

Supplementary Material

Figures

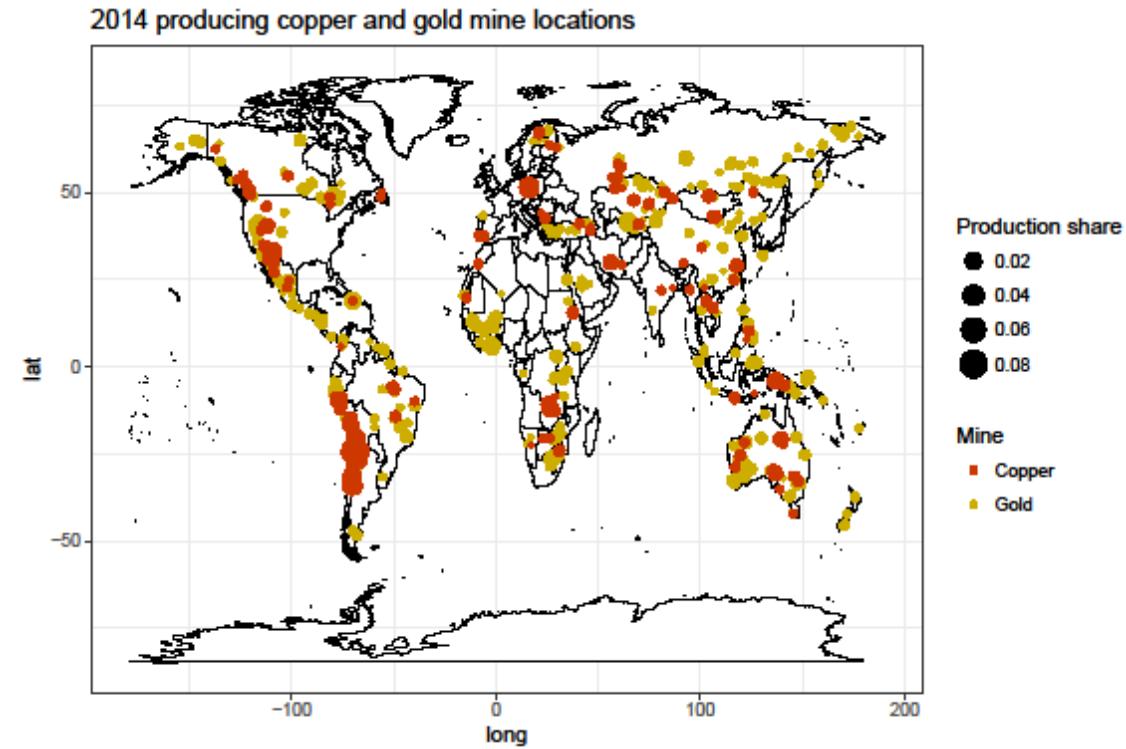


Figure S1: 2014 copper and gold producing mine locations (top) and 2014 copper and gold producing mine locations with size proportional to production (bottom)

100 largest cities in 2006

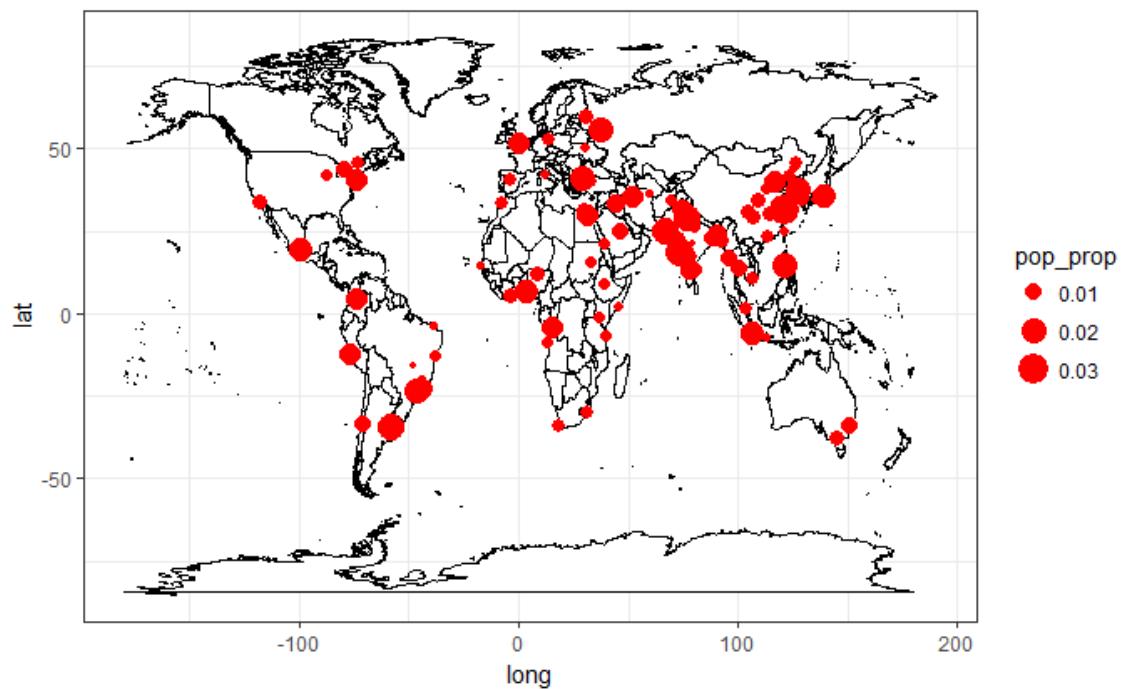


Figure S2: Location of the 100 largest cities in the world in 2006

Maize production geographical distribution

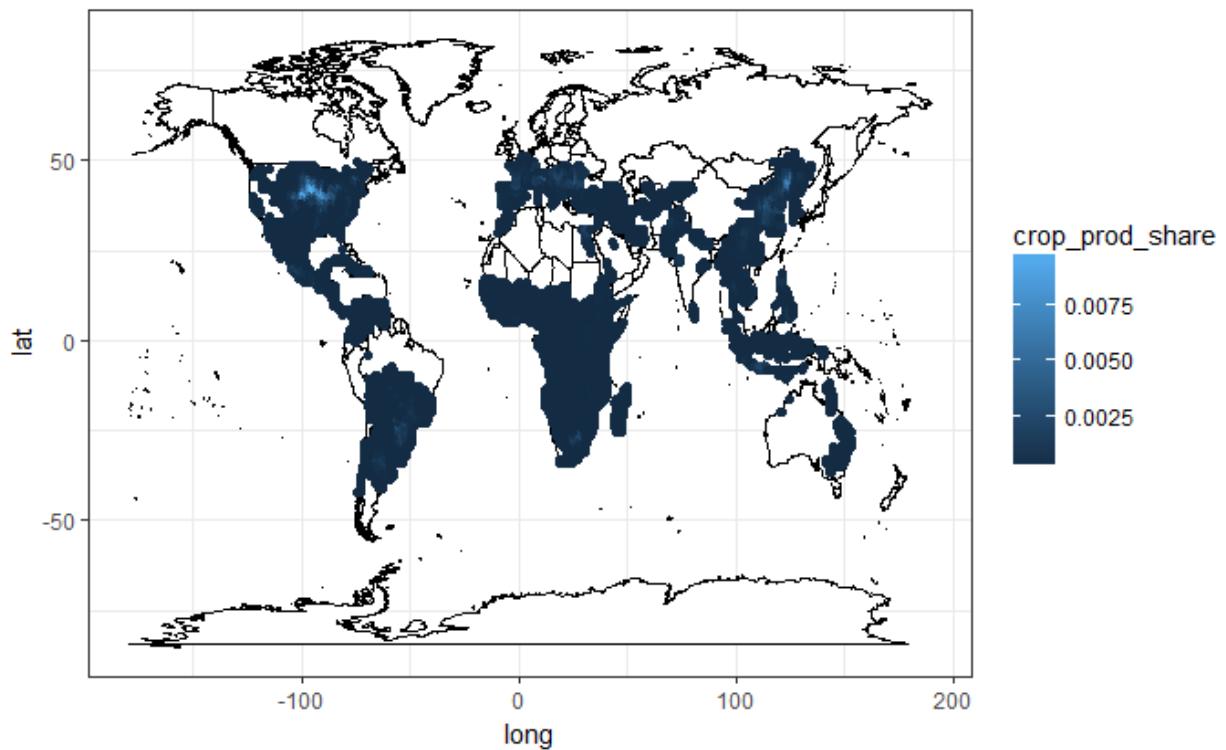


Figure S3: 2011 Maize production distribution

Rice production geographical distribution

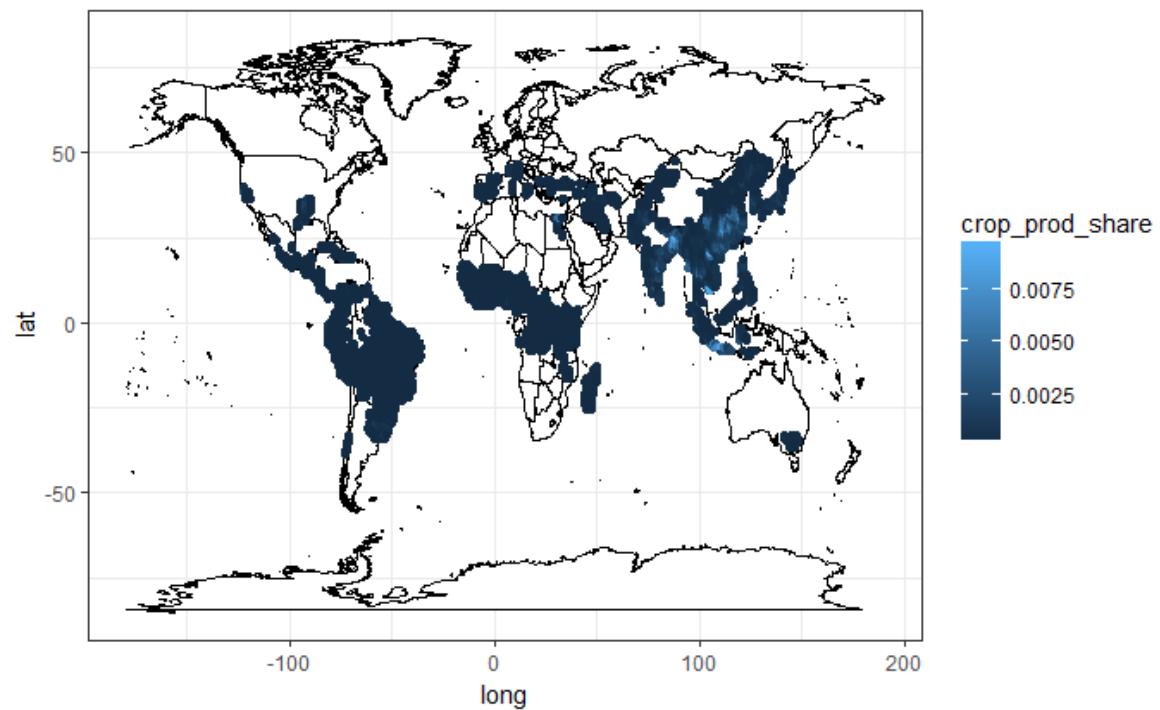


Figure S4: 2011 Rice production distribution

Soybean production geographical distribution

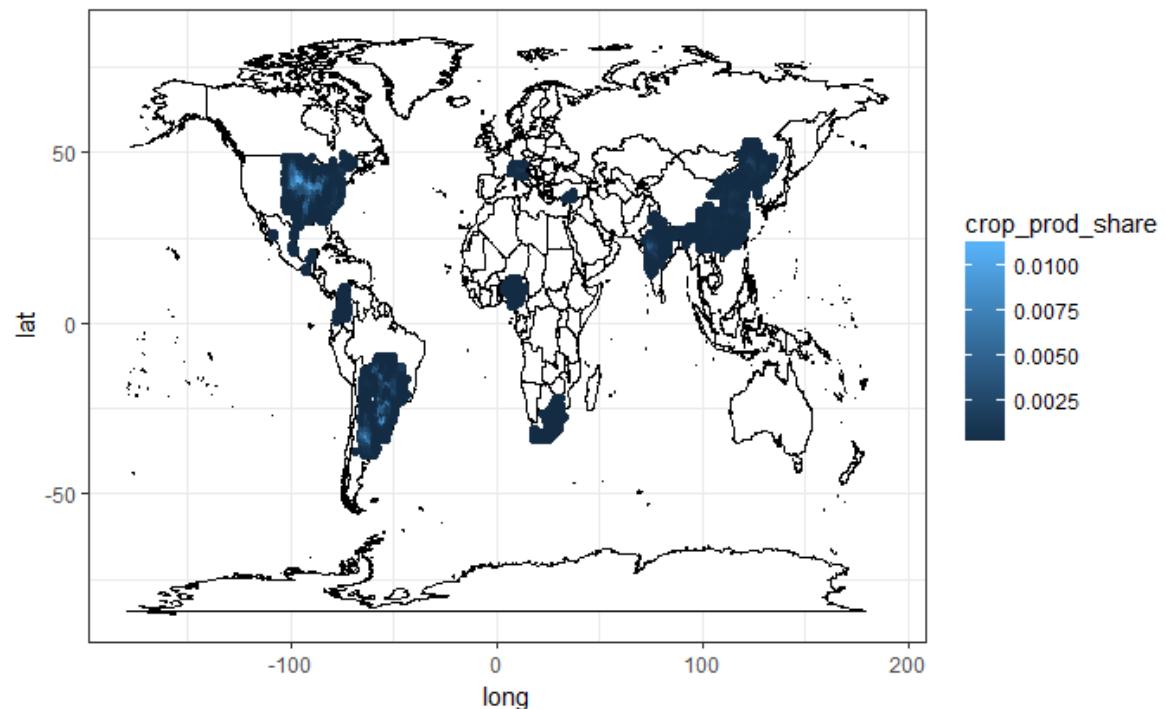


Figure S5: 2011 Soybean production distribution

Wheat production geographical distribution

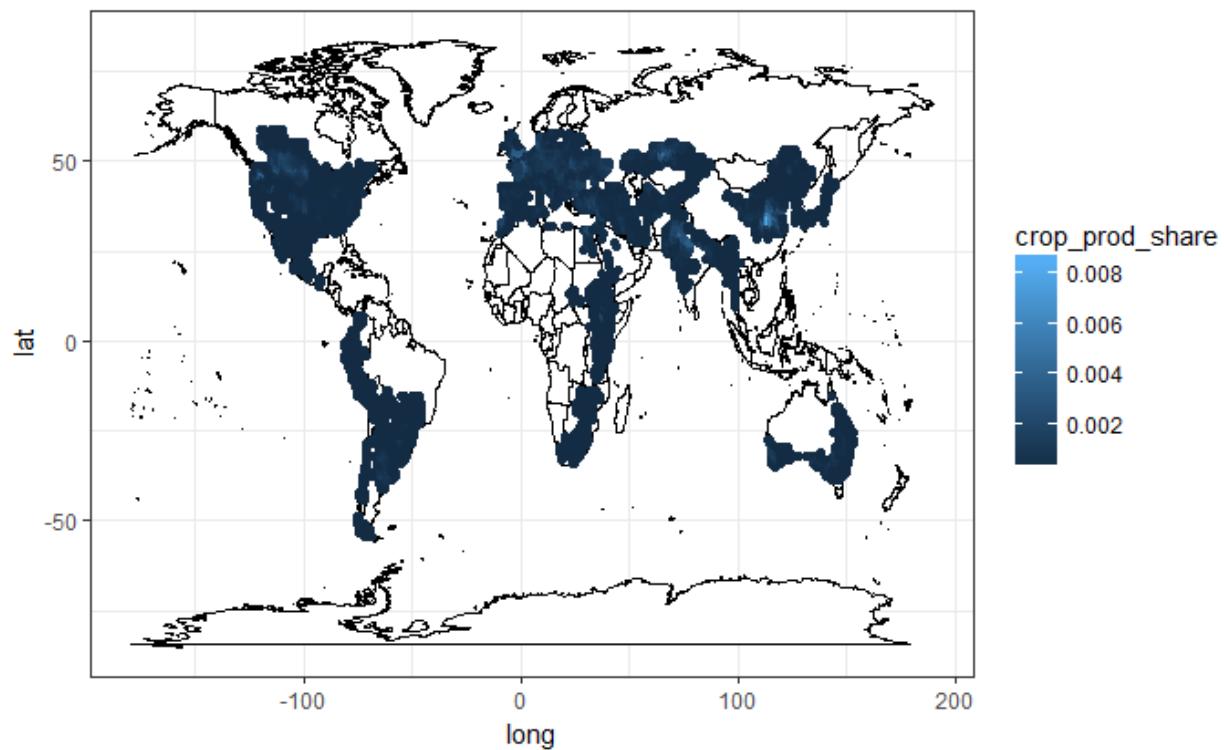


Figure S6: 2011 Wheat production distribution

Time series of the proportion of the land area between 30°N and 15°N affected by a 12-month event with a 10-year return level

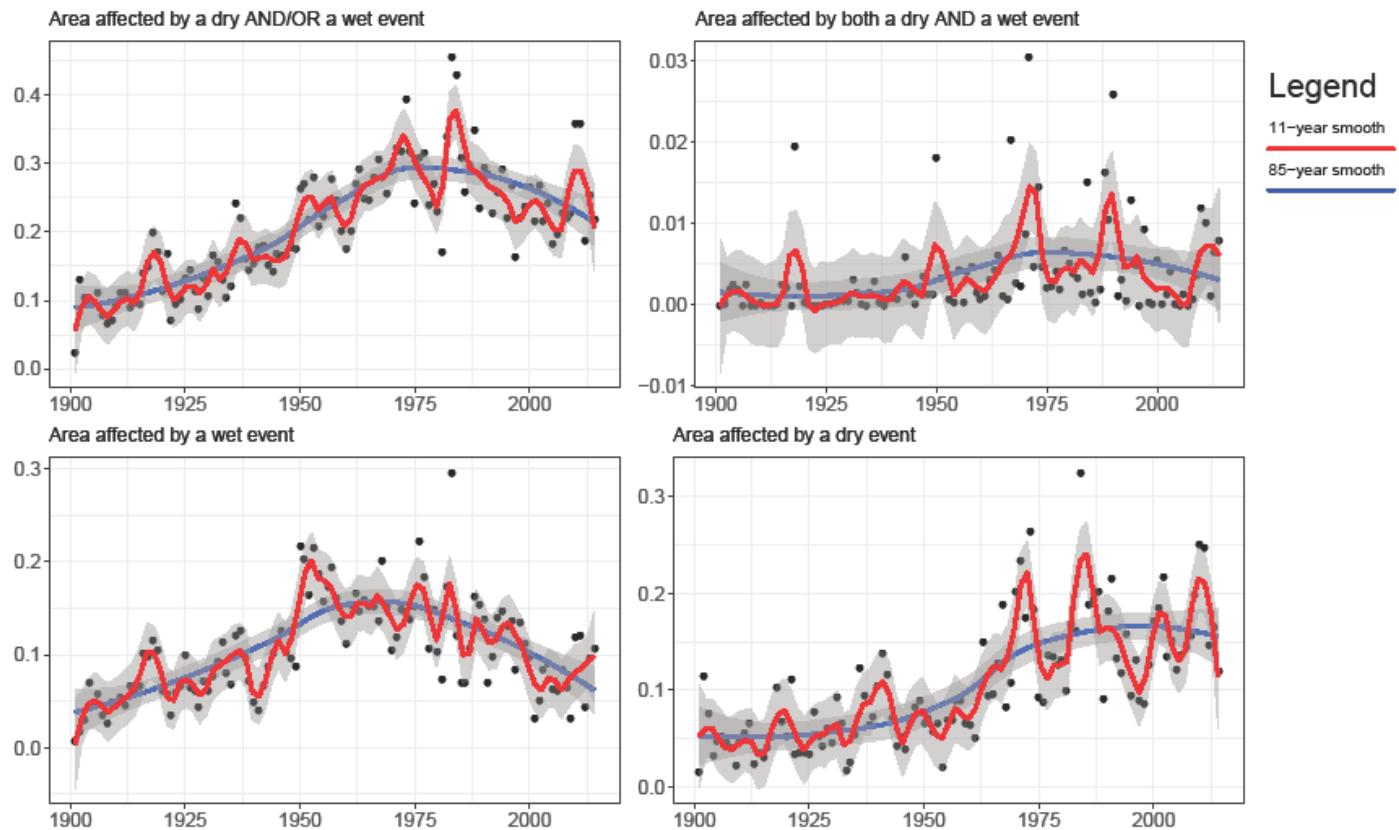
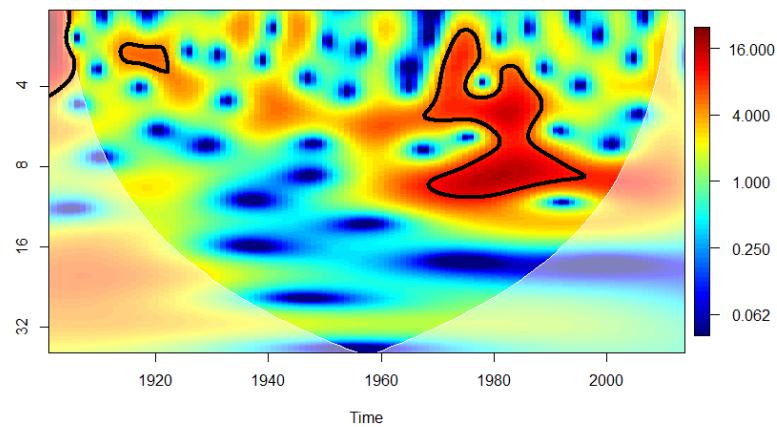
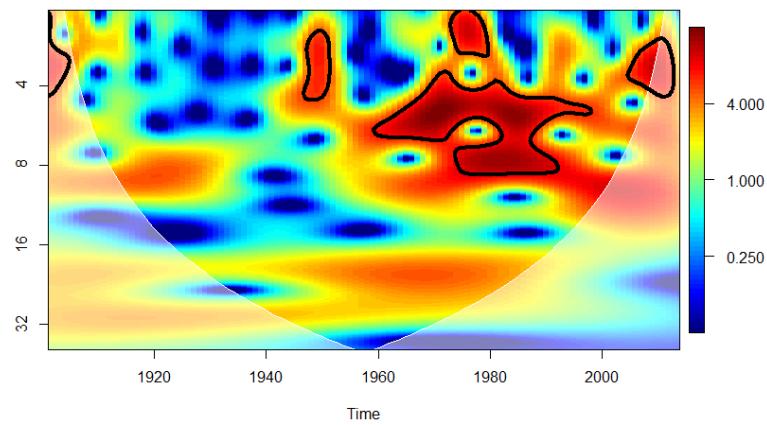


Figure S7: Northern sub-tropical area proportion affected by a 10-year, 12-month, wet or dry (top left), wet and dry (top right), wet (bottom left), and dry (bottom right)

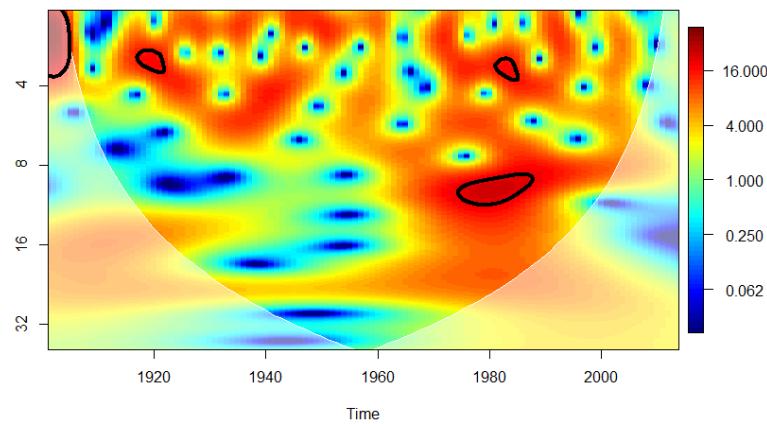
Wavelet spectrum of the time series of the world area
hit by a wet OR a dry 10-year event

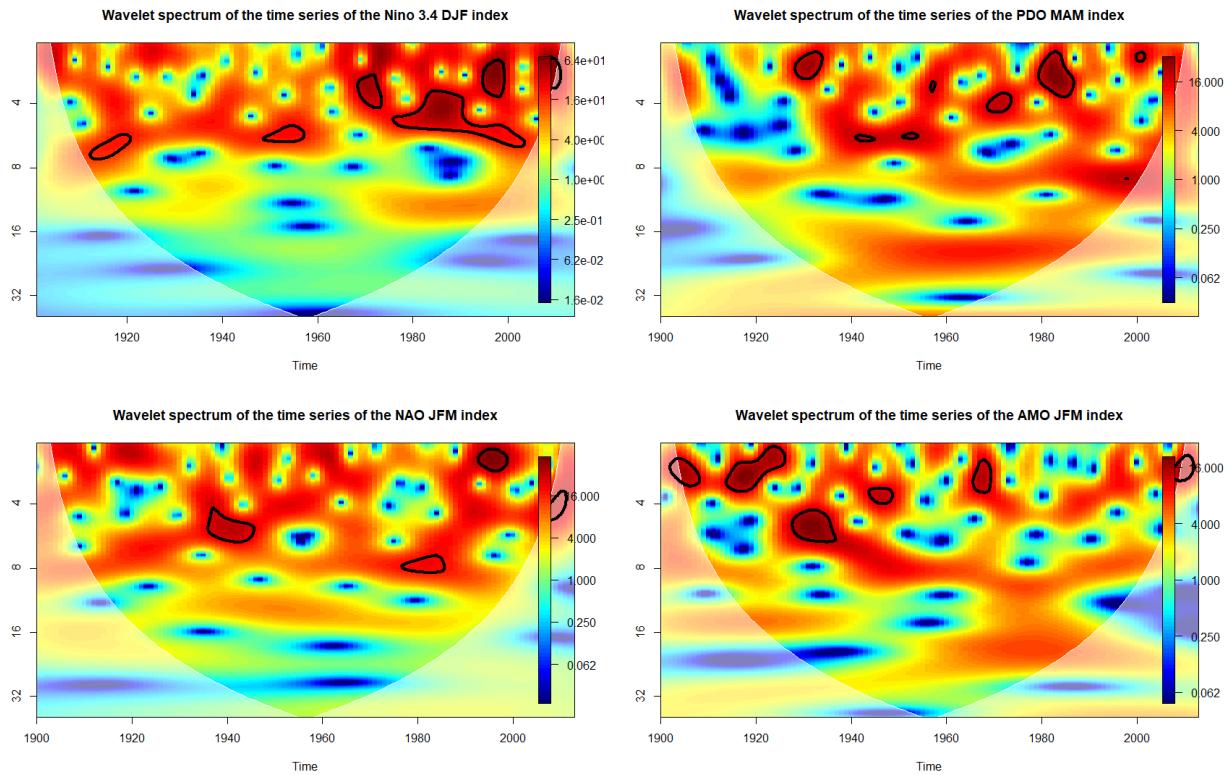


Wavelet spectrum of the time series of the world area
hit by a wet 10-year event



Wavelet spectrum of the time series of the world area
hit by a dry 10-year event



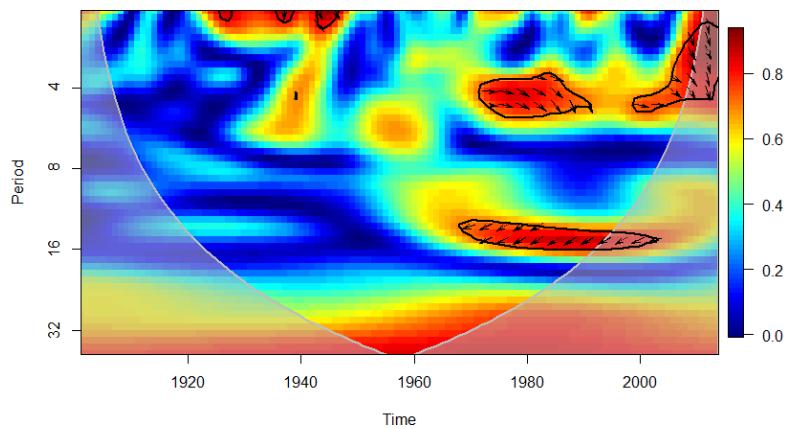


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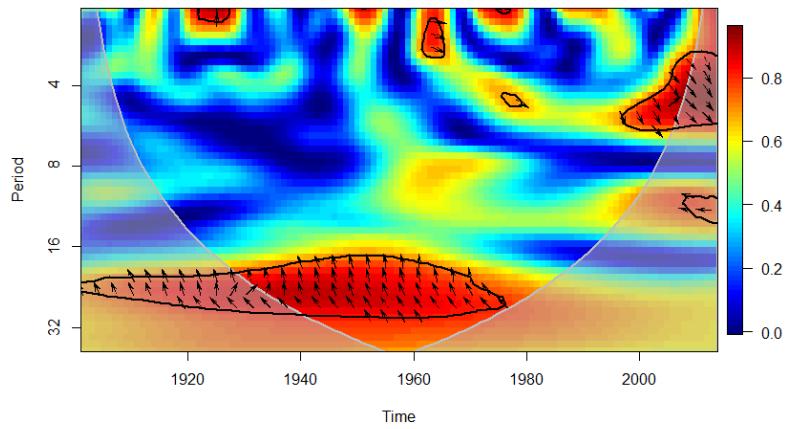
Figure S9: Wavelet spectra of Nino 3.4 DJF (top left), PDO MAM (top right), NAO JFM (bottom right), AMO JFM (bottom right) indexes

10

Wavelet spectrum coherence between the Nino 3.4 DJF index
and the world area hit by a wet or a dry 10-year event



Wavelet spectrum coherence between the Nino 3.4 DJF index
and the world area hit by a wet 10-year event



Wavelet spectrum coherence between the Nino 3.4 DJF index
and the world area hit by a dry 10-year event

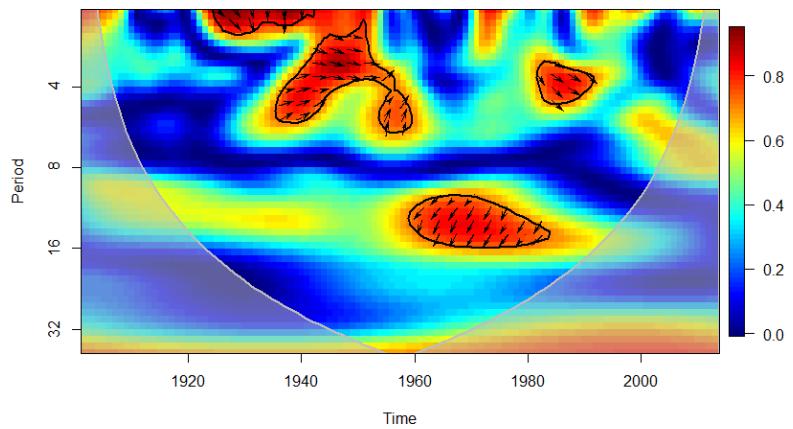


Figure S10: Wavelet coherence between time series of the Nino3.4 DJF index and world areas

5 hit by a 10-year wet or dry (top), wet (middle) or dry (bottom) event

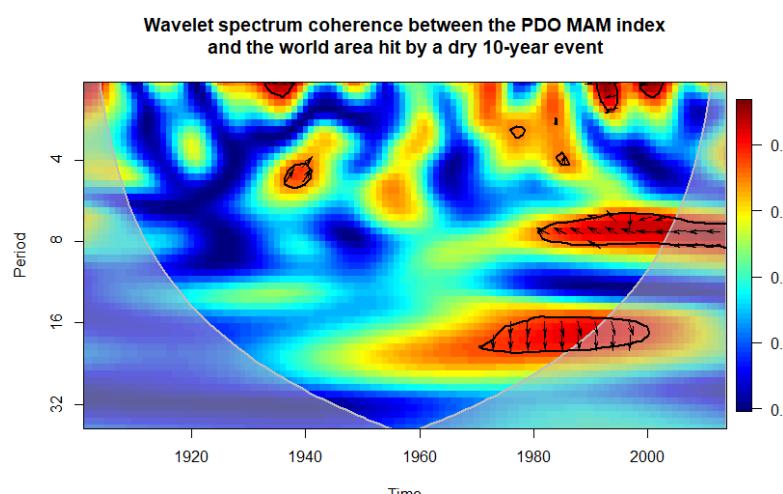
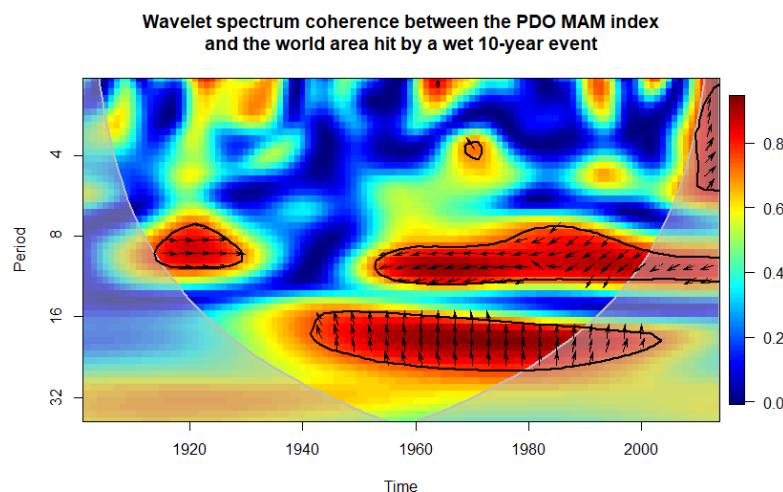
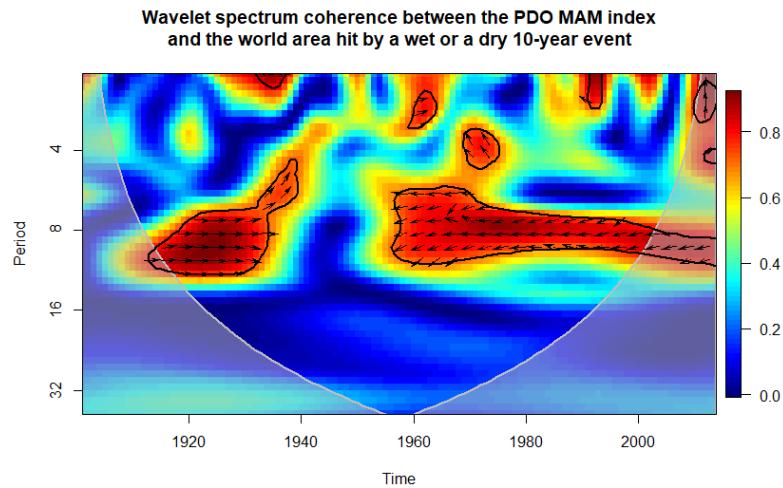


Figure S11: Wavelet coherence between time series of the PDO MAM index and world areas hit by a 10-year wet or dry (top), wet (middle) or dry (bottom) event

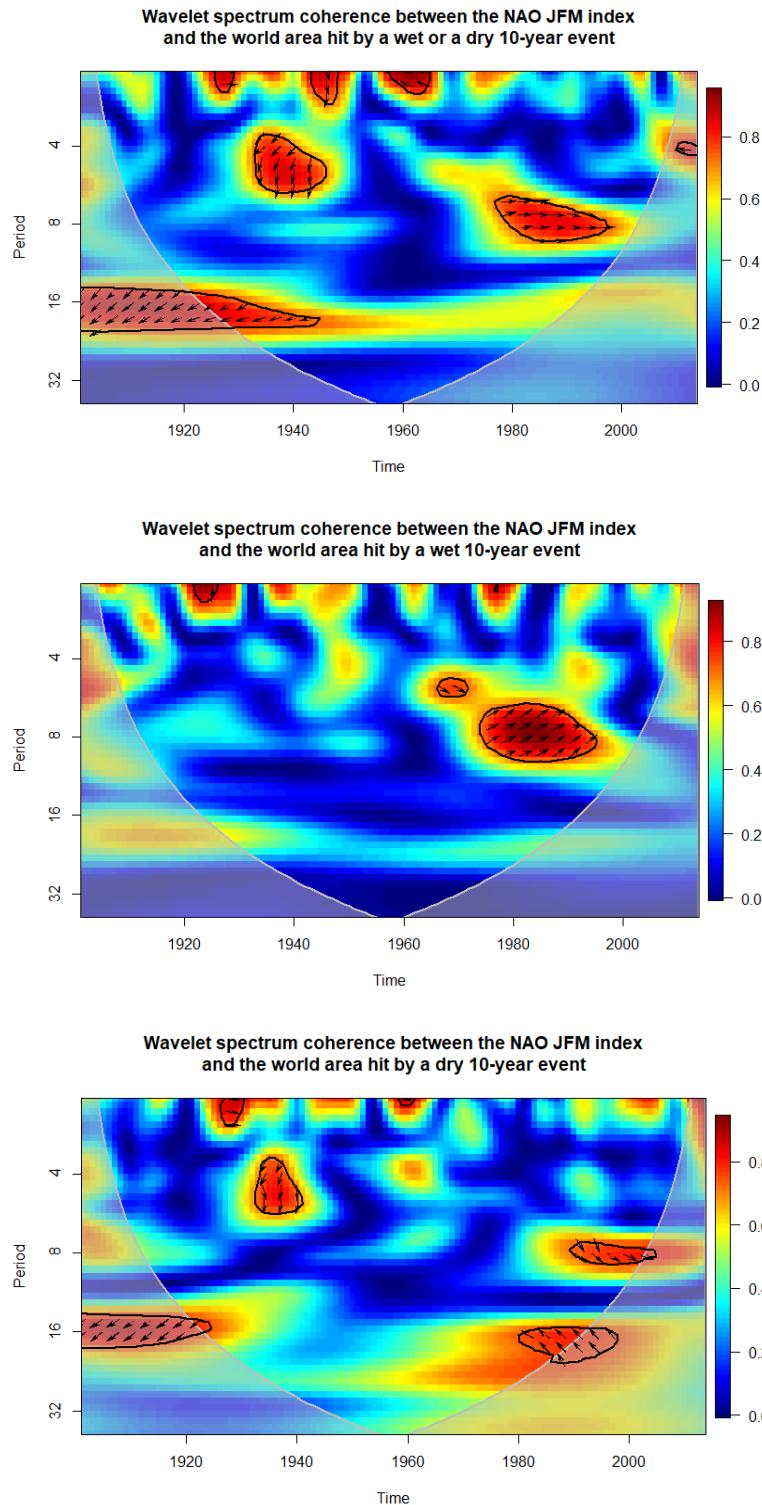


Figure S12: Wavelet coherence between time series of the NAO JFM index and world areas hit by a 10-year wet or dry (top), wet (middle) or dry (bottom) event

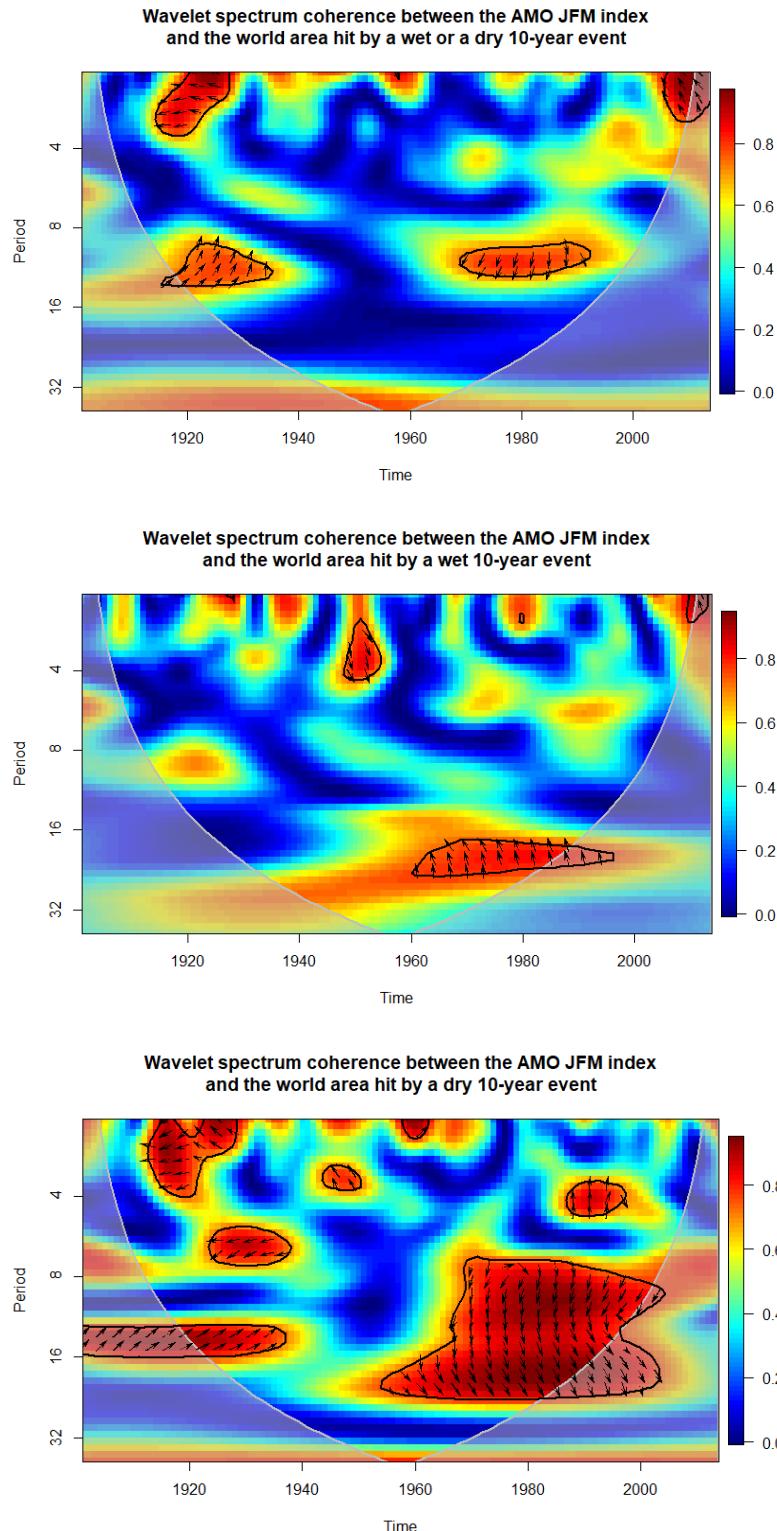


Figure S13: Wavelet coherence between time series of the AMO JFM index and world areas hit
by a 10-year wet or dry (top), wet (middle) or dry (bottom) event

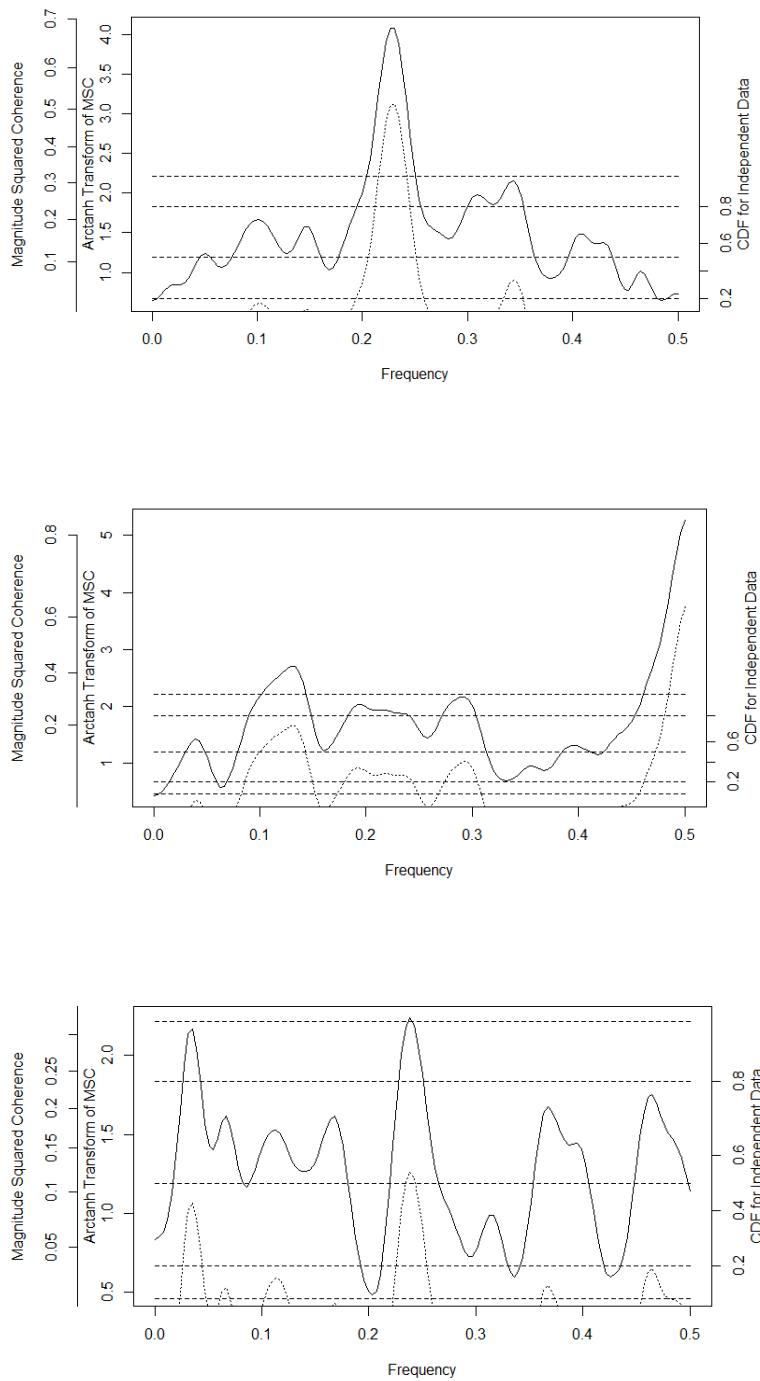


Figure S14: MTM spectrum coherence between the time series of world area hit by a wet or dry ten-year event and the Nino 3.4 DJF index (top), the NAO DJFM index (middle) and the PDO MAM index (bottom)

Time series of the proportion of 2014 copper production affected by a
12-month event with a 10-year return level

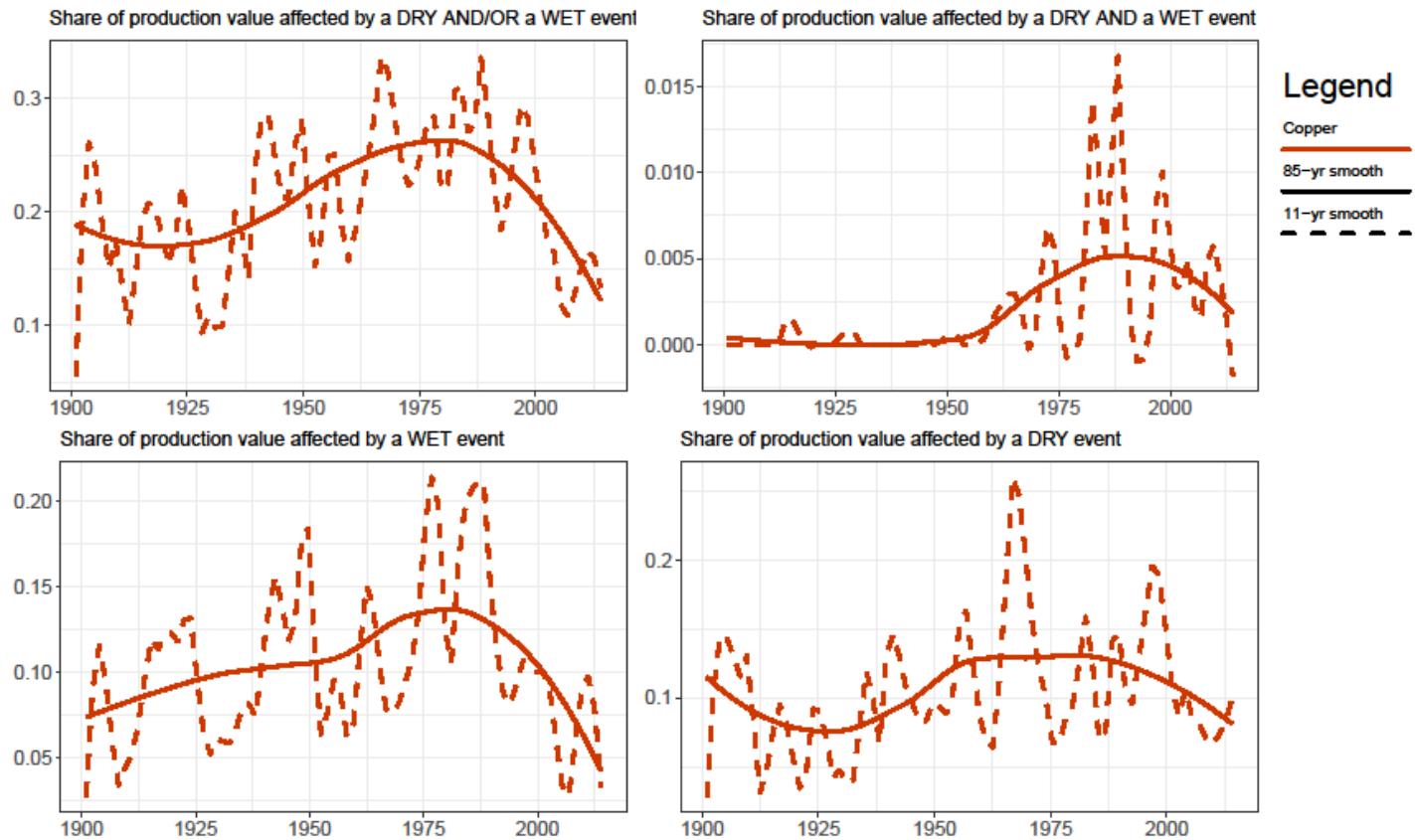


Figure S15: Time series of the proportion of the 2014 copper production affected by a dry or wet event

Wavelet analysis of the copper mine exposure time series

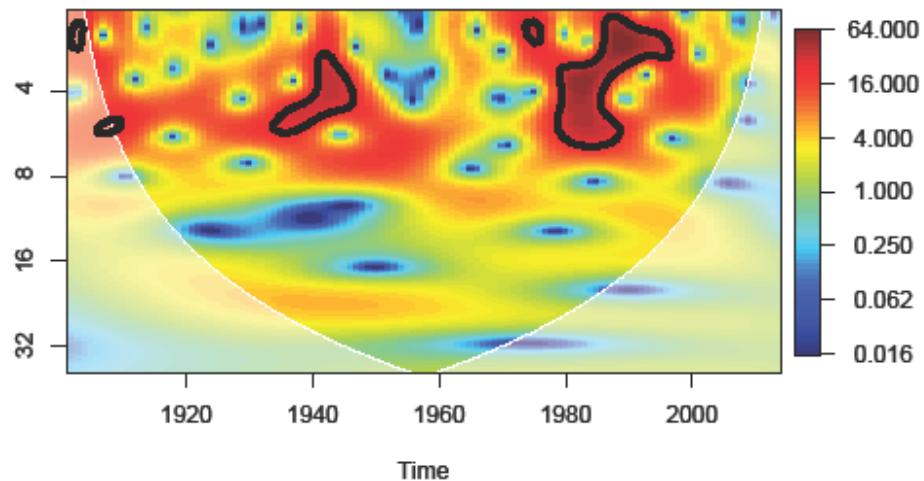


Figure S16: Wavelet analysis of the copper mining exposure time series

World time series

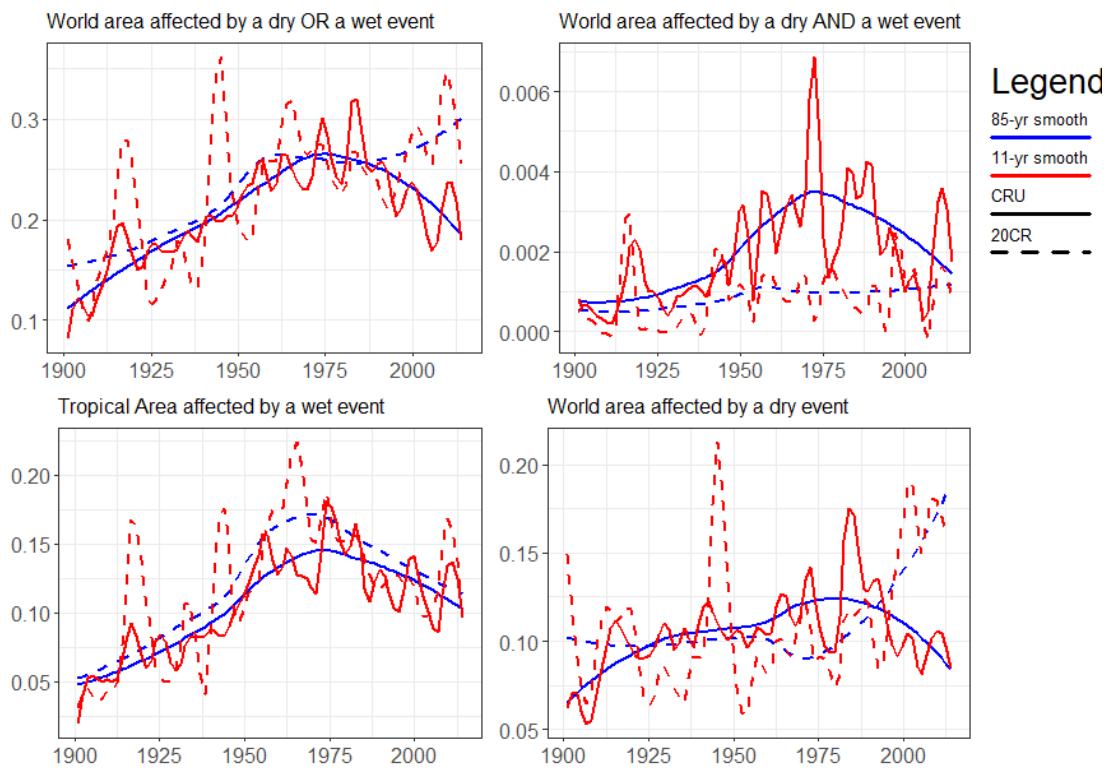


Figure S17: Fraction of land area hit by a 10-year event according to CRU and 20CR SPEI

Time series of the proportion of the World land area affected by a 12-month event with a 10-year return level

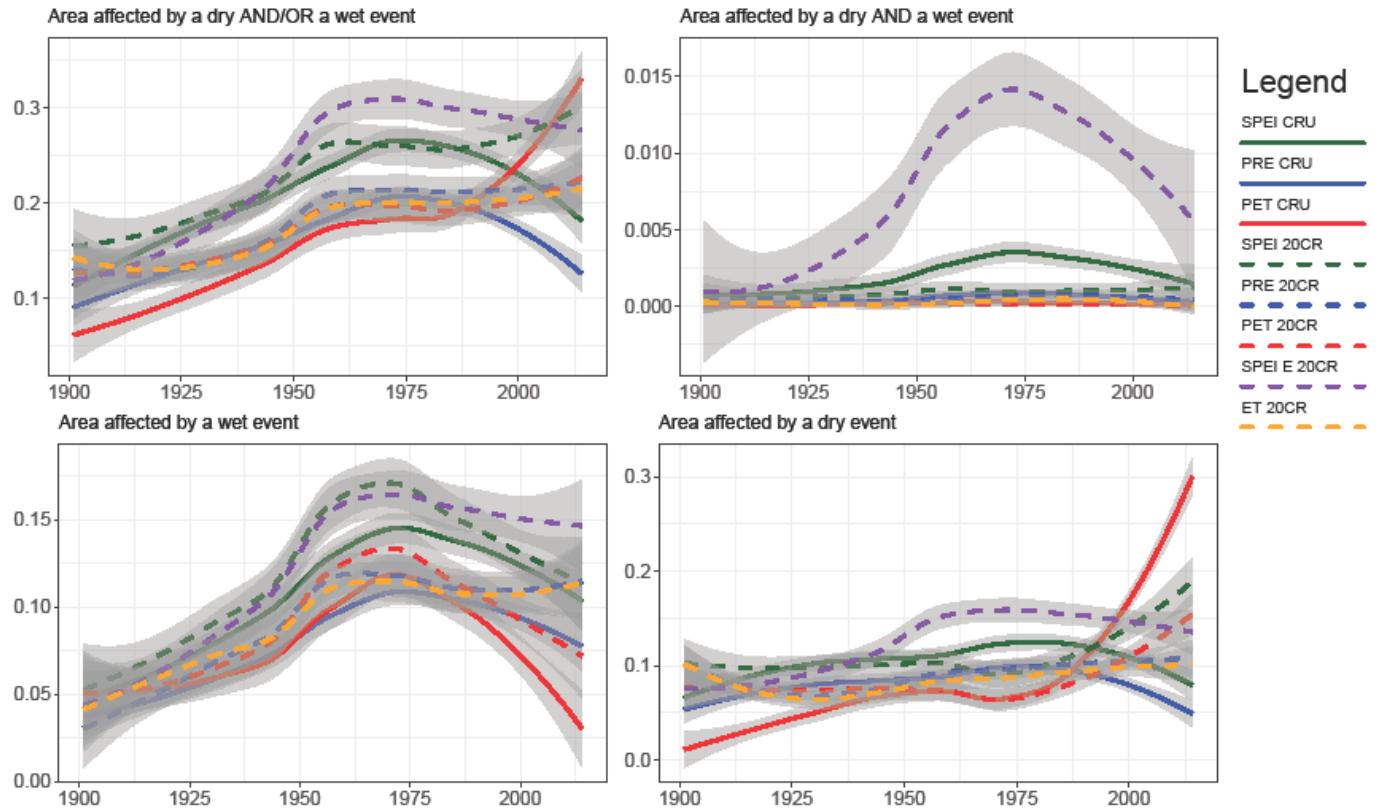


Figure S18: Fraction of land area hit by a 10-year event according to CRU and 20CR data. 85-year smoothing trend of the fraction of land area hit by a 10-year event based on SPEI,

precipitation (PRE), potential evapotranspiration (PET), according to CRU and 20CR data, and to evapotranspiration (E) and a version of the SPEI using evapotranspiration instead of potential evapotranspiration (SPEI E) according to 20CR.