

## PRESS RELEASE

### TUDAV SEA SNOT (MUCILAGE) UPDATE

**Sea snot first appeared in the Sea of Marmara in the 80's, and then reappeared in 2007, 2008 and 2009 and relatively disappeared. However, it has reappeared in April. There has never been such a vast amount in the region and it has expanded rapidly until the early July. Even though, it is mainly the presence of the phytoplankton *Phaeocystis pouchetii* (Prymnesiophyceae) that has formed this phenomenon, the species *Skeletonema costatum*, *Cylindrotheca closterium*, *Thalassiosira rotula* (Bacillariophyceae), and *Gonyaulax fragilis* (Dinophyceae) are also present.**

The impact of sea snot can be seen on the marine biodiversity in the Western Black Sea, Marmara and Northern Aegean Sea. The snot has started to break up, rot and has descended to the benthos, which is endangering the life below water. The death of several species can be observed in the benthos.

Alongside the danger to the marine biodiversity, the snot has caused socio-economic ramifications. Citizens stopped consuming fish because of this phenomenon and the fishing industry is suffering a significant loss. Furthermore, the visual and the odour pollution has slowed down tourism in the Sea of Marmara.

The fight against the snot continues with the action plan drafted on 8<sup>th</sup> June. Among the main goals of this action plan, announced by the Minister of Environment and Urbanization Murat Kurum, are: to declare the Sea of Marmara as a marine protected area, to take preventive measures with 24/7 observation, to spot and clean all ghost nets, to adopt zero-waste practices, to use organic cleaning products, to prevent discharge and to form a Coordination Board.

The full action plan:

1. In order to reduce pollution in the Marmara region and to carry out monitoring studies; Coordination Board composed of the Ministry of Environment and Urbanization, relevant institutions and organizations, universities, chambers of industry and NGOs; A Scientific and Technical Board was established within the Marmara Municipalities Union.
2. The Sea of Marmara Integrated Strategic Plan will be prepared within three months and studies will be carried out within the framework of this plan.
3. Studies to declare the entire Sea of Marmara as a marine protected area will start and be completed by the end of 2021.
4. As part of the emergency response, as of June 8, 2021, studies will be initiated to completely clean the Snot in the Marmara Sea with scientific-based methods, on a 24/7 basis.

5. All of the existing wastewater treatment plants in the region will be converted into advanced biological treatment plants. Studies will be carried out in line with the objectives of preventing the discharge of wastewater into the Marmara Sea without advanced biological treatment.
6. The discharge standards of wastewater treatment plants discharging into the Marmara Sea will be updated and implemented within 3 months.
7. Re-use of treated wastewater wherever possible will be increased and supported. Clean production techniques will be applied.
8. The transition to advanced treatment technologies will be accelerated by rehabilitation and improvement works of OIZs (organized industrial site) that do not operate their wastewater treatment plants properly.
9. Public-private partnership models will be implemented to make the construction and operation of wastewater treatment plants much easier.
10. Arrangements will be made within three months to prevent the discharge of wastewater from ships into the Sea of Marmara.
11. Cleaner production techniques will be expanded in shipyards.
12. Within the framework of the studies carried out by our Ministry of Environment and Urbanization; All wastewater treatment plants that discharge to the environment will be monitored online 24/7. 91 monitoring points in the Sea of Marmara will be increased to 150. With the help of the Turkish Environment Agency, inspections in all basins associated with the Sea of Marmara will be increased using remote sensing, satellite and early warning systems, unmanned aerial vehicles and radar systems.
13. The Regional Waste Management Action Plan and Marine Litter Action Plan, covering the coasts of the Sea of Marmara, will be prepared and put into practice within three months.
14. Good agricultural and organic farming practices and pressurized and drip irrigation systems will be expanded.
15. In the basins associated with the Marmara Sea, artificial wetlands and buffer zones will be created on the streambeds, thereby preventing the pollution from reaching the sea.
16. In order to prevent pollution originating from olive black water and whey, technological transformations will be provided to reduce wastewater.
17. The use of cleaning materials containing phosphorus and surfactants will be gradually reduced. Organic cleaning products will be encouraged.
18. All ghost nets in the Sea of Marmara will be cleared within 1 year.
19. Fishing activities will be made ecosystem-based, and protected areas will be developed.
20. Economic support will be provided to fishermen who are harmed by sea snout.
21. Studies will be carried out to prevent marine pollution and to raise awareness of our citizens, and a platform will be created to inform the public.
22. Measures will be taken to reduce the effects of hot waters caused by the cooling waters and thermal facilities on the Marmara Sea.

Lastly, Turkish Marine Research Foundation looks positively to all these measures and will closely follow their application. If written rules meet concrete action, the Sea of Marmara can recover back to its old self. Nevertheless, this action plan must be applied with the utmost urgency.

Our foundation has been studying the Sea of Marmara for a long time and has knowledge on the subject. We are ready to provide all the necessary help to implement the action plan when requested. Let us not forget that there is much work to do and all delay can provoke a new disaster in Marmara.