

## CHAPTER 1: WHAT IS ENVIRONMENTAL LAW? A BRIEF INTRODUCTION

Environmental law is quite a difficult subject to access for the complete beginner. There are two reasonably short texts aimed at those coming to the subject for the first time which we recommend: D. Wilkinson (2002) *Environment and Law*, London: Routledge; and M. Stallworthy (2008) *Understanding Environmental Law*, London: Sweet and Maxwell. Because this book is not just about the law but also its wider policy context you may want a gentle introduction and to read around the subject to get a feel for the language. Some of the best introductions can be found in Routledge's *Introductions to the Environment* series—in particular, the environment and society texts. These include: J. Barry (2006) *Environment and Social Theory*, 2nd edn, London: Routledge; T. Doyle and D. McEachern (2007) *Environment and Politics*, 3rd edn, London: Routledge; J. O'Neill, A. Holland, A. Light (2007) *Environmental Values*, London: Routledge; J. Roberts (2010) *Environmental Policy*, 2nd edn, London: Routledge. Another helpful introduction that helps 'set the scene' for later discussions is J. Dryzek (2005) *The Politics of the Earth: Environmental Discourses*, 2nd edn, Oxford: Oxford University Press.

On the difficult question of the definition of 'environmental law', have a look at Z. Plater, 'Environmental law and three economies: navigating a sprawling field of study, practice, and societal governance in which everything is connected to everything else' (1999) 23 *Harv Envtl L Rev* 359. T. Aagard, 'Environmental Law as a Legal Field: An Inquiry in Legal Taxonomy' (2010) 95 *Cornell L Rev* 221, is an excellent analytic article which emphasizes the importance of publicness and shared interconnectedness as the key hallmarks, and which explains why classifying something as 'environmental law' matters, though it might be difficult 'week one' reading. For a British perspective, see C. Reid, 'Environmental law: sifting through the rubbish' (1998) *Jur Rev* 236. There is a fascinating account of judicial scepticism in the 1970s about whether such a thing as environmental law existed, and much more, in R. Macrory (2010) *Regulation, Enforcement and Governance of Environmental Law*, Oxford: Hart Publishing. Lively debate on the nature of and challenges facing environmental law scholarship can be found in E. Fisher et al, 'Maturity and Methodology: Starting a Debate about Environmental Law Scholarship' (2009) 21(2) *Journal of Environmental Law* 213; and O.W. Pedersen, 'Modest Pragmatic Lessons for a Diverse and Incoherent Environmental Law' (2013) 33(1) *Oxford Journal of Legal Studies* 103.

The classic legal analysis of the limits of polycentrism for adjudication—which has often been used as an argument for keeping the courts out of environmental law disputes—is L. Fuller, 'The forms and limits of adjudication' (1978) 92(2) *Harvard L Rev* 353. J. King, *Judging Social Rights*, Cambridge: CUP, ch. 7, discusses the legal relevance of polycentricity and questions whether polycentricity really justifies such judicial restraint.

A really good way to get an insight into what is happening in the 'real world' of environmental law is to scan the ENDS Report ([www.endsreport.com](http://www.endsreport.com)).

## CHAPTER 2: HISTORY AND CHALLENGES

There are several good books on the history of environmental problems. A. Markham (1994) *A Brief History of Pollution*, London: Earthscan, is a short volume that gives an engaging overview. A. Wohl (1984) *Endangered Lives: Public Health in Victorian Britain*, London: Methuen, is the definitive history in this field. Other good works which take the long view are P. Brindlecombe (1987), *The Big Smoke: A History of Air Pollution in London Since Medieval Times*, London: Methuen (esp. ch. 1) and E. Cockayne (2007) *Hubbub: Filth, Noise and Stench in England 1600–1770*, New Haven: Yale University Press (esp. chs 5 and 6). C. Rose (1990) *The Dirty Man of Europe: The Great British Pollution Scandal*, London: Simon and Schuster, is written by a leading campaigner of the 1980s who coined the term 'The Dirty Man of Europe'

to describe the UK (particularly because of its reticence to introduce controls on sulphur emissions). D. Vogel (1986) *National Styles of Regulation*, Ithaca, NY: Cornell University Press, stretches back to the nineteenth century to try to explain the (then) shape of UK environmental policy and Christine Corton's (2015) *London Fog*, Cambridge: Harvard University Press offers a fascinating account of one of the defining problems in British environmental history. Further reading on the history of controls can be found within, and at the end of, the chapters in Part 3 of the book, while the regulatory issues introduced in this chapter are explored in more depth in Ch. 8.

G. Winter, 'Perspectives for environmental law: entering the fourth phase' (1989) 1 *JEL* 38, remains a thought-provoking contribution and charts what the author sees as the shift from use, to exploitation, to management, to new solutions respecting environmental uncertainties. Published in the very first issue of the *Journal of Environmental Law*, it is interesting to read this article and to reflect on how far we have come since then, and in which direction (as this and others authors do in (2008) *JEL*). A good source for thinking about current challenges is D. Osborn, 'From pollution control to sustainable development: lucid law for fuzzy objectives' (1999) 1 *Env L Rev* 79, which argues that modern environmental laws must *tend towards* solutions that are integrative and that pursue sustainable development, rather than try to tackle single environmental problems with single, simplistic, legal solutions, but that the role of law in doing so—and in making sure that everyone plays by the book—is no less important for that. R. Lazarus (2004) *The Making of Environmental Law*, Chicago, Ill.: University of Chicago Press, focuses on the USA, but, in doing so, offers a sophisticated general survey of how modern environmental law has developed. Richard Macrory's collection of previously published works found in (2014) *Regulation Enforcement and Governance in Environmental Law* Oxford: Hart Publishing contains several good essays on the development UK environmental law. UKELA (2012) *The State of UK Environmental Law in 2011–2012: Is There a Case for Legislative Reform?*, available from the UKELA website ([www.ukela.org](http://www.ukela.org)), raises a number of questions about the effectiveness and coherence of the law. Finally, for an examination of the historical origins of some of the early statutory developments Ben Pontin's (2014) 'Environmental Law-Making Public Opinion in Victorian Britain: The Cross-Currents of Bentham's and Coleridge's Ideas' 34(4) *OJLS* 759 as well as his comprehensive study of the 'common environmental law' found in (2013) *Nuisance law and Environmental Protection: A Study of Nuisance Injunctions in Practice* Witney, Lawtext Publishing are both excellent places to start.

See the Online Resource Centre for links to a range of relevant historical and contemporary documents.

### CHAPTER 3: ENVIRONMENTAL VALUES, PRINCIPLES, AND RIGHTS

This chapter has ranged across a number of topics that stray into other areas of environmental ethics, economics, politics, and social theory. Bear in mind, therefore, that this list is very selective.

#### GENERAL

J. Alder and D. Wilkinson (1999) *Environmental Law and Ethics*, London: Macmillan, is an outstanding text that covers environmental ethics within the legal and policy context of environmental law. An extremely interesting portrayal of different ways of looking at environmental issues can be found in J. Ruhl, 'The case of the Speluncan polluters: six themes of environmental law, policy, and ethics' (1997) 27 *Env Law* 343, which takes a mythical case before a Supreme Court and presents different judicial perspectives in a manner that is immediately accessible without being simplistic—highly recommended for raising the interest of the disinterested and uninterested student!

Another good introduction to the idea of different perspectives on the environment can be found in J. Dryzek (2005) *The Politics of the Earth: Environmental Discourses*, 2nd edn, Oxford: Oxford

University Press, which contains a fuller and deeper analysis of the range of perspectives (or discourses) than we have covered here (for example, the administrative, or bureaucratic, perspective).

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### ENVIRONMENTAL PERSPECTIVES

For a consideration of some of the issues surrounding the environmentalist perspective, have a look at C. Stone (2010) *Should Trees Have Standing? And Other Essays on Law, Morals and the Environment*, 3rd edn, New York: Oceana; D. Wilkinson (1999) 'Using environmental ethics to create ecological law' in J. Holder and D. McGillivray (eds.) *Locality and Identity: Environmental Issues in Law and Society*, Aldershot: Ashgate; and J. Holder, 'New age: rediscovering natural law' (2000) 53 *CLP* 151, particularly pp. 165–71. These all contain good ways of rethinking law in a more ecocentric fashion.

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### ECONOMIC PERSPECTIVES

A classic critique of the economic perspective can be found in M. Sagoff (2008) *The Economy of the Earth*, 2nd edn, Cambridge: Cambridge University Press. His thesis is forcefully presented in a clear and readable fashion. Sagoff covers some of these arguments in (2004) *Price, Principle and the Environment*, Cambridge: Cambridge University Press, arguing that economic valuation fails on a number of fundamental counts and that the best way of balancing competing interests is through principles that are elucidated through deliberative political processes.

In similar vein (although with different conclusions), D. Farber (1999) *Eco Pragmatism*, Chicago, Ill.: University of Chicago Press, and L. Tribe, 'Ways not to think about plastic trees: new foundations for environmental law' (1974) 83 *Yale LJ* 1315, consider the rights and wrongs of valuing nature. In particular, C. Sunstein (2002) *Risk and Reason*, Cambridge: Cambridge University Press, argues for the 'cost–benefit state' and claims that environmental laws have the capacity of killing more people than they protect. This last text prompts one word of warning: most of these originate from the USA and therefore come from a tradition where formal cost–benefit analysis is much more developed than it is in the UK.

For further reading on how decisions about conservation and development might be framed, we recommend F. Ackerman and L. Heinzerling (2004) *Priceless*, New York: New Press; P. Macnaghten and J. Urry (1998) *Contested Natures*, London: Sage; and C. Harrison, J. Burgess, and J. Clark (1999) 'Capturing values for nature' in J. Holder and D. McGillivray (eds.) *Locality and Identity: Environmental Issues in Law and Society*, Aldershot: Ashgate, as good counterpoints to the economic approaches referred to. There is also a specialist journal—*Environmental Values* (quarterly; White Horse Press)—within which much of the debate on values and sustainability is conducted.

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### PARTICIPATORY APPROACHES

The idea that participatory approaches are the best way of resolving different perspectives on the environment is gathering pace. For a discussion of the main themes, see M. Lee and C. Abbot, 'The usual suspects? Public participation under the Aarhus Convention' (2003) 66 *MLR* 80 and J. Steele, 'Participation and deliberation in environmental law: exploring a problem-solving approach' (2001) 21 *OJLS* 415.

Further reading on this issue is found at the end of Ch. 10.

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### SCIENTIFIC PERSPECTIVES

There is a plethora of material dealing with the perception of risk (including environmental risk). For an entertaining and illuminating examination of the topic, see J. Adams (1994) *Risk*, London: UCL Press, complete with idiosyncratic diagrams of angels and fish. A more difficult book (but one that is definitive

in the area) is U. Beck (1992) *Risk Society*, London: Sage, which suggests that environmental impacts and the associated risks are part of a fundamental shift in society. Also have a look at J. Steele (2004) *Risks and Legal Theory*, Oxford: Hart Publishing, especially pt III on environmental risk generally. While not necessarily an easy read, it is thought provoking and well considered.

D. Winickoff, S. Jasanoff, L. Busch, R. Grove-White, and B. Wynne, 'Adjudicating the GM food wars: science, risk and democracy in world trade law' (2005) 20 *Yale J Intl L* 81, considers the competing approaches to risk regulation on either side of the Atlantic and makes a well-argued case for taking values and public participation into account in determining what is 'sound science'. In many ways, the first part of the article is an excellent (and accessible) primer on how to think about the role of science in risk from a social science perspective, but as importantly, the article as a whole nicely considers how, in the authors' view, having regard to local cultural sensitivities in relation to matters of risk need not clash unduly with other objectives such as trade liberalization.

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### ENVIRONMENTAL PRINCIPLES

Comprehensive coverage of the form and function of environmental principles can be found in N. de Sadeleer (2002) *Environmental Principles: From Political Slogans to Legal Rules*, Oxford: Oxford University Press. This is a heavyweight work that covers not only the substantive issues, but also a deeper analysis of the role of principles in the shift from rules-based 'modernist' law to principles-based 'postmodernist' law. Another (shorter) general introduction to the area can be found in M. Doherty, 'The status of the principles of EC environmental law' (1999) 11 *JEL* 379.

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### SUSTAINABLE DEVELOPMENT

For those wanting a general introduction to sustainable development, A. Dobson (2007) *Green Political Thought*, 4th edn, London: Routledge, gives a clear overview. For more detail, see A. Dobson (1999) *Fairness and Futurity: Essays on Environmental Sustainability and Social Justice*, Oxford: Oxford University Press. On the relationship between law and sustainable development, see M. Jacobs (1999) 'Sustainable development as a contested concept' in A. Dobson (ed.) *Fairness and Futurity: Essays on Environmental Sustainability and Social Justice*, Oxford: Oxford University Press. For a critique, see A. Ross-Robertson, 'Is the environment getting squeezed out of sustainable development?' [2003] *Pub L* 249, as well as S. Hendry, 'Worth the paper that it's written on? An analysis of statutory duty in modern environmental law' [2005] *JPL* 1145, which provides a study of various statutory duties in relation to sustainable development. For the most comprehensive review of sustainable development in the UK from a legal standpoint see A. Ross (2010) *Sustainable Development Law in the UK: From Rhetoric to Reality?*, Abingdon: Earthscan.

One of the best-known critics of sustainable development is Wilfred Beckerman, a former member of the Royal Commission on Environmental Pollution. As an introduction to his work, see 'Sustainable development: is it a useful concept?' (1994) 3 *Environmental Values* 191, and a response from H. E. Daly, 'On Wilfred Beckerman's critique of sustainable development' (1995) 4 *Environmental Values* 49. A more comprehensive critique of sustainable development and the Precautionary Principle can be found in Beckerman (2002) *A Poverty of Reason: Sustainable Development and Economic Growth*, Oakland, Calif.: Independent Institute, well worth reading if only for a balanced counterpoint to the mainstream support for sustainable development.

A. Boyle and D. Freestone (eds.) (2001) *International Law and Sustainable Development*, Oxford: Oxford University Press and H. C. Bugge and C. Voigt (2008) *Sustainable Development in International and*

*National Law*, Groningen: Europa Law Publishing, cover the main legal developments of sustainable development.

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### THE PRECAUTIONARY PRINCIPLE

There is a huge amount of literature on this topic. As a starting point, try European Environment Agency (2013) *Late Lessons from Early Warnings: Science, Precaution, Innovation*, Copenhagen: EEA. This presents numerous detailed accounts of the application of the Precautionary Principle in relation to various hazards. It also reflects on the lessons learned and how they might inform the development of the principle. For an alternative view, see J. Morris (ed.) (2000) *Rethinking Risk and the Precautionary Principle*, London: Butterworth Heinemann, a collection of essays that are highly critical of the Precautionary Principle as a 'meaningless soundbite that can be used to justify just about any policy, including quite contradictory policies'.

You will have no problem identifying any number of good books and articles on law and the Precautionary Principle. Try any of: E. Fisher (2007) *Risk Regulation and Administrative Constitutionalism*, Oxford: Hart Publishing; R. Harding and E. Fisher (eds.) (1999) *Perspectives on the Precautionary Principle*, Sydney: Federation Press; T. O'Riordan and J. Cameron (eds.) (2000) *Reinterpreting the Precautionary Principle*, London: Cameron May; D. Freestone and E. Hey (eds.) (1995) *The Precautionary Principle and International Law: The Challenge of Implementation*, The Hague: Kluwer.

Shorter articles on the topic include: O.W. Pedersen, 'From Abundance to Indeterminacy: The Precautionary Principle and Its Two Camps of Custom' (2014) 3(2) *Transnational Environmental Law* 323; O. McIntyre and T. Mosedale, 'The Precautionary Principle as a norm of customary international law' (1997) 9 *JEL* 221; M.-C. Cordonnier Segger and M. Gehring, 'The WTO and precaution: sustainable development implications of the WTO Asbestos dispute' (2003) 15 *JEL* 289; E. Fisher, 'Is the Precautionary Principle justiciable?' (2001) 13 *JEL* 315. Also on precaution, Cass Sunstein's 2005 book *Laws of Fear: Beyond the Precautionary Principle*, Cambridge: Cambridge University Press, is worth reading. Instead of adopting the Precautionary Principle, Sunstein advances three causes: a narrow 'anti-catastrophe principle', whereby regulators would have to identify the worst cases and eliminate the worst of these—that is, to focus on the most serious risks; close attention to costs and benefits; and 'libertarian paternalism', which amounts to getting people to take more seriously the genuine risks that they currently ignore and to reduce their fear of trivial or non-existent risks (in effect, a kind of enforced rationalism). For a fierce attack on this book, however, see E. Fisher's review in (2006) 69 *MLR* 288. Fisher argues that Sunstein 'mischaracterises the precautionary principle, . . . mischaracterises the problems that it addresses; and . . . mischaracterises the context it applies in'.

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### ENVIRONMENTAL JUSTICE

The literature on environmental justice in the USA is vast and includes a number of very informative books and articles. A good place to start is L. W. Cole and S. Foster (2001) *From the Ground up: Environmental Racism and the Rise of the Environmental Justice Movement*, New York: New York University Press, which offers a good account of the history of environmental justice. A number of good essays are found in D. Pellow and R. Brulle (eds.) (2005) *Power, Justice and the Environment*, Cambridge: MIT Press, and a particularly good overview of the different interpretations of environmental justice can be found in R. R. Kuehn, 'A taxonomy of environmental justice' (2000) 30 *Envl L Reporter* 10681. A very good essay highlighting that although environmental justice made its way to executive levels quickly it is far from clear what the underlying causes of the injustices are, is V. Been, 'Locally undesirable land uses in minority neighbourhoods: disproportionate siting or market dynamics' (1994) 103 *Yale LJ* 1383. If you

are interested in a more theoretical (but highly informative) analysis of environmental justice D. Schlosberg (2007) *Defining Environmental Justice: Theories, Movements, and Nature*, Oxford: Oxford University Press, is excellent. The best account of environmental justice in the UK is offered in G. Walker (2011) *Environmental Justice: Concepts, Evidence and Politics*, Abingdon: Routledge. For an analysis of environmental justice and law see O. W. Pedersen, 'Environmental justice in the UK: uncertainty, ambiguity, and the law' (2011) 31(2) *Legal Studies* 279. An interesting website offering examples of perceived environmental injustices is the *So We Stand* campaign on [www.environmental-justice.com/stories/](http://www.environmental-justice.com/stories/). For the specific application of the environmental justice argument to the problem of climate change, E. Page (2006) *Climate Change, Justice and Future Generations*, Cheltenham: Edward Elgar, offers a good theoretical overview. For a specific analysis of the role which fairness plays in the climate change regime see F. Soltau (2009) *Fairness in International Climate Change Law and Policy*, Cambridge: Cambridge University Press.

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## RIGHTS

On rights issues, an excellent introduction is C. Miller (1998) *Environmental Rights: Critical Perspectives*, London: Routledge, which critically probes the value of thinking about environmental protection (both generally and in particular areas, such as air quality or nature conservation) through rights (on the creation of 'ecocentric' environmental rights from existing laws, see especially ch. 9). Equally good as a way in—although with much more of an international and comparative perspective—is A. Boyle and M. Anderson (eds.) (1996) *Human Rights Approaches to Environmental Protection*, Oxford: Oxford University Press. The opening chapter of this fine set of essays neatly locates environmental rights in the context of the evolution of rights more generally and the chapter by Merrills is highly recommended. K. Morrow, 'Worth the paper that they are written on? Human rights and the environment in the law of England and Wales' (2010) 1(1) *Journal of Human Rights and the Environment* 66, provides an overview of the role of human rights in UK environmental law and O. W. Pedersen, 'European environmental human rights and environmental rights: a long time coming?' (2008) 21 *Georgetown Int Env L Rev* 73, offers an analysis of European developments in this area. For recent and up-to-date commentary on the topic you should consult the *Journal of Human Rights and the Environment* in general. For a provocative debate on the reconceptualization of environmental law in an ecocentric context, see C. Cullinan (2011) *Wild Law*, 2nd edn, Dartington: Green Books, with a series of discursive articles discussing the pros and cons of the 'wild law' approach currently freely available online at [www.lawtext.com/lawtextweb/default.jsp?PageID=2&PublicationID=6](http://www.lawtext.com/lawtextweb/default.jsp?PageID=2&PublicationID=6). On future generations see L. Warren, 'Legislating for tomorrow's problems today—dealing with intergenerational equity' (2005) 7 *Env L Rev* 165.

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## WEBSITES

A useful repository, containing reports and updates, is the website of the UN Special Rapporteur on Human Rights and the Environment <http://srenvironment.org/>. Another useful website is that of the Global Network for the Study of Human Rights and the Environment on <http://gnhre.org/>

## CHAPTER 4: THE FORM, FUNCTION, AND ADMINISTRATION OF ENVIRONMENTAL LAW

Much of the specific reading on the different sources of law will be found at the end of the relevant chapters dealing with European law, international law, and the regulation of environmental protection. For a general introduction and a historical account of different sources of law, have a look at D. Robinson (1998) 'Regulatory evolution in pollution control' in T. Jewell and J. Steele (eds.) *Law in Environmental*

*Decision Making*, Oxford: Clarendon Press. This gives a clear picture of the development of new types of law. The relationship between EU and UK sources of law is explored in ch. 3 of C. Hilson (2000) *Regulating Pollution: A UK and EC Perspective*, Oxford: Hart Publishing. It provides a good overview of the justifications for legislating at different levels both generally, in federal/devolved countries, and more particularly, in the UK and EU.

An excellent analysis of UK environmental law and the ways in which it has developed is found in E. Scotford and J. Robinson, 'UK environmental law and its administration in 2013- achievements, challenges and prospects' (2013) 25 *JEL* 383.

The idea of administrative integration and the creation of the Environment Agency are covered in some depth in J. Steele and T. Jewell (1998) 'Law in environmental decision making' in T. Jewell and J. Steele (eds.) *Law in Environmental Decision Making*, Oxford: Clarendon Press. There is an interesting analysis of the work of the Environment Agency, and the criticisms of its role and performance, in D. Bell and T. Gray, 'The ambiguous role of the Environment Agency in England and Wales' (2002) 11(3) *Environmental Politics* 76.

The administration of Northern Ireland environmental law is discussed in S. Turner, 'Transforming environmental governance in Northern Ireland: Part One—The process of policy renewal' (2006) 18 *JEL* 55 and 'Transforming environmental governance in Northern Ireland: Part Two—The case of environmental regulation' (2006) 18 *JEL* 245; B. Jack, 'Environmental governance in Northern Ireland: returning to the drawing board' (2007) *Env L Rev* 1; and there is also useful discussion in S. Turner and C. Brennan, '[Modernising environmental regulation in Northern Ireland: a case study in devolved decision-making](#)' (2012) 63 *Northern Ireland Legal Quarterly* 509-532.

Scotland, generally, is dealt with comprehensively in M. Poustie (2007) 'The laws of Scotland' in *Stair Memorial Encyclopaedia*, London: Lexis Nexis-Butterworths and a useful collection on Wales is P Bishop and M Stallworthy (eds) (2013), *Environmental Law and Policy in Wales: Responding to Local and Global Challenges*, Cardiff: University of Wales Press. Useful shorter pieces on devolution in Scotland and Wales are G. Little, 'Scottish devolution and environmental law' (2000) 12 *JEL* 155; V. Jenkins, 'Environmental law in Wales' (2005) 17 *JEL* 207; A. Ross, H. Nash, and C. Reid, 'The implementation of EU environmental law in Scotland' (2009) 13 *Edin L Rev* 224; A. Ross and H. Nash 'European Union environmental law—who legislates for whom in a devolved Great Britain?' (2009) *PL* 564; and C. Reid (2011), 'Environment and sustainable development' in E. Sutherland, K. E. Goodaal, G. F. M. Little, and F. P. Davidson (eds.) *Law Making and the Scottish Parliament: The Early Years*, Edinburgh: Edinburgh University Press.

To get a more general sense of how devolution is evolving, try B. Hatfield 'Devolution: a national conversation?' in J. Jowell and D. Oliver (eds.) (2011) *The Changing Constitution*, 7th edn, Oxford, Oxford University Press, and P. Leyland, 'The multifaceted constitutional dynamics of UK devolution (2011) *Int J of Constitutional Law* 251. R. Macrory (1999) 'The environment and constitutional change' in R. Hazell (ed.) *Constitutional Futures: A History of the Next Ten Years*, Oxford: Oxford University Press, is interesting reading now that the ten years are up.

A. Ross, 'The UK approach to delivering sustainable development in government: a case study in joined-up working' (2005) 17 *JEL* 27, explores some of the difficulties, both in terms of the vital need for Prime Ministerial support, and in trying to 'join up' government on the basis of unclear and inconsistent objectives. Ross's work is brought together in (2011) *Sustainable Development Law in the UK: From Rhetoric to Reality?* London: Earthscan. S. Owens, 'Experts and the environment: the UK Royal Commission on Environmental Pollution 1970–2011' (2012) *JEL* 1, is a very incisive analysis of the range of functions the RCEP performed, and an assessment of its influence in practice, written by a former member. K. Morrow, 'Of babies and bathwater' (2010) 12 *Env L Rev* 179, criticizes the loss of outside

impetus for the development of environmental law created by the abolition of the Sustainable Development Commission and the RCEP.

## CHAPTER 5 – INTERNATIONAL LAW AND ENVIRONMENTAL PROTECTION

There are two excellent texts on international environmental law: P. Birnie, A. Boyle and C. Redgwell (2009) *International Law and the Environment*, 3rd edn, Oxford: Oxford University Press, and P. Sands, A. Fabra, R. MacKenzie, and J. Peel (2012) *Principles of International Environmental Law*, 3rd edn, Cambridge: Cambridge University Press. The former is a little more doctrinal, while the latter is slightly more comprehensive, especially on the tools of international environmental law, and contains very useful bibliographic sources (in much more depth than we can provide here). D. Bodansky (2011) *The Art and Craft of International Environmental Law*, Cambridge, Mass.: Harvard University Press, offers an excellent and concise account of how international environmental law works and how it got to where it is today (and is also recommended for what it has to say about environmental regulation generally). A good but slightly less comprehensive text is U. Beyerlin and T. Marauhn (2011) *International Environmental Law*, Oxford: Hart Publishing. For updates on recent case law developments from a range of courts and tribunals the 'Significant International Environmental Cases' by James Harrison published in the *JEL* are highly instructive.

In terms of up-to-date and reflective commentary across the whole range of topics that fall within this chapter and beyond, the magnum opus is now D. Bodansky, J. Brunnée, and E. Hey (eds.) (2007) *The Oxford Handbook of International Environmental Law*, Oxford: Oxford University Press, which covers a huge range of topics and is a further reading list in its own right. Further edited collections that contain valuable contributions include: A. Boyle and D. Freestone (eds.) (1999) *International Law and Sustainable Development*, Oxford: Oxford University Press; R. Hurrell and D. Kingsbury (eds.) (1992) *The International Politics of the Environment*, Oxford: Clarendon Press (placing international law in its wider context); on compliance, J. Cameron, J. Werksman, and P. Roderick (eds.) (1996) *Improving Compliance with International Environmental Law*, London: Earthscan (which combines general discussion and examples, many about climate change); J. Werksman (ed.) (1996) *Greening International Institutions*, London: Earthscan.

On the work of the International Court of Justice, there is a symposium on the *Gabčíkovo-Nagymaros* case in J. Brunnée and E. Hey (eds.) (1997) *Yearbook of International Environmental Law*, Oxford: Oxford University Press. R. Clark and M. Sann (eds.) (1996) *The Case Against the Bomb*, Camden, NJ: Rutgers University School of Law at Camden, provides a first-hand account of the ICJ's *Nuclear Weapons Advisory Opinion* and is an excellent way in to understanding the working of the ICJ. The *MOX* dispute, which is central to understanding the relationship between EU and international law, is discussed in R. Churchill and J. Scott, 'The *MOX* plant litigation: the first half-life' (2004) 53(3) *ICLQ* 643, and N. Laurantos (2005) *EELR* 213. For a discussion on the recent proposals for the establishing of an international environmental court see OW Pedersen, 'An International Environmental Court and International Legalism' (2012) *JEL* 547.

The link between human rights and the environment continues to be explored by commentators and scholars and a good source for those seeking to explore the subject further is D. Anton and D. Shelton, (2011) *Environmental Protection and Human Rights*, New York: Cambridge University Press. The ongoing work by the United Nations Special Rapporteur is available on his website on <http://www.ohchr.org/EN/Issues/Environment/SREnvironment/Pages/SREnvironmentIndex.aspx>. The subject even has its own dedicated journal now in *Journal of Human Rights and the Environment* available on <http://www.elgaronline.com/jhre>.



On international trade and the environment, good starting points are the relevant chapters in Birnie, Boyle, and Redgwell (2009) *International Law and the Environment*, and Sands, Fabra, MacKenzie and Peel (2012) *Principles of International Environmental Law*. S. Charnovitz, 'The WTO's environmental progress' (2007) 10 *JIEL* 685, considers the extent to which environmental concerns are becoming increasingly important within the WTO. If you are really ambitious, you might want to tackle the *EU/Biotech* dispute in some depth. Helpful works written before the decision are J. Peel, R. Nelson, and L. Godden (2005) 'GMO trade wars: the submissions in the US–EC *Biotech* dispute in the WTO', available online at [www.austlii.edu.au/au/journals/MelbJIL/2005/6.html](http://www.austlii.edu.au/au/journals/MelbJIL/2005/6.html), and D. Winickoff, S. Jasanoff, L. Busch, R. Grove-White, and B Wynne, 'Adjudicating the GM food wars: science, risk and democracy in world trade law' (2005) 20 *Yale J Intl L* 81 (the latter is based on an amicus ('friend of the court') brief to the WTO by a group of very eminent risk scholars). On the final decision (which runs to a thousand pages and needs some filleting before you get into it), see D. Prevoist, 'Opening Pandora's box: the Panel's findings in the EC-Biotech Products dispute' (2007) 34 *Legal Issues of European Integration* 67.

For keeping up to date, the *Review of European Community and International Environmental Law* (RECIEL), *Transnational Environmental Law and Environmental Policy and Law* (EP&L) are regular and informative. The *Yearbook of International Environmental Law* (published annually; Oxford: Oxford University Press) contains both sectoral and country reports (including the implementation of international environmental law), recent primary materials, and a useful bibliography, as well as lengthy articles. *International Legal Materials* (ILM) provides most of the major treaties and decisions, although the Internet is now the main way of keeping up to date.

## CHAPTER 6 – THE EUROPEAN UNION AND THE ENVIRONMENT

### EU ENVIRONMENTAL LAW—GENERAL

Still a very readable introduction to the subject is J. Scott (1998) *EC Environmental Law*, London: Longmans, a text, the strength of which in discussing enduring issues such as the arguments for and against EU intervention remains, notwithstanding its datedness on the law. It is nicely complemented by M. Lee (2014) *EU Environmental Law* (second edition) Oxford: Hart Publishing, which is especially strong on analysing sustainable development, and on assessing both traditional and new legal tools in the EU context. More comprehensive coverage is given in the two leading general texts: J. Jans and H. Vedder (2010) *European Environmental Law: After Lisbon*, 4th edn, Groningen: Europa, and L. Krämer (2012) *EU Environmental Law*, 7th edn, London: Sweet and Maxwell. Krämer in particular does not hold back from pointing out both what he sees as the importance of the EU as a law-maker and enforcement body but also its weaknesses. For detailed information on the relationship between environmental protection and free trade in the EU, see N de Sadeleer, *EU Environmental Law and the Internal Market* (Oxford, Oxford University Press, 2014).

Many of the leading articles, capturing the development of EU environmental law, are gathered together in L. Krämer (ed.) (2003) *European Environmental Law*, London: Ashgate; R Macrory (ed.) (2005) *Reflections on 30 Years of EU Environmental Law: A High Level of Protection?*, Groningen: Europa; and M. Onida (ed.) (2005) *Legal Essays in Honour of Ludwig Krämer*, Groningen: Europa. Together, they provide a wide range of essays on enduring and topical issues, and on sectoral achievements. A number of the essays in R. Macrory (2010) *Regulation, Enforcement and Governance of Environmental Law*, Oxford: Hart Publishing, reflect the author's long-standing interest in EU environmental law, especially its better enforcement. Krämer (2002) *Casebook on EC Environmental Law*, Oxford: Hart Publishing, analyses fifty leading cases and sets them in context, and is highly recommended.

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## PRINCIPLES

R. Macrory, I. Havercroft, and R. Purdy (2004) *Principles of European Environmental Law*, Groningen: Europa, gives a good overview (and see also the further sources on principles cited in Ch. 3—especially de Sadeleer). Two particularly cutting-edge analyses of EU environmental law principles are V. Heyvaert, ‘Facing the consequences of the Precautionary Principle in European Community law’ (2006) 31(2) *Eur LR* 185 (contrasting cases in which the challenge has been based on under-precaution with those based on over-precaution) and E. Fisher ‘Opening Pandora’s box: contextualising the precautionary principle in the European Union’ in M. Everson and E. Vos (eds.) (2009), *Uncertain Risks Regulated*, Routledge: Cavendish. (Both of these are well worth reading even if your particular interest is not precaution.)

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## INTERNAL TRADE AND THE ENVIRONMENT

F. Jacobs, ‘The role of the European Court of Justice in the protection of the environment’ (2006) 18 *JEL* 185, written by the Advocate-General in a number of leading trade and environment cases, is especially good on how the Court has promoted environmental values, particularly as against trade freedom and concerns about discrimination between Member States. See also N De Sadeleer, *EU Environmental Law and the Internal Market* (Oxford University Press, 2014), a work dedicated to the potential conflicts and confluences that exist between harmonization and environmental protection measures, but which also provides an excellent overview of EU environmental law in general. A very interesting work considering the role of the CJEU in the development and enforcement of EU environmental law is Veerle Heyvaert, Justine Thornton and Richard Drabble, ‘With reference to the environment: the preliminary reference procedure, environmental decisions and the domestic judiciary’ (2014) 130 *LQR* 413.

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## IMPLEMENTATION AND ENFORCEMENT

C. Hilson (2004) ‘Legality review of member State discretion under Directives’ in T. Tridimas and P. Nebbia (eds.) *European Union Law for the Twenty-First Century: Volume 1*, Oxford: Hart Publishing, uses a number of examples from environmental Directives to question the limits of Member States’ discretion in implementation. M. Hedemann-Robinson (2006) *Enforcement of European Union Environmental Law: Legal Issues and Challenges*, London: Routledge-Cavendish, is a comprehensive and thoughtful analysis that benefits from the author’s first-hand experience of the Commission. L. Krämer, ‘Statistics on environmental judgments by the EC Court of Justice’ (2006) 18 *JEL* 407, stresses some of the shortcomings in enforcement, especially the great length of time that most cases take (the picture may be slightly better now), and is a good antidote to the Commission’s annual implementation and enforcement guide (available via the Commission’s website). K. Lenaerts and J. Gutiérrez-Fons, ‘The General System of EU Environmental Law Enforcement’ (2011) 30 *Yearbook of European Law* 3, is a very good general survey of a wide range of enforcement issues covered in this chapter. B. Jack, ‘Enforcing Member State compliance with EU environmental law: a critical evaluation of the use of financial penalties’ (2011) 23 *JEL* 73, and I. Kilbey, ‘The interpretation of Article 260 TFEU (ex 228 EC)’ (2010) 35 *Eur LR* 370, both consider financial sanctions.

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## EU ENVIRONMENTAL POLICY

A. Jordan and A. Adelle (eds.) (2012) *Environmental Policy in the European Union*, 3rd edn, London: Earthscan, gathers together the leading journal articles (especially recommended is the editor’s article on ‘The implementation of EU environmental policy: a policy problem without a political solution?’; also found in (1999) 17 *Environment and Planning C: Government and Policy* 69). See also C. Knill and D.

Liefferink (2007) *Environmental Politics in the European Union: Policymaking, Implementation and Patterns of Multilevel Governance*, Manchester: Manchester University Press. Excellent introductions to how national policy style evolved in response to EU membership are P. Lowe and S. Ward (eds.) (1998) *British Environmental Policy and Europe*, London: Routledge, and A. Jordan (2002) *The Europeanisation of British Environmental Policy*, London: Palgrave, while A. Jordan (2007) 'Environmental policy' in I. Bache and A. Jordan (eds.) *The Europeanization of British Politics*, Basingstoke: Palgrave Macmillan, looks at the interpenetration of the EU into national policymaking and vice versa. K. Holzinger, C. Knill, and A. Schäfer, 'Rhetoric or reality? New governance in EU environmental policy' (2006) 12(3) *ELJ* 403, is a detailed empirical study that calls into question some of the claims that the EU is undergoing a transition to the use of second-generation policy tools.

Keeping up to date, IEEP Manual of European Environmental Policy (online) is a library acquisition. It spans law and policy, and analyses the history and scope of most environmental Directives, and how they are implemented at national level, and is updated regularly. Other ways of keeping up to date are obviously through specialist journals: the *European Environmental Law Review* (EELR; monthly; The Hague: Kluwer) combines news and articles, as does the *Review of EC and International Environmental Law* (tri-annually; Oxford: Blackwell), which has excellent coverage of case law. The annually published *Yearbook of European Environmental Law* (Oxford: Oxford University Press) also has a useful annual survey, but its real strength is the quality of its articles.

Finally, on whether, from a British perspective, the EU has been a force for good environmentally, read A. Jordan (2006) *The Environmental Case for Europe: Britain's European Environmental Policy*, CSERGE Working Paper EDM 06–11, available online at [www.cserge.ac.uk/sites/default/files/edm\\_2006\\_11.pdf](http://www.cserge.ac.uk/sites/default/files/edm_2006_11.pdf).

## CHAPTER 7: THE REGULATION OF ENVIRONMENTAL PROTECTION

The range of reading on regulation generally and on environmental regulation specifically is vast, and so the selection of further reading depends largely on the nature of any further research.

### REGULATORY THEORY

Those interested in finding out more about regulatory theory should look to more general texts on regulation. Two of the most accessible and relevant texts are: B. Morgan and K. Yeung (2007) *Introduction to Law and Regulation: Text and Materials*, Cambridge: Cambridge University Press; and R. Baldwin and M. Cave (2011) *Understanding Regulation*, 2nd edn, Oxford: Oxford University Press.

### HISTORY OF ENVIRONMENTAL REGULATION

For historical analyses of environmental regulation, see J. McLoughlin and E. Bellinger (1993) *Environmental Pollution Control: An Introduction to Principles and Practice of Administration*, London: Graham and Trotman, which is a very readable (if a little dated) account that combines legal and administrative insights; and D. Robinson (1998) 'Regulatory evolution in pollution control' in T. Jewell and J. Steele (eds.) *Law in Environmental Decision Making*, Oxford: Clarendon Press, which traces the evolution of regulation and examines the reasons for regulatory changes. J. Harman, 'Environmental regulation in the 21st century' (2004) 6 *Env L Rev* 141, was written when Harman was Chairman of the Environment Agency in England and Wales and captures the perspective of the regulator (and is probably very typical of a regulator's viewpoint generally).

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#### REGULATORY STANDARD-SETTING IN DIFFERENT CONTEXTS

On the various types of environmental standards (and on environmental decision-making in general), see the 21st Report of the Royal Commission on Environmental Pollution (1998) *Setting Environmental Standards*, Cm. 4053. The nature and role of environmental standards are discussed in G. Lubbe-Wolff, 'Efficient Environmental Legislation—On Different Philosophies of Pollution Control in Europe' (2001) 13 *JEL* 79; and there is a historic analysis of the apparent conflict between the UK and European use of standards in N. Haigh (1990) *EEC Environmental Policy and Britain*, 2nd edn, London: Longman. A broader examination of the policy differences or similarities between the UK and Europe can be found in P. Lowe and S. Ward (eds.) (1998) *Britain Environmental Policy and Europe: Politics and Policy in Transition*, London: Routledge; and R. Wurzel (2002) *Environmental Policymaking in Britain, Germany and the European Union*, Manchester, Manchester University Press.

On the 'British approach' to pollution control, see D. Vogel (1986) *National Styles of Regulation*, Ithaca, NY: Cornell University Press, which, despite its age, still provides a thought-provoking comparison between UK and US approaches. More recent coverage can be found in R. Kagan and L. Axelrad (eds.) (2000) *Regulatory Encounters*, Berkeley, Calif.: University of California Press.

The issue of 'how to regulate' does not only arise in national and EU law. Good sources for thinking about this in international environmental law are R. B. Stewart (2007) 'Instrument choice' in D. Bodansky, J. Brunnee, and E. Hay (eds.) *The Oxford Handbook of International Environmental Law*, Oxford: Oxford University Press, ch. 8; and D. Bodansky (2010), *The Art and Craft of International Environmental Law*, Cambridge: Harvard University Press, ch. 4, esp. pp. 71–85.

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#### CHOICE OF REGULATORY INSTRUMENT

A very helpful study of the different types of regulatory technique, with a comparison in terms of accountability, efficiency, and effectiveness, can be found in C. Hilson (2000) *Regulating Pollution: A UK and EC Perspective*, Oxford: Hart Publishing. R. Macrory, 'Regulating in a risky environment' (2001) *CLP* 619, analyzes command and control regulation as against newer forms of regulatory instrument. Also highly recommended are the essays in R. Macrory (2010) *Regulation, enforcement and Governance of Environmental Law*, Oxford: Hart Publishing. For a defence of command regulation, see W. Wagner, 'The triumph of technology-based standards' (2000) *U Ill L Rev* 83.

D. Driesen (2009) 'Alternatives to regulation?: Market mechanisms and the environment' in M. Cave, R. Baldwin, and M. Lodge (eds.) *Oxford Handbook on Regulation*, Oxford: Oxford University Press, provides an excellent comparison of economic and direct regulation. For a justification of economic instruments over command and control regulation, see B. Ackerman and R. Stewart, 'Reforming environmental law: the democratic case for market incentives' (1988) *Colum J Env L* 171; and more recently R. Stewart (2000) 'Economic incentives for environmental protection: opportunities and obstacles' in R. Revesz, P. Sands, and R. Stewart (eds.) *Environmental Law: The Economy and Sustainable Development*, Cambridge: Cambridge University Press. Contrast these with D. Driesen (2006) 'Economic instruments for sustainable development' in B. Richardson and S. Wood (eds.) *Environmental Law for Sustainability*, Oxford: Hart Publishing, which argues that traditional economic tools do not work well in providing for the transformative technological innovation needed for sustainable development.

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#### COMPLEX REGULATORY SOLUTIONS TO COMPLEX ENVIRONMENTAL PROBLEMS

There is a growing literature on the need to deploy optimal combinations of regulatory instruments in responding to complex environmental challenges: see, for example, N. Gunningham and P. Grabosky (1998) *Smart Regulation: Designing Environmental Policy*, Oxford: Clarendon Press, esp. ch. 6.

On optimal enforcement strategies, see R. Baldwin and J. Black, 'Really Responsive Regulation' (2008) 71(1) *Modern Law Review* 59; and for a detailed analysis of environmental enforcement, see C. Abbot (2009) *Enforcing Pollution Control: Strengthening Sanctions and Improving Deterrence*, Oxford: Hart Publishing. Although it is tempting to think of regulation as being a two-way relationship between polluter and regulator, the reality is more complex. R. Kagan, N. Gunningham and D. Thornton, 'Explaining corporate environmental performance: how does regulation matter?' (2003) 37(1) *Law & Society Review* 51, offers an empirical study of pulp and paper mills in various (English-speaking) countries and looks at the impact of regulation versus other influences on corporate behaviour. The empirical research on enforcement mentioned at the end of Ch. 8 should also be mentioned here (because, in theory, compliance is a proxy for effectiveness).

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#### SELF-REGULATION

The use of self-regulation for environmental protection is critiqued by S. E. Gaines and C. Kimber, 'Redirecting Self-Regulation' (2001) 13(2) *JEL* 157. Private environmental agreements are covered in E. Orts and K. Deketelaere (2000) *Environmental Contracts: Comparative Approaches to Regulatory Innovation in the United States and Europe*, The Hague: Kluwer Law International; J. Verschuuren, 'EC environmental law and self-regulation in the member States: in search of a legislative framework' (2000) 1 *Yearbook of European Environmental Law* 103; and A. Ross and J. Rowan-Robinson, 'Behind closed doors: the use of agreements in the UK to protect the environment' (1999) *Env L Rev* 82. There is an interesting study of the implementation and effect of environmental management systems in A. Gouldson and J. Murphy (1998) *Regulatory Realities*, London: Earthscan, particularly ch. 4.

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#### NEW REGULATORY PRACTICES

For an examination of newer approaches to regulation, see J. Scott and J. Holder (2006) 'Law and new environmental governance in the European Union' in G. de Búrca and J. Scott (eds.) *Law and New Governance in the EU and US*, Oxford: Hart Publishing, ch.8; and N. Gunningham, 'Environment law, regulation and governance: shifting architectures' (2009) *JEL* 179. More specific discussion can be found in O. Perez (2008) 'The new universe of green finance: from self-regulation to multi-polar governance' in O. Dilling, M. Harberg and G. Winter (eds.) *Responsible Business: Self-Governance and Law in Transnational Economic Transactions*, Oxford: Hart Publishing, ch. 6. An overview of the use of adaptive approaches alongside other tools, especially in responding to uncertainty, can be found in J. Jones, 'Regulatory design for scientific uncertainty' (2007) *JEL* 347.

Examples of 'nudging' in environmental regulation are analysed in D. L. Costa and M. E. Kahn, 'Energy conservation "nudges" and environmentalist ideology: evidence from a randomized residential electricity field experiment' (2013) 11(3) *Journal of the European Economic Association* 680. On behaviourally-informed regulation generally, see A. Alemanno and A. Sibony (2015) *Nudge and the Law: A European Perspective*, Oxford: Hart Publishing. R. Lee, 'Regulation and localism' (2011) 23 *ELM* 166, explores the regulatory tensions between 'nudge theory' and the current Government's localism agenda.

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### CHAPTER 8: ENVIRONMENTAL CRIME AND ENFORCEMENT

#### GENERAL

There are no recommended general texts on environmental crime. An excellent place to start though would be C. Abbot (2009) *Enforcing Pollution Control Regulation*, Oxford: Hart Publishing, which offers a comprehensive examination of theory and regulatory approaches as well as comparisons with other

common law jurisdictions. Two US books—M. Clifford (1998) *Environmental Crime: Enforcement, Policy and Social Responsibility*, Gaithersburg, Md: Aspen; and Y. Situ and D. Emmons (2000) *Environmental Crime: The Criminal Justice System's Role in Protecting the Environment*, Thousand Oaks, Calif.: Sage—provide a general introduction. There is an interesting comparative perspective of US and UK approaches to environmental crime in W. Wilson (1998) *Making Environmental Laws Work*, Oxford: Hart. In particular, chs. 6 and 7 focus on the use of the criminal law, and civil and administrative law enforcement and P. Bishop, 'Criminal law as a preventative tool of environmental regulation: compliance versus deterrence' (2009) *NILQ* 279, offers the argument that the criminal law does have a role to play when it comes to deterrence.

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## EU

We do not consider the European aspect of environmental crime in this chapter, partly for reasons of space. But the idea is also relatively underdeveloped in comparison with other areas of environmental law. For an overview of the issues, have a look at F. Comte, 'Criminal environmental law and Community competence' [2003] *EELR* 147; M. Faure, 'European environmental criminal law: do we really need it?' [2004] *EELR* 18; R. Pereira, 'Environmental criminal law under the first pillar' [2007] *EELR* 254; the collection of essays in F. Comte and L. Krämer (eds.) (2004) *Environmental Crime in Europe: Rules of Sanctions*, Groningen: Europa, and M. Hedemann-Robinson, 'The emergence of European Union environmental criminal law: a quest for solid foundations—Parts I and II (2008) 16 *Environmental Liability* 71 and 111.

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## DEFINITIONAL ISSUES

On a practical level, the House of Commons Environment Audit Committee's Sixth Report of Session 2003–4, *Environmental Crime and the Courts*, provides the context for many of the issues in this chapter. The report examines some of the contemporary problems of enforcing and sanctioning environmental crime, and comes up with some interesting suggestions and solutions for addressing them. Finally, for an empirical survey of environmental crime and related opinions, see the Environment Justice Project (2004) *Environmental Justice*, especially Pt III (see also Web Links at the end of this chapter).

There is not a huge amount of literature on the definitional aspects of environmental crime. There have been some attempts to develop 'green' criminology or a theory of environmental crime. M. Lynch and P. Stretsky, 'The meaning of green: contrasting criminological perspectives' (2003) 7(2) *Theor Crim* 217, and R. White, 'Environmental issues and the criminological imagination' (2003) 7(4) *Theor Crim* 483, comprise a two-part series on the definition and goals of environmental criminal law. In addition, a special issue of the journal *Theoretical Criminology* (*Theor Crim*) focused on the different perspectives on environmental crime: see 'For a green criminology' (1998) 2(2) *Theor Crim*. Readers may also find P. Lowe, J. Clark, S. Seymour, and N. Ward (1997) *Moralizing the Environment*, London: UCL Press, an interesting study of the way in which shifts in the perception of the harm caused by agricultural pollution brought about tighter regulation and enforcement.

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## ENFORCEMENT

Anyone looking for some wider reading material on the enforcement of environmental law will find a number of good works and there are additional texts that cover regulatory enforcement generally, but which can be extremely useful when considering the theory of enforcement. In the former category, there is G. Richardson, A. Ogus, and P. Burrows (1982) *Policing Pollution: A Study of Regulation and Enforcement*, Oxford: Clarendon Press; K. Hawkins (1984) *Environment and Enforcement: Regulation and*

*the Social Definition of Pollution*, Oxford: Clarendon Press; and B. Hutter (1988) *The Reasonable Arm of the Law*, Oxford: Clarendon Press, all of which provide an examination of environmental enforcement officers' experience of enforcing the law in the real world. In the latter category, K. Hawkins (2002) *Law as a Last Resort: Prosecution Decision Making in a Regulatory Agency*, Oxford: Oxford University Press, examines the process of prosecutions brought by the Health and Safety Executive, and I. Ayres and J. Braithwaite (1992) *Responsive Regulation*, Oxford: Oxford University Press, as the main text explains, provided an alternative view of regulatory enforcement (we hesitate to call it the 'third way'). B. Lange, 'Compliance construction in the context of environmental regulation' (1999) 8 *Social and Legal Studies* 549, brings out the complexity of the very concept of compliance in an environmental context; N. Gunningham, 'Enforcing environmental regulation' (2011) 23 *JEL* 169, offers a good overview of the various approaches to enforcement applied by enforcement agencies across the world and D. Farber, 'Taking slippage seriously: non-compliance and creative compliance in environmental law' (1999) 23 *Harv Envtl LR* 297, although using US examples, is helpful.

Other relevant material includes J. Rowan-Robinson and A. Ross, 'The enforcement of environmental regulation in Britain' [1994] *JPL* 200. There are two articles that examine the practices and opinions of industrial pollution control enforcement officers: A. Mehta and K. Hawkins, 'IPC and its impact: perspectives from industry' (1998) 10 *JEL* 61; C. Lovat, 'Regulating IPC in Scotland: a study of enforcement practice' (2004) 16 *JEL* 49. For a historical account of enforcement of nature conservation rules see D. Withrington and W. Jones (1992) 'The enforcement of nature conservation legislation: the protection of SSSIs' in W. Howarth and C. Rodgers (eds.) *Agriculture, Conservation and Land Use*, Aberystwyth: University of Wales Press. A very useful empirical study is found in *Business Perspectives on Approaches to Securing Compliance* by Greenstreet Berman available at [www.greenstreet.co.uk/publication/business-perspectives-on-approaches-to-securing-compliance-br0103/](http://www.greenstreet.co.uk/publication/business-perspectives-on-approaches-to-securing-compliance-br0103/).

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## SANCTIONS

There has been an upsurge of interest in the different sanctions for environmental crime. The weight of opinion and evidence suggests that current criminal penalties (largely fines) are too low, and that they are an inadequate response to environmental offences. The best-aggregated data source can be found in C. DuPont and P. Zakkow (2003) *Trends in Environmental Sentencing in England and Wales*, London: DEFRA. The Environmental Justice Project's report previously referred to also has some empirical data. For a general introduction to the *issues*, read A. Ogus and C. Abbot, 'Sanctions for pollution: do we have the right regime?' (2002) 14 *JEL* 283, and the short response from top prosecutors in the Environment Agency, R. Navarro and D. Stott, 'A brief comment: sanctions for pollution' (2002) 14 *JEL* 299.

Extensive analysis of the use of civil sanctions can be found in the literature building up to the introduction of the new regime. See M. Woods and R. Macrory (2003) *Environmental Civil Penalties: A More Proportionate Response to Breach?*, London: University College London (available online at [www.ucl.ac.uk/laws/environment/index.shtml?cp\\_home](http://www.ucl.ac.uk/laws/environment/index.shtml?cp_home)); the Government's Consultation Document (2006) *Regulatory Justice: Sanctions in a post-Hampton World* (available online at [www.bis.gov.uk](http://www.bis.gov.uk)); and R. Macrory (2006) *Regulatory Justice: Making Sanctions Effective (Final Report)*, Cabinet Office (also available at [www.berr.gov.uk](http://www.berr.gov.uk)). N. Parpworth, K. Thompson, and B. Jones, 'Environmental offences: utilising civil penalties' (2005) *JPL* 560, provides a detailed survey of the literature relating to the use of civil penalties in criminal cases and O. W. Pedersen, 'Environmental enforcement undertakings and possible implications: responsive, smarter or rent seeking?' (2013) *MLR* 319, offers an analysis of the use

of enforcement undertakings by the Environment Agency. For a useful summary of the new rules see C. Abbot, 'Legislative comment: The Regulatory Enforcement and Sanctions Act 2008' (2009) *Env L Rev* 38.

Other useful articles on this topic include M. Grekos, 'Environmental fines: all small change' [2004] *JPL* 1330, and R. Malcolm, 'Prosecuting for environmental crime: does crime pay?' (2002) 14(5) *ELM* 289. Another approach is the 'name and shame' policy adopted by the Environment Agency. A discussion of this can be found in P. De Prez, 'Beyond judicial sanctions: the negative impact of conviction for environmental offences' (2000) 2(1) *Env L Rev* 11. Finally, P. de Prez, 'Excuses, excuses: the ritual trivialisation of environmental prosecutions' (2000) 12 *JEL* 65, provides a real-world view of the ways in which companies address environmental crime and the mitigation they put before a court when sentencing. It is perhaps unsurprising to learn that companies play down their culpability.

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#### WEB LINKS

In recent years, it seems that enforcement and prosecution data has become less accessible. Materials that were once available online from DEFRA's and the Environment Agency's websites are no longer available. One conclusion to draw from this would be that making such data readily available to the public is no longer a priority. Many of the reports which are referred to in this chapter can be accessed through the Department for Business Innovation and Skills justice web page at [www.bis.gov.uk/](http://www.bis.gov.uk/). Details of the Environment Agency's enforcement statement and guidance is available at [www.environment-agency.gov.uk/](http://www.environment-agency.gov.uk/). The Centre for Corporate Accountability at [www.corporateaccountability.org](http://www.corporateaccountability.org) is aimed largely at health and safety legislation, but is a good source of information of corporate liability.

### CHAPTER 9: PUBLIC PARTICIPATION

#### GENERAL READING

The best starting point is M. Lee and C. Abbot, 'The usual suspects? Public participation under the Aarhus Convention' (2003) 66 *MLR* 80, which gives a first-rate overview of the issues from both practical and theoretical viewpoints.

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#### ACCESS TO ENVIRONMENTAL INFORMATION

If you are interested in the topic of access to information generally, have a look at H. Brooke (2004) *Your Right to Know: How to Use the Freedom of Information Act and Other Access Laws*, London: Pluto Press, which is a great guide to using the Act to get hold of information that you want. It is also backed up by a good web page (see 'Web links' at the end of this chapter). For a more 'legal' guide to the area, see P. Coppel, 'Environmental information: the new regime' [2005] *JPL* 12, which provides a comprehensive guide to the operative provisions of the Regulations and the related role of the Freedom of Information Act 2000. The Royal Commission on Environmental Pollution has long campaigned for free access to environmental information. See, in particular, its Fifth Report (1975) *Air Pollution Control: An Integrated Approach*, Cmnd 6371, and its Tenth Report (1984) *Tackling Pollution: Experience and Prospects*, Cmnd 9149. The latter gives a good introductory account of the arguments for and against disclosure.

A general discussion of the issues can be found in C. Kimber (1998) 'Understanding access to environmental information: the European experience' in T. Jewell and J. Steele (eds.) *Law in Environmental Decision Making*, Oxford: Oxford University Press. For an empirical study on the effectiveness of access to information, see J. Rowan-Robinson, A. Ross, W. Walton, and J. Rothnie, 'Public access to environmental information: a means to what end?' [1996] 8 *JEL* 19.



## PUBLIC PARTICIPATION

The starting point for any discussion of public participation in environmental law should be P. McAuslan (1980) *The Ideologies of Planning Law*, Oxford: Pergamon Press. The general thrust of the book is that planning law is a product of the tension between three competing 'ideologies' aimed at promoting private property, the public interest, and public participation. Although now out of date, it provides a good background and historical introduction to many of the issues. Deliberative theory is discussed in J. Bohman and W. Rehg (1997) *Deliberative Democracy: Essays on Reason and Politics*, Cambridge, Mass.: MIT Press. Chapter 3 in J. Holder and M. Lee (2007) *Environmental Protection, Law and Policy*, Cambridge: Cambridge University Press, is good on the rationale and reasons behind public participation. J. Steele, 'Participation and deliberation in environmental law: exploring a problem-solving approach' (2001) 21 *OJLS* 415, is more theoretical, but thought-provoking (and argues that participation does make for better decisions). In similar vein, K. Getliffe, 'Proceduralisation and the Aarhus Convention: does increased participation in the decision-making process lead to more effective EU environmental law?' (2002) *Env L Rev* 101, considers the basic rationales for increasing public participation. The impact of Aarhus on European institutions is considered in V. Rodenhoff, 'The Aarhus Convention and its implications for the "institution" of the European Community' (2002) *RECIEL* 343.

## CHAPTER 10: ACCESS TO ENVIRONMENTAL JUSTICE AND THE ROLE OF THE COURTS

### ACCESS TO ENVIRONMENTAL JUSTICE

The issue of access to environmental justice has gained a great deal of recent attention from both practitioners and academics. An excellent overview is found in J. Maurici, 'Aarhus access to justice and civil sanctions update' (2011) 23 *ELM* 170. A number of important reports highlight some of the problems in relation to the Aarhus Convention. For instance, Working Group on Access to Environmental Justice (2008) *Ensuring Access to Environmental Justice in England and Wales* questions the compatibility between the 'costs follow the event' rule and the Aarhus Convention (see also the Working Group's follow-up report *Ensuring Access to Environmental Justice in England and Wales: Update Report* (2010). Lord Justice Jackson (2010) *The Review of Civil Litigation Costs: Final Report* argues that one way cost shifting would be the most obvious way for the UK to comply with the Convention. Another useful report is the consultation produced by the Ministry of Justice (2015) relating to environmental PCOs, 'Costs Protection in Environmental Claims'.

The Environmental Law Foundation (2010) *Costs Barriers to Environmental Justice* lends empirical support to the claim that high costs act as a deterrent and academic commentary is found in K. Morrow, 'Worth the paper that they are written on? Human rights and the environment in the law of England and Wales' (2010) 1(1) *Journal of Human Rights and the Environment* 66. On the question of costs and standing before the CJEU, very helpful discussion is to be found in C Poncelet, 'Access to justice in environmental matters - does the European Union comply with its obligations?' (2012) 24 *Journal of Environmental Law* 287.

### AN ENVIRONMENTAL COURT

Interesting to read (if you can get hold of a copy) is M. Grant (ed.) (1993) *Environmental Litigation: Towards an Environmental Court?*, London: UKELA, which, far from being a historical document, demonstrates that, although the arguments may have become more sophisticated, the principles of the debate have moved on little over the last couple of decades. Other articles include: Sir Harry Woolf, 'Are the judiciary environmentally myopic?' (1992) 4 *JEL* 1; R. Carnwath, 'Environmental enforcement: the

need for a specialist court' [1992] *JPL* 799; P. McAuslan, 'The role of courts and other judicial-type bodies in environmental management' (1991) 2 *JEL* 195; G. McLeod (1995) 'Do we need an environmental court in Britain?' in D. Robinson and J. Dunkley (eds.) *Public Interest Perspectives in Environmental Law*, London: Wiley Chancery; M. Grant (2000) *Environmental Court Project: Final Report*, London: DETR; R. Macrory and M. Woods (2003) *Modernising Environmental Justice: Regulation and the Role of an Environmental Tribunal*, London: UCL; The Environmental Justice Project (2004) *Environmental Justice*; the 23rd Report of the Royal Commission on Environmental Pollution (2002) *Environmental Planning*, Cm. 5459, and most recently R. Macrory (2011) *Consistency and Effectiveness: Strengthening the New Environmental Tribunal*, London: University College London.

## CHAPTER 11: PRIVATE LAW AND ENVIRONMENTAL PROTECTION

### GENERAL TORT TEXTS

If you want to appreciate English tort law further, then an excellent text is J. Steele (2014) *Tort Law: Text, Cases and Materials* 3<sup>rd</sup> ed OUP.

### SPECIFIC TORTS

J. Murphy (2010) *The Law of Nuisance*, Oxford: Oxford University Press provides a thoughtful analysis of much of the law covered in this chapter. We also recommend M. Lee, 'What is private nuisance?' (2003) 119 *LQR* 298. Both offer thoughts about how the law is developing generally (not just in relation to the environment). B. Pontin, 'Private Nuisance in the Balance: *Coventry v Lawrence (No 1 and No 2)* (2015) 27 *JEL* 119-137 offers an excellent contextualization of the important Supreme Court Decision.

### THE FUNCTION OF TORT

Although not a traditional textbook, J. Conaghan and W. Mansell (1998) *The Wrongs of Tort*, 2nd edn, London: Pluto, discusses the economic and doctrinal underpinnings to tort law, and has an excellent critique of the limitations of tort law for environmental protection. Against this, look at J. Wightman, 'Nuisance: the environmental tort?' (1998) 61 *MLR* 870, a particularly good analysis not only of *Hunter v. Canary Wharf*, but of private nuisance generally. A stronger defence of nuisance law over regulation from a critically economic perspective is D. Campbell, 'Of Coase and corn: a (sort of) defence of private nuisance' (2000) *MLR* 197. For some, tort law is just a compensation mechanism that, in an age of regulation, should not be relied on to provide socially good things such as environmental protection: P. Cane, 'Are environmental harms special?' (2001) 13 *JEL* 3, argues this in a very readable fashion. P. Cane, 'Using Tort Law to Enforce Environmental Regulations?' (2002) 41 *Washburn LJ* 427, explains this view in more detail.

### SOCIO-LEGAL AND HISTORICAL ISSUES

An excellent place to start is B. Pontin (2013) *Nuisance Law and Environmental Protection* Whitney: Lawtext. Leading journal articles on the common law and the environment from a broadly socio-legal perspective include: J. McLaren, 'Nuisance law and the industrial revolution: some lessons from social history' (1983) *OJLS* 155; J. Brenner, 'Nuisance law and the Industrial Revolution' (1974) *J Leg Stud* 403; A. Ogus and G. Richardson, 'Economics and the environment: a study of private nuisance' (1977) *CLJ* 284; B. Pontin, 'Tort law and Victorian government growth: the historiographical significance of tort in the shadow of chemical pollution and factory safety regulation' (1998) *OJLS* 661. B. Pontin, 'Integrated pollution control in Victorian Britain: rethinking progress within the history of environmental law' (2007)

19 *JEL* 173, shows how, even in the nineteenth century, attempts were made to make tort more of an effective tool against pollution and that this was being argued for by regulators (which may require some rethink of the traditional historical accounts provided by writers such as McLaren and Brenner). H. Marlow Green, 'Common law, property rights and the environment: a comparative analysis of historical developments in the United States and England and a model for the future' (1997) 30 *Cornell Intl LJ* 541, examines how the US state of Oregon gave an expansive interpretation to what is direct harm, allowing it to decide more actions under trespass and hence under stricter liability, and the advantages of this from an environmental protection point of view.

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#### PRIVATE LAW AND PUBLIC REGULATION

A good starting point in relation to this subject is a strong set of essays assessing the contribution of private law collected together in J. Lowry and R. Edmunds (eds.) (2000) *Environmental Protection and the Common Law*, Oxford: Hart Publishing as well as M. Lee, 'The Public Interest in Private Nuisance' (2015) *CLJ* 329. The interface between private law and public regulation raises legal issues such as the effect of a regulatory licence on a private law claim. But it also raises wider questions about the relative merits of private and public law controls. Discussion of both aspects is contained in J. Steele, 'Private law and the environment: nuisance in context' (1995) 15 *LS* 236, and 'Remedies and remediation: foundational issues in environmental liability' (1995) *MLR* 615. D. McGillivray and J. Wightman (1997) 'Private rights, public interests and the environment' in T. Hayward and J. O'Neill (eds.) *Justice, Property and the Environment*, Aldershot: Ashgate, explores the scope for private law to defend alternative, unofficial conceptions of the public interest. Both P. Bishop and V. Jenkins, 'Planning and nuisance: revisiting the balance of public and private interests in land use development' (2011) *JEL* 285, and M. Lee, 'Tort law and regulation: planning and nuisance' (2011) *JPL* 986, consider this issue in the context of recent case law and statutory developments.

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#### CONTEMPORARY TOPIC AREAS

C. Rodgers, 'Liability for the release of GMOs into the environment' (2003) *CLJ* 371, looks at the range of possible tort actions to this area, including comment on the (then) draft EC Civil Liability directive. In contrast to Rodgers, D. Howarth, 'Civil liability for GM farming: unanswered questions' (2004) *Env Liability* 137, wonders whether the use of civil liability was dismissed too readily. Also worth reading is the report of the Royal Commission on Environmental Pollution (2005) *Crop Spraying and the Effects on Health of Residents and Bystanders*, ch. 4 of which is short and accessible, and considers the potential application of civil liability rules and the difficulty of using any particular legal action to address this problem—for example, the limitations of private nuisance if property rights are not affected (as would be the case with bystanders).

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#### THE EU ENVIRONMENTAL LIABILITY DIRECTIVE

G. Winter, J. Jans, R. Macrory and L. Kramer, 'Weighing up the EC Environmental Liability Directive' (2008) *JEL* 163, is a concise overview of the strengths and weakness of the Directive, with some early discussion about implementation. V. Fogelman, 'The Environmental Liability Directive and its impacts on English environmental law' [2006] *JPL* 1443, gives a comprehensive account of the Directive and how it differs from existing national approaches. The Sixth Report of the House of Commons Environment, Food and Rural Affairs Committee (2007) *Implementation of the Environmental Liability Directive, 2006–7*, HC 694, covers the key areas in which there is discretion in implementation (and is highly critical of the Government for not proposing to go beyond the bare minimum requirements). One of the key features

of the Liability Directive is damages for ecological losses; on this see E. Brams, 'Liability for damage to public national resources under the 2004 EC Environmental Liability Directive' (2005) *Env L Rev* 90. M. Lee, "'New" environmental liabilities: the purpose and scope of the contaminated land regime and the Environmental Liability Directive' (2009) 11(4) *Env L Rev* 264–8, compares these two regimes (and is a useful reminder that the Directive, like the contaminated land regime, is more about administrative obligations than private rights).

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#### INTERNATIONAL LIABILITY RULES

The general international environmental law texts mentioned at the end of Ch. 7 all cover this area. A. Boyle, 'Globalising environmental liability: the interplay of national and international law' (2005) 17 *JEL* 3, is a particularly valuable source for keeping abreast of recent thinking. R. S. J. Tol and R. Verheyen, 'State responsibility and compensation for climate change damages' (2004) 32 *Energy Policy* 1109, links these areas. Climate change liability is considered more fully in Ch. 15.

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### CHAPTER 12: TOWN AND COUNTRY PLANNING

#### PLANNING POLICY

The high policy content of planning law makes planning policy texts more valuable than normal. Y. Rydin (2011) *The Purpose of Planning*, London: Policy Press, gives a very concise and accessible introduction. A lengthier treatment of general issues is B. Cullingworth and V. Nadin (2006) *Town and Country Planning in Britain*, 14th edn, London: Routledge—environmental law students studying planning law in any depth will profit greatly from, at a minimum, chs. 1 and 2. The extent of the changes to planning that have occurred since the 1947 Act are captured in B. Cullingworth (ed.) (1999) *British Planning: 50 Years of Urban and Regional Policy*, London: Athlone Press, with valuable chapters by Profs. Grant and Purdue on compensation issues and the role of the courts, respectively. Sustainability issues are the theoretical focus of S. Owens and R. Cowell (2011) *Land and Limits*, 2nd edn, London: Routledge. Both G. Monbiot (2000) *Captive State*, London: Macmillan, and R. Girling (2005) *Rubbish! Dirt on Our Hands and Crisis Ahead*, London: Transworld, contain chapters taking a journalistic, and often provocative, look at planning in action.

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#### PLANNING LAW

The two main texts are V. Moore and M. Purdue (2014) *A Practical Approach to Planning Law*, 13th edn, Oxford: Oxford University Press, which contains useful practical insights, but focuses more on the exposition of principle through case law, rather than on policy considerations, and R. Duxbury (2012) *Telling and Duxbury's Planning Law and Procedure*, 15th edn, London: Butterworths, which is readable, but relatively less comprehensive in coverage. Both are bang up to date and include coverage of the Localism Act 2011. However, neither is now priced for the student market. Still the most useful conceptual framework for thinking about planning law is P. McAuslan (1980) *Ideologies of Planning Law*, Oxford: Pergamon Press, especially chs. 1 and 6. The incorporation of sustainable development concerns is discussed by M. Stallworthy (2002) *Sustainability, Land Use and the Environment*, London: Cavendish, especially chs. 4, 6, and 7. Planning is a particular strength of J. Holder and M. Lee (2007) *Environmental Protection: Text and Materials*, Cambridge: Cambridge University Press—see especially chs. 12, 13, and (for a case study on wind energy) 16. M. Purdue, 'An overview of the law on public participation in planning law and whether it complies with the Aarhus Convention' (2005) 17 *ELM* 107, is a useful bridge between Ch. 10 and Chs. 12 and 13, and is highly recommended.

For a complete and up-to-date account of the law, the looseleaf *Encyclopaedia of Planning Law*, London: Sweet and Maxwell, includes all of the relevant statutory and non-statutory material, and is updated monthly, with insightful annotations and analysis. The other pre-eminent source is the *Journal of Planning and Environment Law (JPL)*, which contains information on legislative and policy developments, Ministerial decisions and case law analysis, as well as articles (often with a practice orientation).

For some discussion of the NPPF and recent changes to planning policy, see the special edition of the *Journal of Planning and Environment Law* from 2013 entitled “Untangling the Golden Thread” which contains a number of articles discussing the role of the presumption in favour of sustainable development. For some analysis of how this presumption, and the duty to cooperate, interact with local decision-making, see E Lees and E Shepherd, “Incoherence and incompatibility in planning law” (2015) 7 *International Journal of Law in the Built Environment* 111.

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## SCOTLAND

M. Poustie, ‘Planning reforms in Scotland’ [2007] *JPL* 489 looks at the Planning etc. (Scotland) Act 2006, which, among other things, uses the term ‘development management’ rather than ‘development control’ to signify that planning ought to have a less negative remit. The 2006 Act also provides the framework for a planning hierarchy explicitly distinguishing national, major, local, and minor (permitted) developments.

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## DEVELOPMENT PLANNING AND THE LOCALISM ACT REFORMS

Although they are in the process of being abolished, it is still worth mentioning sources on regional spatial strategies (RSSs) and the theoretical rationales for these, which are discussed in M. Tewdwr-Jones, ‘Spatial planning, practices and cultures’ [2004] *JPL* 560. A report of some influence behind the emergence of RSSs was the 23rd Report of the Royal Commission on Environmental Pollution (2002) *Environmental Planning*, ch. 10 of which discusses integrated spatial strategies. For comment on the Localism Act 2011 and associated National Planning Policy Framework see M. Ellis, ‘Green growth: do blue and yellow really make green?’ [2011] *JPL* 1433, and J. Brearley, ‘What’s wrong with planning—and is it about to be fixed? A crie de coeur’ [2012] *JPL* 534. Both A. Layard, ‘The Localism Act 2011: what is “local” and how do we (legally) construct it?’ (2012) *Env L Rev* 134, and H. Bullock, ‘Localism and growth’ (2011) 13 *JPL* 9 (Occasional Paper series), are very good sources not just on recent changes but on the theoretical and ideological underpinnings. W. Le-Las and E. Shirley, ‘Does the planning system need a “tea party”?’ [2012] *JPL* 239, provides some short but provocative thoughts about why, at a time when local government is run on increasingly unaccountable lines, “localism” is a smokescreen to distract from the public interest becoming indistinguishable from the private interest.

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## DEVELOPMENT CONTROL, CONDITIONS, AND OBLIGATIONS

P. Booth (2003) *Planning by Consent*, London: Routledge, traces the origins of development control back to early nuisance law and notions of property rights, and charts developments up to the time of its writing, putting into perspective concerns about delays in reaching planning decisions. A foundational article for thinking about the main mechanisms of development control is D. Callies and M. Grant, ‘Paying for growth and planning gain: an Anglo–American comparison of development conditions, impact fees and development agreements’ (1991) 23 *Urban Lawyer* 221, which, with the introduction of the community infrastructure levy alongside planning obligations, remains topical. A. Samuels [2002] *JPL* 514, considers the legality of ‘no car’ planning obligations, but is valuable generally on the legality of development control measures to reduce environmental impacts.

On the moral dimension to planning agreements, see J. Alder [1990] *JPL* 880. R. Grove-White, 'Land use law and the environment' [1991] *JLS* 32, explains the importance of the planning system to shaping the debate on some of the 'first generation' of modern environmental controversies, such as nuclear plants. On planning and public perceptions of risks, N. Stanley, 'Public concern: the decision makers' dilemma' [1998] *JPL* 919; R. Kimball, 'Risk, jurisprudence and the environment' [2000] *JPL* 359; and C. Hilson, 'Planning law and public perceptions of risk' [2004] *JPL* 1638 are all recommended.

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#### MAJOR INFRASTRUCTURE PLANNING

B. Kelly, 'The Planning Bill: implications of the proposals for a new regime for major infrastructure for democracy and delivery' [2008] *JPL* 1 (Supp), puts forward the argument that what became the provisions of the Planning Act 2008 strengthened decision-making and accountability (the author worked for the Government of the time). H. Ellis, 'Planning and the people problem (1)' [2008] *JPL* 75 (Supp), profoundly disagrees (the author was planning adviser to Friends of the Earth at the time of writing). For a more dispassionate analysis see J. Maurici, 'Judicial review under the Planning Act 2008' [2009] *JPL* 446.

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#### PLANNING AND CLIMATE CHANGE

A valuable read in thinking about how planning law could better protect the environment, with reference to climate change, is the 26th Report of the Royal Commission on Environmental Pollution (2007) *The Urban Environment*. P. Waddy, 'Sustainable design and planning: the new policy imperative' [2006] *JPL* 4 (Dec supp), and S. Tromans, 'Climate change, energy and planning' [2007] *JPL* 357, consider some of the steps that are already being taken to reduce emissions, and the key challenges in making things such as zero carbon development a reality.

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#### PLANNING AND OTHER SECTORAL ISSUES

To varying degrees, planning is an important part of the law relating to other sectors covered in this book. This is very much the case with, for example, climate change and landscape, areas in which planning law plays a primary role in responding to the problems. In areas such as general pollution control, waste management, and nature conservation, planning generally plays a slightly different role, in the sense that there are laws in these areas dealing with these issues, but there is a degree of overlap with planning law. Each of the sectoral chapters considers the role that planning law plays. C. Miller (ed.) (2001) *Planning and Environmental Protection*, Oxford: Hart Publishing, is a valuable supplement to this book's sectoral coverage of planning law.

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### CHAPTER 13: ENVIRONMENTAL ASSESSMENT

Anyone looking for a thoroughly engaging introduction to the basic issues involved in environmental impact assessment (EIA) and the initial scepticism with which these might be viewed by governments should look no further than the chapter by Chris Wood, a leading authority, in C. Miller (ed.) (2001) *Planning and Environmental Protection*, Oxford: Hart Publishing, complete with fictional *Yes, Minister*-type discussion. Other good introductory accounts of EIA are J. Glasson, R. Therivel, and A. Chadwick (2011) *Introduction to Environmental Impact Assessment*, 4th edn, London: Routledge, and C. Wood (2002) *Environmental Impact Assessment: A Comparative Review*, 2nd edn, Harlow: Pearson. The journals *Impact Assessment and Project Appraisal* (formerly *Project Appraisal*), *Environmental Impact Assessment Review* and the *Journal of Environmental Assessment Policy and Management* can also be recommended especially for critical insights and understanding how EIA works in practice.

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#### EIA LAW—EU AND NATIONAL

Of the more legalistic literature, J. Alder, 'Environmental impact assessment: the inadequacies of English law' (1993) *JEL* 203, provides not only an excellent and accessible account of some of the early case law and implementation problems, but also an enduring framework through which to think about EIA law and its realization. P. Stookes, 'Getting to the real EIA' (2003) *JEL* 141, provides a good critical legal analysis of EIA as a whole—with a particular focus on public participation—and questions, in particular, the way in which 'significance' is defined in law and understood in practice. F. Botchway, 'Privy to unsustainable arguments in the Belize dam case' (2006) *Env L Rev* 144, is a good critique of this case which could inform your thinking about question 4 in the Questions section of this chapter. R. McCracken, 'EIA, SEA and AA: where are we now?' (2010) *JPL* 1515, is a very incisive overview of the field.

S. Tromans (2012) *Environmental Impact Assessment*, 2nd edn, Haywards Heath: Bloomsbury is the most up-to-date general text on the law but this is now missing the amendments made by the 2014 Directive. J. Holder (2004) *Environmental Assessment*, Oxford: Oxford University Press, provides a sophisticated legal analysis of competing perspectives on environmental assessment, focusing on the contested areas of alternatives, prediction, and participation, while J. Holder and D. McGillivray (eds.) (2007) *Taking Stock of Environmental Assessment*, London: Routledge-Cavendish, contains a number of essays that consider how EIA law might develop further. Particularly accessible are the chapter by Jones, Jay, Slinn, and Wood, which is an excellent survey of how this area has developed over the years, and the chapter by Krämer, which gives a critical, and sometimes cynical, view of EIA in the EU. IEMA (2011) *The State of Environmental Impact Assessment Practice in the UK*, is a very thorough overview which gives a good sense of how the Directive is used in practice and which points to many of the contentious legal issues.

Further articles on more specific areas considered in this chapter, in addition to those already cited, are B. McClosky, 'The contemporary dominance of environmental law', Commercial Bar Association, May 2011 and D. McGillivray, 'Mitigation and screening for environmental assessment (2011) *JPL* 1539.

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#### STRATEGIC ENVIRONMENTAL ASSESSMENT

S. Marsden, *Strategic Environmental Assessment in International and European Law: A Practitioner's Guide* (2008) admirably fills the gap in terms of a book-length text on the law of SEA. R. Therivel (2010) *Strategic Environmental Assessment in Action*, 2nd edn, London: Earthscan, although less legally focused, considers the SEA Directive and is good on practical examples. Useful articles include that by R. McCracken, 'EIA, SEA and AA: where are we now?' (2010) *JPL* 1515; I. Gilder, 'The impact of the SEA Directive' (2005) *JPL* (Occ Supp) 120; J. Robinson and D. Elvin, 'The assessment of plans and programmes' (2004) *JPL* 1028 (which provides excellent commentary on what some of the vague phrases in the SEA Directive might mean when applied to the UK).

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#### ENVIRONMENTAL ASSESSMENT IN INTERNATIONAL LAW

Useful chapter-length coverage of the development and status of EIA in international law, across a wider range of regimes than we can cover here, can be found in P. Birnie, A. Boyle, and C. Redgewell (2009) *International Law and the Environment*, 3rd edn, Oxford: Oxford University Press, and in P. Sands and J. Peel (2012) *Principles of International Environmental Law*, 3rd edn, Cambridge: Cambridge University Press. Both consider the status of EIA as a binding norm of international environmental law in more depth than we can here and the latter also gives a nice account of early objections to EIA by developing

countries at the time of the 1972 UN Conference at Stockholm, their concerns being that, if EIA were to require consultation with other states, then developed states might use it to block projects in developing countries. N. Craik (2008) *The International Law of Environmental Impact Assessment: Process, Substance and Integration*, Cambridge, Cambridge University Press now provides book-length treatment.

## CHAPTER 14: ENVIRONMENTAL PERMITTING AND INTEGRATED POLLUTION PREVENTION AND CONTROL (IPPC)

Integrated pollution prevention and control (IPPC) is a relatively 'dry' topic that appears to be dominated by procedural and technical matters (though actually underneath this is a lot of politicking and some really big public health concerns) and most of the early works are now slightly out of date as a result of the introduction of the Industrial Emissions Directive. Having said that, some materials remain very useful. On the IPPC Directive from a legal point of view see N. Emmott and N. Haigh, 'Integrated pollution prevention and control: UK and EC approaches and possible next steps' [1996] *JEL* 301; M. Doppelhammer, 'More difficult than finding your way around Chinatown? The IPPC Directive and its implementation' (2000) *EELR* 199.

For a useful comparison between the Industrial Emissions Directive and the IPPC Directive, see A. Farmer, 'Revising IPPC: incremental change rather than a radical overhaul of EU industrial emissions policy' (2008) *Env L Rev* 258 (note though that this article was written before the final Directive was adopted). Another useful source is European Environmental Bureau (2008) *A Push for a Cleaner Industrial Production* as well as *New Features under the Industrial Emissions Directive* (2011) also by the EEB. Both reports are available online at [www.eeb.org/](http://www.eeb.org/). There is a study of the background to the Sevilla process and the writing of Best Available Techniques (BAT) Reference (BREF) documents in B. Lange, 'From boundary drawing to transitions: the creation of normativity under the EU Directive on Integrated Pollution Prevention and Control' (2002) 8(2) *ELJ* 246, and an excellent and accessibly written (given the subject matter) book-length treatment in B. Lange (2008) *Implementing EU Pollution Control*, Cambridge: Cambridge University Press. J. Scott, 'Flexibility in the implementation of EC environmental law' [2000] *Yearbook of European Environmental Law* 56, considers the IPPC Directive in terms of the wider 'proceduralization' of EU environmental law and the same author's 'The multi-level governance of climate change' in P. Craig and G. de Burca (2011) *The Evolution of EU Law*, Oxford: Oxford University Press is a good discussion of the IE Directive v EUETS Directive issue, as is R. Macrory 'Weighing up the performance' (2011) *JEL* 311. A good discussion of some of the problems associated with the manner in which BAT is developed is found in C. Abbot and M. Lee 'Economic Actors in EU Environmental Law' 2015 *34 Yearbook of European Law* 26.

For historical interest, there are a few articles on the system of IPC that are worth looking at. A. Mehta and K. Hawkins, 'IPC and its impact: perspectives from industry' (1998) 10 *JEL* 61, is an empirical study of the effect of the regime upon industry; a similar approach (although with a greater focus on enforcement practice) is taken in C. Lovat, 'Regulating IPC in Scotland' (2004) 16 *JEL* 48. M. Purdue, 'Integrated pollution control and the Environmental Protection Act 1990: a coming of age for environmental law?' [1991] 54 *MLR* 534, deals with the significance of the introduction of the IPC system, in terms of its impact upon environmental standard setting. A further source of some interest here is B. Pontin, 'Integrated pollution control in Victorian Britain: rethinking progress within the history of environmental law' (2007) 19(2) *JEL* 173, which puts the case that there was more integration than is generally acknowledged.

There is, as yet, little general literature on environmental permitting. E. Scotford and J. Robinson, 'UK Environmental Legislation and Its Administration in 2013 – Achievements, Challenges and Prospects'



(2013) 25 *JEL* 383 touches briefly on the system and E. Kirk and K. Blackstock, 'Enhanced decision making: balancing public participation against "better regulation" in British environmental permitting regimes' (2011) *JEL* 97, examines the public participation parts of the regime. A general though thoughtful discussion on the use of permits in environmental law is found in C. Reid, 'Regulation in a Changing World: Review and Revision of Environmental Permits' (2008) 67 *CLJ* 126. The best place to start reading further about environmental permitting is the guidance that has been produced. There is 'core guidance' that explains the general procedures (available online at <https://www.gov.uk/government/publications/environmental-permitting-guidance-core-guidance--2>)

## CHAPTER 15: CLIMATE CHANGE, OZONE DEPLETION, AND AIR QUALITY

### CLIMATE CHANGE—GENERAL AND POLICY

K. Anderson (2012), 'Climate change going beyond dangerous—brutal numbers and tenuous hope' in *What Next Volume III: Climate, Development and Equity* (at <http://whatnext.org>) is highly accessible to anyone approaching this topic for the first time and sets out better than anyone the issues and the daunting nature of the challenge. There is seemingly no end of books on this subject, but we can strongly commend C. Hamilton (2010) *Requiem for a Species: Why We Resist the Truth About Climate Change*, London: Earthscan. Chapter 1 of this, in particular, is recommended. Dieter Helm (2012) *The Carbon Crunch: How We're Getting Climate Change Wrong—and How to Fix it*, New Haven: Yale University Press, is written by one of the UK's most astute analysts. In terms of shorter articles, read G. Monbiot, 'Climate change: a crisis of collective denial' (2005) *ELM* 57, and J. Lanchester, 'Warmer, warmer' (2007) 29(6) *London Review of Books*, which reviews the recent literature, such as by the IPCC and that by Monbiot, in a highly engaging way.

A. Meyer (2000) *Contraction and Convergence: The Global Solution to Climate Change*, Schumacher Briefing No. 5, Dartington: Green Books, sets out a theoretically neat and, in some respects, increasingly influential way of reducing emissions globally, converging ultimately on per capita quotas, which the author argues respect issues of fairness as between developed and developing states (there is an associated website: [www.gci.org.uk](http://www.gci.org.uk)).

HM Treasury and Cabinet Office (2006) *The Economics of Climate Change* (the Stern Review) has been hugely influential not only in the UK, where it was commissioned, but globally. The full report, as well as summaries, is available online at [www.webarchive.nationalarchives.gov.uk/+http://www.hm-treasury.gov.uk/sternreview\\_index.htm](http://www.webarchive.nationalarchives.gov.uk/+http://www.hm-treasury.gov.uk/sternreview_index.htm). For discussion see L. Warren, 'Global climate change: a Stern response' (2007) *Env L Rev* 77.

### INTERNATIONAL LAW AND CLIMATE CHANGE

For a comprehensive introduction to climate change law see C. Carlane, et al (Eds) (2016) *The Oxford Handbook of International Climate Change Law* Oxford; OUP. This lengthy collection of essays deals with all the key characteristics of the legal response to climate change with both international and national coverage

If you want to understand the complexity of negotiating an international agreement with insights of the role of governmental and non-governmental actors, you should read I. Mintzer and J. Leonard (eds.) (2004) *Negotiating Climate Change: Inside Story of the Rio Convention*, Cambridge: Cambridge University Press. This book reveals the extent to which principles are traded and compromise attained. For tracking more recent developments we suggest looking at one of the number of legal journals that are devoted to climate change, including *Climate Law* and the *Carbon and Climate Law Review*.

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#### CLIMATE CHANGE—GENERAL EU SOURCES

A. Jordan, D. Huitema, H. van Asselt, T. Rayner and F. Berkhout (eds.) (2010) *Climate Change Policy in the European Union*, Cambridge: Cambridge University Press, is a strong collection of essays, of which the scene-setting chapter by Jordan and Rayner, 'The evolution of climate policy in the European Union: an historical overview' and the chapter by Haug and Jordan, 'Burden sharing: distributing burdens or sharing efforts?' are particularly recommended. D. Helm 'EU climate-change policy—a critique' in D. Helm and C. Hepburn (eds.) (2009) *The Economics and Politics of Climate Change*, Oxford: Oxford University Press, also provides a very thoughtful platform for thinking about the issues generally.

In terms of more legal sources, C. Carlarne (2010) *Climate Change Law and Policy: EU and US Approaches*, Oxford: Oxford University Press, provides good book-length treatment. J. Scott 'The multi-level governance of climate change' in P. Craig and G. de Burca (eds.) (2011) *The Evolution of EU Law*, Oxford: Oxford University Press, in the author's customary fashion, takes a number of important areas within the field such as the EUETS/IPPC tension, and the use of biofuels, to shed light on the complexity of the legal issues more generally: thoroughly recommended. V. Heyvaert, 'Governing climate change: towards a new paradigm for risk regulation' (2011) *MLR* 817, is also recommended.

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#### EU EMISSIONS TRADING

Most of the sources just mentioned include coverage of the EUETS. M. Peeters, 'Emissions trading as a new dimension to European environmental law: the political agreement of the European Council on greenhouse gas allowance trading' (2003) *ELR* 82, is good on the origins. R. Baldwin, *Regulation Lite: The Rise of Emissions Trading*, LSE Law, Society and Economy Working Papers 3/2008 (available online), considers not just the effectiveness of trading but also about its scrutiny, transparency, and accountability, and why these factors should not be overlooked in the rush to find mitigation solutions. R. Macrory, 'Weighing up the performance' (2011) *JEL* 311, discusses the inter-relationship between trading and permitting. S. Caney, 'Markets, morality and climate change: what, if anything, is wrong with emissions trading?' (2010) 15(2) *New Pol Econ* 197, is a good place to start if you are thinking more about the ethical issues. For a deeper more theoretical analysis of the place of emission trading schemes within the regulatory toolbox, see S. Bogojevic (2013) *Emissions Trading Schemes: Markets, States and Law* London; Bloomsbury Publishing.

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#### EU—RENEWABLES

A. Sharman and J. Holmes, 'Evidence-based policy or policy-based evidence gathering? Biofuels, the EU and the 10% target' (2010) 20 *Environmental Policy and Governance* 309, interrogates the drivers behind the creation of the 10 per cent target and critically assesses its merit, not only in light of the environmental sustainability motivations for EU energy policy, but also against the Precautionary Principle and the EU's own guidelines on the collection and use of expertise. It is also worth looking at 'EU ducks mandatory energy efficiency targets for 2020', ENDS Report 2011, 433, p. 50.

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#### GENERALLY ON UK POLICY AND ON THE 2008 ACT

M. Stallworthy, 'Legislating against climate change: a UK perspective on a Sisyphean challenge' (2009) *MLR* 412, is a good general overview. N. Schoon, 'It's a hard act to follow on climate change' *ENDS* 2009, 408, pp. 35–7, is also accessible. A good contrast is between the optimism of D. Kennedy, 'The UK's Climate Change Act: opportunities and challenges in building a low carbon economy' (2011) *ELM* 1 and R. Pielke, 'The British Climate Change Act: a critical evaluation and proposed alternative approach' (2009) 4 *Env Research Letters* 1, which criticizes the use of targets, arguing that these do not help to decarbonize

the economy and are bound to be missed. There is a summary of UK measures up to 2011 in T. Townsend et al. (2011) *GLOBE Climate Legislation Study*, Globe International and LSE which is a compendious study of national and regional legislation.

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#### CLIMATE LITIGATION

Jolene Lin, 'Climate change and the courts' (2012) *LS 35*, is a very good starting point because it tries to break down the cases based on the motivation for bringing them, which might be because there is no regulation or what regulation there is inadequate or inadequately enforced, or to articulate concerns.

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#### INTERNATIONAL LAW, AND OTHER AIR AND ATMOSPHERIC PROBLEMS

A good single chapter, which gives more depth than we can on the range of international law issues considered in this chapter, is I. Rowland (2007) 'Atmosphere and outer space' in D. Bodansky J. Brunnée, and E. Hey (eds.) *The Oxford Handbook of International Environmental Law*, Oxford: Oxford University Press. R. Benedick (1998) *Ozone Diplomacy*, Cambridge, Mass.: Harvard University Press, is widely regarded as the definitive insiders account of the international negotiations, and O. Yoshida (2001) *The International Legal Regime for the Protection of the Stratospheric Ozone Layer*, The Hague: Kluwer, is also recommended. P. Okowa (2000) *State Responsibility for Transboundary Air Pollution in International Law*, Oxford: Oxford University Press, provides a general overview of the topic.

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#### AIR POLLUTION

An interesting overview of the historical background to air pollution in the UK can be found in P. Brimblecombe (1987) *The Big Smoke: History of Air Pollution in London Since Mediaeval Times*, London: Routledge, which traces legislative developments in the context of social, industrial, and economic change. An introduction to the issues that also considers the challenges for the future is T. Williamson and L. Murley (eds.) (2003) *The Clean Air Revolution: 1952–2052*, Brighton: NSCA. D. Hughes, N. Parpworth, and J. Upson (1998) *Air Pollution Law and Regulation*, Bristol: Jordans, is now very dated, but still useful background. For an overview of the ClientEarth litigation have a look at U. Taddei, 'A right to clean air in EU law? Using litigation to progress from procedural to substantive environmental rights', (2016) *Env LR 3*.

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### CHAPTER 16: CONTAMINATED LAND

Contaminated land is a specialist area and this is reflected in the relative paucity of the academic writing on the subject. The starting point for any understanding of the contaminated land regime is the DEFRA (2012), *Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance*, which provides as clear a picture as possible (given the complexity of the provisions) of the way in which the law should work in practice. In addition to this a number of materials are relevant, although you will need to exercise caution with the ones that are written before the 2012 statutory guidance. An overview of the changes introduced by the 2012 guidance though is E. Lees, 'The contaminated land regime – new guidance and a new philosophy?' (2012) *Env L Rev* 267. On wider issues related to contaminated land, there is one work that stands head and shoulders above the rest: S. Tromans and R. Turrell-Clarke (2008) *Contaminated Land*, 2nd edn, London: Sweet and Maxwell, provides a comprehensive coverage of the pre- and post-Pt 2A law, including precedents, and practical matters such as commercial and property considerations.

Other than these general works, the articles tend to concentrate on particular aspects of the contaminated land regime. There is an excellent overview of the problems of allocating liability for contaminated land in D. Lawrence and R. Lee, 'Permitting uncertainty: owners, occupiers and responsibility for remediation' (2003) 66 *MLR* 261 and P. Catney et al., 'Dealing with contaminated land in the UK through "development managerialism"' (2006) *J Env Pol & Planning* 331, offers a good generalist assessment of the regime. Other articles focus on other elements of the regime, ranging from the definition of contaminated land in risk assessment in R. Kimblin, 'Risk, jurisprudence and the environment' (2000) *JPL* 359, to a general overview in D. Woolley, 'Contaminated land: the real world' (2002) *JPL* 5, and S. Vaughan, 'The contaminated land regime: still suitable for use?' (2010) *JPL* 142, argues that despite the lack of 'regulatory success', Pt 2A has acted as a 'knowledge driver'. Although there is not much coverage of European initiatives on contaminated land in this chapter (for reasons that are spelt out in the relevant section), there are some moves towards developing European policy. A. Layard, 'The Europeanisation of contaminated land' (2004) *Env L Rev* 97 summarizes the position, while S. Christie and R. Teeuw, 'Policy and administration of contaminated land within the EU' (2000) *Eur Env* 24 gives a comparative perspective. See also M. Lee, "'New" environmental liabilities: the purpose and scope of the contaminated land regime and the Environmental Liability Directive' (2009) 11 *Env L Rev* 264, for a comparison between the two regimes.

There have been a number of articles that discuss the impact of the rules on the practice of environmental law, and in the sale and purchase of contaminated land. This is a real issue, as can be seen in S. Payne, 'Clean-up and indemnity: a postscript to Cambridge Water' (2003) 15 *JEL* 202, which analyses a case dealing with the contractual allocation of liability for contamination arising out of the *Cambridge Water* decision. Other articles are a little specialist, dealing with the drafting of warranties and indemnities to transfer or limit liability post-sale. If that is what you are interested in, then have a look at any one of the following: B. Adams, 'Contaminated land: the new clean-up regime takes hold' (2000) 11 *PLC* 29; V. Fogelman, 'Transferring remediation liabilities in commercial transactions' (2001) 13 *ELM* 83; A. Thomson, 'Environmental indemnities: controlling exposure' (2002) 13 *PLC* 43.

For a stimulating examination of the problems of trying to regulate the clean-up of contaminated land while taking note of market effects (the stumbling block for the ill-fated Contaminative Uses Register), see J. Steele, 'Remedies and remediation: issues in environmental liability' (1995) 58 *MLR* 615.

If you are interested in a comparative approach, you may wish to analyse the operation of the Superfund legislation in the USA. This legislation has been the subject of much criticism, but it does illustrate a different way of approaching the problem. A good set of essays on the topic is found in R. Revesz and R. B. Stewart (eds.) (1995) *Analyzing Superfund: Economics, Science and Law*, Washington, DC: Resources for the Future. There is also a lot of literature in US journals on the topic. A few that may be of interest and which can be sourced through one of the electronic databases (for example, Westlaw) are J. Lyons, 'Deep pockets and CERCLA: should Superfund be abolished?' (1987) *Stan Envtl LJ* 6, 271; C. Meyer, 'Does minimizing expenditures for CERCLA site remediation increase the future public abatement costs?' (1993) 9 *J Nat Resources & Envtl L* 381; E. James, 'An American werewolf in London: applying the lessons of Superfund to Great Britain' (1994) 19 *Yale J Intl L* 349. Comparatively, another interesting source is T. Field, 'Liability to remedy asbestos pollution' (2006) *JEL* 479, which considers a case in which the South African High Court held that national environmental law did not extend to historical pollution, because this infringed the principle that law should not be retroactive (although, arguably, principles central to the environmental legislation, such as environmental justice principles, pointed the other way).

## CHAPTER 17: WATER POLLUTION AND WATER QUALITY

### WATER LAW

Comprehensive surveys of the law relating to water quality, including EU and international law, are J. H. Bates (looseleaf, updated) *Water and Drainage Law*, London: Sweet and Maxwell, and W. Howarth and S. Jackson (2011) *Wisdom's Law of Watercourses*, 6th edn, London: Sweet and Maxwell. W. Howarth and D. McGillivray (2001) *Water Pollution and Water Quality Law*, Crayford: Shaw and Sons, is increasingly out of date, but has quite detailed historical coverage and chapter-by-chapter bibliographies that may serve as a useful springboard to further research. The *Journal of Water Law* (WL; Lawtext) is the specialist periodical, and contains both current awareness of UK and EU developments, and articles (many of which relate to developments globally).

### INTERNATIONAL LAW

D. Freestone and S. Salman (2007) 'Ocean and freshwater resources' in D. Bodansky, J. Brunnee, and E. Hey (eds.) *Oxford Handbook of International Environmental Law*, Oxford: Oxford University Press, is an excellent starting point for exploring this further. More comprehensive treatment can be found in R. Barnes, D. Freestone and D. Ong (eds.) (2006) *The Law of the Sea: Progress and Prospects*, Oxford: Oxford University Press, a collection that goes well beyond the relatively narrow range of international law issues that we cover, and in the relevant chapters of Birnie, Boyle, and Redgewell, and of Sands and Peel (see 'Further Reading' to Ch. 6).

### EU LAW

More detail on the specific Directives can be found in the general works already mentioned and those works on EU environmental law mentioned at the end of Ch. 7. Chapter 7 in Ludwig Krämer (2011) *EU Environmental Law*, 7th edn, London: Sweet and Maxwell, is especially incisive on some of the aspects that we cannot cover in depth such as monitoring and compliance issues. As ever, an excellent (though expensive even for a library) general source, both on policy and law, is IEEP, *Manual of European Environmental Policy* (online), which considers all of the Directives mentioned here and their implementation.

### THE EU WATER FRAMEWORK DIRECTIVE

There is a very good discussion of the difficulties of devising and using a standard of 'good ecological status', and of using the law to assess and achieve this objective, in H. Josefsson and L. Baaner, 'The Water Framework Directive: a Directive for the twenty-first century?' (2011) *JEL* 463 and also in W. Howarth, 'The progression towards ecological quality standards' (2006) 18 *JEL* 3. S. Boyle, 'The Water Framework Directive: why is "good" status proving such an elusive goal?' (2011) *WL* 19 considers some of the problematic implementation issues.

J. Scott and J. Holder (2006) 'Law and new environmental governance in the European Union' in G. de Burca and J. Scott (eds.) *New Governance and Constitutionalism in Europe and the United States*, Oxford: Hart Publishing, considers the role of the common implementation strategy under the Water Framework Directive as a case study in new forms of environmental governance in the EU and gives a very good sense of how some of the detail of EU water law is arrived at. But flexibility can mean a lack of effective action on the ground, and even different understandings of central obligations, a point argued in A. Keessen et al., 'European river basin districts: are they swimming in the same implementation pool?'

(2010) 22 *JEL* 197, a fascinating study of different practices in eleven Member States. We also recommend reading the House of Lords Sub-Committee report on *An Indispensable Resource: EU Freshwater Policy* (2012), especially ch. 2, which is a good way of understanding current policy issues and the differing perspectives of stakeholders and of experience across the EU of implementing the Framework Directive. This takes a generally optimistic view of the Directive, unlike European Environmental Bureau (2010) *10 Years of the Water Framework Directive: A Toothless Tiger? A Snapshot Assessment of EU Environmental Ambitions*.

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#### DIFFUSE POLLUTION

A good, short, background document is the Parliamentary POST Note on ‘Diffuse Pollution of Water by Agriculture’ (No. 478, October 2014). N. Gunningham and D. Sinclair, ‘Policy instrument choice and diffuse source pollution’ (2005) 17 *JEL* 51, provides an excellent overview of how to tackle diffuse water pollution—which is not to underestimate its intractability as a problem—which is of particular relevance to this chapter (see further comment on this in Ch. 8). S Boyle, ‘The Case for Regulation of Agricultural Water Pollution’ (2014) *Environmental Law Review* 4 is a very good appraisal of the limitations of economic approaches and the scope for specification and process standards to be used, which in some ways is the direction of travel in the UK.

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#### RIPARIAN RIGHTS

To get an appreciation of riparian rights in action, look at the website of Fish Legal ([www.fishlegal.net](http://www.fishlegal.net)) which gives summaries of recent and ongoing cases. A case decided in the County Court in 2012 against a hydro-power scheme is a reminder of the force of riparian rights in the face of major development pressure.

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#### WEB LINKS

The Environment Agency [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk) has certain facts and figures about river quality and pollution incidents, although little prosecution and sentencing data. The Department for Environment, Food and Rural Affairs (DEFRA) [www.defra.gov.uk/environment/quality/water/water-quality](http://www.defra.gov.uk/environment/quality/water/water-quality) and its devolved counterparts hold useful information, especially on current policy reforms and on the implementation of EU Directives. The website of OFWAT [www.ofwat.gov.uk](http://www.ofwat.gov.uk) is usefully browsed when looking at water supply and financing issues and their environmental context. On EU water quality law and policy, see [www.ec.europa.eu/environment/water](http://www.ec.europa.eu/environment/water). Relating to the international agreements already considered, see the OSPAR Convention [www.ospar.org](http://www.ospar.org) and the International Tribunal for the Law of the Sea [www.itlos.org](http://www.itlos.org).

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## CHAPTER 18: WASTE MANAGEMENT

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#### GENERAL TEXTS

The introduction of the Environmental Permitting regime has rendered many texts—particularly those that discuss waste management licensing—as out of date. Even before the introduction of the permitting regime, the changes in waste management law over the last ten years have been rapid and dramatic. Thus sourcing the most up-to-date text as possible is critical, because anything before 2000 will fail to cover many of the recent developments in such things as the Landfill Regulations, the definition of waste,

and new producer responsibility legislation. R. Hawkins and H. Shaw (2004) *The Practical Guide to Waste Management Law*, London: Thomas Telford, is a superb introduction to the topic. It has the advantage of being highly accessible, with tables and illustrative examples. Be warned however: the commentary is opinionated, controversial, and humorous—this is not a dry academic work. Another recommended text is D. Lawrence (2000) *Waste Regulation Law*, London: Butterworths: although this is now very out of date, it is comprehensive in its coverage, and is detailed in its evaluation and analysis.

A good introduction to some of the problems of European waste legislation can be found in S. Tromans, 'EC waste law: a complete mess?' (2001) 13 *JEL* 13. As the title suggests, this is an extensive (and devastating) critique of all aspects of European waste management law, and covers areas such as the trade in waste, which are not covered in this chapter. E. Scotford, 'The new Waste Directive—trying to do it all . . . an early assessment' (2009) 11 *Env L Rev* 75, offers a good comparison between the Framework Directive and its 2006 predecessor and Scotford's 'Trash or treasure: Policy tensions in EC waste regulation' (2007) 19 *JEL* 367, highlights the inherent tensions and contradictions in the Directive.

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## WASTE POLICY

A basic starting point in terms of understanding the EU's approach to waste policy is European Commission, '*Being Wise with Waste: the EU's Approach to Waste Management*'. This sets the framework for waste management, and sets out both the problems and some potential solutions. In the domestic context any of the national waste strategies would flesh out the challenges in each country. It is important to get up-to-date information as the data on waste has changed significantly over the last 10 or so years. Thus even the Waste Management Plan for England, published in December 2013, will not necessarily reflect current priorities.

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## THE DEFINITION OF WASTE

There are many articles examining the case law and issues surrounding the definition of waste. Some care should be taken, because pre-2000 articles do not necessarily represent the law as it stands today. Some of the older articles are still useful, however, because they discuss some of the problems of coming up with a workable definition of 'waste'. The best articles include: M. Purdue, 'Defining waste' (1990) 2 *JEL* 250; J. Smith, 'The challenges of environmentally sound and efficient regulation of waste' (1993) 3 *JEL* 91; J. Fluck, 'The term "waste" in EU law' [1994] *EELR* 79; I. Cheyne and M. Purdue, 'Fitting definition to purpose: the search for a satisfactory definition of waste' (1995) 7 *JEL* 149; M. Purdue and A. van Rossem, 'The distinction between using secondary raw materials and the recovery of waste: the Directive definition of waste' (1998) 10 *JEL* 116; G. Van Calster, 'The EC definition of waste: the Euro *Tombesi* bypass and the Basel relief routes' (1997) *EBLR* 137; I. Cheyne, 'The definition of waste in EC law' (2002) 14 *JEL* 61; J. Pike, 'Waste not, want not: an (even) wider definition of waste' (2002) 14 *JEL* 197; L. Kramer 'The distinction between product and waste in Community law' (2003) 11(1) *ELLR* 3; R. Lee and E. Stokes, 'Rehabilitating the Definition of Waste: Is it Fully Recovered?' (2008) *YEEL* 162. Following the most recent Framework Directive, DEFRA has issued some useful practical guidance on the definition of waste: DEFRA (2012) *Guidance on the Legal Definition of Waste and its Application* (2012).

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## OTHER WASTE TOPICS

The breadth of this chapter means that there are many other sources that could provide further reading on specialist topics. Works of direct relevance are footnoted. Those listed here are only a selection.

We are in a period during which the impact of waste reduction and recycling targets is becoming more prevalent. The implications of this are discussed in D. Pocklington, 'The role of mandatory targets in

mandatory waste management legislation' (2003) 15(5) *ELM* 285. There are some areas that have not been covered in this chapter, primarily on grounds of space. One of these is the interrelationship between different waste Directives. For example, the relationship between recycling in the Packaging Waste Directive and the Waste Framework Directive is covered in S. Tromans, 'Defining recycling' (2004) 16 *JEL* 80, and M. Lee, 'Resources, recycling and waste' (2004) *Env L Rev* 49. An overview of the operational problems in the initial years of the landfill tax can be found in J. Morris and P. Phillips, 'The UK landfill tax: an evaluation of the first three years' (2000) *Env L Rev* 150.

On the question of insolvency and waste management licences, see A. Keay and P. de Prez, 'Insolvency and environmental principles: a case study in a conflict of public interests' (2001) 3(2) *Env L Rev* 90, C. Shelbourn, 'Can the insolvent polluter pay? Environmental licences and the insolvent company' (2000) 12 *JEL* 207, and J. Armour, 'Who pays when polluters go bust?' (2000) *LQR* 200.

F. Nunan, 'Barriers to the use of voluntary agreements: a case study of the development of the packaging waste regulations in the UK' (1999) 9(6) *Euro Env* 238, provides a good introduction to producer responsibility legislation as compared to alternative methods of addressing the problem. Other articles on producer responsibility include M. Lee, 'New generation regulation? The case of end-of-life vehicles' (2002) 11(4) *EELR* 114, and K. Kroepelian, 'Extended producer responsibility: new legal structures for improved ecological self-organisation in Europe' (2000) 9(2) *RECIEL* 165.

Integrated product policy is a relatively recent initiative which is still developing, but there is some literature that provides the background. Have a look at R. Malcolm, 'Ecodesign laws and the environmental impact of our consumption products (2011) 23 *JEL* 487.

## CHAPTER 19: THE CONSERVATION OF NATURE

There are many more provisions aimed at conserving species and habitats, at national, EU, and international levels, than the illustrative selections in this chapter. The most up-to-date dedicated work is C. Rodgers (2013), *The Law of Nature Conservation*, Oxford: OUP. See also C. Reid (2009) *Nature Conservation Law*, 3rd edn, Edinburgh: W. Green, which provides a good overview, though even this work does not include the Conservation Regulations 2010 or the Marine and Coastal Access Act 2009. On the distinctive position in Scotland see C. Reid, 'Towards a biodiversity law: the changing nature of wildlife law in Scotland' (2012) 15 *JIWLP* 202.

Other useful articles about national law include: K. Last, 'The Wildlife and Countryside Act 1981: has it made a difference?' (1999) *JEL* 15; D. Brock, 'Is nature taking over?' [2003] *JPL Supp* 50 (which questions whether the balance in the legal protection of conservation interests has now tipped too far towards 'nature' at the expense of humans). L. Warren, 'New approaches to nature conservation in the UK' (2012) *Env L Rev* 44 surveys a range of recent developments.

A really excellent article that critiques wildlife law for focusing too much on what are really welfare concerns at the expense of more ecological approaches, and which criticizes the failure to conserve the 'commonplace' in biodiversity, is S. Harrop, 'Conservation regulation: a backward step for biodiversity?' (1999) 8 *Biodiversity and Conservation* 679. B. Martin, 'To control or not to control? The need to control some alien species, the effectiveness of legislation and possible future developments in the law' (2007) 27(3) *Liv LR* 259 is a comprehensive analysis of the law in an important area that we do not cover here. For EU conservation law, two articles by N. de Sadeleer—'Habitats conservation in EC Law: from nature sanctuaries to ecological networks' (2005) 5 *Yearbook of European Environmental Law* 215, and 'The Birds, Habitats, and Environmental Liability Directives to the rescue of wildlife under threat' (2007) 7 *Yearbook of European Environmental Law* 36—both offer in-depth analysis and wider context. G. Jones (ed.) (2012) *The Habitats Directive: A Developers Obstacles Course?*, Oxford: Hart Publishing, is a



strong set of essays combining academic and practice considerations, and provides for detailed discussion of many of the vague terms and concepts which are a feature of this area of the law, especially as they apply to the UK. B. Jack, 'The European Community and biodiversity loss: missing the target?' (2006) 15(3) *RECIEL* 304 is a helpful overview of the development of agri-environmental law and of some of its surprising shortcomings in delivering conservation benefits. J. Phelps, 'Much ado about decoupling: evaluating the environmental impact of recent European Union agricultural reform' (2007) 31 *Harvard Env L Rev* 279, is also recommended. J. Lowther, 'Determining the meaning of 'disturbance' for European protected species' (2011) *JEL* 319 discusses the *Morge* case.

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#### INTERNATIONAL CONSERVATION LAW

Our omission of international conservation law can be more than rectified by M. Bowman, P. Davies, and C. Redgwell (2011) *Lyster's International Wildlife Law*, 2nd edn, Cambridge: Cambridge University Press, which as well as providing comprehensive coverage also considers historical and ethical issues. Failing this, try the relevant chapters of P. Birnie, A. Boyle, and C. Redgwell (2009) *International Law and the Environment*, 3rd edn, Oxford: Oxford University Press, which also contains a useful account of the development of scientific thinking and policy at international level (and how the law has often lagged far behind these), or P. Sands and J. Peel (2012) *Principles of International Environmental Law*, 3rd edn, Cambridge: Cambridge University Press. L. Guruswamy and J. McNeely (eds.) (1998) *Protection of Global Biodiversity: Converging Strategies*, Durham: Duke University Press, contains an excellent essay by M. Sagoff, arguing that intrinsic worth is the most compelling reason to value nature.

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#### CONSERVATION POLICY

Good starting points for understanding current policy are, in England, Natural England (2011) *Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services*; at EU level, European Commission (2011) *Our Life Insurance, Our Natural Capital: An EU Biodiversity Strategy to 2020* and, internationally, Convention on Biological Diversity (2010) COP Decision X/2, *Strategic Plan for Biodiversity 2011–2020*. These all set strategic ambitions. To get a sense of how we got where we are, look at M. Shoard (1980) *The Theft of the Countryside*, London: Temple Smith, looking at the shortcomings of planning and conservation law, and G. Harvey (1997) *The Killing of the Countryside*, London: Jonathan Cape, which focuses on the negative effects of the Common Agricultural Policy. W. M. Adams (2003) *Future Nature*, revd edn, London: Earthscan, is a hugely engaging attempt to think critically about what conservation means in a modern world in which everything has been affected by man. P. Marren (2002) *Nature Conservation: A Review of the Conservation of Wildlife in Britain, 1950–2001*, London: HarperCollins, is a forthright book, written by a key insider, which gives colour to most of the legal provisions and many of the legal cases considered here.

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#### MARINE CONSERVATION

A useful starting point is the 2004 report of the Royal Commission on Environmental Protection on *Turning the Tide: Addressing the Impact of Marine Fisheries on the Environment*, available at <http://webarchive.nationalarchives.gov.uk/201110322143804/http://www.rcep.org.uk/reports/index.htm>. For a highly critical opinion of the law and its implementation see G. Monbiot, 'The UK's marine reserves are nothing but paper parks', *The Guardian*, 10 May 2012

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## COMPENSATION, TRADING, AND OTHER INNOVATIONS

On habitat compensation issues, R. N. Lawton, 'Ecological compensation within the UK planning system' (2007) 18(2) *WL* 47 looks at three case studies of major port developments and how nature conservation interests fared in the decision-making processes. The decision-making, or at least opinion-delivering, role of the EU Commission is explored in L. Kramer, 'The European Commission's Opinions under Article 6(4) of the Habitats Directive' (2009) *JEL* 59, and D. McGillivray, 'Compensating biodiversity loss: the EU Commission's approach to compensation under Article 6 of the Habitats Directive' (2012) *JEL* 395 which also surveys the literature on banking. B. Biggs, D. Hill, and R. Gillespie, 'Habitat banking—how it could work in the UK' (2009) *J of Nature Conservation* 112, is a generally more positive assessment, perhaps not surprisingly given that the authors work for The Environment Bank. The Business and Biodiversity Offsets Program, at [www.forest-trends.org/biodiversityoffsetprogram](http://www.forest-trends.org/biodiversityoffsetprogram), has a library with links to some good papers on this particular issue.

C. Reid, 'The privatisation of biodiversity? Possible new approaches to nature conservation law in the UK' (2011) *JEL* 203, considers a range of possible new approaches including some that we look at but also others, and is a very valuable overview of current thinking. N. Affolder, 'Transnational conservation contracts' (2012) *Leiden J Int L* 443, looks at many of the same sorts of issues as Reid but also at how these might work through by privately negotiated agreements across borders.

On ecosystem services a good starting point is J. Ruhl, S. Kraft, and C. Lant (2007) *Ecosystem Services and the Law*, Washington: Island Press. Although US-based and often using US examples it does raise many of the key questions in a way that should be accessible to a UK audience. For a critical discussion of this, see the review by B. Pardy in (2008) 46 *Osgoode Hall LJ* 445 (available online).

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## LAW REFORM

The key document here is the Law Commission's Report No. 362, *Wildlife Law* (2015). Another important source is House of Commons Environmental Audit Committee, Third Report, *Wildlife Crime* (2012). On Conservation Covenants, see the Law Commission Report No 349 (2014).

## CHAPTER 20: NEW TECHNOLOGIES

There is a vast and growing literature on law-and-technology generally and on the legal regulation of specific technologies, such as GMOs and nanotechnology. Major texts on law-and-technology include Roger Brownsword and Karen Yeung (2008) *Regulating Technologies: Legal Futures, Regulatory Frames and Technological Fixes*, Hart Publishing: Oxford; Roger Brownsword and Morag Goodwin (2012) *Law and Technologies of the Twenty-First Century*, CUP: Cambridge; Albert C. Lin (2013) *Prometheus Reimagined: Technology, Environment, and Law in the Twenty-first Century*, University of Michigan Press: Ann Arbor; Roger Brownsword, Eloise Scotford, and Karen Yeung (eds) (2017 forthcoming) *The Oxford Handbook of the Law and Regulation of Technology*, OUP: Oxford.

Key works on the WTO biotechnology dispute include David Winickoff et al (2005) 'Adjudicating the GM Food Wars: Science, Risk, and Democracy in World Trade Law' 30(1) *Yale Journal of International Law* 81; and Alexia Herwig, 'Whither Science in WTO Dispute Settlement?' (2008) 21(4) *Leiden Journal of International Law* 823. For an excellent analysis of the regulation of GMOs at EU level, see Maria Lee (2008) *EU Regulation of GMOs: Law and Decision Making for a New Technology*, Edward Elgar: Cheltenham. Recommended reading on the complex and evolving nature of regulation in this field includes Maria Weimer, 'Risk Regulation and Deliberation in EU Administrative Governance—GMO Regulation and Its Reform' (2015) 21(5) *European Law Journal* 622; Maria Lee, 'GMOs in the Internal Market: New Legislation on National Flexibility' (2016) 79(2) *Modern Law Review* 317; and Mary Dobbs,

'Attaining Subsidiarity-Based Multilevel Governance of Genetically Modified Cultivation?' (2016) 28(2) *Journal of Environmental Law* 245. A comparison of legal responses to GMOs in different jurisdictions can be found in Sheila Jasanoff (2007) *Designs on Nature: Science and Democracy in Europe and the United States*; and Luc Bodiguel and Michael Cardwell (eds) (2010) *The Regulation of Genetically Modified Organisms: Comparative Approaches*, OUP: Oxford. A less recent but still relevant and insightful explanation of the broader implications of GMOs is provided by Nuffield Council on Bioethics (1999) *Genetically Modified Crops: The Ethical and Social Issues*, Nuffield Council on Bioethics: London. For a socio-legal perspective, see Alain Pottage, 'The Socio-Legal Implications of the New Biotechnologies' (2007) 3 *Annual Review of Law and Social Science* 321. A fascinating account of public engagement in this context can be found in Tom Horlick-Jones et al (2007) *The GM Debate: Risk, Politics and Public Engagement*, Routledge: London.

On the regulation of nanotechnologies, see Diana M. Bowman and Graeme A. Hodge, 'A Small Matter of Regulation: An International Review of Nanotechnology Regulation' (2007) 8 *Columbia Science and Technology Review* 1; Gary E. Marchant, Kenneth W. Abbott, and Douglas J. Sylvester, 'What Does the History of Technology Regulation Teach Us About Nano Oversight?' (2009) 37(4) *Journal of Law, Medicine and Ethics* 724; Elen Stokes, 'Regulating Nanotechnologies: Sizing Up the Options' (2009) 29(2) *Legal Studies* 281; Maria Lee, 'Risk and Beyond: EU Regulation of Nanotechnology' (2010) 35(6) *European Law Review* 799; and Tanja Ehnert, 'The Legitimacy of New Risk Governance—A Critical View in Light of the EU's Approach to Nanotechnologies in Food' (2015) 21(1) *European Law Journal* 44. For a US perspective, see Gregory Mandel, 'Nanotechnology Governance' (2008) 59(5) *Alabama Law Review* 1323

Clear and comprehensive analyses of planning policy and decision-making in respect of particular technological developments are provided by Yvonne Rydin, Maria Lee and Simon J. Lock, 'Public Engagement in Decision-Making on Major Wind Energy Projects' (2015) 27(1) *Journal of Environmental Law* 139; and Chris Hilson, 'Framing Fracking: Which Frames Are Heard in English Planning and Environmental Policy and Practice?' (2015) 27(2) *Journal of Environmental Law* 177. On the UK Government's policy on fracking, see Ole W. Pedersen, 'The Rhetoric of Environmental Reasoning and Responses as Applied to Fracking' 27(2) *Journal of Environmental Law* 325; and Elen Stokes, 'Regulatory Domain and Regulatory Dexterity: Critiquing the UK Governance of "Fracking"' (2016) 79(6) *Modern Law Review* 961.

For illuminating work on new modes of governing emerging technologies, including governance arrangements involving private actors, see Catherine Lyall, 'Governing Genomics: New Governance Tools for New Technologies?' (2007) 19(3) *Technology Analysis and Strategic Management* 369; Carolyn Abbot, 'Bridging the Gap—Non-state Actors and the Challenges of Regulating New Technology' (2012) 39(3) *Journal of Law and Society* 329; and Gary E. Marchant, Kenneth W. Abbott, and Braden Allenby (eds) (2013) *Innovative Governance Models for Emerging Technologies*, Edward Elgar: Cheltenham.

On the 'law lag' and questions of whether and how law keeps pace with new technologies, see Sheila Jasanoff, 'Rewriting Life, Reframing Rights', in Sheila Jasanoff (ed) (2011) *Reframing Rights: Bioconstitutionalism in the Genetic Age*, MIT Press: Cambridge, MA, ch. 1; Lyria Bennett Moses, 'How to Think about Law, Regulation and Technology: Problems with "Technology" as a Regulatory Target' (2013) 5(1) *Law, Innovation and Technology* 1.

Further reading on general liability issues can be found at the end of Chapter 11. On GMOs in particular, see Maria Lee and Robert Burrell, 'Liability for the Escape of GM Seeds: Pursuing the "Victim"?' (2002) 65(4) *Modern Law Review* 517; and Michael Blakeney, 'Blowing in the Wind: Adjudicating the Impact of GM Crops on Organic Farming in the Courtroom' (2015) 21(4) *International Trade Law and Regulation* 91.

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The regulation of geoengineering is examined in detail by Jesse Reynolds, 'The Regulation of Climate Engineering' (2011) 3(1) *Law, Innovation and Technology* 113; 'The International Regulation of Climate Engineering: Lessons from Nuclear Power' (2014) 26(2) *Journal of Environmental Law* 269; Albert C. Lin, 'The Missing Pieces of Geoengineering Research Governance' (2015) 100(6) *Minnesota Law Review* 2509.