



Turbidity dynamics in lowland pristine and agricultural streams, Bode catchment, Germany

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Continuous turbidity monitoring gives us the possibility for detailed understanding of sediment transportation dynamics in streams and the monitoring of storm-event driven turbidity dynamics is getting more attention from stream researchers. However, detecting storm-event related turbidity peaks accurately from time series data is still challenging. Furthermore, the character of such turbidity peaks defines their effect on stream ecosystems. Both, the frequency, seasonality and character of storm-event related turbidity peaks may be driven by catchment land use. In this study, we applied different approaches for detecting and characterizing storm-event driven turbidity events from long-term series data and assess the influence of agricultural land use on their occurrence and characteristics. The turbidity data has been continuously recorded at an upstream forest stream site and a downstream agricultural stream site in the Bode catchment for several years. Initial results show a clear seasonal variation of storm events. During the warm season, due to the increased number of rainy days, the number of storm events increased. Also, storm events at agricultural stream sites showed a more sensitive response to the precipitation events. Moreover, the data analysis showed that the event detection analysis is a suitable approach to characterize different events especially from long-term time series data. Furthermore, the hysteresis loop of each event will be investigated carefully, and it will give us possibility to define fine sediment origins in the catchment.