Unintended pesticide use for fishing in Cameroon: Links between human health, ecosystems and local livelihoods

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ABSTRACT (250-300 words)

A major multi-national cotton company that operates in Cameroon provides local farmers with subsidized pesticides for use on their cotton crops. However, many farmers use the pesticides to catch fish, in turn poisoning the drinking water for the community. The problem stems from a combination of distorted pesticide prices and corporate influence on local communities, farm production practices, clashing immigrant and local ethnic groups and local cultural practices (e.g. traditional use of seeds that temporarily stun fish was substituted with pesticides). This unintended use of pesticides potentially has devastating health and ecosystem impacts.

We propose a research and intervention project to understand, educate, and empower local communities to address the problem. The project would consist of four phases:

Phase 1: In the phase, we would establish how humans and the ecosystem are affected by the use of pesticides by conducting water quality tests, assessing impacts on local biota, and surveying human health in downstream communities. We would survey equivalent upstream communities to establish a control.

Phase 2: The second phase aims to understand structural factors that motivate the unintended use of pesticides. To do this we propose to conduct interviews and focus group meetings with local communities and representatives from the cotton company.

Phase 3: The third phase aims to empower local communities to address the problem. We would conduct a joint meeting of representatives from different groups to identify options and agree on a suitable intervention strategy. Participants would be presented with the data from the first two phases to develop a shared understanding of the problem. The groups would be asked to suggest 1) possible solutions to the problem and 2) changes each group could make.

Phase 4: The success of the program would be evaluated by testing local water quality and conducting follow-up health and behavioral survey on the communities sampled in phase 1. The eventual goal is for locals to adapt these methods learn to monitor water quality, ecosystem and community health.