



Fifty Years of Peace and Science

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Biological prospecting in the Antarctic: An update on the review by SCAR

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Introduction

During ATCM XXXI, SCAR was asked to prepare a paper for ATCM XXXII to inform the on-going discussions of biological prospecting. After consultations, SCAR agreed to review recent published research on biological prospecting in the Antarctic Treaty region and assess these efforts from discovery to development to commercialisation to product use. The assessment is to be based on fundamental scientific principles, and a survey of biological prospecting research being undertaken within the SCAR community.

The question of biological prospecting in the region has a considerable history of consideration, and SCAR took note of the several papers submitted to ATCM since IP 123 submitted by SCAR at ATCM XXIII, and the outcomes of academic workshops on this question, including IP047 submitted by New Zealand to ATCM XXVI.

SCAR has commenced a review of published research and submitted a questionnaire survey to its members (Appendix A).

Progress

Whilst much has been published about the legal and policy implications of biological prospecting, scientific literature that can be identified as relating directly to biological prospecting activities is difficult to find. There are several reasons for this situation.

First, the outcome of the initial step in any bioprospecting activity is often not necessarily described as such. The outcomes of systematic searches for organisms are often published without indication that prospecting activities have been involved. Indeed, often bioprospecting is not identified as a goal even though the initial steps in such a process requires identification of organisms that may be a later target for further investigation for commercial applications. Disentangling systematic research from bioprospecting requires consideration of the systematic literature in toto, an extensive exercise. In essence, this involves a broader discussion of the question of fundamental vs. applied research and the often ambiguous boundaries between these activities.

Second, many activities are not comprehensively reported in scientific reports submitted to SCAR. As a consequence, ascertaining whether a particular scientific activity has a goal of bioprospecting requires more than a simple assessment of scientific activities reported to SCAR.

Third, much of the initial work in the field is published in local journals that are frequently more difficult to access than regional or international periodicals. This has led to the conclusion that a substantially larger group of scientists will need to be involved if a comprehensive assessment is to be the result.

SCAR has also experienced delays in receipt of returns on the questionnaires submitted to its members. Much of this delay is due to the timing of the submissions (over the Austral summer) and the short period between ATCM XXXI and ATCM XXXII.

As part of its review, SCAR is also examining the extent to which biodiversity databases are available containing genetic systematic information on Antarctic organisms (acknowledging the considerable debate in other international fora about terminology in this arena). Much of this information is widely scattered and for terrestrial organisms the available information is poor at best.

Conclusion and prospectus

Due to the above factors, more time will be necessary to adequately address the requests by the Treaty Parties. Presenting a paper at this time would be premature in that it would not be an accurate reflection of the range of work published and activities undertaken by SCAR members.

SCAR will continue to assess the information available, as agreed to at ATCM XXXI and set out in point 1 above, with regard to providing as comprehensive response as possible by ATCM XXXIII.

Appendix A: Survey sent to SCAR National Representatives

SCAR National Committee representative:

- A. Of your countries current Antarctic/Southern Ocean research projects, that are being carried out under the SCAR headings of Life Sciences, Geosciences or Physical Sciences, are any of these projects being carried out specifically to target living resources in order to identify and isolate any component of those living resources that might result in the development of a commercial product or process?
- B. If yes, please list those research projects:
- C. Are there any other research projects, that is, any project outside of the SCAR headings currently being carried out within the Antarctic Treaty area, that are specifically for the purpose of searching for living resources in order to identify and isolate any component of those living resources that might result in a commercial product or process?
- D. If yes, please list those research projects:
- E. Of any of the projects listed in either B or D above, do any of the teams of scientific researchers include members of the commercial sector? That is, is any of this research being carried out by consortia which might include a commercial sponsor or organisation?
- F. If yes, please indicate which of those research projects do and what the role of the commercial researcher/organisation is:
- G. Of the research being carried out in the Antarctic Treaty area that is not specifically being carried out for a bioprospecting purpose but which does involve living and non-living samples to be collected, what happens to those samples (living and non-living) once they are no longer required for the original purpose of the investigation/research?
- H. To your committee's knowledge have any of these samples been used as a "secondary source" for bioprospecting purposes?
- I. If yes, please indicate the current status of those samples. That is, what is/was the result of the use of these samples in this way?
- J. Are the sizes of all Antarctic samples, location where taken from and the names of any species identified entered into a database of any kind in your country or elsewhere?
- K. Would you like to supply us with other information related to this topic for consideration?