International Environmental Law and Governance

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Malgosia Fitzmaurice

Duncan French

Queen Mary Studies in International Law

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Introduction

The present book is the updated version of articles published in the Special Issue of the International Community Law Review, which in turn arose out of a one-day workshop held at Queen Mary, University of London, in March 2011, organised by Professors Malgosia Fitzmaurice and Duncan French, which encouraged the participants to examine the current state of international environmental law-making and to take stock of developments in environmental treaty governance.

It can be safely said that international environmental law has matured sufficiently that it has strayed significantly beyond any form of ontological questioning. Though there remain interesting avenues of research about specialisation in international environmental law and what this evolution reveals about international law's overall fragmentation, general debates as to the existence of a discrete corpus of law relating to the environment have long passed.

Rather, the debate has moved on to consider more nuanced questions over the legitimacy and efficacy of what is being created, to reflect on structural innovation and to analyse whether these developments are achieving the desired goals of environmental protection, and the necessary international collaboration to achieve this. Though this is true of general international environmental law to some extent – with due consideration given to the work undertaken by the International Law Commission, in particular, on prevention of harm and especially the increasingly significant jurisprudence of the International Court and other tribunals – attention has been given, both in the legal and political science literature, to the operation of multilateral environmental agreements.

The focus of the discussion of this volume is on the powers of COPs, an issue which has been puzzling international lawyers, in particular since the establishment of the compliance regimes under several Multilateral Environmental Agreements (MEAs) on the basis of the decisions of the COPs in the implementation of so-called "enabling clauses"; or in some cases even without them, such as the compliance mechanism of the Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal.[1] The powers of COPs were assessed from the points of view of international law; the law of treaties; but also from a more general point of view of the legitimacy, which

1 See on this in general and the review of views; Malgosia Fitzmaurice, "Law – Making and International Environmental Law. The Legal Character of Decisions of Conferences of the Parties", in: Rain Liivoja and Jarna Petman (eds.,) International Law-making. Essays in Honour of Jan Klabbers (Abington and New York:Routledge, 2014), 190–210.

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was extensively discussed by political scientists. The question which was most challenging was why do States Parties to MEAs comply in most cases with decisions of COPs which are not fully authorised by international law. There are several such theories in political science, the full analysis of which exceeds the content of this Introduction. There is the so-called managerial, process-oriented approach;[2] compliance based on close vertical interactions between various actors (public and private) through discursive interpretation of international norms (mainly by domestic institutions, as the key policy makers);[3] compliance based on so-called "interactional theory" – based on interactions between States;[4] there is a transformationalists theory;[5] and one based on a presumption that engaging States in an agreement is of fundamental importance. This theory distinguishes three alternative compliance strategies: sunshine; incentive; and sanctions.[6] We can also mention Franck's theory of legitimacy which is based on a presumption that States comply with international law even in instances when it does not further their own interests. Therefore, he argued, international law has a "compliance pull" which is underscored by the perception of it by its addressees as being legitimate.[7]

These and other topics which were discussed during the lively discussion at the workshop showed, as these papers highlight, that a number of themes can be seen to have emerged. First, the development of environmental regimes is far from being of interest just to scholars of international relations. International lawyers bring a constructive and critical eye to the formation and elaboration of such structures and processes, not simply because they have emerged from

2 Abraham Chayes and Antonia Handler Chayes, The new Sovereignty: Compliance with International Regulatory Agreements (Harvard University Press, 1998); See also Abraham Chayes, "Compliance without Enforcement", 91 American Society of International Law Proceedings (1997), 53–56.

3 Harold Hongiu Koh, "The hy nations Obey International Law", 165 Yale Law Journal (1997), 2599–639.

4 Juttta Brunnée and Stephan J. Toope, *Legitimacy and Legality in International Law; An International Account* (Cambridge University Press, 2010), 124.

5 George W, Downs, David M. Rocke and peter N. Barsoom, "Is the Good News About Compliance Good News About Cooperation?" 50 *International Organisation* (1996), 379–406 These School of thought is of the view that compliance appears to be high in regimes requiring slightly more from Stats than they are expected to do in the absence of a regime.

6 Edith Brown Weiss and Harold Karan Jacobson "A Framework for Analysis" in Edith Brown – Weiss and Harold Karan Jacobson (eds.,) *Engaging Countries: Strengthening Compliance with International Law* (MIT Press, 1998), 1–18.

7 Thomas M. Franck, *The Power of Legitimacy Among Nations* (Oxford University Press, 1988), 705–59.

legally binding treaties (though that is important) but because the norms and procedures thereby established invariably create internationally significant expectations and even perhaps binding obligations, in the form of secondary legislation. Secondly, dichotomies of hard-versus-soft law, treaty-versus-institutional law, and Parties-versus-participants, whilst formally and practically important, are not rigid divisions. Rather, such dichotomies frame a more open discourse around international governance, its parameters, its nature and even its purpose. Thirdly, there are examples of shared practice between COPs, but there is equally significant institutional divergence between the environmental regimes. We should avoid the temptation of over-generalisation; the practice and priorities of States Parties and institutional actors will continue to ensure important differences in approach between the various treaties. Finally, continuing this motif of difference, not all issues are governed by treaty institutional arrangements for reasons of political sensitivity, historical anomaly and fragmented policy frameworks; thus it would be wrong to assume environmental governance invariably demands a particular institutional form.

The volume can only provide partial coverage of this broader debate, but we are confident that it does so expertly and with intellectual rigour.

Bowman argues that the effectiveness of conservation treaty regimes plainly depends heavily on the extent to which they are informed by developing scientific understanding of the principles which govern the operation of biological systems and natural processes generally. As a result, the "ecosystem approach" has become a crucial element in the substantive conservation policies which underpin such regimes. There is an emerging view, however, that the principles which determine the essential robustness, stability and productivity of biological systems may actually be applicable to complex systems of any kind, including those of an institutional character. Accordingly, it may be instructive to have regard to such principles when devising the institutional arrangements which indisputably represent another crucial element of regime effectiveness. This article explores the relevance of such matters in relation to the structures, attributes and commitments with which such arrangements will need to be invested if their respective regimes are to flourish. He is also of that the view that the acquisition of enhanced understanding of fundamental ecological processes, and its effective reflection within the normative structure of the regime, could never of itself be sufficient to guarantee the success of international agreements for the conservation of biological diversity. No less important will be the development of appropriate administrative procedures, operational techniques and institutional arrangements to underpin the operations of the regulatory instruments themselves, in order that this enhanced technical competence may be more effectively enshrined and exploited within the system.

Goodwin deals with the little known subject of the way delegations prepare for, and then participate in, plenary meetings under multi-lateral environmental agreements – a key administrative stage in the ongoing development of international environmental regimes and law. Goodwin based his research on the 1971 Convention on Wetlands of International Importance. This Chapter explores the external rules that shape the "internal modalities" of states and their delegations as they undertake these stages. Other insights into delegate preparation and participation are sought from published accounts and internet based resources. Goodwin's research question divides into two parts (preparation and participation). However, the main endeavour will be to identify and analyse the sets of rules, customs and ethics that operate within delegations when they undertake these stages.

Davies' Chapter seeks to assess the extent to which Conferences of the Parties (COPs) of Multilateral Environmental Agreements (MEAs) have played a role in the establishing and operation of compliance systems and techniques. The roles of plenary bodies of a number of earlier MEAs adopted in the 1970s provide the particular focus of discussion (CITES, Ramsar, the CMS Convention, LRTAP and the Berne Convention). Discussion will focus on the given plenary body's role in the following areas: clarification of compliance by means of the interpretation of primary rules; the monitoring and verification process; establishing reporting requirements and improving reporting by parties; the facilitation of compliance by means of capacity-building and funding; the establishment and development of non-compliance procedures and mechanisms without an express treaty basis; and, finally, determining the consequences of non-compliance.

Lesniewska's Chapter examines how COP activities can have law-making effect beyond a regime by proxy without there being any 'formal' legal mechanism being agreed. It uses recent legal theory to interpret both the UNFCCC COP REDD+ decisions as well as the process adopted to develop them over time. Lesniewska comes to the conclusion that the UNFCCC REDD+ mechanism is a valuable example of COPs as law-makers. The UNFCCC has essentially created a sub-regime that has become a centre point around which all international forest law themes oscillate and appear now to gauge their own developments. It has achieved this through a flexible, iterative process. Yet it is important that international forest law evolves in a balanced manner and is not hijacked by certain substantive and procedural elements within the REDD+ mechanism. REDD+ should be part of international forest law not the other way round. The UNFCCC COP also illustrates the need for mechanisms to ensure equitable, fair and transparent participation in these new law-making processes to realise legitimate outcomes. Again this comes back to safeguards

and essentially a commitment to strengthen the enforcement of existing international forest law and governance.

Cullet's Chapter critically analyses the contribution that global administrative law makes to our understanding of environmental stewardship, and looks at ongoing institutional reforms in the water sector that are not based on COPs being the main actor. He concludes that the new environmental stewardship in the context of water is thus one where existing categories have both imploded and exploded. This leaves developing countries generally, and least developed countries in particular, exposed to outcomes that are neither equitable nor environmentally sustainable. Further reforms are needed to take into account the reality of international governance that has seen the private sector making significant inroads into the existing framework, while ensuring that no change comes at the expense of the weakest states. Further, the primacy of the realisation of the right to water, and more broadly the right to a clean environment, needs to be reasserted so that everyone's individual basic rights take precedence over other elements, such as efficiency concerns.

We hope that such in-depth study of environmental treaty regimes; their organs and their effectiveness, will contribute to the solving of the puzzle of certain environmental law institutional and legal arrangements.

Beyond the "Keystone" COPs: The Ecology of Institutional Governance in Conservation Treaty Regimes

Michael Bowman

Abstract

The effectiveness of conservation treaty regimes plainly depends heavily on the extent to which they are informed by developing scientific understanding of the principles which govern the operation of biological systems and natural processes generally. As a result, the "ecosystem approach" has become a crucial element in the substantive conservation policies which underpin such regimes. There is an emerging view, however, that the principles which determine the essential robustness, stability and productivity of biological systems may actually be applicable to complex systems of any kind, including those of an institutional character. Accordingly, it may be instructive to have regard to such principles when devising the institutional arrangements which indisputably represent another crucial element of regime effectiveness. This article explores the relevance of such matters in relation to the structures, attributes and commitments with which such arrangements will need to be invested if their respective regimes are to flourish.

Keywords

conservation treaties – regime effectiveness – institutional governance – ecosystem approach

1 Introduction: The Determinants of Regime Effectiveness

As the International Year of Biodiversity fades into memory, the time seems ripe for renewed reflection upon almost 150 years' experience of multilateral law-making efforts to preserve wildlife, the natural environment and the life-support systems of the planet.[1] Undoubtedly, a great many lessons have been learned during this protracted process of conservation endeavour, though it

1 See further M.J. Bowman, P.G.G. Davies and C.J. Redgwell, *Lyster's International Wildlife Law* (2nd edn., 2010, hereafter *Lyster*), Chapter 1. This work as a whole contains extended discussion of most of the treaties referred to in this paper.

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may be that there are still more to be absorbed, especially since, in the event, the various targets which were originally set for slowing or halting the rate of biodiversity loss by the year 2010 proved so resistant to attainment that the UN has subsequently committed to the dedication not merely of a single calendar year, but of an entire decade, to their more effective realisation.[2] It may be helpful in this context to recall that the prospects of success inherent in any treaty-based conservation endeavour are likely to be a function of three principal variables, namely (i) the range, rigour and appropriateness of the substantive provisions of the legal instrument in question; (ii) the effectiveness of its machinery for implementation and enforcement; and (iii) the level of participation by states, and, indeed, other key actors.[3] Although it is the second of these elements that forms the primary focus of attention of the present study, all three are in fact inter-connected in a variety of ways, and any meaningful appraisal of progress to date must accordingly embrace relevant aspects of each.

1.1 *Substantive Obligations: The Evolution of Ecological Understanding*

With respect to the first, one obvious pre-requisite is the compilation and effective application of a sufficient body of technical knowledge regarding the ecological processes relevant to the treaty's particular conservation objectives to ensure that the powers, duties and other legal functions it creates can be suitably conceived and crafted in the first instance, and then monitored and (where necessary) progressively refined thereafter, so as to enable these objectives to be continuously fulfilled over the course of time.[4] In that regard, any serious and systematic evaluation of contemporary conservation arrangements would surely confirm that they have indeed been fuelled by an ever-evolving scientific understanding of the workings of natural systems.[5] In particular, it is now widely recognised that there is little purpose in seeking to protect instrumentally or aesthetically valued species without regard to the broader network of ecological relationships upon which the *taxa* in question are ultimately

2 UNGA Resolution 65/161, specifying 2011–2020 for this purpose, in accordance with the current strategic plan of the 1992 Convention on Biological Diversity (CBD), 31 *ILM* 818. On this point, see CBD COP Decisions X/2 and X/8 and, for further information, www.cbd.int/doc/strategic-plan/UN-Decade-Biodiversity.pdf. On the seriousness of the current state of diminution of biological diversity, see especially J. Rockström, W. Steffen *et al.*, "Planetary Boundaries: Exploring the Safe Operating Space for Humanity" (2009) 14 *Ecology & Society* 32.

3 M.J. Bowman, "The Effectiveness of International Nature Conservation Agreements" in H.T. Anker and E.M. Basse (eds.), *Land Use and Nature Protection* (2000).

4 In some cases, of course, the objectives themselves may ultimately require fine-tuning.

5 For an accessible recent overview of such matters, see K. Thompson, *Do We Need Pandas?* (2010).

dependent. As a result, the focus of regulatory attention has gradually shifted away from a narrow preoccupation with protecting individual species of known anthropocentric utility[6] (or, conversely, persecuting those perceived to pose a direct threat to human interests)[7] to embrace a more sophisticated appreciation of the need to protect and preserve the overall functioning of ecosystems and the whole complex of life-forms which they sustain, and by which they are themselves in turn sustained. Accordingly, the "ecosystem approach" has become a central focus of contemporary global endeavours for biodiversity conservation.[8]

Initially, one of the principal determinants of ecological stability which tended to be emphasised by scientists who studied natural ecosystems was the sheer profusion and diversity of the life-forms they contained.[9] This perspective is, of course, pervasive throughout the principal legal instrument in the conservation field – the 1992 Biodiversity Convention – though its founding fathers were wise enough to ensure that attention was paid not only to the diversity of species as such but also to variability at both higher and lower levels of biological organisation.[10] Since, moreover, living things plainly do not exist in isolation, other factors which came to attract attention alongside diversity *per se* were the complexity and inter-connectivity of ecological relationships.[11] Indeed, the realisation gradually dawned that there might be certain life-forms whose contribution to the maintenance of the overall system was wholly disproportionate to their prolificity or biomass, with the

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6 For early examples of treaties in this vein, see e.g., the 1900 Convention for the Preservation of Wild Animals, Birds and Fish in Africa, 94 *BFSP* 715 (preamble); 1902 Convention for the Protection of Birds Useful to Agriculture, 102 *BFSP* 969; 1911 Treaty for the Preservation and Protection of Fur Seals, 37 *Stat* 1542, *USTS* 564.

7 See, e.g., the 1881 International Convention respecting Measures to be Taken against *Phylloxera vastatrix*, 73 *BFSP* 323, and 1889 Additional Convention, 81 *BFSP* 1311. More generally, various species identified in the 1900 and 1902 Conventions, *supra* note 6, as harmful (*"nuisibles"*) to human interests were not merely excluded from protection but targeted for persecution.

8 See especially CBD COP Decisions II/8, V/6, VII/11.

9 See, e.g., R.H. MacArthur, "Fluctuations of Animal Populations and a Measure of Community Stability" (1955) 36 *Ecology* 533. For a recent survey of subsequent studies in this vein, see A.R. Hughes, "Disturbance and Diversity: An Ecological Chicken and Egg Problem" (2010) 1(8) *Nature Education Knowledge* 26.

10 Thus, Article 2, CBD defines biological diversity to include "diversity within species, between species and of ecosystems".

11 R.M. May, *Stability and Complexity in Model Ecosystems* (1973). For further references, see Hughes, *supra* note 9.

result that their specific disappearance or decline might not be capable of redemption by the mere abundance or diversity of other forms: hence the notion of *keystone* species was born.[12] Unfortunately, such species do not necessarily signal their importance in any overt or reliably detectable fashion: as one recent account puts it: "we still have no better way of identifying them than taking them away and seeing what happens".[13] This naturally reinforces the importance of endeavouring to preserve *all* the various components of functioning ecosystems, including species that might hitherto have been targets for persecution. Indeed, one consideration that has become increasingly apparent is that, contrary to initial, impressionistic suppositions that their overall impact was essentially pernicious and destructive, large predators might actually serve as crucial guarantors of ecological resilience and stability.[14]

A more justifiable cause of concern, however, has been the anthropogenic introduction into natural ecosystems (whether deliberately or accidentally) of specimens of invasive alien species: since such life-forms have, by definition, not previously featured as a component of the local ecology, there is a serious risk that they may pose threats against which indigenous species have not evolved any counter-strategy or coping mechanism.[15] The introduction of rats,

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12 The term is, of course, architectural in origin: the "keystone" is the one at the summit of an arch, removal of which will cause the entire structure to collapse, despite the fact that it bears the least pressure itself. It was first employed in relation to species by Robert Paine: see his "Food Web Complexity and Species Diversity" (1966) 100 "*American Naturalist* 65; see further L.S. Mills, M.E. Soulé and D.F. Doak, "The Keystone Species Concept in Ecology and Conservation" (1993) 43(4) *Bioscience* 219; R.T. Paine, "A Conversation on Refining the Concept of Keystone Species" (1995) 9 *Conservation Biology* 962; R.D. Davic, "Linking Keystone Species and Functional Groups: A New Definition of the Keystone Species Concept" (2003) 7(1) *Conservation Ecology* 11.

13 Thompson, *supra* note 5, at 68.

14 Such creatures were particularly likely to be denied protection as being "noxious", as per *supra* note 7: see *Lyster*, *supra* note 1, at 5. The folly of such an approach has become ever more apparent, however: for contemporary scientific perspectives, see, e.g., W.J. Ripple and R.L. Beschta, "Linking Wolves and Plants: Aldo Leopold on Trophic Cascades" (2005) 55 *Bioscience* 613; W.T. Flueck, "Predators' Effects on Ecosystem Entropy" (2011) 333 *Science* 1092; W. Stolzenberg, *Where the Wild Things Were: Life, Death and Ecological Wreckage in a Land of Vanishing Predators* (2008); J. Terborgh and J.A. Estes (eds.), *Trophic Cascades: Predators, Prey and the Changing Dynamics of Nature* (2010).

15 For a brief sample of the vast literature, see C.S. Elton, *The Ecology of Invasions by Animals and Plants* (1958); M.E. Soulé, "The Onslaught of Alien Species, and Other Challenges in the Coming Decades" (1990) 4 *Conservation Biology* 233; M. Williamson, *Biological Invasions* (1996); G.W. Cox, *Alien Species and Evolution* (2004).

cats and other predators into the ecological communities of small islands, for example, poses a major threat to the various species of flightless birds which have evolved in such environments in the absence of any indigenous predators to exploit their lack of aerial escape options.[16] Consequently, the prevention of such introductions – and, where necessary, the eradication of aliens already present – has become a central feature of contemporary conservation policy.[17] Latterly, however, there are signs of the emergence of a moderating counter-current of scientific opinion, urging accommodation to the status quo, questioning the propensity to over-generalise the destructiveness of exotic species and even acknowledging potential benefits from their introduction in some cases.[18]

Most recently of all, a tendency has emerged of supplementing the conventional emphasis upon the individual biological components of ecosystems – organisms, species, communities etc. – with a keener eye to the connective *ecological processes* that allow them to interact, survive and flourish. Although the critical significance in this context of such abiotic elements of the landscape as soil and water has long been appreciated,[19] emerging perspectives have highlighted the importance of other chemical compounds by which the ecosystem is more discreetly infused, and which may serve effectively as its channels or media of communication.[20] Perhaps the best-known example to date is dimethyl sulphide (DMS), which is released into the atmosphere by microscopic marine algae as they are consumed by predators. Once in the atmosphere, it is oxidised into other compounds, some of which act as condensation nuclei for the droplets that form clouds, which in turn reflect sunlight

16 See, e.g., G. Mountford, *Rare Birds of the World* (1988), Chapter 1, esp at 19–21; and, for a series of specific examples, A. Diamond, R.L. Schreiber *et al.*, *Save the Birds* (ICBP, rev edn, 1989), esp at 96, 98, 102–3, 113, 179, 261.

17 See P.W. Birnie, A.E. Boyle and C.J. Redgwell, *International Law & the Environment* (3rd edn., 2009), 624–6.

18 See, e.g., S.P. Carroll, "Conciliation Biology: The Eco-Evolutionary Management of Permanently Invaded Biotic Systems" (2011) 4 *Evolutionary Applications* 184; M.A. Schlaepfer, D.F. Sax and J.A. Olden, "The Potential Conservation Value of Non-Native Species" (2011) 25 *Conservation Biology* 428; C. Zimmer, "Alien Species Reconsidered: Finding a Value in Non-Natives" (2011) *Yale Environment 360*, available online via http://e360yale.edu.

19 In the legal context, specific attention to these elements was accorded by Articles 4 and 5 of the 1968 African regional convention, discussed in the following sub-section.

20 See generally S. Gupta, "The Hunt for Life's Communication Links", *New Scientist*, 22 January 2011, 14.

and cool the planet.[21] Yet it seems that DMS may also have been opportunistically recruited by nature to fulfil a host of other functions: for example, since various species of seabirds and fish are sensitive to its characteristic odour,[22] they can use it to track the crustaceans upon which they predate, who unwittingly give away their own position whenever they feast upon the algae in question. It is also an attractant to larger creatures still higher up the chain of predation, such as fur seals, whose excrement may serve to nourish and sustain the algae themselves, and thereby complete an ecological circle.[23] Thus, the circulation of such chemicals throughout the ecosystem serves to activate and sustain it in much the same fashion, perhaps, as an individual animal depends upon its blood supply or nervous system. Accordingly, the notion of "keystone molecules" has recently emerged as a central pillar of the nascent discipline of "neuroecology".[24]

1.2 *The Development of Institutional Arrangements*

Yet the acquisition of enhanced understanding of fundamental ecological processes, and its effective reflection within the normative structure of the regime, could never of itself be sufficient to guarantee the success of international agreements for the conservation of biological diversity. No less important will be the development of appropriate administrative procedures, operational techniques and institutional arrangements to underpin the operations of the regulatory instruments themselves, in order that this enhanced technical

21 R.J. Charlson, J.E. Lovelock *et al.*, "Oceanic Phytoplankton, Atmospheric Sulphur, Cloud Albedo and Climate" (1987) 326 *Nature* 655; G. Malin, S.M. Turner and P.S. Liss, "The Plankton/Climate Connection" (1992) 28 *Jnl of Phycology* 590.

22 It is a significant component of the smell produced by cooking vegetables such as cabbage and beetroot, as well as of the characteristic "smell of the sea", conventionally (but wrongly) attributed to ozone.

23 In a similar way, recent research has identified the importance of the chemical tetrodotoxin (TTX) – which is stored in the bodies of certain species of newt, toads, fish, flatworms etc – across at least four levels of the trophic web: Gupta, *supra* note 20.

24 This emerging field of study seeks to link the work of psychologists and neuroscientists regarding adaptive variation in the brain and its cognitive capacities with that of biologists and ecologists on the functioning of ecosystems, so as to explore the relationship between neural effects and ecological consequences: see further D.F. Sherry, "Neuroecology" (2005) 57 *Annual Review of Psychology* 167; R.K. Zimmer and C.D. Derby, "The Neuroecology of Chemical Defense" (2007) 213 *Biological Bulletin* 205, and the collected papers in the same thematic issue. Note, however, that the same term has sometimes been employed by cognitive scientists in a much looser, more metaphorical, sense, just as one might speak of the "architecture" of the brain.