
[EE] Evening Poster | M (Multidisciplinary and Interdisciplinary) | M-IS Intersection

[M-IS02] Conservation of geoparks, natural geosites and cultural heritage: weathering process and damage assessment

convener: Chiaki T. Oguchi (Institute for Environmental Science and Technology, Graduate School of Science and Engineering, Saitama University), Tetsuya Waragai (Graduate School of Science and Engineering, Nihon University), Miguel Gomez-Heras (Universidad Autonoma de Madrid, 共同), Magdalini Theodoridou (School of Engineering, Cardiff University, Wales, UK)

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Geoparks, natural geosites and cultural geo-heritage are recognized as an important natural and cultural properties. Due to long years of suffering from weathering of rocks and earthen materials, they are often facing deterioration problems and somehow treatments or conservations might be necessary. Investigation from wide range of research fields such as geomorphology, engineering geology, geoarchaeology, conservation of cultural properties, petrophysics, geochemistry, geotechnical engineering, etc, however, our knowledge of many aspects of these materials is still limited. Here in this session, we accept discussions on original researches and case studies of documentation, measurement and monitoring techniques, experiments, predictive models, damage assessments, etc. We welcome papers from any kinds of research fields.

[MIS02-P01] Monitoring and Preservation of Active Geomorphological Sites: Instructive Cases from European Protected Areas

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This paper provides a synthesis of active geomorphological site management and conservation from a selected examples of such sites in Europe. Currently in most geoparks geoconservation tends to simply conserve particular 'landmarks' that have high economic value, this helps little in preserving the earth heritage and associated benefits for the longer term. In contrast, active geomorphosite preservation implies preservation of the dynamic earth processes such as denudation and transport, that give rise to new landmarks, landscapes and habitat patches. Especially for many active geosites/geomorphosites that are located within protected areas, there is still scope for relatively unimpeded range of natural processes. In the Anthropocene era of sweeping human-induced change in the geo-biosphere, these sites offer a critical challenge for conservation: failure to protect the integrity of natural processes would result in swift deterioration of the site itself as well as irreversible deterioration of the many ecosystemic and other services derived from them. Monitoring for multi-scale process evidence is considered an important tool for addressing conservation issues of these active geomorphosites. The paper presents instructive examples from the Italian part of Mont Blanc Massif (Miage glacier) and the Sobrarbe Geopark in Spain to highlight the fragility of active geomorphosites and the urgent need for their protection.