



**IASC ACZON Workshop**  
**“Towards and Arctic Critical Zone Observation Network”**  
**Pisa (Italy), 11-12 January 2023**

**Tuesday 10 January 2023**

19:00 Get together dinner at Hotel Bologna, Via Giuseppe Mazzini 57, Pisa

**Wednesday 11 January**

**Aula 40, National Research Council Headquarters, Via Giuseppe Moruzzi 1, Pisa**

**Online participation: <https://meet.goto.com/734014789>**

9:30 - 9:40 Antonello Provenzale: Introduction to the workshop

9:40 - 10:00 Antonello Provenzale: Italian IGG CZ observatories at high latitudes and high altitudes

10:00 - 10:20 Björn Klöve et al: Pallas and Oulanka observatories, Northern Finland

10:20 – 10:40 Vladimir Romanovsky: Permafrost observing network in Alaska

10:40 - 11:00 Angela Augusti (remote): Activities of the Ny-Alesund Terrestrial Ecosystem Flagship

11:00 - 11:20 Tim White (remote): Common Measurements at the US CZOs

11:20 - 11:40 *Coffee break*

11:40 – 12:00 Maciej Dąbski and Ireneusz Badura (remote): Micro-weathering and spectral signatures of rock surfaces in glacier forelands

12:00 – 12:20 Piotr Owczarek (remote): Contemporary increase in the activity of mass movements in the Arctic recorded in the annual growth rings of woody plants

12:20 – 12:40 Zbigniew Zwolinski: Fluvial transport and denudation rate in glacierised and non-glacierised catchments in polar areas

12:40 – 13:00 Ilaria Baneschi, Marco Doveri: First results from the ICEtoFLUX project

13:00 - 14:00 *Lunch break*

14:00 - 14:20 Mauro Guglielmin, Stefano Ponti, Nicoletta Cannone: Active Layer thickening and impacts on landscape in different permafrost areas.

14:20 - 14:40 Zbigniew Zwolinski: Permafrost monitoring after the wildfire disturbances - A remote sensing point of view.

14:40 - 15:00 Edyta Wosniak et al: Wildfires in northern ecosystems

15:00 – 15:20 Ivan Alekseev (remote): Carbon polygons in Yamal peninsula (northwestern Siberia)



15:20 – 15:40 Marco Giardino: Comparing climate and geodiversity changes within mountain and polar regions

15:40 – 16:00 *Coffee break*

16:00 – 16:20 Emanuele Pallozzi, Olga Gavrichkova et al: Role of High Arctic vegetation in Carbon cycle: isotope and flux approaches

16:20 – 16:40 Francesca Avogadro di Valdengo et al: Carbon flux drivers in the Arctic Critical Zone: a study-case in Spitzbergen, Norway

16:40 – 17:00 Milos Bartak: Ecophysiological approaches in the evaluation of polar soil crust responses to the changes of microclimate.

17:00 – 17:20 James Bradley: Microorganisms as regulators of carbon and nutrient cycles in Arctic ecosystems

17:20 – 17:40 Mariasilvia Giamberini et al: Winter CZ - measuring CO<sub>2</sub> fluxes and microbiological processes in the High Arctic winter

20:00 *Working dinner at Restaurant L'Artifafo, Pisa*

#### **Thursday 12 January**

**Aula 40, National Research Council Headquarters, Via Giuseppe Moruzzi 1, Pisa**

**Online participation: <https://meet.goto.com/199555165>**

9:30 – 11:00 Critical Zone and the water cycle: Effects of permafrost thaw, active layer deepening, talik changes and modifications in the snow cover and precipitation properties on geomorphic processes such as debris flows, on sediment transport, rivers and lakes, surface and ground water

11:00 – 11:30 *Coffee break*

11:30 – 13:00 Critical Zone and climate change: wildfires and other disturbances in the Arctic vegetation.

13:00 – 14:00 *Lunch break*

14:00 – 15:30 Critical Zone and the carbon cycle: effects of soil variables and the role/response of vegetation and microbiota.

15:30 – 16:00 *Coffee break*

16:00 – 18:00 Minimal characteristics of a network of Arctic Critical Zone observatories

20:00 *Working dinner at Ristorante La Prata, Pisa*



This workshop has been funded by IASC – the International Arctic Science Committee (<https://iasc.info/>), in the framework of the activities of the Terrestrial Working Group (TWG, <https://iasc.info/our-work/working-groups/terrestrial/>), and co-funded by the Institute of Geosciences and Earth Resources (IGG) of the Italian National Research Council. Some of the participants used their own funding to be at the workshop.

The project “Towards an Arctic Critical Zone Observation Network” (ACZON) is described at <https://iasc.info/our-work/working-groups/terrestrial/twg-projects/1029-towards-an-arctic-critical-zone-observation-network-aczon> and the Pisa workshop was announced at <https://iasc.info/events/45-towards-an-arctic-critical-zone-observation-network-aczon>

Please also join/consult:

- IASC mailing list: <http://eepurl.com/cBLUFn>
- IASC Facebook Group: <https://www.facebook.com/groups/343786799008379/>
- IASC Twitter [https://twitter.com/IASC\\_Arctic](https://twitter.com/IASC_Arctic)