

POSTER PRESENTATION

FRESHWATER POLLUTION AND DIATOM COMMUNITIES IN THE UPPER AWASH CATCHMENT, ETHIOPIA

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Uncontrolled population growth in developing countries leads to agricultural intensification and crowded urban settlement, which have increased pressure on the environment through time. Despite this pollution alarm little is known about the ecological status of rivers and streams flowing through agricultural and urban landscapes. Physicochemical and biological river water quality assessment were carried out in the Upper Awash Catchment that is impacted by agricultural malpractices in the upstream sites and receive untreated waste from the capital city (Addis Ababa) in downstream sites. Both physicochemical and biological data revealed that there was drastic ecological water quality deterioration as result of both severe agricultural and urban impact. Dissolved oxygen (DO) was depleted to a level of 0.2 mg/L, while chemical oxygen demand (COD) was reached a peak (1920 mg/L) in downstream sites. Diversity of diatom species was significantly reduced in urban impacted sites. Canonical Correspondence Analysis (CCA) was also revealed a gradient in diatom communities explained by this extreme pollution. *Navicula accomoda* Hust., *Nitzschia palea* Kütz., and *Gomphonema parvulum* Kütz. were the dominant diatom species found in the urban impacted sites, where as *Achnanthes minutissima* Kütz., and *Nitzschia amphibian* Grun. were abundant in agricultural impacted sites.