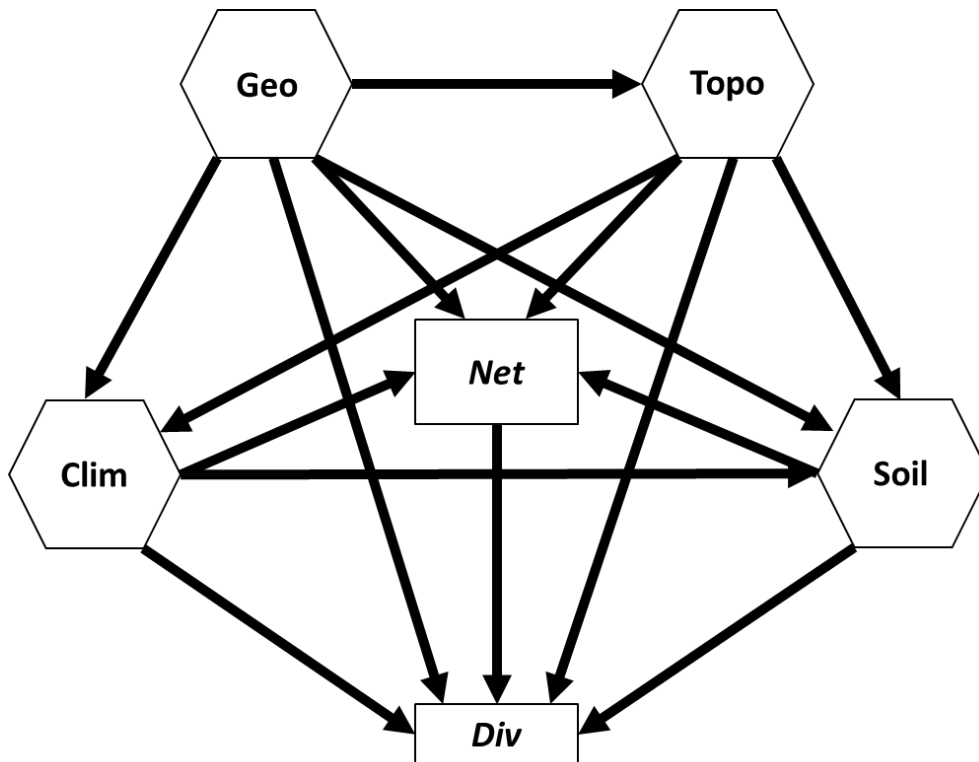S1. Structural equation model used to evaluate the effect of network indices on plant community diversity. Hexagons represent composite variables.

Explanation of the variables in the SEM. For composite variables the number in parentheses represents the unit of the variable. For measure variables the number in parentheses represents the abbreviation of the variable.

Variable (SEM)	Type of variable	Variable	Description
Geo	Composite	Latitude (º)	Latitude in decimal system
		Longitude (º)	Longitude in decimal system (includes both the sin and cosin transformation of longitude)
Topo	Composite	Elevation (m)	Altitude over sea level
		Slope (º)	Slope
Clim	Composite	Aridity	1 – Aridity Index (Precipitation / Evapotranspiration)
		Seasonality (%)	Coefficient of variation of monthly precipitation for 30 years
Soil	Composite	Soil organic C (%)	Proportion of organic C in bare soil
		pH	Bare soil pH
		Total phosphorous (mg_P/g_{soil})	Available P in bare soil
Net	Measure	Link Density (D)	Average number of links per node
		Link weight mean ($\overline{W}$)	Average of link weights in the network
		Link weight heterogeneity (H)	Kurtosis of link weights in the network
		Global network balance (K)	Proportion of balanced cycles in the network
Div	Measure	Species richness (SR)	Total number of perennial plant species
		Species evenness (E)	Standardized Shannon diversity index (H'/Ln (SR))