

## **Working Paper on an Analysis of IEEs Prepared for Antarctic Operations An Update on Progress**

### **Background**

The issue of environmental impact assessment has been an important focus of the Council of Managers of National Antarctic Programs (COMNAP) work over the last decade. Recent initiatives within the Antarctic Treaty system and COMNAP, as well as ongoing experience in the practical implementation of the Environmental Protocol, have advanced the understanding of the issue.

During the eleventh meeting of COMNAP in Goa, India (September 1999), the Antarctic Environmental Officers Network (AEON) arranged a workshop with the aim to follow up and facilitate discussions on the issue of environmental impact assessment.

The Workshop considered the value of comparing EIAs for similar activities, in similar types of environments, and noted that such a comparison could probably only be done for IEEs due to the low number of CEEs so far prepared. It was suggested that a number of IEEs for similar activities could be compared to enable a better understanding of how the EIA process is being implemented.

The workshop recommended that COMNAP consider initiating an analysis of existing IEEs. COMNAP endorsed the recommendation.

At the third meeting of the Committee for Environmental Protection (CEP III) the issue of implementation and interpretation of the Protocol provisions on environmental impact assessments was discussed. In this context COMNAP offered to conduct an analysis of existing IEEs for two or three specified types of activities with the aim of achieving a better understanding of how the EIA process is being implemented. The CEP welcomed this initiative.

COMNAP has consequently asked AEON to conduct such an analysis. This paper updates the CEP on progress made by AEON with the work. The terms of reference are set out and the draft methodology is provided for the information of the committee. AEON is expected to complete the work by the end of 2001 and COMNAP will report back to the CEP at its next meeting.

## Terms of Reference

The following terms of reference have been developed for the review of IEEs by AEON.

- (1) AEON shall conduct an analysis of existing IEEs considering similar types of activities assumed to have similar types of impacts on the Antarctic environment. The aim of such an analysis is to achieve a better understanding of how the EIA process is being used by national Antarctic programs.
- (2) The analysis is to cover a set of activities (including the actions<sup>1</sup> conducted as part of the activity) assumed to have similar types of impacts on similar environmental values.

The following actions should be considered for inclusion in the analysis:

- construction of a station living facility
- bulk fuel storage
- scientific ice core drilling

Variations in both the abiotic and biotic environment should be taken into consideration when conducting the analysis for the various actions.

- (3) The analysis should take into account a representative sample of IEEs. To identify relevant IEEs prepared, the updated list of IEEs maintained by the CEP should be used as a basis, although further information should be obtained through direct contact with the members of the network.

- (4) The following aspects should be compared in the analysis:

- description of the activity and the local environment
- the identification and evaluation of impacts and the methodologies used
- alternatives to the proposed activity and recommended mitigation measures
- the level of information and detail provided
- the conclusions reached

- (5) The following timeframe has been set for the work:

- Prepare a preliminary report on the ongoing work to CEP IV
- Complete the analysis by the end of 2001. Methodology Considerations

A working group has been set up by AEON to progress the EIA analysis under the terms of reference. There are eight members of the group. The group have researched relevant

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<sup>1</sup> **Action:** any step taken as a part of an activity (adapted from *CEP 1999 Guidelines for Environmental Impact Assessment in Antarctica*). **Activity:** an event or process resulting from (or associated with) the presence of humans in the Antarctic, and/or which may lead to the presence of humans in Antarctica. (adapted from *SCAR/COMNAP 1995/96 Monitoring Workshop*)

aspects of EIA practice elsewhere in the world, in particular the development of techniques to review or assess the quality of the EIA. Some of these techniques have been useful, for instance the effectiveness review developed as part of the International Study of the Effectiveness of Environmental Assessment, the purpose of which “is problem-solving rather than fault-finding”. Other reports have also been useful (see references).

From the review criteria which are available, several items are recurrent. These focus on the adequacy of certain aspects of EIA including:

- A clear description of the proposed activity, its objectives, the environmental setting, and a balanced summary of the key issues
- Adequate and relevant information on environmental effects (long term and short term, indirect and direct, negative and beneficial, cumulative, covering all relevant environmental media – soil, water, air etc)
- A sound methodology for assessing the level of impact
- Provision for monitoring
- Consideration of alternatives

Two areas of frequent consideration that are beyond the scope of this investigation are consultation and outcomes. Most criteria for consultation from other countries are not directly transferable to the Antarctic context owing to the lack of an indigenous or permanent population, and the absence of a requirement to consult at IEE level. Several studies and reviews of EIAs have used the impact of the EIA on the actual project outcome as a measure of their effectiveness. This also relates to auditing and monitoring once the activity commences. The terms of reference for this work relate specifically to evaluation of EIA documents themselves, but evaluation of their further implementation and outcomes may be a useful future focus.

### **Proposed Process**

The AEON working group has developed a process for analysis of IEEs as set out by the terms of reference. The basic elements of the process is as follows:

- The analysis will be undertaken by a small panel of reviewers (members of the working group).
- Each IEE is reviewed by the panel using agreed criteria set out in the form of a spreadsheet (see draft attached).
- The results of the reviews are collated into a matrix table for comparison and presentation of the review outcomes. The draft report is circulated for consideration and comment by the working group.
- The final report is provided to COMNAP following input and comments from the working group and AEON.

### **Next Steps**

The next steps for the AEON working group will be to finalise the methodology and identify the IEEs which will be included in the analysis. It should be emphasised that the actual IEEs that are reviewed will not be identified in the report of the working

group.

The results of the analysis will be provided to COMNAP who will report back to the next CEP meeting on the outcomes and findings.

### **Recommendation**

That the CEP IV provides feedback to COMNAP/AEON on the terms of reference and methodology proposed in this paper.

### **References**

AEON 1999. *Environmental Monitoring and Environmental Impact Assessment*, September 1999, Goa, India. Antarctic Environmental Officers Network workshop report.

(<http://preview.comnap.aq/aeon#4>)

CEP Guidelines for Environmental Impact Assessment in Antarctica (1999)

([http://www.npolar.no/cep/innhold/cep\\_archive/Docs/Guidelines/guideline\\_list.htm](http://www.npolar.no/cep/innhold/cep_archive/Docs/Guidelines/guideline_list.htm))

CEP Updated list of IEEs prepared since 1987

([http://www.npolar.no/cep/innhold/about\\_cep/cep\\_act.htm](http://www.npolar.no/cep/innhold/about_cep/cep_act.htm))

Environmental Protection Agency 1995 Report of the EIA Process Strengthening Workshop. Canberra, Australia.

([www.environment.gov.au/epg/eianet/eastudy/aprilworkshop/contents.html](http://www.environment.gov.au/epg/eianet/eastudy/aprilworkshop/contents.html))

European Commission Directorate General for Environment 1994. *EIA Review Checklist*

([europa.eu.int/comm/environment/eia/eia-support.htm](http://europa.eu.int/comm/environment/eia/eia-support.htm))

Protocol on Environmental Protection to the Antarctic Treaty (1991)

Sadler B. 1996. *Environmental Assessment in a Changing World: Evaluating Practice to Improve Performance*. Final Report of the International Study of the Effectiveness of Environmental Assessment.

(<http://www.environment.gov.au/epg/eianet/eastudy/final/main.html>)

<b>DRAFT CRITERIA FOR REVIEW OF IEES</b>
Consider the adequacy of the IEE in each of the following areas and rank accordingly: <i>Rankings are as follows:</i> <i>C = Complete: all relevant information is provided</i> <i>A = Acceptable: information provided in incomplete but omissions are not serious</i> <i>I = Inadequate: major omissions, additional information necessary for decision making</i> <i>N = Not applicable to this IEE</i>

<b>Feature of IEE</b>	<b>Ranking</b>	<b>Comments</b>
<b>Description of activity</b>		
purpose and need		
location, spatial extent		
intensity		
duration, timing		
relationship to other activities		
access described, maps provided		
proximity to protected areas		
<b>Alternatives</b>		
locations		
technologies		
pre-existing facilities		
timing		
no action		
<b>Outputs of activity</b>		
from vehicles		
from power generation		
from building		
from fuel storage		
<b>Existing environment</b>		
physical characteristics		
biota		
dependent/related populations		
natural variations, current trends		
spatial/temporal sensitivities		
data reliability		
special values		
past/present activity (e.g. impacts, values, cumulative effects)		
baseline data for monitoring		
<b>Impacts</b>		
interactions between outputs and environmental elements/values		
nature, spatial extent, intensity and duration of impacts and resulting changes to environment		
reversibility		
lag time		
direct		
indirect		
cumulative, in the light of existing (past and present) and known planned activities of different alternatives		

<b>Feature of IEE</b>	<b>Ranking</b>	<b>Comments</b>
<b>Evaluation</b>		
description of methods		
judgement of significance		
finding of minor or transitory		
<b>Comparison of alternatives</b>		
aggregation of impacts of each alternative		
comparison of alternative impacts		
<b>Corrective measures</b>		
mitigation		
remediation		
<b>Monitoring programme</b>		
verifying predicted impacts		
detecting unforeseen impacts		
<b>Process</b>		
document readily available		
evidence of consultation		
<b>Overall</b>		
material relevant		
sufficient detail		
logical presentation		