Supplementary Information
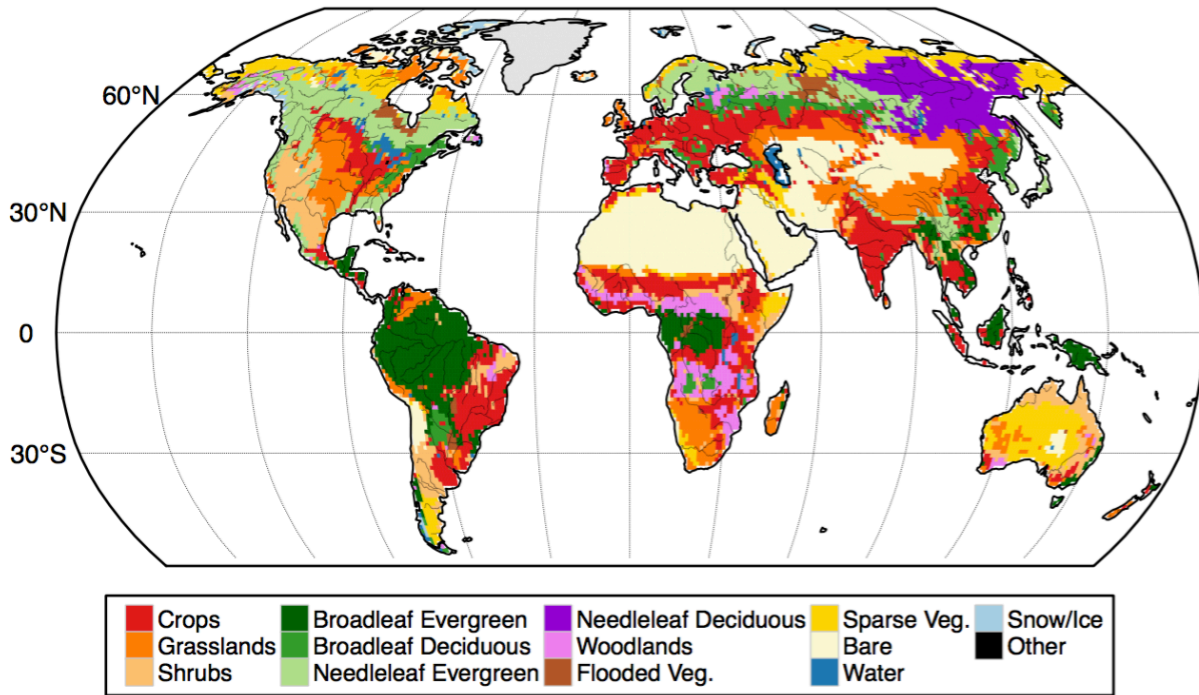

Figure S1. Land cover classification used for identifying bare soil locations.
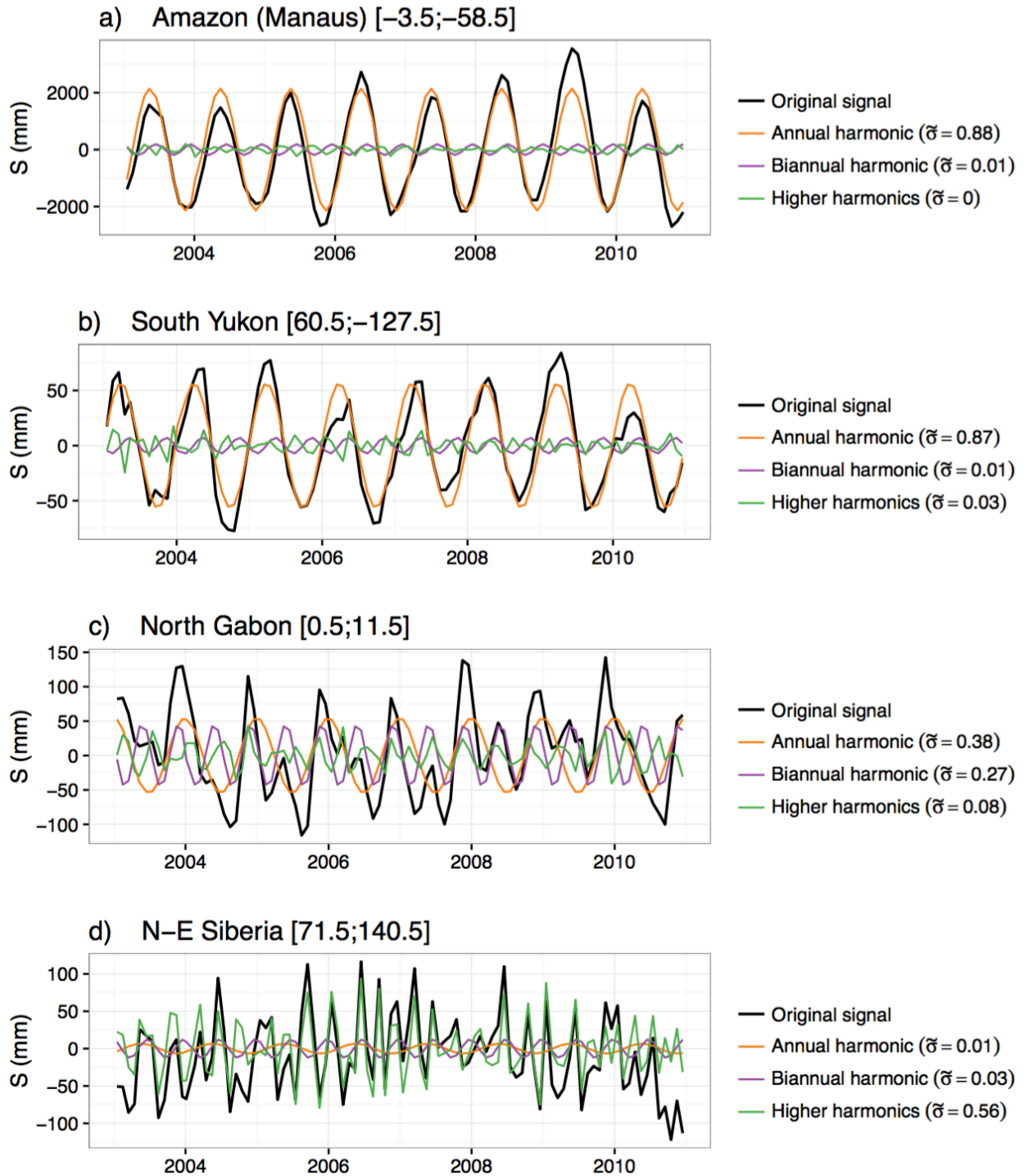
Figure S2. Time series of terrestrial water storage (S) over the 2003-2010 period at four $1°×1°$ GRACE pixels, taken as examples of locations showing significant harmonics at the annual (a and b), biannual (c) and more stochastic (d) time scales. The original signal (thick black) is overlaid with some of its harmonics, as derived from a fast Fourier transform algorithm: annual (orange), biannual (violet) and the summed higher harmonics (green). For each component, $\tilde{\sigma}$ gives the 2-digits-rounded variance normalized by the variance of S.
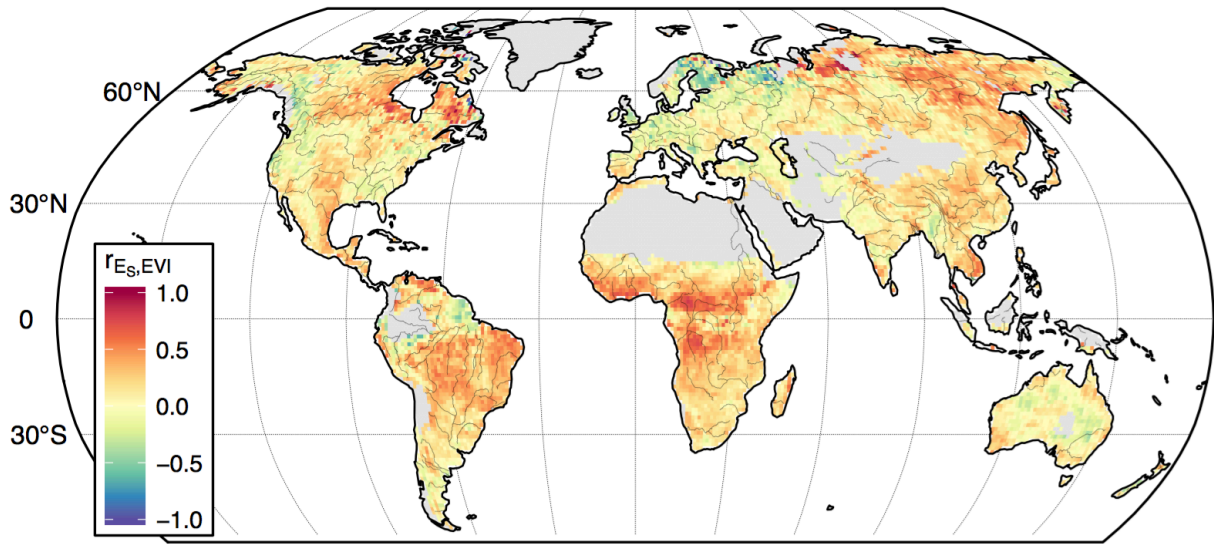
Figure S3. Correlation between monthly subsidized E (E_S) and EVI when E > P, excluding locations without vegetation cover and/or without period when monthly E > monthly P.