

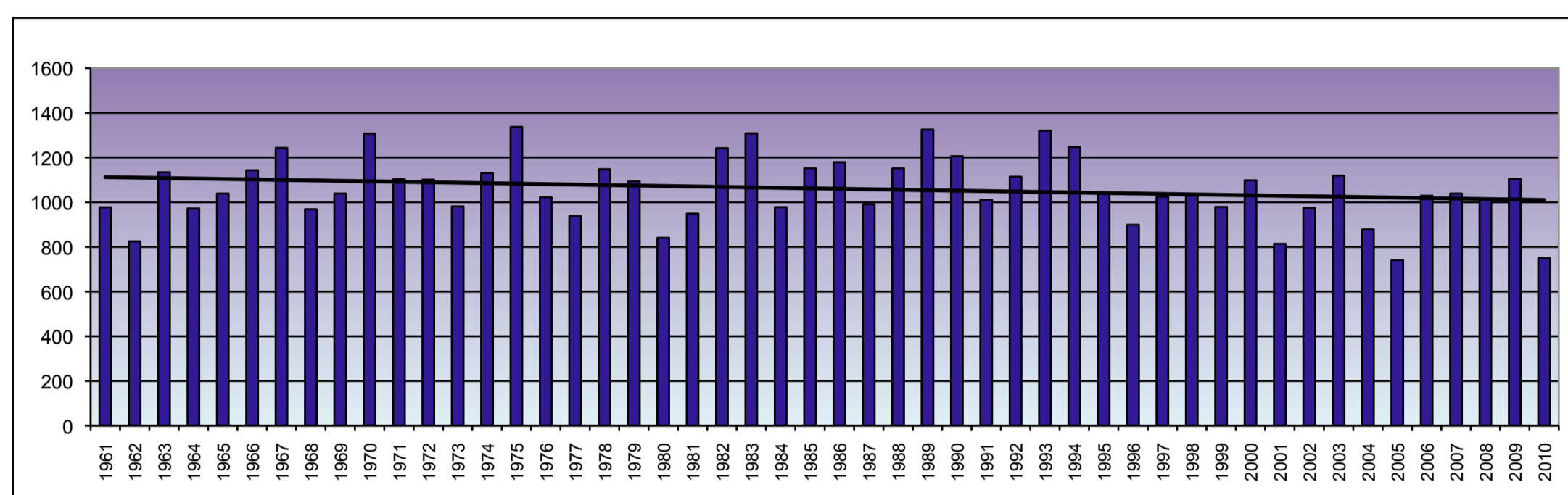
Time Series of Severe Storms in Austria, 1951 – 2010.

The severe weather time series are **not homogenous**.

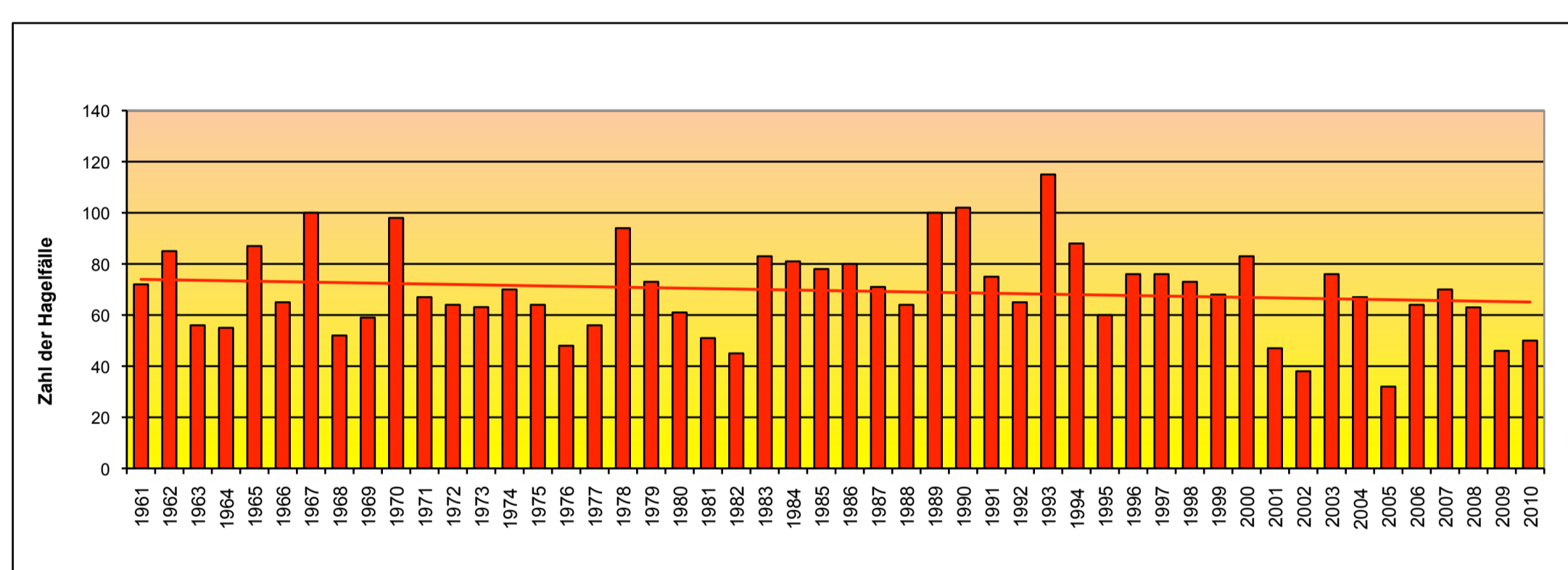
As an addition to the severe weather chronicle of ZAMG (begin 1951, mainly based on given press coverage) the annual variability of the number of storms in Austria, gusts and hail, within the last sixty years is investigated. The aim of the investigation is to develop time series of severe weather events, becoming able to indicate climate change. Is there an increase of severe weather events causing heavy damages, as an argument for climate change?

Professional observer reports

Yearly number of days with thunderstorm, summation of observations on 41 conventional climate stations

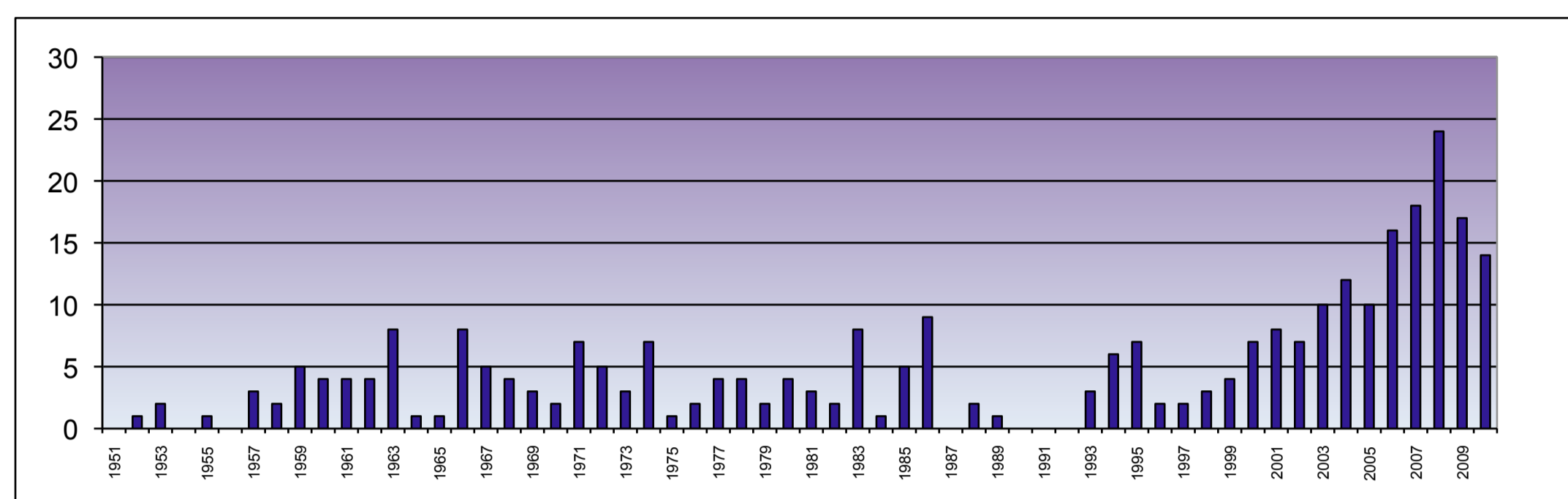


Yearly number of days with hail, summation of observations on 41 conventional climate stations

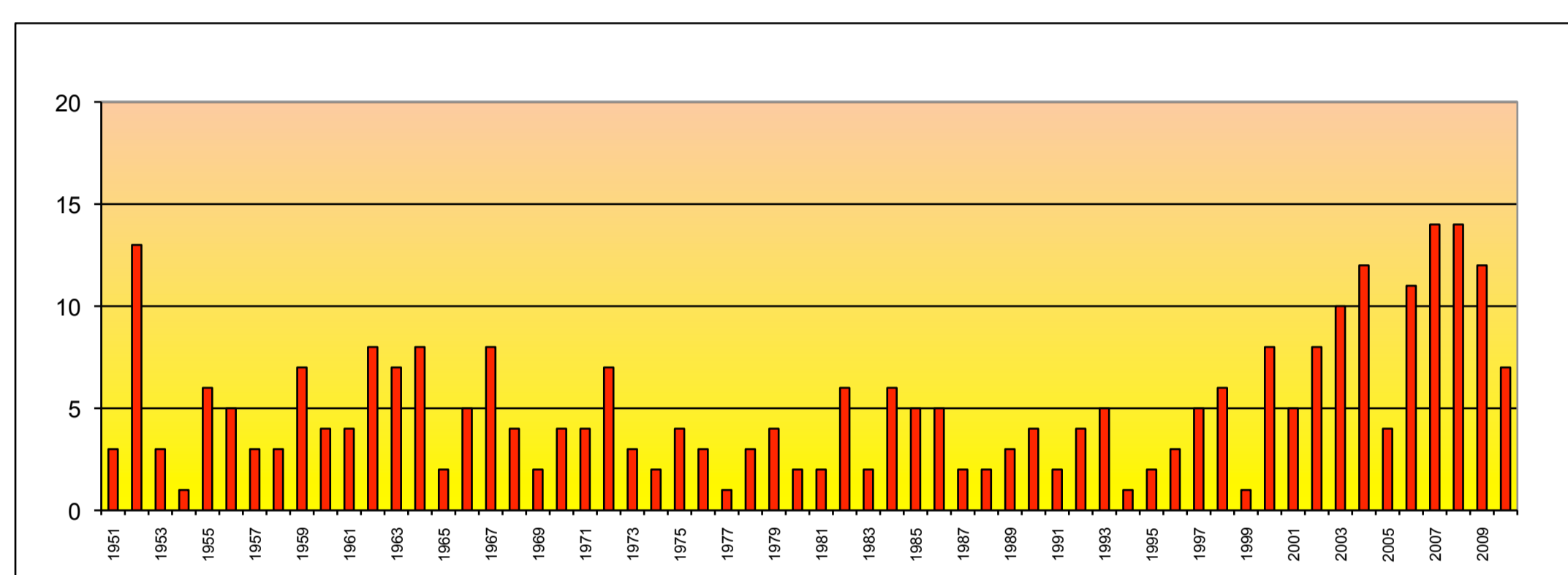


Media reports and others

Yearly number of days with thunderstorm, following all reports within the chronicle



Yearly number of days with hail, following all reports within the chronicle



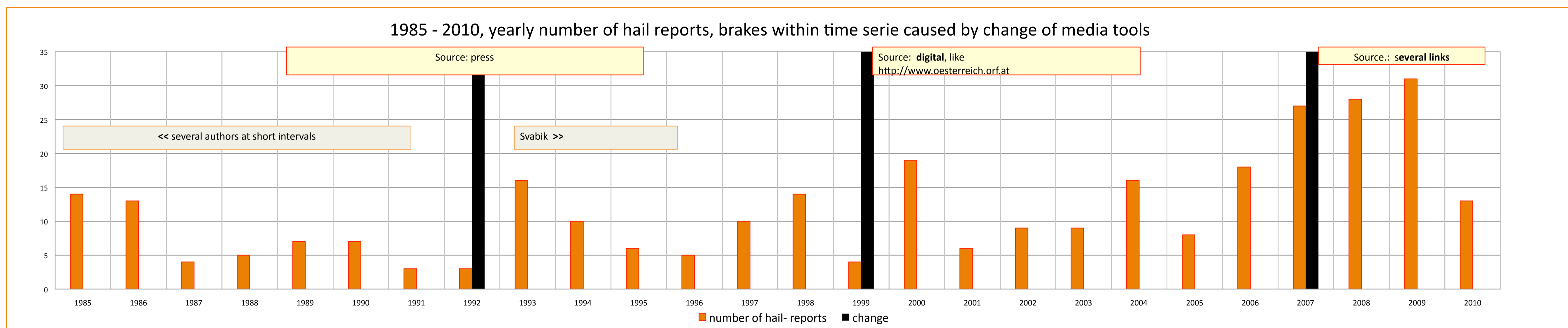
Left side

The source of the time series of „yearly number of days with thunderstorm / hail in Austria“, the summary of reports from 41 keepers of (conventional) climate stations of the ZAMG since 1961 (figures on left side). The time series show no significant increasing of the mentioned numbers from 1961 up to the last years, they are nearly constantly.

Right side

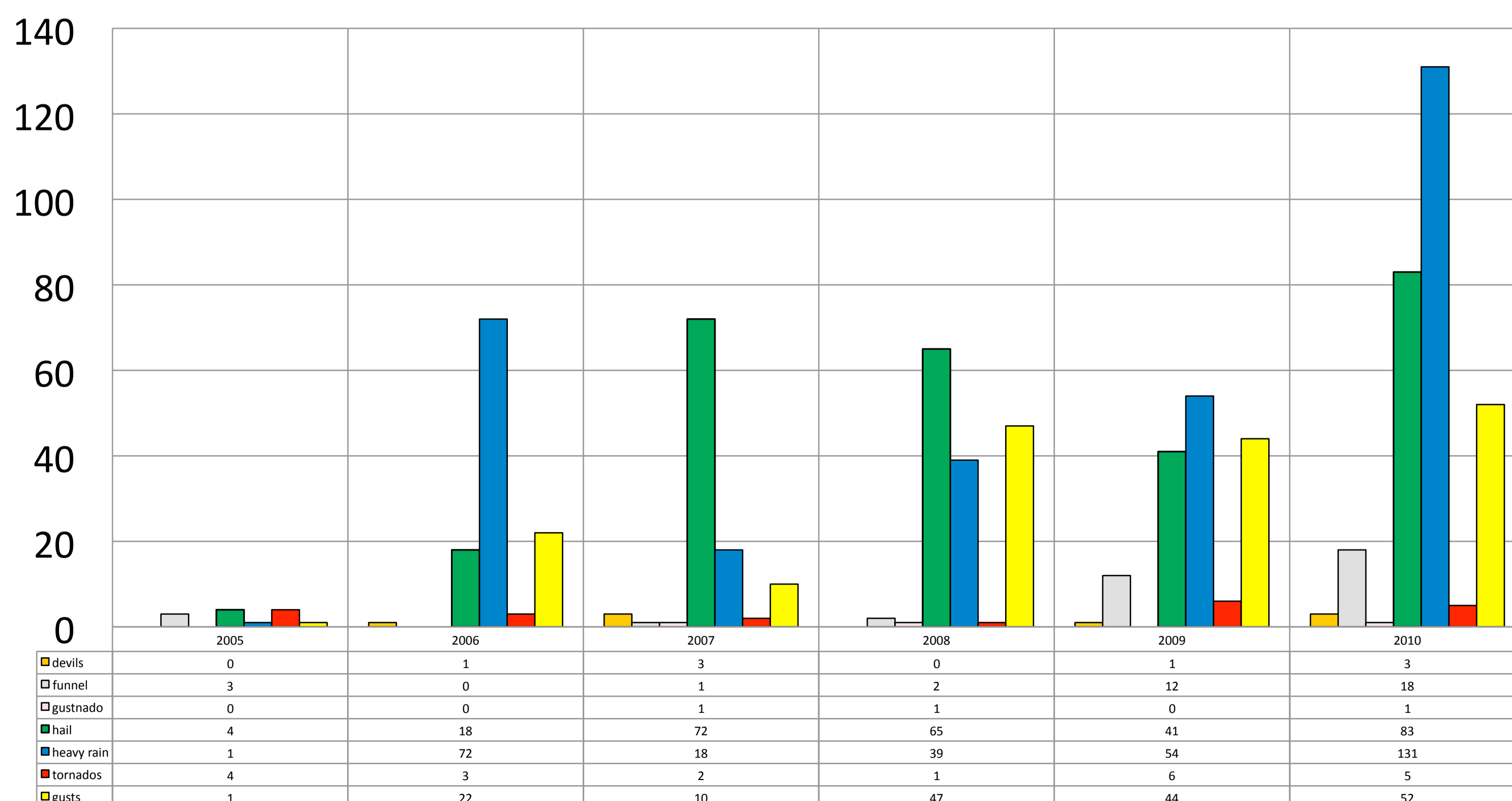
There is a significant increasing of days with thunderstorm/hail during the last 15 years, in case of respecting all kind of reports, given by several media and individual observers, members of unions, like skywarn, mostly (figures on the right side).

The severe weather time series are obviously not homogeneous. They include breaks, which are not due to natural climate variability. One type of such breaks is caused by changes of the keepers of the chronicle, specifying the weather impacts individually. Much stronger seems to be the argument the increasing of information of the last decades (keyword: internet).



To explain the increasing amounts of losses during the last 60 years, we have to consider the increasing density of population and values in towns, the higher standard of living, the changing of regional infrastructure and environmental conditions finally.

Number of Austrian Severe Weather Reports, transmitted to ESWD



ANNEX
ESWD- Statistics:
an overview of all received reports, Austria, 2005-2010

Dr. Otto Svabik

ZAMG, Section Climatology,
Division Customer Service,
Central Institute for Meteorology and
Geodynamics
A-1190 Vienna, Hohe Warte 38
Tel: +43 (0)1 / 36 0 26 / 2206
Fax: +43 (0)1 / 36 0 26 / 72

E- Mail: otto.svabik@zamg.ac.at
Homepage: www.zamg.ac.at