



**BLACK SEA ADVISORY COUNCIL/BISAC/  
CONSILIUL CONSULTATIV PENTRU MAREA  
NEAGRA**

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## MINUTES

### From an extraordinary meeting of the BISAC Working Group

**October 19, 2021**

**Subject: The complicated situation with the stranded sea vessel "Vera Su" near Kamen Bryag, Bulgaria and the presence of cargo which represents a potential danger to the marine environment.**

On October 19, 2021, a meeting of an extraordinary working group formed by BSAC was held via video link in connection with the complicated situation with the stranded sea vessel "Vera Su" near Kamen Bryag and the presence of cargo that poses a potential danger to the marine environment.

The meeting was attended by members and the Secretariat of BISAC, as well as Mr. Galin Nikolov - Executive Agency for Fisheries and Aquaculture /EAFA/, Burgas, Mrs. Mihaela Velinova from Ministry of Agriculture, Food and Forestry /MAFF/, Mrs. Tsvetana Belomacheva - MAFF, Assoc. Prof. Dr. Nikolay Valchev - Director of the Institute of Oceanology, Varna, Assoc. Prof. Dr. Violin Raykov - Institute of Oceanology /IO/, Varna, Mrs. Mariela Pavlova - Sunny Beach AD, Mr. Konstantin Petrov - General Fisheries Commission for the Mediterranean /GFCM/, Mr. Lazar Getskovski - external expert in loading and unloading activities.

The meeting was opened by Mr. Yordan Gospodinov, who introduced the participants in the meeting. He specified that an invitation for the meeting was also sent to the Executive Director of the Maritime Administration, to the Executive Director of the Bulgarian Food Safety Agency, to the Long-distance Sailing Captain /LDSC/ Bogdan Bogdanov from the Bulgarian Maritime Chamber, and to the LDSC Rumen Georgiev, to the Ministry of Transport and to the Ministry of Environment and Water/MoEW/, of which, unfortunately, there are no representatives, and they would give more accurate information about the condition of the ship and the cargo of ammonium nitrate in it.

The meeting aims to hear the opinion of the state administration, scientists, representatives of fisheries and environmental organizations in connection with the situation.

Assoc. Prof. Dr. Nikolay Valchev explained that the Institute of Oceanology Varna has been involved in connection with the stranded ship from the very beginning. Many of his colleagues gave interviews to the media and were asked to prepare an opinion on the proposed 4 options for unloading the cargo, namely:

- Release of cargo in small quantities and concentrations in the area of the accident;
- Leakage of cargo due to open hatches in the area of the Yailata reserve;
- Discharge or leakage of cargo as a result of breakage of the ship's hull;
- Transfer of cargo to specialized vessels and controlled discharges overboard over a 12-mile zone at depths of not less than 50 m.

In this regard, the Institute of Oceanology /IO/, Varna has prepared a long opinion, which was submitted to the Basin Directorate, which requested it on behalf of the Ministry of Environment and Water /MoEW/, and sent to the Ministry and to the Maritime Administration of Varna. This opinion is structured in such a way as to raise the problem of where in the world such pollution is registered and what would be the immediate as well as the delayed effect of them. Ammonia is a waste product of metabolism in organisms, in this case it is ammonium nitrate, which is a fertilizer and when dissolved in seawater, ammonium ions are formed, of which 10% are toxic. It is also a breeding ground for phytoplankton development. However, nitrogen pollution suppresses those phytoplankton species, which are a much better nutrient base for zooplankton and other phytoplankton species are developing in their place, which replace the valuable species used by zooplankton. They could bloom, and the primary production they produce will not be able to be assimilated by zooplankton, which increases the risk of phytoplankton death and sedimentation. At the bottom of the sea rotting processes begin to decompose it and it is possible to get hypoxia and anoxia, which means a serious lack of oxygen.

Mr. Yordan Gospodinov asks the question whether this pollution, given that the entire cargo of the ship falls and decomposes in the sea, can affect a large area? Because small-scale fishermen are worried about whether this would pollute the sea and whether it would affect their livelihood. Although as of today the Bulgarian government is taking measures to unload this fertilizer, regardless of its condition.

Assoc. Prof. Dr. Nikolay Valchev - it is difficult to make a forecast, because a lot depends on whether this pollution will happen all at once, or gradually and in what quantities and in what area it will fall, due to sea currents. The main Black Sea current is predominant, which in the winter season is from north to south and in recent days its speed was 50 cm/sec., which would mean that it can affect quite large areas. It is possible to reach the central parts of the shelf and even the coast, but these are only assumptions. To calculate exactly requires a very detailed modeling, with well-defined initial conditions, and for the time remaining to respond could hardly be done. Regarding the fish that are now in this area and are preparing for migration, their path passes exactly through the stream of current which has the highest concentration of nitrogen pollution. This can lead to poisoning. In conclusion, Assoc. Prof. Valchev clarified that the opinion of scientists from the Institute, whose main concern is to preserve the purity of the Black Sea, dumping the cargo of the ship in the water basin is unacceptable. In the event of a sudden influx of salt water into the ship, this fertilizer hardens and this makes it very difficult to unload, and it is also difficult to

say how the processes of dissolution and entry of the substance into the seawater will take place.

Assoc. Prof. Dr. Violin Raykov added that the ammonium ions that are obtained after the dissolution of fertilizer in water are extremely harmful to organisms, especially those who have an attached lifestyle, and for the young forms – - the larvae, which are also at the bottom. Urea, unlike nitrate, does not dissolve instantly in water, there is a period in which it falls to the bottom and there is a longer release of ammonium ions. As for migratory fish - yes, it could affect them, but to a lesser extent because they are fast-moving organisms and have an instinct to avoid dangers. In any case, what is happening can be called an ecological catastrophe, because this fertilizer is an external agent that is not inherent in the marine environment and unloading actions must be implemented as soon as possible. This situation does not only affect the area where Vera Su is stuck, because the currents are very strong and in the direction north - south.

Assoc. Prof. Dr. Galin Nikolov explained that NAFA is ready to introduce, but only if necessary, a temporary ban on fishing. This is not necessary at this stage. It is very important, among what is published in the media and to prevent the dissemination of false information and "false news" which would prevent people from buying fish.

Mr. Yordan Gospodinov expressed the opinion that fish cannot be compromised to such an extent that it becomes dangerous for consumption. Moreover, it became clear that the fish will not stay in a contaminated area and feed on ammonium nitrate.

Mrs. Mihaela Velinova said that the MAFF monitors the whole process, but does not participate in the established headquarters, which directly monitors everything that happens around "Vera Su". There is little information reaching the MAFF, unfortunately there are no participants from the MoEW and the Basin Directorate, because they could share more accurate information about the monitoring they perform.

Mr. Konstantin Petrov expressed the opinion that the organization of this meeting is important in order to shed light on what is happening with the ship. FAO colleagues from Ukraine are also interested in the course of events. For the General Fisheries Commission for the Mediterranean /GFCM/, as the organization directly responsible for fisheries management throughout the Black Sea basin and adopting measures to protect fish stocks, it is important to inform neighboring countries as well, and to see if the situation will have an impact on fishing.

Mr. Yordan Gospodinov explained that BISAC also monitors everything from the media and the purpose of the meeting is to obtain additional details. According to information from Mr. Nelko Yordanov from the Local Fisheries Initiative Group, the state has taken unloading measures and there are restrictions on access to the ship.

Mr. Kiril Zheglev, as a fisherman, expressed concern about what is happening to the stranded sea vessel and hopes that there will be no consequences for the industry. Clarify once again how important it is to prevent the spread of false information to the public that fish is dangerous to eat and that this will further shrink the market. He hopes that the authorities will use the good weather in the coming days and take action to unloading the ship.

Mr. Yordan Gospodinov added that so far the BISAC has not received information that there is a change in the quality of fish or the amount of catches. Bad weather over the past week has hampered both fishing and the actions of unloading Vera Su. As a consequence of the amount of fertilizer fallen in the Black Sea, more intensive flowering of plankton can be expected in the spring, which can be favorable for the development of mussels.

Mr. Marian Payu asked to find out what is the current state of urea in the ship, how it can be unloaded and why Bulgaria has not asked for external assistance from neighboring countries. The sinking of the ship is not a good option for the environment.

Mr. Yordan Gospodinov explained to the Romanian participants in the meeting that the Bulgarian government had taken measures to unload the ship's cargo, but the technology used proved to be unsuccessful. According to information from the media, three barges have been ordered from Italy, which have already arrived in Varna and today they will be transported to the ship and the cargo will be unloaded on them, which is in bulk and not hardened because it is assumed that part of it is flooded and must be pumped with pumps. Until now, the weather was bad and the ship was stuck in the rocks and it was impossible to approach. In this regard, BSAC has invited external experts dealing with loading and unloading activities to give an opinion on how unloading at sea and on land could take place. Such an expert is Mr. Lazar Getskovski.

Mr. Lazar Getzkovski - the options for unloading specifically for this stranded ship are unloading at sea and unloading on land could take place also. As for unloading on land, there must be coordination with the MoEW, because the territory is protected and the terrain is difficult. In the past few days, when there was no access to the ship by sea, it was appropriate to check the option of unloading on land. The first step that needs to be taken is to see what the condition of the load is, because depending on its humidity it changes, and this leads to a change in the ways of unloading. If in the beginning it was possible to unload more than 90% in bulk, now no one knows in what form it is. If it has hardened or liquefied, unloading becomes much more complicated. What has been understood by the media is that the cargo will be pumped and then brought into a tanker, and then it is not clear whether there will be controlled dumping or storage somewhere.

Mr. Yordan Gospodinov - BISAC could hardly solve this case, but it is important to clarify the situation and explain to the people that if adequate actions are taken by the state and use the good time to be able to unload some quantities, there will be no negative consequences for the environment. Again, according to media reports, it is known that the ship's fuel has been drained. As for the mussel plantations in the region, they are not worried, because they believe that the concentration of nitrogen in the water will be very low and will be blurred, and may even have a beneficial effect on the growth of mussels. Loading and unloading companies could directly offer their services to the government to help in the emergency situation created.

Mrs. Mihaela Mirea said that in Romania in the fall of 2019 a ship ran aground in the port of Media, and subsequently sank with a cargo of more than 14 thousand sheep. Initially, attempts were made to get the animals alive, but the number of live animals taken out was small. Attempts were then made to pull the ship out of the water for four months. In the case of Vera Su, it is important to remove the cargo as soon as possible, because for any amount of fertilizer that enters the marine environment, it will not be clear what will

happen and how it will affect marine life in the area. It may appear after a few months. As the representatives of the IO said, it could lead to hypoxia and mass extinction of species.

Assoc. Prof. Dr. Nikolay Valchev added that the opinion of mussel producers that increased amounts of ammonium nitrate can lead to an increase in the core of the mussels is so, but on the other hand toxic effects have been reported because mussels are sensitive to ammonia. These toxic effects can lead to reduced opening of the shells for breathing and feeding, impaired secretion of byssus - the fibers with which they attach, as well as depletion of lipid and carbohydrate stores leading to metabolic changes and death. These physiological effects can lead to reduced nutrition, reproduction and survival, which in turn leads to a reduction in mussel populations. In other words, it is important in what concentration the pollutant will reach the respective farms. At lower concentrations it is possible to have a somewhat positive effect, but at higher concentrations negative effects are also possible.

Mrs. Mihaela Velinova explained that active activities are currently underway to unload the ship, and favorable weather is expected in the coming days. The government has a plan to unload the liquefied cargo and the solid cargo. What needs to be emphasized is that the quality of Black Sea fish should not be compromised in any way due to incorrect information.

Next: closing the meeting.

The minutes of the meeting were kept by: Mrs. Elena Peneva

Chairman of BISAC: Mr. Yordan Gospodinov