Twenty-seventh Meeting of SCAR Delegates Shanghai, China, 22-26 July 2002

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XXVI SCAR Recommendations Agenda Item 4.6

Recommendation SCAR XXVI - 1

Concerning biological prospecting

Recognizing that the Antarctic marine ecosystem has a high biodiversity and is rich in groups of interacting organisms which elsewhere in the world have proved of pharmaceutical value;

Noting the increasing international interest in the world-wide exploitation of biodiversity for chemical compounds of use to mankind, and

Recognizing that the international legislation for controlling access to genetic resources is based on sovereign rights which do not appear to be applicable in the Antarctic Treaty area south of latitude 60°S,

SCAR recommends that National Committees be aware of:

• the possible detrimental direct and indirect effects of any direct collection of Antarctic species for the identification and commercial exploitation of secondary metabolites, enzymes or other useful molecules

- the possibility of patenting of gene sequences from Antarctic organisms for commercial use
- the lack of any legislation under the Antarctic Treaty System specifically focused on these matters.

Recommendation SCAR XXVI - 2

Concerning Antarctic Place-names

Noting that the SCAR Composite Gazetteer of Antarctica (CGA):

• has been published in March 1998 by the SCAR Working Group on Geodesy and Geographic Information (WG-GGI)

• contains names data from twenty SCAR member countries and the International Hydrographic Organisation (IHO)/ International Oceanographic Commission (IOC);

• comprises around 33,000 entries for 16,500 features, including around 500 features with two or more entirely different names;

Considering that, in the interests of both scientific clarity and operational safety, the general principle of 'one name per feature' should apply for all new feature names;

SCAR *recommends* that National Committees, directly or through their national Antarctic naming authority:

1. refer to the CGA in considering all proposals for new place names;

2. avoid adding new place names to features already named;

3. submit all new approved place names to the WG-GGI for inclusion in the CGA.

Recommendation SCAR XXVI - 3

Concerning bathymetric data

Noting that the lack of bathymetric information in large areas of the Southern Ocean is a limiting factor in bathymetric mapping and nautical charting;

Noting further the key role of the IHO Data Center on Digital Bathymetry (DCDB) located at the US National Geophysical Data Center (NGDC) in Boulder, CO, and the efforts of the IOC/IHO organizations for updating and maintaining the General Bathymetric Chart of the Ocean (GEBCO);

Considering the need for bathymetric maps for the morphological interpretation of the sea-floor structure and general oceanographic studies, the geo-location of scientific data, and the general requirements for precise nautical charts to ensure the safety of navigation in Antarctic waters;

SCAR recommends to National Programmes that:

1. they support the acquisition of echo-sounding data on all vessels operating in Antarctic waters and the delivery of the gathered measurements to the IHO DCDB for further use in bathymetric mapping;

2. wherever possible, vessel transits should be planned through oceanic regions where few bathymetric data exist in order to gather additional bathymetric information.

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Recommendation SCAR XXVI - 4

Concerning meteorological data from Automatic Geophysical Observatories (AGOs)

Recognizing that:

• the British and American Antarctic Programmes operate Automatic Geophysical Observatories (AGOs);

- AGOs collect data for studies on solar-terrestrial physics and meteorological variables;
- the British data are collected annually and are available at BAS;

• meteorological data and other information from the US AGOs are placed on the World Wide Web and are refreshed every 24 hours.

• meteorological data are required on the Global Telecommunications System (GTS) operated by WMO at least at 00 GMT and 12 GMT, so that they can be assimilated into operational global models run by a number of centres around the world;

SCAR *recommends* to National Committees that meteorological data from AGOs should be inserted into the WMO GTS at least twice every 24 hours (at 00 GMT and 12 GMT)

Recommendation SCAR XXVI - 5

Concerning the International Programme for Antarctic Buoys (IPAB)

Recognizing that:

• the international programme for drifting buoys in the seasonal sea-ice zone is part of the World Climate Research Programme (WCRP);

• the programme is a cooperative venture aimed at maintaining a network of some 50 drifting buoys for both global weather forecasting and climate research;

• the programme's future plan proposes a long term commitment after the initial phase 1994&endash;2000;

SCAR *encourages* National Committees to continue their support for the International Programme for Antarctic Buoys (IPAB).

Recommendation SCAR XXVI - 6

Concerning rationalization of scientific activities on King George Island

Aware of the on-going debate on scientific activities that is currently underway on King George Island;

Appreciating that national programmes should maintain their own priorities; and

Noting the belief of the Working Group on Physics and Chemistry of the Atmosphere that some rationalization of existing research programmes on King George Island would free resources for new scientific projects;

SCAR *recommends* that the relevant National Committees should make efforts to integrate their scientific objectives and to collaborate with other nations.

Recommendation SCAR XXVI - 7

Concerning management plans for the Dry Valleys

Recognizing the unique nature of the ice-free areas in Antarctica, particularly the Dry Valleys in southern Victoria Land;

Aware that the scientific value of these areas may easily be jeopardized inadvertently by ill-considered activities;

SCAR *encourages* the relevant National Committees to develop management plans for the Dry Valleys of southern Victoria Land as appropriate.

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Recommendation SCAR XXVI - 8

Concerning metadata records

Recognizing that the generation of metadata records are key components of national science programmes;

Recognizing also that the creation of metadata records requires an appropriate level of resourcing for science projects as well as National Antarctic Data Centres (NADCs);

SCAR recommends

1. that metadata records are created as soon as is feasible after the collection of data; and

2. that national programmes make available appropriate funding for science projects for the creation of such records to be made as an integral part of the project.

Recommendation SCAR XXVI - 9

Concerning management plans for protected areas

Considering the need for the protection of the Antarctic environment and in furtherance of the stated SCAR objectives of conservation,

SCAR *recommends* that the appropriate National Committees forward to the ATCM, via their governments, the management plans for the following protected areas:

SPA No 19 Lagotellerie Island, Marguerite Bay, Graham Land

SPA No 14 Lynch Island, South Orkney Islands

SPA No 20 New College Valley, Cape Bird, Ross Island

SSSI No 22 Yukidori Valley, Langhovde, Lützow-Holm Bay

Recommendation SCAR XXVI - 10

Concerning the commercial exploitation of Antarctic meteorites

Noting that members of certain private expeditions are apparently going to Antarctica with the expressed aim of collecting meteorites for subsequent sale,

Concerned that meteorites collected in this way will be lost to science, and

Mindful of Recommendation SCAR XXII-1,

SCAR *recommends* that National Committees, via their governments, request the ATCM to take a stronger position on Recommendation XXII-1 that states:

"SCAR recommends that:

1. Geological specimens, such as fossils, minerals, meteorites, volcanic bombs and ventifacts in Antarctica should be collected for scientific or educational purposes and not for commercial gain;

2. Geological samples collected from Antarctica for these purposes should be properly curated in

institutions accessible to the scientific community and, wherever possible, should be publicly displayed."

Recommendation SCAR XXVI - 11

Concerning Geodetic and Geographic Information

Noting the Antarctic Treaty Article III (1c) requirements regarding data exchange,

Recognising that the information products produced by the SCAR Working Group on Geodesy and Geographic Information are all derived from the work of National Committees and Programmes;

SCAR *recommends* that National Committees request National Programmes to provide continuing access for all SCAR members to fundamental geodetic and geographic information, including:

- geodetic observations and databases;
- geodetic control point and tide gauge records;
- topographic and bathymetric data; and
- place-names data.

Recommendation SCAR XXVI - 12

Concerning airborne gravity data for geoid computation

Noting that determination of a high resolution geoid in Antarctica benefits research on ice sheet geometry, and the calibration and validation of satellite missions;

Recognising that there is a major gap in gravity data required for the computation of a high resolution geoid in Antarctica;

Considering the current lack of gravity data, the need to acquire gravity data at close intervals (optimally spaced between 10 and 50 km), that new satellite gravity missions will leave a gap from 82 to 90 degrees south, and that airborne gravity observation is considered the most cost-effective and reliable method for collecting data;

SCAR recommends that National Committees request National Programmes:

• to support a scientific programme of airborne gravity to close gaps in existing Antarctic gravity data coverage;

and

• encourage all researchers to coordinate their efforts in Antarctic gravity data acquisition, in particularly airborne gravity data, and to provide such data to the SCAR Working Group on Geodesy and Geographic Information.

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Recommendation SCAR XXVI - 13

Concerning climate and palaeoenvironmental past records

Recognizing that Antarctica and the Southern Ocean are very important parts of the climate system,

and

Noting that recent research has highlighted the importance of Antarctic ice cores for understanding global change,

SCAR requests that National Antarctic Programmes and national and international funding agencies

- support ice-coring field activities;
- ensure the archiving and sharing of ice-core data; and
- promote the syntheses of ice-core data as well as their comparison with oceanic records.

Recommendation SCAR XXVI - 14

Concerning the importance of magnetometer data

Recognizing the importance of high precision absolute measurements of the geomagnetic field for:

1. Improving understanding of the structure and evolution of the Earth's interior;

2. Assisting the determination of the International Geomagnetic Reference Field that is a crucial background data set for global solar-terrestrial and other studies;

3. Providing ground truth for present and up-coming satellite missions;

Noting increasing satellite and ground-based international efforts related to the current solar maximum;

SCAR *encourages* National Committees and other responsible bodies to establish and maintain these important basic measurements at all feasible Antarctic stations that provide independent coverage.

Recommendation SCAR XXVI - 15

Concerning continued support of existing observatories

Recognizing that the study of Geospace and the Space Weather Environment is now more important than ever, both scientifically and in terms of the practical impact of Space Weather on technological systems in space and on the ground; and

Recognizing that the polar regions, and especially Antarctica, provide unique platforms for coordinated multipoint observations of the geospace environment

Noting that the ionosphere over the Antarctic continent is now comprehensively monitored by overlapping fields of view of multiple HF radars and

Noting the crucial importance of ground-based observatories at distributed high latitude Antarctic sites as facilitated, for example, by the Automatic Geophysical Observatories (AGOs) operated by the United Kingdom and United States;

SCAR *recommends* to National Programmes that these and other similar observations be continued without interruption during the next few years as geophysical activity peaks during and after the current intense solar maximum.

Recommendation SCAR XXVI - 16

Concerning site testing for astronomical observation.

Recognizing the advantage to astronomy of the unique observing conditions on the Antarctic plateau, confirmed by the exceptional conditions existing at South Pole station; and

Noting that comprehensive data on the site conditions are an essential pre-requisite to the establishment of new observatories;

SCAR *encourages* responsible organizations and National Programmes to deploy instrumentation to potential new sites to acquire comprehensive data on observing conditions.

Recommendation SCAR XXVI - 17

Concerning specially protected species

Recognising the large increase in population of Arctocephalus spp in Antarctic waters;

SCAR *recommends* that National Committees, via their governments, request that the ATCM removes all species of the genus *Arctocephalus* from the list of Specially Protected Species in Annex II, Appendix A, of the Protocol on Environmental Protection to the Antarctic Treaty.