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Guest Editorial

Focused tourism needs focused monitoring

The recent paper by Lynch *et al*. analysing 'Spatial patterns of tour ship traffic in the Antarctic Peninsula' (Antarctic Science, **22**, 10.1017/S0954102009990654) demonstrates clearly that a substantial proportion of land-based tour activities in the Antarctic Peninsula region are focused at a small number of locations. Currently, almost 55% of all landings in this region occur at just eight sites. Such a concentrated, as opposed to dispersed, visitation pattern raises concerns about the cumulative impacts tourism may have both on frequently visited sites and on the remaining lower-visitation sites that are spread across the region. High intensity visitation may lead to trampling of vegetation and soils, disruption of animal behaviour and breeding activities, an increased opportunity for introduction or redistribution of regionally and locally non-native species across different visited sites and, less tangibly, a loss of wilderness values that exist in what can otherwise be an empty/unpopulated landscape. Nevertheless, a system where tourism is highly focused on a small number of locations of high aesthetic value and/or of historic interest would ensure environmental impacts were not distributed across numerous Peninsula sites where environmental monitoring would be logistically and economically unfeasible.

The Antarctic Treaty Consultative Meeting (ATCM) has already taken steps to manage some aspects of the tourism industry with the production of visitor Site Guidelines for 25 Antarctic locations that are particularly sensitive to visitor impacts and/or where visitor numbers are high. In the future, these could be usefully expanded to include site-specific emergency action plans and bespoke monitoring programmes for each location. In a region where logistics operations are costly, developing a system whereby the degree of monitoring is commensurate with the level of visitation, and focusing management effort and available resources on the most highly visited sites, makes both financial and ecological sense. Ideally, monitoring should cover all aspects of the marine and terrestrial ecosystems across the full range of taxa, and include assessment of vulnerable geomorphological and historical features (where appropriate) and environmental sampling to detect pollutants. Only with baseline data in place can regular monitoring be fully effective at detecting changes in the ecosystem or the landscape.

But who should pay for the baseline assessments and on-going monitoring of visited and control sites? Why should it be supported by national programmes from the USA, UK and Germany when it is for a commercial industry? Should there be discussion of a small levy for all visitors to be used for a monitoring programme directed by the CEP/SCAR with the funds disbursed by the Treaty Secretariat and the travel provided for free by the IAATO ships? Ultimately, scientists need to be resourced for these activities and the Parties have so far fought shy of addressing this difficult area.

Lynch *et al.* assert that use of 'management techniques is only likely to be truly successful if a guiding vision is used in their application – an approach which is currently lacking'. At Baltimore, however, the ATCM have discussed a 'Strategic vision of Antarctic tourism for the next decade', which included contributions from IAATO, ASOC and eight Treaty nations, and notably included a call for greater monitoring of tourism activities.

Perhaps a more useful output, though politically much more challenging, would be a strategic vision extending to all human activities in the region, including those of the tourism industry and the Treaty nations' logistic and science programmes. The same environmental threats presented by tourism also apply to all national research operations and stations and the majority of documented instances of non-native species introductions and environmental impact are associated with national operators or historical industries, and not with the tourism industry.

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