

Interactive comment on “Effects of watershed and riparian zone characteristics on nutrient concentrations in the River Scheldt Basin” by J. Meynendonckx et al.

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The purpose of this study is to examine the relative influence of a set of watershed characteristics on surface water nutrient concentrations in two specific subcatchments (Upper-Scheldt and Nete) of the River Scheldt Basin. We selected two subcatchments representing different conditions (elevation, geologic substrate, soil texture, land use) in order to compare and evaluate whether the relationships are subcatchment-specific or not. Within each of these subcatchments, we delineated a great number of watersheds with the water quality monitoring sites of the Flemish Environment Agency as outlets (67 in the Upper-Scheldt and 106 in the Nete). As you can see in Table 2, these watersheds represent a range of different conditions. As such, there is no problem of pseudoreplication in our dataset. In general, the problem of spatial autocorrelation in

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such datasets is difficult to handle, as is the problem in separating the influence of a set of intercorrelated watershed characteristics. Concerning the last, we used the statistical technique of partial regression, which was not earlier used in studies like this, and which delivered the unique contribution of each theme of watershed characteristics (precipitation, point sources, morphology, land use, soil texture and soil drainage).

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