**Declaration of Importance**

The Manuscript is a novel study for the Neotropical Region. To our knowledge, there is no available study aiming to use changes in fish liver tissues to detect diffuse pollution in water bodies. Most studies on this subject use experimental designs.

The study gives a detailed description of the liver tissues in natural conditions and compare with their changes. It is a first step to find trustworthy. Such description will allow future quantification of the changes that will be compared with environmental water quality data through statistical tests in future studies. This is an interesting and useful research to be developed in our country, where several water bodies are jeopardized by pollution and habitat degradation.

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