



Agenda Item: CEP 10c
Presented by: New Zealand,
United Kingdom,
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SCAR
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Developing general guidelines for operating in geothermal environments

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Information Paper submitted by New Zealand, the United States, the United Kingdom and SCAR

Summary

New Zealand, the United States, the United Kingdom and SCAR, in relation to recent work on the development of a Code of Conduct for the Erebus ice caves and the proposed new ASPA for high altitude geothermal sites in the Ross Sea region, are planning to hold a workshop to begin discussions around developing general guidelines for operating in geothermal environments in Antarctica. The workshop is proposed to be held during the next SCAR Open Science Conference in Auckland, New Zealand 22 August – 3 September.

Background

At ATCM XXXV/CEP XV (2012) the United States and New Zealand submitted WP 38 *Developing protection for a geothermal area; Volcanic ice caves at Mount Erebus, Ross Island*. In undertaking this work it was identified that human activity conducted in the Erebus ice caves, has the potential to contaminate the environment with introduced microorganism, compromising the scientific value of that environment. More generally, geothermal sites in Antarctica are considered vulnerable to the introduction of new species as they present an environment where organisms typical of more temperate regions can establish. To protect these environments, the development of a Code of Conduct to manage the risk of contamination across all Mount Erebus ice caves was initiated.

Recognising that other geothermal environments might benefit from the development of best practice guidelines, WP 38 recommended that the CEP: *Encourage scientists, interested Parties, and SCAR to work together to develop appropriate guidance material for other geothermal areas in Antarctica*. The CEP endorsed the recommendation (CEP XV Final Report paragraph 178).

Simultaneously, at ATCM XXXV/CEPXV (2012), New Zealand submitted WP 19 *The proposed designation of an Antarctic Specially Protected Area for high altitude geothermal areas of the Ross Sea region* outlining the proposal to designate a new ASPA encompassing the three known locations of geothermal activity in the Ross Sea region. The drafted Management Plan was referred to the SGMP for review.

Following a site visit in the 2012/13 season and advice received from the SGMP over two intersessional periods (2012/13 and 2013/14), a final draft Management Plan has been submitted to CEP XVII jointly by New Zealand and the United States (WP 31).

During the review process of the draft Management Plan for geothermal sites in the Ross Sea region, the SGMP noted that the draft Management Plan contains a Management Activity (Section 3) that states, "National Antarctic Programmes are encouraged to consider joint implementation of guidelines intended to minimize the introduction and dispersal of non-native species within the Area and between the Area's three sites." The advice received from the SGMP was that, 'the level of biosecurity (including specific measures) needed to protect microbial communities could benefit from wider discussion, perhaps within SCAR or more broadly' and that 'any guidelines would likely be of interest to Parties working in other geothermally heated areas, (i.e. Deception Island).' In WP 31, the SGMP have suggested that the CEP may wish to give further attention to this issue.

Proposed workshop

New Zealand, the United States, the United Kingdom and SCAR are proposing to hold a workshop during the next SCAR Open Science Conference in Auckland, New Zealand 22 August – 3 September.

The purpose of this workshop would be to engage the scientific community and interested Parties to begin discussions around developing a Code of Conduct for the Mount Erebus ice caves and geothermal areas more generally.

Interested Parties are invited to indicate their interest in participating in such a workshop. New Zealand and the United States will keep interested Parties informed of workshop planning and report back to CEP XVIII on the key outcomes from the workshop.