CLIMATE CHANGES AND PESTICIDES IN SURFACE WATERS: THE WILDFIRES IN THE BRAZILIAN CERRADO AND AMAZONIA BIOMAS.

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INTRODUCTION: Pesticides are a public health concern globally, and environmental exposure has been associated with degenerative diseases. Drinking water is a relevant matrix where pesticides can compromise safety. OBJECTIVE: Evaluate the impact of wildfires in the Amazonia and Cerrado biomes on pesticide presence in surface waters. MATERIALS AND METHODS: A comparative analysis of pesticide residues was conducted before (2024/2nd semester) and after (2025/1st semester) the peak of wildfires in representative Cerrado and Amazonia states (Mato Grosso, Mato Grosso do Sul, Amazonas and Para). Water samples were collected from various font superficial sources and analyzed using solid-phase extraction (SPE) and gas chromatography-triple quadrupole mass spectrometry (GC-MS/MS) to identify/quantify 99 pesticides. RESULTS: Preliminary findings for the Cerrado showed 17.28% (n=84) positive samples before the wildfire event, while 100.0% (n=10) were positive after. Atrazina and metoloclor increased in positive samples, ranging from 29.76% to 30%. Tebuconazol decreased positivity frequency (-4.46%). In the Amazon biome, 19.71% (n=23) of samples were positive before wildfires, with malathion and pyraclostrobin being the most frequent pesticides (8.33% and 5%, respectively). Data for post-wildfire samples are being processed and analysed. CONCLUSION: The preliminary findings suggest that wildfires in the Brazilian Cerrado biome interfered with pesticide availability in surface waters. Further analysis is needed to understand the impact of climate changes on pesticide presence in drinking water.

Key-words: Pesticides; drinking water, climate changes and wildfires.

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