

Daniel Silverman

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The article presented is titled “Long and short-term trends of stream hydrochemistry and high frequency surveys as indicators of the influence of climate change, agricultural practices and internal processes (Aurade agricultural catchment, SW France)”. The authors Vivien Ponnou-Delaffon, Anne Probst, Virginie Payre-Suc, Franck Granouillac, Sylvain Ferrant, Anne-Sophie Perrin, and Jean-Luc Probst are all PhD students at the Université de Toulouse in Toulouse, France. This article is quite recent and is included in the March 2020 edition of the *Ecological Indicators* journal.

This article is of particular interest because of how it discusses how to use measurable characteristics as indicators of more abstract processes. In the case of this study, high-frequency surveys of the hydrochemistry of the Montouse catchment in Aurade, France were analyzed in order to better understand changes in internal processes, agricultural practices, and climate. This article would be great for anyone interested in better understanding how human activity can impact water quality over time.

High frequency data was collected from the Mountouse catchment over the course of 34 years (1985-2018) and analyzed for long term trends in flow and nitrogen content. Over a 15 year period (2004-2008) water was also analyzed for cations which were presumed to have come mostly from the bedrock and soil in the drainage basin. The stream was also analyzed during a one year period (2008-2009) in order to understand the short term hydrochemistry of the catchment.

Decreases in cations and the nitrate content of the water was observed over the 34 year period but especially significant decreases were observed during the 15 year period. These decreases were attributed to changes in agricultural practices and increased streamflow. Increases in K^+ and DOC (dissolved organic carbon) were theorized to be due to increased soil erosion from an observed increase in flood events and an increase in mineralization due to increasing temperatures. In the end, this paper offers a useful example of how to interpret changes in water quality that may be due to changes in human behavior and a changing climate.