

ECOSYSTEM STATION

Name:	Torgnon (IT-Tor)
Location (lat-long):	North-Western European Alps, 45.8444 - 7.5781
Environment:	Alpine grassland
Operational history:	2008 – present.
Scientific purpose:	To measure CO ₂ fluxes in alpine environment.
Station description:	<p>The Torgnon site, active since June 2008, is an unmanaged subalpine grassland located a few kilometers from the village of Torgnon in the northwestern Italian Alps (Aosta Valley) at an elevation of 2160 m asl. In the past the site was used for domestic livestock grazing and was abandoned in late 1990s. Vegetation is mainly composed by matgrass (<i>Nardus stricta</i>) with other graminoids and forbs as co-dominant species (<i>Festuca nigrescens</i>, <i>Arnica montana</i>, <i>Carex sempervirens</i>, <i>Geum montanum</i>, <i>Anthoxanthum alpinum</i>, <i>Potentilla aurea</i>, <i>Trifolium alpinum</i>). The peak value of leaf area index (LAI) is on average 2.2 m² m⁻² and maximum canopy height is 0.2 m. The site is characterized by an alpine climate with strong seasonality. The mean annual temperature is 3.1 °C and mean annual precipitation is about 880 mm, however growing season cumulative precipitation can show huge variations (from 160 to 630 mm). On average, the site is covered by a thick snow mantle (90-120 cm) from the end of October to late May, which limits the growing season length to four-five months.</p>
Measured ICOS core parameters:	CO ₂ flux and concentration
Other measured parameters:	Wind, relative humidity, solar radiation, precipitation, phenology, vegetation spectral indexes, snow, soil temperature, soil water content, soil heat fluxes
Website/data portal:	http://www.arpa.vda.it/climatechange
Responsible organization:	Environmental Protection Agency of Aosta Valley (ARPA VdA)
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