

Conflicts of Interest in the Use of Antarctica

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1 Introduction

1.1 Scientific Achievements

The International Geophysical Year of 1957–58 demonstrated the effective use of the Antarctic for peaceful international scientific activity, and the Antarctic Treaty of 1961 acknowledges the important contribution of science. The pre-eminent position accorded to science has been vindicated: 30 years of intensive research have shown the intimate connections and controlling influences of Antarctica on the principal environmental systems of planet Earth (climate, ocean circulation and sea level). The achievements of and challenges arising from research in Antarctica whilst representing fundamental scientific contributions also possess political and environmental dimensions:

- the discovery of the ozone “hole”. This is arguably one of the most fundamental scientific and environmental revelations of the last 50 years, which led from scientific discovery to political action, in the form of the Montreal Protocol, in only 2 years, demonstrating that science can, at times, influence rapidly the political process;
- the detection of background levels of global pollution in Antarctic snow (e.g. heavy metals, PCBs, pesticides), drawing attention to the extreme end of the transboundary pollution spectrum;
- the climate archive contained in Antarctic ice cores. Careful chemical analyses of deep cores reveal details of changes in a wide range of environmental parameters over ice age time-scales. The analysis of past atmospheric composition contained in gas bubbles (such as CO₂, H₂O₂, CH₄) has been a fundamental, if not unique, contribution to the understanding and study of climate change;
- the role and importance of the Antarctic region, especially the Southern Ocean, to global climate change and the study of the “greenhouse effect”. The Southern Ocean plays a very significant part in the carbon cycle, the

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- uptake of excess, anthropogenic, CO₂ and its behaviour is thus critical to climate predictions;
- the ice sheet contains sufficient ice to raise world sea levels by a total of 55–60m. A change in ice volume of only a fraction of a percent is sufficient to alter sea level by many centimetres over the next decades. The growing knowledge and modelling of ice sheet response to climate warming is, therefore, critical to predictions of future sea level change on a variety of time scales (decades, centuries, millennia).

1.2 Political Achievements

Issues of science have to be viewed within the overarching framework of the Antarctic Treaty which stands as one of the greatest achievements of humankind in the latter part of the twentieth century – setting aside almost one-tenth of the planet to be free of conflict, confrontation and terrorism which seem pervasive elsewhere; establishing freedoms of travel, scientific research, and exchange of personnel and data; creating an area free from nuclear explosions and nuclear dumping, and from military activities; and endorsing rights of inspection – all of which have set out the path to the gradual diminution of sovereignty (Vicuna 1986; Beeby 1991).

It would seem a paradox, therefore, that in this region of the planet already devoted to peace the subject of this chapter should focus on *conflict* in the uses of Antarctica. Conflict results from, among other factors, unacceptable change; of the result of tensions created by the alteration, too quickly or too dramatically, in the state of systems.

It is 30 years since the entry into force of the Antarctic Treaty. In that time there have been profound changes to society and politics worldwide which could not have been imagined in the late 1950s – humankind has conquered space flight, discovered DNA, black holes, quarks and quasars, learnt to harness microchip technology and created terraflop computing capacity. The political climate has gone from cold to at least warm. The map of Europe has changed irrevocably. Drought, famine, homelessness and diseases like AIDS stalk the planet and cast ever lengthening shadows. It is no wonder that even in remote Antarctica there should also be change driven by these external forces and that changes in perception of the appropriate use of Antarctica should take place. Established values have come steadily under pressure creating a nexus of tension fed by the increasingly diverse nature, demands, aspirations, perceptions, attitudes and methodologies of an expanding Antarctic community.

2 Uses of Antarctica

In recent years the diversity and number of activities in Antarctica has enlarged and become better defined (Drewry 1986), together with a range of