overall, the findings indicate a strong preference for practice-oriented and industry-integrated training approaches, while more theoretical or remote learning formats are viewed as less impactful for developing the skills needed in circular aquaculture.

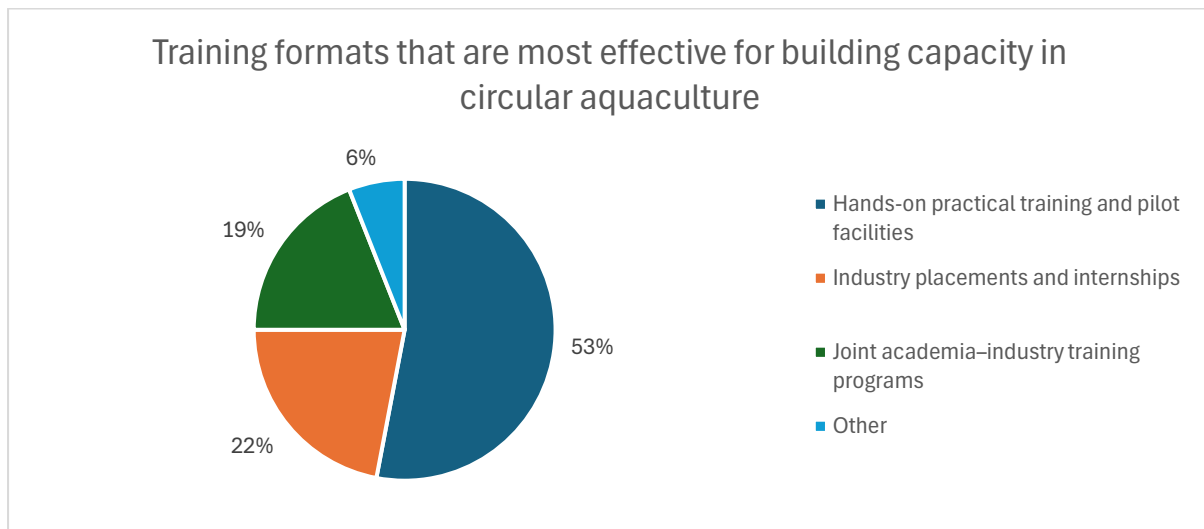


Figure 8: Training formats most effective for building capacity in circular aquaculture (SLIDO poll, 32 responses)

Beyond the program

Beyond the formal program of the conference, the conference offered valuable opportunities for networking, partnership building, and increasing visibility within an international community focused on sustainable aquaculture. Participants engaged in informal discussions during breaks, explored a **posters mini exhibition**, and took part in a unique **“RAS tasting”** experience, further strengthening connections across sectors.

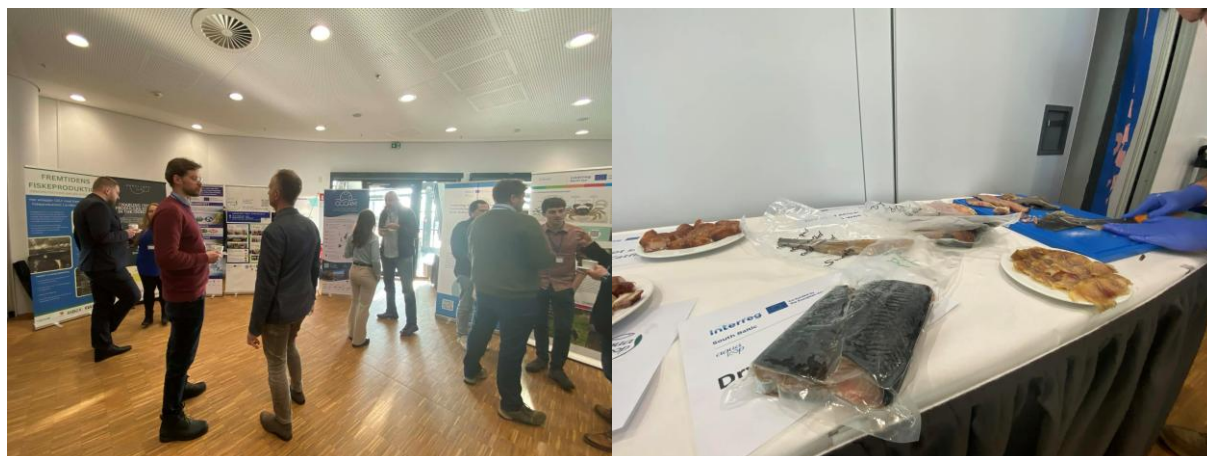


Photo 8: Posters mini exhibition & RAS tasting (photo credit: Basia Dmochowska)

Study visits

On 26 February 2026, selected participants continued the exchange during dedicated study visits to leading facilities in Bremerhaven. These included the **Centre of Aquaculture Research at the Alfred Wegener Institute (AWI) and the Technology Transfer Center (ttz)**. Both centers provide a modern infrastructure with closed recirculation aquaculture systems (RAS) supporting freshwater, brackish, and marine organisms, including fish, crustaceans, algae, and other species. The facilities are highly customizable and supported by greenhouses, culture rooms, and laboratories to meet diverse research requirements. Technology Transfer Center (ttz) is an innovative provider of research services and operates in the field of application-oriented research and development, with an international team working in the areas of food, environment and health. The study visit focused on ttz facilities, with particular emphasis on fish feed development, formulation, and manufacturing.

The visits provided hands-on insights into advanced RAS infrastructure, aquaculture research, and innovations such as fish feed development and applied solutions within the blue bioeconomy.

➤ Study visits' facilities:

- [Centre of Aquaculture Research at the Alfred Wegener Institute \(AWI\) study visit report](#)
- [Technology Transfer Center \(ttz\) study visit report](#)

Event satisfaction

In response to the question, **“Were your expectations from this event met?”** (Figure 9), the results indicate an exceptionally high level of participant satisfaction. A vast majority of respondents (96%) stated that their expectations were **fully met**, while the remaining 4% indicated that their expectations were **mostly met**. No respondents selected “partly met” or “not sufficiently met.”

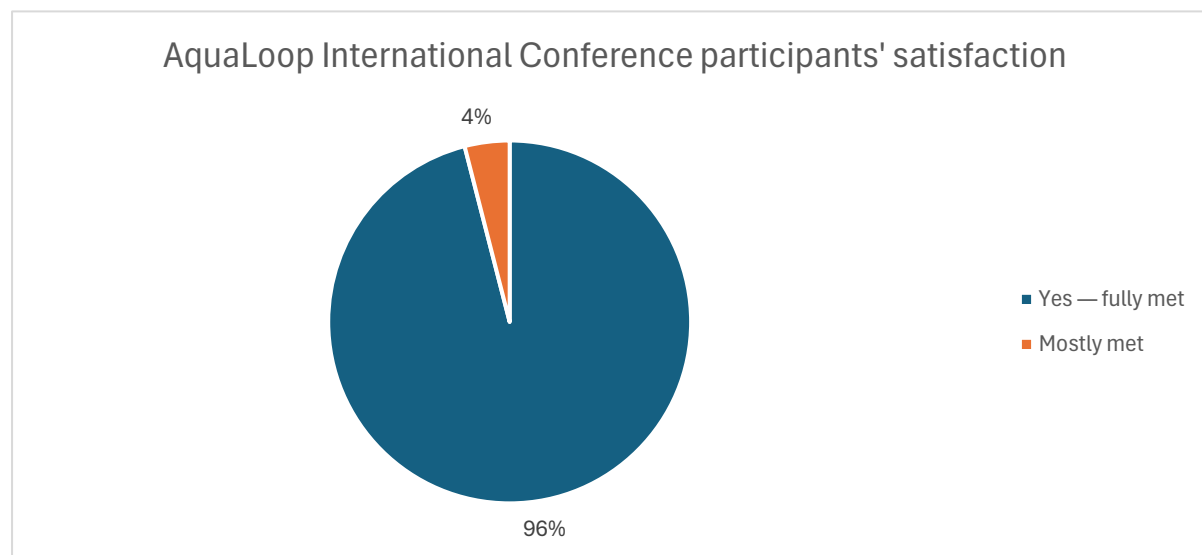


Figure 9: Event satisfaction (SLIDO poll, 27 responses)

Project & Aquaculture Community Recommended Future Focus

For the question **“What should this project/community focus on next?”** (Figure 10), the results showed a clear prioritization of system-level enablers over technical development or capacity building. The leading priorities mentioned were **industry-research partnerships** (31%) and **regulatory and policy support** (27%), which together accounted for 58% of all responses. This indicates that respondents primarily see the main constraint not in individual technologies, but in the structures that connect stakeholders and enable innovation to progress particularly collaboration mechanisms and supportive policy frameworks.

The remaining responses were more distributed across implementation and scaling concerns. Funding and investment access (12%) is the next most important area, while practical pilot projects and demonstrations, market development for side-stream products, and technology development in circular RAS each received 8%. Together, these suggested a secondary focus on translating research into deployment and improving commercial viability, but without a single dominant technical or market direction.

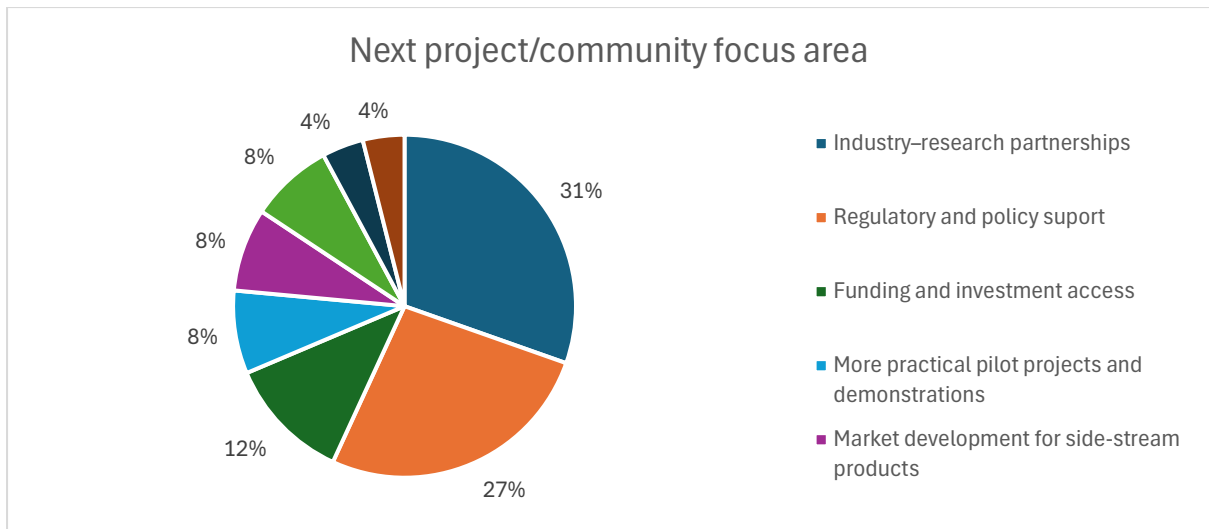


Figure 10: Next project and aquaculture community focus area (SLIDO poll, 27 responses)

CONCLUSION & RECOMMENDATIONS

The AQUALOOP International Conference represented a significant milestone as the final event of the AquaLoop project, delivered in collaboration with seven international partners and providing a success story for the South Baltic region and beyond.

The conference clearly demonstrated the value of interdisciplinary exchange, successfully bringing together stakeholders from research, policy, education, and industry. It provided a highly effective platform for collaboration and strategic networking, fully aligned with its intended objectives. Participants emphasized the importance of diverse valorization approaches and noted that the sector remains largely in an exploratory phase, with gradual progress toward practical implementation.

The findings indicate that system-level challenges outweigh technological or financial constraints. In particular, regulatory uncertainty and fragmentation were identified as the primary barriers to scaling side-stream valorisation. At the same time, limited consumer acceptance, driven by gaps in awareness and perception highlights the need for more effective communication strategies and trust-building efforts.

Capacity-building needs were identified as inherently interdisciplinary, requiring a combination of technical, biological, and data-driven expertise. Stakeholders expressed a strong preference for hands-on, practice-oriented learning formats, such as pilot facilities, industry placements, and enhanced collaboration between academia and industry.

Survey results further suggest that future efforts should prioritize strengthening industry–research partnerships and improving regulatory and policy frameworks, which were identified as the most critical next steps for the community. Secondary priorities include improving access to funding, supporting pilot implementation, fostering market development for side-stream products, and advancing circular RAS technologies, reflecting a broader need to enable scaling and practical deployment.