



Response to Letter to the Editor: “Lake Mogan (Turkey) Pollution by Metals and Phosphorus. Some Comments”

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Dr. Chirumbolo and Dr. Björklund’s reviews [1] are very important to us.

It would be better to calculate some indicators such as Pollution Local Index (PLI), contamination factor (CF) or enrichment factor (EF) to assess the metal pollution in Lake Mogan. There was a lot of data in the study and we thought that only that data would be enough. But from now on, we will be more careful and try to give every detail.

In addition, the determination of whether the actual cause of metal pollutions originated from phosphorus compounds could also have contributed significantly to our study. However, we wanted to draw attention to the pollutions made by human hands while taking the samples. Dr. Chirumbolo and Dr. Björklund cited old references (2003, 2008, or 2009). According to Ekström et al. [2], why Fe concentrations in water increase is still controversial. Because Fe mobility are highly complex and not easily resolved, controlled experiments on this matter need to explore Fe mobility from soils. To clarifying the reasons for increased transfer of Fe from soil to water, ecological and biogeochemical consequences should be given more attention. We have already mentioned this in the discussion section of our article. It was also not our specialty.

Due to the ecological and recreational importance of the wetland swamp area near the lake, pollution from urban and industrial activities has been limited by the Turkey Environment Act, which has labeled the area a Special Environmental Protection Area since 1990. After this

protection was enacted, some industrial facilities in the area were closed or forced to stop disposing of their waste directly into the lake or the streams that feed it. However, the settlements around the lake grew significantly, which led to increases in urban pollution and intense settlement pressure. In addition, there is no agricultural activity around the lake. For this reason, we did not need to perform phosphorus analysis in lake samples. We tried to emphasize that people should be more careful. Also, after this stage, it is not possible to perform phosphorus analysis on the same lake samples. However, re-sampling and the study must be repeated.

Many thanks to Dr. Chirumbolo and Dr. Björklund’s comments. You can be sure that we will consider it in our next works. So, we believe that we will do more valuable work.

References

1. Chirumbolo S, Björklund G (2020) Lake Mogan (Turkey) pollution by metals and phosphorus. Some comments. *Biol Trace Elem Res* in press
2. Ekström SM, Regnell O, Reader HE, Nilsson PA, Löfgren S, Kritzbeg ES (2016) Increasing concentrations of iron in surface waters as a consequence of reducing conditions in the catchment area. *J Geophys Res-Biogeosci* 121(2):479–493. <https://doi.org/10.1002/2015JG003141>

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