# POCIS evidence Yaoundé's rivers pesticides contamination

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**Passive samplers deployed in an urban tropical watershed**

Yaoundé's freshwater supply is crucial to the local population and to the production of crops in its humid lowlands [1]. However, contribution of agricultural activities on water pollution is likely to occur but has never been documented in Yaoundé. Thus, *in situ* physico-chemical measurements, passive (POCIS) and grab sampling [2][3] was deployed to monitor contamination from 32 polar pesticides in urban and peri-urban tropical watershed.

Results show that the majority of the targeted compounds were detected. 10 pesticides had quantification frequencies greater than 40%. Surprising spatio-temporal differences in contamination were found, with the highest contamination in urban rivers rather than peri-urban rivers (Figure 1).

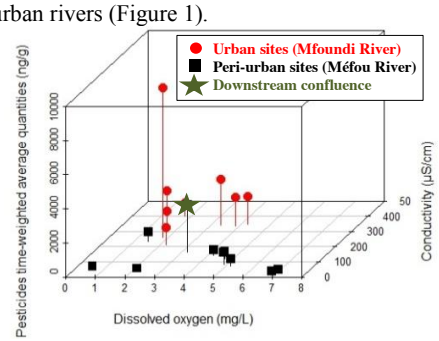


**Figure 1:** Sampling sites distribution according to pesticides time-weighed quantities, oxygen and conductivity

**Discussion of Results**

This specific pesticides contamination questions process affecting their mobilization from treated crops to surface waters and their fate in the hydrosystem depending on subwatersheds physical characteristics [4]. Moreover, high contamination levels observed at urban sites could raise concern for Yaoundé dwellers potential health risks.

[1] Tanawa *et al*. (2002) *Build. Environ* 37, 269–275. [2] Alvarez *et al*. (2008) *J. Environ. Qual* 37, 1024–1033. [3] Ibrahim *et al*. (2013) *Talanta* 116, 495–500. [4] Camenzuli *et al*. (2012) *Sci. Total Environment* 440, 178-185.