SILMAS: Climate driven scenarios

Target groups
Scientists

Area of application
Ten Alpine lakes located in different regions: three Austrian lakes (Wörthersee, Klopeiner See and Ossiacher See), one lake located in Germany, Switzerland and Austria (Lake Constance), five Italian lakes (three located in Piedmont – Lake Sirio, Lake Grande di Avigliana and Lake Viverone – and two lakes in Trentino/Alto Adige – Lake Caldonazzo and Lake Levico) and a French lake (Lake Annecy). Apart from their location in the Alpine space, no common criteria for the selection of the study sites are indicated.

Time frame
Data were analysed from different timelines, determined by data availability and different for each lake and parameter (e.g. Surface temperature Lake Constance 1964 – 2009), Scenarios for air temperature and precipitation scenarios (25. x. 25. km. resolution) for the investigated lakes were calculated for the period 2001 – 2050.Thus, it builds on 'aging' data.

Keywords
Climate change, Alpine lakes, climate change impact, scenario development

Accessibility
Open access; the method and data are part (chapter) of a project report;

Transferability and re-usability
Method can probably be useful for other lakes. Yet, it remains unclear how the study sites were selected. Which were the criteria (apart from the location within a broadly defined Alpine space). On the one hand, there are several geographic differences between Lake Constance and Lake Caldonazzo (e.g. size, depth). On the other hand, this might indicate the method's applicability all over the Alpine space and even in other ETC areas.

Sector policies adressed
Adaption to climate change touches many sectors, in the case of Alpine lake especially tourism and spatial planning. Moreover it is crucial for environmental management and regional development.