Supplementary Material

Figures

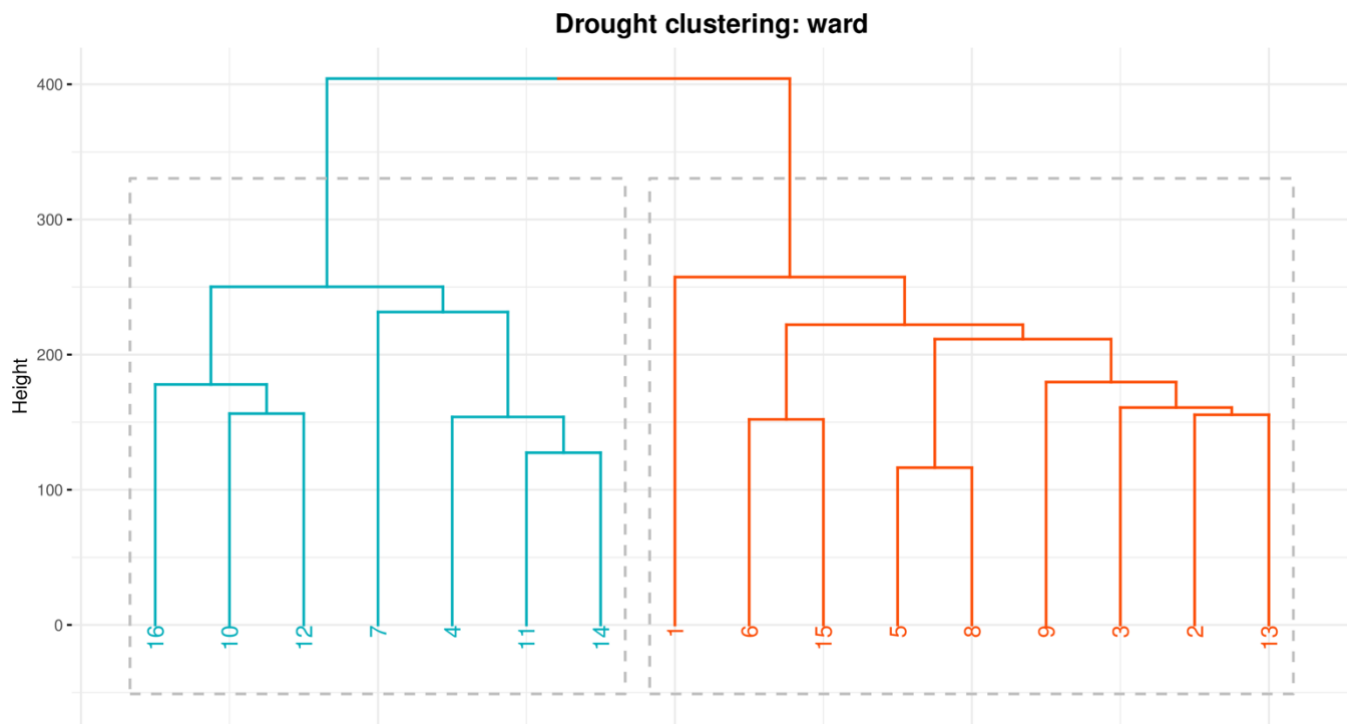Drought clustering: ward

Supplementary Figure S1: First two principal components of the hierarchical clustering based on the ward method of PDSI values for the 16 drought periods.

Supplementary Figure S2: First two principal components of PDSI values for the 16 drought periods based on the k-means clustering approach with prescribed cluster centers (defined by the previous experiment with the ward method).

Table

Supplementary Table S1: Comparison of our clustering approach with the droughts found by Fye et al. (2003). "Dust Bowl"-type droughts are marked with dark shading, 1950s-type droughts with light shading. Overlapping droughts were attributed to each other.

Fye et al. (2003)	Our study	N $_{drought\ years}$	Cluster
1946-1958	1952-1965	14	2
1929-1940	1931-1939	9	1
1897-1904[+]			
	1892-1896	5	2
1870-1883	1869-1874	6	1
1855-1865	1855-1866	12	2
1841-1848			
1818-1824	1817-1824	8	2
1805-1814			
	1783-1791	9	2
1772-1782	1772-1776	5	1
1752-1760*	1753-1758	6	1
1752-1757*			
1728-1744	1734-1743	10	2
	1716-1720	5	1
1703-1712	1703-1710	8	1
1663-1672	1663-1671	9	2
	1652-1656	5	1
	1644-1648	5	1
1626-1634*	1624-1634	11	1
1622-1628*			

5 [+] Given the 5-yr moving average used in the definition, these droughts might be considered the same.

* These two droughts overlap in Fye et al. (2003).