

Industrial waste, unplanned urbanization blight Turkey's Sea of Marmara

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The marine mucilage, or sea snot, that first started to appear in the Sea of Marmara in January, mostly on Istanbul's shores, has continued to spread over the past months. It recently covered the coasts of almost all the provinces that have a coast to the Sea of Marmara and brought a major environmental disaster to the surface.

When marine mucilage was first seen on the beaches, it was thought to be just a layer over the sea. However, scientists have explained that its greatest impact takes place underwater.

The mucilage layer on the bottom particularly affects sea creatures. The layers seen on the surface prevent sea creatures from getting the necessary oxygen, causing them to die. Thus, the entire marine ecosystem is rapidly disappearing.

Alice Alldredge, an expert on marine mucilage and a professor emerita at University of California, Santa Barbara, told *The Scientist*: “Sea snot is a colloquial term for the mucus that is exuded by a lot of different phytoplankton species.” She added: “[t]he main problem is that the material eventually sinks and completely smothers the organisms that are on the bottom. It kills corals, it kills fish, it kills all the crustaceans down there, the bivalves—it kills pretty much everything because there's not enough oxygen.”

Studies have shown that the pollution is not limited to the Marmara Sea, which is an inland sea. The pollution has been seen both in the neighboring Aegean and Black Seas. Like all environmental problems, it ignores artificial national boundaries and has an international character.

Alldredge said: “There have been scum events like this in the Adriatic [Sea] going back to the 1800s. ... It seems these events are increasing in the Mediterranean. It used to be just the Adriatic, [and] in the area around Sicily. Now, there's been some events up around

Corsica and the Italian-French border. So, it's not just Turkey that's suffering from this.”

Scientists agree that this mucilage originates from industrial and urban wastes that have been dumped into the Marmara Sea for decades, as well as from climate change. If comprehensive measures are not taken soon, Marmara will turn into a completely dead sea.

M. Levent Artüz, a hydrobiology expert from the Marmara Environmental Monitoring Project, claims that the Sea of Marmara already died in 1989. Speaking to the *1+1 Forum* website, he said: “This is not an isolated event; it is a chain, a result. Marmara died in 1989. What we see is the decay of a corpse. The diversity of species in the sea was dealt a grave blow, it was hollowed out, competition between species disappeared.”

The Marmara Region links Europe and Asia and consists of cities clustered around the Sea of Marmara. While it makes up 8.5 percent (approximately 67,000 square kilometers) of Turkey's surface area, over 25 percent of country's population—over 20 million people—live there. Its largest cities, including Istanbul, Kocaeli, Bursa and Tekirdağ, and host many of the country's largest industrial facilities. Waste from industrial plants and these major cities is dumped on the bottom of the sea without passing through modern wastewater treatment facilities.

Professor Barış Salihoğlu, head of Turkey's Middle East Technical University (METU) Institute of Maritime Sciences, stated: “Indeed, mucilage is very common. We have seen a gel-like structure spreading across the sea and never encountered such a large mass before.” He also warned: “Oxygen levels have dropped drastically, so we need to take action quickly. It is not the first time mucilage has been seen, but it is the first time it has been so widely spread.”

Pointing to deoxygenation caused by the waste from provinces surrounding the Marmara Sea, Mustafa Yücel, deputy director of the METU Institute of Marine Sciences, said: “There is also an excess of nitrogen and phosphorus that creates other ecosystem problems, such as deoxygenation, which is the main cause of mucilage. ... The problem is big.”

He also stated: “The main cause of this deoxygenation is essentially the same thing that causes sea snot: nitrogen and phosphorus loads. According to our models and calculations, this deoxygenation only comes from Turkish territories. These loads have entered the sea for the last 20-30 years.”

Capitalist politicians have reacted by covering up the roots of the problem, which is in the capitalist system’s failure to build the proper waste management infrastructure. They either blame each other or make empty promises to solve the problem quickly. President Recep Tayyip Erdoğan’s Justice and Development Party (AKP) government has blamed the Istanbul Metropolitan Municipality, controlled by the bourgeois opposition Republican People’s Party (CHP), which was elected two years ago, for this issue.

Erdoğan himself was silent on the issue for months and then cited untreated wastewater discharged into the sea as the cause of the problem. He blamed municipalities that passed from the AKP to the bourgeois opposition parties in local elections held in 2019. However, most of the municipalities, especially Istanbul, have been ruled by AKP mayors since 1994.

Nurettin Sözen (CHP), a former mayor of the Istanbul metropolitan area, claimed that three full biological treatment projects planned to be built in Istanbul were shelved after Erdoğan was elected mayor of Istanbul in 1994. Sözen said that under Erdoğan, a low-cost method of discharging the wastewater, which pollutes the Sea of Marmara to the bottom of the sea, was implemented.

The CHP’s criticisms are utterly hypocritical, however, as smaller cities on the Sea of Marmara that have been governed by CHP mayors for years have not pursued a waste treatment policy fundamentally different from AKP municipalities.

On June 8, Environment and Urbanization Minister Murat Kurum announced that Turkey is launching its “largest and most comprehensive sea cleaning mobilization” ever to save the Sea of Marmara. The

only action proposed by Kurum, who met the mayors and governors of the Marmara Region’s seven provinces fully six months after the mucilage emerged, was to begin collecting mucilage by boat. However, the source of these problems is the control of industry and urban planning by capitalist interests and bourgeois governments who serve them.

While industrial enterprises do not implement necessary purification and filtration measures, the national and local governments who serve them transfer public resources to the wealthy instead of acting to protect the environment.

The Turkish state refuses to make long-term, comprehensive infrastructure investments needed to save the Marmara Sea from turning into a dead sea or to ensure the safety of millions in an expected Istanbul earthquake. Instead, it is preparing to build an Istanbul Canal in line with the NATO military alliance’s geopolitical calculations and plans for massive profiteering by Turkish and international investors.

However, scientists warn such a canal would damage the ecosystem of the Sea of Marmara and the Black Sea, destroy Istanbul’s wetlands, increase traffic and even damage inflicted by a possible earthquake. Valuable resources and time are thus wasted.

A scientifically-guided struggle against the problem of mucilage spreading from the Sea of Marmara, and other forms of the environmental degradation, can only be waged on the basis of an international, anti-capitalist program. The implementation of this solution requires the conscious struggle to transfer power to the working class—in a struggle for international socialism, based on the planning of global economic life around social needs, not private profit.



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