The Protocol on Environmental Protection to the Antarctic Treaty: A Ten-Year Review

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Introduction

Ten years have passed since the Protocol on Environmental Protection to the Antarctic Treaty (Protocol) was adopted.[1] What impact has the Protocol made since then? Has it proved a successful response to the problems for which it was negotiated? Has it been fully implemented? Such questions suggest the need to review and assess the Protocol's performance over the past decade.[2]

Although the Protocol is now legally in force, a review of it solely as an environmental law treaty would enable only a partial assessment of its impact over the past ten years. In the brief review that follows, the Protocol will be looked upon from several angles. As an international environmental law instrument, the Protocol was adopted to supplement the Antarctic Treaty and to minimize the environmental impact of human activities in the Antarctic. From a political perspective, however, its negotiation and adoption aimed primarily to solve a major crisis which enveloped the Antarctic Treaty system (ATS) at the end of 1980s.

The Protocol and Crisis Solving: A Political Perspective

The specific situation of the Antarctic in international affairs provides the context for any international instrument adopted as a component of the ATS, the main elements of which are rooted in an unresolved issue over sovereignty. In the first half of the twentieth century, seven states—Argentina, Australia, Chile, France, New Zealand, Norway, and the United Kingdom—put forward territorial claims to parts of the Antarctic. None of these claims has ever received general recognition. In 1959, all the seven claimant countries and the other five original signatories to the Antarctic Treaty (Belgium, Japan, South Africa, the Soviet Union, and the United States) agreed to put aside their competing positions on territorial claims in the Treaty area and achieved an 'agreement to disagree' on the sovereignty issue (Article IV), for the sake of establishing a unique form of international governance for the Antarctic.[3] This has developed into the 'Antarctic Treaty System', a regional network of international instruments and decision-making structures for Antarctic affairs.[4] The essential requirement in the development of the ATS was to build it through various co-operatively agreed ways in order not to prejudice the position of any country claiming sovereignty in the Antarctic or that of countries not recognizing the claims.[5] The annual Antarctic Treaty Consultative Meeting (ATCM) is the main policy-making body that regulates the entire spectrum of human activities in the Antarctic. The Antarctic Treaty Consultative Parties have decision-making capacity in this forum, the main mode of operation being the adoption of decisions by *consensus*.

In this manner, while the 1959 Antarctic Treaty did not contain any elaborated provisions concerning environmental protection,[6] the Consultative Parties have developed a long-standing record of issue-specific approaches to this question. These were introduced to the ATS first through a large number of recommendations adopted at the Consultative Meetings and later through international conventions.[7] The negotiation of the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA)[8] between 1982 and 1988 was a continuation of issue-specific and preventive approaches to Antarctic environmental protection.

Concurrently, several types of 'external pressure' were being exerted on the ATS. As of 1983, a debate on the 'Question of Antarctica' was initiated by several developing countries in the UN General Assembly. The ATS was criticized as an exclusive club of wealthy states that were negotiating matters with global implications among themselves—the Antarctic minerals issue being the prime example. Soon afterwards, various environmental NGOs picked up the critique of the ATS from the perspective of demanding higher environmental consciousness in decisions regarding Antarctic affairs. These demands concurred at a later stage with those of the domestic public in several Consultative Parties.

In June 1988 the Consultative Parties adopted CRAMRA, and the Convention was opened for signature in November of the same year. Shortly afterwards the

'CRAMRA crisis' shook the ATS: in the spring of 1989 Australia and France announced that they would not sign CRAMRA, and thereafter New Zealand, which had already signed the Convention, declined to ratify it. It thus became clear that CRAMRA had no prospects of entering into force.[9] Instead of proceeding with the signing or ratification of CRAMRA, several countries proposed the negotiation of a new instrument that would ban mineral-related activity and introduce a comprehensive environmental protection system in the Antarctic. Following a decision of the fifteenth ATCM, held in Paris in autumn 1989,[10] a Special Consultative Meeting was convened in 1990 to negotiate a new environmental protection instrument. The negotiations were conducted expeditiously, and in less than a year a new legal instrument—the Protocol on Environmental Protection to the Antarctic Treaty—was adopted.

The Consultative Parties' new start after the abandonment of CRAMRA in 1989 can *not* be attributed to CRAMRA's containing insufficient environmental safeguards. These were in fact very stringent.[11] The 'fault' of CRAMRA may rather have been the failure of the Parties to give it proper marketing as an environmental protection instrument, which should have begun already with the choice of title given to that convention. It was a complex combination of economic and political factors that led the Consultative Parties to abandon CRAMRA. Aside from the awareness that, for the foreseeable future, any mineral activities in the Antarctic would lack commercial significance, the major factors included the following: (1) fears that CRAMRA would disturb the sensitive balance on sovereignty positions in the Antarctic; (2) the political-ideological critique of the ATS from a group of developing countries in the UN General Assembly; (3) pressures from environmental NGOs; and (4) domestic policy considerations which related to some of the above factors.

Although the Consultative Parties may have appeared to be urgently negotiating and adopting the Protocol in their zeal to prevent and respond to threats to the Antarctic environment, they were primarily reacting to two sets of acute *political* problems. The first was the challenge to the Consultative Parties' legitimacy of governing the Antarctic from actors external to the ATS. The second and equally important problem was the struggle to maintain internal cohesion and balance within the ATS, especially with regard to the sovereignty issue. Although in themselves not always directly or exclusively related to environmental protection, these incentives were substantial and prompted the Parties to agree expeditiously on issues relating to human activities and environmental protection in the Antarctic.

Article 7 of the Protocol was crucial in this respect. This Article states unambiguously that 'any activity relating to mineral resources, other than scientific research, shall be prohibited'. This single provision is basically a response to the many criticisms voiced against CRAMRA. Firstly, the Article rendered the sovereignty issue redundant, insofar as a 'delimitation' in relation to mineral rights was no longer required. Secondly, it neutralized the criticism from a group of developing countries, which, since 1989, had been demanding in the UN General Assembly that a ban on mineral activities be introduced in the Antarctic. Thirdly, the provision allowed the Consultative Parties to present themselves as environmentally highly conscious, more so in the Antarctic than anywhere else on the globe. The provision thereby satisfied many of the demands for which environmental NGOs had campaigned. This latter point was instrumental for several of the Consultative Parties in dealing with domestic policy concerns.

In adopting the Protocol, the Consultative Parties endorsed a legally binding instrument, but the incentives for doing this so quickly were inspired primarily by political rather than environmental protection reasons. The Environmental Protocol was, in a political sense, effective immediately upon adoption, and as such it has continued to be a success. For instance, after consensus resolution was adopted at the 1994 General Assembly session that expressly acknowledged the merits of the ATS in the governance of Antarctic affairs,[12] this acknowledgement was reiterated and strengthened by the UN General Assembly resolutions on the 'Question of Antarctica' adopted at the 1996 and 1999 Assembly sessions.[13] The 'Question of Antarctica', once a serious challenge to the legitimacy of the ATS, now remains a triennial formality that repetitively confirms the merits of the ATS.

It is here that the lasting impact of the Protocol is apparent. Indeed, as explained above, the Protocol has in many ways been greatly instrumental in strengthening international co-operation within the ATS as well as in changing the broader international community's perception about the ATS. However, with the Protocol in force and the changed political context relating to Antarctic affairs, the impending challenge remains the implementation of the Protocol as an *environmental* protection treaty.

In the remainder of this article the Protocol will be briefly reviewed first from a legal perspective, then from an environmental management perspective, and finally from the perspective that there persists an unfinished agenda for the Protocol. It is not the purpose of this article to enter into any extensive analysis or description of the provisions of the Protocol; these are available elsewhere.[14] What will be provided here is a concise review of the basic proclaimed objective of the Protocol—'the comprehensive protection of the Antarctic environment and dependent and associ-

ated ecosystems'[15] —in a ten-year retrospective. The review will also highlight some aspects of the Protocol that, while perhaps of less interest at the time of its adoption, need to be more carefully considered in the current phase of implementation.

The Protocol on Paper: A Legal Perspective

The content of the Protocol's provisions, by and large, did not result from new writing. To a great extent, the Protocol and its Annexes evolved from a 'cut and paste' operation. Many provisions in the Annexes were extrapolated from earlier recommendations.[16] Even some of the Protocol's basic environmental principles were drawn from CRAMRA—the very instrument that the Protocol has superseded.[17]

While the Protocol brought little fresh regulation to the ATS, it did introduce several new elements. Firstly, the Protocol approached the protection of the Antarctic environment in a *comprehensive* rather than in the issue-specific manner that has characterised earlier ATS instruments. Secondly, the Protocol 'codified' the existing recommendations into a *legally binding* instrument. And thirdly, the Protocol provided for the establishment of a *new institution* within the ATS, the Committee for Environmental Protection (CEP).

The legal form used—a protocol to the Treaty rather than a free-standing convention—was innovative for the ATS. The choice of this form resulted in a framework document accompanied by more flexible annexes. The latter are subject to a fast-track amendment mechanism that can enable timely responses to changing environmental conditions and demands.

The legal position of the Protocol in the overall ATS has, in itself, also been an innovation. The Protocol *supplements* the Antarctic Treaty and neither modifies nor amends the Treaty (Article 4(1)). As to the Annexes, Article 9(1) states that 'Annexes to this Protocol shall form an integral part thereof'. Annexes I–IV, which were adopted in the 'Protocol package' in Madrid on 4 October 1991, became effective simultaneously with the entry into force of the Protocol. These four Annexes relate, respectively, to environmental impact assessment, conservation of Antarctic fauna and flora, waste disposal and waste management, and prevention of marine pollution. Annex V, on 'Area Protection and Area Management', however, was embodied in Recommendation XVI–10, adopted at the sixteenth ATCM in Bonn, only some weeks after the adoption of the Protocol, and thus required a separate procedure for becoming effective. After more than a decade since its adoption, Annex V has yet to become effective.[18]

The Protocol addressed environmental protection through two essentially different approaches: the blanket *prohibition* of mining—the one activity regulated under CRAMRA—and the detailed *regulation* of other activities in the Antarctic.[19] The Protocol may thus be seen as consisting of two main 'units', determined by the type of activity in the Antarctic. Mineral activities gave rise to one unit, which is contained in Articles 7 and 25(5): an indefinite prohibition of any such activities (except scientific research).[20] This may be regarded as an entirely new approach, the direct opposite of the approach taken under CRAMRA. However, it can also be argued that no substantial difference was introduced by the Protocol's mining ban. Under CRAMRA, a consensus of Parties was required to start a mining operation; the same would suffice to revise the Protocol's mining ban.

The second main 'unit' of the Protocol concerns the *regulation* of other human activities. This unit comprises all the remaining provisions of the Protocol and its Annexes and thus creates an environmental protection regime for the Antarctic. In this regard, Article 3(1) of the Protocol formulates environmental principles and, *inter alia*, states:

> The protection of the Antarctic environment and dependent and associated ecosystems and the intrinsic value of Antarctica, including its wilderness and aesthetic values and its value as an area for the conduct of scientific research, in particular research essential to understanding the global environment, shall be fundamental considerations in the planning and conduct of all activities in the Antarctic Treaty area.

For activities *not* prohibited in the Antarctic, with the exception of those undertaken pursuant to CCAMLR or the Seals Convention,[21] the Protocol requires an environmental impact assessment (EIA) at the planning stage; an EIA is required if the activity is determined to have at least a 'minor or transitory impact' on the Antarctic environment or on dependent and associated ecosystems.[22] We will return to those requirements when reviewing the Protocol in its practical operation as an environmental management tool.

Even the basic provisions of the Protocol have given rise to legal dilemmas. For example, it is unclear which *activities* are covered by the Protocol, since it variously refers to 'all activities' and, in many places, just to 'activities', while in Articles 3(4), 8(2) and 15(1)(a) the Protocol defines which activities it addresses more specifically by relating to activities pursuant to Article VII(5) of the Antarctic Treaty. Domestic implementing legislation reveals different understandings by the Parties with regard to the scope of activities covered by the Protocol.

The legal status of the Protocol as a 'supplement to the Antarctic Treaty' (Article 4), on the one hand, and its proclaimed role as an instrument for the 'comprehensive protection of the Antarctic environment and dependent and

associated ecosystems' (Article 2), on the other, give rise to some inherent fundamental contradictions. An unambiguous determination of the *area of application* of the Protocol as an environmental protection instrument is hampered by the fact that the Protocol lacks any specific provision as to its territorial scope. On the one hand, this apparent omission would seem to be attributed to the fact that the Protocol is meant to be a supplement to the Antarctic Treaty. Thus, in the absence of any provision to the contrary, its area of application should be understood as identical to that of the Antarctic Treaty, i.e., south of 60°S.[23] Moreover, the essence of the Protocol lies in Article 3, which encompasses 'activities in the *Antarctic Treaty area*'[24]. The Protocol uses the formulation 'Antarctic Treaty area' throughout the text of its provisions. Indeed, since the adoption of the Protocol, the Consultative Parties have declared at several of their gatherings (both formal and informal) that they agree that the area of application of the Protocol is the same as that of the Antarctic Treaty.

On the other hand, confining the Protocol to a geographic limit that seems inadequate in the context of its environmental protection provisions may be seen as contrary to the main (proclaimed) purpose of the instrument.[25] Article 3 demonstrates the contradiction of the Protocol in being limited to 'activities in the Antarctic Treaty area', but at the same time this Article relies on the concept of the 'protection of the Antarctic environment and dependent and associated ecosystems'. The ecosystems being referred to are assumed to be linked to the biological (not the political) boundaries of the Antarctic. However, discussions among the Parties, especially relating to the liability regime, have failed to show any common understanding of the meaning of this term.

Moreover, it has been questioned whether all the provisions of the Protocol should be understood to apply to the *entire* area south of 60°S. The difference between the two main aspects of the Protocol—one prohibitory (Article 7) and the other regulatory—becomes apparent here. For example, does the mining ban contained in Article 7 apply to the portion of the 'seabed beyond the limits of national jurisdiction', which under the letter of the 1982 UN Convention on the Law of the Sea could be regarded as the international seabed area and, as such, would fall under the competence of the International Seabed Authority? Views expressed by several Consultative Parties thus far, as well as their domestic legislation for implementing the Protocol, provide different responses to this question.[26] A further question is whether the Protocol applies to the continental shelf off Antarctica but south of 60°S, or whether it applies to the Antarctic continental shelf that extends even north of 60°S.[27] These considerations may have important implications for possible mineral activities on the continental shelf.[28]

As the above discussion shows, legal dilemmas and some major contradictions encumber the Protocol.[29] However, in spite of this the Protocol has strengthened the *legal* regime for protecting the Antarctic environment by providing a comprehensive instead of an issue-specific approach. Not only is this comprehensive approach contained in a legally binding instrument, but it is also equipped with a new advisory institution, the CEP. The question now is whether this overall legal strengthening, in conjunction with the individual provisions of the Protocol, has made an impact on the improved environmental protection and management practices in, and regarding, the Antarctic.

The Protocol in Practice: An Environmental Management Perspective

The Environmental Protocol is indeed one of the most stringent international agreements to date. It was, however, only shortly before entry into force of the Protocol that the Consultative Parties began enquiring as to the actual state of the environment that the Protocol was intended to protect. Postponements rather than haste characterized the process of producing a 'State of the Antarctic Environment' assessment, the need for which was not expressed before the 1996 ATCM.[30] Incidentally, the time used for discussions alone on how to structure a future 'State of the Antarctic Environment' assessment far exceeded the time used to negotiate and adopt the Protocol itself.

Overall, however, no 'State of the Antarctic Environment' assessment is needed for a general conclusion that, by any normal standard, the Antarctic environment is remarkably clean. The perception of the Antarctic as being in imminent environmental danger prior to the negotiation of the Protocol was misleading. This has been confirmed by a recent regional report for the Ross Sea region.[31] Human activities in the Antarctic, though gradually increasing, remain very limited in number and scope, and those to which the Protocol applies in reality are restricted mainly to scientific research, to related logistics for maintenance of scientific bases and transport, and to the relatively small amount of Antarctic tourism.[32] This is not to deny possible local environmental impacts from activities in the Antarctic.[33] However, activities to which the Protocol does apply present far less of a threat to the Antarctic environment than those originating outside the region—to which the Protocol does not apply and which require action at either global or national level, or both.

When an accident occurs in the Antarctic, it is likely to attract considerable publicity, far more than an accident

of similar magnitude in most other places in the world. A significant aspect of the Antarctic in environmental debate is as a *symbol* of one of the last surviving wilderness areas on the planet.[34] Because of this symbolic role, as observed earlier, 'human activities in the Antarctic are evaluated not only by the actual pressure exerted on the environment but also by the attitude demonstrated.'[35] An important feature of Antarctic environmental protection is the recognition by those involved that this unique and special environment must be preserved.

Thus, the real test for assessing the impact of the Protocol as an international regime lies not necessarily in the direct evaluation of the change in the state of the Antarctic environment, but rather in an evaluation of the *behaviour* that can contribute to the main proclaimed objective of the Protocol. Has the Protocol led to any change in this respect? At the outset, the answer is affirmative—despite the Protocol having been negotiated in haste and with an imminent political agenda, and thus being hampered by some important contradictions. Several aspects of the Protocol, and the political will of the Parties to implement them, are directly responsible for the practical impact on improved environmental management in the Antarctic.

Increased Domestic Awareness

The legally binding nature of the Protocol requires that each Party 'take appropriate measures within its competence, including the adoption of laws and regulations, administrative actions and enforcement measures, to insure compliance'.[36] Even before the entry into force of the Protocol, the Consultative Parties began elaborating and adopting their domestic implementing legislation. Already at the adoption of the Protocol, the Parties agreed that, pending its entry into force, it was desirable to apply Annexes I–IV, 'in accordance with their legal systems and to the extent practicable'.[37] This indication of political will to implement elements of the Protocol voluntarily has been followed up through an information exchange at a series of ATCMs, commencing with the Venice Meeting in 1992. All this has resulted in the increased awareness, from both domestic agencies and operators, of environmental considerations when planning Antarctic operations. Moreover, the codification into national laws of considerations that were earlier scattered in a number of recommendations and other instruments has provided more clearly defined requirements and legal obligations for the conduct of Antarctic operations.

The CEP and Increased Transparency

The establishment of a new institution under the Protocol, the Committee for Environmental Protection, has been instrumental in increasing transparency at the ATS level of what are otherwise discretionary national implementation practices. The CEP, to which each Protocol party is a member, is established as a technical body with the purpose of providing advice and formulating recommendations to the Parties in matters relating to the implementation of the Protocol; the advice is then further considered by the decision-making body, the ATCM.[38] The Parties have the obligation of reporting annually on the steps taken to implement the Protocol (Article 17); these reports are circulated to all the other Parties, presented at the CEP, considered at the ATCM, and then made publicly available. The CEP plays the key role in annually cross-checking domestic implementation.[39]

Strictly legally, this annual reporting had to await the entry into force of the Protocol and the establishment of the CEP. But the political will of the Parties to implement aspects of the Protocol ahead of its entry into force should also be noted here. As early as the 1992 ATCM, an initiative was given to set up an informal discussion group to review the implementation of the Protocol.[40] At the next meeting, in 1994, the Parties agreed that a Transitional Environmental Working Group (TEWG) be established that would be operative from the ATCM in Seoul in 1995. The TEWG would deal with items which, following the entry into force of the Protocol, would be handled by the CEP.[41] The TEWG operated through the 1997 ATCM.

Following the establishment of the CEP in 1998, the record of annual reporting over the past four meetings has gradually improved. The format of the reports has also been under scrutiny, hence a proposal at the 1999 ATCM to develop a standard for annual reports.

Inspection of Environmental Practices

The Protocol contributed to inspections under Article VII of the Antarctic Treaty, placing more emphasis on environmental practices than before. Under the Protocol, an element of those inspections is now directly related to the promotion of environmental protection in the Antarctic (Article 14(1)). This increases mutual control among the Parties with regard to their environmental management practices in conducting operations in the Antarctic. Inspection reports are first sent to the inspected Parties, who are given the opportunity to comment; the reports are then circulated (with any comments made on them by the inspected Parties), following a procedure similar to that for the annual reports by Parties under Article 17.

Interpreting 'minor or transitory impact'

The Protocol requires an EIA for any proposed activity in the Antarctic before that activity may proceed, unless it is determined that the activity will have *less than* a 'minor or transitory impact' on the Antarctic environment.[42]

An EIA can be initial (IEE) or comprehensive (CEE), the latter if a proposed activity is likely to have *more than* a minor or transitory impact. Whether or not an EIA is required and which type of EIA is needed for any proposed activity is determined under the 'appropriate national procedures'.[43] The evaluation of whether an activity may have a 'less than', 'equal to', or 'more than' a 'minor or transitory' impact is left to the Parties. The contents of this evaluative standard would be, it has been stated, developed through practice.[44] The Protocol stopped short of entitling an independent or collective body to evaluate EIA requirements for proposed activities. Only draft CEEs are scrutinized by both the CEP and ATCM, yet these bodies have no power of veto which could prevent any such activity from proceeding. As to IEEs, Parties need to make them 'available on request'; only an annual list of completed IEEs is to be circulated to other Parties, forwarded to the CEP, and made publicly available. Devoid of a common frame of reference, the practice of various Parties inevitably varies. The 'Guidelines for EIA in Antarctica', adopted by the Consultative Parties at the Lima Meeting in 1999, confirmed in respect of the notion of 'minor or transitory impact' that 'no agreement on this term has so far been reached', and that its interpretation will therefore need to be made on a 'case by case site specific basis'.[45] From the information circulated among the Parties thus far, it is apparent that approximately 300 IEEs have been prepared, while at the same time no more than ten CEEs have been made. This could be the result of different interpretations as to when a CEE is required, but could equally, especially in border-line cases, be attributed to a tendency to avoid the technically complex preparation and time-consuming review of a draft CEE. Therefore the unclear notion of 'minor or transitory impact', combined with different procedural requirements for IEEs and CEEs, may result in quite undesirable side effects for the practical implementation of the Protocol.

As shown above, the Protocol, despite some vagueness, has greatly influenced behaviour related to minimizing the environmental impacts of activities in the Antarctic. It is, however, difficult and probably premature to conclude on this basis alone that the practical implementation of the Protocol has been a major success. Findings of recent Antarctic inspections have confirmed the reality that the implementation record of the Parties remains uneven, and it is certainly not possible to assess implementation by viewing the Parties as a homogeneous group.[46] Moreover, whereas an individual Party may have developed adequate practices in implementing some aspects of the Protocol, it may have employed inadequate procedures in respect to others.

The Unfinished Agenda

There remain several major sets of issue areas on which the Parties will have to focus more closely in order to enhance the implementation of the Protocol. The basic reason for this is the specific political and legal situation of the Antarctic, where the need to maintain a balance on sovereignty positions has led to various open questions. These have become even more apparent in the current phase of the implementation of the Protocol.

Issues of Jurisdiction, Control, and Enforcement

Ensuring a comprehensive implementation of the Protocol requires the introduction of innovative mechanisms to enable control and enforcement in the Antarctic. Related to this is the need to establish an effective jurisdiction over activities in the Antarctic Treaty area. The Antarctic Treaty regulates jurisdiction in quite a limited manner[47] and fails to resolve the question of jurisdiction over nationals of Treaty parties who are not observers or exchanged scientists; nor does the Treaty address the question of jurisdiction over nationals of third states. This lack of a comprehensive jurisdictional regime was not of particular concern in the decades immediately following the adoption of the Antarctic Treaty.

Nowadays, particularly with the growth in Antarctic *tourism*, the question of jurisdiction needs to be readdressed. Otherwise it will become increasingly difficult to ensure compliance with the Protocol in a situation where close to half of the vessels visiting Antarctica on tourist cruises fly flags of third states, often various 'flags of convenience'. At present, Parties rely to a degree on informal regulations by IAATO (the International Association of Antarctic Tour Operators) to ensure compliance by tour operators with the Protocol, which is a pragmatic solution, yet one without any legal guarantee.[48]

The problem occurs when an offence by a third party breaches legislation for implementing environmental regulations, such as regulations under the Protocol. In cases when flag state enforcement fails (as it often does), the need arises for a complementary means. At ATCMs in 1996 and 1997, the Parties initiated discussion on the need for introducing such complementary means in the Antarctic context.[49] Since all the regularly used gateway ports to the Antarctic are subject to the jurisdiction of the Protocol parties (Argentina, Australia, Chile, New Zealand, South Africa, and the United Kingdom), a concept such as 'departure state jurisdiction' was proposed by the United Kingdom.[50] Moreover, this concept was not confined to the obvious departure ports but rather to all the Parties equally, regardless of whether or not vessels departed from their territories directly to the Antarctic. This would in practice mean solving the question of jurisdiction *in* the

Antarctic waters by dealing with it *outside* of the Antarctic Treaty area. However, although there is a general understanding among the Parties regarding the need for improved mechanisms to ensure the effective implementation of the Protocol, opposition remains to far-reaching proposals such as 'departure state jurisdiction'. How can issues of jurisdiction be adequately solved to enhance implementation of the Protocol but not disturb the balance on sovereignty positions as preserved in Article IV of the Antarctic Treaty? This question remains a major item on an unfinished agenda.

Liability Regime for Environmental Damage

In Article 16 of the Protocol, the Parties undertook 'to elaborate rules and procedures relating to liability for damage arising from activities undertaken in the Antarctic Treaty area and covered by this Protocol. Those rules and procedures shall be included in one or more Annexes.'

In the aftermath of the adoption of the Protocol, the Consultative Parties established at the 1992 ATCM the Group of Legal Experts on Liability, which first met in 1993. Although the Group initially showed steady progress, signs gradually emerged of an approaching stalemate on several crucial issues. The Group was then requested to report to the Tromsø ATCM in 1998, which it did by listing key pending issues for an Antarctic liability regime.[51] Thereupon, the Group was actually dissolved. In other words, as stated in official documents, the Consultative Parties decided that the 'Group of Legal Experts on Liability, by submitting its report, has fulfilled its task and its work is now completed; [and that] the further negotiation of an annex or annexes on liability be undertaken in Working Group I of the ATCM.'[52] The sense of urgency and the main change in the course that was agreed upon at the 1998 ATCM were prompted by the entry into force of the Protocol a few months before that meeting. Viewed retrospectively, the task of the Group of Legal Experts resembled a 'mission impossible': equipped with no real policy guidance, with no risk assessments available of actual activities in the Antarctic,[53] and mainly devoid of natural science and technical expertise, this Group was left to discuss various legal (and often rather theoretical) options in a vacuum.[54]

Deliberations over liability, now in a policy rather than a legal forum, have continued since the 1999 ATCM. A renewed listing of key issues has been made, and the major policy dilemmas, including the choice between a piecemeal or an overall approach in creating a liability regime under the Protocol, have been revisited. A 'step-by-step' approach has been reverted to. This was originally triggered by a US proposal tabled in 1996, which then indicated that the Group of Legal Experts was approaching a dead-end. The Parties have now agreed to elaborate a draft for an annex on 'the liability aspects of environmental emergencies, as a step in the establishment of a liability regime in accordance with Article 16 of the Protocol.'[55] The question remains of course whether the choosing of this more pragmatic approach will eventually fulfil the requirements of Article 16—i.e., how many 'steps' will be needed.

Improving the Annexes

A closer analysis of various provisions of the Annexes to the Protocol reveals regulatory gaps and vague language. These shortcomings were partly unintended by-products of the hasty negotiation of the Protocol and partly the deliberate results of adopting the texts by consensus, thereby agreeing on the lowest commonly acceptable standards. The need for improvements in the individual Annexes has increasingly been recognized.

At CEP IV in St Petersburg, in July 2001, the Committee decided to begin conducting a *rolling review* of the Annexes. The review is due to begin with Annex II, 'Conservation of Antarctic Fauna and Flora', at the next meeting of the CEP, to be held in Warsaw in September 2002.[56] The ATCM endorsed this proposal.[57] Inherent in the original design of the Protocol as a framework instrument with various annexes is the enhanced flexibility of the latter to be updated to reflect changing environmental challenges, acquired knowledge, and new practices. While an amendment of the Protocol has to undergo a complex procedure analogous to that of the Antarctic Treaty itself,[58] the Annexes can be modified under a simplified procedure by a measure adopted at the ATCM, which is then, if after one year's time without explicit opposition, deemed to have been approved and becomes effective.[59]

However well conceived this revision system may seem, it faces practical obstacles. The domestic implementation legislation of several Parties simply incorporates provisions from both the Protocol and the Annexes, without making distinctions regarding the revision procedures for these. Thus, for some countries, an ongoing review process of Annexes at the ATS level might result in the challenge of revising respective provisions in domestic laws, whose revision procedure is not necessarily as flexible as that for the Annexes themselves. This, in turn, may result in resistance towards modification of the Annexes at the ATCMs. Perhaps a combination of a rolling review at the annual CEP and periodic, yet less frequent, revision meetings for the Annexes could both satisfy the demands for responsiveness of the Annexes and placate the concerns of domestic legislators in some countries.

Antarctic Treaty Secretariat

In contrast to most contemporary multilateral environmental treaties, the Protocol contains no provision for the establishment of a secretariat. The lack of permanent institutions must be seen in a wider ATS context, where a careful preservation of balance on sovereignty positions coupled with a low level of activities in the Antarctic has, for many years, prevented institutionalization of Antarctic affairs. Even the main decision-making forum of the ATS—the Consultative Meeting—has no institutional legal personality of its own; it is rather a periodic intergovernmental diplomatic conference of participating states.

With the advent of the Protocol, and with significant new requirements for information exchange and reporting introduced in the ATS (which, from the original 12, now also numbers 45 states), the need for permanent technical support has been recognized by the Consultative Parties. Although discussed by the Parties earlier, it was not until after the Protocol's adoption that the need to establish a permanent secretariat was first formally recognized and agreed to, at the 1992 ATCM.[60] Since that meeting, however, the question of the location of the secretariat has postponed its establishment. The 1992 candidacy of Argentina as a prospective host country for the secretariat was met with reservation from the United Kingdom, and the stalemate on this issue endured for nearly a decade. However, improved relationships between these two countries in recent years, combined with the Argentine commitment to comprehensive reorganization of the structure of its Antarctic programme,[61] resulted at the latest ATCM in 2001 in the UK joining the consensus on Buenos Aires as the seat of the secretariat.[62]

Although efforts towards the establishment of the secretariat have gained momentum by the recent consensus regarding its seat,[63] additional time will certainly be needed to reach agreement on legal and, especially, funding arrangements—and not least to secure the approval of these in the domestic forums of all the Parties.[64] Meanwhile, the CEP operated for its first four years and performed its initial tasks well, also thanks to the efficiency and enthusiasm of its chair and the logistical support furnished by his home institution, the Norwegian Polar Institute. While this temporary arrangement may have functioned well in the initial years, the increasing complexity and scope of tasks required from the CEP clearly demand a permanent secretariat if the implementation of the Protocol is not to be hampered by the lack of support needed for technical follow up.[65]

Ten Years After: What Has Been Achieved?

From the above brief review, the impact that the Protocol has had since its adoption can be summarized as follows:

Firstly, politically, the Protocol exerted a significant impact immediately upon its adoption. However, it then responded to various external and internal challenges to the governance of Antarctic affairs by the Consultative Parties. As such, the Protocol has significantly contributed both to strengthening international co-operation within the ATS and to changing the perception about the ATS in the broader international community. This impact appears to be a lasting one.

Secondly, the legal effect of the Protocol has accurately been summarized as a 'positive but limited contribution'.[66] This contribution has been made in three main ways: by introducing a comprehensive instead of an issue-specific approach in Antarctic environmental protection; by doing this in a legally binding instrument; and by establishing a new institution, the CEP, with an advisory role in the implementation of the Protocol. Despite these positive contributions, however, the Protocol has introduced some legal dilemmas. These can be attributed partly, on the one hand, to the Protocol's being stretched between its status as a supplement to the Antarctic Treaty and, on the other, to its proclaimed role as an instrument for the comprehensive protection of the Antarctic environment and dependent and associated ecosystems.

Thirdly, as to Antarctic environmental management, the Protocol has enabled a change in behaviour relating to minimizing environmental impacts of activities in the Antarctic in three major ways: by increasing awareness of domestic agencies, by increasing the transparency of domestic implementation, and by increasing mutual control of environmental practices in the Antarctic. The full effect of these changes, however, remains hampered by the wide interpretation possibilities of some core requirements under the Protocol, such as the standard for conducting EIAs and, especially, the trigger for CEEs, which remain in a 'grey zone'.

Finally, an unfinished agenda persists for the Protocol to apply comprehensively to activities in the Antarctic. The main items on that agenda include: the unresolved issues of jurisdiction, control, and enforcement in the Antarctic, especially regarding activities by third parties, such as tourism; the adoption of a liability regime for environmental damage; the improvement of Annexes through rolling review; and the establishment of the secretariat. The question remains whether it is possible for the Parties to respond fully to all these agenda items, or whether in some instances it is better to seek out pragmatic solutions.

Notes and References

I am indebted to Chris Joyner, Mike Richardson, and Olav Schram Stokke for comments on a draft of this article. I also wish to acknowledge the support provided to the FNI's research projects on Antarctic affairs by the Tinker Foundation, New York, within which part of the research for this article has been carried out. The views and opinions in this article are my own, and do not necessarily reflect the views of any agency or institution.

1. The Protocol was adopted on 4 October 1991 and entered into force on 14 January 1998. For a reference to the source text of this and any other international instrument cited in this article, see the agreements section in the present *Yearbook*. While the Protocol is open for accession by any state party to the Antarctic Treaty, the current state of participation, as of 28 February 2002, comprises all the 27 Antarctic Treaty Consultative Parties, yet only two among 18 non-Consultative Parties (Greece and Ukraine). For a list of state parties to the Antarctic Treaty, see the agreements section in the present *Yearbook*.
2. Ten years ago, following the adoption of the Protocol, this *Yearbook* published a review of environmental protection in the Antarctic; see Olav Schram Stokke (1992), 'Protecting the Frozen South', *Green Globe Yearbook*, 1, 133–40.
3. For comprehensive studies, see Sir Arthur Watts (1992), *International Law and the Antarctic Treaty System* (Cambridge: Grotius Publications); and Peter J. Beck (1986), *The International Politics of Antarctica* (London: Croom Helm).
4. On the notion and components of the ATS, see Davor Vidas (1996), 'The Antarctic Treaty System in the International Community: An Overview', in Olav Schram Stokke and Davor Vidas (eds.), *Governing the Antarctic: The Effectiveness and Legitimacy of the Antarctic Treaty System* (Cambridge: Cambridge University Press), 35–48. See also the agreements section in the present *Yearbook*.
5. Note here the interplay between various provisions of the Antarctic Treaty, especially Arts. IV and IX.
6. See Art. IX(1) of the Antarctic Treaty.
7. Note here especially the 1964 Recommendation III–8 ('Agreed Measures for the Conservation of Antarctic Fauna and Flora'), the 1972 Convention for the Conservation of Antarctic Seals (Seals Convention) and the 1980 Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR).
8. For an overview, see Christopher C. Joyner (1996), 'The Effectiveness of CRAMRA', in Stokke and Vidas (eds.), *Governing the Antarctic*, 152–62. See also Francisco Orrego Vicuña (1988), *Antarctic Mineral Exploitation: The Emerging Legal Framework* (Cambridge: Cambridge University Press); and Rüdiger Wolfrum (1991), *The Convention on the Regulation of Antarctic Mineral Resource Activities: An Attempt to Break New Ground* (Berlin: Springer–Verlag).
9. Ratification by *all* the claimant countries was in effect a prerequisite for entry into force; see Art. 62(1) of CRAMRA in conjunction with provisions on the establishment of and membership in the institutions under the Convention.
10. See Recommendation XV–1 (1989); text reprinted in John A. Heap (ed.) (1994), *Handbook of the Antarctic Treaty System*, 8th edn (Washington, DC: US Department of State), 2005–7.
11. See William M. Bush (1992), 'The 1988 Wellington Convention: How Much Environmental Protection?', in Joe Verhoeven, Philippe Sands, and Maxwell Bruce (eds.), *The Antarctic Environment and International Law* (London: Graham & Trotman), 69–83; Francisco Orrego Vicuña (1996), 'The Effectiveness of the Protocol on Environmental Protection to the Antarctic Treaty', in Stokke and Vidas (eds.), *Governing the Antarctic*, 197–8; Watts (1992), *International Law and the Antarctic Treaty System*, 276; and Wolfrum (1991), *The Convention on the Regulation of Antarctic Mineral Resource Activities*.
12. UNGA resolution 49/80.
13. UNGA resolutions 51/56 and 54/45, respectively.
14. Among many analyses of the Protocol available to date, see especially Orrego (1996), 'Effectiveness of the Protocol', 174–202; Francisco Orrego Vicuña (1996), 'The Legitimacy of the Protocol on Environmental Protection to the Antarctic Treaty', in Stokke and Vidas (eds.), *Governing the Antarctic*, 268–93; and Francesco Francioni (1993), 'The Madrid Protocol on the Protection of the Antarctic Environment', *Texas International Law Journal*, 28, 47–72.
15. Art. 2 of the Protocol.
16. See Orrego (1996), 'Effectiveness of the Protocol', 190–202.
17. See Christopher C. Joyner (1996), 'The Legitimacy of CRAMRA', in Stokke and Vidas (eds.), *Governing the Antarctic*, 255–67.
18. As of 28 February 2002, only one Consultative Party—India—has yet to approve Recommendation XVI–10, thereby alone blocking Annex V from becoming legally effective.
19. See, however, para. 7 of the Final Act of the Eleventh Special Antarctic Treaty Consultative Meeting, regarding the activities already regulated under CCAMLR, the Seals Convention, and the International Convention for the Regulation of Whaling; text reprinted in Heap (ed.) (1994), *Handbook of the Antarctic Treaty System*, 2016–18.
20. The Protocol does contain certain other prohibitions, such as the prohibition on introducing dogs onto land or ice shelves in Antarctica (Annex II, Art. 4(2)), but it is the mining ban that has been the outstanding prohibitory feature of the Protocol.
21. See para. 8 of the Final Act of the Eleventh Special ATCM.
22. Art. 8 and Annex I to the Protocol.
23. Art. 4 of the Protocol, in conjunction with Art. VI of the Antarctic Treaty (of course, with the derogation clause contained in the latter article, explicitly preserving the high-seas rights in the Antarctic Treaty area). See comment by William M. Bush (1992–), *Antarctica and International Law: A Collection of Inter-State and National Documents* (Dobbs Ferry, NY: Oceana Publications), Booklet AT91C, 2; at another place Bush comments, 'the area south of 60 degrees south latitude ... is the same as the area of operation of the protocol'; ibid., Booklet AT91D, 11.
24. Art. 3(1) of the Protocol (emphasis added). See also comment by Bush (1992–), *Antarctica and International Law*, Booklet AT91C, 2.
25. Similarly, Bush, in ibid., 2–3.
26. For a detailed examination of this issue, see Davor Vidas (1999), 'Southern Ocean Seabed: Arena for Conflicting Regimes?', in Davor Vidas and Willy Østreng (eds.), *Order for the Oceans at the Turn of the Century* (The Hague: Kluwer Law International), 291–314.
27. On the Chilean interpretative declaration in this connection, first made on the occasion of signing and reaffirmed when ratifying the Protocol, see Maria Luisa Carvallo and Paulina Julio (2000), 'Implementation of the Antarctic Environmental Protocol by Chile: History, Legislation and Practice', in Davor Vidas (ed.), *Implementing the Environmental Protection Regime for the Antarctic* (Dordrecht: Kluwer Academic Publishers), 342–3.
28. See, further, Davor Vidas (2000), 'The Antarctic Continental Shelf Beyond 200 Miles: A Juridical Rubik's Cube', in Vidas (ed.), *Implementing the Environmental Protection Regime for the Antarctic*, 261–72.
29. See, especially, Orrego (1996), 'Effectiveness of the Protocol'.
30. See para. 163 of the *Final Report of the Twentieth Antarctic Treaty Consultative Meeting, Utrecht, 29 April – 10 May 1996* (1997) (The Hague: Netherlands Ministry of Foreign Affairs). At the latest (fourth) meeting of the Committee for Environmental Protection (CEP IV), held in St Petersburg, 9–13 July 2001, 'SCAR apologised that it had been unable to provide the Scoping

Study for a State of the Antarctic Environment Report. It will be provided by SCAR to CEP V'; see para. 94 of the 'Report of the Committee for Environmental Protection', in *Final Report of the Twenty-Fourth Antarctic Treaty Consultative Meeting*, *St. Petersburg*, *Russian Federation*, *9–20 July 2001* (2002) (Moscow: Ministry of Foreign Affairs of the Russian Federation).

31. *Ross Sea Region: A State of the Environment Report for the Ross Sea Region of Antarctica* (2001) (Christchurch: New Zealand Antarctic Institute).
32. The one human activity in the Antarctic region that today presents a real threat to the Antarctic ecosystem—the illegal, unreported, and unregulated (IUU) fishing in the Southern Ocean—is beyond the scope of the Protocol.
33. See, for instance, *Ross Sea Region* (2001), 3.20–3.21.
34. Stokke (1992), 'Protecting the Frozen South', 133.
35. Olav Schram Stokke and Davor Vidas (1996), 'Introduction', in Stokke and Vidas (eds.), *Governing the Antarctic*, 5–6.
36. Protocol, Art. 13(1). For a review of domestic implementation of the Protocol, see Kees Bastmeijer (2000), 'Implementing the Environmental Protocol Domestically: An Overview', in Vidas (ed.), *Implementing the Environmental Protection Regime for the Antarctic*, 287–307.
37. Para. 14 of the Final Act of the Eleventh Special ATCM.
38. See Arts. 11 and 12 of the Protocol. On CEP, see Olav Orheim (2000), 'The Committee for Environmental Protection: Its Establishment, Operation and Role within the Antarctic Treaty System', in Vidas (ed.), *Implementing the Environmental Protection Regime for the Antarctic*, 107–24.
39. Note, however, that annual reports are not discussed at the CEP unless a specific question is raised; see para. 6 of the 'Report of the Committee for Environmental Protection', in *Final Report of the Twelfth Antarctic Treaty Special Consultative Meeting*, *The Hague*, *11–15 September 2000* (2001) (The Hague: Netherlands Ministry of Foreign Affairs), Annex D.
40. See also Bastmeijer (2000), 'Implementing the Environmental Protocol Domestically', 289.
41. See *Final Report of the Eighteenth Antarctic Treaty Consultative Meeting*, *Kyoto*, *Japan*, *11–22 April 1994* (1994) (Tokyo: Japanese Ministry of Foreign Affairs), paras. 39–43.
42. Protocol, Art. 8 and Annex I.
43. Protocol, Annex I, Art. 1(1).
44. See para. 30 of the 'Report of the Meeting of the Committee for Environmental Protection, Tromsø, 25–29 May 1998' (1998), in *Final Report of the Twenty-Second Antarctic Treaty Consultative Meeting*, *Tromsø*, *Norway*, *25 May – 5 June 1998* (Oslo: Norwegian Ministry of Foreign Affairs), Annex E.
45. Guidelines are appended to Resolution 1 (1999), in *Final Report of the Twenty-Third Antarctic Treaty Consultative Meeting*, *Lima*, *Peru*, *24 May – 4 June 1999* (Lima: Peruvian Ministry of Foreign Affairs), Annex C.
46. See reports from a joint inspection by United Kingdom and German observers in January 1999 (doc. XXIII ATCM/WP 23, 1999), by Belgium and France in September 1999 (doc. XXIV ATCM/INFO 9, 2001), by Norway in January 2001 (doc. XXIV ATCM/WP 25, 2001), and by the United States in February 2001 (doc. XXIV ATCM/INFO 17, 2001). Inspection reports presented at XXIV ATCM are available at <www.24atcm.mid.ru>.
47. Art. VIII of the Antarctic Treaty.
48. On the current issues of Antarctic tourism, see Mike G. Richardson (2000), 'Regulating Tourism in the Antarctic: Issues of Environment and Jurisdiction', in Vidas (ed.), *Implementing the Environmental Protection Regime for the Antarctic*, 71–90.
49. See, especially, the United Kingdom (1997), 'Enhancing Compliance with the Protocol: Departure State Jurisdiction', doc. XXI ATCM/WP 22.
50. Ibid.
51. See 'Liability – Report of the Group of Legal Experts' (1998), doc. XXII ATCM/WP 1.
52. See paras. 1 and 2 of Decision 3 (1998), 'Liability'; and paras. 61–84 of *Final Report of the XXII ATCM*. For an analysis of the result of the work of the Group, see René Lefeber (2000), 'The Prospects for an Antarctic Environmental Liability Regime', in Vidas (ed.), *Implementing the Environmental Protection Regime for the Antarctic*, 199–217.
53. The first such risk assessment appeared only in 1999: COMNAP (1999), 'An Assessment of Environmental Emergencies Arising from Activities in Antarctica', doc. XXIII ATCM/WP 16.
54. See a review by Mari Skåre (2000), 'Liability Annex or Annexes to the Environmental Protocol: A Review of the Process within the Antarctic Treaty System', in Vidas (ed.), *Implementing the Environmental Protection Regime for the Antarctic*, 163–80.
55. See Decision 3 (2001) in *Final Report of the XXIV ATCM*, Annex B.
56. See para. 6 of the 'Report from CEP IV, July 9–13, 2001, St. Petersburg, Russia' (2002), in *Final Report of the XXIV ATCM*.
57. *Final Report of the XXIV ATCM* (2002), para. 41.
58. Compare Art. 25 of the Protocol with Art. XII of the Antarctic Treaty.
59. For further details and safeguards incorporated in that procedure, see the standard amendment/modification clause of the Annexes.
60. See *Final Report of the Seventeenth Antarctic Treaty Consultative Meeting, Venice, Italy, 11–20 November 1992* (1993) (Rome: Italian Ministry of Foreign Affairs), para. 43.
61. See *Final Report of the XXIV ATCM* (2002), paras. 21–3 and Appendix 3, 'Statement by the Minister of Defense of Argentina, Dr Horacio Jaunarena (Buenos Aires, 6 July 2001)'.
62. See ibid., para. 20 and Appendix 3, 'UK Response to Argentine Defence Minister's Statement of 6 July 2001'.
63. See also ibid., Decision 1 (2001).
64. For a review of some major issues involved, see Francesco Francioni (2000), 'Establishment of an Antarctic Treaty Secretariat: Pending Legal Issues', in Vidas (ed.), *Implementing the Environmental Protection Regime for the Antarctic*, 125–40.
65. On functions of the CEP and their practical implementation, see Orheim (2000), 'Committee for Environmental Protection', 113–24.
66. See Orrego (1996), 'Effectiveness of the Protocol', 201–2.