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Ecosystem services and Antarctica: The time has come?

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ABSTRACT

Antarctica's status as a unparalleled place of international scientific collaboration was entrenched in the Antarctic Treaty 1959, and its designation as a "natural reserve, devoted to peace and science" formally referenced in the Protocol on Environmental Protection to the Antarctic Treaty (PEPAT) 1991 (PEPAT 1991, Article 2). The continent's importance for maintenance of the global ecosphere has more recently been confirmed by the Intergovernmental Panel on Climate Change (Anisimov et al., 2007). However, the expanded scale and scope of commercial tourism in Antarctica over the last quarter century raises issues about whether the laissez-faire approach to tourism management that has been taken under the auspices of Antarctic Treaty System (ATS) governance is sufficient to protect the Antarctic environment and its "wilderness" values from the negative impacts of tourism (PEPAT, Article 3(1)). This is an subject that has occupied a number of the Antarctic Treaty Consultative Parties (ATCPs), who form the decision-making group within the ATS, and resulted in a recent question by The Netherlands to fellow ATCPs as to whether "a system of obligatory or voluntary payments by individual tourists or tourist organizations (as a payment for 'ecosystem services')?" should be established within the ATS (The Netherlands, ATCM XI, 2012).

This paper considers the Dutch question about payment for ecosystem services in Antarctica as a potential tourism regulatory tool. It also examines the legal and related political issues that a proposal for introduction of ecosystem services would generate in an area of the earth which, de facto, is treated as an international commons, but is also the site of continuing contestation and challenge over abeyant claims to sovereignty by seven states within the ATCP group. Issues canvassed in this context include: the different political-philosophical approaches to tourism and the environment evinced by the ATCPs; the limited number of states signatory to the Treaty and the increase in non-state actor activity in the Southern Ocean and Antarctic waters, and concomitant difficulties of monitoring and compliance in a geographically expansive and remote area of the earth; and the potential of ecosystem services in Antarctica to help realise some of the United Nations' post-2015 Sustainable Development Goals.

1. Introduction

In 2017 the Antarctic Treaty entered its forty-fifth year as the convention that initiated multilateral governance in the seventh largest continent and simultaneously established the world's first nuclear-free zone. Fifty-three countries are now States Parties to the Antarctic Treaty, a more than four hundred percent increase since its creation in 1959 and one that indicates the growing interest in the natural resources and biodiversity of the continent, recognition of the importance of Antarctica in the biosphere, and the changing geopolitics of the southern polar region (ATS Secretariat, n.d.).

The growth in Antarctic Treaty signatories is mirrored in an increase in Antarctic tourism numbers that has occurred over the last three decades. The expansion of tourism in the continent has aroused concern about the long-term sustainability of tourism in Antarctica, and the impacts of tourism on one of the most fragile and pristine environments left on earth (Tin et al., 2014; Shaw et al., 2014; Frenot et al., 2005; Hughes et al., 2011). However, the governing group of states within the Antarctic Treaty System (ATS), the twenty-nine Antarctic Treaty Consultative Parties (ATCP), has not been able to agree upon a collective approach to tourism management and there remain significant philosophical differences between them about how

Abbreviations: ATCM, Antarctic Treaty Consultative Meeting; ATCPs, Antarctic Treaty Consultative Parties; ATS, Antarctic Treaty System; CCAMLR, Convention on the Conservation of Antarctic Marine Living Resources; CEP, Committee for Environmental Protection; CRAMRA, Convention on the Regulation of Antarctic Mineral Resource Activities; EIA, Environmental Impact Assessments; EU, European Union; IAATO, International Association of Antarctica Tour Operators; IGY, International Geophysical Year; NAP, National Antarctic Programmes; PEPAT, Protocol on Environmental Protection to the Antarctic Treaty; PES, Payment for Ecosystem Services; SCAR, Scientific Committee on Antarctic Research; SDG, Sustainable Development Goals

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tourism in Antarctica should be handled (Bastmeijer and Lamers, 2012).

A Payment for Ecosystem Services (PES) approach to tourism management was suggested by The Netherlands in 2012 at the annual Antarctic Treaty Consultative Meeting (ATCM) as an option for their fellow Consultative Parties to consider (Netherlands, 2012a). PES denotes “market incentives for the provision of public goods within the field of environmental and resource issues” (Derissen and Latacz-Lohmann, 2013). Nsoh and Reid (2013) describe PES as

a mechanism whereby payments are provided in exchange for the management of land to maintain or enhance the health of the ecosystem, thereby providing benefits for the public or specific beneficiaries, eg carbon storage or control of water resources. Such payments can take the form of flat-rate subsidies or individually negotiated contracts to ensure that greater effectiveness can be achieved.

PES need not be confined to land management, though. Salzman (2009) notes that PES

refers to voluntary transactions where a service provider is paid by or on behalf of service beneficiaries for land, coastal, or marine management practices that are expected to result in continued or improved service provision.¹

PES has gained popularity as an approach to conservation over the last two decades, particularly since its use in the United Nations Millennium Ecosystem Assessment (UNEP, 2005), and been described as “probably the most promising innovation in conservation since Rio 1992” (Wunder and Wertz-Kanunnikoff, 2009, quoted in Schomers and Matzdorf, 2013). As Costanza et al. (1997) note, “[b]ecause ecosystem services are not fully ‘captured’ in commercial markets or adequately quantified in terms comparable with economic services and manufactured capital, they are often given too little weight in policy decisions.” PES attempts to remedy the commercial market problem by focusing on the idea that ecosystem services have distinct value for users, and that these positive externalities can be applied in a market framework using a “Beneficiary Pays Principle” or “Provider Gets Principle” (Van Hecken and Bastiaensen, 2010). PES has been used by a variety of states, such as Nicaragua, Bolivia, Costa Rica, Mexico, Australia, and the United States, who have applied PES within their own countries or in combination with others in regional programmes (Schomers and Matzdorf, 2013).

PES is a potentially attractive tourism management tool for Antarctica because it could address multiple issues that challenge ATS governance in this policy area. Firstly, it uses a holistic, ecosystem approach to engage with environmental conservation that is consistent with approaches already used within the ATS regime, such as the Convention on the Conservation of Antarctic Marine Living Resources (Fabra and Gascon, 2008). Secondly, the introduction of PES would acknowledge the multiple benefits that Antarctic ecosystem services and ongoing Antarctic conservation efforts provide for commercial tourism and establish a mechanism for payment of use rights by the commercial tourism industry to the governance group of the ATS, the Consultative Parties. This would generate an additional revenue stream for environmental conservation in Antarctica that could reduce the current dependence on the Consultative Parties to provide the monies for conservation activities in the continent. Thirdly, PES could serve as a cohering focus for an ATS tourism management policy in Antarctica,

something that is currently lacking and dangerously overdue in a policy area that is critically important for Antarctica's future as a “natural reserve” (Protocol on Environmental Protection to the Antarctic Treaty (PEPAT), 1991) and status as a “climate change barometer” (Wehrmann, 2016). Finally, this article suggests that PES could be introduced in Antarctic tourism management without jeopardising the abeyant Antarctic sovereignty claims of the United Kingdom, Argentina, Chile, New Zealand, Australia, Norway and France, a critical consideration for any policy innovation in Antarctica. An additional factor, not specific to Antarctic tourism management but with international relevance, is that the introduction of PES in Antarctic tourism management would be an important step towards beginning a global conversation about the use of PES in the conservation and management of protected spaces around the world under the governance of more than two states.²

Despite these incentives, achieving the introduction of PES in Antarctic tourism management would not be unproblematic. Should the governing group decide to endorse use of a PES tool in Antarctic tourism, it would represent a fundamental change in how southern polar tourism management is both conceptualised and operationalized. Even beyond the consequences for tourism, though, the espousal of PES in tourism management would signal a shift in the nature of environmental governance in Antarctica itself. Given the unique nature of the legal and political arrangements for Antarctica, realising a PES approach to tourism in the area covered by the Antarctic Treaty (south of 60° South latitude (Antarctic Treaty, 1959)) would present a considerable challenge for the Consultative Parties because it would involve grappling with issues, both small and large, fundamental to the political and legal dimensions of sovereignty in the continent, and require addressing politically sensitive issues and ideas that the ATS leadership group have, thus far, been loath to engage with.

Despite these formidable obstacles, the use of a PES policy tool in Antarctic tourism management would appear to be a good fit conceptually for a remote, polar area that is formally designated a “natural reserve” with “aesthetic and wilderness values” (PEPAT, 1991), contains multiple protected sites, and is extremely sensitive to anthropogenic impacts, but which is also increasingly accessible and vulnerable to tourist incursion, governed through a condominium framework whose political arrangements preclude swift decision-making, and within the parameters of legal instruments that contain inherent tensions between science and commerce. To the extent that PES represents a regulatory instrument containing elements of both capitalism and ecologism,³ it would seem an appropriate tool for inclusion in an integrated Antarctic tourism management policy. The notion of a natural estate common to humankind whose untrammelled functioning is essential to life on earth resonates with green philosophical thought that recognizes a fundamental, interdependent relationship between humans and the environment, and is also captured in human rights scholarship that acknowledges human rights are ecologically embedded (Barry and Woods, 2013). While the idea of the continent being subject to quantification of its ‘value’ across different ecosystem service dimensions – such an exercise being a necessary prerequisite to introducing PES in Antarctic tourism management – would be anathema for ecological purists, it is worth remembering that since first contact Antarctica has existed within a capitalist paradigm that venerates profit, and that human activities in and around the continent have until recently been motivated almost solely by the profits to be made from commodification of its resources. PES moves

¹ The Global Environment Facility (the funder of the Millennium Ecosystem Assessment) notes that the wide variation in PES definitions “from narrow market-based definitions with direct transactions between providers and beneficiaries (including schemes where private buyers and sellers arrange voluntary and conditional transactions for the delivery of ecosystem services), to broader schemes in which those who benefit directly from the ecosystem service pay (usually indirectly) those who provide the services” (Global Environment Facility, n.d.).

² PES in Antarctic tourism management may, for instance, have relevance for Large Marine Ecosystems such as the Benguela Current which, under the Benguela Current Convention of 2013, is managed through the condominium governance of South Africa, Namibia and Angola.

³ Albeit an ecologism which is somewhere between Naess’ (2005) definitions of “shallow ecology” and “deep ecology”. Perhaps the closest approximation is the “bright green” ecologism described by Robertson (2008).

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