Nicolas de Sadeleer’s early analyses of the precautionary, prevention and polluter-pays principles coincided with the global formulation of the principles in the 1992 Rio Summit. He then expanded his research in a number of publications published in French. *Environmental Principles – From Political Slogans to Legal Rules* brings the result of this elaborate work to the Anglophone audience.

The first part of the book gives an overview of the legal meaning of the polluter-pays, prevention and precautionary principles, with a thorough analysis of each principle in international, European and some domestic laws (Western European states and North America). De Sadeleer also considers other regional organizations, such as the OECD, and the ASEAN. While the principles are included in numerous legal instruments, the exact obligations entailed by the application of these principles often remain unclear. What level of risk or damage triggers the principles? What type of action do they call for? Which other principles should they be balanced against? The author examines such questions for each of the three principles.

De Sadeleer links the development of the prevention principle to sustainable development and to international legal obligations regarding transboundary pollution. The prevention principle calls for pollution control at the source rather than attempting to cure the harmful effects of emissions after the facts. According to the author, the principle’s prescriptions range from mere due diligence obligations to obligations to limit emissions or the setting of exposure standards. He concludes that the core legal status of the principle remains uncertain and that it does not amount to an obligation under general international law.¹

A consensus has yet to emerge from the vast literature on the precautionary principle with regard to its definition. According to the author, the precautionary principle invites pollution prevention measures even if the risk or the scope of the damage is uncertain.² Reversal of the burden of proof is often cited as a corollary to the precautionary principle, a view to which de Sadeleer subscribes. Ultimately, he argues that the precautionary principle essentially carries a duty of care. This moderate approach may assuage the fears of those who see the principle as a duty to abstain from any novel or risky activity, thereby hindering scientific progress. De Sadeleer examines the precautionary principle in the face of post-industrial risk, characterizing the latter as global and permeated with uncertainty. He concludes that the principle is not an appropriate response for all types of risks, in particular residual risks. Thus, whether and how to apply the principle becomes an issue of risk management, a matter of public policy. De Sadeleer recommends that the precautionary principle be applied to situations where there is a ‘reasonable scientific plausibility’ of the risk.³

While the legal status of the precautionary principle is still unsettled, de Sadeleer argues that it may become ‘hard law’. This position contrasts with the more radical view that the principle has already achieved the status of customary law. While de Sadeleer falls short of explicitly endorsing the view that the precautionary principle is customary law, he does leave that possibility open.

The polluter-pays principle requires that polluters internalize their environmental costs. Thus, the principle does not directly advocate control of environmental pollution; it is traditionally seen as a cost-allocation mechanism. While the prevention and precautionary principles seek to enforce environmental protection before the occurrence of a damage (ex-ante regulation), the polluter-pays principle does not follow such a preventive logic. For this reason, the principle may not be so appropriate to illustrate de Sadeleer’s thesis of a post-modern regulatory shift from ex-post to ex-ante environmental regulation.

Nonetheless, the author argues that the polluter-pays principle should be treated as a preventive norm, because a polluter-pays rule may dissuade the polluter from polluting if the costs, as allocated by the principle, are deemed too high by the polluter. However, such a preventive role seems somewhat limited in practice. If the benefits to the polluter of engaging in the activity outweigh their costs, the polluter nevertheless will engage in the polluting activity. Moreover, other costs of the activity may not be internalized by the polluter, thus skewing the economic calculus prescribed by the polluter-pays principle. This confirms, in contrast to de Sadeleer’s thesis, that the polluter-pays principle is not preventive by nature, but rather, embodies the regulator’s preference regarding pollution cost allocation. Prevention is only a side effect of the principle when a polluter does not find it economically efficient to pollute.

From a normative standpoint, the underlying assumption of the polluter-pays approach is that the polluter is ‘rational’, as understood by economic theorists. This assumption is typical of a traditional approach to regulation. Thus, the principle might not be a good example of post-modern regulation analysed by de Sadeleer as shifting away from positivism and a rationality-based approach.

Beyond analysing the three environmental principles, the book aims at situating such ‘directing principles’ in what the author describes as the post-modern legal world, characterized by new regulatory forms, self-regulatory schemes, and governance in the context of declining state authority and regulatory monopoly.


5 Supra note 1, at 318–319.

6 Ibid, at 245.
transformations result in a shift in the regulatory perspective from *ex-post* control to *ex-ante* control.

According to the author, whereas general principles of international law characterized the modern age, directing principles are the main attribute of post-modern law. Directing principles, as a new normative category, challenge Dworkin’s dichotomy between rules and principles. They are ‘rules of indeterminate content’, blending characteristics of both rules and principles.7 This analysis is interesting and should be considered in the context of the literature on international standards.8 Indeed, standards may also be ‘rules of indeterminate content’.

In the post-modern context, hard law gives way to built-in flexibility; horizontal regulation is preferred to hierarchical systems.9 This and other features analysed by de Sadeleer mirror much of the contemporary analysis of globalization: the decline of state authority, the increased role of civil society, and the promotion of self-regulatory mechanisms in a decentralized and multipolar society are now familiar references in post-modern analysis.

I would submit that while these observations may be true and certainly have an impact on the rule-making process in domestic systems, they may not be as novel in the international arena. Indeed, the international legal system historically has been decentralized and non-hierarchical. If anything, it has become more centralized in recent years with the growing role of supranational and intergovernmental organizations. However, in support of de Sadeleer’s thesis, factors such as the emergence and strengthening of subnational actors (NGOs, multinational enterprises, etc.) may well have an impact on the formation and implementation of public international law.

De Sadeleer views international environmental law as particularly sensitive to the post-modern regulatory shift. This is why directing principles, as the norms of choice of post-modern law, find paramount expression in environmental law. Their inherent flexibility allows an individual-oriented and case-by-case implementation of legislation and regulations, in line with the focus of post-modernism away from macro-regulation. De Sadeleer also argues that directing principles are helpful in the adjudication arena. Because they allow more flexibility in integrating conflicting interests and balancing other norms, they are better suited to allow courts to determine the appropriate level of environmental protection. The connection between post-modern environmental regulation and human rights provides an interesting illustration of the author's thesis.10 De Sadeleer views the development of flexible directing principles as being consistent with the individual-oriented approach of human rights. Case-law confirms such an interpretation. For example, the protection of privacy under the European Convention

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7 _Ibid._ at 308.
8 See, e.g., Trachtman, ‘The Domain of WTO Dispute Resolution’, _40 Harv Int’l LJ_ (1999) 333, at 334. A standard gives ‘general guidance to both the person governed and the person charged with applying the law, but does not specify in advance...the conduct required or proscribed’.
9 _Supra_ note 1, at 245.
10 _Ibid._, at 275 ff.
on Human Rights has been used by victims of industrial pollution.\footnote{Lopez Ostra v Spain, 20 EHRR (1994) 277, at paras. 44, 51, 58; Guerra v Italy, 26 EHRR (1998) 357, at paras. 57, 60. In these cases, industrial pollution and the government’s failure either to prevent or abate such pollution were found to interfere with the right of enjoyment of family life by the claimants and to intrude into the privacy of their homes.}

While directing principles certainly appear to allow much leeway in their interpretation, traditional legal rules may not be as monolithic as de Sadeleer suggests. His view of legal rules is clearly grounded in a civil law system, where the application of codes and laws is indeed often pictured as a rigid and systematic process. However, common law systems, with their focus on case-law, put the facts and circumstances of each case at the centre of the analysis and seek to balance the multiple legal rules that could apply, with an acute awareness of the grey areas surrounding each applicable rule. Similarly, public international law is hardly a forum where even ‘hard law’ obligations are applied strictly and mechanically. Thus, directing principles may be particularly helpful in shaping and interpreting international law, not so much because they bring an unprecedented avenue for flexibility, but rather because they reflect essential features of the international legal system.

When examining the characteristics of directing principles and their place in post-modern law, de Sadeleer finds that their legal status depends on the type of instruments in which they are embodied. In hard law instruments, directing principles will tend to have an interpretative value and may be precursors to treaty law or customary law. In soft law instru-

ments, their status will depend on the type of treaty, whether the principles are found in the preamble or in substantive provisions, and whether their formulation suggests that states intend to be bound by them or whether they merely express a general (political) aspiration. This analysis reaches beyond the case-studies of the precautionary, preventive and polluter-pays principles, and may find applications in the evaluation of other principles, within and outside international environmental law.

This book is a valuable contribution to the debate surrounding environmental principles and their application. It opens new avenues for reflection on evolving international norms.

\textit{International Court of Justice} Sonia Boutillon*  
E-mail: S.Boutill@umich.edu  
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The \textit{Purpose of Intervention} by Martha Finnemore, a political scientist at George Washington University, is a pleasure to read for an international lawyer. International lawyers, however, are not Finnemore’s primary audience. The main purpose of her book is rather to persuade her American-style political scientist colleagues to adopt broader and more constructivist approaches for the interpretation of changes in states’ behaviour with respect to military interventions.

* This review was written in a personal capacity. The views expressed do not necessarily reflect those of the court.