



## Supplement of

## **Emergent stationarity in Yellow River sediment transport and the underlying shift of dominance: from streamflow to vegetation**

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## Supplementary

Figure S1: Spatial distribution of hydrology gauges used in this study. The green
triangles correspond to 68 gauges with discharge and sediment concentration data, the
red circles correspond to 44 selected gauges with NDVI data, and the yellow circles
are the ones with annual discharge and sediment data for the years 2000 – 2012.



Figure S2: Wavelet coherence plots of the coupling between standardized discharge
and concentration, using the Jing River as an example. The labels correspond to the
gauge IDs. The shaded area is the cone of influence (COI) of edge effects.



Figure S3: Averaged wavelet coherence plot, using the Jing River as an example. The lines are colored according to long-term mean annual discharge (mm/yr), from blue to



13 brown as discharge increases.

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Figure S4: Scatter plot of the annual discharge and annual mean concentration from 17 1951 to 1986, as well as the result of linear regression between discharge and 18 concentration, using the gauges along the Jing River as an example.



**Figure S5:** Spatial distribution of the slope of the Q-C regressions ( $\alpha_{QC}$ ).



Figure S6. a) Spatial distribution of the MOPEX catchments; b) scatter plot of mean



annual precipitation and annual maximum LAI for the MOPEX catchments.