

Hydrological Atlas of Switzerland

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The “Hydrological Atlas of Switzerland” HADES is the result of a collaborative effort by Swiss hydrologists and has provided basic hydrological information, specialist knowledge and didactic materials to a wide range of users for over 30 years, on behalf of the Federal Office for the Environment FOEN.

Data and Analyses (since 2018)

The data and analysis platform provides analysis and aggregation options for viewing and downloading in over 4500 catchments (see Figure 1). The topics are divided into the following eight chapters: A) Fundamentals, B) Water in the Atmosphere, C) Water on the Earth's surface, D) Water in the Lithosphere, E) Synthesis, and F) Water and Humans.

Printed Issue (1992–2010)

The printed issue provides reliable and comprehensive information about water in Switzerland by means of maps, diagrams, and texts. Digital tables, grid and vector data corresponding to the Atlas, as well as all explanatory texts, are available for viewing and for downloading. In addition, all printed plates are at your disposal in pdf format.

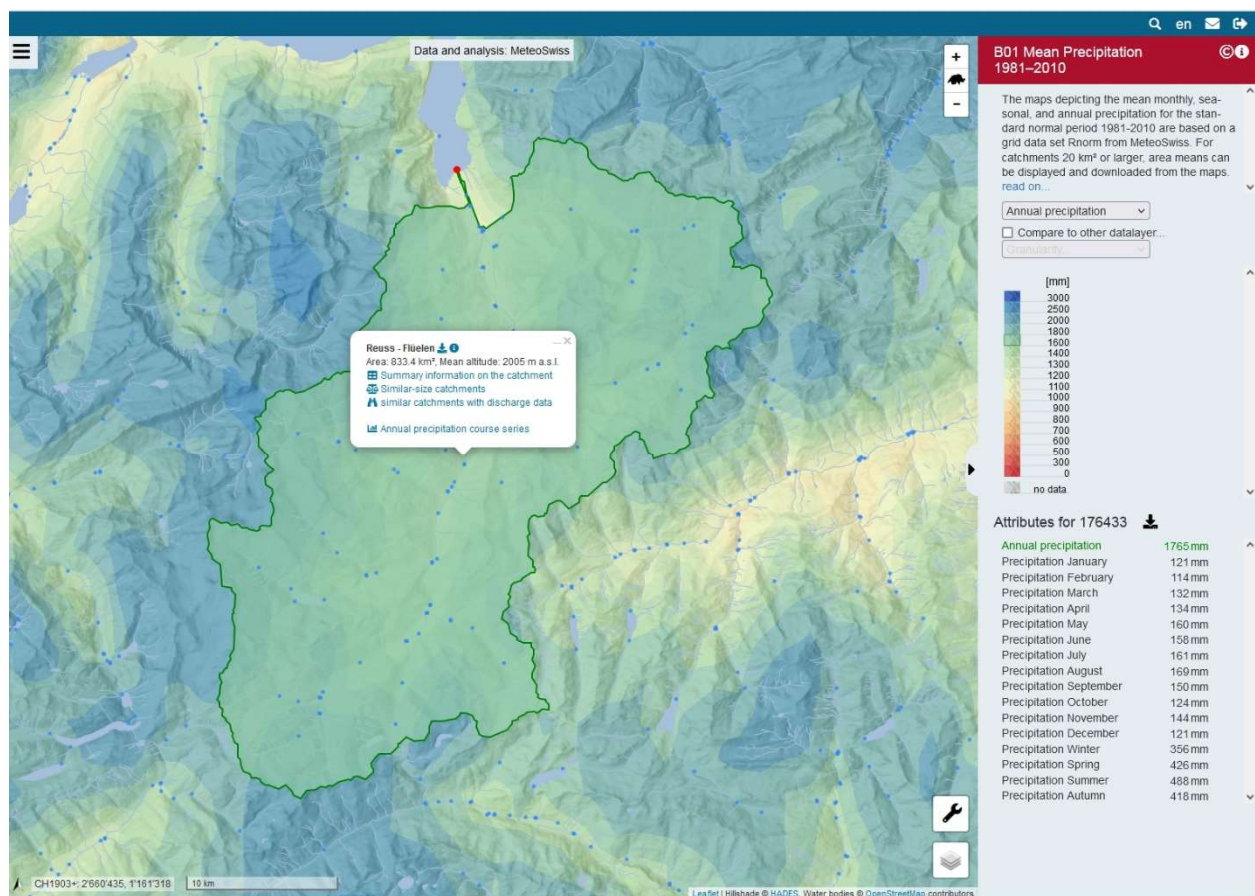


Figure 1: Map B01 Mean Precipitation 1981–2010 with the analysis options for a catchment.

Excursions (since 2004)

With its series of excursions under the heading “Tracks along the Water World”, the Atlas aims to create public awareness about hydrological topics. Since 2004, 31 excursions in nine regions of Switzerland have been published (see Figure 2).



Figure 2: Excursion guides to hydrological topics

Hydro-CH2018 (since 2021)

The present platform, “Hydro-CH2018: Scenarios till 2100”, presents hydro-climatic and hydrological scenarios for the 21st century. The platform currently includes precipitation and temperature scenarios, estimates of glacier development, and the resulting runoff scenarios for selected catchments (see Figure 3). The hydrological scenarios show possible ways in which the water balance

and waterbodies in Switzerland could, under certain assumptions, change as a result of climate change. They include important hydrological components such as discharge, groundwater recharge, proportion of meltwater, evapotranspiration, or waterbody temperatures. At the end of the model chain are impact models that simulate the effects on water management or agriculture.

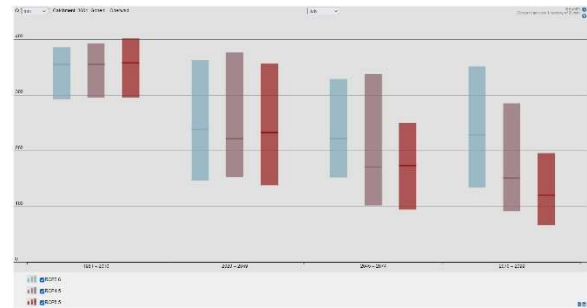


Figure 3: Goneri–Oberwald (influenced by glacier retreat): Changes in discharge in July up to the end of the 21st century for RCP2.6 (blue), RCP4.5 (purple), and RCP8.5 (red)

Teaching Material (since 2015)

The modern teaching material “WASSER verstehen” (“Understanding water”) for high schools is available in both print and digital formats. The printed and digital materials complement each other in the modularly structured learning environment and support a deep examination of hydrological topics (see Figure 4).

Distribution de l'eau

Même en 2100, la Suisse enregistrera encore assez de précipitations pour ne pas manquer d'eau, grâce aux Alpes. Les **changements climatiques** en modifieront cependant la répartition saisonnière. En outre, du fait de la disparition des glaciers d'ici 2100 et de la diminution des quantités de neige, il s'écoulera bien moins d'eau de fonte en été. Sans ces réservoirs, les pénuries s'aggraveront, surtout lors des canicules.

La **distribution optimale de l'eau** dans ce type de situation n'est pas le seul défi auquel font face les services chargés de la **gestion des eaux**. Ils se débattent aussi contre la répartition des tâches compliquée entre la

Fig. 1 : Le lac de barrage de Tseuzier stocke l'eau pour la production d'électricité. (photo: Tom Reist)

Fig. 2 : Le Grand Bisse de Lens conduit l'eau du torrent Ertentse vers les prairies et terres agricoles à irriguer. (photo: Flurina Schneider)

Figure 4: Teaching material for high schools (extract)