PROSN❄W NEWS

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Edito

The PROSNOW project is now fully on tracks! Our inception report was delivered to the European Commission on February, 28, 6 months after the project start. This comprehensive report demonstrates that all initial steps of the project were completed according to the plans. The initial Data Management Plan and Dissemination and Exploitation Plans were prepared. Local working groups are in place and have started working in a cross-disciplinary and cross-WP manner. Furthermore, the feedback from the ski tourism is excellent, demonstrated from feedback received during the Mountain Planet event in Grenoble in April 2018, following the Public presentation of the project, the User Advisory Board meeting and, last but not least, the Digital Mountain Award « Jury's prize » awarded to PROSNOW! Let's keep up the momentum and continue developing our work together. We have several exciting milestones over the next few months, before we meet again four our General Assembly just before the International Snow Science Workshop in Innsbruck in October 2018.

Samuel Morin, PROSNOW coordinator

Latest news

April 2018: a very busy month for PROSNOW !

In april, PROSNOW has been involved in two major events:

European Geosciences Union (EGU) - General Assembly 2018 , Vienna (Austria): https://www.egu2018.eu/

The General Assembly 2018 of the EGU was held at the Austria Center Vienna in Vienna, from 8 to 13 April 2018. This edition was again a great success, with 4,776 orals, 11,128 posters, 1,419 PICO presentations and the participation of 15,075 scientists from 106 countries.

Four presentations related to PROSNOW were given at this conference during two PICO sessions « Snow in ski resorts » and « Science underpinning climate services »:

• Morin et al., *On the predictability of snow conditions in the European Alps, from meteorological to seasonal time scales.*

S. Morin introducing his presentation. © Carlo Carmagnola

• Carmagnola et al., *Towards a seamless modelling chain to stimulate snow conditions in ski resorts.*

• Carmagnola et al., *Trade off between topographic complexity and weather and climate forecasting skills at a ski resort level.*

• Hanzer et al., *Simulating snow management in Austrian and Italian ski resorts using the AMUNDSEN model: data, setup and first results.*

Upcoming Deliverables

- D2.1- (IRSTEA): «Review of ski resorts operating costs and market analysis. »

- D2.2- (IRSTEA): « Report on interviews and surveys with first sample of stakeholders. »

- D2.3 - (TEC): « First round of specifications on PROSNOW data visualization and processing. »

- D3.1 - (TEC): « Technical specifications of the demonstrator ».

Agenda

Upcoming scientific meetings

- ISSW 2018, Congress Innsbruck, Austria. 7-12/2018. Abstracts were due on April 30, 2018. Several PROSNOW related abstracts were submitted to the ISSW session on « Snow making and ski resort management ».

Upcoming professional meetings

- Swiss Ropeway conference, Luzern, Switzerland. 18-19/10/2018.

- German Ropeway Conference, Oberstdorf, Germany. 17-19/10/2018

PROSNOW Vienna meeting

In parallel to EGU, a 5-hour-meeting spread over 2 days was organized at BOKU, with 13 people in-situ and 11 online, to discuss the current project status and the next steps.

P. Ebner moderating the discussions during PROSNOW Vienna meeting. ©Carlo Carmagnola

Mountain Planet fair (MP) - Grenoble (France) :https://www.mountain-planet.com/

Moutain Planet, the international trade show for mountain professionals, gathered during 3 days (18-20 April) all the players from the winter and summer mountain industry. From start-ups to worldwide leaders, including professional and public organizations, Mountain Planet welcomed 900 brands from 25 countries in its 2018 edition. Four PROSNOW events took place during this fair:

- PROSNOW General Overview: presentation of the project to the general public

- PROSNOW first User Advisory Board.The User Advisory Board (UAB) provides feedback, advice and recommendations about improvements to the project work plans, tools and techniques, and on the adaptation of PROSNOW products to market needs. Stakeholders bring high levels of sector- and subject-specific knowledge that will be used to help develop the project's deliverables, including the demonstrator specification and implementation. The PROSNOW UAB consists of 13 members from Austria, Italy, Switzerland, France, Canada and the United States of America. Most attended the meeting help on April 19, either physically or through video conferencing, and provided critical input to the project, fostering ideas beyond the initial work plan and providing strong support to the project objectives from a scientific and users perspectives.

- Several discussions and round tables between PROSNOW partners and stakeholders.

Journal watch

- Soares Marta Bruno, Daly Meaghan, Dessai Suraje. *Assessing the value of seasonal climate forecasts for decision-making*. WIREs Clim Change, 2018. doi:10.1002/wcc.523

Seasonal climate forecasts (SCF) can support decision-making and thus help society cope with and prepare for climate variability and change. The demand for understanding the value and benefits of using SCF in decision-making processes can be associated with different logics. Two of these would be the need to justify public and private investment in the provision of SCF and demonstrating the gains and benefits of using SCF in specific decision-making contexts. This paper reviews the main factors influencing how SCF is (or can be) valued in supporting decision-making and the main methods and metrics currently used to perform such valuations. Our review results in four key findings: (a) there is a current emphasis on economic exante studies and the quantification of SCF value; (b) there are fundamental differences in how the value of SCF is defined and estimated across methods and approaches; (c) most valuation methods are unable to capture the differential benefits and risks of using SCF across spatiotemporal scales and groups; and (d) there is limited involvement of the decision-makers in the valuation process. The paper concludes by providing some guiding principles towards more effective valuations of SCF, notably the need for a wider diversity and integration of methodological approaches. These should particularly embrace ex-post, qualitative, and participatory approaches which allow co-evaluation with decision-makers so that more comprehensive and equitable SCF valuations can be developed in future.
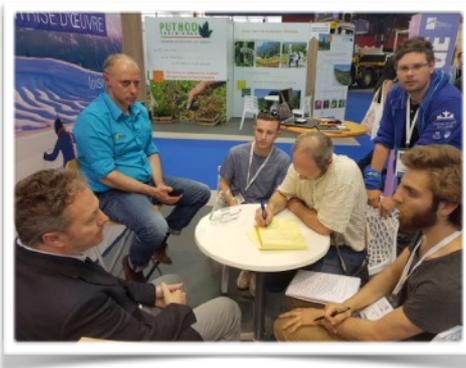
Discussions between people from Dianeige, IRSTEA and Météo-France

- Digital Mountain awards: PROSNOW was awarded the Jury's Special Awards (see article below)

Digital Mountain Awards

Digital Mountain Awards 2018 (*http://www.digitalmontagne.com/laureats-awards-digital-montagne)* were organized alongside the Mountain Planet fair (https://www.mountain-planet.com/). These prizes reward initiatives and investments dedicated to digital innovation and to customer relation in ski tourism strategy. The jury is composed of professionals supported by l'Association Nationale des Maires des Stations de Montagne (ANMSM, French Association of Mayors of Mountain Municipalities), of Domaines Skiables de France (DSF, which represents most French ski resorts) and of members of the Digital Moutain

PROSNOW won the Jury's Prize ©Carlo Carmagnola

Carlo Carmagnola (Météo-France) with the PROSNOW prize, and Olivier Hargoaa (SNOWSAT). SNOWSAT was awarded in the category « B2B Product Innovation in the ski resorts management domain »

Journal watch (continued)

Two new open-access studies from PROSNOW partners on future climate change in the Alps ! These two studies provide state-of-the-art context about long term climate change in the mountain regions with some expected impacts to the ski industry (although snow management is not accounted for in these studies):

- Hanzer, F., Förster, K., Nemec, J., and Strasser, U.: Projected cryospheric and hydrological impacts of 21st century climate change in the Ötztal Alps (Austria) simulated using a physically based approach, Hydrol. Earth Syst. Sci., 2018.

- Verfaillie, D., Lafaysse, M., Déqué, M., Eckert, N., Lejeune, Y., and Morin, S.: Multi-component ensembles of future meteorological and natural snow conditions for 1500m altitude in the Chartreuse mountain range, Northern French Alps, The Cryosphere, 2018.

Upcoming WP3 meeting

During its next meeting in May, the WP3 will focus on the description of the web-based interfaces, as it's time to start implementing a framework for the PROSNOW outputs. Two directions will be taken, one for self-supporting web-interface designed to give different layers of informations according to the scale of the ski resort map, and one for the PROSNOW information in the existing interfaces. An analysis of the interfaces of the existing service providers of the consortium has been recently done for this last purpose.

Portraits of PROSNOW members

Ulrich Strasser, University of Innsbruck (UIBK)

1) Hello Uli, could you tell more about you?

I am a researcher at the University of Innsbruck and interested in hydrological and climatological processes in high mountain catchments. The interface to the human activities influencing the water balance is thereby of special interest for developing future scenarios of water supply and availability.

2) What is you role in PROSNOW?

We develop a simulation model to quantify the fluxes of energy and water for skiing slopes. Thereby, we integrate the mechanisms of technical snow production and slope preparation into the model , as well as the management practice of the skiing resort operators. Therefore we closely cooperate with snow managers in several Austrian and Italian skiing resorts.

3) What are your expectations regarding PROSNOW?

With the PROSNOW decision support system the snow managers can better estimate the future weather and snow conditions, and improve their management practices and both their economical and ecological effects.