SECTION 1.
ECONOMIC THEORY, MACRO- AND REGIONAL ECONOMY

ADVANCING AQUACULTURE INNOVATION:
PROGRAM ORGANIZATIONAL AND ECONOMIC MEASURES IN UKRAINE

Transitioning to innovative aquaculture systems requires well-founded propositions, new skills, and continuous knowledge enhancement. However, the benefits provided by this approach make it a pivotal step in the advancement of aquaculture and ensuring a stable supply of high-quality fish products. Implementing and developing such innovations necessitates significant investments, which can be effectively regulated through a system of organizational and economic measures.

In the initial stage of organizational and economic measures for the development of aquaculture innovations, considerable emphasis is placed on establishing a legal framework and standardization. The value chain (VC) system approach is employed, focusing on institutional structures and value chain management formed by stakeholders at regional, national, and local levels. In this regard, the state plays a key role in creating a transparent and stable business environment to engage businesses, professional organizations, and citizens in participation [1].

The second stage may involve spatial planning of circular economy models in aquaculture, defined as a key aspect for engaging local communities, requiring the development of a state development program or spatial planning plan in accordance with Directive 2014/89/EU on marine spatial planning [2].

The third stage in the development of aquaculture innovations involves increasing awareness among government agencies, aquaculture enterprises, and farmers regarding the benefits of these systems and their importance for promoting a circular economy in agriculture. To achieve this, it is proposed to develop an information strategy that includes a detailed description of the roles, benefits, nature, content, criteria, and methods of implementing aquaculture innovations, including recirculating systems.

The fourth stage of aquaculture sector development, considering innovative trends, involves systematic monitoring and adaptation of educational programs to modern requirements to support new fish species and marine aquaculture development. To achieve these goals, collaboration between professional training organizations and training companies is essential to provide relevant and well-founded specialized knowledge to participants. The application of open innovation (OI) approach, namely exploring the interaction and collaboration among various sources of knowledge and technologies within and outside firms [3].

The fifth stage includes the development of financial mechanisms and expanding opportunities. The support and development strategy for aquaculture and mariculture complexes may include credit lines, partial compensation of construction and reconstruction costs, compensation for the volume of production, as well as tax incentives for new aqua and mariculture farms.
The sixth stage of aquaculture innovation development aims to create incentives for investment and the use of aquaculture innovations among enterprises and farmers. This approach is a systemic innovation (SI) approach that considers numerous interactions between different participants to create innovations, aiming to understand the dynamics and processes behind changes, analyzing them as a co-evolutionary process between society and technologies [4].

Utilizing diverse perspectives on innovation can contribute to a deeper understanding of their implementation and development in the aquaculture sector and facilitate effective resolution of complex issues. The development of the aquaculture sector can benefit from the complementary use of different approaches to innovation and the adoption of an approach that combines technological design with stimulating systemic changes for technology implementation. The goal is to understand and address complex problems, which include not only technical but also social, ecological, and institutional aspects of innovation in the aquaculture sector.

References: