

# Climate extreme values in Andorra, evolution in terms of frequency and intensity

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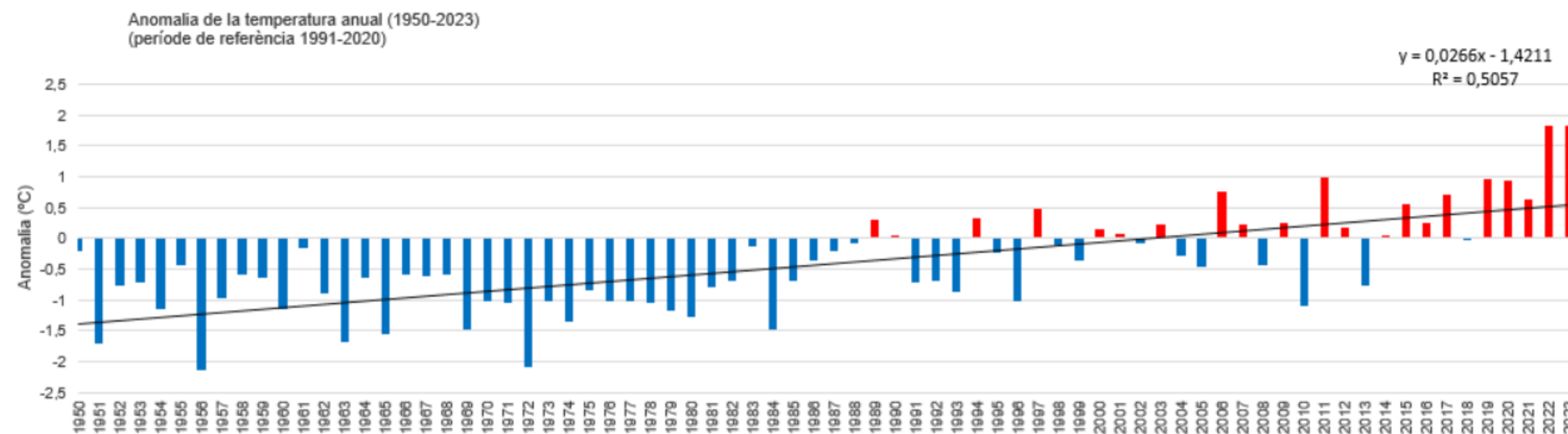
## Abstract

Climate change in mountain areas is faster than in other parts of the world.

Temperature increase study shows how in recent decades the rise in temperature is accelerating. If we focus on the extremes, in some of climatic indices such as maximum and minimum temperature records, we see that in Andorra maximum temperature records continue to occur while minimum temperature records stopped occurring in the 1980s.

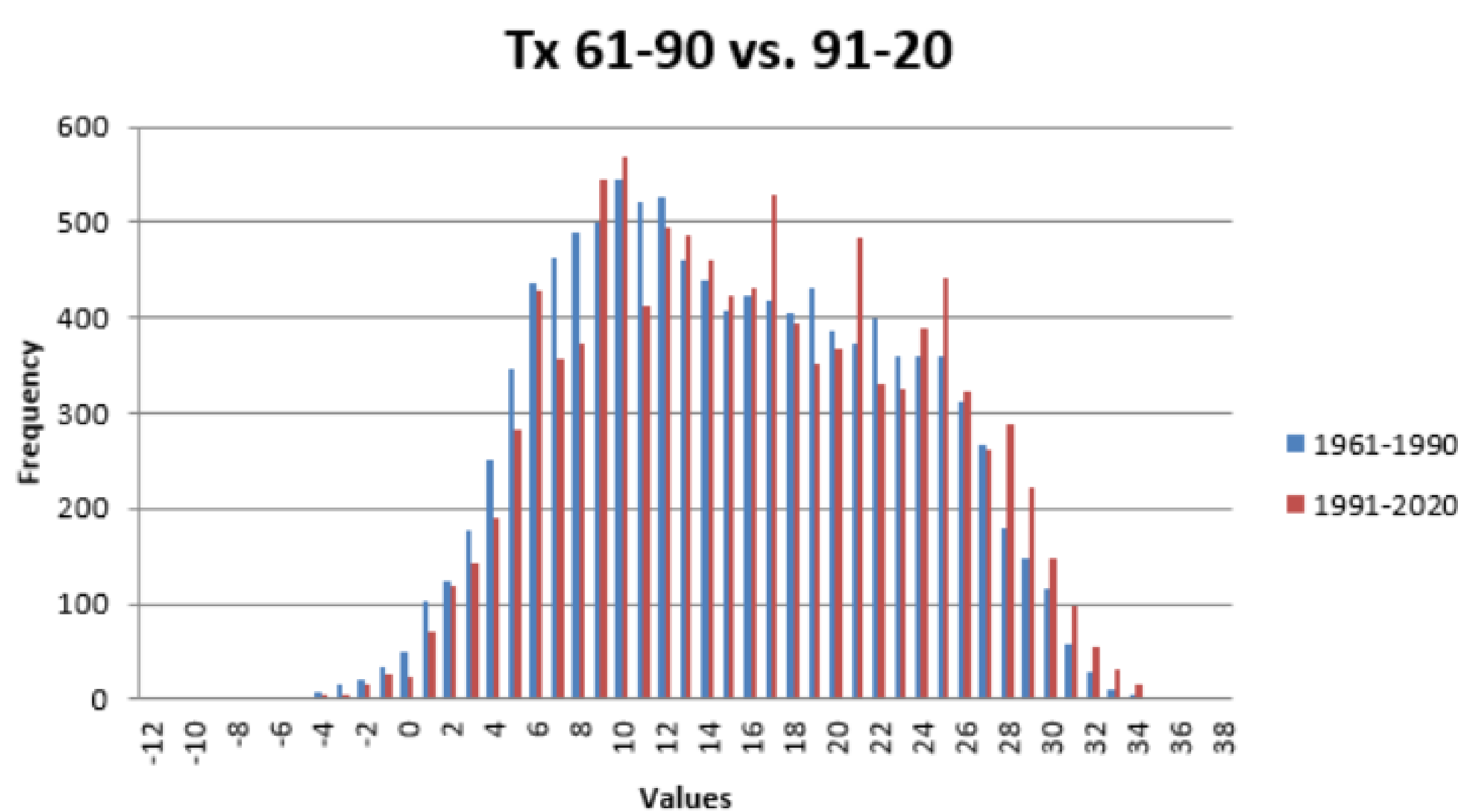
In this poster we will quantify the speed increase in temperatures rise in one of most representative historical weather stations from Andorra over the last decades and we will see how the frequency and intensity of extremes study demonstrates an alteration of the climate beyond a simple statistical distribution.

## Climate evolution

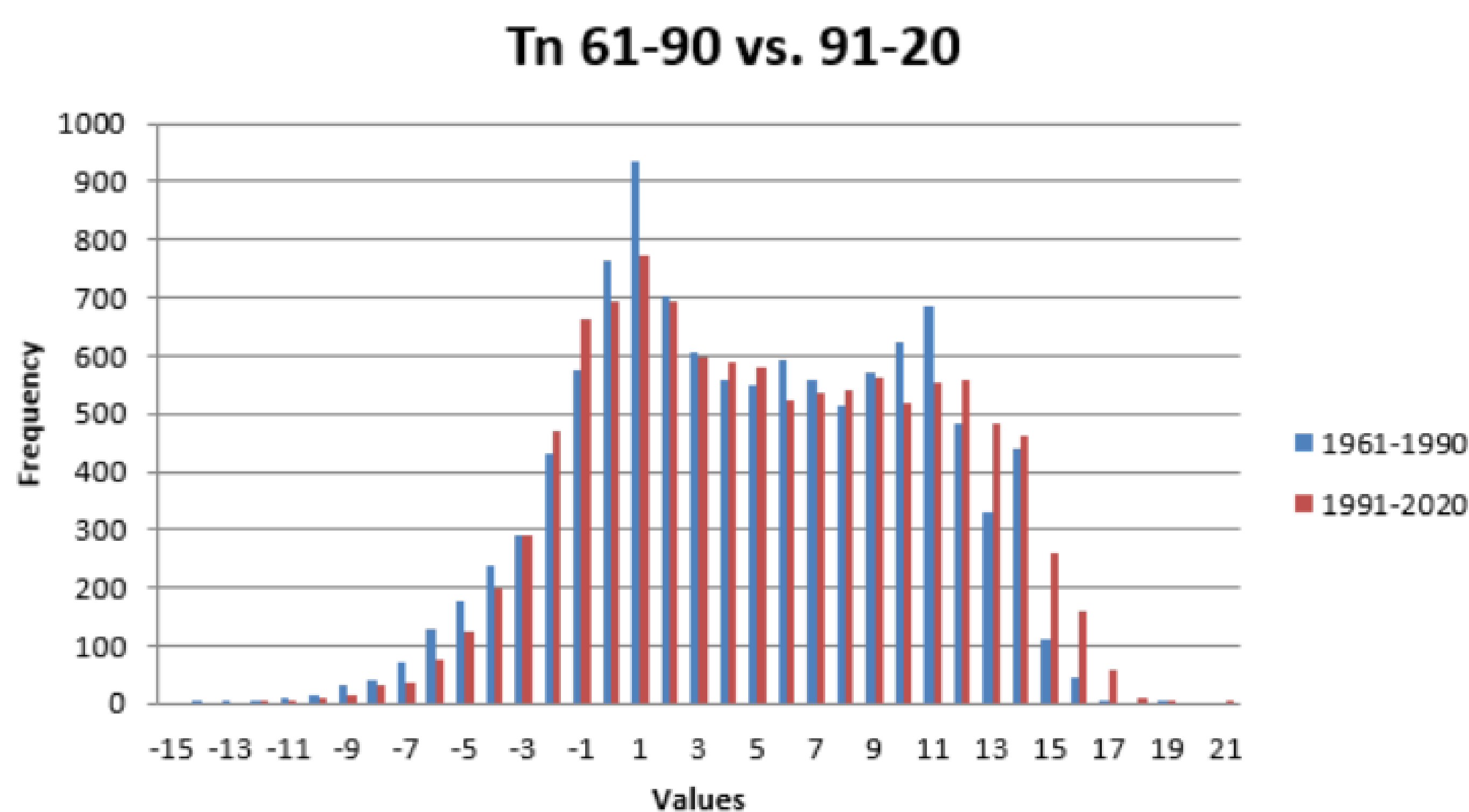


During 1950-2023 period the trend is about +0,26°C/decade, but since 1971 the trend is +0,4°C/decade.

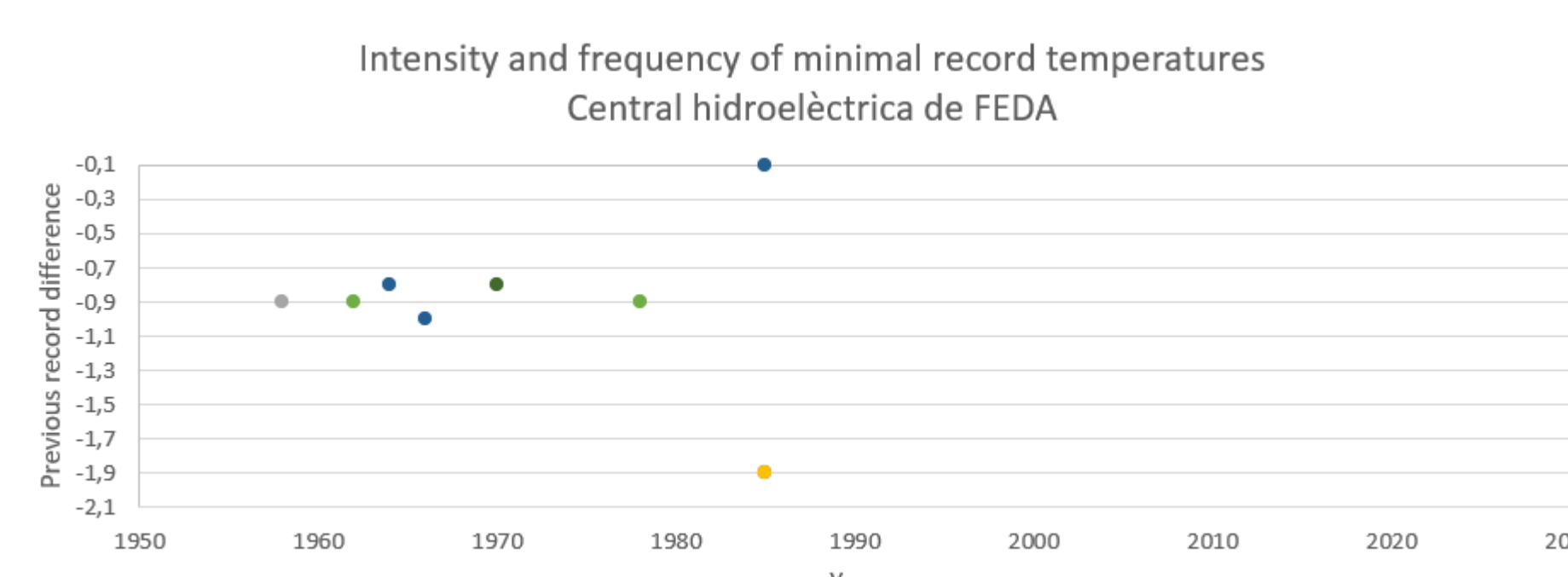
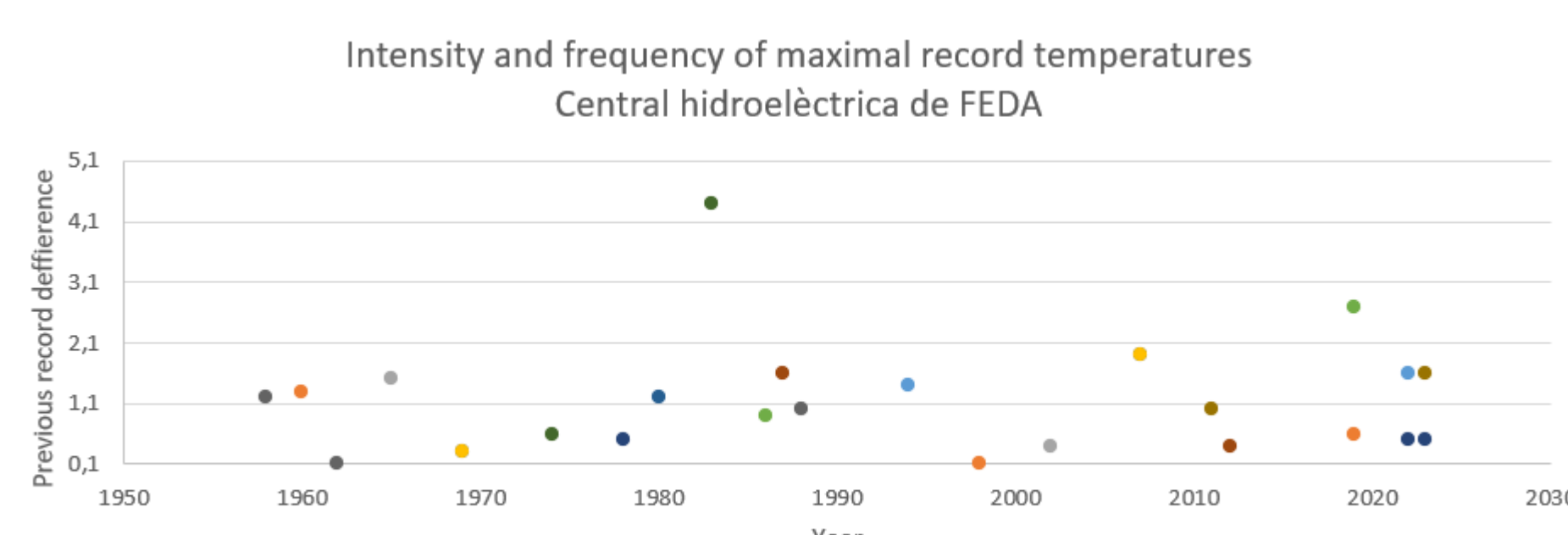
## Temperatures distribution



The maximal temperatures distribution had experimented a reduction of low values and a rise of high values. Minimal temperatures follow the same pattern

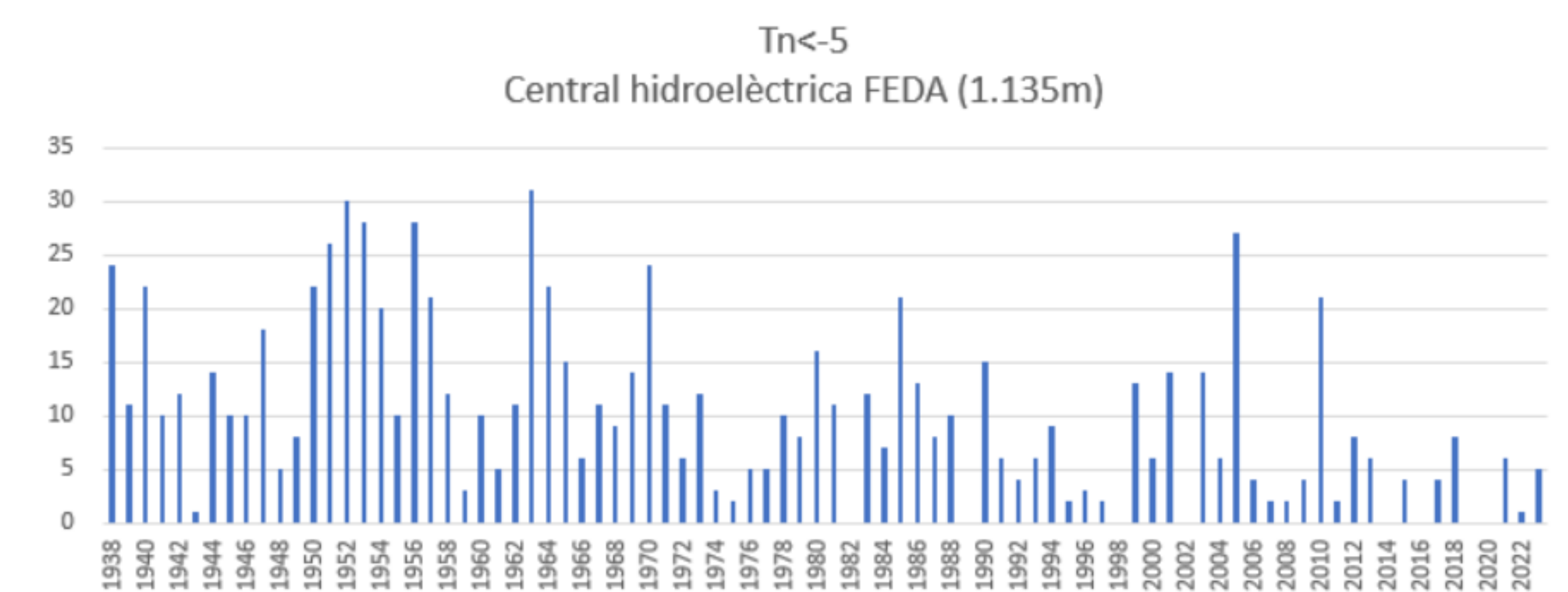
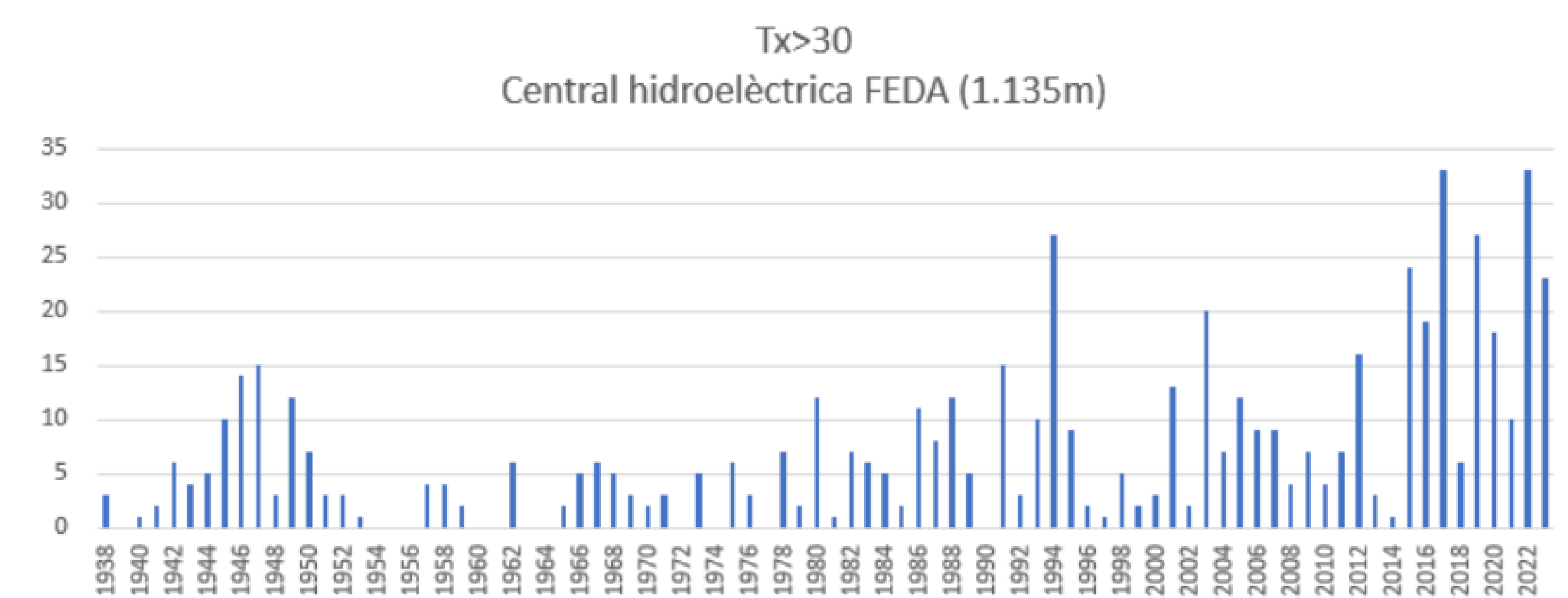
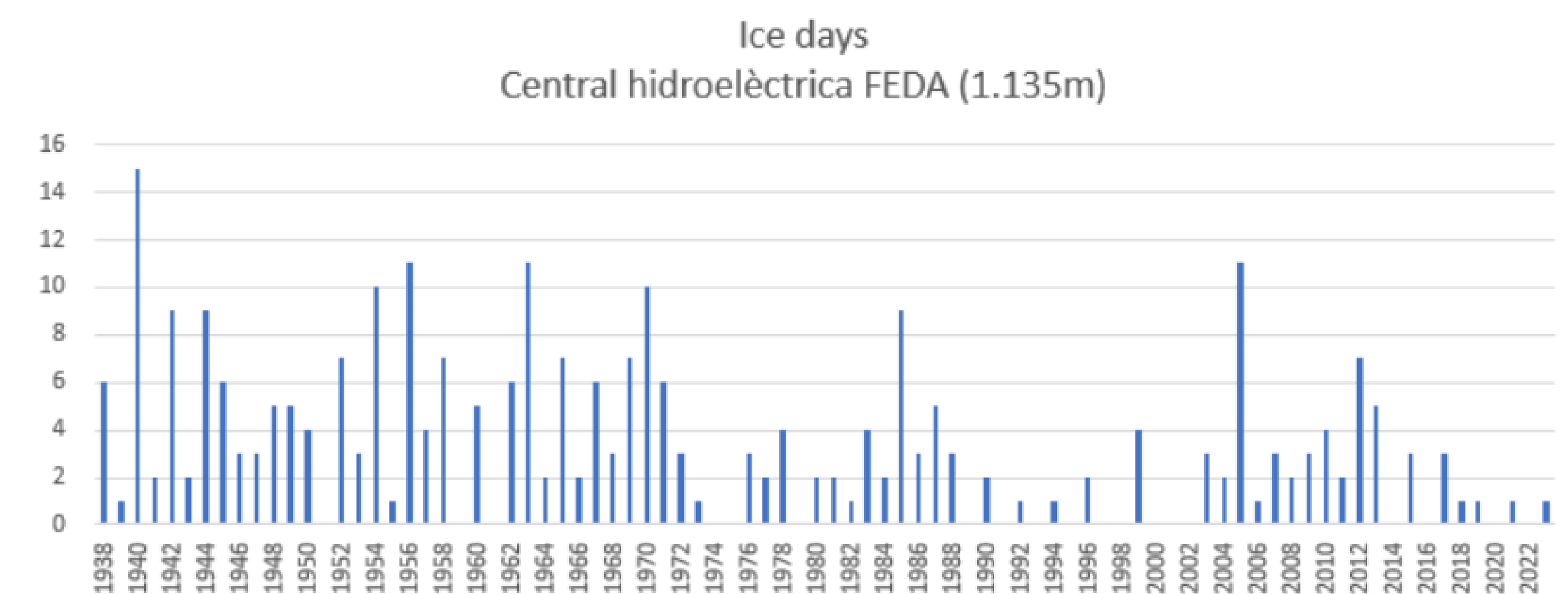


## Climate records



Maximum temperature records have been occurring since the beginning of the series, while minimum temperature records are concentrated only in the first part of the climate series.

## Climate indices



There are some climate indices that are most relevant than some years ago, like the number of days with maximal temperature above 30°C.

Or other that are not so relevant, like ice days or the number of days with minimal temperature below -5°C or lower.

Summer days and frost days are further evidence confirming the trends shown with climate evolution and temperature distribution.

