Scientific Knowledge and the Progressive Development of International Law: With Reference to the ILC Topic on the Protection of the Atmosphere

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1 Introduction

Development of international environmental law would not have been possible without contributions by ‘epistemic communities’. International environmental lawmaking is one area where science has played and will continue to play a crucial role. For instance, since its establishment in 1988, the Intergovernmental Panel on Climate Change (IPCC) has made significant contributions to reporting and assessing scientific findings regarding climate change. The first IPCC report was published in 1990 and served as the basis of discussion in drafting the United Nations Convention on Climate Change (UNFCCC), adopted in 1992. The second report, published in 1995, had a decisive impact on formulating the principles incorporated in the Kyoto Protocol of 1997. The IPCC fourth and fifth reports of 2007 and 2014 led to the adoption of the Paris Agreement of 2015. Thus, the link between scientific knowledge and international lawmaking has been more than vivid in the context of climate change.

Likewise, the International Law Commission (ILC, or the Commission) has been faced in recent years with the problem of scientific input into its...
activities for progressive development of international law. In pursuing one of the current ILC topics, ‘Protection of the Atmosphere’, for which the present writer serves as Special Rapporteur, the Commission has taken steps to reach out to the relevant international organizations as well as the scientific/technical community whose advice and expertise are needed for the Commission to understand what has to be regulated. The situation is similar to the one faced by contemporary judges of international courts and tribunals who, confronted with an increasing filing of environmental disputes, require experts for proof of scientific evidence in these fact-intensive and science-heavy cases.

The ILC has been at a crossroads in selecting its topics. It has been pointed out since the 1970s that the shift of topics from ‘codification’ to ‘progressive development’ has made the work of the Commission increasingly difficult. Note also that there has been another aspect of this difficulty: having exhausted most of the ‘traditional’ topics of international law, the Commission has had to shift to those related to ‘special regimes’ of international law such as human rights law, environmental law and economic law. While some consider that development of the law of special regimes should be left to experts in their respective fields rather than the ILC, others consider that the topics on special regimes should also be included in the agenda of the Commission, precisely because it is expected to perform the function of safeguarding the integrity of the international law system and avoiding the tendency towards ‘compartmentalization’ (or fragmentation) caused by dominant ‘single-issue’ approaches under special regimes.

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6 While the mandate of the ILC is the codification of ‘established’ rules of customary international law and the progressive development of international law based on the ‘emergent rules’ of customary law (see the Statute of the ILC, article 15), science is naturally more relevant to the latter phase of the ILC work.

7 Most notably, see the Pulp Mills on the River Uruguay (Argentina v Uruguay), Judgment, ICJ Reports 2010, p. 14, paras. 160–168 (on the burden of proof and expert evidence), and the joint dissenting opinion of Judges Al-Khasawneh and Simma, ibid., pp. 1–6. The main focus of the Whaling in the Antarctic (Australia v Japan, New Zealand intervening), Judgment, ICJ Reports 2014, paras. 74–246, was the scope of ‘scientific research’ under the 1946 International Whaling Convention.


9 Murase, supra, note 5, p. 10. See also S. Murase, First Report on the Protection of the Atmosphere, UN Doc. A/CN.4/667, 14 February 2014, paras. 17–18. The atmosphere is not yet subject to a comprehensive regime such as the law of the sea, and instead, the global ‘atmospheric commons’ are regulated by a ‘regime complex’ comprising a multitude of international