



**BLACK SEA ADVISORY COUNCIL
/BISAC/**

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MINUTES

From a meeting of Focus Group 3 of BISAC

23 June 2022

Topic: Marine Aquaculture

On 23 June, 2022 a meeting of Focus Group 3 of BISAC was held via video link through ZOOM in "Astor Garden" Hotel, Sv. Sv. Konstantin and Elena, Varna Town, on the following topic: "Marine Aquaculture"

The meeting was attended by Mrs. Yordanka Chobanova - DG Maritime Affairs and Fisheries of the EC, Dr. Victor Nita - "Grigore Antipa" Institute, Constanta, Dr. Magda Nenciu "Grigore Antipa" Institute, Constanta, Mrs. Stefka Nikolova EAFA, Assoc. Dr. Galin Nikolov – Thracian University, Mrs. Petya Bakalova – EAFA, Mr. Bogdan Ghinea - Ministry of Territorial Development - Romania, Mr. Catalin Platon - ROMFISH organization - member of the Aquaculture Advisory Council, Mr. Alexandru Simeonov – NAFA, Constanta.

The meeting was opened by the Chairman of BISAC – Mr. Daniel Buhai, who explained that fishing organizations realize that marine aquaculture is the future of the sector. BISAC has been considering the topic since 2021, and for the future it will also be advocated in the Working Program.

Mrs. Mihaela Mirea: Aquaculture is a very important sector, and BISAC should continue working on this topic, started in 2021.

It is followed by a presentation of Assoc. Prof. Dr. Galin Nikolov from Thracian University on the topic: "Marine aquaculture - prospects for development in Bulgaria". In future, marine aquaculture will play an increasingly important role in the global food supply. Marine aquaculture offers many environmental benefits compared to other forms of livestock farming. Marine aquaculture operations generally have a smaller carbon footprint and use less land and fresh water than beef, pork and poultry production. Seafood produced from marine aquaculture is also a healthy source of omega-3 fatty acids. For Bulgaria, the natural Black Sea conditions do not provide well-protected areas from waves such as fjords and

bays strongly cut into the land, which necessitates the use of storm-resistant facilities. This undoubtedly makes marine aquaculture production more expensive. Another factor with negative effect is strong anthropogenic pollution, which is expressed in significant eutrophication and the appearance of algal blooms, and hence in phenomena, such as oxygen deficiency. High summer temperatures in the region of the Black Sea coast also limit the cultivation of many fish species.

The first scientific data about marine aquaculture production in Bulgaria is from the Fish Resources Institute - Varna, from the 1970s. After preliminary experimental work under aquarium conditions at the Fish Resources Institute, a number of experiments on fattening of rainbow trout in mesh cages in Sozopol Bay under semi-industrial conditions have been performed. The aim of the experimentation is to create bio techniques for breeding rainbow trout in net cages in the conditions of the Bulgarian Black Sea coast and in basins on land fed with sea water. In this connection, the opportunities for obtaining commodity production from one-summer and one-year rainbow trout, fattened during different periods of time, related to the seasonal hydrological and hydro-meteorological characteristics, were studied. The goal is to establish which period of the year is the most profitable for fattening, to determine the rate of growth and the optimal weight of stocking material that will be used when stocking the cages during the separate fattening periods.

At the moment, the only species cultivated in our marine aquaculture is the black mussel (*Mytilus galloprovincialis*). Attempts to cultivate black mussel started in the 1980s with the construction of the first collection plants. After a break of several decades, in 2007, 15 collection farms were built with a total production of about 300 tons. Today, black mussel production exceeds 3,000 tons and represents about 30% of all aquaculture production in the country. The Bulgarian water areas, which are now used for growing black mussels, are around St. Ivan island - Sozopol Bay, near Pomorie, around Maslen Cape and near Primorsko (Perla), around Kaliakra Cape (Zelenka and Dalboka localities), near Kavarna. According to IARA data, there is one oyster farm registered. All these regions are partially protected and installations and farms are vulnerable in case of high waves.

In Bulgaria, mussel farms are being built, where the technology of rope collectors, suspended on floats, is mainly used. An exception is the technology where the floats themselves are used for collectors, attached to concrete anchors at the bottom. The advantages of float-collectors consist in combining the functions of floats with those of collectors, which leads to technological conveniences and to stable position of the extended float-collectors in water, protecting them from the effects of turbulence and underwater currents, as well as to the easy removal of each separate collector and the seizure of the products. The advantages of anchors are that they provide habitats for bottom fish, crustaceans, molluscs and algae with their inner surfaces, thus contributing to the increase of biodiversity and the self-purification capacity of the sea.

The number of registered mussel farms in Bulgaria is growing annually. In 2020, their number reached 32. Unfortunately, a small part of them function - only 50%. A significant number of farms are completely abandoned, but without the removal of floats and collectors, which, in addition not only has a negative aesthetic effect, but also causes serious

dissatisfaction among local fishing communities, which are prevented from using the waters of the abandoned mussel farms, and pose a danger to vessels, too.

Also of great importance is constructing demonstration centers whose objectives are to increase confidence in the existing potential for aquaculture development in the Black Sea. These centers are useful tools for local and national administrations to evaluate new projects, taking into account the differences: degree of aquaculture development, environmental conditions and characteristics, expertise and experience available in countries. The Central Fisheries Scientific Institute in Trabzon, Turkey and the National Institute of Marine Research and Development (NIMRD) - "Grigore Antipa" in Constanta, Romania have provided infrastructure and laboratories to build aquaculture demonstration centers for knowledge extension and technology exchange. A similar center is to be built in Bulgaria, which will be the first center of this type with experimental cages in the sea.

Regarding the legal framework, the presentation has not described the administrative requirements and obstacles for establishing an aquaculture farm in the Black Sea. There are eight administrations to go through, in order to register such a farm. The operators have to comply with six laws, each of which has by-laws, i.e. the registration of an aquaculture farm requires a lot of efforts on behalf of the future producer, going through various institutions and it takes minimum six months.

Comments follow:

Mr. Yordan Gospodinov: the administrative burden in Bulgaria when registering an aquaculture farm is huge. Besides all the laws that must be observed, the future operator of such a farm must also comply with the naval forces of the country, because every farm affects shipping. It is high time that Bulgaria and Romania have an electronic government, so that the procedure for submitting documents is simplified.

Ms. Lyubov Georgieva asks a question to Associate Professor Nikolov: in the presentation it is said that there are aquaculture farms that no longer function. Is there a legal norm that can force them to clear their spaces of anchors?

Prof. Galin Nikolov: there is a legal norm, but it is difficult to find the owners. In every single permit issued by the Ministry of Environment and Water, it is written that after the permit expires, or after completion of the farm work, the owner is obliged to remove the facilities. A large part of these farms have been built according to the old Operative Program, but when the five-year monitoring period expires, the objects cease functioning, i.e. they have been made for the purpose to absorb some funds.

Mrs. Lyubov Georgieva: we are left with the impression that the regulations do not guarantee the implementation of the permit and work must be done in this direction.

Mr. Daniel Buhai: he asks what the costs in Bulgaria per square meter for renting marine aquaculture area in Bulgaria are and how they are calculated. In Romania, extremely high amounts have been set and no one is interested in renting sea areas.

Assoc. Prof. Galin Nikolov: He cannot answer this question, although he has searched for fee regulations in Internet. As far as he knows from producers in Bulgaria, the fee is not small, but it is bearable

Mr. Yordan Gospodinov: BISAC has also invited the Ministry of Agriculture to this meeting, but unfortunately, there is no their representative to take part on the issues.

Associate Professor Galin Nikolov: Another major problem facing the development of marine aquaculture is the lack of trained personnel in Bulgaria. In the Universities of the country, there is no specialty for training personnel for aquaculture cultivation. I want to ask the Romanian representatives how the matter stands in Romania.

Dr. Victor Nita: There is no such specialty in the universities in Romania either, but in the faculties of fisheries in Bucharest and Galati there are modules for Aquaculture.

The next is a presentation by Mrs. Mihaela Mirea on the topic: "WG 2022 - Aquaculture"; Brief overview of the work of the BISAC focus group, dedicated to Marine Aquaculture in 2021 and the submitted recommendation on this topic, which states that the procedure for obtaining permits for construction of a Black Sea aquaculture farm should be simplified, as well as one-stop service for applicants and obtaining permits should be introduced. The recommendation also states the need to build the legal framework in Romania, regarding marine aquaculture, as well as to conduct a study by the Romanian authorities together with scientific institutes which are the most suitable areas along the Romanian Black Sea coast, related to growing aquaculture. Last but not least, the legislation between Bulgaria and Romania regarding aquaculture in the Black Sea, should be harmonized, so that fair competition exists.

The presentation states that the EU imports over 70% of the seafood consumed, and EU aquaculture consists of 2% of global aquaculture. 25% of the seafood comes from non-EU aquaculture and only 10% - from EU aquaculture. 30% of the Bulgarian aquaculture is represented by shellfish farming, while in Romania it can be said that marine aquaculture does not exist. Trials have been made for a turbot farm and for two mussel farms. But there is no financial support offered by the state, only a few types of compensation, which is insufficient.

The conclusions of the presentation are, as follows:

- Access to space and water should be facilitated, in order for aquaculture in the EU to continue growing;
- Reducing unnecessary bureaucracy for permitting new aquaculture farms;
- Further limiting the impact on aquaculture, as well as promoting the types of aquaculture that are most beneficial for the environment and climate;

- Improving animal health and welfare; ensuring that aquaculture adapts to climate change and contributes to climate change mitigation;
- Providing more and better information to consumers and citizens about aquaculture in the EU;
- Promoting research, innovation and development of relevant skills;
- Promoting diversification of production, in order to increase the supply of aquaculture products, especially new promising species in the EU, such as algae or marine invertebrates (including molluscs or other invertebrates);

Comments follow:

Mr. Yordan Gospodinov: regarding the humane treatment of animals, this requires a lot of energy, funds and administrative capacity; how much this is necessary for cold-blooded animals, such as marine species, is not known. The humane treatment of animals is practice imposed by the EC and in Bulgaria it is applied to warm-blooded species. The goal is to kill the animals humanely so that the meat quality does not change due to stress. There is need for scientific research on how stress affects fish, shellfish and bivalves and whether meat quality changes. Only after such scientific research we can talk about the need to invest funds, to train people, to make control checks monitoring whether the fish is landed in a humane way on the deck and if the shellfish is killed in a humane way. Aquatic animals are cold-blooded and have a different cycle of substances.

Mrs. Mihaela Mirea: If this topic is interesting to the members of BISAC, it can be included in the future working program.

Mrs. Dimitrina Kostova: the European Black Sea Fishermen's Association has been asked by an organization from the United Kingdom, which is conducting a study, related to the humane treatment of fish in Bulgaria. Is there any expertise on this issue at the moment?

The next is a presentation by Mr. Catalin Platon, who represents the Romfish Association - a member of the Aquaculture Advisory Council, on the topic: "Marine Aquaculture". The legal terms for marine aquaculture are described in EU Directives. These are Directive 2008/56/EC of the European Parliament and the one of the Council from 17 June 2008, establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive), Art.1, which states that the Marine Strategies apply an ecosystem approach to the management of human activities, ensuring that the total pressure of these activities is within limits, compatible with achieving good environmental status and that the ability of marine ecosystems to cope with human-induced changes while enabling the sustainable use of marine products and services by current and future generations is not threatened. Directive 2014/89/EU of the European Parliament and the one of the Council from 23 July 2014, for establishing a framework for maritime spatial planning, Art.5 states that when developing and implementing maritime spatial planning, Member States shall take into account economic, social and environmental aspects in order to support sustainable development and growth in the maritime sector by applying an ecosystem approach and promoting the coexistence of relevant activities and uses.

A condition for the development of aquaculture is the zoning of marine areas and it is better to indicate from the very beginning which areas are suitable for aquaculture.

The presentation shows some examples of the prices for renting marine areas in different EU countries. For example, in France, for cultivating oysters (catch, breeding, storage) in the Mediterranean region, the tariffs are as follows:

- Cadastral area considered "very good" harvest per hectare: 209 €;
- Cadastral area considered a "good" harvest per hectare: 139 €;
- Cadastral area considered an "average" harvest per hectare: 104 €;
- For mussel farming (catch, breeding, storage): long line farming: offset by length, per linear meter: 0.10 €; per surface concession - hectare: 99 €;

The individual, applying for a concession must prove his professional capacity by holding a diploma or official certificate including a curriculum at least equal in level and content to that of a professional bachelor's degree in marine culture and appearing in a list drawn up by Minister responsible for Marine Fisheries and Marine Aquaculture, after consultation with the Ministers responsible for National Education, Agricultural Education, Maritime Education and Professional Training. When the application for a concession is submitted by a legal entity under public law or by a professional organization, they undertake to manage the concession granted to them, under the conditions corresponding to the relevant law. In France, concessions are issued for a maximum period of thirty-five years. The French system for leasing marine areas for aquaculture is very well developed, but it is also very bureaucratic. Also, in the country, there is a National Committee for breeding molluscs and shellfish, which is a semi-public body and no one who is not a member of this committee can be engaged with marine aquaculture. This committee is under the supervision of the Ministry of Agriculture and Food and the Ministry of the Sea. The Committee proposes, participates or performs actions, related to the management of the molluscs market; shoreline protection, water quality protection; sanitary standards; social and fiscal legislation for molluscs' farmers; scientific and technical research; product promotion; education and training; inter-professional information; relations with the media and the public in general.

Regarding the Aquaculture Advisory Council, it has 3 main focus groups - WG for fish; WG for molluscs and crustaceans and WG for horizontal aspects. The Aquaculture Advisory Council was established in 2017 and has developed 27 recommendations up to now.

Discussions follow:

Mrs. Michaela Mirea: The administration in Bulgaria and Romania has not taken into account the recommendation of BISAC, related to marine aquaculture from 2021. There is a need for the EC to push the member states to better resolve and simplify the administrative burden regarding aquaculture farming in Black Sea.

Mr. Catalin Platon: the Romanian legislation should separate Aquaculture from fishing, because the Aquaculture is an "agricultural" activity, while fishing is a gathering activity.

The next is a presentation by Dr. Victor Nita - Coordinator of the Marine Resources Department at "Grigore Antipa" Institute, on the topic: "Demonstration of a small mussel farm, components, installation and operation";

The presentation demonstrates clearly the technological process for cultivation of Black Sea mussels. There are not many suitable places for such farms along the Romanian coast because there are no bays. A mussel farm has been built in Adjija, and the water in this region is categorized as Class A. Visually, in several videos, the BISAC members learned about the technologies used in cultivating black mussels and the methods of harvesting.

Discussions follow:

Mrs. Mihaela Mirea: Regarding the permits issued by the National Fisheries Agency in Romania / NAFA / no distinction is made between marine and inland aquaculture.

Mr. Catalin Platon: NAFA issues permits under a uniform procedure, related to aquaculture, but it is very long. The conditions for obtaining a license are tied to many other documents that are practically redundant.

Dr. Victor Nita adds that regarding the requirement to have a permit from the Ministry of the Environment, it is necessary, because sensitive species such as algae remain on the territory of a mussels' farm. Even though the mussels are said to purify the water, waste collects underneath them, so it is a good idea to have permits from the Environment Agency as well.

Mr. Yordan Gospodinov: In general, aquaculture can be defined much simpler, namely as breeding of aquatic organisms in controlled conditions. It is important to think in the direction of simplifying the procedure for obtaining permits. It is obvious that there are serious problems regarding aquaculture in both countries and they are the following:

- 1) Lack of trained personnel to work in the Aquaculture sector;
- 2) Large and unnecessary administrative burden when issuing permits;
- 3) Related to Bulgaria - it is necessary to build a demonstration center for aquaculture, following the example of Romania and Turkey.

Mrs. Yordanka Chobanova: the topic of Aquaculture is one of the EC priorities, especially in the context of the geopolitical crisis, as well as the one related to food supplies. Aquaculture has enormous potential. In the GFCM, the discussion on the topic is very serious and the new strategy is aimed at the sustainable development of aquaculture. On 7 June, a meeting was held in Morocco within the framework of the GFCM, where a detailed

review of all reports and recommendations on the subject was made for the period from 2019 to 2022. It is also high time to build the demonstration center in Bulgaria, as well. For EC, it is very important not only to outline the problems, but also to see the solutions that BISAC would propose.

Mrs. Mihaela Mirea: the result from the work of BISAC Focus Group will be the preparation of recommendations on the topic, some of which will certainly be repeated with those from last year. At the same time, there is a need for the Administration in both member states to support this sector.

Next is closing the meeting.

The Minutes of the meeting was made by: Mrs. Elena Peneva

Chairman of BISAC: Mr. Daniel Buhai