

**Committee for Environmental Protection  
The Hague, The Netherlands, 11–15 September 2000**

**WILDLIFE DISEASES**

**Working Paper submitted by SCAR and COMNAP**

**INTRODUCTION**

1. Both SCAR and COMNAP welcomed the report from the workshop meeting on Diseases of Antarctic Wildlife held in Australia on 25-28 August 1998 following discussions on this topic at CEP I. The report and its recommendations were circulated within SCAR, discussed in detail by three SCAR specialist committees and subjected to independent assessment by non-Antarctic scientists specializing in wildlife diseases. The report and recommendations were also circulated by COMNAP to the Antarctic Environmental Officers Network for comment. While neither SCAR nor COMNAP attempted to develop a consensus view concerning the workshop report, the following comments do represent a consensus response to the workshop recommendations. This paper takes into account the abbreviated report on the workshop tabled by Australia as XXIII ATCM/WP32.
2. As the full report says, “There has not yet been a disease outbreak in Antarctica that has been positively attributed to human activity”. There are, however, many natural methods of disease transmission to and within wildlife populations well documented for other parts of the world. SCAR considers that the scientific data available from the Antarctic, and used as the basis for the recommendations, are currently inadequate and do not in themselves justify any action. However, it is recognized that human activities have been an agent in the spread of diseases in other parts of the world. It would therefore be advisable to increase awareness and scientific knowledge about diseases in Antarctic wildlife. In addition it is prudent to take simple and practical precautions to limit the possibility of disease introduction as a result of human activities.
3. The scientific issues with respect to the introduction of disease into Antarctic wildlife and the ensuing recommendations are not fully understood and there appears to be no hard evidence that the reported cases of mass mortality were caused by the anthropogenic introduction of disease. In taking prudent precautions, however, considerations should be given to develop guidelines to minimize the risk of anthropogenic introduction and the spread of disease among living organisms. COMNAP offers to task AEON to develop such guidelines on the basis of the recommendations from the workshop, taking into account comments received and subject to receipt of advice from SCAR on the scientific basis for developing such guidelines.

**RESPONSES TO WORKSHOP RECOMMENDATIONS**

**Recommendation 1**

*Managers of National Antarctic Programs should raise the awareness of the possibility of disease introduction particularly among station leaders and voyage leaders.*

For consideration and implementation by COMNAP member agencies and others.

## **Recommendation 2**

*Pre-departure environmental briefings to all expeditioners should include an explanation of the potential for disease introduction and translocation, and the simple procedures that should be adopted to reduce the possibility.*

For consideration and implementation by COMNAP member agencies and others as specific and appropriate procedures are developed and agreed upon.

## **Recommendation 3**

*National Antarctic Programs should encourage the production of and exchange of educational material such as posters and videos.*

COMNAP and SCAR see these as sensible recommendations, in principle, but note that until the risks are better identified it is not clear what the educational message should be. Information about potential risk could be easily incorporated into existing procedures, but referring to tourism operators as well as national programs. Exchange of material within COMNAP could take place through the AEON group

## **Recommendation 4**

*A central clearing-house should be established for information on suspected disease occurrences.*

It is questionable whether there is a need for establishment of a “clearing house”, in that existing information exchange mechanisms should be adequate.

## **Recommendation 5**

*All operators should provide to the central clearing-house a contact address to receive information.*

See above response.

## **Recommendation 6**

*The central information clearing-house should report annually to the ATS through the CEP as a standing item, including negative reports.*

COMNAP consider that no new facilities are required to provide adequate information channels. The AMEN system can provide immediate notification to all national operators and to IAATO of any unusual mortality events. Details of any such notifications could be provided in the annual COMNAP report to the ATS. In the absence of scientific or forensic evidence, such reports should avoid the term “disease outbreak.”

## **Recommendation 7**

*All governments and NGOs operating in Antarctica should be alerted to these publications [procedures for recording disease events] and should nominate someone familiar with the procedures.*

SCAR supports the nomination of a scientist with appropriate expertise in each country. Appropriate versions of the CCAMLR and Department of Conservation documents could be made available on an appropriate Web site for ease of dissemination. It is noted that some countries have contingency planning procedures to deal with mass mortality events.

### **Recommendation 8**

*If disease is suspected the first response should be to stand back, view widely, photograph (preferably digital) and count dead and dying*

SCAR supports preliminary data collection on discovery of a mass mortality event

### **Recommendation 9**

*Access to the site should be restricted to reduce the risk of transfer to uninfected populations*

SCAR notes that it is accepted as good practice elsewhere in the world to restrict access to sites where a disease outbreak has occurred, and recommends that procedures for limiting access and for notification of disease be developed by interested parties.

### **Recommendation 10**

*If expert support (veterinarian, medical officer, biologist) is available, record symptoms and conduct sampling according to the procedures outlined by CCAMLR or Department of Conservation, New Zealand*

SCAR and COMNAP support the recording of symptoms and collection of samples using standardized protocols (a number of which exist and could be used for this purpose) to allow definite identification of disease organisms.

### **Recommendation 11**

*The minimum information that should be provided to the central clearing house is:*

- 1. Location, including coordinates,*
- 2. Species involved,*
- 3. Description of the event including percentage and total number of animals affected,*
- 4. Symptoms,*
- 5. Contact person*

SCAR supports the minimum information proposed

### **Recommendation 12**

*Operators should be made aware of the potential for disease transfer on clothing, equipment and vehicles particularly if used for other activities such as field training prior to their use in Antarctica.*

This would appear to be a further element of the educational campaign for awareness of risk, subject to the comments made under Recommendation 3.

### **Recommendation 13**

*Clothing, equipment and vehicles used in Antarctica should be carefully cleaned before being dispatched to Antarctica.*

Where this is possible it should be done but it may prove impractical in many instances, as well as unnecessary depending upon locality.

#### **Recommendation 14**

*Biocides, such as sodium hypochlorite or iodine solutions that are not persistent environmental contaminants, should be used for washing boots and other equipment when moving between locations: if biocide is not available repeated washing with water is better than nothing.*

There is concern about the use of chemical treatments without prior justification. Clearly when moving out of a disease area disinfection is required to limit the spread of a known disease. However, the routine use of such a strong oxidizing agent in areas where no disease has been reported seems premature. The recommendation as currently worded does not adequately define “locations” nor does it take account of moving between areas where there is insufficient water to wash equipment. SCAR accepts that sanitizing of equipment, including footwear, is advisable under some circumstances, such as when moving from an area in which a disease outbreak is suspected or confirmed. SCAR notes that the need to consider which sanitizing techniques are appropriate and adequate in the light of field conditions in the Antarctic.

#### **Recommendation 15**

*Operators should source food supplies free from known diseases.*

Measures to prevent the introduction of disease through poultry already exist. It is not clear what other diseases and controls are envisaged.

#### **Recommendation 16**

*The potential for disease introduction from sewage treatment and effluent disposal procedures should be recognized and addressed.*

The Protocol only requires maceration of sewage and more research is needed to demonstrate that a change in this requirement can be justified. Standard wastewater treatment design provides treatment methods for whatever level of pathogen removal is desired. For a price, it is even possible to remove all pathogens, but that is very costly and has not been shown to be necessary, even in sensitive ecosystems in temperate climates.

#### **Recommendation 17**

*Live vaccines should not be used as preventative treatments.*

SCAR agrees that live vaccines should not be used on wildlife as it is not possible to be certain that the viral strain will not become virulent again when introduced into a new host.

#### **Recommendation 18**

*Managers of National Antarctic Programs should note the importance of serum banks and support the establishment of repositories for archival material.*

SCAR recognizes the value of repositories of archival material to understand better disease occurrence in Antarctica and for other purposes. At present SCAR does not see a mechanism for organizing and funding an international facility but would welcome the establishment of national repositories.

## **Recommendation 19**

*Fundamental research on disease in Antarctic wildlife including immunology, pathology and preventative measures is needed and should be supported.*

SCAR recognizes that there are very few data on the presence of disease antibodies in Antarctic birds and seals, nor is there any information on the natural methods of disease transmission within and between Antarctic wildlife populations. Fundamental research is required to establish the characteristics of wildlife diseases and their contribution to population dynamics. It is not however the most pressing problem in Antarctic conservation.

## **List of Acronyms and Abbreviations**

AEON	Antarctic Environmental Officers Network
AMEN	Antarctic Managers Electronic Network
ATCM	Antarctic Treaty Consultative Meeting
ATS	Antarctic Treaty System
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
COMNAP	Council of Managers of National Antarctic Programmes
NGO	Non-Governmental Organization
SCAR	Scientific Committee on Antarctic Research
WP	Working Paper