

Downstream Impacts from Upstream Actions: The Toll of Food Production on Water Quality

Krasovich, Emma

MPH student, Columbia University, United States, emma.krasovich@gmail.com

The nexus of agriculture and water security is particularly relevant in Africa, where there remains a need for sustainable resource management that allows for access to clean water as well as other development needs, such as food availability. Agricultural activities, both smaller scale subsistence farming as well as larger scale irrigated crops, serve as the most widespread nonpoint source contributor to water quality issues worldwide. Nonpoint source pollution (NPS) due to agricultural activities presents a particular challenge as the effects on human and environmental health are not restrained by boundaries. Pollution occurring upstream results in downstream impacts, often leaving communities experiencing water quality issues unable to prevent the effects of upstream polluting communities. This is of particular relevance in developing countries where higher proportions of the population are involved in agricultural activities, where there is a lack of official standards to protect environmental health, and where there are limited resources to address these issues. Therefore, understanding the relationship between NPS pollution from agricultural activities and water quality issues is the first step in finding ways to prevent harmful impacts in the developing context. To do so, this paper highlights several cases of NPS pollution within African countries as a means to depict the burden of the environmental and human health impacts that lie at the intersection of water quality and agricultural activities. Furthermore, potential solutions to address the increasing need for agricultural intensification are suggested in the context of the developing world.