

## **Leveraging scientific knowledge in aquaculture for entrepreneurship - Case studies at Universiti Malaysia Sabah**

### **ABSTRACT**

Aquaculture has emerged as an important sector for addressing the challenge of global food security. In order for it to play this role, certain supporting policies and mechanisms are necessary. Because aquaculture is a subject where there is a convergence of science, art and business, this has a better chance of knowledge-based entrepreneurship. With the demand of seafood steadily rising, the market potential is high to strengthen the business activity related to aquaculture. Aquaculture can be conducted in a wide variety of aquatic environments, whether on land or in the sea, using different methods to produce many kinds of plants and animals for human consumption. This sort of diversity offers entrepreneurship of different types and scales. Not many subjects have as much advantages for entrepreneurship as aquaculture. Government demands that universities in Malaysia should impart entrepreneurship education to students and researchers to commercialize their findings. Aquaculture is one of the niche areas of Universiti Malaysia Sabah (UMS) and thus, it becomes a priority to implement the national policies pertaining to this sector. Steps taken by the University to demonstrate our response through specific case studies are explained in this paper. Borneo Marine Research Institute developed aquaculture as its flagship program of education and research. This included building of infrastructure and expertise. UMS is the only university in the country with two on-campus hatcheries (for finfish and shellfish) to offer education, training and research. Entrepreneurship is an integral part of the undergraduate program. Worthwhile research carried out yielded results of great significance in promoting aquaculture industry. Selection of need-based research topics and problem-solving approaches applied to produce tangible outcomes are highlighted here. The paper also elaborates what it takes to be an aquaculture entrepreneur and constraints of applying industrial model of aquaculture under the academic culture of institutions of higher education. It is evident from an in-depth analysis of the scenario that academic entrepreneurship requires a radical departure from the past practices and a paradigm shift to successfully unify the art, science and business of aquaculture to achieve seafood sustainability and security.