



## THE COUPLING OF VOLCANIC, CLIMATIC AND SEDIMENTARY PROCESSES ACROSS THE LIFETIME OF ARC-VOLCANIC SYSTEMS

LECCO AND ONLINE, 12TH/14TH OF OCTOBER 2022

Feedbacks between climatic and volcanic processes form a fundamental planetary mechanism, whereby surface ice and water distribution modulate rates and styles of volcanism, which in turn potentially influences atmospheric conditions. These relationships can be constrained by reconstructing volcanism in glaciated regions, but a limitation of current datasets is that they are based solely on large explosive eruptions, and have a low temporal and spatial resolution, especially in glacial periods. To overcome this, we propose a strategy that focuses on a small number of individual volcanic systems and that aims to construct a more comprehensive record of volcanism, erosion, sediment transport and climatic and environmental conditions, so that a more holistic view can be obtained on the relationship between volcanic, climatic and Earth-surface processes. New scientific drilling can provide these records, and we propose an amphibious IODP/ICDP proposal targeting volcanically-dominated source-to-sink systems that span multiple glacial/interglacial cycles, in southern Chile (42°S to 44°S).

### Organising Committee:

Andrea Di Capua - CNR IGAG of Milan  
Sebastian Watt - University of Birmingham

**Registration deadline: 15th of September 2022**

Free but mandatory for organization purposes  
<https://forms.gle/KZugUXyou16Bki6h9>

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