On Thursday 5th June 2025, the Townhall event entitled "Optimising the Potential of Aquatic Food Systems - Science Needs for a Blue Transformation" was held at the One Ocean Science Congress in Nice, France. From this event, we bring the following message:

Aquatic foods offer unique potential to address hunger and malnutrition—contributing with high nutrient density, relatively low environmental impact, and vital livelihood support. However, to realize this potential, a Blue Transformation that leverages sound science well-connected to policy needs is needed.

Key takeaway 1: Science must demonstrate the comparative benefits of aquatic food systems: While valuable science on aquatic food systems exists, it is often not well-connected to metrics used by policymakers to inform decisions. There is a critical evidence gap in demonstrating the return on investment in aquatic food systems compared to other food systems. To unlock political support and financing, science must generate robust, comparable evidence that positions aquatic food systems as a smart, climate-resilient, cost-effective, high-impact investment, within broader food and development strategies.

Key takeaway 2: Aquatic food systems science must better engage in a food systems approach: Despite their importance, aquatic foods remain under-represented in global food systems science. Research is often siloed, missing connections between disciplines and other systems. A more integrated, food systems-based approach is essential to reflect the full role of aquatic foods in sustainable, equitable food systems. This will generate more coherent evidence and strengthen the science-policy nexus by aligning research with policy needs and development goals.

Key takeaway 3: Science must be grounded in equity and justice to be optimised effectively and sustainably: Transforming aquatic food systems requires timely, inclusive research, co-developed with diverse stakeholders to ensure solutions are fair, avoid unintended harm, and empower marginalized communities. Building partnerships and trust through co-produced knowledge and data are critical to achieving equitable and sustainable outcomes.

Key takeaway 4: Science must drive nutrition-focused aquatic food systems governance: To realize the nutritional potential of aquatic foods, science must go beyond a focus on a few species of high economic value species and generate evidence on the broad diversity of aquatic foods. This includes documenting nutrient profiles, developing nutrition-sensitive products, and effectively communicating findings—ensuring nutrition is embedded in ocean and food systems governance. Importantly, science must be relevant at the local level, capturing environmental factors, community needs and cultural preferences for sustainable nutrition outcomes.

Key takeaway 5: Science must drive sustainable, nutrition-sensitive, and equitable aquaculture: Aquaculture can play a transformative role in food and nutrition security, but only if science supports sustainable diversification, climate resilience, and nutrient-rich species selection, while addressing health risks.