

Guest Editorial

A new paradigm - Antarctic influence without Antarctic presence?

Several nations have indicated their interest in joining the existing 30 Consultative Parties to the Antarctic Treaty, who collectively are responsible for the governance of Antarctica. But do nations aspiring to Consultative Party status have to damage the Antarctic environment to attain this objective?

According to the Treaty, a nation can become a Consultative Party if it '*demonstrates its interest in Antarctica by conducting substantial research activity there*' (Article IX). The Treaty goes on to suggest this can be demonstrated by the establishment of a scientific station or the despatch of a scientific expedition. Crucially, these activities are only examples, and '*substantial research activity*' can be shown, potentially, in other ways. However, that is not how most Consultative Parties have interpreted the Treaty. With the exception of the Netherlands, all Consultative Parties have tried to demonstrate their scientific credibility by building research stations, although that in itself does not mean that credible research automatically follows. It has, however, served political agendas to establish a firm foothold on the continent. Inevitably, the construction process causes varying - but never insignificant - degrees of environmental damage, which means that, in effect, the attainment of Consultative status is largely dependent upon a Party causing a negative long-term impact upon the increasingly vulnerable Antarctic environment. This runs contrary to the Environmental Protocol's aim of preserving Antarctica as a '*natural reserve*'.

Much has changed in the 55 years since the Treaty was negotiated. One aspect of this is that tools and data resources are now available that facilitate the production of significant high quality science in some areas of research, with reduced or even no need to visit Antarctica. Satellite remote sensing techniques can reveal information on geological structures and rock types and the distribution of vegetation, avifauna and marine mammals, over large spatial scales. Increasingly sophisticated and cost-effective instruments can monitor many physical, chemical and now biological parameters automatically. Hundreds of thousands of snow, ice, geological and biological samples, sourced from across the Treaty area, are held in publically accessible collections and are available for study. Added to this, the Antarctic Master Directory, organized by SCAR, holds metadata for almost 9000 datasets, many of which are instantly accessible. We already know that the scientific rewards from these datasets for those with data mining skills are immense, (e.g. the SCAR Biogeographic Atlas of the Southern Ocean). In short, substantial Antarctic research is now possible in many fields without the need for new research stations or large-scale scientific expeditions. This has the dual benefits of reducing both impacts on the fragile Antarctic environment and scientific and logistic costs. If there is a need to visit the continent, these benefits are realised further if the spare capacity on many existing station is made available and utilised.

But how will this approach be viewed by the current Consultative Parties, with their own infrastructure in Antarctica, when they sit in judgement, behind closed doors, on new applicants? To pass the seemingly one-off 'test' of demonstrating '*substantial research activity*' required for Consultative status, the acceding state must have their portfolio of science considered adequate by the existing Parties. This evaluation is not a transparent process and no scientific assessment criteria have ever been formally agreed. So are the existing Consultative Parties likely to decide that Antarctic scientific research conducted 'remotely' is enough to qualify a nation to join the top table of Antarctic governance? Given that the underlying principle of the Environmental Protocol is to facilitate scientific research while minimising environmental impact, how could they possibly object?

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