Supplement of:

Effects of seasonal variations in vegetation and precipitation on catchment erosion rates along a climate and ecological gradient: Insights from numerical modelling

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In this supplementary material, we present the model results (e.g., seasonal erosion rates with respect to precipitation and vegetation cover variations) for the entire time-series (Autumn-2000 – Summer-2019). These are additional aspects of the model results presented in the manuscript. For example, Fig. S1, S2, and S3 are extensions to Fig. 4, 6, and 8, respectively, in the main text.
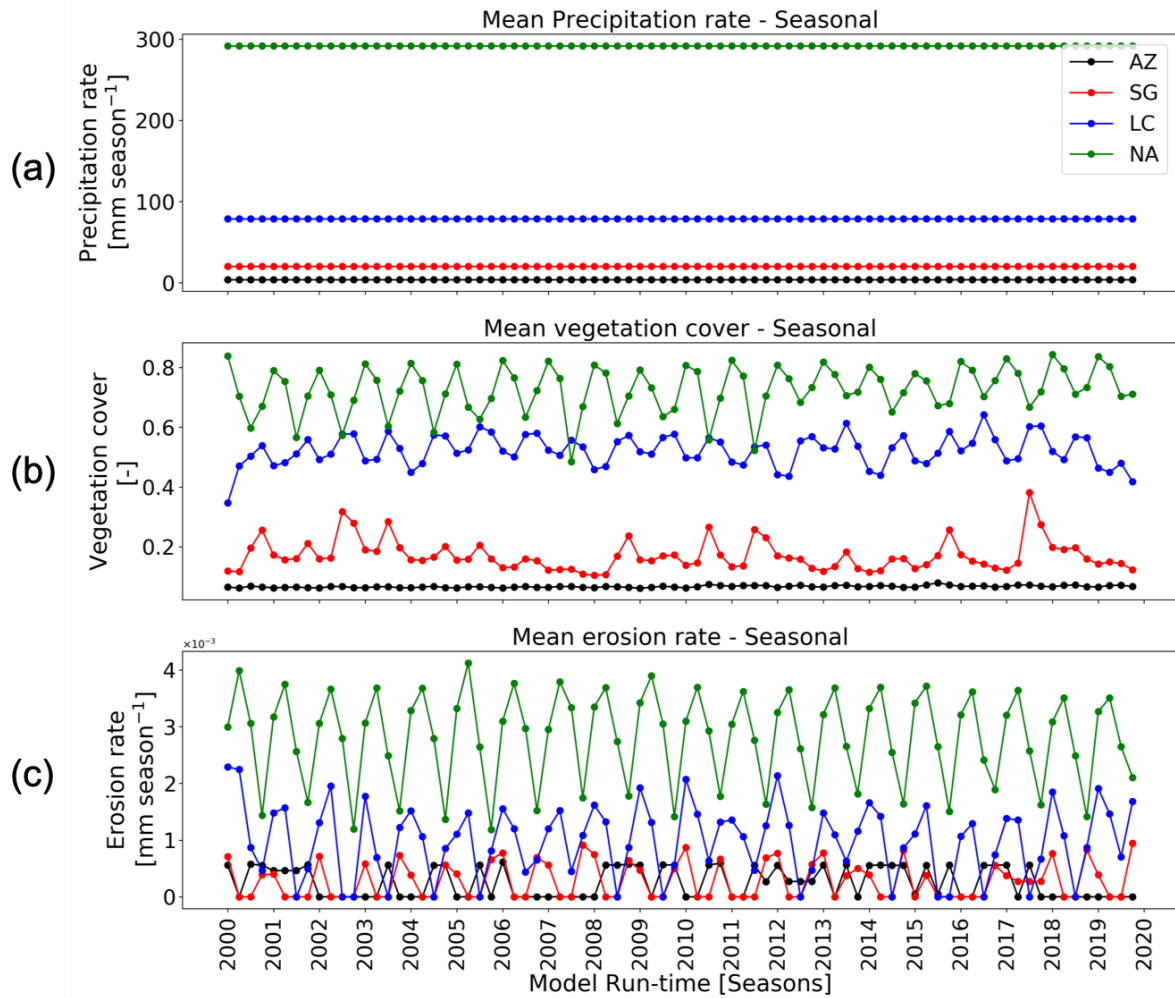
Figure S1. Scenario1: Influence of constant precipitation and seasonal variations in vegetation cover on erosion rates. Results of simulations with constant seasonal precipitation and variable vegetation over entire twenty years (Autumn-2000 – Summer-2019) of last cycle of transient-state model run representing: (a) mean catchment seasonal precipitation rates [mm season⁻¹], (b) mean catchment seasonal vegetation cover [-], and (c) mean catchment seasonal erosion rates [mm season⁻¹].
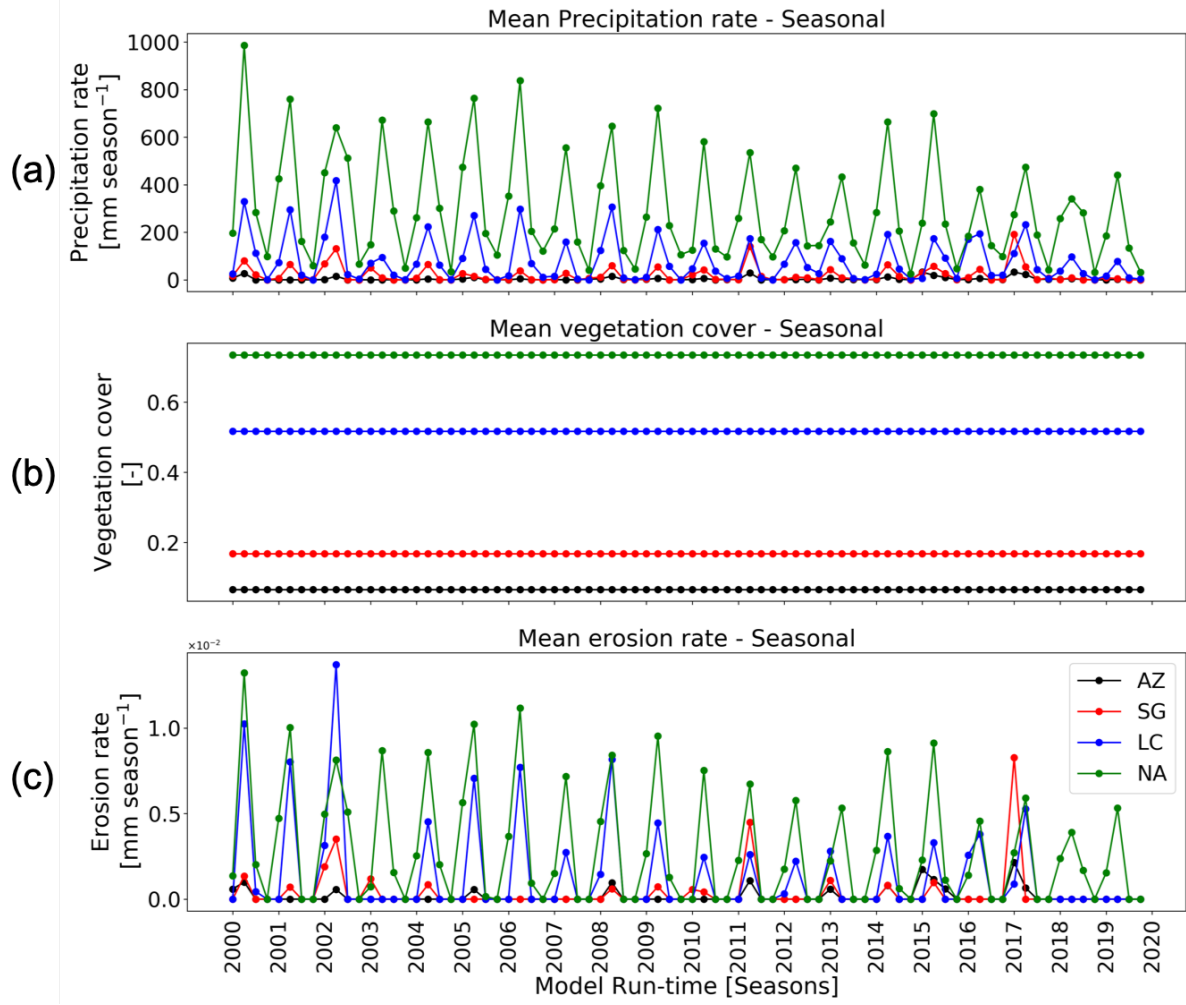
Figure S2. Scenario 2: Influence of seasonal variations in precipitation and constant vegetation cover on erosion rates. Results of simulations with variable seasonal precipitation and constant vegetation over entire twenty years (Autumn-2000 – Summer-2019) of last cycle of transient-state model run representing: (a) mean catchment seasonal precipitation rates [mm season^{-1}], (b) mean catchment seasonal vegetation cover [-], and (c) mean catchment seasonal erosion rates [mm season^{-1}].
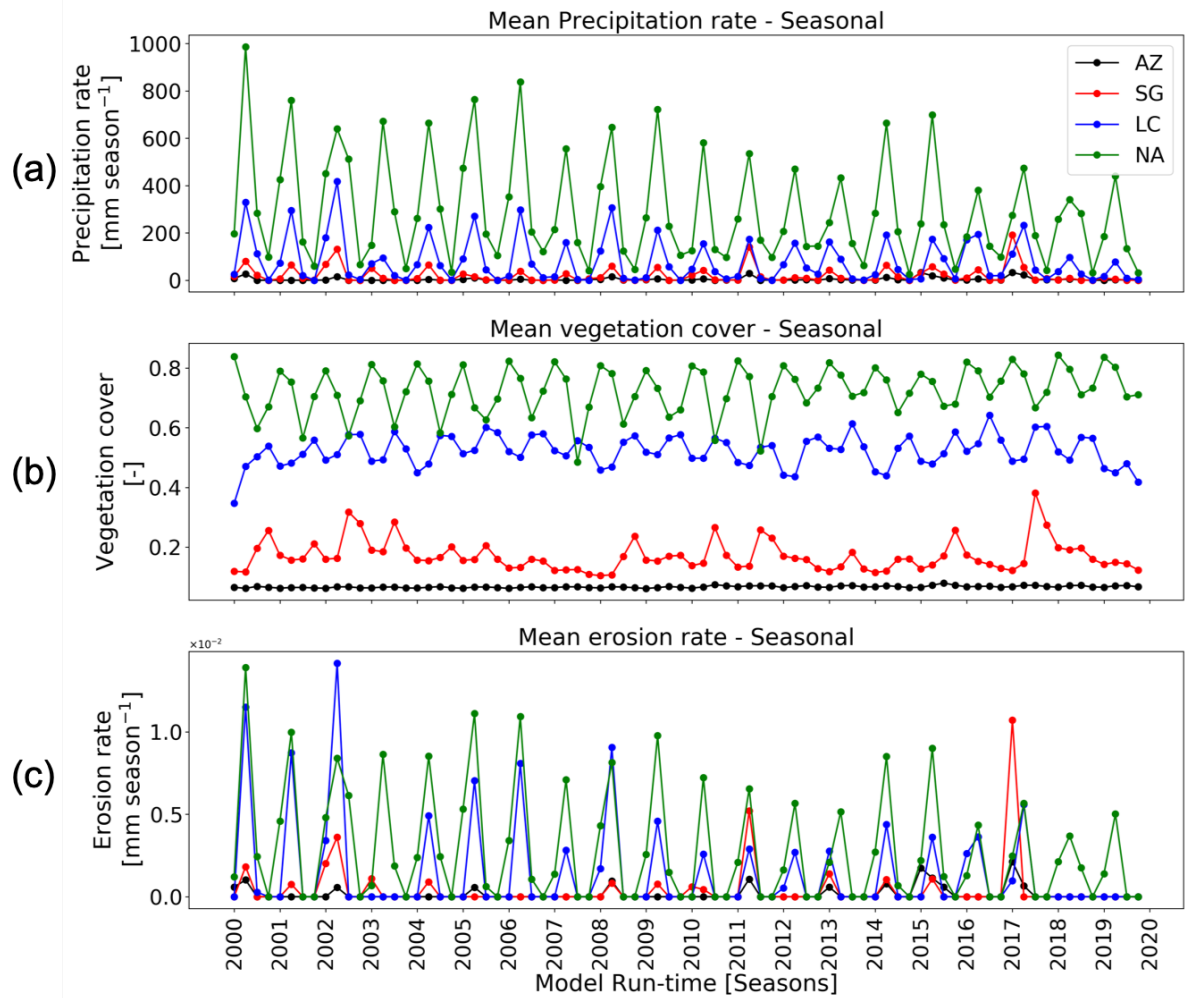
Figure S3. Scenario 3: Influence of coupled seasonal variations in both precipitation and vegetation cover on erosion rates. Results of simulations with coupled variations in seasonal precipitation and vegetation over the entire twenty years (Autumn-2000 – Summer-2019) of the last cycle of transient-state model run representing: (a) mean catchment seasonal precipitation rates [mm season⁻¹], (b) mean catchment seasonal vegetation cover [-], and (c) mean catchment seasonal erosion rates [mm season⁻¹].