Guest editorial

The need for geological protection in Antarctica?

During the past 30 years or so, the primary objects of environmental protection in Antarctica were living organisms such as penguins and seals, and their breeding grounds, terrestrial plants and their habitats. The ever growing threats to the icy continent, resulting from increasing human activities, lead SCAR, the Antarctic Treaty Consultative Parties (ATCPs), and recently also the Council of Managers of National Antarctic Programmes (COMNAP) to seek improved measures for conservation of the Antarctic fauna and flora, to actively participate in the preparation of conventions for protection of seals and other marine living organisms, and to elaborate a mandatory code for waste disposal.

It became apparent during XX SCAR in Hobart, 1988, that the range of environmental protection in Antarctica need to be vastly expanded in the light of the present activities. As a response, such new categories as SRA (Specially Reserved Area) and MPA (Multiple-use Planning Area) were established at XV ATCP meeting in Paris, 1989. Together with the existing network of protected areas, such as SPAs and SSSIs, these new categories will now help to protect objects and areas of special geological or geomorphological value.

For many years, there was no common view among the members of the SCAR Working Group on Geology on the matter of geological protection in Antarctica: do we need it or not? Some members were for strict protection of both the larger immovable units, such as volcanoes and fossil-bearing strata, and of smaller movable elements such as fossils, minerals, and meteorites. Many feared that, once singled out for protection, such objects would become vulnerable to damage by uncontrolled visits by non-scientists taking geological samples (fossils, meteorites, minerals etc.), for private collections, barter and/or trade.

The creation of the SCAR Group of Specialists on Environmental Affairs and Conservation (GOSEAC) byXX SCAR 1988, put the problem of geological protection again into focus, since the membership of the group included managers and earth scientists as well as biologists and environmentalists. And again, this subject became an important matter of debate for the SCAR Working Groups on Geology and Solid Earth Geophysics during XXI SCAR in São Paulo, 1990. Their recommendations, adopted by the SCAR delegates, call for protection of Antarctic fossils, minerals, meteorites and geological objects (such as volcanic bombs and ventifacts). They should be sampled for scientific purposes only, and collecting, for barter or for commercial purposes should be totally prohibited.

However, some earth scientists are still hesitant about listing field exposures, sections and areas where such movable geological objects occur, until proper legislation has been adopted by the ATCPs and implemented. As a geologist myself, I would like to encourage them to start preparing proposals now for protection of both movable and immovable geological objects in Antarctica under the existing protection schemes (SSSI, SPA, SRA, MPA) before it becomes too late. Such proposals must have a strong management plan which takes into account the protection *in situ* for both immovable and moveable objects. It must also recognize the legitimate interests of the Earth Science community to collect the necessary samples needed to fulfil research objectives.

K. Birkenmajer
Polish National Committee on Polar Research

https://doi.org/10.1017/S0954102090000402 Published online by Cambridge University Press