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The „One Health” Concept, the Result of the Application of Bio - Economic and Ethical Management in the Development of a Business in the Fisheries Sector

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Abstract

Bio-economic and ethical management in the development of a business in the fisheries sector in the context of a “One Health” aims to implement the objectives of the Europe 2020 Strategy in terms of exploiting the potential of aquaculture in Romania and the European Union. Aquaculture plays an important role both in Romania and in the European Union in terms of developing a business in this sector, taking into account the ethical component but also the potential of food resources. In order to ensure an adequate level of health in the sector, it is necessary to ensure an adequate management that uses the potential of fishery resources in accordance with the objectives of food security and sustainable development of the European strategy.

Keywords: *Health, ethics, sustainability, food security, growth and employment.*

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1. Introduction

The development of a business in the fisheries sector will contribute to the increase of production and the development of the fish trade at national level. The immediate effects relate to stimulating business in rolling areas, regional growth and will reduce dependence on fish import (Ionita-Predescu et al., 2021). Taking into account the provisions of the European Commission on cooperation with the Member States, several strategic guidelines for aquaculture and fisheries have been introduced to facilitate access to the potential of the Union's aquaculture sector. At the same time, these guidelines are intended to provide recommendations for addressing the main obstacles in the fisheries sector. The recommendations refer mainly to management (planning, bureaucracy reduction, resource management) and marketing (market organization, labelling and visibility) aspects and should be used in an adapted legislative framework. Fish farming and aquaculture is dependent on the One Health concept for both the quality and health of marine and freshwater waters. Also, environmental legislation of the European Parliament and the Council of the European Union (2000; 2008; 2011) on the use of fish in aquaculture and aquaculture species locally absent species - ensures that these preconditions are met (Dinulescu et al., 2018). Considering the European Union legislation that establishes high standards in terms of “one health”, environmental sustainability, sustainable development, and consumer protection are standards that must be respected and ethical principles in fishing and aquaculture activities both in Romania and in the member countries of the European Union. These have implications for local producers related to the management of bio-economic costs, but which can turn into a competitive advantage given that the consumer's attention is drawn to quality. Quality can be identified both in the local market but also in national and international markets with implications for accepting aquaculture as a sustainable food source.

The Fish farming, of all the branches of agriculture, has registered the most spectacular leaps, and the progresses in this field are more and more efficient. The dizzying increase in the consumption of aquatic products has led to a reconsideration of this field, due both to the fact that it is a source of animal protein, and especially to the beneficial role that the consumption of these products has on human health.

Fish are aquatic creatures consumed by humans since their appearance on Earth. Thus, in order to catch fish and know their particularities, people have had to know, over time, the areas where they live, their habits, the species that are edible, the methods of capture, and the

possible dangers to which humans are exposed in contact with some of aquatic life (Sanchez-Jerez et al., 2016).

Fish farming is the basic branch of aquaculture that covers a fully sustainable cycle from the time fish are raised under controlled conditions in which differentiated technologies are applied to the harvesting and recovery of fish for human consumption. Fish farming can be practiced in natural pools (rivers, streams, lakes, seas and oceans) or in artificial pools (ponds, reservoirs, ponds, canals, etc.) (Żarski et al., 2015).

The predominant species in aquaculture production in recent years are represented by carp and Asian cyprinids, in proportion of over 70% of total production (Kestemont, 1995). Apart from these, the carp and trout have a high share, of over 10% of the total aquaculture production, and the other species present in the productions made in aquaculture have a weight below 5% (Vartolomei, 2008).

2. Problem Statement

Fish farming and aquaculture are increasingly contributing to world aquatic food production, as exploitation of most wild fish stocks is no longer sustainable. Aquaculture is becoming a core activity in many regions and is influencing regional economic growth. At the same time, the resizing of aquaculture will allow the repopulation of some fish areas, for which the current exploitation limits are already exceeded. (Sanchez-Jerez et al., 2016).

European aquaculture offers good quality products, strictly complying with the standards of environmental sustainability, animal health and consumer protection. The available data show that in the European Union there is a growing gap between the consumption of fish and other foods of marine origin, on the one hand, and the volume of quantities made by the fisheries sector, on the other hand, estimated at over 8 million tonnes. (Peck et al., 2020).

According to the market study for the fishing sector in Romania, at the level of 2005, aquaculture in Romania was carried out on an area of about 100,025 ha of fish farms, structured in 84,525 ha of farms (84.5%) and 15,500 ha of nurseries (15.5%). Practically, almost all of this area was used by cyprinid farms, except for an area of 25 ha which consisted of salmon farms (Neculita & Moga, 2015).

In 2013, from the statistical data of the Romanian National Agency for Fisheries and Aquaculture, Dr. finds that a number of 748 aquaculture licenses were activated for a total area of 102,356 ha. The approved area is represented by 93.5% for fish farming (95,682 ha) and 6.5% nurseries (6,673

ha) (Ministry of Agriculture and Rural Development, 2007). The analysis of data from the last 9 years shows an increase in the share of fishing farms to the detriment of nurseries, given that the area devoted to aquaculture was similar.

According to the Register of Aquaculture Units (RAU), a number of 518 entities are identified that are registered in the aquaculture sector, being allocated a number of 575 aquaculture farms located in lakes, ponds or in predefined areas (Ministry of Agriculture and Rural Development, 2004). Regarding the typology of licenses granted, out of the 518 entities registered in RAU only 175 entities hold both nursery licenses and breeding licenses while 19 entities hold only one nursery license and the remaining 324 entities hold only one breeding licenses.

The aquaculture process takes place exclusively in fresh water on Romanian territory. This process is characterized by two directions of technological development:

- intensive eco-economic growth (especially of salmonids);
- extensive and semi-intensive bio-economic growth of cyprinids in polyculture, in terrestrial basins (ponds and lakes).

“ONE HEALTH” - Fish farming and aquaculture involves the close link between the 6 main areas of a society (Figure 1), namely health, bio-economy, welfare, agriculture, education and research, having a key role in ensuring an integrated and integrative health between sectors.

Figure 1. Main Areas of a society and influence to ONE HEALTH

Source: Author’s research

3. Aims of the research

The aim of the research is to identify support models to achieve a growth of the fishing sector in the medium and long term. It will also identify management models that will lead to the creation of new jobs in coastal areas. At the same time, emphasis is placed on the need to efficiently and effectively supply all EU citizens with fish in a healthy and sustainable way by implementing and supporting the “ONE HEALTH” concept.

By applying bio-economic and ethical management in the field of aquaculture, it contributes more and more to the world production of aquatic food, given that, in the case of most wild fish stocks, the limits of sustainable exploitation are in present almost touched or even outdated. In Romania, as well as in the member states of the European Union, aquaculture is an important economic activity in ensuring good quality products, strictly respecting the standards of a correct welfare of the population.

The national development and expansion of modern trade has significantly contributed to the growth of the market, by opening hypermarkets, but also by the importance given to fishery products and the creation of special and very attractive presentation areas for consumers. Also, another cause of market growth is the increase of the range of fishery products sold in Romania.

The market for fish and fish products is a growing business, supported by several factors:

- on the one hand domestic producers try to face external competition and use modern methods and techniques to promote traditional products, looking for niche markets,
- on the other hand, distributors (fishermen, hypermarkets, cash & carry division) have created special districts for fishery products and promote a healthy lifestyle through various advertising campaigns, and customers have become more receptive to messages about choosing a lifestyle healthy and balanced.

Romanians are much more attentive to what they buy, where they come from, they read the labels carefully, they choose dishes that are ready to be cleaned and well packaged, which keep them fresh and nutritious. Frozen fish is the best-selling on the Romanian market, because there is no volume needed to cover consumption only through the fresh version but also due to the lower price (Neculita & Moga, 2015). Once the fish market reaches a degree of maturity, the switch between fresh and frozen fish will be inevitable in favour of fresh fish. The total fish market (fresh and frozen)

is expected to continue to grow by about 25-30% each year. In this sense, the fresh fish market will move away from the frozen fish market.

4. Research Methods

Consumer knowledge is an extremely necessary condition for success in the market. Whenever there are several companies in a given market that sell or buy the same goods, there will be a certain rivalry between them (Stegarioiu et al., 2020). This rivalry is all the stronger the slower the growth of the market, the greater the number of competitors and the differences between these companies (in terms of size, product characteristics, access to resources, level of costs, etc.) are smaller.

Competition is also a risk because it is very receptive to strategies launched on the market (Henderson, 1982). Renowned strategist Bruce Henderson mentioned that any strategy depends on competition. His statement was also demonstrated by other practitioners, who in turn said that if you want to be successful in the market with a new product or service, you must know well the situation in this market and the competition, then determine the advantages of your company. you have compared to competitors.

5. Findings

The SWOT analysis performed based on the concept „ONE HEALTH”, as a result of the application of bio-economic and ethical management in the development of a business in the fisheries sector, aims to define the area, on the socio-economic and environmental context, considering existing policies, community perspective and stakeholder consultations:

5.1. SWOT Strengths

- the existence on the Romanian territory of some important surfaces arranged for the practice of aquaculture;
- long tradition in fishing, with impact on local and regional communities;
- aquaculture creates products that contribute to human health and food safety;
- the existence of research infrastructure in the field of fisheries and the efficient management of research staff;

- the existence of the Market Study at national level;
- the existence of the Multiannual National Strategic Plan for Aquaculture.

5.2. SWOT Deficiencies

- insufficiently developed specific infrastructure;
- poor market organization in terms of the producer;
- processor-trader chain;
- high cost of stocking aquaculture.

5.3. SWOT Opportunities

- a growing demand for fish consumption, especially on the occasion of religious holidays or traditional events;
- the existence of production capacities with potential for modernization and expansion;
- low level of employment, availability of labor and competitive price in rural areas.

5.4. SWOT Threats

- import dependence in the case of granulated feed for aquaculture;
- climate change;
- losses of aquaculture production as a result of the application of environmental regulations;
- competition from aquaculture products from other states;
- losses of aquaculture production due to natural disasters or meteorological phenomena;
- diseases (Schäperclaus, 1992);
- high production costs and cumbersome procedures in obtaining permits / authorizations, which reduce the interest for new investments.

6. Conclusions

The year 2013 was marked by the long-awaited reform of the Common Fisheries Policy (CFP). Reforms in the field of aquaculture must present the strongest possible action plan that takes into account the objectives of the European strategy and emphasizes social, economic and environmental sustainability. Achieving European goals will support the

overall long-term growth of the sector. The resizing of the fisheries sector will lead to the creation of new jobs, regional development and an improvement in the fish trade. The ultimate goal is to provide the citizens of the European Union with fish in a healthy and sustainable way.

Simplification of administrative procedures. Romania, at present, with regard to administrative procedures in general and those related to the aquaculture sector in particular, needs to go through a series of steps in order to simplify them. In order to simplify all administrative procedures, it is first necessary to reform the fisheries sector so that all its constituent elements are coordinated on the basis of the same administrative principles, under a single legislation and administration, thus reducing deadlines which play an important role in the administrative process. The legal framework needs to be harmonized in order to avoid all conflicts and, in particular, overlaps in the administrative act.

The reform of the Common Fisheries Policy aims to fully exploit the potential of aquaculture in the European Union, in line with the objectives of the Europe 2020 Strategy (European Commission - EC, 2010) but in the perspective of the Europe 2030 Strategy (EC, 2019). An effective and efficient aquaculture will at the same time create the premises for a sustainable development, a food security and an increase of the human resource involved in the sector.

Aquaculture must play an increasingly important role at EU level in terms of its potential for food resources. This potential must be exploited in the context of a growing demand for safe food, and financing the sector with European funds will generate economic growth and sustainable development for many regions. Sustainable development can also be ensured through coordinated land use planning for aquaculture growth.

The coordinated arrangement of the national territory of Romania must necessarily integrate the needs of ensuring the sustainable development of aquaculture.

The identification, mapping and remediation of areas at national level by productivity classes for freshwater / marine aquaculture will contribute to increasing aquaculture production and increasing environmental benefits and services, including the protection of biodiversity.

Defining an improved framework for aquaculture and resizing the number of fish farms will help increase fish production and ensure EU-level demand. This mechanism will minimize the level of imports of fish from outside the EU, will allow the organization of the European market in better conditions and will lead to regional economic growth and sustainable development.

The European Commission's recommendations on aquaculture are intended to underpin strategies and solutions to meet current challenges. At the same time, future guidelines are defined to improve the approach of the sector such as reducing bureaucracy, efficient planning, marketing strategies and management policies, in which it could help the market to unlock the potential of the European Union's aquaculture sector. Aquaculture is dependent on both the quality and health of marine and freshwater.

The sustainable development of the fisheries sector can only be achieved if the competitive advantages of European market operators are effectively exploited. One of the objectives of the European strategy can be achieved by promoting a level playing field for these operators, which will lead to regional economic growth.

High standards of bio-economic and ethical management in the development of a fish and aquaculture business are other strategies that can improve fish farming and ensure food security for the European market. The same standards are applicable to Romanian aquaculture.

Also, information and awareness about the origin of fish food resources will lead to an increase in demand for European aquaculture production. The CMO's recommendations on the differentiated labelling of aquaculture products is a first step in this direction. Licensing and downsizing of the number of fish farms will lead to a reduction in the supply circuits for fish products which will lead to regional development and access to a sustainable food resource.

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