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## **Green Expedition in the Antarctic**



## Green Expedition in the Antarctic

***Working Paper submitted by Australia, Chile, China, France, Germany, India, Korea(ROK), New Zealand, Norway, United Kingdom, United States.***

### Summary

This working paper introduces the Green Expedition concept and presents a Resolution proposal reminding Parties of their commitment under the Environmental Protocol to plan and conduct their activities in Antarctica in an efficient and sustainable way.

### Background

Under the framework of Antarctic Treaty System, since the signing and entry into force of the Antarctic Treaty and its Protocol on Environmental Protection, many activities have been undertaken in Antarctica in accordance with its status as a *'natural reserve, devoted to peace and science'*. Compared to tourism industry activities, scientific investigations organised and conducted by National Antarctic Programmes of contracting Parties, which are often described as Antarctic Expeditions, generally occur over more extensive areas, and in a more intensive manner and contribute significantly to the understanding of Antarctica, its role in global natural processes, and the management of the region. The conduct and support of this science also has the potential for impacts on the Antarctic environment. Environmental Protocol accords priority to scientific research, and requires activities to be planned and conducted in such a way to preserve the value of Antarctica, including its value as an area for the conduct of scientific research.

Increased recognition of the global significance of Antarctic science, along with socio-economic development worldwide, is resulting in growing international interest in scientific work in Antarctica. An increasing number of countries may be interested in scientific work in Antarctica and conducting their own research activities. The need for more scientific research in Antarctica remains pressing, given that areas of Antarctica remain unknown and extensive opportunities exist for further scientific discoveries, as well as several other important reasons, e.g. the role of Antarctica in the control of global climate and impact on sea level rise. However, policy makers need to take into consideration the potential increases in human impact and pressures on local environments due to any increases in scientific activities and the associated logistical support.

Promoting both environmental protection and science and the balance between these two goals has been a subject of discussion within the ATCM and CEP over many years, and contracting Parties have developed solutions and recommendations in response to issues such as the introduction of non-native species, energy management, and the enhancement of effective cooperation between Parties. Furthermore, the development of best practice and tools for environmental protection are priorities in the Work Plan of the CEP and ATCM. New proposals are generally based upon existing experience and are intended to improve Parties' environmental performance.

The Protocol, its Annexes that are currently in force, and the effective Measures adopted by consensus at the ATCM are principal rules, which are legally binding and shall be strictly followed by those undertaking activities in Antarctica to ensure a high standard of environment protection. In addition to the aforementioned compulsory requirements, additional non-mandatory (hortatory) texts have been developed, mainly in the form of Resolutions, which are also adopted by consensus at the ATCM and are designed to supplement the existing mandatory rules and thereby further improve the environmental practices of scientist and logisticians working in Antarctica. Many of the guidelines, handbooks and manuals agreed through

Resolutions are comprehensive and provide details on practical implementation of principles agreed in the Environmental Protocol and wider Antarctic Treaty System.

Resolutions have been agreed that concern many elements of Antarctic fieldwork. Demonstrating Parties' desire to constantly improve environmental practice, two Manuals have been revised in recent years, i.e. the CEP Non-native Species Manual (Resolution 4 (2016)) and Antarctic Clean-up Manual (Resolution 2 (2013)). Guidance has also been developed for specific activities, such as the SCAR Code of Conduct for Activity within Terrestrial Geothermal Environment in Antarctica (Resolution 3 (2016)), the Guidelines for Environmental Monitoring (Resolution 2 (2005)) and the Protection of Antarctic Meteorites (Resolution 3 (2001)). SCAR has developed additional guidance to ensure that scientific activities have minimal impact, such as the Code of Conduct for the Exploration and Research of Subglacial Aquatic Environments (2011) and the Environmental Code of Conduct for Terrestrial Scientific Field Research in Antarctica (2009). COMNAP's focus on "best practices" in managing scientific research support provides guidance on specific operational activities in a manner to minimize environmental impact. Protection of local environments from oil spills and pollution may also be enhanced by Parties ensuring adequate fuel storage and handling, as recommended in Resolution 1 (2014). The operation of vessels in polar waters has been a major concern for Parties and in response the ATCM agreed Resolution 3 (2006) on Ballast Water Exchange and expressed their supporting for the Polar Code (Resolution 3 (2014)). Furthermore, Parties have demonstrated their commitment to international cooperation (see Resolution 3 (2012) and, in particular, their interest in developing a cooperative air transport system (Resolution 1 (2015)). Other methods to reduce human impacts, such as the use of renewable energy and the sharing of facilities, are regularly raised in ATCM discussions or other occasions and encouraged to be realised.

Motivated by the accomplishments mentioned above, and seeking to derive benefits from recent advances in modern management and technology to improve scientific performance and better fulfil our environmental commitments, this paper intends to bring to the Parties' attention an idea to better bring together all relevant requirements, recommendations and examples of best practice to promote the concept of Green Expedition.

### **Green Expedition**

Antarctic Expeditions are often composed of many participants; most of them are either scientists or personnel who are responsible for logistic support. Environment impacts are likely to be greatest during activities that involve a large number of people and often involving the use of stations, field camps, vehicles, ships, aircrafts, other logistical tools and a wide variety of scientific equipment, sometimes within a confined area. Such activities often have a high energy consumption because of the extreme conditions they encounter and may also produce comparatively large volume of wastes and emissions in areas of focussed activity. In addition, most stations are located in the rare coastal ice-free areas that host most of Antarctica's terrestrial biodiversity. Without a determined effort to manage human activities in an environmentally sound manner, potential impacts, including cumulative impacts, could be considerable. The recently adopted "Revised Guidelines for Environmental Impact Assessment in Antarctica (Resolution 1, 2016) provides a framework for Parties to ensure that best practices are considered and any potential environmental impacts are mitigated.

Green Expedition refers to the promotion of environmental-friendly activities in the Antarctic by those planning and undertaking activities. This would involve minimising impacts on the local environment by all means, including implementing the methods and guidance detailed in current Resolutions and CEP/ATCM discussions (as described above) and any new methods developed as a result of recent advances in modern management and technology. Some examples of technological innovation are listed in the Attachment A. Innovative and novel best practice examples could be widely shared among the National Antarctic Programmes, namely through COMNAP. These examples related to environmental matters could also be brought to the attention of the CEP through COMNAP or through, on a voluntary basis, any Member of the CEP.

The concept of Green Expedition is based on the ideals of efficiency, harmony and sustainability and its implementation is intended to showcase "environmentally efficient" thinking in all aspects of Antarctic activities. This paper would like to propose a Resolution, to be recommended to the ATCM for adoption, encouraging and promoting concept of 'Green Expedition'.

## Draft Resolution:

### Green Expedition in the Antarctic

#### **The Representatives,**

**Recalling** that the Protocol on Environmental Protection to the Antarctic Treaty designates Antarctica as a natural reserve “devoted to peace and science” and sets out environmental principles which provide guidance for scientific activities, as supported and prioritised both by the Antarctic Treaty and its Protocol on Environmental Protection;

**Recognizing** that achievements from scientific investigations conducted by the National Antarctic Programmes of contracting Parties, usually in the name of Antarctic Expedition, contribute greatly to the understanding of Antarctica and its role in global natural processes;

**Recognising** the legal requirements of, and the benefits that can be gained from, conducting an appropriate EIA that highlights how to improve the environmental efficiency of the activity and address cumulative impacts;

**Noting** that there are growing scientific interests and needs in Antarctica, which may result in additional research and associated logistic supporting activities and also increased pressures on local environments, and that more considerations should be given to the balance between environmental protection and scientific activities;

**Recalling** that Parties commit to protect the Antarctic environment and dependent and associated ecosystems;

**Recognizing** that the Environmental Protocol and its Annexes in force and the effective Measures which are binding tools and some current Resolutions adopted at the ATCM by consensus all together contribute to protect the Antarctic environment and CEP and ATCM work continuously to further improve this regulation in order to reach the objectives of the Antarctic Treaty and Madrid Protocol;

**Acknowledging** that environmentally-friendly activities in the Antarctic are much appreciated and encouraged; and

**Desiring to** build the concept of Green Expedition which is based on the ideals of efficiency, harmony and sustainability and aimed at taking all available methods (including those contained in the current Resolutions and new ones from the advancement of modern management and technology) to reduce human impact;

**Recommend** that their Governments:

1. Reaffirm their commitment to protect the Antarctic environment and dependent and associated ecosystems and to encourage collaborative efforts to this end;
2. Support the concept of Green Expedition by encouraging their National Antarctic Programmes to conduct science in an environmentally-friendly manner in the Antarctic;
3. Encourage their National Antarctic Programmes to work more closely with other Parties, including through participation and interaction with organisations such as SCAR and COMNAP, to develop more collaborative projects; and to promote the sharing of experiences and advanced technology; and

When new activities are planned, to produce high-quality EIAs that include as far as possible best practices to prevent and minimize environmental impact.