It will rain harder high up in the Alps in summer

August 8th, 2016

Most global climate models (GCMs) project a ubiquitous decrease in summer precipitation over the Alps in response to global warming. The resolution of these models is coarse, probably too coarse to get a good indication of how precipitation in the Alps may change this century. In fact, high-resolution regional climate models project enhanced summer convective rainfall at Alpine high elevations in response to climate warming. This increase of (intense) summer rainfall is not projected in the global climate models and is important for fresh water supply and, for instance, with respect to flash floods.

This precipitation increase is qualitatively consistent with positive trends in observed (extreme) precipitation increase over the Swiss Alps, although these trends may also be due to natural variability.

Source: Giorgi et al., 2016. Nature Geoscience 9: 584-589

Photo: Moss (www.flickr.com)