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The August 2005 floods in the Alps: a warning for a warmer climate?

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The intense convective storms that affected the northern Swiss Alps in late August 2005 resulted in what has been referred to as the "floods of the century". Although certainly exceptional in terms of their intensity, the August 2005 convective storms do not appear to be anchored within any particular long-term trends; the number of intense storms today is not greater than in the first half of the 20^{th} century. Despite uncertainties related to regional climate simulations of precipitation in complex terrain, model projections for a "greenhouse climate" by 2100 suggest that extreme rainfall events may undergo a seasonal shift, with a sharp rise in the number of extreme events occurring in the spring and autumn. Paradoxically, associated impacts may be reduced because the buffering effects of snowfall on rapid runoff may be greater in future springs and autumns than under current summer conditions, implying the the 2005 type of event is not necessarily an analog for such events by the end of the 21^{st} century.