

ECOSYSTEM STATION

Name:	Renon – Selva Verde (IT-Ren)
Location (lat-long):	Italian Alps, 46.5869 – 11.4337, 1735 m a.s.l.
Environment:	Subalpine forest
Operational history:	1997 – present.
Scientific purpose:	To investigate long-term exchange of carbon dioxide, water vapour and sensible heat between the subalpine coniferous forest and the atmosphere.
Station description:	<p>The Renon-Selva Verde site is located in the municipality of Renon, at a distance of 12.2 km North-Northeast from the town of Bolzano. Eddy covariance measurements started in the year 1997. The site is placed on a porphyric plateau; the soil is classified as Haplic Podsol following F.A.O. The site vegetation, a subalpine coniferous forest, is of natural origin and is used for wood production. As a result of the traditional harvesting method, which consists of irregular cuttings of 50-80 cubic meters, overall the forest is unevenly aged, but with homogenous groups. The largest group present in the area is growing approximately since the year 1820, after Napoleon wars. The main forest species is spruce (<i>Picea abies</i> (L.) Karst., 85% in number) followed by cembran pine (<i>Pinus cembra</i> L., 12%) and larch (<i>Larix decidua</i> Mill., 3%). In the clearings, covering approximately 15% of the area, the dominant grass species is <i>Deschampsia flexuosa</i> (L.) Trin. The canopy is irregular, with maximal height of 29 m. The mean leaf area index (LAI), measured by hemispherical photographs, is 5.1 m² m⁻². The climate is strongly influenced by elevation, with cool summer and moderately cold winter. During the last decade, average temperature was around 6°C and annual precipitation was around 964 mm.</p>
Measured ICOS core parameters:	All parameters requested according to ICOS protocols for Class 2 sites.
Measured ICOS desirable parameters:	Relative humidity profile.
Other measured parameters:	NDVI, PRI, PAR reflectance, CO ₂ efflux from the soil.
Website/data portal:	http://www.provincia.bz.it/forst/wald-holz-almen/2411.asp
Responsible organization:	Forest Services of the Autonomous Province of Bolzano, Italy.
Principal investigator:	Leonardo Montagnani (leonardo.montagnani@unibz.it);
Site responsible:	Stefano Minerbi (Stefano.Minerbi@provincia.bz.it).
Funding:	Autonomous Province of Bolzano, Italy

Renon site, tower and shelter.



Automated system for CO₂ efflux from the soil measurement.



CO₂/H₂O sampling system for storage flux determination



Renon site aerial view. Afforestation is ongoing in the upper left corner of the image

