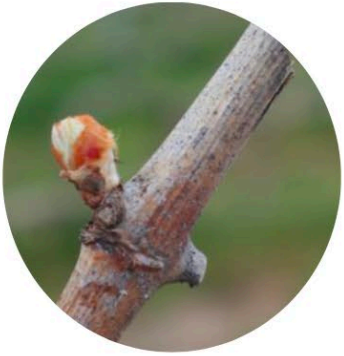
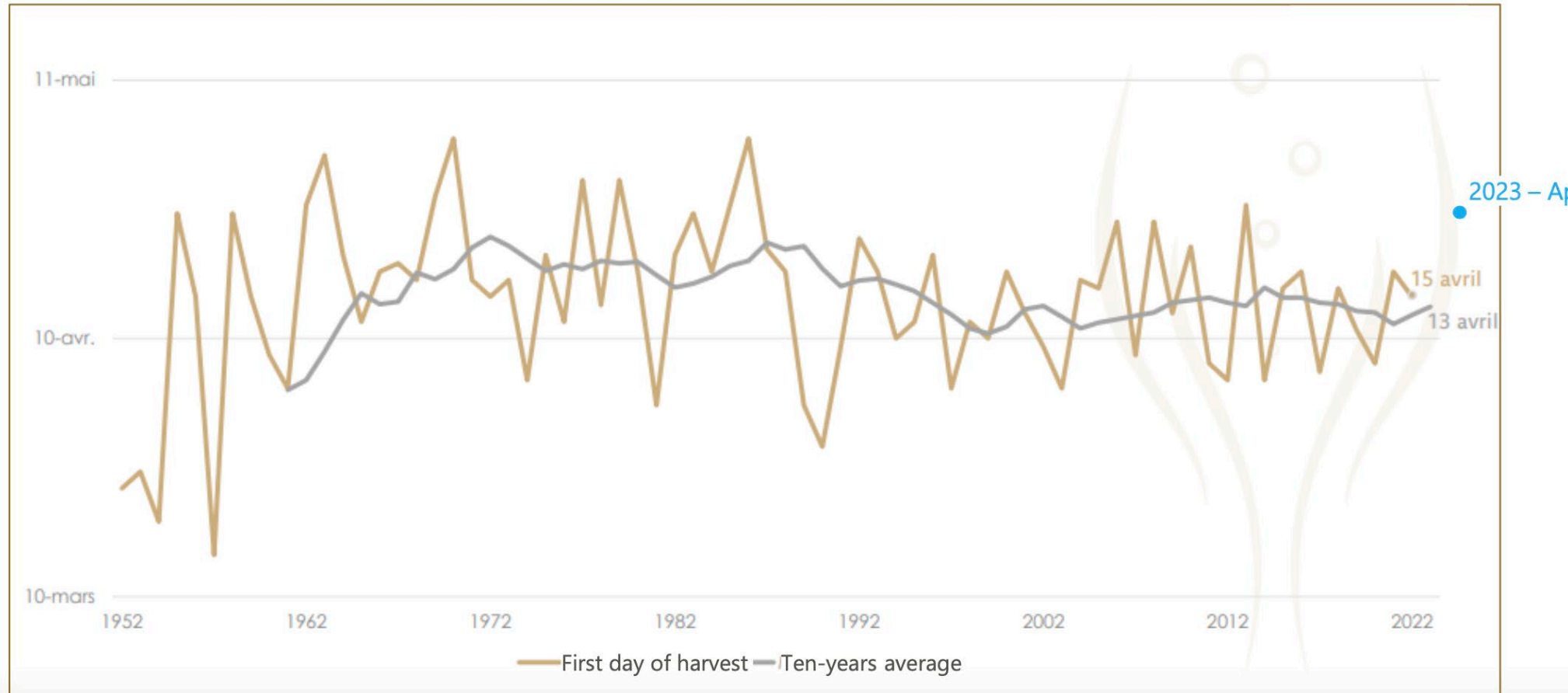


VINE CYCLE & GLOBAL WARMING

CONSEQUENCES OF GLOBAL WARMING ON THE VINE CYCLE



BUDBURST – 1952 - 2022

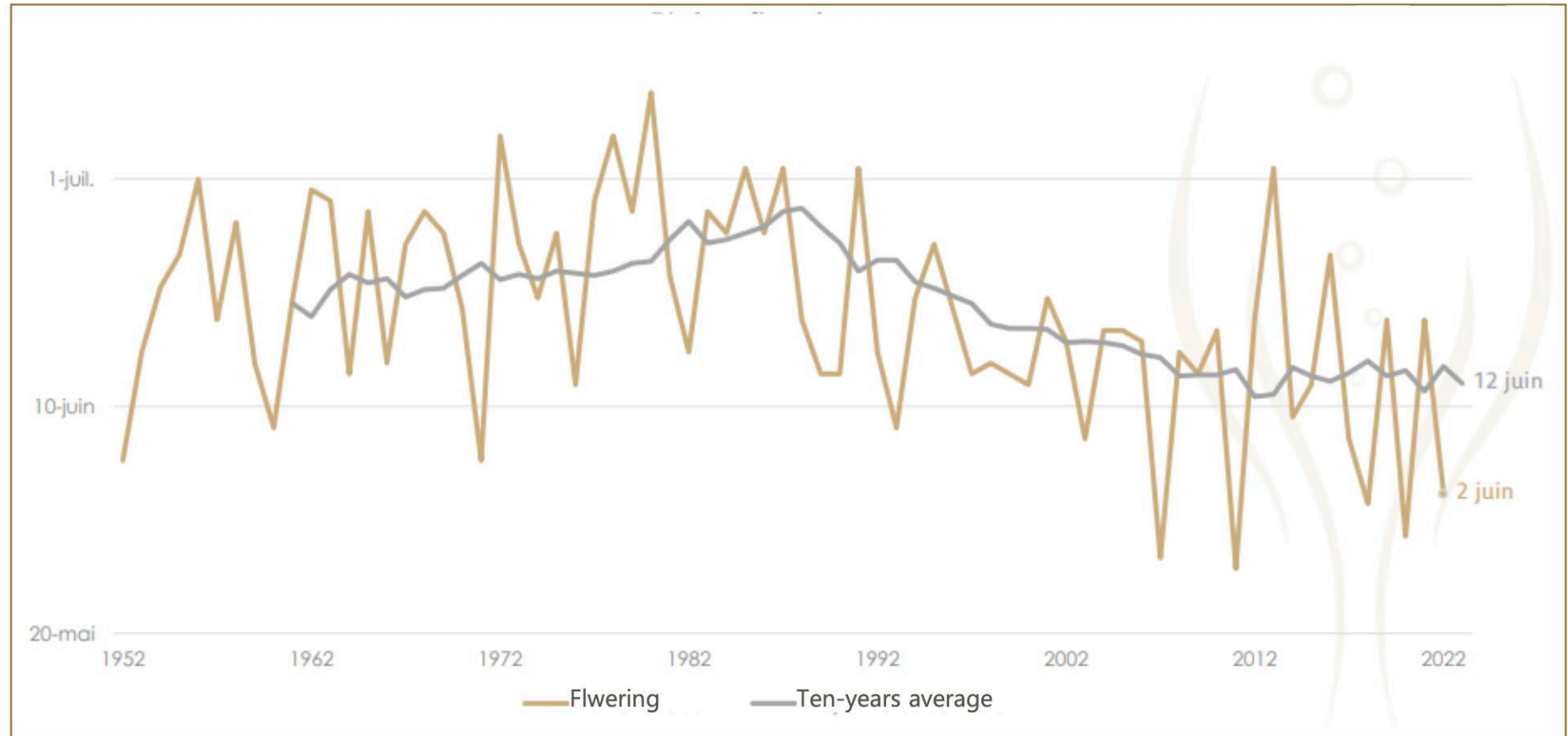


VINE CYCLE & GLOBAL WARMING

CONSEQUENCES OF GLOBAL WARMING ON THE VINE CYCLE



FULL FLOWERING – 1952 - 2022

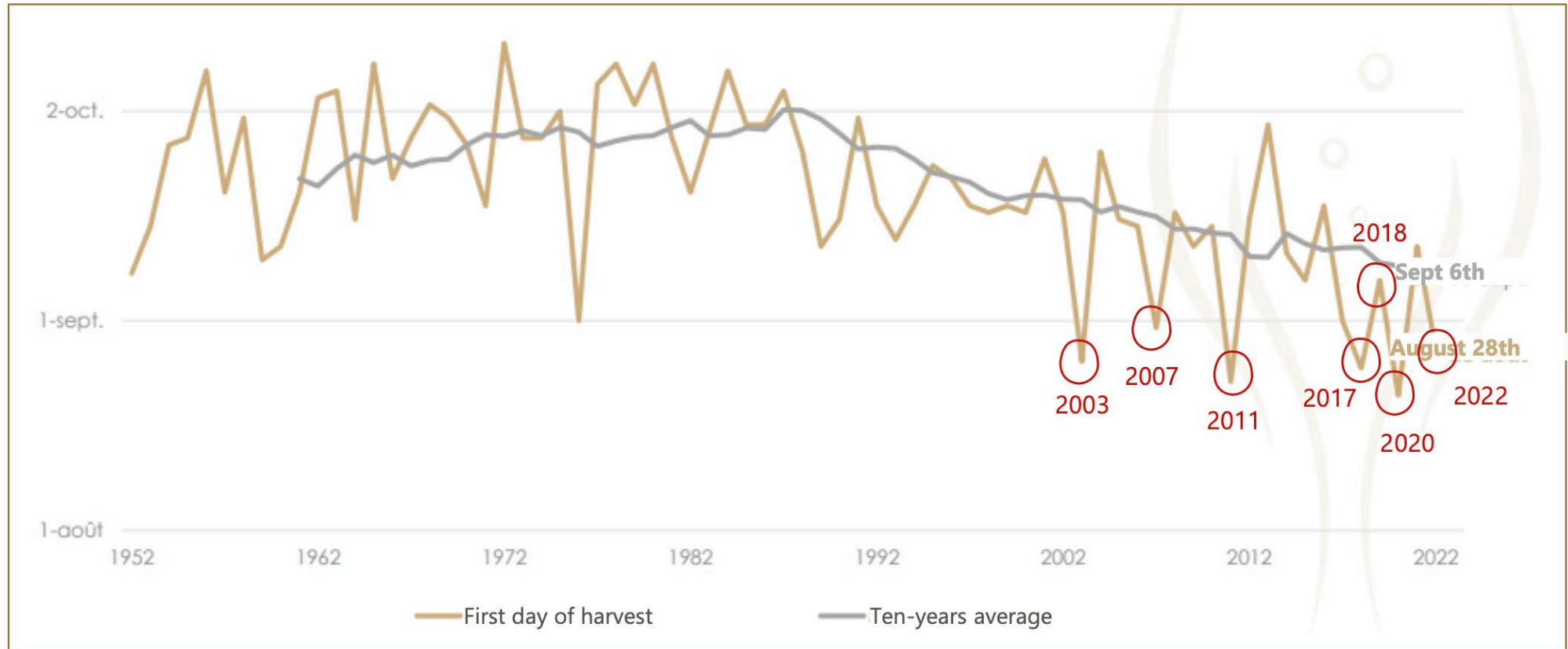


VINE CYCLE & GLOBAL WARMING

CONSEQUENCES OF GLOBAL WARMING ON THE VINE CYCLE



FIRST DAY OF HARVEST— 1952 - 2022

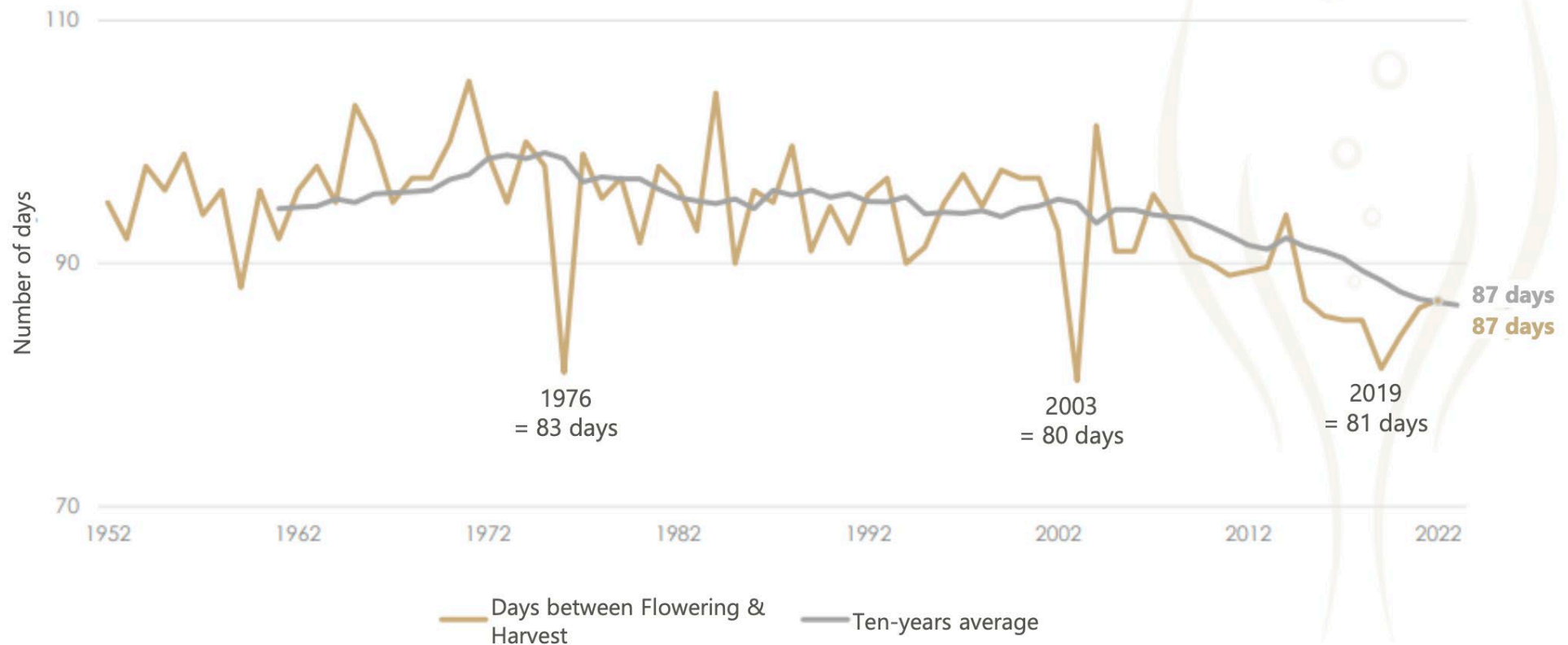


Vine Cycle & Global warming

Consequences of global warming in Champagne



Days between Flowering & Harvest – 1952 - 2022



CHAMPAGNE & GLOBAL WARMING

AVERAGE TEMPERATURE IN CHAMPAGNE 1961-2022



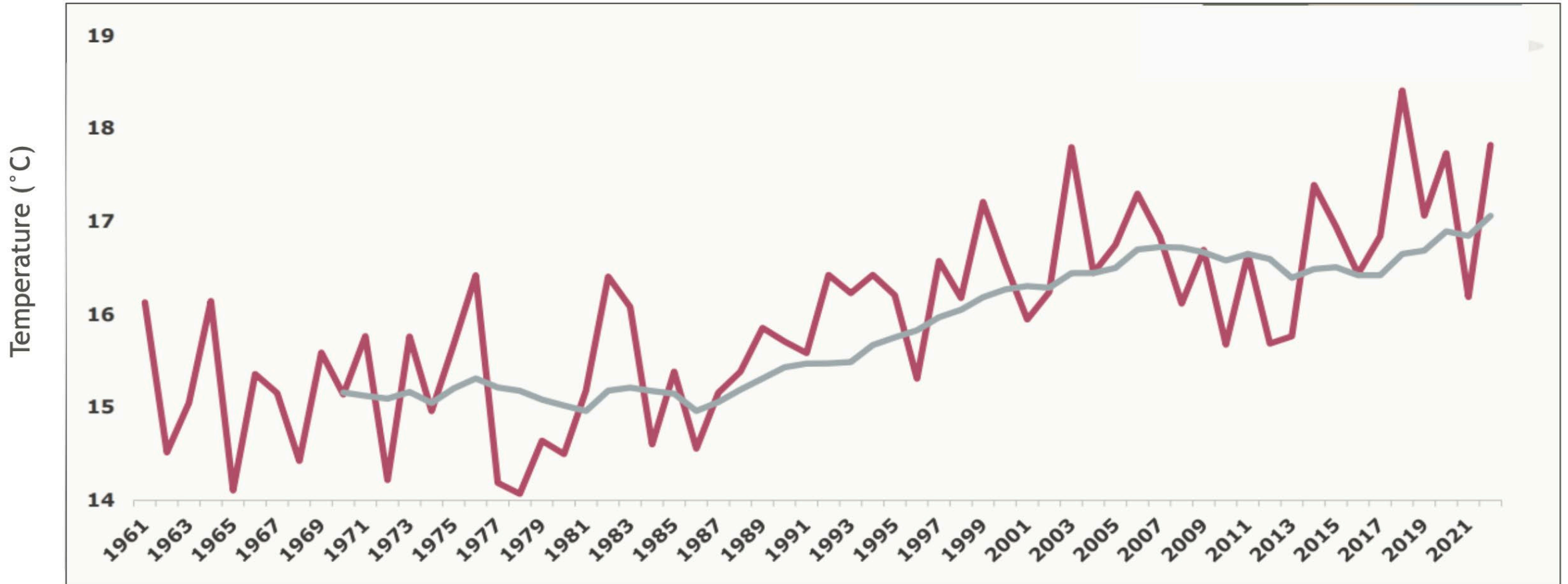
ΔT AVERAGE IN CHAMPAGNE = +1,3°C 1991-2020 vs. 1961-1990

T average in Champagne, 2022 = 17,7°C vs 10,4°C 1991-2020 vs. 1961-1990

T average in France, 2022 = 13°C vs 11,82°C



2022	2018	2003
2	1	3

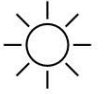


Source : Comité Champagne

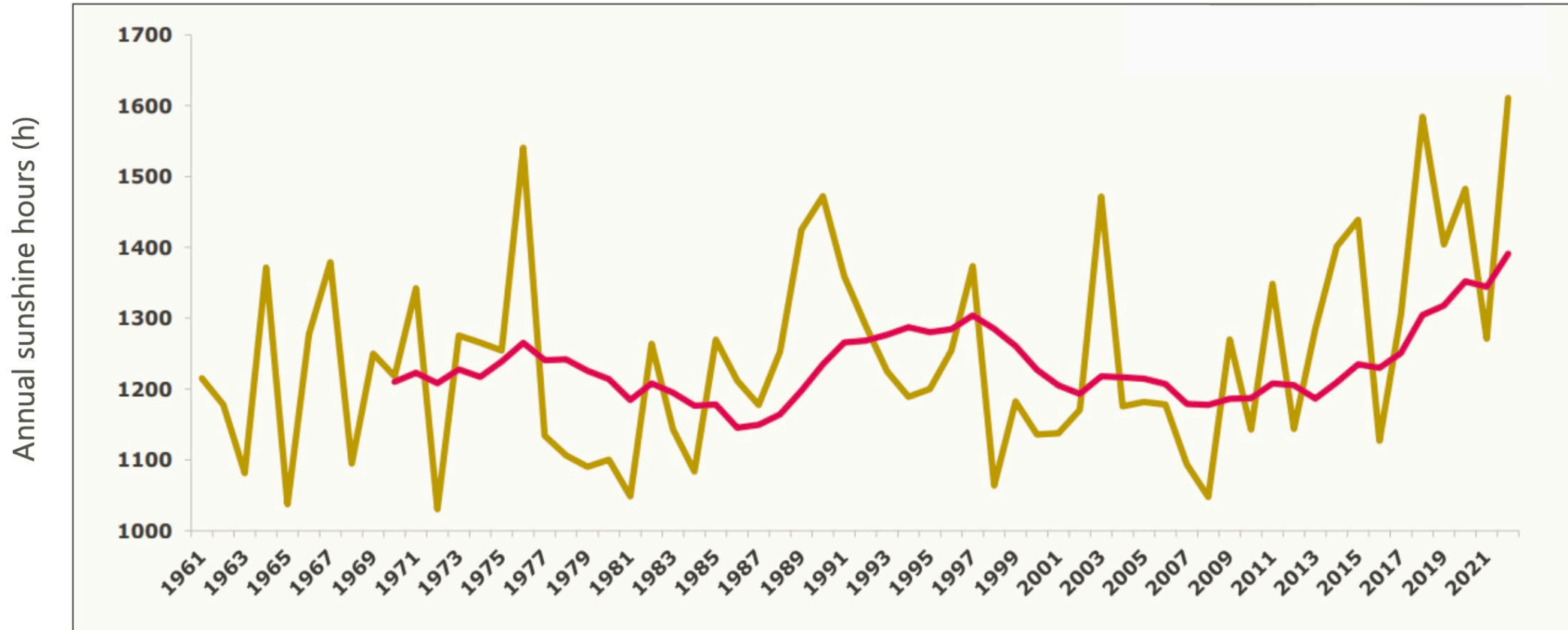
CHAMPAGNE & GLOBAL WARMING



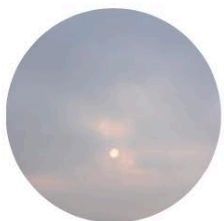
ANNUAL SUNSHINE HOURS IN CHAMPAGNE— 1961 - 2022



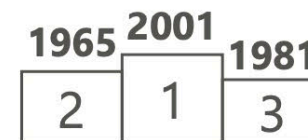
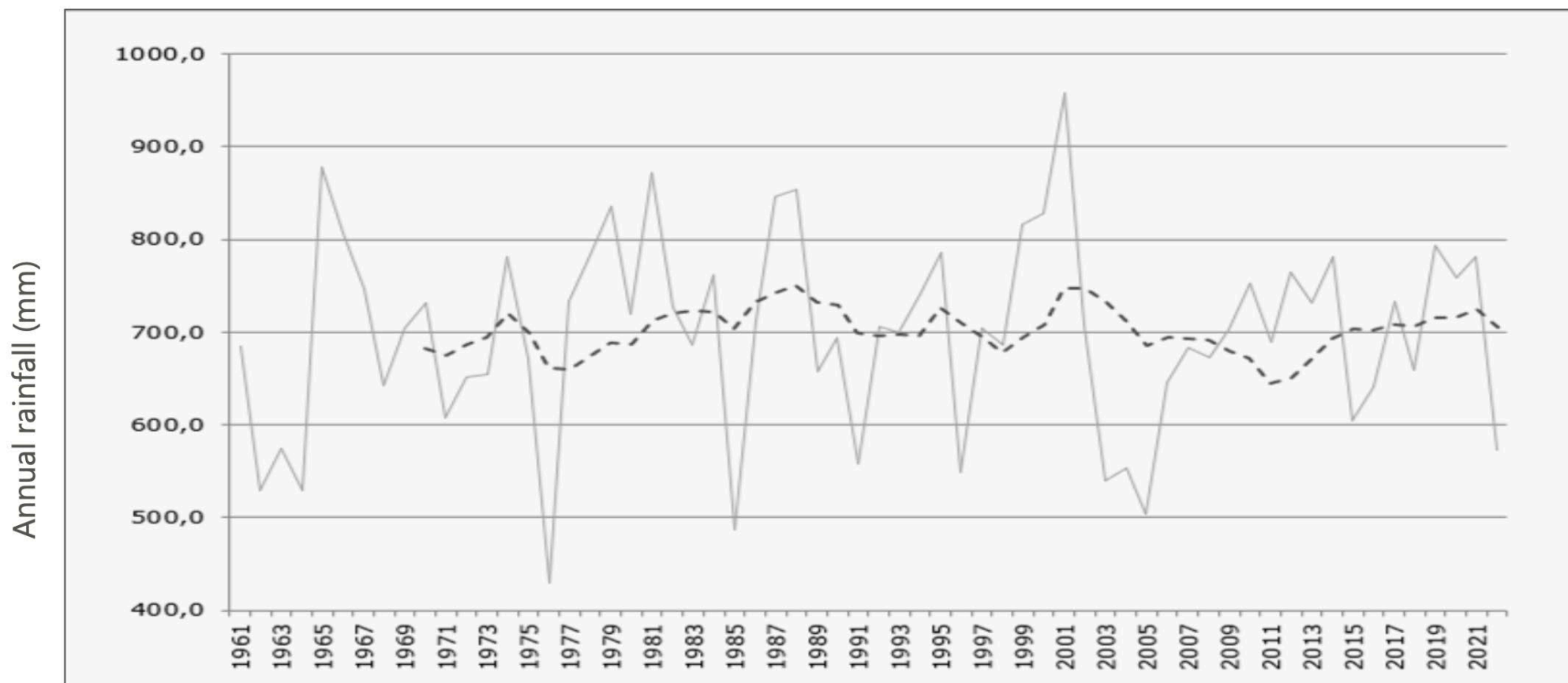
2018	2022	1976
2	1	3



CHAMPAGNE & GLOBAL WARMING



ANNUAL RAINFALL IN CHAMPAGNE – 1961 - 2022



CHAMPAGNE & GLOBAL WARMING

EVOLUTION OF BIOCLIMATIC INDICATORS

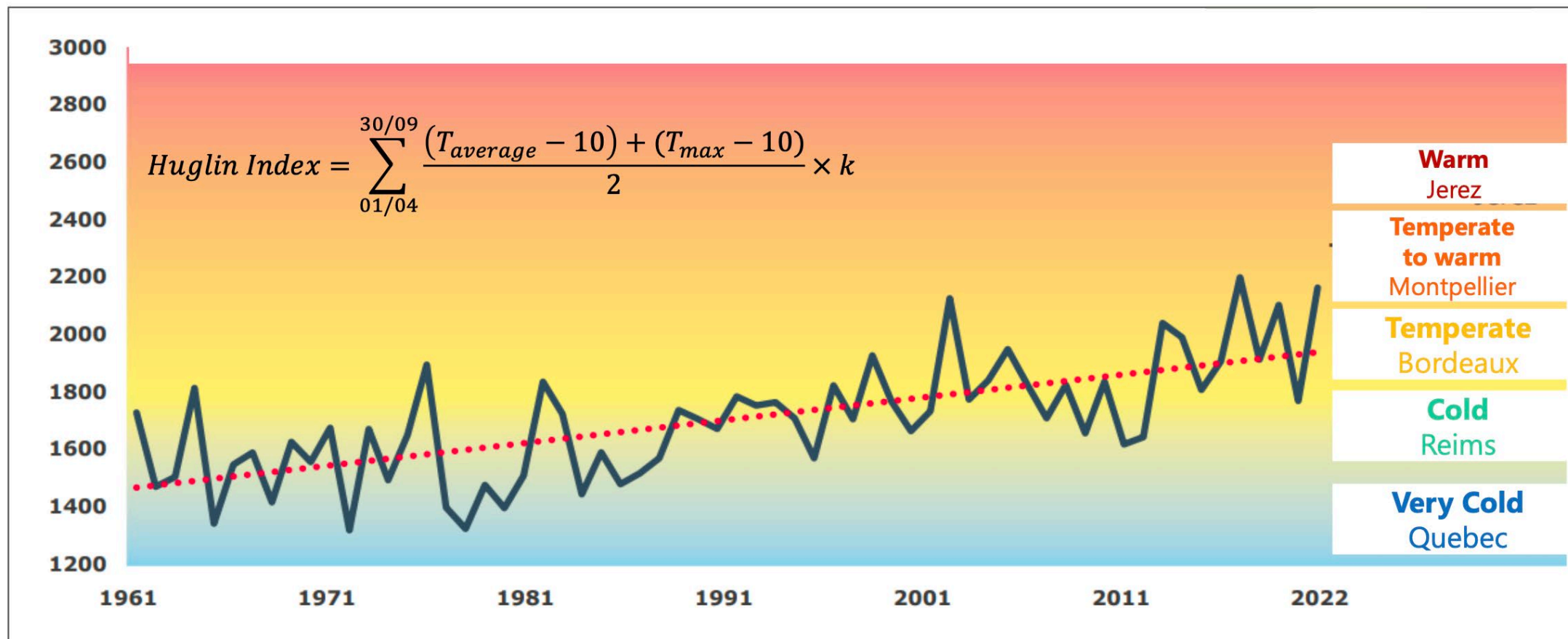


HUGLIN INDEX IN CHAMPAGNE – 1961 – 2022

Cool climate > Temperate climate

2022	2018	200
2	1	3

Huglin Index (degree-day)

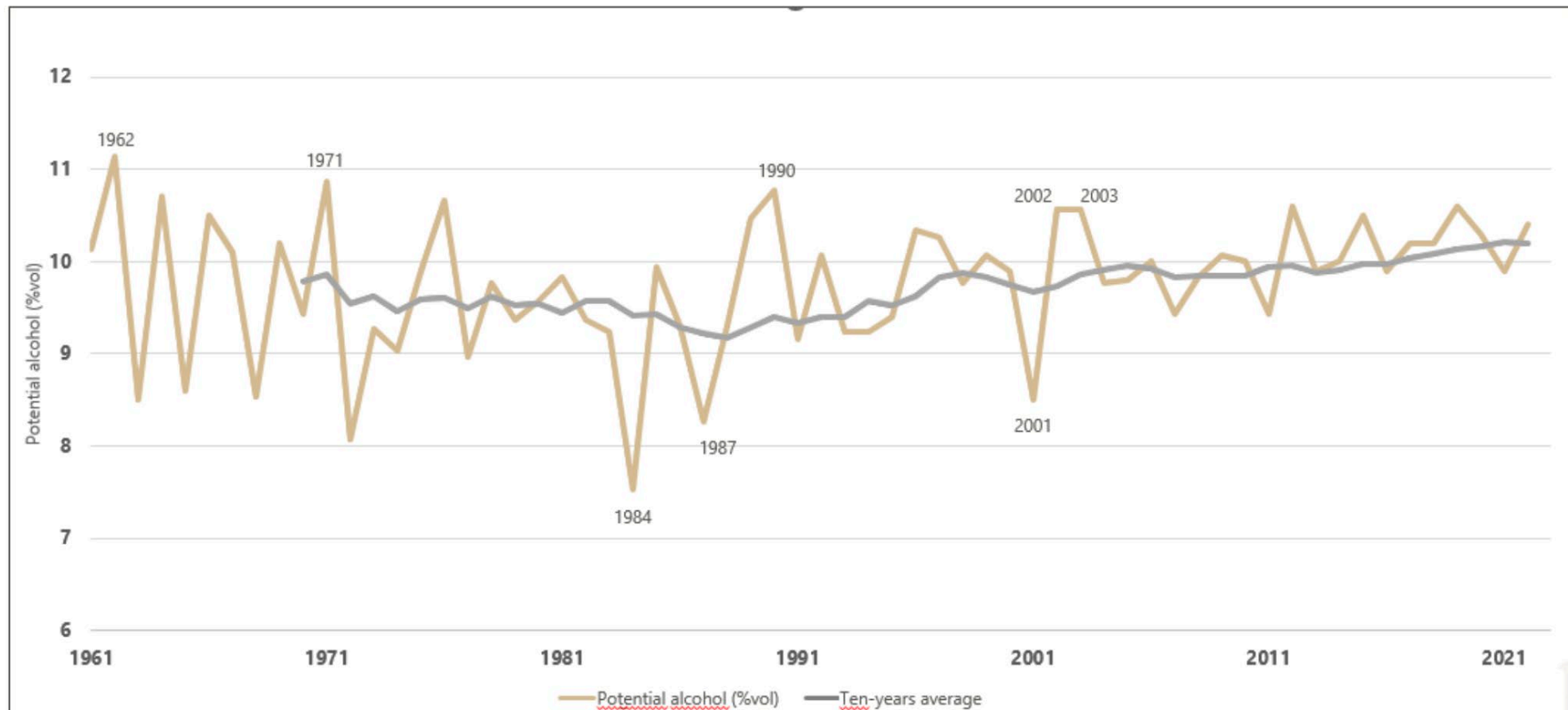


WINES & GLOBAL WARMING

CHANGES IN THE MUST COMPOSITION



POTENTIAL ALCOHOL IN MUST – 1961 - 2022



WINES & GLOBAL WARMING

CHANGES IN THE MUST COMPOSITION



TOTAL ACIDITY IN MUST – 1961 - 2022



 Degradation of malic acid

 Increase in pH

