

Comparison of published palaeoclimate records suitable for reconstructing annual to sub-decadal hydroclimatic variability in eastern Australia: implications for water resource management and planning

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Supplementary Material

S1. 5-year wet/dry/neutral classifications for all palaeoclimate records used in this study

5-year period	Local reconstructions			Remote reconstructions							
	Speleothems	Tree rings Heinrich et al. (2009)	Tree rings Allen et al. (2015a,b)	Lake sediments Barr et al. (2014)	Lake sediments Barr et al. (2014)	Ice cores Vance et al. (2015)	Corals Hendy et al. (2003); Lough et al. (2011)	Multiproxy Gallant and Gergis (2011)	Multiproxy McGowan et al. (2009)	PDO reconstruction Verdon and Franks (2006)	IPO reconstruction Buckley et al. (2019)
WET=1											
DRY=-1	Ho et al. (2015b)										
Neutral=0	Aridity index			Lake Elingamite	Lake Surprise						
1000	0			1	-1	-1					
1005	0			1	-1	-1					
1010	0			1	-1	-1					
1015	1			1	-1	-1					
1020	1			0	-1	-1					
1025	1			-1	-1	0					
1030	1			0	0	0					
1035	0			0	0	0					
1040	0			-1	-1	-1					
1045	0			-1	-1	0					
1050	0			-1	-1	-1					
1055	0			-1	-1	-1					
1060	0			-1	0	0					
1065	0			-1	1	0					
1070	-1			-1	-1	-1					
1075	-1			-1	-1	0					
1080	0			-1	-1	0					
1085	0			-1	-1	0					
1090	0			-1	0	0					
1095	0			-1	1	0					
1100	0			-1	1	0					
1105	0			-1	1	-1					

1110	0	-1	1	-1
1115	0	-1	1	0
1120	0	0	1	-1
1125	0	0	-1	0
1130	-1	-1	-1	0
1135	-1	0	-1	-1
1140	-1	0	0	-1
1145	-1	1	1	-1
1150	0	1	1	0
1155	0	1	0	0
1160	1	0	-1	0
1165	0	-1	0	0
1170	-1	0	1	-1
1175	-1	-1	-1	-1
1180	-1	-1	-1	-1
1185	0	-1	-1	-1
1190	0	0	-1	-1
1195	0	0	0	-1
1200	0	0	1	-1
1205	0	0	1	-1
1210	0	0	1	-1
1215	0	0	1	0
1220	0	0	1	0
1225	0	1	-1	0
1230	0	1	-1	0
1235	0	1	-1	0
1240	0	1	-1	-1
1245	0	1	-1	-1
1250	0	1	-1	-1
1255	0	0	-1	-1
1260	0	0	0	0
1265	0	0	-1	0

1270	0	0	-1	1	
1275	0	0	0	0	
1280	0	0	1	0	
1285	0	0	1	0	
1290	0	0	1	0	
1295	0	0	0	0	
1300	0	0	0	0	
1305	0	0	-1	0	
1310	0	0	0	-1	
1315	0	0	1	0	
1320	0	0	1	0	
1325	0	-1	1	0	
1330	0	-1	1	0	
1335	0	-1	1	1	
1340	0	-1	1	0	
1345	0	-1	0	-1	
1350	-1	-1	0	0	0
1355	-1	-1	0	1	1
1360	-1	-1	0	1	1
1365	-1	-1	0	1	1
1370	-1	-1	0	0	0
1375	-1	-1	-1	0	0
1380	-1	-1	-1	0	0
1385	0	-1	-1	0	0
1390	0	-1	-1	0	0
1395	0	-1	0	0	0
1400	0	-1	-1	0	0
1405	0	-1	-1	0	0
1410	0	-1	-1	0	0
1415	0	-1	-1	0	0
1420	0	-1	-1	1	1
1425	0	-1	-1	1	1

1590	1	1	0	-1	1	1	1
1595	1	1	0	-1	1	1	1
1600	1	-1	0	0	1	1	1
1605	1	-1	0	-1	1	1	1
1610	1	-1	0	-1	1	1	1
1615	1	1	0	-1	1	1	1
1620	1	1	1	-1	0	1	1
1625	0	-1	0	-1	0	0	0
1630	0	-1	0	-1	-1	1	1
1635	0	1	0	-1	0	0	0
1640	0	1	0	-1	0	1	1
1645	0	0	0	-1	0	1	1
1650	0	0	0	-1	0	0	0
1655	0	0	0	-1	0	0	0
1660	0	0	0	1	0	1	1
1665	-1	1	0	1	0	0	0
1670	-1	0	0	1	1	0	0
1675	-1	-1	-1	1	1	1	1
1680	-1	-1	-1	0	1	0	0
1685	-1	-1	0	0	1	1	1
1690	-1	-1	0	0	1	-1	1
1695	0	0	0	-1	0	1	1
1700	0	0	0	-1	0	1	1
1705	0	1	0	-1	1	1	1
1710	0	1	0	0	1	-1	1
1715	0	0	0	1	0	1	1
1720	0	-1	0	1	0	-1	1
1725	0	-1	1	-1	-1	0	0
1730	0	-1	1	0	-1	1	1
1735	0	0	1	0	0	-1	1
1740	0	-1	1	1	0	-1	1
1745	0	-1	1	1	-1	-1	1

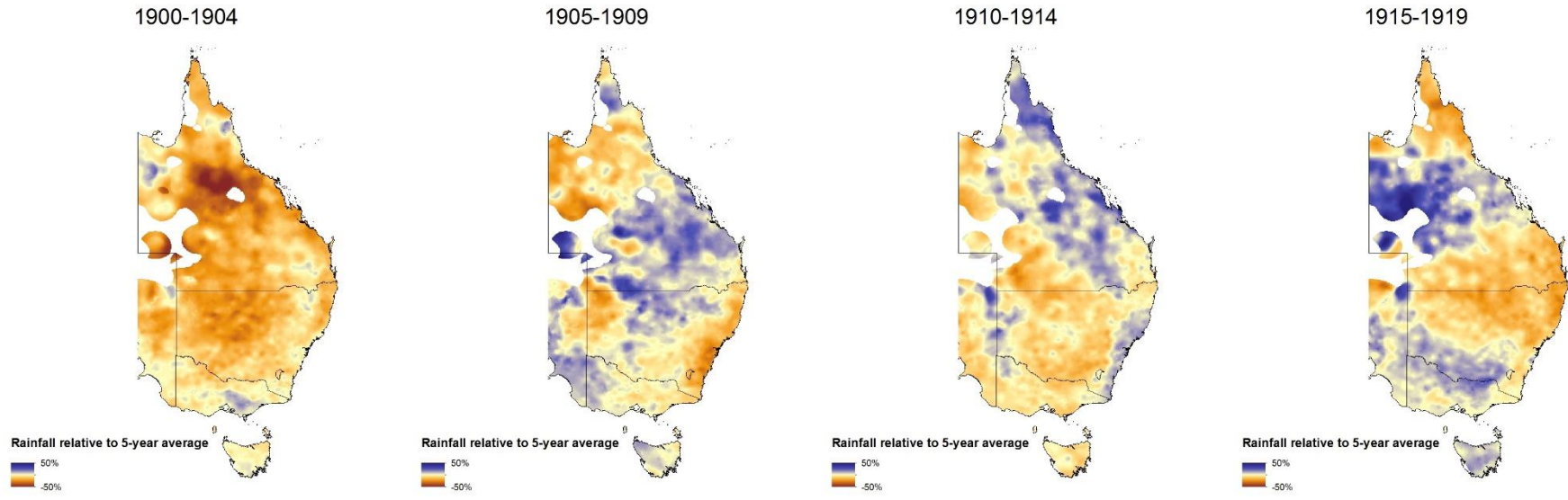
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1765	0		1	1	0	0	-1		0	-1	0
1770	-1		0	1	0	0	-1		0	-1	0
1775	-1		0	1	0	0	-1		1	1	0
1780	-1		1	1	0	0	-1		1	1	0
1785	-1		0	1	0	1	-1		0	1	1
1790	-1		0	1	1	1	-1	0	-1	1	1
1795	0		1	1	1	0	-1	0	0	0	0
1800	0		1	1	1	0	-1	1	1	1	0
1805	0		1	1	1	1	-1	0	0	1	1
1810	0		1	1	1	1	-1	-1	0	1	1
1815	0		1	1	1	1	-1	-1	-1	1	1
1820	-1		1	1	1	0	-1	1	-1	0	0
1825	-1		1	1	1	0	-1	1	0	-1	0
1830	-1		1	1	1	0	-1	0	0	-1	0
1835	-1		0	1	1	1	-1	-1	1	0	1
1840	0		0	1	0	1	-1	-1	0	0	1
1845	0		-1	1	0	1	-1	0	0	0	1
1850	0		0	1	1	1	-1	0	1	0	1
1855	0		0	1	1	1	0	1	1	1	1
1860	0	0	1	1	1	1	1	1	0	1	1
1865	0	0	1	0	1	0	0	0	-1	1	0
1870	0	0	1	0	1	0	-1	0	-1	1	0
1875	0	-1	0	0	1	0	0	0	0	1	0
1880	0	0	1	0	1	0	1	1	1	0	0
1885	0	1	1	-1	1	0	-1	1	1	1	0
1890	0	1	1	-1	1	0	1	1	1	1	0
1895	0	0	0	-1	0	0	1	0	1	1	0
1900	-1	-1	-1	-1	0	0	-1	-1	0	1	0
1905	-1	-1	-1	-1	0	0	0	-1	0	1	0

1910	-1	-1	-1	-1	0	0	1	1	1	1	0
1915	-1	-1	-1		0	-1	0	0	1	1	-1
1920	-1	0	0		0	-1	-1	-1	0	1	-1
1925	-1	1	0		-1	-1	0	-1	-1	1	-1
1930	0	1	1		0	-1	-1	0	-1	0	-1
1935	0	0	1		0	0	-1	-1	-1	0	0
1940	0	-1	1		0	0	0	-1	-1	-1	0
1945	0	-1	0		0	0	0	1	0	1	0
1950	0	0	0		0	0	1	1	1	1	0
1955	0	0	0		-1	0	1	1	1	1	0
1960	0	0	0		-1	0	-1	0	1	1	0
1965	-1	1	0		0	-1	-1	1	0	1	-1
1970	-1	1	1		1	-1	1	1	1	-1	-1
1975	-1	0	0		-1	-1	0	0	0		-1
1980	0	0	-1		-1	-1	-1	0	-1		-1
1985	0	0	0		-1	-1			0		-1
1990	0	0	1		-1	-1		1			-1
1995	0		1		-1	0					0
2000											

S2. Pre-instrumental 5-year periods classed as equivalent to instrumental 5-year periods

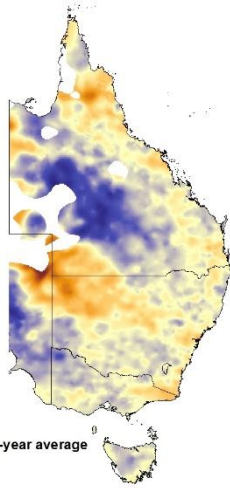
Year	Equivalent pre-instrumental 5-year periods																
1900	1350	1370															
1905	1350	1370															
1910	1350	1370															
1915	1140																
1920	1140																
1925	1070	1135	1175	1180													
1930	1195	1310	1345	1510													
1935	1035	1060	1090	1155	1165	1260	1275	1295	1300	1395	1450						
1940	1035	1060	1090	1155	1165	1260	1275	1295	1300	1395	1450						
1945	1035	1060	1090	1155	1165	1260	1275	1295	1300	1395	1450						
1950	1035	1060	1090	1155	1165	1260	1275	1295	1300	1395	1450						
1955	1045	1080	1085	1125	1225	1230	1235	1265	1305	1385	1390	1400	1405	1410	1415		
1960	1045	1080	1085	1125	1225	1230	1235	1265	1305	1385	1390	1400	1405	1410	1415		
1965	1140																
1970	1145	1170															
1975	1070	1135	1175	1180													
1980	1000	1005	1010	1040	1050	1055	1185	1190	1240	1245	1250	1255					
1985	1000	1005	1010	1040	1050	1055	1185	1190	1240	1245	1250	1255					
1990	1000	1005	1010	1040	1050	1055	1185	1190	1240	1245	1250	1255					
1995	1045	1080	1085	1125	1225	1230	1235	1265	1305	1385	1390	1400	1405	1410	1415	1635	1640

S3. Rainfall relative to 5-year instrumental average for each 5-year instrumental periods

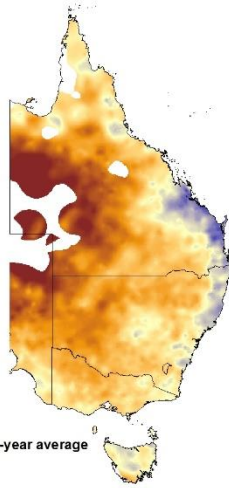


S4.

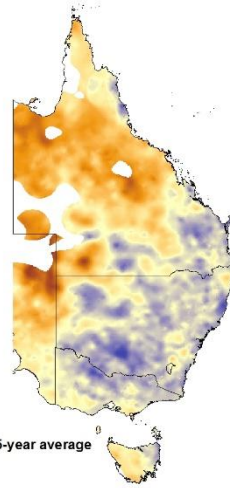
1920-1924



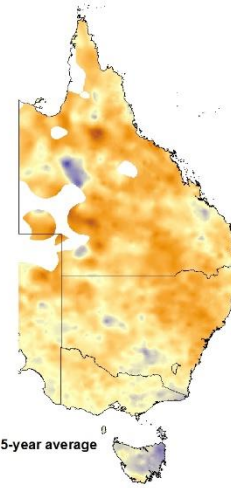
1925-1929



1930-1934

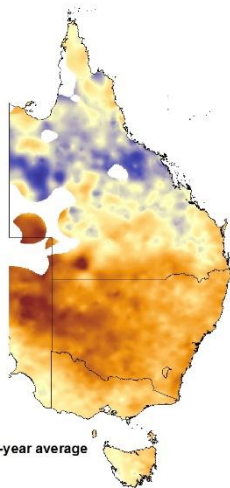


1935-1939

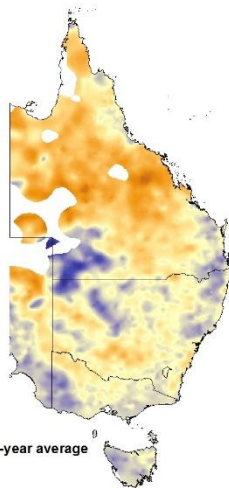


S5.

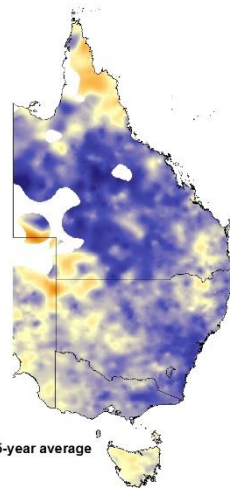
1940-1944



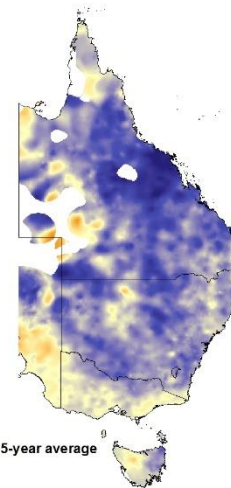
1945-1949



1950-1954

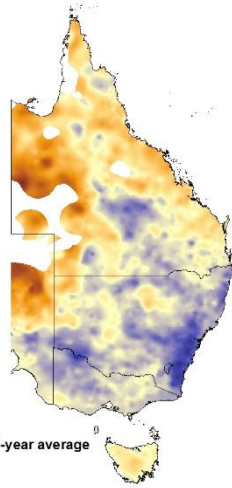


1955-1959

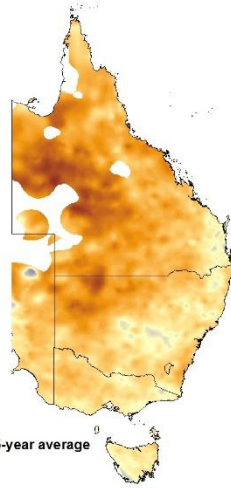


S6.

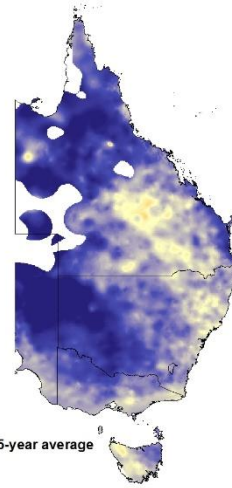
1960-1964



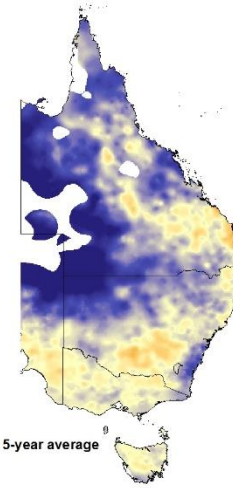
1965-1969



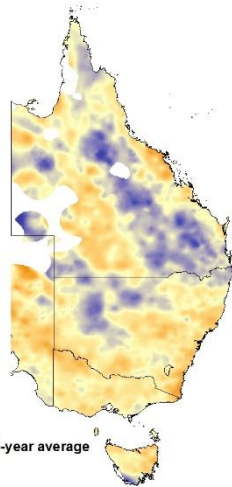
1970-1974



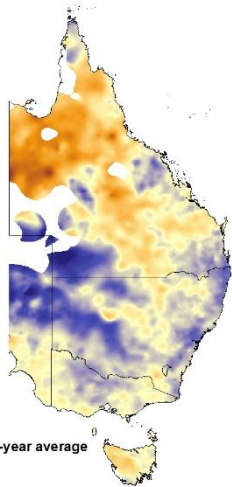
1975-1979



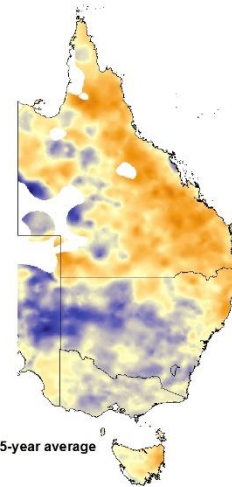
1980-1984



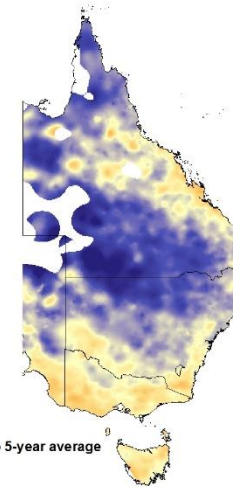
1985-1989



1990-1994



1995-1999



S7.

S8.

