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Governing the Southern Ocean: The science-policy interface as thorny issue



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ABSTRACT

The Southern Ocean is a unique ecosystem with highly coveted marine resources. It includes the largest marine protected area anywhere, with management spread across national jurisdictions and a number of international bodies and cooperative arrangements. The area has local, national and international stakeholders with interests in an array of activities, such as fishing, tourism and scientific research. This article sheds light on the linkages between climate change and governance of Southern Ocean marine territories. It unravels the complexity of governing this marine region, in the process looking at biodiversity conservation, exploitation of resources and military activities. Using socio-historic analysis and ethnographic observation, it examines multiple decision-making areas, institutions, groups and actors. Issues examined in this artice include marine protected areas, fisheries management and environmental impacts of melting Antarctic ice and French subantarctic territories. These issues are viewed through the prisms of knowledge and policy – a knowledge-policy interface. Case studies highlight the interactions between human activities and climate change in Southern Ocean ecosystems. Real-world examples illustrate the governance of marine ecosystems and resources and demonstrate adaptations to environmental changes already affecting sub-Antarctic societies.

1. Introduction

Antarctica is often described as a largely pristine environment. It is one of the planet's last wildernesses with no permanent human settlements apart from a scientific presence and an emerging tourism. The environment of the polar continent makes it especially appealing for scientists. Indeed, the Protocol on Environmental Protection to the Antarctic Treaty signed in Madrid in 1991 has designated Antarctica as a "natural reserve, devoted to peace and science" (art.2). While the Protocol accords "priority to scientific research" (art.3.3), it is possible to organize other activities, such as fishing, tourism and non-governmental activities. The "key selling points of Antarctica and other remote areas are their pristine wilderness, unique and undisturbed wildlife, and dramatic landscapes" (Haase et al., 2009). While Antarctica is often thought of as an environment little affected by human disturbance, the area is no longer as pristine as it used to be due. Some examples can be given: the over exploitation of some marine species, anthropogenic climate change, alien species pressure, local production and the longdistance transportation of pollutants and their very slow degradation in polar conditions (Znój et al., 2017). Moreover, as elsewhere in the world, natural sciences researchers have shown that this area has been altered by climate change. Regional warming and ocean acidification have, for example, led to immediate conservation threats to some species, ecosystems and resources in Antarctica (Chown et al., 2012). While reasonably broad estimates can be made as to "how quantities such as temperature, precipitation, acidification of the ocean and sea ice extent might change", the situation is not quite so clear-cut when it comes to the reactions of Antarctica's large ice sheets (Turner and Barrand, 2014). Environmental changes will also have consequences for logistics, mainly regarding access and operations in the area (Liggett et al., 2017). Compared to other regions, however, the significance and diversity of human activities in Antarctica is minimal.

There is large heterogeneity in terms of the actors and targets in this domain, and, at the very least, minimal cooperation between the actors

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is essential. The Scientific Committee on Antarctic Research (SCAR), which is an inter-disciplinary committee of the International Council for Science, has recognized the Antarctic Treaty System and thus the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) (Canberra, 1980) as "international initiatives and organizations". Indeed, they limit the exploitation of natural resources, industry and fishing and their resulting anthropogenic impacts. SCAR recognizes that the main direct influences on Antarctica are "likely to come from global climate change in the mid to long term" (Turner and Bindschadler, 2009).

Antarctica is recognized for its environmental singularity and renowned for its governance arrangements. The remoteness of Antarctica in relation to centres of human activity has contributed to the development of a specific governance system for the region, which is based on the Antarctic Treaty (Antarctic Treaty, 1959). The Southern Ocean, characterized by the presence of Antarctica with its unique international status, is directly faced with global change. This article tries to explain how the governance of this specific socio-ecosystem and its highly coveted marine resources is implemented through different mechanisms with different stakeholders involved at different levels. This normative vision from a legal and sociological point of view raises the question of the social construction of the sui generis so-called "governance" of Antarctica. In the context of climate change impacting Antarctica, how does the decision-making process take place, and which actors take part in or are excluded from this process? In relation to the announcement of a "planetary governance", which derives from the concept of "planetary common goods" (that is, goods not subject to the sole sovereignty of any nation (Buck, 1998; Ostrom, 1990; Ostrom, 2010), the construction of the boundaries of planetary common goods like Antarctica involves processes of inclusion and exclusion at the definition stage and results in the creation of international associations that raise equity issues on a global scale (Pflieger, 2014). How then are science and the decisions taken linked in this decision-making process concerning the "governance" of the Antarctica region? In responding to this question, we will be contributing to the literature on the socioecological system model. There has been very little research conducted on the science/policy interface in this domain, particularly in regarding to climate change adaptation governance (Vink et al., 2013), and the role and mechanism of power needs to be more broadly investigated (Olsson et al., 2014). Antarctic activities pose a "unique governance challenge" since the region is "not controlled by any single sovereign State" (Student et al., 2016). Operationally, the Antarctic Treaty System (ATS) has established an exceptional collective responsibility whereby any issue arising in Antarctica is the responsibility of the Antarctic Treaty Consultative Parties (ATCP). The aim of this paper is to explain how Antarctica is governed, or managed, at the science/policy interface. This international cooperation on Antarctica benefits both humankind and environmental protection.

2. Cooperation for the benefit of humankind

Nearly 60 years after it was signed, the Antarctic Treaty "remains the cornerstone of Antarctic governance" (Dodds, 2010). This international cooperation for the benefit of humankind was developed following the recognition of the region as a territorial exception, and it contributes to a collective responsibility for the management of Antarctica.

2.1. The recognition of a territorial exception

The acquisition of "ownerless territories" has been the goal of many maritime expeditions to distant lands. In all, seven States have seen, in the discovery of Antarctica, a means of asserting their sovereignty away from their metropolitan territory (Argentina, Australia, Chile, France, New Zealand, Norway, United Kingdom) (Dupuy, 1958). They have based their territorial claims on an assortment of arguments, such as discovery, geographic proximity and acts of sovereignty. The assertion of sovereignty rights over part of the Southern continent is fraught with consequences because of risks of jurisdiction conflicts. Not only the claims have not been globally recognized, but there is an overlapping of the claims of Argentina, Chile and the United Kingdom and Marie Byrd Land (between 90 °W and 150 °W) has not been claimed.

The scientific value of Antarctica has led States to cooperate. Researchers quickly realized the importance of combining Antarctica with peaceful purposes and international cooperation, and their initiative resulted in the third International Geophysical Year (IGY) (1957-1958), creating "uncommon collaborations and unprecedented results" (Belanger, 2004). The accomplishment of numerous scientific programmes during the IGY "facilitated the resolution of long-standing sovereignty disputes in the signing of the Antarctic Treaty" (Powell, 2008) in 1959 by the claimant States and five other States (Belgium, Japan, South Africa, the Soviet Union and the United States). A "status quo concept" (Hayton, 1960) was established in article IV of the Treaty, which recognizes all positions. This clause, "which is intended to preserve the conflicting interests of claimant states, potential claimants, and non-claimants" (Triggs, 1985) is "critical to the success of the Antarctic legal regime". Human activities are "collectively governed" by the Antarctic Member States and the ATS (Lamers et al., 2012).

The ATS area covers the region "south of 60 "South Latitude" (art. 6 of Antarctic Treaty, 1959), with the exception of the CCAMLR. The expansion of krill harvesting in the mid-1970s has shown how important conservation is for the maintenance of Antarctic marine life (Parkes, 2000). The food chain means that birds, marine mammals and fish are all highly dependent on krill. Through collaboration, scientists have convinced States to delimit the CCAMLR through Antarctic Convergence (art.1.4 of the Convention on the conservation of Antarctic Marine living resources, 1980). The whole Southern Ocean area surrounding the continent of Antarctica is covered. As such, it concerns some islands that are subject to sovereignty (for example, the Bouvet island is a dependency of Norway and the Crozet and Kerguelen islands are French territories). A statement by the Chairman of the Conference, appended to the Final Act of the Conference, sets out a system that functions by exception for "the waters adjacent to Kerguelen and Crozet over which France has jurisdiction and to waters adjacent to other islands within the area to which this Convention applies over which the existence of State sovereignty is recognized by all Contracting Parties". Such a regime reduces the scope of the ecosystem approach by creating exemptions in the implementation of conservation measures (Cordonnery, 1998).

Divergent interests always create a challenge for long-term planning cooperation. Hence, "convinced that the establishment of a firm foundation for the continuation and development of such cooperation on the basis of freedom of scientific investigation in Antarctica as applied during the International Geophysical Year accords with the interests of science and the progress of all mankind" (Antarctic Treaty preamble), the Antarctic Treaty has established a collective responsibility for Antarctic management.

2.2. Collective responsibility for antarctic management

The ATCP have taken "collective responsibility for Antarctic arrangements" (Hemmings, 2016) based on the "interest of all mankind". In the Preamble to the Antarctic Treaty, it is recognized "that it is in the interest of all mankind that Antarctica shall continue forever to be used exclusively for peaceful purposes". According to the ATS documents, "the ATCP had and continue to have a collective ambition to manage Antarctica" in the interests of all humankind (Bastmeijer and Tin, 2014). On the 50th anniversary of the Antarctic Treaty, the ATCP pledged "to continue and extend for the benefit of all humankind their cooperation established in the Treaty" (ATCM XXXII Washington Ministerial Declaration, 2009), and other member States were "urged to" adhere to the Madrid Protocol (Beck, 2017). Download English Version:

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