

MOUNTAINS UNDER WATCH 2013
Observing Climate Change in the Alps
20-21 February 2013 – Forte di Bard – Aosta Valley – Italy

Poster Session program

Aosta Valley Activities

A specific area of the poster hall is devoted to presenting research activities related to climate change impacts carried out in Aosta Valley by the conference organizers in collaboration with Universities and Research Institutes.

VDA1 - “Glaciers risk in Aosta Valley (NW Italy): observations, changes and monitoring”

M. Curtaz, D. Bertolo, E. Motta, M. Vagliasindi

VDA2 - “Medium-term analysis of nivo-meteorological parameters in the Aosta Valley (NW Italy)”

V. Segor, G. Antonello, G. Burelli

VDA3 - “The study of snow avalanches from a climate change perspective”

V. Segor, B. Sovilla, L. Pitet, E. Bovet, P. Dellavedova, W. Steinkogler, J. Veitinger, J. McElwaine, M. Maggioni and I. Chiambretti

VDA4 - “The contribution of soil properties to snow gliding phenomena under a changing climate”

M. Freppaz, E. Ceaglio, D. Viglietti, M. Maggioni, G. Filippa, E. Zanini

VDA5 - “A snow model intercomparison project for the evaluation of Snow Water Equivalent in Valle d'Aosta”

S. Gabellani, E. Cremonese, U. Morra di Cella, P. Pogliotti, F. Diotri, R. Rudari.

VDA6 - “Crowdsourcing snow data through mobile technologies”

M. Dall'amico, E. Cremonese, F. Diotri, U. Morra di Cella, P. Pogliotti

VDA7 - “The Alpine Permafrost Database: a webtool for permafrost data sharing”

P. Pogliotti, E. Cremonese, U. Morra di Cella, R. Bredy

VDA8 - “Five years of microseismic activity and temperature monitoring at J.A. Carrel hut (3829 m s.l.m.), Matterhorn”

V. Coviello, M. Arattano, M. Chiarle, U. Morra di Cella, G. Mortara, C. Occhiena, M. Pirulli, P. Pogliotti, C. Scavia



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VDA9 - “Fast primary succession and pedogenesis on proglacial areas: examples from Valle d’Aosta Region (north-western Italian Alps)”

M. D'amico, M. Freppaz, E. Zanini

VDA10 - "Location and characterization of recently deglaciated areas in Aosta Valley"

A. Arato, A.M. Ferrero, G. Filippa, D. Franco, A. Godio, M.R. Migliazza, U. Morra di Cella, P. Pogliotti, M. Vagliasindi, L. Sambuelli, A. Théodule

VDA11 - “Water quality, hydrology, and soil properties in a recently deglaciated area (Indren glacier, Valle d’Aosta-NWItaly)”

M. Freppaz, M. Martin, E. Squinobal, U. Morra di Cella, G. Confortola, D. Bocchiola

VDA12 - “Changing winters and subalpine forest soils”

M. Freppaz, D. Viglietti, G. Filippa, E. Zanini

VDA13 - “Snowmelt date and temperature constrain the flowering and vegetative phenology of mountain grassland plant species”

A. Duparc, C. Siniscalco, E. Cremonese, A. Delestrade, N.G. Yoccoz

VDA14 - “Ecosystem responses to extreme variations in snow season: the example of a subalpine grassland in Aosta Valley”

M. Galvagno, G. Wohlfahrt, E. Cremonese, M. Migliavacca, U. Morra di Cella

VDA15 - “Assessing grassland phenology with snow depth sensors: methods, issues, perspectives”

G. Filippa, E. Cremonese, M. Galvagno, M. Freppaz, U. Morra di Cella, C. Rixen

VDA16 - “GLORIA: 10 years of observations in Aosta Valley”

M. Petey, U. Morra di Cella, C. Siniscalco

VDA17 - “Verification of thermal values forecasted in the valle d’Aosta region by the meteorological model COSMOI2 and the algorithm Multimodel”

C. Cassardo, A. Diémoz, U. Pellegrini, S. Ratto

Cryosphere

C1 - “Winter climate indices applied to ski tourism over Andorra: recent trends and future projections”

P. Esteban, M. Pons, S. Macià



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C2 - “Evaluation of MODIS Snow and LST data in Arunachal Pradesh: Heat pump or Freezer”

U.D. Baruah, A. Saikia

C3 - “Remote Sensing of Mountain Environment – State of the Art and Outlook”

M. Zebisch, C. Notarnicola, A. Tetzlaff, C. Iasio, C. Steurer, R. Sonnenschein, K. Lewinsk, N. Spindler, A. Polychronaki, S. Schneiderbauer, M. Pettit, B. Ventura, M. Duguaya, R. Monsorno, A. Costa

C4 - “Monitoring snow dynamics in the Pyrenees with a long range Terrestrial Laser Scanner”

J. Revuelto, J.I. Lopez-Moreno, C. Azorín-Molina, G. Arguedas, S.M.V. Serrano

C5 - “Standard Software for Multifunctional Alpine Monitoring: From Avalanche Warning and Hydrometric Monitoring to Climate Change”

G. Ruggiero, M. Egeling, R. Funke

C6 - “PERMAQUA: Permafrost and its impacts on water resources and water ecology in high mountain areas”

M. Tolotti, R. Albers, K. Krainer, K. Lang, B. Losch, V. Mair, U. Nickus, E. M. Schiestl, V. Schmidt, D. Tait, R. Tessadri, B. Thaler, H. Thies, D. Tonidandel

C7 - “Geochemical and isotopic characterization of discharge waters from the Piz Boè active rock glacier, Dolomites, Eastern Italian Alps”

J. Gabrieli, A. Crepaz, C. Barbante

C8 - “The permafrost monitoring network in Piedmont Alps: establishing, problems and solutions”

L. Paro, M. Guglielmin

C9 - “The permafrost monitoring site of Piz Boè (Dolomites/Eastern Italian Alps) – Two years dataset”

A. Crepaz, A. Cagnati, J. Gabrieli, R. Gnech

C10 - “Geophysical investigation of a rock glacier”

H. Cadet, O. Brenguier

C11 - “Application of image correlation techniques to TLS datasets for quantifying surface displacements of rock glacier”

X. Bodin, B. Deroux, P. Vacher



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- C12 - **“Hazard assessment of debris-flow originating from alpine permafrost area, two case studies in Valais”**
E. Bardou, G. Favre-Bulle, J. D. Rouiller
- C13 - **“Rockfall hazard in high mountain areas increased by the current atmospheric warming”**
L. Ravanel, P. Deline
- C14 - **“A web 2.0 framework for alpine glaciological monitoring”**
L. Criscuolo, R. Seppi, F. Zucca, M. Pepe
- C15 - **“The Ortles Project: a high-altitude observatory of the changing cryosphere in the Eastern European Alps”**
R. Seppi, C. Barbante, L. Carturan, M. Davis, G. Dalla Fontana, R. Dinale, G. Dragà, J. Gabrieli, P. Gabrielli, N. Kehrwald, V. Mair, V. Mikhalenko, K. Oeggli, U. Schotterer, L. G. Thompson, D. Tonidandel, T. Zanoner
- C16 - **“The evolution of Dolomitic glaciers during the last century”**
A. Crepaz, A. Cagnati, G. De Luca
- C17 - **“Reconstructing the history of the Rosa dei Banchi glacier in the Champorcher valley, Valle d’Aosta, by use of multisourcing data over the past two centuries”**
B. Villone, A. Vassoney
- C18 - **“Glacier surface instability and melt stream changes reconstructed by means of tree-ring data at Miage Glacier (AO)”**
G. Leonelli, I. Bollati, M. Pelfini
- C19 - **“A measurement of the erosion beneath the Glacier des Bossons (Chamonix, France)”**
J.L. Mugnier, C. Godon, J.F. Buoncristiani, H. Guillon, E. Trouvé, A. Pohl, J.L. Paquette
- C20 - **“Periglacial area sediment budget of a rapidly retreating glacier inferred from four years of detrital flux monitoring (Bossons stream, Mont-Blanc massif, France)”**
H. Guillon, C. Godon, B. Goupy, A. Pohl, J. F. Buoncristiani, J. L. Mugnier
- C21 - **“Emerging ecosystems after glacier retreat – A new study site for interdisciplinary research in the Central-eastern Alps”**
M. Engel, A. Esposito, E. Varolo, L. Brusetti, F. Comiti, T. Mimmo, G. Bertoldi, R. Bottarin, S. Zerbe
- C22 - **“Measurements of CO₂ and thermal fluxes at a periglacial site in the Ortles-Cevedale Group”**
G. Gerosa, A. Finco, R. Marzuoli



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C23 - “A worldwide inventory of high-mountain lake outburst floods”

Y. Schaub, S. Würmli, C. Huggel, W. Haeberli

C24 - “Hydro-climatological and biogeochemical research project on high mountain regions: SHARE – Water Resources”

F. Salerno, R. Balestrini, L. Guzzella, M. Freppaz, G. Viviano, S. Thakuri, G. Tartari

Biosphere

B1 - “Plant cover changes at high elevation in central Apennines within the last 11 years”

A. Stanisci, M.L. Carranza, A. Evangelista, L. Frate, G. Pelino

B2 - “Long-term changes in plant diversity and composition on alpine summits”

S. Wipf, M. A. Dawes, V. Stockli, C. Rixen

B3 - “Alpine vegetation dynamic in the northwestern Caucasus: long term observations on the permanent plots”

T.G. Elumeeva, V.G. Onipchenko, F.K. Elkanova, A.B. Khubiev, A.V. Egorov

B4 - “Simultaneous response to climate change and eutrophication in plant communities of an inner-alpine valley, Maurienne, French Alps”

J. Bodin, J-L. Dupouey, V. Badeau

B5 - “Growth performance and spring freezing resistance in alpine dwarf shrubs”

J. A. Wheeler, C. Rixen, S. Wipf, G. Hoch

B6 - “Grassland transplantations along an elevation gradient: Evaluating impacts of a simulated temperature increase on phytodiversity and aboveground productivity”

G. Niedrist, N. Obojes, G. Bertoldi, S. Della Chiesa, E. Tasser, U. Tappeiner

B7 - “Reduction of plant community diversity by warming and herbivore removal in the low arctic”

E. Post, P. Sporon Boving

B8 - “Ecohydrological processes along an elevation gradient in an inner dry alpine valley”

S. Della Chiesa, G. Bertoldi, G. Niedrist, U. Tappeiner

B9 - “Variation in leaf traits of an Apennine grass *Sesleria nitida* along a narrow altitudinal gradient at Mount Terminillo (Italy)”

L. Gratani, M.F. Crescente, R. Di Pietro, V. D'Amato, G. Puglielli



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- B10 - **“The first continuous last Late Glacial – Holocene peat bog record from the Dolomites (NE Italian Alps)”**
L. Poto, J. Gabrieli, S.J. Crowhurst, P.G. Appleby, P. Ferretti, N. Surian, G. Cozzi, C. Zaccone, N. Kehrwald, C. Turetta, R. Pini, C. Barbante
- B11 - **“Population dynamics of *Dendroctonus mexicanus* parasiting *Pinus cembra* in response to climate change”**
H. Suzan-Azpiri, O. García-Rubio, H. Luna-Soria, V. H. Cambrón-Sandoval, O. Alvarado-Villanueva
- B12 - **“Is there an impact of tropospheric ozone on the climate change mitigation potential of forests in Trentino (Northern Italy)?”**
M. Ferretti, A. Cristofori, F. Cristofolini, E. Gottardini
- B13 - **“The impact of soil warming on ectomycorrhizal community structure and extracellular enzyme activity at the alpine treeline in Switzerland”**
R.C. Souza, M. Peter, L. Nagy, C.R. Clement, C. Rixen, M. Dawes, F. Graf, F. Hagedorn
- B14 - **“Simulating local adaptation of forest trees to climate using a new model coupling physiology, demography and genetics applied to budburst phenology”**
H. Davi, K. Csillery, S. Oddou-Muratorio
- B15 - **“Effects of climatic conditions on sap-flow and radial increment of *Larix decidua* and *Pinus cembra* in an inner-alpine dry area”**
N. Obojes, C. Newesely, E. Tasser, G. Bertoldi, S. Mayr, U. Tappeiner
- B16 - **“Model data integration for the territorial assessment of future climate change impacts on natural pasturelands of the Italian Alps”**
C. Dibari, G. Argenti, M. Moriondo, M. Bindi
- B17 - **“From monitoring global change to quantifying changes in ecosystem services: conceptual framework to create a eco-hydrological model in Sierra Nevada Mountains”**
A. Millares, F. Bonet, J. Herrero, R. Zamora, M. J. Polo
- B18 - **“Facing climate change and soil erosion in the high altitude catchment of Valle de Bravo, Mexico”**
A. Guevara-Escobar, G. Malda-Barrera, H. Suzan-Azpiri, M. Cervantes-Jimenez
- B19 - **“Linaria: a set of information management tools monitor global change in Sierra Nevada Mountains (Spain)”**
F. Bonet, R. Pérez-Pérez, A. J. Pérez-Luque



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B20 - “The LTER-Italy network 2006-2012. Status and update”

G. Matteucci et al.

B21 - “Complex Mountain Landscapes RCN-SEES: Advancing Our Social and Environmental Understanding of Complex Mountain Landscapes and their Vulnerability to Environmental Change”

J. Gosz, R. Crabtree, T. Norton, S. Pinel, J. Stanford, *M.W. Williams*

B22 - “Climate change and alpine ecosystems: a new set of permanent monitoring plots in North-western Italy”

E. Rivella, A. Bertola, N. Loglisci, M. Freppaz, G. Buffa, F. Attorre, T. Chiti, G. Certini

B23 - “Role of Diatoms in the environmental evaluation of remote Alpine Springs”

M. Battegazzore, A. Gaggino, E. Gastaldi, L. Giordano, I. Mattone, P. Molineri

B24 - “Climate-induced zooplankton species turnover in high mountain lakes in the Alps”

L. Nevalainen, M. Manca, R. Kurmayer, T.P. Luoto

B25 - “Alpine Streams under changing climatic conditions”

R. Bottarin, S. Folegot, U. Tappeiner

B26 - “LTER Italy: Long term research in high altitude lakes in the Himalayas”

A. Lami, S. Musazzi, M. Rogora, A. Boggero, M. Manca, G. A. Tartari, A. Marchetto, P. Guilizzoni, F. Salerno, G. Tartati

B27 - “Chemical weathering characterization in Sabalan mountain, the sample for high freeze area in Iran”

S. Z. Mousavi, J. Ghalamghash



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