

## Book Reviews

*The Book Reviews section will introduce you to the latest and most interesting books on a wide range of topics pertaining to the law and policy of risk regulation. EJRR Book Reviews will strive to be present in every edition and will accept reviews from all disciplines. For further information on the submission of reviews please contact the Book Reviews Editor at david.hornsby@wits.ac.za.*

*Science and Risk Regulation in International Law*

Jacqueline Peel  
Cambridge, New York:  
Cambridge University Press, 2010  
397 pp., £64.25, Hardcover

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Science and scientific expertise has become, in the most recent decades, an important component of international rule-making and adjudication. This process reflects the progressive “scientification” of many areas of the contemporary world, which in part is a result of the growing technical complexity of the issues tackled at the international level. The alleviation of climate change, regulation of genetically modified organisms, global risk management of epidemic diseases, and implementation of effective tobacco control policies are just some examples of this phenomenon. Science, due to its (perceived or real) epistemic superiority over other mechanisms and narratives, is also conventionally regarded as an important legitimizing factor that compensates for the lack of democratic elements in the international legal system. Moreover, science may operate as a neutral criterion that helps to depoliticize international controversies, facilitating the resolution of disputes between states. On the surface the idea is simple – disputes (or at least some of them) can be decided on purely technical grounds, with political considerations playing only secondary role. This, in theory, should make them easier to adjudicate and facilitate the implementation of the judicial decisions rendered.

A good example of such a science-oriented system is the legal regime created within the World Trade Organization (WTO), where different agreements require, implicitly or explicitly, recourse to science and scientific expertise in order to determine (or to assist in the determination of) the legality of national measures that impact on international trade. The Agreement on Sanitary and Phytosanitary Measures (SPS Agreement) is probably the most elaborate set of science-based rules, but other WTO treaties, such as the Agreement on Technical Barriers to Trade, also refer to science.

Jacqueline Peel’s book is situated in the above-described context. Its basic research question relates to the role that is (and/or should be) ascribed to science in international risk decision-making and adjudication in the area of human health and the environment. The monograph may be seen as an element in the broader scientific debate on the role of states and international structures in the governance of the global risk society (in the meaning proposed by Ulrich Beck). The book builds on the previous research conducted by Peel (e.g. her excellent article *Risk Regulation Under the WTO SPS Agreement: Science as an International Normative Yardstick?*, published as Jean Monnet Working Paper in 2004) and is a revised and updated version of the PhD thesis which she defended at the University of Melbourne.

The book is divided into eight chapters. After establishing the main research questions and introducing the methodological framework, chapter 2 describes the phenomenon of progressive internationalization of the rules relating to human health and environmental protection and explains the reasons behind this process. Chapter 3 concentrates on the concept of risk and the role of science in the international management of health and environmental risks. This chapter also proposes some critical insights from

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other disciplines (i.e. social science) and attempts to show the limitations of scientific knowledge when it comes to the assessment of uncertain and complex risks. The following chapter supplements that discussion with the comparison of two competing regulatory paradigms that can be identified in international risk regulation, i.e., the sound-science and precautionary approaches. The former is founded on the premise that regulatory measures in the field of risk (particularly as far as human health and environment are concerned) should be always based on scientific evidence (preferably empirical ones). The second approach, without rejecting the value of science, highlights its limitations and accepts (or even mandates) the regulation of uncertain and yet-to-be-proven threats. Peel also recognizes that both paradigms may sometimes collide (e.g. in the area of international trade), providing states with contradictory guidelines.

Against this background, Chapter 5 proceeds to analyze the legal disciplines of the SPS Agreement and the subsequent practice developed by the political (i.e. the SPS Committee) and adjudicative bodies (i.e. panels and the Appellate Body) that operate within the WTO framework. Jacqueline Peel correctly concludes that the approach taken by panels and the Appellate Body falls within the sound-science paradigm and “effectively precludes reference to other, non-scientific considerations or values (such as those underlying policy decisions, consumer preferences, intuitive judgments, and ethical or socio-economic concerns) as a basis for risk regulation” (Peel, p. 8). She also notes in this context that due to the institutional strength of the WTO system, the regulatory model which is promoted by the SPS Agreement may have a significant influence on the developments that take place in other fields of international law.<sup>1</sup> After criticizing the sound-science approach as an insufficient mechanism for the management of international health and environmental risks, she examines the available alternatives (Chapter 6). Using case studies, she analyzes the approaches taken within different international treaties/organizations. In particular, the discussion includes the WTO General Agreement on Tariffs and Trade of 1994 (cases such as *Shrimp – Turtle* and *EC – Asbestos*), the system established under the Codex Alimentarius Commission (risk analysis model), as well as various international environmental agreements (e.g. the Cartagena Biosafety Protocol or the Stockholm Convention on Persistent Pollutants, which rely more heavily on precaution). Chapter 7 introduces the concept of democ-

ratization of global risk governance. According to Peel, implementation of such a process can be helpful in overcoming problems posed by the contingency and uncertainty inherent in scientific knowledge (p. 338), and improve the legitimacy of the whole system. In this context, she proposes some concrete mechanisms that may be used to that end. Again the focus is on the SPS Agreement as the most developed international legal regime that relies on science and scientific expertise. The first solution suggested by Peel is a deferential standard of review<sup>2</sup> to be applied to scientific determinations made by domestic authorities. Contrary to some scholars (e.g., Andrew Guzman or Ilona Cheyne) who opt for full deference, Peel’s position is rather moderate and probably more pragmatic. She calls only for a “deferential reasonableness standard” and only for some categories of health and environmental disputes. The criteria that can be used to distinguish such disputes include: novelty of risk, level of uncertainty, and degree of public concern.<sup>3</sup> Second, she proposes a proceduralist approach which would require concentrating on the process of gathering scientific data and other relevant inputs (using criteria such as inclusiveness, transparency, and intellectual rigor) (Peel, p. 352), rather than on the substantive aspects of the evidence. Another option is to enhance public participation in WTO dispute settlement proceedings by improving their transparency and directly involving external actors in the process. This solution may also cover those calls for expanding the scope of expertise that should be sought by panels to include experts in, for example, sociology or regulatory science.

The final chapter concludes that although it is necessary to blend scientific and non-scientific inputs

1 This issue was also addressed in another work of Peel; see Jacqueline Peel, “A GMO by Any Other Name . . . Might Be an SPS Risk!: Implications of Expanding the Scope of the WTO Sanitary and Phytosanitary Measures Agreement”, 17(5) *European Journal of International Law* (2007), pp. 1009–1031 (analysing the consequences of an expansive interpretation proposed by the *Biotech* panel for international environmental law).

2 Standard of review, in the SPS context, can be defined as the level of scrutiny applied by WTO panels to scientific determinations made by WTO Members. In theory, it can vary from *de novo* review to full deference (with many intermediate variations). *De novo* review gives panels unconstrained power to review all the determinations made by national bodies and substitute them with their own. A fully deferential standard is restricted to a mere examination of procedural compliance.

3 A similar narrative was proposed by Tracey Epps, who distinguished between normal disputes and so-called “difficult (or ‘amber’) cases”. According to Epps, the latter category should be approached with relatively high degree of deference (see, Tracey Epps, *International Trade and Health Protection. A Critical Assessment of the WTO’s SPS Agreement*, (Cheltenham: Edward Elgar, 2008)).

when assessing risk, no single solution should be uniformly applied. Instead Peel proposes using the entire “menu of options and strategies ... by which international legal structures can seek to determine the best possible balance between science and non-scientific perspectives in different circumstances” (Peel, p. 11).

The monograph represents a very solid and insightful piece of research. It includes analysis of all important case law (as of the time of publication) and regulatory practices in different international legal settings. The structure is clear and well thought-out. On the substantive level, Peel reaches conclusions which are shared by the author of this review. The WTO system (and particularly its SPS Agreement) remains ensconced within the sound-science paradigm. This, as correctly noted by Peel, may be questioned on various grounds and arguably does not constitute the optimal model for the global governance of health and environmental risks. This conclusion is well substantiated in the monograph by extensive and persuasive references to social science scholarship.

It should be also noted that the subject of the book is not new. The literature on national risk regulation and the role of science in the regulatory and adjudicative processes (particularly in the context of the United States and the European Union) is vast (one may mention here just the recent books by Robin Feldman, *The Role of Science in Law*, (Oxford University Press, 2009) or Susan S. Silbey, *Law and Science* (Ashgate, 2008). The scholarship concerning international risk regulation, although relatively novel, is also substantial. It is enough to mention the commentary by Joanne Scott (*The WTO Agreement on Sanitary and Phytosanitary Measures: A Commentary*, Oxford University Press, 2007), and three other monographs: Tracey Epps (*International Trade...*), Alberto Alemanno, *Trade in Food: Regulatory and Judicial Approaches in the EC and the WTO*, (CMP Publishing, 2007) and Lukasz Gruszczynski, *Regulating Health and Environmental Risks under WTO Law (A Critical Analysis of the SPS Agreement)*, (Oxford University Press, 2010). The novelty of Peel’s book, however, consists in her approach. While other positions on

the market tend to concentrate on the WTO system, she goes beyond that and analyses, along with the SPS Agreement, the practice of other international organizations and courts (*cf.*, Chapters 3, 4 and 6). This helps to place the developments that have taken place within the WTO in the broader context and thus facilitates the recognition of different and competing paradigms in the area of international risk regulation. While this may seem to be a rather trivial observation, it also seems to be frequently forgotten among WTO scholars. In this sense, Peel’s book is similar to the more recent monograph of Caroline Foster (*Science and the Precautionary Principle in International Courts and Tribunals (Expert Evidence, Burden of Proof and Finality)*, (Cambridge University Press, 2011)). The latter work, however, concentrates more on the procedural aspects of science-based international disputes, enquiring into issues such as the participation of experts or the burden of proof.

On the other hand, what may be slightly disappointing about Peel’s book is her allocation of space between the SPS Agreement and other international treaties/systems. The SPS area remains somehow privileged in her monograph and constitutes the *leitmotiv* of the discussion. While it is true that the SPS Agreement establishes the most sophisticated international risk regulatory regime, a more extended analysis of the approach taken by the International Court of Justice (e.g. *Gabčíkovo-Nagymaros Project Case (Hungary v. Slovakia)*<sup>4</sup>), or the European Court of Justice (“*Paraquat*” *Case (Sweden v. Commission)*<sup>5</sup>) would have been more than welcome. The same is true when it comes to the international environmental treaties discussed by Peel. A careful reader might have the impression that some issues could have been addressed in a more comprehensive manner. Similarly the normative part of the book, with concrete policy recommendations for introducing mechanisms that could be used to more properly balance the scientific and non-scientific factors, also remains somewhat underdeveloped. A more systematic account that would consider the practical difficulties and negative consequences of the solutions proposed would arguably make the monograph even more insightful.

It is also worth noting that the book was published before the report in the *Australia–Apples*<sup>6</sup> dispute was issued, and as a consequence it does not include an analysis of the legal findings made by the Appellate Body in that case. This means that some of the conclusions reached by Peel with respect to practice under the SPS Agreement are incomplete. This is

4 International Court of Justice, *Case concerning the Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, Judgment of 25 September 1997, ICJ Reports 1997.

5 European Court of Justice, Case T-229/04, *Sweden v. Commission*, 11 July 2007 [2007], ECR I-2437.

6 Appellate Body Report, *Australia – Measures Affecting the Importation of Apples from New Zealand*, WT/DS367/AB/R, adopted 17 December 2010.

particularly true with respect to the discussion on the applicable standard of review and its impact on the freedom enjoyed by WTO Members when assessing complex scientific problems. It is correctly noted that the Appellate Body in *Continued Suspension*<sup>7</sup> proposed a rather deferential standard of review, thus expanding the regulatory space available to WTO Members (this was even labeled by Peel as a procedurally focused approach, *cf.* p. 215). This approach has been, however, modified by the *Australia – Apples* case. In that case the Appellate Body confirmed, on the one hand, its previous findings that a panel was only expected to determine whether the specific basis of a particular measure could be regarded as “legitimate” science. This implies a rather restrained level of scrutiny and corresponds with Peel’s call for deference in international risk governance structures. But on the other hand, the Appellate Body in *Australia – Apples* accepted an intrusive examination into the reasoning included in the domestic risk assessment, according to which it needs to be reviewed against some benchmark of correctness rather than mere reasonableness. This distinction between science as such and the reasoning included in domestic risk assessment indicates that WTO dispute settlement bodies are unwilling to resign from their investigative prerogatives when adjudicating on national SPS measures. This is a problematic approach, as panels generally lack epistemic competence to inquire into the details of the scientific justifications put forward by WTO Members. It should be noted however that Peel has extensively addressed the problem of the applicable standard of review, including the developments that have taken place as a result of *Australia – Apples*, in one of her more recent articles.<sup>8</sup>

Overall, the Jacqueline Peel’s monograph constitutes a very interesting and useful position for anyone confronted with the problems posed by international governance of risk and the interactions that take place between science and law. It is thought-provoking and transcends the narrow boundaries of the current scholarly discussion. This is a work definitely to be recommended.

7 Appellate Body Report, *United States – Continued Suspension of Obligations in the EC – Hormones Dispute*, WT/DS320/AB/R, adopted 14 November 2008.

8 See Jacqueline Peel, “Of Apples and Oranges (and Hormones in Beef): Science and the Standard of Review in WTO Disputes under the SPS Agreement”, 61 *International and Comparative Law Quarterly* (2012), pp. 427 *et seq.*

#### *Roadmap to EU Food Law*

Irene Scholten-Verheijen, Theo Appelhof, Ronald van den Heuvel and Bernd van der Meulen

The Hague: Eleven International Publishing, 2012  
198 pp., € 49.00, Hardcover.

#### Margherita Poto\*

The Roadmap to EU Food Law, structured in three parts, provides an overview of food safety regulation, dealing with the international and European dimensions of Food Law as well as the domain of private food law.

The food safety sector is one of the most densely regulated and most regularly updated sectors in the European Union. Complying with all the European legal provisions, regulations and directives presents an enormous challenge to the food industry. For the countries outside the European Union, it is essential to maintain an overview of the rapidly evolving regulatory framework.

Therefore, the authors have decided to provide an English translation to the *Landkaart Levensmiddelenrecht*, published in the series *WAAR&WET*.

This edition, updated with the most recent legal provisions on food safety, offers insight into the multiplicity and diversity of public and private rules, at both the global and European levels. In this English edition there are no references to the Dutch legislation, due to the peculiarities of the National legal provisions. A schematic overview additionally illustrates, at a glance, the large amount of European legislation that applies to the European Food Law.

In Part I, Bernd van der Meulen tackles the aspects of the global arena, first answering the question about who governs the food safety system. A pivotal role is played by the United Nations, the World Trade Organization and their specialised organisations and agencies, such as the Food and Agriculture Organization (FAO), the World Health Organization (WHO) and their joint programme. Secondly, the author focuses his attention on the human rights dimension of the right to safe food, the shift of the negotiation platforms as well as the trade and dispute settlements organizations. Thirdly, special attention is given to the sanitary measures set up at the international level to ensure that countries apply measures to protect only human, animal and plant health.

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