



Questions to consider

as part of the authorisation process for non-Governmental land-based activities in Antarctica

In undertaking domestic procedures to assess potential non-Governmental land-based activities in Antarctica, Competent Authorities may find it helpful to consider the following list of questions. The overall aim of the list is to underpin the consideration of land-based activities to ensure full compliance with the Protocol on Environmental Protection and other relevant ATCM instruments, including Measure 4(2004), Resolution 4(2004), Resolution 7(2009) and Resolution 3(2011), as appropriate.

The list of questions is neither exhaustive nor prescriptive and is intended for guidance purposes only. Not all of the questions will be relevant to every land-based activity, and the requirements of those operating regularly in Antarctica will clearly be different to those conducting one-off activities. Each Party's Competent Authority will determine how it wishes to utilise this list of questions to consider in each case.

General Environmental Issues

Overarching issues, likely relevant to all land-based activities:

- Are the proposed activities, in terms of scale (eg, number of participants, duration and extent of operational area) and type (ie, what is specifically planned), consistent with the Environmental Principles set out in Article 3 of the Environmental Protocol?
- Has the Environmental Impact Assessment (EIA) been developed in accordance with the Guidelines appended to Resolution 4(2005) and does it cover all of the activities to be undertaken whilst in Antarctica, including those of any other operator contracted to, or working with, the organisers of the activities, where these other operators are not already authorised by another Treaty Party? Does the EIA include any alternative activities that may be offered because of weather restrictions etc? In all cases, have the environmental risks been identified and appropriate mitigation measures planned?
- Does the Environmental Impact Assessment specify clearly defined geographic boundaries within which all of the proposed activities will take place, taking into account contingency plans and potential alternative operating areas (including the location of any field camps, storage facilities or depots, or the route of any traverses)? Are the organisers (or the Competent Authority) aware of what other activities might also be planned to take place simultaneously in this area, and how will any potential cumulative effects be assessed and considered? Are activities known to have previously taken place in the area or is it, as far as known, a pristine area? Is the proposed activity a one-off event or is it likely to be repeated in the foreseeable future in the same location?
- Can the organisers of the proposed activities demonstrate a good understanding of the environmental conditions of the full area of proposed operation, for example, through prior experience, or through seeking the advice of relevant experts? Are there any Antarctic Specially Protected Areas (ASPAs), Antarctic Specially Managed Areas (ASMAs) and Historic Sites and Monuments (HSMs) in proximity to their intended activities?
- Have the proposed activities been planned in accordance with *Guidance for those organising and conducting tourism and non-Governmental activities in the Antarctic* (Recommendation XVIII- 1(1994))? Are plans in place to ensure that those planning to undertake the activities in Antarctica are fully aware of the *General Guidelines for Visitors to the Antarctic* (Resolution 3(2011)); and *Non-native Species Manual* (Resolution 2(2011))?
- Are the proposed management practices for waste and sewage appropriate for the scale and location of the proposed activities; particularly plans for discarding waste from travelling activities (paying particular attention to the likelihood of temporary camps being dismantled quickly)?
- Do contingency plans include provision for the removal of all equipment in the case of accident or damage to equipment, or in the event of an emergency evacuation?
- Have appropriate measures been identified to avoid introductions of non-native species, both by the members of the expeditions, and by their logistical support operator, if different?



Specific issues, to be considered as relevant:

- Are detailed fuel handling, storage procedures, and spill avoidance measures in place, including any specific procedures where fuel is to be transported long distances, or where vehicles and aircraft are to be refuelled on the ice? (The COMNAP Fuel Manual 2008 may be useful in assessing such measures);
- If vehicle use is proposed, what measures have been taken to demonstrate its appropriateness for the proposed area of operation? Are vehicles proposed to be used in any areas not covered by snow or ice, and if so, what is the potential risk of more than minor or transitory impacts (eg, visible tracks remaining after the activity is completed)?

Contingency Plans (including Search and Rescue and Medical Evacuation)

Overarching issues, likely relevant to all land-based activities:

- Have the proposed activities been planned in accordance with Measure 4(2004) and/or paragraph 1 of Resolution 4(2004), such as to ensure that appropriate contingency plans and appropriate arrangements for health and safety, search and rescue, and medical care and evacuation are in place? Do these contingency plans cover, in particular, weather-related implications, medical emergencies, and equipment failures?
- Can the organisers demonstrate adequate insurance or other arrangements to cover the costs associated with search and rescue and medical care and evacuation, in line with Measure 4(2004) and paragraph 2 of Resolution 4(2004)? Do all insurance policies make specific reference to Antarctica and the types of activities for which the policy/arrangements cover – for both the organisers, and all participants?
- Have the organisers developed a sufficiently detailed risk assessment for the activities proposed, in terms of search and rescue and evacuation (ie, identification of possible scenarios requiring search and rescue and/or evacuation, and clear plans as to how this would be enacted under each scenario)?

- Has radio linkage between each component of the activity (vehicles, groups, medical and/or logistical staff etc), with base camp and with organisers outside Antarctica been prepared and successfully tested?

Specific issues, to be considered as relevant:

- Where activities are planned to take place away from a base camp, are clear agreed protocols in place for regular (eg, at least once per day) reporting to base camp or to a designated contact elsewhere (including whether all necessary communication and location equipment and back-ups will be provided for prior at the beginning of the activities)? Is there a maximum proximity between base camp and the activities to be supported, and is this appropriate? Will search and rescue operations be automatically commenced if no communication is received after an agreed period of time? For travelling activities, will a continuous record of the last known (and regular) location of participants be kept?

Health and Safety of those undertaking the activities

- Do the organisers, or appointed leaders of the activities in Antarctica if different, have previous experience of operating in Antarctica (or other similar environments, combined with a clear understanding of the different conditions and requirements of Antarctica)? What safety equipment will they have available and is this appropriate for the type and scale of the proposed operation?
- Have the organisers identified the potential health and safety risks arising from their activities in Antarctica, and, if appropriate, will all potential participants be medically assessed for their physical aptitude to carry out the planned activities?
- Have standard operating procedures been developed for accidents and emergencies, health and safety and the provision of medical/first aid? What medical equipment will they have available?
- As appropriate: what will the ratio be of medically and specialist polar trained staff/instructors to novice, or less experienced participants – is this appropriate and does it provide for continuous cover throughout the duration of the proposed activity?; or for remote activities, what will the arrangements be for ensuring timely access to medical assistance?

Specific issues, to be considered as relevant:

- Can the organisers of any potential activities to be undertaken in Antarctica without the supervision or support of an experienced operator demonstrate full compliance with paragraphs 3-7 of the Guidelines appended as Annex 1 to Resolution 4(2004)?
- For supervised/supported group activities which will involve participants engaging in endurance or highly physical activities (assessed relative to the abilities of the participants), what specific prior training and preparation will be undertaken, and will this be for all participants (for example, in line with paragraphs 3, 5 and 6 of Annex I of Resolution 4(2004), even where there are also on-site guides present)?
- For supervised/supported group activities which will involve participants engaging in endurance or highly physical activities (assessed relative to the abilities of the participants), what arrangements will be in place for regular monitoring of the well-being of participants (eg, for races, this might be at a series of checkpoints)? Are formal procedures in place for the withdrawal or removal of participants on medical grounds?



- For travelling activities, is there a general agreed pre-planned (fixed) route (with contingencies), and if so, has there been reconnaissance and mapping of these routes (with particular emphasis on the location of crevasses and other natural hazards)? Are the organisers aware of recent meteorological data across the proposed routes?
- Where vehicles (including all wheeled, tracked or skied machinery, both powered or unpowered, eg, cars, snow mobiles, quad bikes, 'tractor trains') are to be used, what modifications have been made for Antarctic conditions, for example, will they be fitted with ground radar and other navigational equipment, and are the vehicle operators appropriately trained in the use of such equipment? Is the number of vehicles sufficient to support the proposed activities and what appropriate spare parts will be carried?
- Has the loss of one or more vehicles been taken into account and would such an event endanger lives?

Liaison with other Competent Authorities and Treaty Parties

- In line with Resolution 3(2004), what contact has been made with other national authorities that may have an interest in the activities (eg, sub-contractors, participants etc)?
- Will the proposed activities be taking place in proximity to known scientific research locations, or scientific stations? What contact has been made with relevant National Antarctic Programmes?

Education and Outreach

- How will the activities focus on the enrichment and education of visitors, before and during the period in Antarctica, in line with Resolution 7(2009)?
- Have the organisers fully considered whether, and how, the activities will generate a wider interest in the protection of Antarctica, for example, through education and outreach etc?