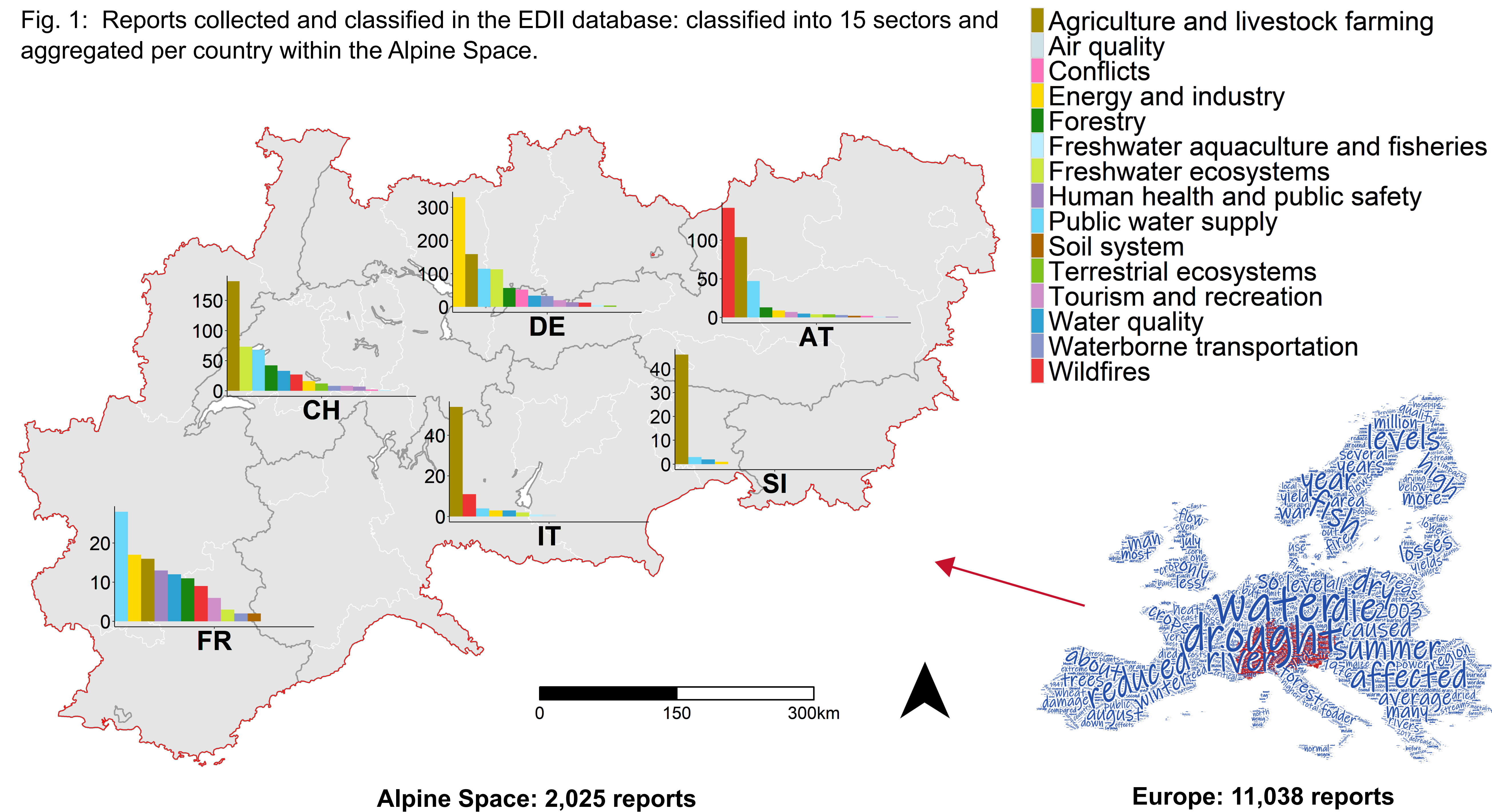


Within the Alpine Space the sectors **Agriculture and livestock farming, Energy and Industry** as well as **Public water supply** reported the most drought impacts. Differences among regions are high.

Fig. 1: Reports collected and classified in the EDII database: classified into 15 sectors and aggregated per country within the Alpine Space.



METHODS

The European Drought Impact report Inventory (EDII) compiles knowledge of drought impacts across Europe from a variety of information sources (Stahl et al. 2016). The dataset now consists of more than 11,000 reported impacts. For this study we investigated the Alpine and pre-Alpine region to identify the most impacted sectors in this generally humid mountain region. We compared the results to the European scale, with altitudes and in-between drought events.

RESULTS

More than 18 % of all reported drought impacts are within the Alpine Space showing the importance to develop specific management strategies and early warning. The proportion of each affected sector varies between Europe and the Alpine Space. But the seven most affected sectors remain the same with different ranking (Fig. 2). In addition, the most impacts occurred between 250 and 750 m.a.s.l. and the higher, the less impacts are recorded. Whereas, the wildfires' range of altitudes is by far the largest, the other impact categories show smaller ranges and less elevated means (Fig. 3).

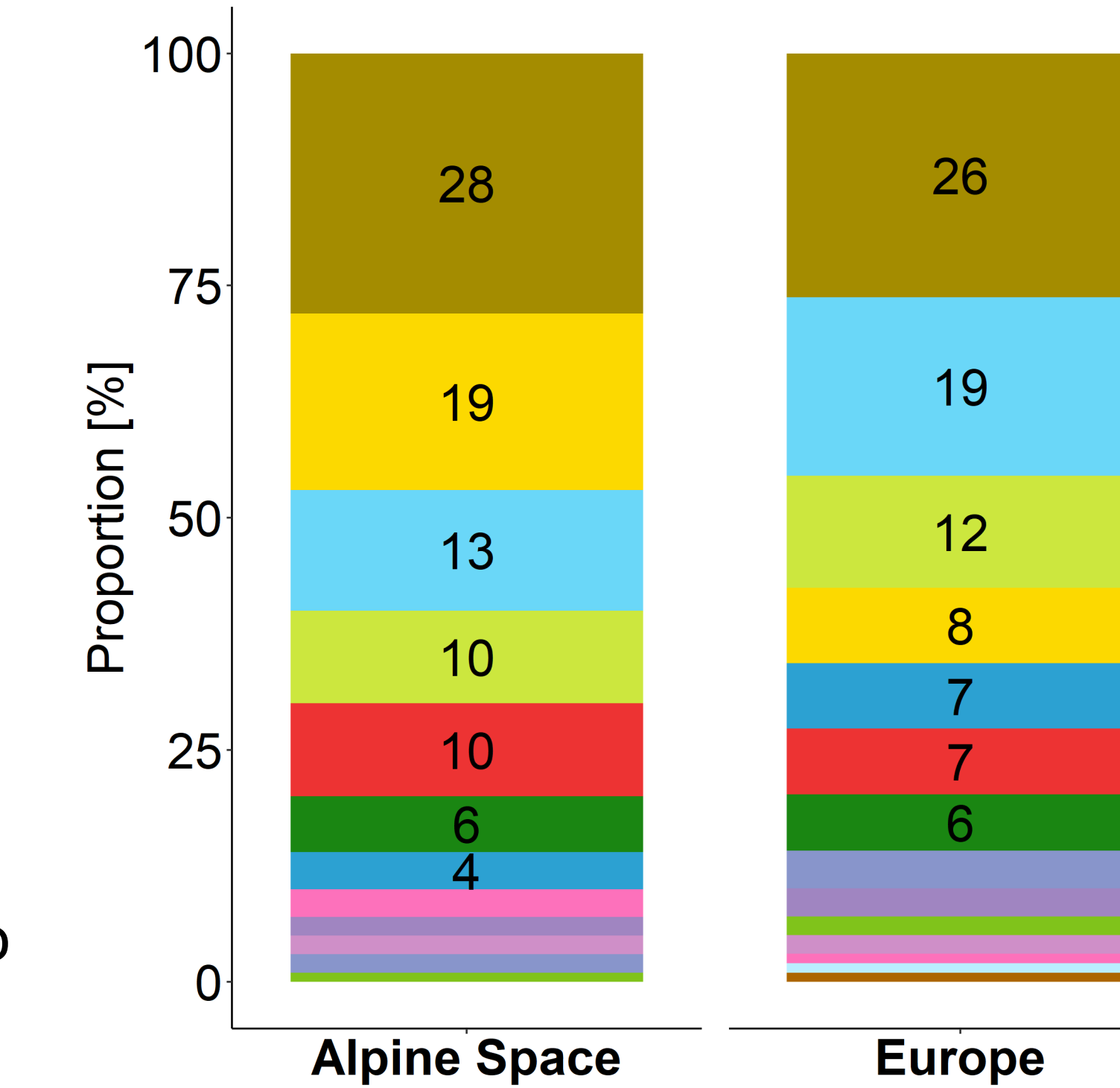


Fig. 2: Decreasing proportion of reports in each category recorded for the Alpine Space and Europe. The colors relate to the legend of Fig. 1.

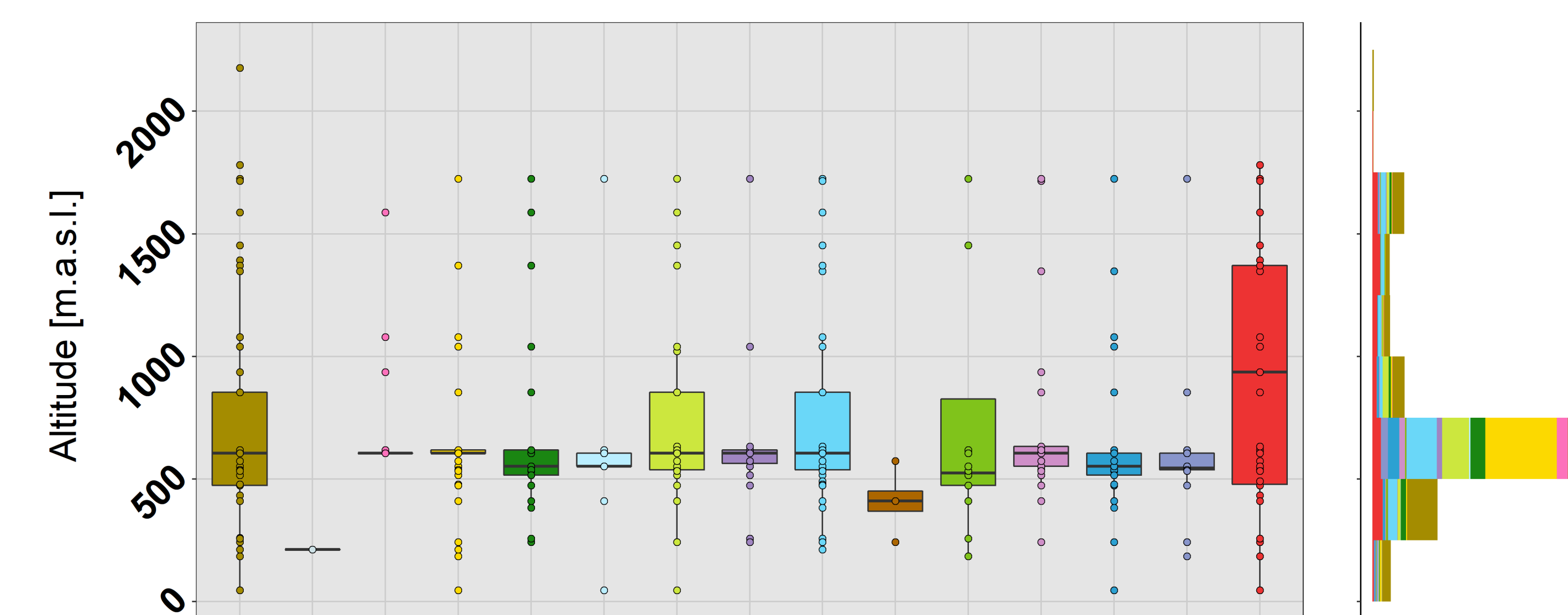


Fig. 3: Box-plots of each category and elevation in the Alpine Space. The histogram on the right shows the number of all reports over altitudinal classes of 250 m.a.s.l. The colors relate to the legend of Fig. 1.

■ DISCUSSION

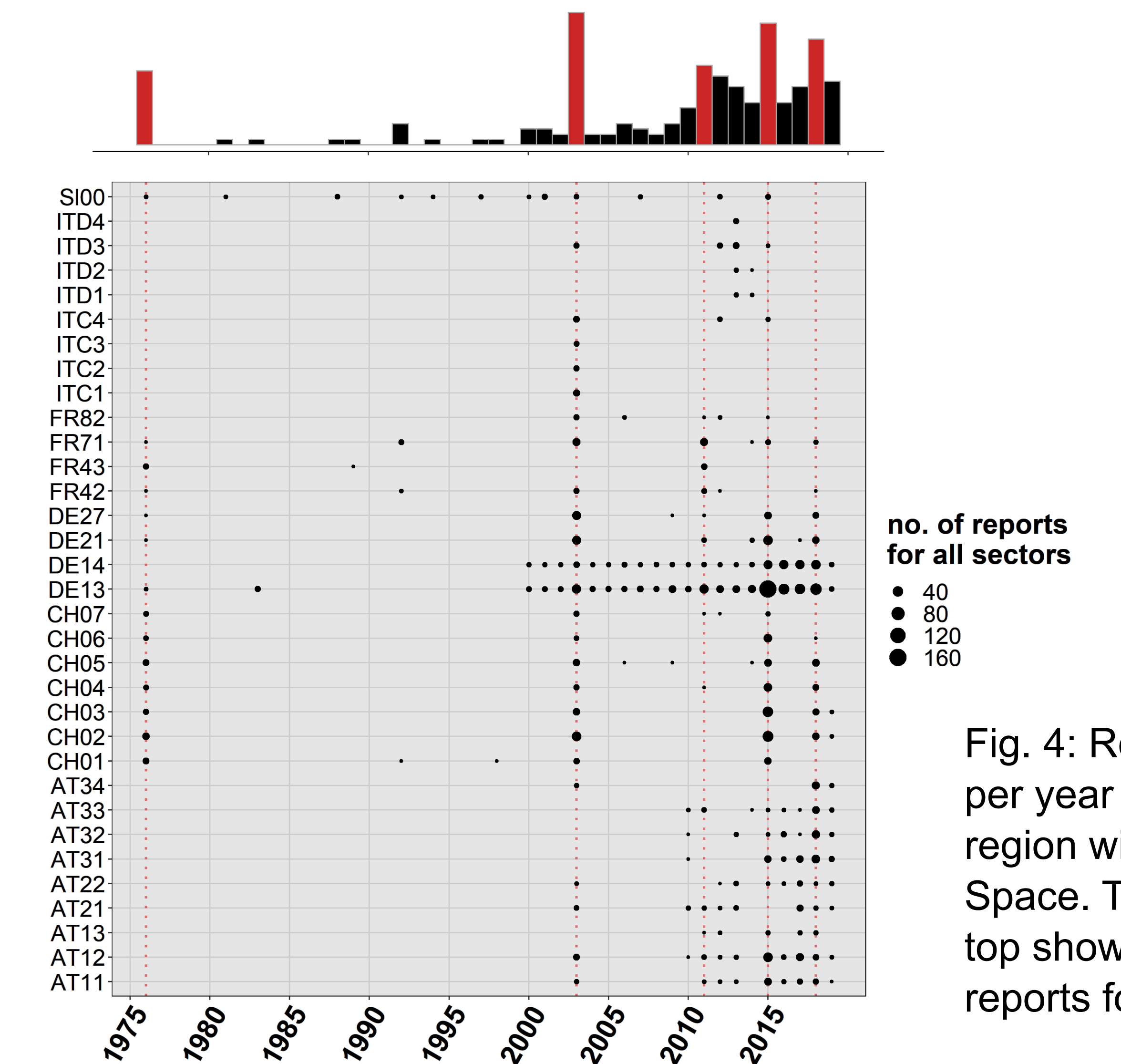


Fig. 4: Reports aggregated per year and pe NUTS-2 region within the Alpine Space. The histogram on the top shows the number of reports for all NUTS regions.

The five drought events of the years 1976, 2003, 2011, 2015 and 2018 display substantially more recorded impacts per NUTS region within the Alpine Space (Fig. 4.). Hence, the link between severe drought events and a higher quantity of recorded impacts is demonstrated. Nonetheless, the increasing amount of recorded impacts within EDII after 2003 has to be discussed. Are the records affected by an increasing occurrence of drought or by the higher societal awareness? Or vice versa: Does the lack of reported impacts indicate no drought impacts or rather no reporting or collection of them?

Conclusion and Outlook