ENVIRONMENTAL LAW IN AUSTRALIA AND THE UNITED STATES: A COMPARATIVE OVERVIEW†

Kenneth M. Murchison*

I. Introduction

The legal systems of Australia and the United States are attractive subjects for comparative study. In both nations, modern law has evolved from the English tradition. Moreover, the division of power between federal and state governments has followed a similar course of development in both countries. The constitution of each country limits the federal government to enumerated powers, but federal power in both countries has expanded greatly in the twentieth century. Although very real differences distinguish the two federations,

[†] An independently edited version of this Article was published in Australia in the Environmental and Planning Law Journal. See 11 Envtl. & Plan. L.J. 179 (pt. 1), 256 (pt. 2) (1994).

^{*}J. Denson Smith Professor, Paul M. Hebert Law Center, Louisiana State University; B.A. 1969, Louisiana Polytechnic Institute; J.D. 1972, University of Virginia; M.A. 1975, University of Virginia; J.D. 1988, Harvard Law School. This Article was written during the author's 1992–1993 sabbatical leave while he was the Natural Resources Law Institute Fellow at the Northwestern School of Law at Lewis and Clark College. The author is grateful to William Andreen, Michael Blumm, and Gary Meyers for their critiques of earlier drafts of the Article.

¹ Austl. Const. ch. I, pt. V, §§ 51, 52, ch. V, § 107; U.S. Const. art. I, § 8, amend. 10.

² SIR ROBERT MENZIES, CENTRAL POWER IN THE AUSTRALIAN FEDERATION 2 (1967). Citing Lord Bryce, Menzies, former Australian Prime Minister, identifies this centripetal tendency as an inevitable distinguishing characteristic of federations. *Id.* Among federations from the English tradition, Canada is perhaps the most important contemporary example of the contrasting centrifugal tendency toward regionalization. *See generally* Richard Cullen, *Canada and Australia: A Federal Parting of the Ways*, 18 Fed. L. Rev. 53 (1989).

³ At least two important differences distinguish the constitutions of the United States and Australia. First, Australia has no guarantees of individual rights comparable to the Bill of Rights and Civil War Amendments of the United States Constitution. Second, Australia adopted a parliamentary form of government in which all ministers are members of, and responsible to, Parliament. This system of responsible government eliminates many of the separation of powers

the similarities are significant enough to encourage comparison.4

Environmental law is a particularly inviting topic for comparative analysis in the 1990s. Australia and the United States share a tradition of cooperation with respect to environmental matters. An academic from Australia⁵ assisted the committee that drafted the Federal Water Pollution Control Act of 1972,⁶ the statute that redefined the approach to water pollution control in the United States.⁷ More recently, environmentalists in the United States have applauded Australian efforts to protect the nation's environmental treasures.⁸ Likewise, Australians have long shown considerable interest in environmental law developments in the United States.⁹ Indeed, the National Environmental Policy Act,¹⁰ the Endangered Species Act,¹¹ and the

issues that have been prominent in recent United States cases. For analyses of the differing traditions of judicial review in the two countries, see Sanford H. Kadish, Judicial Review in the United States Supreme Court and the High Court of Australia, 37 Tex. L. Rev. 1 (pt. I), 37 Tex. L. Rev. 133 (pt. II) (1958); Geoffrey Sawer, The Supreme Court and the High Court of Australia, 6 J. Pub. L. 482 (1957). For a recent article suggesting that the doctrinal differences that result from these differences are far less significant than has been generally assumed, see William Rich, Converging Constitutions: A Comparative Analysis of Constitutional Law in the United States and Australia, 21 Fep. L. Rev. 202 (1993).

Practical differences also exist between the two countries. Australia's much smaller population and much larger states minimize the interstate impact of pollution. In addition, the establishment of intercolony trading routes and patterns prior to creation of the Commonwealth makes the interstate nature of trade less pervasive. See infra notes 114–19 and accompanying text.

⁴ For a summary of some of the legal, political, and geographical similarities between Australia and the United States, see Brian G. Baillie *Environmental Law and Litigation in the United States: An Australian's Impressions of America's New Legal Frontier*, 5 ENVTL. & PLAN. L.J. 14, 15 (1988).

⁵ See Walter E. Westman, Some Basic Issues in Water Pollution Control Legislation, 60 Am. Scientist 767 (1972).

 $^{^6}$ Pub. L. No. 92-500, 86 Stat. 896 (1972) (codified as amended at 33 U.S.C. \$\$ 1251–1376 (1988 & Supp. V 1993))

⁷ See William L. Andreen, The Evolving Law of Environmental Protection in the United States: 1970-91, 9 Envtl. & Plan. L.J. 96, 99-101 (1992); Jackson Battle, Environmental Law and Cooperative Federalism in the United States, 2 Envtl. & Plan. L.J. 302, 309-12 (1985).

⁸ Andreen, *supra* note 7, at 96 (discussing opposition to Tasmanian dams).

⁹ See, e.g., id.; Battle, supra note 7; Michael C. Blumm, The Origin, Evolution and Direction of the United States National Environmental Policy Act, 5 Envtl. & Plan. L.J. 179 (1988).

¹⁰ Pub. L. No. 91-190, 83 Stat. 852 (1970) (codified as amended at 42 U.S.C. §§ 4321–4370a (1988 & Supp. 1993)). For the author's view of the significance of the National Environmental Policy Act (NEPA) in the United States, see Kenneth M. Murchison, *Does NEPA Matter? An Analysis of the Historical Development and Contemporary Significance of the National Environmental Policy Act*, 18 U. Rich. L. Rev. 557 (1984); see also Symposium, *NEPA at Twenty: The Past, Present and Future of the National Environmental Policy Act*, 20 Envtl. L. 447 (1990).

 $^{^{11}}$ Pub. L. No. 93-205, 87 Stat. 884 (1973) (codified as amended at 16 U.S.C. \$\$ 1531–1544 (1988 & Supp. V 1993)).

National Historic Preservation Act¹² have all influenced statutes adopted in Australia.¹³

More fundamentally, environmental law appears to be headed in the same direction in Australia and the United States. In the United States. the pressures of centralization have controlled the field of environmental law since the 1970s. As a result, federal law has become the dominant force in environmental law, especially with respect to pollution control and the response to releases of hazardous substances.¹⁴ Though states remain the primary actors in the environmental arena in Australia, 15 important changes occurred during the 1980s and the early years of the 1990s. During this period, the Australian High Court consistently sustained the Commonwealth's efforts to protect important natural resources. 16 Moreover, a recent Memorandum of Agreement between the states and the Commonwealth created a federal Environmental Protection Authority.¹⁷ The memorandum anticipates the establishment of national pollution-control standards, although the scope and significance of those standards has not yet been established.

This Article offers a comparative overview of how selected environmental law issues have been resolved in the United States and Australia. Sections II and III focus on governmental power: the respective roles of federal governments and states in establishing, ad-

 $^{^{12}}$ Pub. L. No. 89-665, 80 Stat. 915 (1966) (codified as amended at 16 U.S.C. §§ 470–470x-6 (1988 & Supp. V 1993)).

¹³ See R.J. Fowler, Environmental Law and Its Administration in Australia, 1 Envtl. & Plan. L.J. 10, 22 (1984); Gary D. Myers, A Comparative View of Endangered Species Legislation in the United States and Australia: How Effective Are These Acts for Preserving Biodiversity?, in Legislating for Biodiversity?, in Legislating for Biodiversity?, in Legislating for Biodiversity?, in Federalism and the Environment 47, 48 (R. Mathews ed., 1985). But see Battle, supra note 7, at 305–06 (summarizing the differences between United States and Australian provisions for the assessment of environmental impacts).

¹⁴ See, e.g., Clean Water Act, 33 U.S.C. §§ 1251–1387 (1988 & Supp. V 1993) [hereinafter CWA]; Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901–6992k (1988 & Supp. V 1993) [hereinafter RCRA]; Clean Air Act, 42 U.S.C. §§ 7401–7671q (1988 & Supp. V 1993) [hereinafter CAA]; Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601–9675 (1988 & Supp. V 1993) [hereinafter CERCLA].

 $^{^{15}\,}See$ generally Gerry M. Bates, Environmental Law in Australia 68–74 (3d ed. 1992); Fowler, supra note 13.

¹⁶ See Queensland v. Commonwealth, 167 C.L.R. 232 (Austl. 1989); Richardson v. Forestry Comm'n, 164 C.L.R. 261 (Austl. 1988); Commonwealth v. Tasmania, 158 C.L.R. 1 (Austl. 1983); New South Wales v. Commonwealth, 135 C.L.R. 337 (Austl. 1975).

¹⁷ See Commonwealth of Australia, National Strategy for Ecologically Sustain-Able Development, app. A (Summary of the Intergovernmental Agreement on the Environment) at 117 (Dec. 1992) [hereinafter Summary of Intergovernmental Agreement].

ministering, and enforcing environmental policies. Section IV compares how the two countries have established pollution-control standards, employed permit requirements, and enforced their environmental regulations. Section V describes and compares the roles of agencies, courts, and the public with respect to the administration of environmental law in both countries. The concluding section combines a caution against unreflective borrowing with a description of the positive contributions of the comparative study. The section summarizes the lessons each nation can learn from the other and lists some trends that seem to transcend national boundaries.

II. FEDERAL POWER

A. United States

In the United States, the Supreme Court endorsed an expansive interpretation of federal regulatory power long before the explosion of environmental statutes occurred in the 1970s. Since the New Deal era, 18 the Supreme Court has embraced a functional test which greatly augments congressional power to regulate interstate commerce. 19 So long as an activity significantly affects interstate commerce, either by itself or as part of a class of activities, 20 Congress may regulate the activity under the Constitution's Commerce Clause. 21 Under this approach, congressional authority to enact national environmental regulations is an easy question; 22 environmental cases have, however, raised

¹⁸ See NLRB v. Jones & Laughlin Steel Corp., 301 U.S. 1, 36–39 (1937) (sustaining Congress's power to regulate commerce and upholding National Labor Relations Act of 1935).

¹⁹ U.S. Const. art. I, § 8, cl. 3.

²⁰ See Wickard v. Filburn, 317 U.S. 111, 118-29 (1942).

²¹ See, e.g., Perez v. United States, 402 U.S. 146, 150–54 (1971); Katzenbach v. McClung, 379 U.S. 294, 301–05 (1964). The Supreme Court has recently granted certiorari to a Fifth Circuit decision holding unconstitutional the Gun-Free School Zones Act. United States v. Lopez, 2 F.3d 1342 (5th Cir. 1993), cert. granted, 114 S. Ct. 1536 (1994). The decision of the Court of Appeals is the first significant judicial attempt since the New Deal to limit Congress's power to regulate interstate commerce.

²² See, e.g., United States v. Riverside Bayview Homes, Inc., 474 U.S. 121, 129–31 (1985) (regulation of wetlands under Clean Water Act); Hodel v. Virginia Surface Mining & Reclamation Ass'n, 452 U.S. 264, 275–83 (1981) (regulation of surface coal mining under Surface Mining Control and Reclamation Act); United States v. Ashland Oil & Transp. Co., 504 F.2d 1317, 1328-29 (6th Cir. 1974) (regulation of discharges into navigable tributaries under the Clean Water Act); South Terminal Corp. v. EPA, 504 F.2d 646, 677–78 (1st Cir. 1974) (regulation of motor vehicle transportation under the Clean Air Act).

more difficult questions with respect to preemption $^{\!\scriptscriptstyle 23}$ and the reserved powers of the states. $^{\!\scriptscriptstyle 24}$

As a practical matter, contemporary limits on federal power derive primarily from the protection that the Constitution provides for individual rights. For environmental regulations, the Takings Clause is the most significant limitation,²⁵ but other provisions can also be decisive in particular contexts. For example, modern environmental cases have raised important constitutional questions regarding due process,²⁶ search and seizure,²⁷ the privilege against self-incrimination,²⁸ and the right to a jury trial.²⁹

Some older cases indicate that congressional power might be broader under other enumerated powers such as the treaty power,³⁰ the spending power,³¹ and the war power.³² Today, the issues raised in those cases have only academic interest in the environmental context. As presently construed, the Commerce Clause is broad enough to authorize nearly any type of federal environmental regulation.³³

 $^{^{23}}$ E.g., Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n, 461 U.S. 190, 203-23 (1983) (nuclear energy); Ray v. Atlantic Richfield Co., 435 U.S. 151, 157-78 (1978) (oil tankers); Burbank v. Lockheed Air Terminal, Inc., 411 U.S. 624, 626-40 (1973) (noise).

²⁴ U.S. Const. amend. X; see, e.g., New York v. United States, 112 S. Ct. 2408, 2417–32 (1992); United States v. Ohio Dept. of Highway Safety, 635 F.2d 1195, 1204–05 (6th Cir. 1980), cert. denied, 451 U.S. 949 (1981); Maryland v. EPA, 530 F.2d 215, 224–28 (4th Cir. 1975), vacated sub nom. EPA v. Brown, 431 U.S. 99 (1977); Pennsylvania v. EPA, 500 F.2d 246, 259–63 (3d Cir. 1974).

²⁵ U.S. Const. amend. V; see, e.g., Lucas v. South Carolina Coastal Council, 112 S. Ct. 2886 (1992), analyzed in Kenneth M. Murchison, Review of Recent Developments: 1991–1992 Local Government Law, 53 La. L. Rev. 823, 854–61 (1993); see also Formanek v. United States, 26 Cl. Ct. 332, 340–41 (1992); Florida Rock Indus., Inc. v. United States, 21 Cl. Ct. 161 (1990), vacated, 18 F.3d 1560 (Fed. Cir. 1994), cert. denied, 115 S. Ct. 898 (1995).

²⁶ U.S. Const. amend. V. *Compare* Reardon v. United States, 947 F.2d 1509, 1517–24 (1st Cir. 1991) (en banc) (finding denial of due process in CERCLA lien provision's failure to provide notice and pre-deprivation hearing to certain landowners) *with* Barmet Aluminum Corp. v. Reilly, 927 F.2d 289, 294–96 (6th Cir. 1991) (finding no denial of due process in CERCLA's pre-enforcement jurisdictional bar).

²⁷ U.S. Const. amend. IV; see, e.g., Dow Chemical Co. v. United States, 476 U.S. 227 (1986); Keisel Co., Inc. v. Householder, 879 F.2d 385 (8th Cir. 1989), cert. denied, 494 U.S. 1026 (1990); McLaughlin v. AB Chance Co., 842 F.2d 724 (4th Cir. 1988).

²⁸ U.S. Const. amend. V; see, e.g., United States v. Ward, 448 U.S. 242 (1980); United States v. Mitchell, 966 F.2d 92 (2d Cir. 1992).

²⁹ U.S. Const. amend. VII; Tull v. United States, 481 U.S. 412 (1987).

³⁰ U.S. Const. art. II, § 2, cl. 2 & art. VI, cl. 2; Missouri v. Holland, 252 U.S. 416 (1920).

³¹ U.S. Const. art. I, § 8, cl. 1; see, e.g., Oklahoma v. Civil Serv. Comm'n, 330 U.S. 127 (1947).

³² U.S. Const. art. I, § 8, cl. 11; see, e.g., Woods v. Cloyd W. Miller Co., 333 U.S. 138 (1948).

³³ For a discussion of just how far the congressional power in environmental matters might extend, see Stephen M. Johnson, *Federal Regulation of Isolated Wetlands*, 23 Envtl. L. 1 (1993). See also Dennis J. Priolo, Section 404 of the Clean Water Act: The Case for Expansion of Federal Jurisdiction Over Isolated Wetlands, 30 Land & Water L. Rev. 91 (1995) (exam-

The expansion of federal power in the United States has resulted in a broad array of environmental statutes.³⁴ Federal law now prescribes environmental standards for air³⁵ and water pollution,³⁶ as well as for the management of hazardous wastes.³⁷ Federal statutes also protect endangered species³⁸ and wetlands,³⁹ set aside wilderness areas,⁴⁰ and designate scenic rivers.⁴¹ In addition, federal legislation partially funds the cleanup of sites containing hazardous substances and prescribes standards for holding private parties liable for cleanup costs.⁴²

B. Australia

Like the United States Constitution, the Australian Constitution enumerates the powers that are delegated to the federal legislature.⁴³ The list of powers delegated to the Commonwealth Parliament is considerably longer than the list of powers delegated to Congress, and includes important regulatory powers not found in the United States Constitution.⁴⁴ Protection of the environment is not, however, one of the powers entrusted to Parliament, and a recent constitutional reform commission rejected a proposal for amending the Constitution to add environmental protection to the list of Commonwealth powers.⁴⁵

ining United States Army Corps of Engineers' regulatory jurisdiction over private landowners' wetlands). But see Hoffman Homes, Inc. v. EPA, 999 F.2d 256 (7th Cir. 1993) (EPA's Section 404 regulations did not apply to isolated wetland). The Wild Free-Roaming Horses and Burros Act provides an unusual example of congressional reliance on a power other than the Commerce Clause to support an environmental statute. 16 U.S.C. §§ 1331–1340 (1988 & Supp. V 1993). In a challenge to the Act, the Supreme Court broadly construed congressional power under the Property Clause. U.S. Const. art. IV, § 3, cl. 2; see Kleppe v. New Mexico, 426 U.S. 529 (1976).

³⁴ See generally Andreen, supra note 7, at 98–105; Battle, supra note 7.

³⁵ CAA 42 U.S.C. §§ 7401-7671q.

³⁶ CWA 33 U.S.C. §§ 1251–1387.

 $^{^{37}}$ RCRA 42 U.S.C. §§ 6911–6939b. Federal controls over the disposal of nonhazardous solid waste are currently much less substantial, but those controls are likely to increase when Congress reauthorizes the Resource Conservation and Recovery Act. See 42 U.S.C. §§ 6941–49a.

 $^{^{38}}$ Endangered Species Act of 1973, 16 U.S. \$ 1531–1544 (1988 & Supp. V 1993) [hereinafter E.S.A.]. See generally Tennessee Valley Auth. v. Hill, 437 U.S. 153 (1978).

³⁹ CWA, 33 U.S.C. § 1344; see United States v. Riverside Bayview Homes, Inc., 474 U.S. 121 (1985); Johnson, supra note 33.

⁴⁰ Wilderness Act, 16 U.S.C. §§ 1131–1136 (1988 & Supp. V 1993).

⁴¹ Wild and Scenic Rivers Act, 16 U.S.C. §§ 1271-1287 (1988 & Supp. V 1993).

⁴² CERCLA, 42 U.S.C. §§ 9601–9675.

⁴³ Austl. Const. ch. I, pt. V, § 51.

⁴⁴ E.g., id. § 51(xiii) (banking), (xiv) (insurance), (xx) (foreign, trading, and financial corporations), (xxi) (marriage), (xxii) (matrimonial causes and child custody), (xxxv) (conciliation and arbitration for interstate labor disputes).

⁴⁵ BATES, *supra* note 15, at 53 n.1.

The Commonwealth's powers include the power to pass laws with respect to "[t]rade and commerce with other countries, and among the States,"⁴⁶ but this power lacks the all-encompassing reach of congressional power to regulate interstate commerce that exists in the United States. Australia has experienced no expansion of federal regulatory power over commercial matters comparable to the New Deal revolution in the United States.⁴⁷ The Australian High Court's precedents allow direct regulation of production only if the Commonwealth can show that the regulation is "incidental" to the effectuation of the object of the trade and commerce power.⁴⁸

Despite the contrast with the United States, a centralizing tendency is discernable in Australian law even with respect to formal regulations. As early as 1920, the High Court acknowledged the Commonwealth's power to control the activities of states when the activities involved interstate commerce,⁴⁹ and more recent decisions have interpreted Commonwealth powers expansively.⁵⁰ Indeed, the combination of powers that the High Court has recognized in its decisions probably gives the Parliament greater regulatory powers over the environment than it is likely to use in the near future.

Dean Crawford has summarized three principles of interpretation that establish the priority of federal regulatory power under the Australian Constitution.⁵¹ First, the powers conferred on the Commonwealth "are to be interpreted separately and disjunctively, without any particular attempt being made to avoid overlap between them."⁵² Second, the powers conferred on the Commonwealth "are to be construed liberally in accordance with their terms, and without any

⁴⁶ Austl. Const., ch. I, pt. V, § 51(i).

⁴⁷ See, e.g., NLRB v. Jones & Laughlin Steel Corp., 301 U.S. 1 (1937). See generally W. SWINDLER, COURT AND CONSTITUTION IN THE TWENTIETH CENTURY: THE NEW LEGALITY, 1932–1968 1–116 (1970).

⁴⁸ Leslie Zines, *The Environment and the Constitution, in Federalism and the Environment* 13, 16–17 (R. Mathews ed., 1985).

⁴⁹ Amalgamated Society of Engineers v. Adelaide Steamship Co., 28 C.L.R. 129 (Austl. 1920); cf. United States v. California, 297 U.S. 175, 183–87 (1936) (allowing federal government to impose safety regulations on railroad owned by a state). For a description of the unusual oral argument in the *Engineers* Case, by Sir Robert Menzies, the attorney who represented the union, see Menzies, supra note 2, at 37–39.

⁵⁰ See, e.g., Mabo v. Queensland, 175 C.L.R. 1 (Austl. 1992); Queensland v. Commonwealth, 167 C.L.R. 232 (Austl. 1989); Richardson v. Forestry Comm'n, 164 C.L.R. 261 (Austl. 1988); Commonwealth v. Tasmania, 158 C.L.R. 1 (Austl. 1983); Murphyores Inc. Pty. Ltd. v. Commonwealth, 136 C.L.R. 1 (Austl. 1975); Victoria v. Commonwealth, 134 C.L.R. 338 (Austl. 1975).

 $^{^{51}}$ James Crawford, *The Constitution and the Environment*, 13 Sydney L. Rev. 11, 13–15 (1991).

⁵² Id. at 14.

assumption that particular matters were intended to be excluded from federal authority or 'reserved' to the States."⁵³ Third, the Constitution imposes "no requirement that Commonwealth legislation be exclusively about one of the granted heads of power" or that "in terms of its intent or practical effect, the legislation be primarily, predominately or even substantially concerned with the granted head of power."⁵⁴

A primary method for expanding Commonwealth power throughout the twentieth century has been the federal government's domination of fiscal matters.⁵⁵ Under the Australian Constitution, only the Commonwealth may levy customs and excise taxes.⁵⁶ Since 1928, the Commonwealth has also exercised the preeminent voice in the Loan Council, which controls state borrowing.⁵⁷ During World War II, the Commonwealth gained sole control over income taxation,⁵⁸ which it has never relinquished.⁵⁹ Finally, the High Court has broadly interpreted the Commonwealth's power to make grants to the states⁶⁰ and has recognized a spending power that is apparently broader than the Commonwealth's regulatory authority.⁶¹

Federalism appears to have a more cooperative, or at least more consultative, character in Australia than in the United States. Perhaps the concept of states' rights retains more appeal in Australia because the concept was never discredited by the institution of slav-

⁵⁸ *Id.*; *cf.* Hodel v. Virginia Surface Mining & Reclamation Ass'n, 452 U.S. 264, 291 (1981) ("[This] Court long ago rejected the suggestion that Congress invades areas reserved to the States by the Tenth Amendment simply because it exercises its authority under the Commerce Clause in a manner that displaces the States' exercise of their police powers.").

⁵⁴ Crawford, supra note 51, at 14.

⁵⁵ RUSSEL BRADDOCK WARD, THE HISTORY OF AUSTRALIA: THE TWENTIETH CENTURY 157, 253 (1977). In recent years, some commentators have suggested that modern budgetary deficits have greatly lessened the significance of Commonwealth fiscal power. See, e.g., Michael Crommelin, Commonwealth Involvement in Environmental Policy: Past, Present and Future, 4 ENVIL. & PLAN. L.J. 101, 108–09 (1987).

⁵⁶ Austl. Const. ch. IV. § 90.

⁵⁷ See Percy Ernest Joske, Australian Federal Government 112–15 (3d ed. 1976); P.H. Lane, An Introduction to the Australian Constitution 38–39 (5th ed. 1990).

 $^{^{58}}$ South Australia v. Commonwealth, 65 C.L.R. 373 (Austl. 1942); see Menzies, supra note 2, at 78–83.

 $^{^{59}\,\}mathrm{Joske}, supra$ note 57, at 116–18, 121–22; Lane, supra note 57, at 36–38; Menzies, supra note 2, at 85–91.

⁶⁰ Austl. Const. ch. IV, § 96; see, e.g., Victoria v. Commonwealth, 99 C.L.R. 575 (Austl. 1957). See generally Joske, supra note 57, at 118-21; Lane supra note 57, at 33-35.

⁶¹ AUSTL. CONST. ch. IV, § 81; see, e.g., Victoria v. Commonwealth, 134 C.L.R. 338 (Austl. 1975); see also Lane, supra note 57, at 111–12. In the United States, the Supreme Court has ruled that congressional authority to appropriate funds "for the general welfare" is not limited to projects tied to one of the other powers conferred on Congress. See Helvering v. Davis, 301 U.S. 619, 640–41 (1937).

ery. Or it may be that the smaller number of Australian states makes intergovernmental dialogue more feasible. Or perhaps the High Court's more restrained interpretation of the Commonwealth's regulatory powers has discouraged unilateral federal action. At any rate, formal consultation between the Commonwealth and state governments seems more common in Australia than federal-state dialogue in the United States.

The Australian Constitution offers a variety of potential bases that might support federal intervention to protect the environment. Section 51 authorizes Parliament to tax. Section 51 also authorizes Parliament to legislate generally with respect to interstate and foreign trade and commerce, for foreign and trading corporations, for external affairs, and territories. In addition, Section 51 authorizes Parliament to make special laws for any race that needs protection or assistance. Moreover, some commentators have urged the existence of an inherent power to regulate for the nation, without defining its precise limits; they derive this unenumerated power from the Commonwealth's "status as a 'national government."

In contrast to the United States, modern environmental disputes have provided the context for testing the limits of federal authority in Australia. The Commonwealth has made little effort to use the taxing power in these cases, but the High Court has generally supported the expansion of the other regulatory powers enumerated in Section 51. In the *Tasmanian Dam* case, however, the High Court declined to embrace the inherent national powers theory with respect to environmental regulations. Nonetheless, nonenvironmental cases indicate that the theory would support Commonwealth spending and grant projects. 11

⁶² See generally Zines, supra note 48.

⁶³ Austl. Const. ch. I, pt. V, § 51(ii).

⁶⁴ Id. § 51(i).

⁶⁵ Id. § 51(xx).

⁶⁶ Id. § 51(xxix).

⁶⁷ Id. ch. VI, § 122.

⁶⁸ *Id.* ch. I, pt. V, § 51(xxvi).

⁶⁹ E.g., Zines, *supra* note 48, at 24.

⁷⁰ Commonwealth v. Tasmania, 158 C.L.R. 1 (Austl. 1983). *But see* Australian Communist Party v. Commonwealth, 83 C.L.R. 1 (Austl. 1951) (Dixon, J.) (suggesting that power to legislate against subversion is inherent national power).

⁷¹ Victoria v. Commonwealth & Haydon, 134 C.L.R. 338 (Austl. 1975); Attorney-General for Victoria v. Commonwealth, 71 C.L.R. 237 (Austl. 1945); see Lane, supra note 57, at 111–12; Zines, supra note 48, at 24–25.

The modern expansion of Commonwealth power to protect the environment has occurred primarily in the resolution of conflicts over natural resources. In the 1970s, the High Court confirmed Commonwealth power over the territorial sea. The Court also permitted the Commonwealth to rely on the trade and commerce power to disallow an export license on the basis of the environmental effects of the licensee's mining operations that generated the product to be exported. During the 1980s, judicial decisions further enhanced Commonwealth power. In 1982, the High Court recognized that the Commonwealth could use its external affairs power to protect Aborigines against discrimination by a state government. More recently, the High Court allowed the Commonwealth to use the external affairs and corporations powers to preclude states from damming rivers to allowing forests to be cut.

The High Court's decisions over the last twenty years unequivocally establish the constitutional priority of Commonwealth power regarding conflicts over the exploitation of natural resources. In fact, the expansive interpretation of specific enumerated powers may, as it has done in the United States, ultimately render inconsequential the High Court's refusal to recognize an inherent power to legislate for matters of national concern.

The external affairs power has been the focus of much recent attention.⁷⁷ This attention is not altogether surprising because the contemporary reach of the external affairs power is great. Not only has the High Court largely abandoned scrutiny of what can be the subject of an international agreement,⁷⁸ but the court's decisions also grant

⁷² New South Wales v. Commonwealth, 135 C.L.R. 337 (Austl. 1975); Bonser v. La Macchia, 122 C.L.R. 177 (Austl. 1969).

⁷³ Murphyores Inc. Pty., Ltd. v. Commonwealth, 136 C.L.R. 1 (Austl. 1976).

⁷⁴ Koowarta v. Bjelke-Petersen, 153 C.L.R. 168 (Austl. 1982).

⁷⁵ Commonwealth v. Tasmania, 158 C.L.R. 1 (Austl. 1983). For a bibliography of the extensive literature that quickly developed over the *Tasmanian Dam* case, see James A. Thomson, *A Torrent of Words: A Bibliography and Chronology on the* Franklin Dam *Case*, 15 Feb. L. Rev. 144, 149–51 (1985–86).

⁷⁶ Queensland v. Commonwealth, 167 C.L.R. 232 (Austl. 1989); Richardson v. Forestry Comm'n, 164 C.L.R. 261 (Austl. 1988).

To See Andrew C. Byrnes, The Implementation of Treaties in Australia after the Tasmanian Dam Case: The External Affairs Power and the Influence of Federalism, 8 B.C. Int'l & Comp. L. Rev. 275 (1985); Bruce Davis, Federal-State Tensions in Australian Environmental Management: The World Heritage Issue, 6 Envtl. & Plan. L.J. 66 (1989); Thomas W. Edmunds, Comment, The Queensland Rainforest and Wetlands Conflict: Australia's External Affairs Power—Domestic Control and International Conservation, 20 Envtl. L. 387 (1990).

 $^{^{78}}$ See Commonwealth v. Tasmania, 158 C.L.R. 1 (Austl. 1983); Crawford, supra note 51, at 22–23.

Parliament considerable leeway for expansive interpretation of the extent of the obligations that international agreements impose on signatories.⁷⁹

The potential for expanding the scope of other Commonwealth powers is equally significant. Given the inevitable interrelationship between economic and environmental issues,⁸⁰ the trade and commerce power has enormous potential. Foreign commerce is the goal of much, if not most, exploitation of natural resources. The High Court's modern decisions have given the Commonwealth the authority to condition access to that commerce, and such conditions may include restrictions rooted in environmental protection. However, at least one commentator has suggested that the trade and commerce power is not unlimited.⁸¹

The scope of Commonwealth control over interstate, as opposed to foreign, commerce is less certain, and this uncertainty will probably encourage the Commonwealth to place principal reliance on other powers if it seeks to expand environmental regulations in the future. Because the trade and commerce power extends to interstate as well as foreign commerce, the rationale of the High Court's foreign commerce decisions would seem to be equally applicable to Commonwealth regulation of interstate commerce. However, expansion of Parliament's power to regulate interstate commerce is constrained by Section 92 of the Australian Constitution. Section 92, which applies to the Commonwealth as well as to the states, 2 guarantees that, except for uniform customs duties, interstate trade and commerce "shall be absolutely free." The precise extent to which Section 92 restricts Commonwealth power to enact environmental legislation remains unclear

Commentators have suggested at least two ways that the restrictions of Section 92 might be circumvented. First, as noted below, recent High Court decisions invalidating state legislation under Section 92 emphasized that the legislation had two defects: it discriminated against interstate commerce, and was also protectionist. Because the Commonwealth lacks the power to regulate intrastate commerce, federal

⁷⁹ Zines, supra note 48, at 20.

⁸⁰ See Martin Auster, The Harmonization of Environmental Law: A European-Australian Comparison, 5 Envtl. & Plan. L.J. 276, 278 (1988).

⁸¹ Zines, *supra* note 48, at 16-17.

³² See Cole v. Whitfield, 165 C.L.R. 360, 396 (Austl. 1988). See generally Richard Cullen, Section 92: Quo Vadis?, 19 U.W. Austl. L. Rev. 90 (1989).

⁸³ Austl. Const. ch. IV, § 92.

⁸⁴ See infra notes 171-74 and accompanying text.

environmental regulations will inevitably discriminate against interstate commerce unless they are part of a joint, cooperative program with the states. So the other hand, the purpose of the federal regulations will be environmental preservation rather than economic protectionism. Thus, the lack of a protectionist purpose may save discriminatory, federal regulations if the High Court applies the two parts of its test conjunctively. So

Second, older High Court decisions have distinguished between incidental "regulations" of interstate commerce, which are permitted under Section 92, and "burdens," which are forbidden.⁸⁷ At least one commentator has suggested that the present High Court is likely "to take social problems of conservation and other environmental factors into account in determining questions of whether a particular law constitutes a 'regulation' or 'burden' of interstate trade."⁸⁸

The corporations power also offers possibilities for expanding the sweep of Commonwealth power in the natural resources context. In the modern world, large-scale resource exploitation is virtually certain to involve "foreign corporations" and "trading companies," both of which fall within the corporations power. Moreover, the *Tasmanian Dam* case recognizes broad Commonwealth authority to regulate the activities of those corporations that fall within the scope of the corporations power.⁸⁹

The potential reach of the power to legislate specially for any race is also significant. In each Commonwealth-state confrontation over the environment, the Commonwealth has identified Aboriginal interests at stake. 90 Given the pervasive and nomadic character of the original Aborigine occupation of Australia, identification of Aboriginal interests is likely to be feasible with respect to many, perhaps most, future sites that are important enough to attract the attention of the Commonwealth.

Curiously, the Commonwealth has made relatively little use of the taxing power in conflicts over natural resources, except to capture increased rents associated with oil and gas production off shore from

⁸⁵ See Cullen, supra note 82, at 114.

⁸⁶ Crawford, supra note 51, at 26. But see Zines, supra note 48, at 15.

⁸⁷ Zines, supra note 48, at 26, citing Hughes & Vale Proprietary, Ltd. v. New South Wales, 93 C.L.R. 127 (Austl. 1955); Commonwealth v. Bank of New South Wales, 79 C.L.R. 497 (P.C. 1949).

⁸⁸ Zines, supra note 48, at 27.

⁸⁹ Id. at 17-18.

⁹⁰ See, e.g., Queensland v. Commonwealth, 167 C.L.R. 232 (Austl. 1989); Richardson v. Forestry Comm'n, 164 C.L.R. 261 (Austl. 1988); Commonwealth v. Tasmania, 158 C.L.R. 1 (Austl. 1983).

Victoria.⁹¹ In light of the plenary nature of the Commonwealth's taxing power,⁹² the reasons for this limited use are probably political rather than constitutional.

From the perspective of an outside observer, several factors appear likely to limit Commonwealth dominance of natural resource issues and to encourage Australians to develop new institutions for Commonwealth-state cooperation. First, like the United States, Australia has a tradition of state—and, more commonly, local—control of land use. 93 Second, unlike the United States, governmental ownership of publicly owned land and resources within the boundaries of the Australian states is vested exclusively in the states rather than in the Commonwealth, although the Commonwealth Parliament retains plenary authority over land in the Northern Territory.94 Indeed, "national" parks in Australia are generally owned and controlled by state governments. As a result, the Commonwealth has been able to exercise authority over natural resources only through controls on the state governments and private parties who own the resources. The recent High Court decision recognizing native land rights95 may give the Commonwealth added power to protect areas that have never been alienated by the states. In addition, modern theories of the Commonwealth spending power probably allow the government to purchase land and other natural resources. However, the high cost of purchasing natural resources makes this approach an unlikely option. Third, ingrained notions of equity⁹⁶ and, in some cases, constitutional mandate⁹⁷ may require Commonwealth compensation to states and private parties who are denied the opportunity to exploit resources they own.

To date, the expansion of Commonwealth power over the environment has focused on the use of natural resources rather than on

⁹¹ See Richard Cullen, The Encounter Between Natural Resources and Federalism in Canada and Australia, 24 U.B.C.L. Rev. 275, 293–94 (1990).

⁹² See Crawford, supra note 51, at 17.

 $^{^{98}}$ BATES, supra note 15, at 53. See generally id. at 75–92 (describing state and local land-use planning efforts).

⁹⁴ AUSTL. CONST. ch. IV, § 122; Crawford, supra note 51, at 16.

⁹⁵ Mabo v. Queensland, 175 C.L.R. 1 (Austl. 1992) (native land titles survive the acquisition of British and Australian sovereignty unless displaced by clear legislative grant). For a summary of the Commonwealth's initial proposal for legislation to respond to the *Mabo* decision, see COMMONWEALTH OF AUSTRALIA, MABO: SUMMARY GUIDE TO PROPOSED LEGISLATION ON NATIVE TITLE (Sept. 1993).

⁹⁶ Following the *Tasmanian Dam* case, the Commonwealth signed a financial agreement in which it agreed to pay substantial compensation to the state. *See* Davis, *supra* note 77, at 70.

⁹⁷ Austl. Const. ch. I, pt. V, § 51(xxxi).

pollution control. The natural resources cases, however, provide a theoretical basis for Commonwealth intervention on matters of pollution control.

The taxing power offers the most obvious possibility for extending Commonwealth powers in the area of pollution control, for few would deny that taxation discourages polluting behavior. Moreover, the plenary character of the taxing power was established long before the modern expansion of Commonwealth regulatory power in the natural resources context. In fact, an early article identified the taxing power as the most secure basis for Commonwealth controls over industrial pollution. Pollution.

Other powers on which the Commonwealth has relied in the natural resources context could also provide conceptual frameworks for expanded pollution-control regulations. While the power to legislate specially for any race may be of limited applicability in the pollution-control context, there is substantial potential for transferring other powers from the natural resources context.

The trade and commerce power presents a clear alternative power upon which Commonwealth pollution-control regulation may be based. No principle distinguishes mining¹⁰⁰ from manufacturing or other forms of industrial production. In all three cases, the Commonwealth could impose controls as a prerequisite to the productive activity allowing the product to be sold in interstate or foreign commerce. Thus, to the extent that Australian commerce is interstate or international in character, the Commonwealth should have the power to condition access to that commerce on compliance with pollution-control standards. Of course, the Commonwealth would have to show a relationship between the control and interstate or foreign commerce. Moreover, Section 92 might limit Commonwealth power to regulate interstate commerce.¹⁰¹

The High Court's broad interpretation of the corporations power in the natural resources context seems equally applicable to Commonwealth pollution-control regulations. Trade is the ultimate aim of all industrial activity, and those who trade in the products of manufacturing and other activities fall within the Commonwealth's regulatory power. Moreover, the corporations power extends to state agencies

⁹⁸ Because they fear that taxation schemes will be construed as granting a "right" to pollute, environmentalists have generally preferred regulatory programs.

⁹⁹ Hayden Opie, Commonwealth Power to Regulate Industrial Pollution, 10 Melb. U. L. Rev. 577, 580 (1976).

¹⁰⁰ See Murphyores Inc. Pty., Ltd. v. Commonwealth, 136 C.L.R. 1 (Austl. 1975).

¹⁰¹ See supra notes 80-83 and accompanying text.

that act as trading companies. 102 Once a corporation falls within the reach of the corporations power, virtually all of its activities are subject to regulation. 103

The external affairs power is another potential source for expanding Commonwealth power in the area of pollution control. Parliament has already used the external affairs power as the basis for a number of Commonwealth statutes. ¹⁰⁴ International activity with respect to pollution control and abatement, especially those activities pertaining to toxic and hazardous substances, is likely to grow. Given the High Court's deferential attitude toward the subject matter of—and obligations imposed by—international agreements, the external affairs power will be a fertile ground for the development of new Commonwealth initiatives.

Potential Commonwealth legislation regulating the remediation of spills of hazardous substances and releases from hazardous waste disposal sites is defensible under the current definitions of Commonwealth powers. Because hazardous substances are the subject of increasing international attention, they appear to fall within the external affairs power. Moreover, hazardous substances are by-products of the activities of "trading . . . corporations" subject to the corporations power or of others that engage in activities closely connected to interstate and foreign commerce. In addition, the taxing power provides an obvious basis for funding at least some of the costs of remediation efforts.

The theories described in the preceding paragraphs might even support nationalization of tort liability for damages to people and property in some cases. At least when the damages involve trading companies, interstate or foreign commerce—or production for those forms of commerce—or substances that have been the subject of international agreements, a theoretical argument exists for expanded Commonwealth legislation. Nationalization of tort liability has not even occurred in the United States, however; los lacking the contin-

¹⁰² Commonwealth v. Tasmania, 158 C.L.R. 1 (Austl. 1983).

¹⁰³ *Id.*; Zines, *supra*, note 48, at 17–18.

¹⁰⁴ See BATES, supra note 15, at 57.

¹⁰⁵ Austl. Const. ch. I, pt. V, § 51(xxix).

¹⁰⁶ Id. § 51(xx).

¹⁰⁷ Id. § 51(i).

¹⁰⁸ In recent years the Supreme Court has been extremely reluctant to recognize environmental torts claims under federal law. See, e.g., Middlesex County Sewerage Auth. v. National Sea Clammers Ass'n, 453 U.S. 1, 11 (1981); California v. Sierra Club, 451 U.S. 287, 298 (1981); City of Milwaukee v. Illinois, 451 U.S. 304, 317 (1981). See generally Kenneth M. Murchison, Interstate Pollution: The Need for Federal Common Law, 6 VA. J. NAT. Res. L. 1 (1986) (examining the role of common law doctrines in environmental litigation).

gency fee system that fuels tort litigation in the United States, Australia will probably feel even less pressure for federalization in this area.

Governments generally exercise new powers when they are conferred.¹⁰⁹ If for no other reason, therefore, Commonwealth environmental legislation is likely to expand over the next two decades. Nonetheless, the actual extent of Commonwealth legislation is unlikely to test the theoretical limits of recent High Court decisions in the near future.

One factor that will encourage caution in expanding Commonwealth domination of environmental regulations is the uncertainty as to the limits of Commonwealth power. The preceding paragraphs offer extrapolations and extensions of recent cases. Although the analysis is logical, the High Court might not accept it. After all, the recent decisions represent a significant modification of past doctrine. A court that regretted the centralizing impact of those decisions could certainly discover limits and exceptions to confine their reach or develop doctrines that limit Commonwealth power. The Australian Constitution's "just terms" provision¹¹⁰ could be expanded to require that the government pay for some regulations that regulate the rights to develop property. The High Court could invalidate environmental regulations that impact interstate commerce as inconsistent with the free-trade principles embodied in Section 92.111 Alternatively, the High Court could resurrect previously rejected limits on federal power such as the doctrines of the reserved powers of the states, 112 or it could expand the immunity of state property from Commonwealth taxation.113

Practical considerations will also blunt the drive to centralize environmental law in Australia. Most obviously, Australia experiences relatively little interstate "spillover" of pollution.¹¹⁴ The nation has only one significant interstate river, the Murray-Darling system.¹¹⁵

¹⁰⁹ Cf. Battle, supra note 7, at 303 ("[F]ederal environmental law [in the United States] is perhaps the best example that power given will be used—at least by the United States Congress.").

¹¹⁰ Austl. Const. ch. I, pt. V, § 51(xxxi). See generally Zines, supra note 48, at 28–29.

¹¹¹ AUSTL. CONST. ch. IV, § 92. See generally Cullen, supra note 82; Zines, supra note 48, at 26–27.

¹¹² Lane, supra note 57, at 29; Crawford, supra note 51, at 14.

¹¹³ AUSTL. CONST. ch. V, § 114.

¹¹⁴ Auster, supra note 80, at 281; Stuart Harris & Frances Perkins, Federalism and the Environment: Economic Aspects, in Federalism and the Environment 35, 37 (R. Mathews ed., 1985).

 $^{^{115}}$ See generally Sanford Clark, The River Murray Water Agreement: Peace in Our Time?, 9 Adelaide L. Rev. 108 (1983).

Most of Australia's states are large, and the country's relatively small population is concentrated in a few urban centers. ¹¹⁶ As a result, the states that enjoy most of the benefits of pollution-causing activity also bear most of the environmental costs.

Australian trade patterns also diminish the impetus for national pollution-control regulations. Although interstate trade is certainly important, it is less pervasive than in the United States. While the greater significance of intrastate trade is partly a consequence of the smaller number and larger size of Australian states, historical factors have also contributed. All six Australian states existed prior to federation, when the colonies had already established intracolonial trading patterns. Moreover, various policies, such as colonial protectionism¹¹⁸ and differing railroad gauges, ¹¹⁹ reinforced colonial patterns.

The industries that generate pollution may themselves favor continued state control. Because state pollution-control agencies, like most Australian administrative agencies, are relatively small and weak, they rely on conciliatory rather than coercive strategies to induce compliance. A national environmental authority is likely to have greater resources to combat polluters and to be less susceptible to local political influence.

Despite the influence of these forces, at least two political realities support greater nationalization of environmental law. First, the environmental movement is likely to focus on national reforms. This approach allows environmental groups to concentrate their political efforts and resources as well as to circumvent entrenched power in the least progressive states. The national approach has proved successful in the natural resources arena, and one can reasonably expect environmentalists to embrace a similar strategy for pollution control. Second, both established businesses and states with advanced environmental laws may favor uniform, national regulations in order to avoid competition from businesses that locate in states with less restrictive environmental regulations. ¹²¹ As environmental regulations be-

¹¹⁶ 14 The New Encyclopædia Britannica 414 (15th ed. 1986). "The great paradox of Australia, however, is that in this huge continent with its small population, relatively few people live in the country at all. The majority of the population lives in the seven capital cities." *Id.*

 $^{^{117}\,}See$ I.D. McNaughton, Colonial Liberalism, 1851–1892, in Australia: A Social and Political History 98, 109 (Gordon Greenwood ed., 1955).

 $^{^{118}\,\}mathrm{Thomas}$ L. McKnight, Australia's Corner of the World: A Geographical Summation 91 (1970).

¹¹⁹ DOUGLAS H. PIKE, AUSTRALIA: THE QUIET CONTINENT 115 (2d ed. 1970).

¹²⁰ See generally Peter Grabosky & John Braithwaite, Of Manners Gentle: Enforcement Strategies of Australian Business Regulatory Agencies (1986).

¹²¹ See, e.g., BATES, supra note 15, at 55 (quoting statement of New South Wales Premier).

come stricter in the more industrialized states, demands to avoid such a "race to the bottom" will probably increase.

The most likely outcome of these conflicting pressures is a uniquely Australian solution that offers states a far more significant voice in the establishment of national standards than states have been given in the United States. 122 Not only is such an accommodation a logical result of the competing pressures summarized above, it is also consistent with Australian history and recent developments. Australia preserved a significant role for states on the Loan Council when it nationalized state and Commonwealth borrowing, 123 and the Commonwealth also respected state interests after the High Court confirmed federal powers over the territorial sea.¹²⁴ The recent Memorandum of Agreement between states and the Commonwealth¹²⁵ offers a framework for the future. The memorandum creates an Environmental Protection Authority for the Commonwealth and envisions the creation of national pollution-control regulations. Because the Authority is the product of a Commonwealth-State agreement, it offers states a greater opportunity to participate in the creation of environmental standards, not simply to administer and to enforce them, which is the primary role of states in the United States. 126

III. STATE POWER

A. United States

Under the residual theory of state power,¹²⁷ the United States Constitution allows states to exercise plenary authority over environmental matters except to the extent that the Constitution limits their

¹²² For a description of the way that the Minister for the Arts, Sport, the Environment, Tourism and Territories expected the Environmental Protection Authority to work, see Honorable Ross Kelly, *New Approaches to Environment Issues*, Address to the Public Issues Resolution Conference in Brisbane, Queensland (Feb. 18 1991) (on file with author). *Cf.* Battle, *supra* note 7, at 306 ("In America, co-operative federalism has come to be a euphemism. To the States, it means: cooperate with Uncle Sam *or else.*") (emphasis in original).

¹²³ Of course, the Commonwealth exercises a dominant role. Because the Commonwealth has two votes plus the deciding vote in case of a tie, it and any two states can set the policy of the Loan Council.

¹²⁴ Cullen, supra note 91, at 295–98. See generally Edward Fitzgerald, New South Wales v. Commonwealth: The Australian Tidelands Controversy, 14 Loy. L.A. Int. & Comp. L.J. 25 (1991). In the United States, Congress also granted states greater rights in off-shore lands than the Supreme Court recognized. Compare Submerged Land Act, 43 U.S.C. § 1312 (1988) with United States v. Texas, 339 U.S. 707 (1950), United States v. Louisiana, 339 U.S. 699 (1950), and United States v. California, 332 U.S. 19 (1947).

¹²⁵ See Summary of Intergovernmental Agreement, supra note 17, and accompanying text.

¹²⁶ For a summary of the role of the states, see Battle, *supra* note 7, at 310-11, 312-13.

¹²⁷ See U.S. Const. art. I, § 8 (listing powers of Congress); Federalist No. 39 in The Federal

powers. As in most federal systems, the priority of federal law is the most significant restraint on state power. In the United States, the Constitution, laws made "in pursuance thereof," and treaties made "under the authority of the United States," are the "supreme law of the land . . . any thing in the Constitution or laws of any state to the contrary notwithstanding." ¹¹²⁸

Given the breadth of federal environmental statutes and regulations in the United States, federal preemption of state power in environmental matters has been a recurring issue in litigation. ¹²⁹ Although its opinions on preemption are far from consistent, ¹³⁰ the United States Supreme Court has generally been reluctant to find that the federal government has occupied an entire field merely because Congress has chosen to regulate some portions of the field. Instead, the Court has normally required that the person challenging the state law demonstrate an express or implied conflict with some specific provision of federal law. ¹³¹

Many modern environmental statutes expressly address the preemption question. Most commonly, these statutes enact a rule of "floor preemption." This approach allows states to enforce environmental regulations that are equal to, or more stringent than, the applicable federal regulations.¹³²

Unfortunately, floor preemption provisions have not eliminated all controversies regarding the preemptive impact of federal environmental law. Some statutes expressly impose a federal ceiling that precludes more restrictive state standards, ¹³³ and federal courts have

ALIST 194 (Max Beloff ed., 1987). Following the adoption of the Constitution, the principle of residual state powers was incorporated into the Tenth Amendment, which provides: "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people." U.S. CONST. amend. X.

¹²⁸ U.S. CONST. art. VI, cl. 2.

 $^{^{129}}$ E.g., Wisconsin Public Intervenor v. Mortier, 111 S. Ct. 2476 (1991); English v. General Electric Co., 496 U.S. 72 (1990); Exxon Corp. v. Hunt, 475 U.S. 355 (1986); Pacific Gas & Electric Co. v. State Energy Resources Conservation & Dev. Comm'n, 461 U.S. 190 (1983); Ray v. Atlantic Richfield Co., 435 U.S. 151 (1978).

¹³⁰ Compare, e.g., City of Burbank v. Lockheed Air Terminal, Inc., 411 U.S. 624 (1973) (Noise Control Act preempts state or local regulation forbidding aircraft takeoffs), with Huron Portland Cement Co. v. City of Detroit, 362 U.S. 440 (1960) (Clean Air Act does not preempt local regulation of air emissions of federally licensed vessels operating on the Great Lakes).

¹³¹ See, e.g., Wisconsin Public Intervenor v. Mortier, 111 S. Ct. 2476 (1991); Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n, 461 U.S. 190 (1983); Ray v. Atlantic Richfield Co., 435 U.S. 151 (1978); Huron Portland Cement Co. v. City of Detroit, 362 U.S. 440 (1960).

¹³² CWA 33 U.S. § 1370; RCRA 42 U.S.C. § 6929; CAA 42 U.S.C. § 7416.

¹³⁸ The Federal Insecticide Fungicide and Rodenticide Act prohibits states from imposing "any requirements for labelling or packaging [of pesticides] in addition to or different from" those of the federal statute. 7 U.S.C. § 136v(b) (1988). The Clean Air Act restricts the power of

found preemption in other statutes that lack an express preemption provision.¹³⁴ Moreover, despite an express reservation of state authority in the Comprehensive Environmental Response, Compensation, and Liability Act, one appellate court has interpreted the federal statute to preclude a state from compelling a responsible party to satisfy more stringent clean-up standards than the Environmental Protection Agency has chosen to mandate in a settlement agreement.¹³⁵

Perhaps more significantly, even federal environmental statutes that embrace the rule of floor preemption provide states little power to control the interstate spillover of pollution that originates in another state. Judicial decisions construing both the Clean Water Act and the Clean Air Act have limited the power of a state to stop the interstate effects of pollution that originates outside the state. ¹³⁶

The primary state roles under most pollution-control statutes in the United States are administration and enforcement. States generally apply national standards to individual polluters and translate the individualized limits into permit conditions. In the process, state regulators sometimes exercise a fair amount of discretion in considering peculiarities of a polluter's location. States are also normally responsible for routine enforcement, although the federal government may also take direct enforcement action against violators. The federal government frequently relies on its spending authority to induce states to undertake both administration and enforcement.

In sum, states are significant, but definitely subordinate, actors with respect to pollution control in the United States. States are

states to enforce emission standards for mobile sources that are stricter than federal standards. CAA. 42 U.S.C. § 7453(a).

¹³⁴ See, e.g., California v. FERC, 495 U.S. 490 (1990); Ray v. Atlantic Richfield Co., 435 U.S. 151 (1978) (federal statute regulating oil tankers); Northern States Power Co. v. Minnesota, 447 F.2d 1143 (8th Cir. 1971) (Atomic Energy Act).

¹³⁵ United States v. Akzo Coatings of America, Inc., 949 F.2d 1409 (6th Cir. 1991). *But see* United States v. Colorado, 990 F.2d 1565 (10th Cir. 1993) (state can enforce corrective action requirements under a state program approved under the Resource Conservation and Recovery Act with respect to a hazardous waste site that is also subject to a less stringent federal order under the Comprehensive Environmental Response, Compensation, and Liability Act).

Arkansas v. Oklahoma, 503 U.S. 91 (1992) (Clean Water Act); Air Pollution Control Dist.
v. EPA, 739 F.2d 1071 (6th Cir. 1984) (Clean Air Act).

 $^{^{137}}$ E.g., CWA, 33 U.S.C. \$ 1342(b); RCRA, 42 U.S.C. \$ 6926; CAA, 42 U.S.C. \$ 7410, 7661–61f. 138 E.g., CWA, 33 U.S.C. \$ 1319; RCRA 42 U.S.C. \$ 6928; CAA, 42 U.S.C. \$ 7413.

 $^{^{139}}$ E.g., CWA, 33 U.S.C. § 1256; RCRA, 42 U.S.C. § 6931; CAA, 42 U.S.C. § 7405. Congress has also used the threat of withdrawal of other funds when states elect not to fulfill their responsibilities under federal environmental statutes. See, e.g., CAA, 42 U.S.C. § 7509(b)(1) (authority to prohibit highway grants in states that fail to adopt revised implementation plans under the Clean Air Act for areas that fail to meet national ambient air standards).

normally responsible for implementing the statutes on a day-to-day basis, and they may generally impose stricter controls on pollution sources located within their borders. However, states must ensure compliance with federal standards, and the federal Environmental Protection Agency retains oversight authority over most state decisions.

The Commerce Clause of the United States Constitution¹⁴⁰ also restricts state legislative power even in areas where Congress has not regulated. The primary focus of this implied constitutional limitation under the "dormant" Commerce Clause is the prevention of discrimination against interstate commerce. The Supreme Court has been extremely tolerant of state regulations and taxes that are facially nondiscriminatory.¹⁴¹ On the other hand, a variety of environmental cases have invalidated discriminatory regulations and taxes when the discrimination against interstate commerce is apparent on the face of the statute.

For discriminatory regulations and taxes, the Supreme Court has applied a "virtually per se rule of invalidity." Under this approach, a regulation or tax that discriminates against interstate commerce is unconstitutional unless it falls within one of two exceptions. First, discriminatory state regulations are permissible when the state has no less-discriminatory alternative for achieving a legitimate state interest such as environmental protection. Second, the dormant Commerce Clause does not apply when the state acts as a market participant, because the Commerce Clause only restrains the taxing and regulatory powers of the state.

The United States Constitution contains one other constraint on a state's power to discriminate against nonresidents.¹⁴⁵ Under the Privi-

¹⁴⁰ U.S. Const. art. I, § 8, cl. 3.

 $^{^{141}}$ E.g., Commonwealth Edison Co. v. Montana, 453 U.S. 609, 629 (1981); Minnesota v. Clover Leaf Creamery Co., 449 U.S. 456, 470 (1981).

¹⁴² City of Philadelphia v. New Jersey, 437 U.S. 617, 624 (1978); see Maryland v. Louisiana, 451 U.S. 725, 754 (1981); Hughes v. Oklahoma, 441 U.S. 322, 335 (1979). But see Medical Waste Assoc. Ltd. Partnership v. Mayor & City Council of Baltimore, 966 F.2d 148, 150–51 (4th Cir. 1992) (zoning ordinance limiting medical waste disposal facility to waste generated within city and surrounding counties did not violate dormant Commerce Clause).

¹⁴³ Maine v. Taylor, 477 U.S. 131, 138 (1986).

¹⁴⁴ E.g., Hughes v. Alexandria Scrap Corp., 426 U.S. 794, 810 (1976). For lower-court decisions applying the market-participant exception in the environmental context, see Swin Resource Systems, Inc. v. Lycoming County, 883 F.2d 245, 249 (3d Cir. 1989), cert. denied, 493 U.S. 1077 (1990); Lefrancois v. Rhode Island, 669 F. Supp. 1204, 1212 (D.R.I. 1987); Evergreen Waste Systems, Inc. v. Metropolitan Serv. Dist., 643 F. Supp. 127, 131 (D. Ore. 1986), aff'd on other grounds, 820 F.2d 1482, 1484–85 (9th Cir. 1987).

¹⁴⁵ Cf. Cole v. Whitfield, 165 C.L.R. 360, 388, 393 (Austl. 1988) (suggesting that the guarantee

leges and Immunities Clause,¹⁴⁶ the courts apply a reasonableness standard to evaluate state actions that discriminate against nonresidents.¹⁴⁷ Of course, most actions that discriminate against nonresidents also discriminate against interstate commerce, and so plaintiffs naturally prefer the stricter standard of the dormant Commerce Clause. As a result, the primary impact of the Privileges and Immunities Clause in commercial cases occurs when the Commerce Clause is inapplicable because of the market-participant exception.¹⁴⁸

The doctrine of intergovernmental immunity normally precludes states from taxing or regulating instrumentalities of the federal government. He are Because the federal government is a major landowner and a significant polluter, the limitation is an important one. Although Congress has generally waived federal immunity from state environmental regulations, the Supreme Court has consistently interpreted these waivers in a most restrictive fashion. He immunity from the state environmental regulations, a most restrictive fashion.

Finally, states are also subject to constitutional protection of individual rights. As with federal legislation, the Takings Clause is the most important substantive limitation. ¹⁵² Although the Equal Protection Clause ¹⁵³ has not proved to be a significant restraint on state regulatory power, ¹⁵⁴ environmental cases challenging state laws have raised constitutional issues involving the guarantee of due process, ¹⁵⁵ the prohibition against unreasonable searches and seizures, ¹⁵⁶ the privi-

of freedom of interstate "intercourse" under Section 92 is more absolute than the protection afforded interstate trade).

¹⁴⁶ U.S. CONST. art. IV, § 2.

¹⁴⁷ United Building & Constr. Trades Council v. City of Camden, 465 U.S. 208, 222 (1984).

¹⁴⁸ See Geoffrey Stone et al., Constitutional Law 307-08 (2d ed. 1991).

¹⁴⁹ The seminal case establishing the principle is McCulloch v. Maryland, 17 U.S. (4 Wheat.) 316, 347 (1819).

¹⁵⁰ CWA, 33 U.S.C. § 1323; RCRA 42 U.S.C. § 6961; CAA 42 U.S.C. § 7418.

¹⁵¹ Department of Energy v. Ohio, 112 S. Ct. 1627 (1992); EPA v. California ex rel. State Water Resources Control Bd., 426 U.S. 200, 227 (1976); Hancock v. Train, 426 U.S. 167, 198–99 (1976). See generally Kenneth M. Murchison, Reforming Environmental Enforcement: Lessons From Twenty Years of Waiving Federal Immunity to State Regulation, 11 VA. ENVIL. L.J. 179 (1991); Kenneth M. Murchison, Waivers of Intergovernmental Immunity in Federal Environmental Statutes, 62 VA. L. REV. 1177 (1976).

¹⁵² See generally Lucas v. South Carolina Coastal Council, 112 S. Ct. 2886 (1992); Nollan v. California Coastal Comm'n, 483 U.S. 825 (1987); First English Evangelical Lutheran Church of Glendale v. County of Los Angeles, 482 U.S. 304 (1987); Keystone Bituminous Coal Ass'n v. DeBenedictis, 480 U.S. 470 (1987). For an analysis of the 1987 decisions, see Kenneth M. Murchison, Local Government Law, 48 La. L. Rev. 303, 309–22 (1987).

¹⁵³ U.S. Const. amend. XIV, § 1.

¹⁵⁴ See Minnesota v. Clover Leaf Creamery Co., 449 U.S. 456, 467-70 (1981).

 $^{^{155}}$ E.g., Geo-Tech Reclamation Industries, Inc. v. Hamrick, 886 F.2d 662, 663–64 (4th Cir. 1989); State v. Gingo, 605 So. 2d 1237, 1241 (Ala. 1992), cert. denied, 113 S. Ct. 967 (1993).

¹⁵⁶ See, e.g., V-1 Oil Co. v. State, 902 F.2d 1482, 1484–86 (10th Cir. 1990), cert. denied, 498 U.S.

lege against self-incrimination, ¹⁵⁷ and even the protection provided for freedom of speech. ¹⁵⁸

B. Australia

In Australia, as in the United States, states retain residual powers except as limited by the Constitution. On the other hand—like the Constitution of the United States and most other federal constitutions—the Australian Constitution establishes the primacy of federal power. Whenever a state law "is inconsistent with a law of the Commonwealth," the Commonwealth law prevails and the state law is invalid "to the extent of the inconsistency."

In applying the Inconsistency Clause, the Australian High Court has developed a preemption theory that is arguably broader than the theory embraced by the Supreme Court. The Supreme Court has generally been reluctant to find that the federal government has occupied an entire field merely because it has chosen to regulate some portions of the field. The High Court, by contrast, appears more willing to infer that Parliament has chosen to preempt the entire field that falls within the general scope of an area that is being regulated.¹⁶¹

Given the paucity of Commonwealth environmental regulation in the past, preemption has not yet occasioned significant loss of state power in Australia, except in the few natural resource cases where the Commonwealth has specifically legislated to preclude contrary state action.¹⁶² If the scope of Commonwealth regulation expands in the future, preemption issues are certain to arise.

The key to minimizing preemption disputes is careful drafting. Although the need for state control of spillover effects is less urgent in Australia than in the United States, states should be allowed to

^{920 (1990);} Los Angeles Chemical Co. v. Superior Court, 276 Cal. Rptr. 647, 653–56 (Cal. App. 2d Dist. 1990); Commonwealth v. Lutz, 516 A.2d 339, 340–46 (Pa. 1986).

¹⁵⁷ United States v. Mitchell, 966 F.2d 92, 97-100 (2d Cir. 1992).

 ¹⁵⁸ See, e.g., Members of City Council v. Taxpayers for Vincent, 466 U.S. 789, 803–17 (1984);
Metromedia, Inc. v. City of San Diego, 453 U.S. 490 (1981);
Lawlor v. Shannon, 18 Envtl. L. Rep. (Envtl. L. Inst.) 21,496, 21,496–97, (D. Mass. 1988).

¹⁵⁹ Austl. Const. ch. I, pt. V, §§ 51, 52, ch. V, § 107.

¹⁶⁰ Austl. Const. ch. V, § 109.

¹⁶¹ See Lane, supra note 57, at 32–33. For examples of the willingness of the United States Supreme Court to divide the field being regulated, see Pacific Gas & Electric Co. v. State Energy Resources Conservation & Development Comm'n, 461 U.S. 190 (1983); Ray v. Atlantic Richfield Co., 435 U.S. 151 (1978).

¹⁶² See Queensland v. Commonwealth, 167 C.L.R. 232 (Austl. 1989); Richardson v. Forestry Comm'n, 164 C.L.R. 261 (Austl. 1988); Commonwealth v. Tasmania, 158 C.L.R. 1 (Austl. 1983); New South Wales v. Commonwealth, 135 C.L.R. 337 (Austl. 1975).

choose a cleaner environment if they are willing to pay the increased costs associated with greater protection. Thus, Australia should preserve state authority to impose stricter standards than the Commonwealth requires, at least with respect to pollution originating within the boundaries of the state. Given the existence of established state bureaucracies, states should also retain primary responsibility for administering and enforcing the Commonwealth standards.

The collaborative approach outlined in the recent Memorandum of Agreement between the Commonwealth and the states envisions state participation in the deliberative process that will produce national standards. Although negotiated agreements may slow the difficult process of setting standards, they may also minimize preemption disputes by clarifying the expectations of the participants. In addition, involving states in the creation of federal standards may allow national standards to be established without the adversarial relationship that has sometimes characterized federal-state relations on environmental issues in the United States.

To the extent that agencies of the Commonwealth are significant polluters in Australia, a system of cooperative federalism should allow states to require Commonwealth agencies to comply with federal and state environmental standards. Requiring governments to comply with the same standards as private industry does more than reduce the pollution produced by governmental agencies. It also promotes a greater sense of fairness regarding the operation of the pollution-control system, and it serves as a healthy check on the reasonableness of the costs that government is imposing on the private sector.¹⁶⁵

At least two additional constitutional restraints limit the power of Australian states to respond to environmental problems. First, the Commonwealth Parliament has exclusive power to impose "duties of customs and of excise." ¹⁶⁶ Second, Section 92 of the Australian Constitution forbids the establishment of any regulations that inhibit the "absolutely free" nature of interstate commerce. ¹⁶⁷

The ban on state excises does more than forbid state sales taxes. Indeed, a 1983 decision of the High Court broadened the traditional

¹⁶³ An unreported case of the Land and Environment Court of New South Wales has upheld a conviction for polluting activity in Queensland when the polluted river flowed into New South Wales. *See* BATES, *supra* note 15, at 312.

 $^{^{164}}$ See Summary of Intergovernmental Agreement, supra note 17, and accompanying text.

¹⁶⁵ Murchison, Reforming Environmental Enforcement: Lessons from Twenty Years of Waiving Federal Immunity to State Regulation, supra note 151, at 202–03.

¹⁶⁶ AUSTL. CONST. ch. IV, § 90.

 $^{^{167}}$ Austl. Const. ch. IV \S 92; see supra notes 82–88 and accompanying text.

definition of *excise* to invalidate a pipeline operation fee that was a flat charge, albeit a flat charge of \$10 million per year.¹⁶⁸ A 1989 decision that allowed states to exact substantial "royalties" on the right to exploit publicly owned resources raises the possibility that the High Court might take a more tolerant attitude toward charges related to natural resources and, perhaps, pollution.¹⁶⁹ The royalty decision, however, remains confined to resources owned by the state.¹⁷⁰ As a result, states can regulate pollution through financial charges, however labelled, only if the pollution fee is treated as a royalty for allowing the polluter to use common resources.

The second restraint on state power to respond to environmental problems is Section 92—the most litigated section of the Australian Constitution,¹⁷¹ and one of the most ambiguous. As an original matter, the High Court might have applied a protectionist principle in construing the prohibition against regulations that restrict the freedom of interstate commerce, but the Court's early opinions rejected that approach.¹⁷² Recent decisions seem to be moving toward an anti-discriminatory principle that focuses on regulations that discriminate against interstate trade,¹⁷³ although the High Court probably remains more willing than the United States Supreme Court to find that facially nondiscriminatory regulations discriminate against interstate commerce in practice.¹⁷⁴

IV. Policy Issues: Standards, Permits and Enforcement

A. United States

1. Standards

Two basic approaches exist for setting regulatory standards to protect the environment.¹⁷⁵ The regulator can begin by focusing on

 $^{^{168}\,\}mathrm{Hermatite}$ Petroleum Pty., Ltd. v. Victoria, 151 C.L.R. 599 (Austl. 1983); see Crawford, supra note 51, at 18–19.

¹⁶⁹ Harper v. Minister for Sea Fisheries, 88 A.L.R. 38 (Austl. 1989).

¹⁷⁰ Id.; see Crawford, supra note 51, at 19-21.

¹⁷¹ Cullen, supra note 82, at 90.

¹⁷² Id. at 92-93.

¹⁷³ See, e.g., Cole v. Whitfield, 165 C.L.R. 360 (Austl. 1988); Cullen, supra note 82, at 124.

¹⁷⁴ Compare, e.g., Castlemain Tooheys Ltd. v. South Australia, 169 C.L.R. 436 (Austl. 1990) and Bath v. Alston Holdings Pty. Ltd., 165 C.L.R. 411 (Austl. 1988) with Minnesota v. Clover Leaf Creamery Co., 449 U.S. 456 (1981) and Henneford v. Silas Mason Co., 300 U.S. 577 (1936); see Detmold, Australian Law: Federal Movement, 13 Sydney L. Rev. 31, 49–53 (1991).

¹⁷⁵ Westman, *supra* note 5, at 767. Westman terms the ambient approach "technological," and characterizes the feasibility approach as an "ecological" one. *See id.* at 767–68

the background, or "ambient," environment. Under this approach, discharge or emission limits for individual polluters must be strict enough so that, cumulatively, they will produce the desired ambient environment. Alternatively, regulators can look to existing technology to set discharge or emission limits. This "feasibility" approach requires polluters to make use of available technology regardless of the impact of the pollution on the ambient environment.

Of course, the two methods for setting environmental standards are not mutually exclusive. A single statute can employ a "mixed" strategy that combines both the ambient and the feasibility approaches. Indeed, the mixed strategy describes most contemporary environmental statutes in the United States.

Modern environmental regulation in the United States began with the Clean Air Act Amendments of 1970.¹⁷⁶ The 1970 Amendments included feasibility-based standards for new sources,¹⁷⁷ as well as "technology-forcing" standards for automobiles.¹⁷⁸ Nonetheless, the heart of the 1970 Act was the ambient approach it embraced for stationary sources.

Like all ambient-based systems, the Clean Air Act focused on specific pollutants that threaten the ambient environment. The Act directed the federal Environmental Protection Agency (EPA) to identify air pollutants that originated from numerous and diverse sources and that existed at ambient levels sufficient to threaten public health or public welfare. To each of these pollutants, the statute directed the EPA to prescribe permissible levels of ambient air quality. States were then required to establish "state implementation plans," which set emission standards for stationary sources. The basic requirement for the state implementation plans was the mandate to achieve the desired level of ambient air quality. For pollutants that threatened the public health even in very small concentrations, the 1970 Act directed the EPA to promulgate national emission standards, which

 $^{^{176}}$ Clean Air Act Amendments of 1970, Pub. L. No. 91–604, 84 Stat. 1676 (1970) (codified as amended at 42 U.S.C. §§ 7401–7642 (1988 & Supp. V 1993)).

¹⁷⁷ Id. § 4(a), 84 Stat. 1683 (codified as amended at 42 U.S.C. § 7411). Technology-forcing requirements mandate polluters to achieve, at a specified date in the future, a degree of pollution control that is not feasible using the pollution-control technology in existence at the time the requirement is introduced. For example, the Clean Air Act Amendments of 1970 directed automobile manufacturers to reduce emission levels by 90 percent by 1975.

¹⁷⁸ Id. § 6(a), 84 Stat. 1690, (1970) (codified as amended at 42 U.S.C. § 7521).

¹⁷⁹ Id. § 4(a), 84 Stat. 1678 (codified as amended at 42 U.S.C. § 7408).

¹⁸⁰ Id. § 4(a), 84 Stat. 1679 (codified as amended at 42 U.S.C. § 7409).

¹⁸¹ Id. § 4(a), 84 Stat. 1680 (1970) (codified as amended at 42 U.S.C. § 7410).

were to be set at a level adequate to protect the public health with a margin of safety.¹⁸²

Two years later, the Federal Water Pollution Control Act Amendments of 1972 (FWPCA)¹⁸³ adopted a different approach to the regulation of water pollution. The 1972 Act provided for the establishment of water quality standards¹⁸⁴ and required those standards to be used in setting effluent limits for point sources.¹⁸⁵ However, the focus of the statute was the establishment of feasibility-based standards for point sources.

The FWPCA divided point sources into two broad categories: publicly owned treatment works and "other" point sources. All publicly owned treatment works were directed to employ "secondary treatment" by 1977. ¹⁸⁶ All other point sources that discharged into the waters of the United States were to use the "best practicable" technology by 1977 and the "best available" technology by 1983. ¹⁸⁷ The FWPCA also mandated that new point sources employ the "best available demonstrated control technology." Subsequent amendments extended the statutory deadlines and introduced an intermediate level for "conventional" pollutants. ¹⁸⁹ Notwithstanding these changes, the feasibility-based system for controlling effluents from point sources remains the dominant approach of the Clean Water Act. ¹⁹⁰

In recent years, federal environmental laws in the United States have increasingly applied a mixed approach that incorporates both feasibility-based and ambient-based standards. Most commonly, the

¹⁸² Id. § 4(a), 84 Stat. 1685 (codified as amended at 42 U.S.C. § 7412).

¹⁸⁸ Federal Water Pollution Control Act Amendments of 1972, 86 Stat. 816 (codified as amended at 33 U.S.C. §§ 1251–1387 (1988 & Supp. V 1993)).

¹⁸⁴ Id. § 2, 86 Stat. 846 (codified as amended at 42 U.S.C. § 1313); see also id. § 2, 86 Stat. 816 (codified as amended at CWA 42 U.S.C. § 1251(a)(2) (establishing a "national goal that wherever attainable, an interim goal of water quality which provides the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1. 1983")).

¹⁸⁵ Id. § 2, 86 Stat. 844 (codified as amended at 42 U.S.C. § 1311(b)); see also id. § 2, 86 Stat. 846 (codified as amended at 42 U.S.C. § 1312) (allowing EPA to establish effluent limits based on water quality).

 $^{^{186}}$ Id. § 2, 86 Stat. 844 (codified as amended at 33 U.S.C. § 1311(b)(1)(B)). The 1972 legislation called for stricter standards for 1983, but the 1983 standards for publicly owned treatment works were eliminated in 1981. See Pub. L. No. 97–117, § 21(b), 95 Stat. 1632 (1981).

¹⁸⁷ Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92–500, § 2, 86 Stat. 844 (codified as amended at 42 U.S.C. § 1311(b)).

¹⁸⁸ Id. § 2, 86 Stat. 854 (codified as amended 33 U.S.C. § 1316).

¹⁸⁹ CWA, §§ 301(b)(1)(A), (2)(A), (C)-(F), 33 U.S.C. §§ 1311(b)(1)(A), (2)(A), (C)-(F).

 $^{^{190}}$ Id. §§ 301(b), 306, 307, 33 U.S.C. §§ 1311(b), 1316, 1317. The 1977 Amendments to the Federal Water Pollution Control Act noted that the statute was "commonly referred to as" the Clean Water Act. See CWA, Pub. L. No. 95–217, § 2, 91 Stat. 1566, 1566 (1977).

feasibility approach establishes a uniform floor for environmental controls with stricter ambient-based standards required in areas where the feasibility-based controls fail to produce the desired quality in the ambient environment. The philosophical basis for this primary focus on feasibility-based controls—a commitment to pollution minimization whenever possible—seems consistent with the "precautionary principle" that some scholars have identified as a fundamental attribute of modern environmental law.¹⁹¹

Feasibility-based standards currently form an important part of the Clean Air Act's strategy for controlling air pollution from stationary sources. New sources must comply with feasibility-based performance standards, ¹⁹² and state implementation plans must require feasibility-based controls in areas that meet federal ambient air quality standards ¹⁹³ as well as in areas that have not yet attained the federal standards. ¹⁹⁴ Moreover, the 1990 amendments to the Clean Air Act embraced a feasibility-based approach for setting national emission standards for hazardous air pollutants. ¹⁹⁵

Feasibility-based standards are also a significant component of the regulatory strategy of the Resource Conservation and Recovery Act. After the 1984 amendments to the statute, disposal of hazardous wastes is normally permissible only if the disposal facility handles the waste in accordance with feasibility-based standards established by the EPA. 196

Of course, feasibility-based controls may fail to produce an acceptable ambient environment if control technology is primitive, polluters are numerous, a pollutant is particularly dangerous, or the pollution threatens an especially fragile resource. Thus, federal environmental statutes in the United States typically provide for the creation of ambient-based controls for pollution when feasibility-based standards prove inadequate to produce the desired ambient environment.¹⁹⁷

¹⁹¹ See, e.g., James Cameron & Julie Aboucher, The Precautionary Principle: A Fundamental Principle of Law and Policy for the Protection of the Global Environment, 14 B.C. Int'l & Comp. L. Rev. 1 (1991).

¹⁹² CAA, 42 U.S.C. § 7411.

¹⁹⁸ See id. § 7475. Section 165 of the Clean Air Act imposes best available control technologies for major emitting facilities. *Id.* § 7475(a)(4).

 $^{^{194}}$ Id. §§ 7502(c) (requiring use of all reasonably available control measures in state implementation plans for nonattainment areas), 7503 (requiring lowest achievable emission requirements for construction or modification of major stationary sources).

 $^{^{195}\,\}text{Id.}\ \S\ 7412(d)$ (requiring maximum achievable control technology for major stationary sources that emit hazardous air pollutants).

¹⁹⁶ RCRA, 42 U.S.C. §§ 6924(d), (m).

 $^{^{197}}$ See CWA, 33 U.S.C. §§ 1251(a), 1288, 1329; see, e.g., id. § 1313 (water quality standards); see also id. § 1317(a)(2) (toxic water pollutants); CAA, 42 U.S.C. § 7412(f) (hazardous air pollutants).

Now that the feasibility-based controls of the Clean Water Act have largely been implemented, emphasis is shifting to problems not solved by existing effluent standards: the achievement of water quality standards through stricter controls on point sources¹⁹⁸ and the establishment of effective controls on nonpoint sources of water pollution.¹⁹⁹

Critics of feasibility-based controls have attacked them as economically inefficient. Because feasibility-based controls require use of available technology even if a polluter's impact on the ambient environment is minimal,²⁰⁰ the cost of pollution control may exceed the benefits it produces. Accepting this criticism, some commentators have urged greater use of market forces to allocate pollution limits among existing polluters.²⁰¹ The Clean Air Act Amendments of 1990 embrace the market allocation approach for the special limits imposed on sulfur dioxide and nitrogen oxide emissions to combat acid deposition.²⁰² The Clean Air Act also allows limited trading in emission limits established under state implementation plans.²⁰³ Nonetheless, most federal environmental laws continue to require adherence to feasibility-based standards as a regulatory minimum.²⁰⁴

2. Permits

A second trend of contemporary environmental law in the United States is to broaden the class of polluters who must obtain permits. The Clean Water Act is the paradigm: the law requires a permit for

¹⁹⁸ See, e.g., CWA 33 U.S.C. §§ 1313, 1314.

¹⁹⁹ See generally Robert D. Fentress, Comment, Nonpoint Source Pollution, Ground Water and the 1987 Water Quality Act: Section 208 Revisited?, 19 Envtl. L. 807 (1989).

²⁰⁰ See, e.g., William F. Pedersen, Jr., Turning the Tide on Water Quality, 15 EcoLogy L.Q. 69, 82–84 (1988).

²⁰¹ See, e.g., Bruce A. Ackerman & Richard B. Stewart, Reforming Environmental Law, 37 Stan. L. Rev. 1333 (1985); Robert W. Hahn & Robert N. Stavins, Incentive-Based Environmental Regulation: A New Era from an Old Idea?, 18 Ecology L.Q. 1 (1991); Richard B. Stewart, Controlling Environmental Risks Through Economic Incentives, 13 Colum. J. Envil. L. 153 (1988). But see Howard Latin, Ideal Versus Real Regulatory Efficiency: Implementation of Uniform Standards and "Fine-Tuning" Regulatory Reforms, 37 Stan. L. Rev. 1267 (1985). For a summary of the academic dispute over economic incentives, see Joel A. Mintz, Economic Reform of Environmental Protection: A Brief Comment on a Recent Debate, 15 Harv. Envil. L. Rev. 149 (1991).

²⁰² Clean Air Act Amendments of 1990, Pub. L. NO. 101-549, § 401(b), 104 Stat. 2584, 2585 (1990) (codified at 42 U.S.C. § 7651(b) (Supp. V 1993)). See generally Norman W. Fitchhorn, Command-and-Control vs. The Market: The Potential Effects of Other Clean Air Act Requirements on Acid Rain Compliance, 21 ENVIL. L. 2069 (1991).

²⁰⁸ See CAA, 42 U.S.C. § 172(c)(6). See generally Daniel J. Dudek & John Palmisaw, Emissions Trading: Why Is This Thoroughbred Hobbled? 13 Colum. J. Envtl. L. 217 (1988); Robert W. Hahn & Gordon L. Hester, Where Did All the Markets Go? An Analysis of EPA's Emissions Trading Program, 6 Yale J. on Reg. 109 (1989).

²⁰⁴ See, e.g., CWA, 33 U.S.C. § 1311(b); RCRA, 42 U.S.C. § 6924(m).

any discharge from a point source into the waters of the United States.²⁰⁵ The approach of the Resource Conservation and Recovery Act is analogous. It requires permits for those who own or operate facilities for the treatment, storage, or disposal of hazardous wastes.²⁰⁶

By contrast, the Clean Air Act originally contained no general permit requirement for stationary sources of air pollution,²⁰⁷ although permits were frequently required under state implementation plans. The Clean Air Act Amendments of 1990 do require states to establish permit programs.²⁰⁸ However, the permit requirement established by the 1990 Amendments remains less universal than the one established in the Clean Water Act.²⁰⁹

Permits are valuable for regulators, the regulated community, and the general public. From a regulatory standpoint, permits serve several important purposes. They inform regulators of the extent of existing pollution, allow the individualization of generalized standards for particular polluters, provide a convenient mechanism for the assessment of fees to finance the pollution-control system, and facilitate enforcement. For the regulated community, permits clarify what constitutes compliance with environmental regulations. Even more importantly, compliance with the requirements of a permit provides a shield against enforcement. Under most environmental statutes, compliance with permit requirements is "deemed" to constitute compliance with statutory and regulatory requirements. Finally, permits benefit the general public in at least two ways. They increase awareness of the amount of pollution that is occurring, and they allow for citizen enforcement of discharge limits.

Ideally, a permit for a pollution source should reflect an administrative decision as to the best method for minimizing the pollution from a particular source. Unfortunately, United States environmental law does not embrace such a "unified" approach to permit standards. A

²⁰⁵ CWA, 33 U.S.C. §§ 1342, 1344, 1362(6), (7), (12), (14). The United States Court of Appeals for the District of Columbia Circuit held that the EPA lacked the authority to exempt categories of point sources from the permit requirement. NRDC v. Costle, 568 F.2d 1369 (D.C. Cir. 1977). ²⁰⁶ RCRA, 42 U.S.C. § 6925(a).

 $^{^{207}}$ See generally William F. Pedersen, Jr., Why the Clean Air Act Works Badly, 129 U. Pa. L. Rev. 1059 (1981).

²⁰⁸ Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 502, 104 Stat. 2635 (1990) (codified at 42 U.S.C. § 7661a (Supp. V 1993)). See generally Timothy L. Williamson, Fitting Title V into the Clean Air Act: Implementing the New Operating Permit Program, 21 Envtl. L. 2085 (1991).

²⁰⁹ See generally Claudia Copeland, Comprehensive Clean Air and Clean Water Permits: Is the Glass Still Just Half Full?, 21 Envil. L. 2135 (1991).

²¹⁰ CWA, 33 U.S.C. § 1342(k); CAA, 42 U.S.C. § 7661c(f).

separate permit system exists for each environmental statute, and administration of the various permit systems is divided according to the various receiving media. As a result, an initial effect of permit systems was to transfer pollution residues to other media rather than to develop comprehensive plans for final disposal of the residues. Today, regulators are generally more sensitive to the need for final disposal, although environmental programs remain divided along media lines.

3. Enforcement

Over the last two decades, enforcement of environmental laws in the United States has moved from a conciliatory approach to one that includes punitive elements.²¹¹ Although the Clean Air Act Amendments of 1970 granted the EPA increased enforcement powers, the amendments initially required a conference between the EPA and the violator before a compliance order for most violations became effective.²¹² Congress did not, however, include the conference requirement when it enacted other environmental statutes,²¹³ and the requirement does not apply to all of the enforcement options currently available to the EPA under the Clean Air Act.²¹⁴

The punitive approach to enforcement has entailed an increased emphasis on the imposition of monetary penalties.²¹⁵ To lessen the government's burden of proof and to avoid other constitutional problems,²¹⁶ environmental laws typically allow the imposition of "civil"

²¹¹ See generally William L. Andreen, The Role of Enforcement in the Transformation of U.S. Environmental Law (paper prepared for presentation at the International Workshop on Planning for Environmental Emergencies, London, Apr. 5–7, 1992, on file with author).

 $^{^{212}}$ Pub. L. No. 91–604, 4(a), 84 Stat. 1687 (1970) (codified as amended at 42 U.S.C. 7413(a)(4) (1988 & Supp. V 1993)).

²¹³ See, e.g., CWA, 33 U.S.C. § 1319(a)(3); RCRA, 42 U.S.C. § 6928(a). But see CWA, 33 U.S.C. § 1319(a)(4) (requiring a conference with respect to a compliance order issued under the Clean Water Act with respect to the records, reporting and inspection requirements of 33 U.S.C. § 1318).

²¹⁴ See CAA, 42 U.S.C. § 7413(a).

²¹⁵ For a summary of congressional testimony about the importance of civil penalties for effective enforcement of pollution-control statutes against federal agencies, see H.R. Rep. No. 1011, 102d Cong., 2d Sess. 6–15 (1992).

²¹⁶ See United States v. Ward, 448 U.S. 242, 248 (1980).

The distinction between a civil penalty and a criminal penalty is of some constitutional import. The Self-Incrimination Clause of the Fifth Amendment, for example, is expressly limited to "any criminal case. . . ." Similarly, the protection provided by the Sixth Amendment are available only in "criminal prosecutions. . . ." Other constitutional protection, while not explicitly limited to one context or the other, have been so limited by decision of this Court.

Id. at 248; see, e.g., Helvering v. Mitchell, 303 U.S. 391, 399 (1938) (double jeopardy clause

penalties without proof of a criminal violation. One obvious goal of these penalties is to eliminate the economic benefit of violating regulatory requirements; indeed, this goal is prominent in the EPA's penalty policy.²¹⁷ However, only the noncompliance penalty of the Clean Air Act²¹⁸ is based solely on the economic benefit to the polluter. Other penalty provisions allow consideration of factors such as the severity of the violation and the recalcitrance of the violator in addition to the economic benefit of noncompliance.²¹⁹

The EPA also supervises state enforcement efforts. Most federal statutes require states to assume responsibility for enforcement as a condition for obtaining federal approval of a state program.²²⁰ Nonetheless, the EPA retains the power to enforce the regulatory requirements of federal law even in states that operate programs that have been approved by the federal government.²²¹

Federal statutes have also expanded the scope of administrative enforcement without judicial intervention. Since the 1970s, the EPA has had authority to issue "compliance orders," which direct polluters to correct violations,²²² and the federal courts have generally ruled that an order is not final agency action subject to judicial review.²²³ More recently, Congress has allowed the EPA to impose monetary penalties administratively.²²⁴ Although the penalties are subject to judicial review,²²⁵ the agency decision is entitled to the presumption of regularity normally afforded to administrative determinations.²²⁶

protects only against two criminal punishments); United States v. Regan. 232 U.S. 37, 47-48 (1914) (proof beyond a reasonable doubt required only in criminal cases).

²¹⁷ See U.S. Envtl. Protection Agency, Policy on Civil Penalties, [18 Admin. Materials] Envtl. L. Rep. (Envtl. L. Inst.) 35,000, 35,083 (Feb. 16, 1984).

²¹⁸ CAA, 42 U.S.C. § 7420.

²¹⁹ E.g., CWA, 33 U.S.C. § 1319(d); CAA, 42 U.S.C. § 7413(e).

²²⁰ E.g., CWA, 33 U.S.C. § 1342 (b)(3); RCRA, 42 U.S.C. § 6928 (b)(3); CAA, 42 U.S.C. § 7410.

²²¹ See, e.g., CWA, 33 U.S.C. § 1319(a); RCRA, 42 U.S.C. § 6928(a) (requiring the EPA administrator to give notice to state "prior" to taking enforcement action under the Resource Conservation and Recovery Act in a state with an approved hazardous waste program); CAA, 42 U.S.C. § 7413(a)(1) (requiring the Administrator to give 30 days notice to the state and the alleged violator before initiating an enforcement action for a violation of a state implementation plan or a permit under the Clean Air Act).

²²² CWA, 33 U.S.C. § 1319(a); R.C.R.A, 42 U.S.C. § 6928(a); CAA, 42 U.S.C. § 7413(a).

 $^{^{223}}$ E.g., Southern Pines Ass'n v. United States, 912 F.2d 713, 716 (4th Cir. 1990) (Clean Water Act); Lloyd A. Fry Roofing Co. v. EPA, 554 F.2d 885, 891–92 (8th Cir. 1977) (Clean Air Act).

²²⁴ CWA, 33 U.S.C. § 1319(g); RCRA, 42 U.S.C. § 6928(a), (c); CAA, 42 U.S.C. § 7413. See generally William Funk, Close Enough for Government Work?—Using Informal Procedures for Imposing Administrative Penalties, 24 Seton Hall L. Rev. 1 (1993) (report to the Administrative Conference of the United States examining increased use of informal procedures for assessing administrative penalties).

²²⁵ CWA, 33 U.S.C. § 1319(g)(8); CAA, 42 U.S.C. § 7413(b).

²²⁶ E.g., CWA, 33 U.S.C § 1319(g)(8); CAA, 42 U.S.C. § 7413(d)(4).

By simplifying the process for imposing monetary penalties, the administrative penalty provisions reinforce the emerging concept that all significant violations of environmental regulations should impose financial costs on the violator sufficient to eliminate any economic benefit gained from noncompliance.

At the same time Congress expanded the scope of civil penalties and administrative enforcement, it also increased the criminal penalties for violating environmental statutes. Under both the Clean Water Act and the Clean Air Act, negligent violations can constitute criminal conduct.²²⁷ The more serious criminal penalties—which include imprisonment for up to fifteen years and fines as large as \$1 million—are, however, reserved for intentional violations, especially those involving hazardous substances.²²⁸

Criminal prosecutions frequently involve intentional violations pertaining to pollutants or wastes that are classified as hazardous.²²⁹ A key issue in many of these prosecutions under the Resource Conservation and Recovery Act (RCRA) has been the mental state required to establish a violation. Although RCRA's criminal provisions generally require that the defendant act "knowingly," they are ambiguous as to whether the defendant must know that the EPA has designated the waste as hazardous²³⁰ or that the disposal facility lacks the proper permit.²³¹ The Supreme Court has not yet considered the issue, and the decisions of the courts of appeals are not altogether consistent.²³² Nonetheless, the reported decisions create a significant criminal exposure for those who flout, and even those who ignore, the requirements of federal environmental laws.²³³ Interestingly, federal courts

²²⁷ CWA, 33 U.S.C. § 1319(c)(1); CAA, 42 U.S.C. § 7413(c)(4).

²²⁸ CWA, 33 U.S.C. §§ 1319(c)(2)–(7); RCRA, 42 U.S.C. §§ 6928(d)–(e); CAA, 42 U.S.C. §§ 7413(c)(1)–(3), (5)–(6).

²²⁹ See, e.g., United States v. Wagner, 29 F.3d 264, 265 (7th Cir. 1994); United States v. Heuer, 4 F.3d 723, 726 (9th Cir. 1993), cert. denied, 114 S. Ct. 1190 (1994).

²³⁰ RCRA, 42 U.S.C. §§ 6928(d)(2), (5).

²³¹ Id. § 6928(d)(1).

²³² Compare, e.g., United States v. Speach, 968 F.2d 795, 796–97 (9th Cir. 1992) with United States v. Dean, 969 F.2d 187, 189–97 (6th Cir. 1992), cert. denied, 113 S. Ct. 1852 (1993) and United States v. Baytank (Houston), Inc., 934 F.2d 599, 613 (5th Cir. 1991).

²³³ See, e.g., United States v. Buckley, 934 F.2d 84, 88–89 (6th Cir. 1991); United States v. Sellers, 926 F.2d 410, 416–18 (5th Cir. 1991); United States v. Dee, 912 F.2d 741, 745–46 (4th Cir.), cert. denied, 111 S. Ct. 1307 (1990); United States v. Pozsgai, 757 F. Supp. 21 (E.D. Pa. 1990), aff'd, 947 F.2d 938 (3d Cir. 1991). States have also expanded criminal enforcement. See, e.g., Waste Conversion, Inc. v. Commonwealth, 568 A.2d 738 (Pa. Commw. Ct.), appeal denied, 577 A.2d 892 (Pa.), cert. denied, 111 S. Ct. 2253 (1990); State v. Rollfink, 475 N.W.2d 575 (Wis. 1991); cf. United States v. Louisville Edible Oil Products, Inc., 926 F.2d 584 (6th Cir.), cert. denied, 112 S. Ct. 177 (1991) (federal government may prosecute a company criminally even though the company had already paid penalties to the state for the same violation). For an analysis of the

have even convicted federal employees of criminal violations of environmental statutes.²³⁴

B. Australia

1. Standards

To date, Australia has invested far less effort than the United States in establishing generalized environmental standards. Almost no national pollution-control standards exist. Moreover, even at the state level pollution-control limits have generally been established on a case-by-case basis using a relatively lenient "best practical" standard.²³⁵

Australian attention to generalized standards will probably increase in the coming years. For one thing, the primary purpose of increasing federal involvement with pollution-control standards is to establish uniform, national standards. For another, the influence of the idea of "sustainable development"²³⁶ will also encourage the substitution of generalized standards for the case-by-case approach.

For several reasons, Australia is likely, at least initially, to ground the new—and, presumably, stricter—standards in a feasibility-based approach rather than in an approach designed to protect attributes of the ambient environment. First, apparently drawing on nuisance law and early British statutes, ²³⁷ Australians have previously used a lenient, feasibility-based, test—the "best practical" standard—to establish environmental controls on a case-by-case basis. Thus, substituting stricter feasibility-based standards—for example, requiring "best available" technology—can be seen as a strengthening of existing standards rather than the selection of a completely new approach. Second, although pollution is substantial in the states of New South Wales and Victoria, Australia's population is small. As a result, degradation of the ambient environment—especially the air and water—is much less widespread than in the United States and other developed

dual sovereignty exception to double jeopardy that permits federal and state prosecutions with respect to the same criminal act, see Kenneth M. Murchison, *The Dual Sovereignty Exception to Double Jeopardy*, 14 N.Y.U. Rev. of L. & Soc. Change 383 (1986).

²³⁴ See United States v. Curtis, 988 F.2d 946 (9th Cir.), cert. denied, 114 S. Ct. 177 (1993); see also RCRA, 42 U.S.C. § 6961a.

²³⁵ BATES, *supra* note 15, at 290-93.

²³⁶ See, e.g., id. at 6-12; Zada Lipman, Institutional Reform: The New South Wales Environment Protection Authority, 9 Envtl. & Plan. L.J. 445, 445-46 (1992).

²³⁷ See, e.g., Smoke Abatement Act, Vict. Acts 16 § 17, ch. 128 (1852). See generally Brenner, Nuisance Law and the Industrial Revolution, 3 J. LEGAL STUD. 403 (1974).

countries that are more densely populated. Thus, feasibility-based standards will often achieve ambient goals in Australia. Third, the feasibility-based approach tries to minimize pollution,²³⁸ and minimization is consistent with the emerging "precautionary principle" and a commitment to sustainable development.²³⁹ Fourth, and perhaps most important, the feasibility-based approach avoids granting previously unpolluted areas the competitive advantage associated with the greater carrying capacity of their ambient environments.

Of course, feasibility-based controls will not produce a complete solution to pollution problems. In densely populated areas, feasibility-based controls may fail to produce the desired ambient environment with respect to pollutants that come from diverse sources. Even small amounts of pollution may threaten the environment if a highly toxic pollutant or an especially fragile resource is involved. Where these types of problems exist, Australia—like the United States and, more recently, the United Kingdom²⁴⁰—will have to add ambient-based controls. Thus, the ultimate outcome of increased emphasis on general environmental standards is likely to be a mixed system of feasibility-based and ambient-based controls.

2. Permits

At the state level, permits, or "consents," are already a common feature of Australian law. Planning restrictions are more universal in Australia than in the United States, and they generally require administrative approval for land development proposals.²⁴¹ As a result, requiring developers to obtain pollution-control permits from specialized agencies—and, more recently, from consolidated pollution-control authorities in some states²⁴²—was a natural outgrowth of the planning system.

Permits remain an important feature of an effective system of pollution control.²⁴³ Permits translate generalized standards into site-specific requirements, facilitate administration and enforcement of the regulatory scheme, and offer a greater degree of certainty for the

 $^{^{238}}$ See, Westman, supra note 5, at 772.

²³⁹ See Cameron & Aboucher, supra note 191.

²⁴⁰ See National Rivers Authority, Report of the 1990 Survey of the Quality of Rivers, Canals and Estuaries in England and Wales 45 (1991).

²⁴¹ BATES, *supra* note 15, at 75–92.

²⁴² See Bailey & Brash, The Environmental Protection Act 1986 (WA): An Experiment in Non-Judicial Appeals, 6 Envtl. & Plan. L.J. 197 (1989).

²⁴³ See supra text accompanying note 210.

regulated community. Thus, in Australia as in the United States, permit requirements will continue to increase.

To the extent that permits are part of the emerging national strategy for pollution control, Australia has the opportunity to move beyond media-specific permitting to a more comprehensive approach. Such a comprehensive approach would require a facility to obtain a single, unified permit addressing all of its pollution problems rather than separate permits for air emissions, water discharges, and the handling of hazardous waste.

Unified permitting has the potential for gaining widespread support. For regulated industries, unified permits reduce administrative costs, avoid inconsistent restrictions, and, to the extent that permit compliance equals regulatory compliance, provide a single and complete shield against enforcement. In addition, environmentalists may support unified permits because they allow regulators to minimize the total pollution of a regulated source rather than merely to transfer pollution residues from one media to another.

3. Enforcement

Criminal enforcement has recently received increased emphasis in Australia, especially in New South Wales.²⁴⁴ Nonetheless, Australian regulators retain a more cooperative style of enforcement than is common in the United States.²⁴⁵ The reasons for this style are diverse. The British model from which Australian administrative law is largely derived is undoubtedly one important factor, as British administrative law also emphasizes cooperative enforcement.²⁴⁶ Another important factor is the limited resources of most state environmental agencies in Australia.²⁴⁷ A third factor is the more restricted range of enforcement options available in Australia: criminal prosecution and the civil action for injunctive relief remain the principal enforcement options.²⁴⁸ Although pollution-control authorities also have power to revoke consents and to issue pollution abatement notices,²⁴⁹ they lack the broad

²⁴⁴ See, e.g., Criminal Enforcement of Environmental Non-compliances, Austl. Env. L. News 27 (Dec. 1992); Note, Development in New South Wales: Draft Prosecution Guidelines Issued, Austl. Env. L. News 15–17 (Mar/Apr. 1993).

 $^{^{245}}$ A cooperative style of enforcement is typical of Australian administrative agencies. See Margaret Allars, Introduction to Australian Administrative Law 31 (1990); Grabosky & Braithwaite, supra note 120.

²⁴⁶ See Allars, supra note 245, at 30.

²⁴⁷ See Grabosky & Braithwaite, supra note 120, at 48 (table 1).

 $^{^{248}}$ See Douglas Edgar Fisher, Environmental Law in Australia: An Introduction 64–77 (1980).

²⁴⁹ See generally BATES, supra note 15, at 311-12. See Zada Lipman, Criminal Liability

authority to impose civil penalties that has become common in the United States.

Criminal prosecution is appropriate for egregious violations of environmental regulations, especially those that threaten public health or the environment. But criminal prosecution is an inefficient method for routine enforcement of environmental laws. Although Australia has not constitutionalized the protection afforded to criminal defendants as the United States has done, 250 its system of criminal justice generally provides similar protection. Most importantly, criminal penalties are normally reserved for intentional wrongdoing, and the prosecutor must prove the criminal violation beyond a reasonable doubt. Moreover, if normal criminal standards are relaxed to allow more prosecutions, the expanded categories of criminal liability may not serve the traditional criminal goals of deterrence and retribution. 252

Civil litigation is only slightly less costly than criminal litigation as a technique for routine enforcement of environmental laws. In civil litigation, the government's burden of proof is reduced, and the violator's mental state becomes less critical. Nonetheless, the time and resources required to conduct civil litigation mean that, as a practical matter, agencies reserve the civil approach for relatively serious violations.

Revocation of a polluter's consent to operate is a powerful weapon for encouraging the polluter to comply with control standards. Unfortunately, its power precludes its use except in cases that involve very serious violations. Routine enforcement requires techniques that allow responses proportionate to the individual infraction.

As environmental regulations become stricter and more pervasive in Australia, the expansion of enforcement alternatives is imperative. Regular imposition of substantial monetary penalties for violations will be important to eliminate the financial incentive for noncompliance and to keep those who comply with environmental laws from suffering a competitive disadvantage. To avoid the complexities of criminal trials, the penalties should be characterized as civil in nature. To be made effective, penalties should be large enough to deny the polluter a comparative advantage. To minimize the costs of levying the penalties, environmental statutes should transfer the burden of

Under the Amended Environmental Offenses and Penalties Act 1989 (N.S.W.), 8 Envtl. & Plan. L.J. 322 (1991).

 $^{^{250}}$ See supra notes 26–29 & 144–45 and accompanying text.

²⁵¹ See Funk, supra note 224, at 30, 40.

²⁵² Id. at 37-40.

seeking judicial relief to the violator by authorizing administrative assessment of the penalty amount.

V. Administration: Agencies, Courts, and the Public

A. United States

1. Administrative Authority

Environmental regulations in the United States are extremely complex.²⁵³ To some degree, this legal complexity results from the scientific and technical complexity of the subject the government is trying to regulate and from the desire to guard against "capture" of the agency by the entities that are being regulated. To a considerable degree, however, the complexity derives from a combination of the nation's presidential system of government and the "cooperative federalism" that has characterized environmental regulation.

The legislature and the executive—Congress and the President—are elected independently in the United States. As a result, the perspectives of the two branches can differ markedly, as they did with respect to environmental matters in the 1980s.²⁵⁴ Moreover, the weak party system of the United States produces considerable competition between the two branches even when congressional majorities and the President come from the same party.²⁵⁵

As noted above,²⁵⁶ states have important responsibilities in administering and enforcing environmental statutes, notwithstanding federal domination of environmental law and policy. Before a state can exercise these responsibilities, the federal EPA must approve the state program. Fearing the control of federal bureaucrats, states have demanded and received legislative standards prescribing the requirements that their programs must meet to secure federal approval.²⁵⁷

These competing pressures have produced detailed statutes that are long and complex. Not surprisingly, nearly every clause that has served as the basis for significant pollution-control regulations or for the standards for reviewing a state program has produced litigation

²⁵⁸ For an illustration of the complexity, see generally Kenneth M. Murchison, Recycling Hazardous Waste: Time For Reform (Apr. 5, 1993) (unpublished manuscript, on file with author). ²⁵⁴ See Andreen, supra note 7, at 97–98, 102–05.

²⁵⁵ Witness, for example, President Clinton's difficulty in securing enactment of the deficit reduction package, despite substantial Democratic majorities in both houses of Congress.

 $^{^{256}}$ See supra notes 137–39 and accompanying text.

²⁵⁷ See, e.g., CWA, 33 U.S.C. § 1342(b); RCRA, 42 U.S.C. § 6926(b); CAA, 42 U.S.C. § 7410(a)(2).

to determine its meaning. The most obvious consequence of this statutory detail has been delayed achievement of statutory goals.

Despite the statutory detail, the EPA has great discretion in setting substantive environmental standards. The Clean Air Act directs the agency to establish ambient air quality standards that are adequate to protect the public health and welfare, 258 to review state implementation plans to ensure they will achieve the ambient standards, 259 to prescribe the "best demonstrated" technology for new stationary sources, 260 and to identify the "maximum achievable" control technology for major sources that emit hazardous air pollutants.²⁶¹ The Clean Water Act allows the EPA to establish feasibility-based effluent standards that apply nationwide²⁶² and to oversee state implementation of the Act's permit²⁶³ and water quality standards.²⁶⁴ The Resource Conservation and Recovery Act authorizes the EPA to promulgate standards for those who generate, transport, treat, store, and dispose of hazardous waste.²⁶⁵ The regulations must satisfy specific statutory mandates regarding matters such as recordkeeping and labelling practices, use of the manifest system, reporting requirements, and operation of facilities. However, the basic requirement is that the regulation must be adequate to protect public health and the environment.²⁶⁶

2. External Oversight

In the United States, judicial review in courts of broad jurisdiction has been the primary method for ensuring the accountability of administrative agencies. During the 1970s, Congress experimented with arrangements that allowed it to override environmental—and other—regulations without completing the normal formalities of the legislative process. The Supreme Court, however, ruled that these "legislative vetoes" violated the separation of powers principle implicit in the United States Constitution.²⁶⁷

For nearly two decades after the National Environmental Policy Act and the Clean Air Act were enacted in 1970, judicial decisions

²⁵⁸ CAA, 42 U.S.C. § 7409.

 $^{^{259}}$ Id. § 7410(a)(2).

²⁶⁰ Id. § 7411

²⁶¹ Id. § 7412(d).

²⁶² CWA, 33 U.S.C. §§ 1301 (b), 1306, 1307.

²⁶³ Id. §§ 1342, 1344.

²⁶⁴ Id. § 1313.

²⁶⁵ R.C.R.A, 42 U.S.C. §§ 6922–6924.

²⁶⁶ Id. §§ 6922(a), 6923(a), 6924(a).

²⁶⁷ United States v. Chadha, 462 U.S. 919, 959 (1983).

generally reduced the procedural obstacles to review of administrative decisions affecting the environment. Recent decisions have broken this pattern with respect to the question of standing, but their ultimate impact remains unclear.

Since 1970, the Supreme Court has applied a two-part test for standing in judicial challenges to administrative decisions. First, the party seeking review must demonstrate an injury resulting from the decision. Second, the party seeking review must arguably fall within the zone of interests that are protected by the constitutional or statutory provision that provides the basis for review. Second se

Sympathetic application of the two-part test has allowed judicial review of nearly all administrative decisions affecting the environment. In the seminal case, *Sierra Club v. Morton*, the Supreme Court refused to establish special standing rules for environmental organizations, although it did recognize environmental and aesthetic loss as an injury for standing purposes.²⁷⁰ The following year, the Court found standing even when the environmental injury was widely shared by members of the public.²⁷¹ The Court has also allowed organizations to sue on behalf of members who were injured.²⁷² As a result, an environmental organization has standing if it can identify a member who uses the environmental resource that the administrative decision threatens to degrade.

Two recent decisions indicate that the current Supreme Court is less willing to confer standing on plaintiffs who challenge programmatic decisions of federal agencies. In Lujan v. National Wildlife Federation, the Court refused to allow a general challenge to Bureau of Land Management decisions to reduce the environmental protection provided for federal lands; environmental plaintiffs could only challenge decisions with respect to specific tracts that they, or their members, had used. Similarly, the 1992 decision in Lujan v. Defenders of Wildlife refused to permit a general attack on the decision of

²⁶⁸ See Barlow v. Collins, 397 U.S. 159, 165 (1970); Association of Data Processing Serv. Orgs. v. Camp, 397 U.S. 150, 152 (1970).

 ²⁶⁹ See Barlow, 397 U.S. at 164; Association of Data Processing Serv. Orgs., 397 U.S. at 152.
²⁷⁰ 405 U.S. 727, 734 (1972).

 $^{^{271}\,}See$ United States v. Students Challenging Regulatory Agency Proceedings, 412 U.S. 669 (1973).

²⁷² Morton, 405 U.S. at 739.

²⁷⁸ The Supreme Court's contraction of standing doctrine has not been confined to environmental cases. *See*, *e.g.*, Allen v. Wright, 468 U.S. 737 (1984); Warth v. Seldin, 422 U.S. 490 (1975). Decisions under the National Environmental Policy Act have also displayed a reluctance to review the merits of programmatic decisions of agencies. *See*, *e.g.*, Kleppe v. Sierra Club, 427 U.S. 390 (1976) (no judicial review until the agency has prepared a formal proposal).

^{274 497} U.S. 871 (1990).

the Department of Interior not to require consultation under the Endangered Species Act with respect to United States participation in projects outside the nation's borders.²⁷⁵ Instead, a plaintiff could only challenge the lack of consultation with respect to a particular project when the plaintiff planned to make a specific use of the resource that was threatened by the challenged action.²⁷⁶

When federal environmental law began to expand during the first half of the 1970s, various other procedural obstacles to judicial review existed in the United States. For example, the statute providing for federal court jurisdiction of issues of federal law contained a \$10,000 "amount in controversy" requirement until 1976.²⁷⁷ In addition, the meaning of the Administrative Procedure Act provision allowing a court to compel an agency to act when action was "unreasonably withheld or delayed"²⁷⁸ was uncertain.

Congress responded to these problems by enacting specific jurisdictional provisions of two types. One type allows review of certain administrative decisions, usually in the courts of appeals.²⁷⁹ The other type allows citizens to bring civil actions in federal district court—without regard to the amount in controversy—to obtain orders directing the administrator of the EPA to perform nondiscretionary duties imposed by the statute under which the citizen suit was filed.²⁸⁰

Early environmental decisions also used a variety of techniques to expand the scope of judicial review. Courts included environmental matters in the factors that agencies were required to consider in reaching their decisions,²⁸¹ and they construed statutes to narrow agency authority to take actions that would adversely affect the environment.²⁸² The Supreme Court allowed expanded review of facts regarding the scope of an agency's jurisdiction and authority, and the

²⁷⁵ 112 S. Ct. 2130 (1992).

²⁷⁶ Id. at 2137-38.

²⁷⁷ Pub. L. No. 85–554, § 1, 72 Stat. 415 (1955) (codified as amended at 42 U.S.C. § 1331 (1988 & Supp. V 1993)). The amount in controversy requirement was eliminated in actions against the United States by Pub. L. No. 94–574, § 2, 90 Stat. 2721 (1976), and for other actions involving federal questions by Pub. L. No. 96–486, § 2(a), 94 Stat. 2369 (1980). After the 1976 amendment, the Supreme Court ruled that the Administrative Procedure Act was not a jurisdictional statute. Califano v. Sanders, 430 U.S. 99 (1977). Thus, the federal question statute is essential to secure review under the Administrative Procedure Act when the substantive statute contains no jurisdictional provision.

²⁷⁸ 5 U.S.C. § 706(1) (1988 & Supp. V 1993).

²⁷⁹ See, e.g., CWA, 33 U.S.C. § 1369(b)(1); RCRA, 42 U.S.C. § 6976; CAA, 42 U.S.C. § 7607(b)(1).

²⁸⁰ See, e.g., CWA, 33 U.S.C. § 1365; RCRA, 42 U.S.C. § 6972; CAA, 42 U.S.C. § 7604.

²⁸¹ Scenic Hudson Preservation Conference v. Federal Power Comm'n, 354 F.2d 608, 608 (2d Cir. 1965), cert. denied, 384 U.S. 941 (1966).

²⁸² Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 413-17 (1971).

United States Court of Appeals for the District of Columbia Circuit developed the "hard-look" doctrine.²⁸³

By the end of the 1970s, a counter trend was clear. In addition to reviving the traditional deference to factual decisions and policy judgments of an agency, courts also began to give increased deference to administrative decisions regarding matters of procedure²⁸⁴ and statutory interpretation. In *Chevron U.S.A. v. NRDC*, the Supreme Court declared that courts should defer to a "reasonable" interpretation of a statute for which the agency was responsible unless Congress clearly required a different interpretation.²⁸⁵

Most decisions in recent years have emphasized deference, but reversals of agency interpretations still occur.²⁸⁶ The Supreme Court has not yet articulated a theory to reconcile these two discordant doctrinal themes.²⁸⁷

One can identify several factors that have probably influenced the tendency to defer to agency interpretations. Most obviously, the type of agency whose actions are being challenged has changed. Early cases objected to the refusal of development-oriented agencies to

²⁸⁸ The hard-look doctrine attempts to provide meaningful judicial review without usurping the discretionary authority that Congress has granted to the administrative agency. It requires courts to scrutinize carefully the administrative record on which an agency's decision is based. When the administrative record is inadequate to provide a reasoned basis for the course of action that the agency has chosen, the reviewing court must set aside the administrative action and remand the matter to the agency for further consideration. See, e.g., Portland Cement Ass'n v. Ruckelshaus, 486 F.2d 375, 381–87, 402 (D.C. Cir. 1973), cert. denied, 417 U.S. 921 (1974); Kennecott Copper Corp. v. EPA, 462 F.2d 846, 850 (D.C. Cir. 1972); Greater Boston Television Corp. v. FCC, 444 F.2d 841, 851 (D.C. Cir. 1970), cert. denied, 403 U.S. 923 (1971). See generally William Andreen, Administrative Rulemaking in the United States: An Examination of Values That Have Shaped the Process, 66 Canberra Bull. Pub. Admin. 112, 114–15 (1991); Harold Leventhal, Environmental Decisionmaking and the Role of the Courts, 122 U. Pa. L. Rev. 509 (1974) (discussing role of courts in developing statutory environmental law); William H. Rodgers, A Hard Look at Vermont Yankee: Environmental Law Under Close Scrutiny, 67 Georgetown L.J. 699 (1979) (exploring hard-look doctrine).

 ²⁸⁴ See Ethyl Corp. v. EPA, 541 F.2d 1, 13 (D.C. Cir. 1975), cert. denied, 426 U.S. 941 (1976).
²⁸⁵ 467 U.S. 837, 842-45 (1984).

²⁸⁶ See, e.g., City of Chicago v. Environmental Defense Fund, 114 S. Ct. 1588 (1994) (applicability of statutory clarification of household waste exclusion in the Resource Conservation and Recovery Act); Kelly v. EPA, 15 F.3d 1100, reh'g denied, 25 F.3d 1088 (D.C. Cir. 1994), cert. denied, 115 S. Ct. 900 (1995) (scope of liability for lending institutions under Comprehensive Environmental Response, Compensation, and Liability Act); American Mining Congress v. EPA, 824 F.2d 1177, 1183–85 (D.C. Cir. 1987) (denying deference to EPA's definition of hazardous waste under Resource Conservation and Recovery Act); cf. Presley v. Etowah County Comm'n, 502 U.S. 491, 112 S. Ct. 820, 831–32 (1992) (refusal to defer to Attorney General's construction of Voting Rights Act).

²⁸⁷ For recent attempts to describe when the court is likely to defer to an administrative interpretation, see Dyk & Schenck, *Exceptions to Chevron*, 18 Admin. L. News 1 (Winter 1993); Thomas W. Merrill, *Judicial Deference to Executive Precedent*, 101 Yale L.J. 969 (1992); Peter H. Schuck & E. Donald Elliott, *To the Chevron Station: An Empirical Study of Federal Administrative Law*, 1990 Duke L.J. 984.

protect the environment; the more deferential cases of recent years typically involve regulatory decisions by agencies charged with environmental protection.²⁸⁸ Another factor that has encouraged judicial deference is the breadth of administrative discretion conferred in modern environmental statutes.²⁸⁹ Similarly, the technical complexity of environmental problems has also induced judicial reliance on administrative expertise. Finally, the Supreme Court—a majority of whose members were appointed by Presidents Reagan and Bush—may gradually have assumed a more deferential approach with respect to issues of environmental law as the Court came to share the environmental attitudes of the Reagan and Bush administrations.²⁹⁰

Changes in the rules regarding attorneys' fees have also supported judicial challenges to administrative decisions affecting the environment. Traditionally, the United States has followed the "American rule," which requires litigants to pay their own attorneys' fees regardless of which party prevails.²⁹¹ Over the last two decades, however, statutory changes have substantially altered the rule in the environmental context. Since the 1970s, environmental statutes have authorized the award of attorneys' fees in citizen suits to enforce environmental statutes or to force the EPA administrator to perform nondiscretionary duties²⁹² as well as in actions to review EPA decisions under the Clean Water Act²⁹³ and the Clean Air Act.²⁹⁴ More recently, Congress has generalized the right to recover attorneys' fees in suits against the federal government where the government's position was not "substantially justified."²⁹⁵

3. Public Participation

A major aspect of environmental law in the United States has been the expansion of opportunities for members of the public to participate in the administrative process. To some degree, the judiciary has facilitated this process in its decisions expanding judicial oversight of

²⁸⁸ See, e.g., Murchison, supra note 10, at 613 (suggesting that the enhanced role of the Council of Environmental quality is a partial explanation for the growth of judicial deference to agency decisions involving the National Environmental Policy Act).

 $^{^{289}\,}See\,\,supra$ notes 258–66 and accompanying text.

²⁹⁰ Cf. Frank P. Grad, Foreword, 43 WASH. U.J. URBAN & CONTEMP. L. 3, 3 (1993).

²⁹¹ For a description of the development of the American rule, see Alyeska Pipeline Service Co. v. Wilderness Soc'y, 421 U.S. 240, 247–71 (1975).

²⁹² See, e.g., CWA, 33 U.S.C. § 1365(e); RCRA, 42 U.S.C. § 6972(e); CAA, 42 U.S.C. § 7604(d).

²⁹³ CWA, 33 U.S.C. § 1369(b)(3).

²⁹⁴ CAA, 42 U.S.C. § 7607(f).

²⁹⁵ 28 U.S.C. § 2412(d)(1)(A) (1988 & Supp. V 1993).

administrative decisions. Much of the expansion has, however, resulted from legislative initiatives.

The United States has long allowed public participation in the process of administrative rulemaking. The notice-and-comment provisions of the Administrative Procedure Act allow public comment on proposed rules.²⁹⁶ To make the opportunity for comment meaningful, an agency must respond in writing to the comments before promulgating the rules in final form.

The Clean Air Act establishes special procedures for rulemaking.²⁹⁷ The provisions supersede the Administrative Procedure Act in rulemakings to which they apply,²⁹⁸ and they also prescribe separate standards for judicial review.²⁹⁹ The Clean Air Act expressly declares a congressional intent to insure "a reasonable period for public participation of at least 30 days," except for rules for which the Act provides otherwise.³⁰⁰

Federal environmental statutes also offer members of the public an opportunity to participate in permit proceedings. Both the Clean Water Act and the Clean Air Act require the EPA administrator to provide an opportunity for a public hearing on proposed permits.³⁰¹ Although the EPA rarely grants requests for adjudicatory hearings on permits, the agency will normally hold a public hearing when a permit attracts a significant degree of public interest.³⁰²

Perhaps most interestingly, federal law allows citizen participation in the enforcement of environmental law. The primary vehicle for this participation has been the citizen suit, which has been a common feature of most environmental statutes enacted over the last two decades.³⁰³ The citizen suit provisions allow an individual to bring an action to enforce the statute after giving notice of the violation to the EPA, state officials, and the alleged violator. In the more recent versions of these provisions, Congress has expressly allowed the assessment of civil penalties³⁰⁴ and dispensed with the notice

²⁹⁶ A.P.A., 5 U.S.C. §§ 553(b), (c). *See generally* Andreen, *supra* note 283. For a recent decision invalidating an environmental rule for noncompliance with the notice and comment provisions, see Shell Oil Co. v. EPA, 950 F.2d 741, 747–52 (D.C. Cir. 1991).

²⁹⁷ CAA, 42 U.S.C. § 7607(d); cf. F.I.F.R.A., 7 U.S.C. § 136w (rulemaking procedures).

²⁹⁸ CAA, 42 U.S.C. § 7607(d)(1).

²⁹⁹ Id. § 7607(d)(9).

³⁰⁰ Id. § 7607(h).

³⁰¹ CWA, 33 U.S.C. §§ 1342(a)(1), (b)(3); CAA, 42 U.S.C. § 7661a(b)(6).

³⁰² For an illustration of how regulations for hearings for permits operate under the Clean Water Act, see Costle v. Pacific Legal Found., 445 U.S. 198, 203–04 (1980).

³⁰³ See, e.g., CWA, 33 U.S.C. § 1365; RCRA, 42 U.S.C. § 6972; CAA, 42 U.S.C. § 7604.

³⁰⁴ See e.g., CWA, 33 U.S.C. § 1365(a); RCRA, 42 U.S.C. § 6972(a); CAA, 42 U.S.C. § 7604(a).

requirement for certain violations involving toxic or hazardous pollutants.³⁰⁵

Unfortunately, the Supreme Court has taken a restrictive view of the statutory citizen suit provisions. The Court interpreted the notice requirement of the Resource Conservation and Recovery Act as a jurisdictional prerequisite that required dismissal of a lawsuit long after the litigation itself had provided actual notice of the existence of the violations.³⁰⁶ The Court also refused to allow a citizen suit to proceed under the Clean Water Act absent a good-faith allegation that the violation was continuing at the time the suit was initiated.³⁰⁷ Congress has partially overruled the latter decision in subsequent amendments to other statutes.³⁰⁸ Nonetheless, recent opinions suggest that the Supreme Court's restrictive approach is influencing the decisions of some lower federal courts on other issues involving citizen suits.³⁰⁹ Most ominously, the opinions of Justice Scalia suggest that constitutional doctrine may allow Congress to authorize enforcement only by persons who satisfy the injury requirement of standing doctrine.310

As Congress has expanded agency authority to impose monetary penalties administratively,³¹¹ it has also offered an opportunity for citizen participation in the administrative enforcement process. Typically, these statutory provisions require that the EPA administrator provide an opportunity for public comment before compromising an administrative penalty.³¹²

B. Australia

1. Administrative Authority

Australia has no environmental statutes that approach the complexity of the federal environmental statutes in the United States,

 $^{^{305}}$ See, e.g., CWA, 33 U.S.C. \$ 1365(b); RCRA, 42 U.S.C. \$\$ 6972(b), (c); CAA, 42 U.S.C. \$ 7604(b).

³⁰⁶ Hallstrom v. Tillamook County, 493 U.S. 20, 26–27 (1989).

 $^{^{307}\,\}mathrm{Gwaltney}$ of Smithfield, Ltd. v. Chesapeake Bay Foundation, 484 U.S. 49, 57–58 (1987).

 $^{^{308}}$ See, e.g., CAA, 42 U.S.C. $\S\S$ 7604(g), 11046 (Emergency Planning and Community Rightto-Know Act).

³⁰⁹ See, e.g., North & South Rivers Watershed Ass'n v. Town of Scituate, 949 F.2d 552, 555–58 (1st Cir. 1991); Atlantic States Legal Found. v. Eastman Kodak Co., 933 F.2d 124, 127 (2d Cir. 1991); EPA v. City of Green Forest, 921 F.2d 1394, 1402–05 (8th Cir. 1990).

³¹⁰ See, e.g., Lujan v. Defenders of Wildlife, 112 S. Ct. 2130, 2136 (1992); Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Foundation, 484 U.S. 49, 70–71 (1987) (Scalia, J., concurring in part and concurring in judgment).

³¹¹ See supra notes 213-17 and accompanying text.

³¹² CWA, 33 U.S.C. § 1319(g)(4); CAA, 42 U.S.C. § 7413(g).

and expansion of Commonwealth legislation protecting the environment will not require Australia to duplicate the complexity of United States law. Although Australia's system of federalism is similar to that of the United States, the Commonwealth uses a parliamentary system in which ministers are responsible to Parliament. This system eliminates the legislative-executive conflicts that have induced Congress to try to control a president who favors a different environmental policy.

Of course, the absence of interbranch conflicts will not make environmental regulations simple. It should, however, postpone much of the complexity from statutes to administrative regulations, and that postponement should have several salutary effects. For one thing, the complexity will be more likely to reflect the intractability of the underlying environmental problem rather than the tangled nature of the political alliance that produced the legislation. For another, adjustments to changing perceptions of environmental problems should be easier to achieve at the administrative level than in the legislative process. Perhaps most importantly, simpler statutes can reinforce the rule of law. Courts can allow agencies a generous discretion to implement environmental policy without abandoning oversight of administrative interpretations on issues of statutory construction.

To the extent that the Commonwealth extends the scope of its environmental legislation, federalism concerns are likely to encourage both statutory and bureaucratic complexity in Australia, much as they have in the United States. The system of responsible government ensures that an Australian government will have the support of a parliamentary majority that could amend environmental statutes. Nonetheless, states are likely to prefer grounding their roles in a system of cooperative federalism in the relative stability of statutory enactments rather than committing them to the discretion of a particular minister. Moreover, statutory enactments that give the states significant roles in setting environmental standards are likely to make Commonwealth domination of environmental policy and standards less complete than federal domination has been in the United States. The consultations such provisions are likely to mandate will require bureaucratic arrangements of less than optimal efficiency.

Whatever the precise form the Australian regulatory system takes, the very complexity of contemporary environmental problems means that expanded environmental regulations are likely to increase ad-

³¹³ Of course, the opposing party might control the Senate; and that split in legislative power could slow the process of legislative revision. *See* LANE, *supra* note 57, at 50.

ministrative discretion to control private actions. Although that enhanced discretion may allow for a more coordinated environmental policy, it will also subject the regulated community to the bureaucratic inequities that inevitably accompany command-and-control regulations. Thus, the expansion of environmental regulations, especially at the federal level, is likely to direct increased attention to external controls of the administrative process.

2. External Oversight

In Australia, as in the United States during the 1970s, the role of the courts in reviewing administrative actions has increased in recent years. The pace will probably accelerate as the number of environmental regulations increases.

The doctrine of standing has evolved more gradually in Australia than in the United States.³¹⁴ One factor that has retarded the expansion of Australian doctrine has been the courts' tendency to draw technical distinctions that depend on the type of relief that a litigant seeks.³¹⁵ Like the United States Supreme Court, the High Court has refused to confer standing on conservation organizations merely because they are interested in environmental problems.³¹⁶ Unlike the United States Court, the Australian Court has never explicitly embraced environmental and aesthetic injury as a ground for standing, although some decisions arguably point in that direction.³¹⁷

A Law Reform Commission has proposed that standing should be granted to any party that is competent to represent the interest that is being asserted,³¹⁸ and legislative revisions have diminished the importance of standing in federal litigation as well as in litigation in Victoria and New South Wales. The Commonwealth Administrative Decisions (Judicial Review) Act allows any "person aggrieved" to appeal administrative decisions.³¹⁹ That language may be flexible

³¹⁴ See generally BATES, supra note 15, at 351-73. Interestingly, standing is also a less significant barrier to litigants in the United Kingdom than in Australia. See Allars, supra note 245. at 281-82.

³¹⁵ See Allars, supra note 245, at 283–84, 287–92, 294–98 (discussing tests for standing in prohibition and certiorari cases, requests for declaratory and injunctive relief, and suits brought under the Administrative Decisions (Judicial Review) Act).

³¹⁶ See Australian Conservation Found. v. Commonwealth, 146 C.L.R. 493 (Austl. 1980).

³¹⁷ See, e.g., Onus v. Alcoa of Australia Ltd., 149 C.L.R. 27 (Austl. 1981); Fraser Island Defenders Org. v. Hervey Bay Town Council, 2 Q.R. 72 (1983). See generally Allars, supra note 245, at 289–92; BATES, supra note 15, at 357–64.

³¹⁸ See Allars, supra note 245, at 306-07.

³¹⁹ Id. at 294-98.

enough, as it has been in the United States,³²⁰ to accommodate a wide variety of environmental interests. The wording of the Victoria statute³²¹ is similar, although it may represent less of a clear break with past doctrine. The broadest language is that of the New South Wales Environmental Planning and Assessment Act, which allows any "person" to challenge administrative decisions.³²²

The legislative enactments reinforce the judicial trend. Taken together, the legislative and judicial initiatives are likely to diminish substantially the number of cases that are immune from judicial review because no plaintiff has standing to challenge the decision.

To an observer from the United States, the language of Australian doctrine on the scope of judicial review seems familiar.³²³ The doctrinal details differ, but the issues are similar. Without the aid of a constitutional guarantee of due process, Australian courts require procedural fairness that, in some respects, appears broader than the protection provided by the United States Constitution.³²⁴ Similarly, the focus on actions beyond the limits of statutory authority or jurisdiction and the development of "reasonableness" review mirror concerns that have been influential in the United States.³²⁵

Comparing Australia's application of the doctrine regarding scope of review to that of the United States is more problematic. Certainly, conventional wisdom describes Australian courts as less activist and more deferential to the legislature. On the other hand, a recent Australian evaluation concludes that courts in the United States are more deferential with respect to executive interpretation of statutes. In fact, both descriptions may be accurate because Australian law has not experienced either swing of the pendulum that doctrines regarding judicial review have undergone in the United States.

In the early days of the development of environmental law in the United States, the courts were active players. As explained above, during the 1960s and 1970s, federal courts began to force development

 $^{^{320}}$ See A.P.A., 5 U.S.C. \S 702. This section of the Administrative Procedure Act has provided the basis for the expansion of standing described supra in the text accompanying notes 303–05.

³²¹ Administrative Law Act 1978, Vict. Acts § 3; Allars, supra note 245, at 303.

³²² See Bates, supra note 15, at 368-69; Nicola Pain, Third Party Rights—Public Participation Under the Environmental Planning and Assessment Act 1979 (N.S.W.): Do the Floodgates Need Opening or Closing, 6 Envtl. & Plan. L.J. 26, 26 (1989).

³²³ But see Baillie, supra note 4, at 17 ("To an outsider, the American judiciary appears far more reluctant that its Australian counterpart to interfere in matters it considers administrative, and therefore within the sole province of the executive.").

³²⁴ See generally Allars, supra note 245, at 236-77; Rich, supra note 3, at 217-19.

³²⁵ See supra notes 281-83 and accompanying text.

³²⁶ Baillie, supra note 4, at 45.

agencies to consider environmental issues in their decisionmaking processes, and the United States Court of Appeals for the District of Columbia Circuit applied the hard-look doctrine to decisions of the newly created Environmental Protection Agency.³²⁷ No similar outburst of activism has occurred in Australia, although a recent High Court decision regarding Aboriginal land tenure may portend changes for the future.³²⁸

Since the early 1980s, judicial review issues in the United States have assumed more of a constitutional focus. Throughout the decade, significant policy differences divided Congress and the President on environmental issues. As these questions reached the judiciary, the Supreme Court consistently decided in favor of the executive on questions as diverse as standing³²⁹ and the permissibility of legislative oversight of administrative rules.³³⁰ With respect to the scope of judicial review, the Court has emphasized the deference due to executive interpretation of statutes.³³¹

Several reasons explain why no similar series of decisions has occurred in Australia. The paragraphs above describe one: the lack of a tradition of judicial activism. Closely related is the tendency of Australian cases to focus on administrative decisions as they apply to specific projects. That tendency is particularly pronounced in environmental cases because so few environmental regulations exist. Finally, responsible government precludes the emergence of the legislative-executive conflict that has been so important in the recent past in the United States.

One commentator has proposed an approach to judicial review for permits that would expand the scope of judicial review considerably, at least within the Land and Environment Court of New South Wales. Under this approach, the court would conduct de novo review of permit decisions, with the burden of proof on the applicant for the permit. Such an approach would provide conservation organizations and members of the public a far better chance of successfully

³²⁷ See supra notes 282-83 and accompanying text.

 $^{^{328}}$ Mabo v. Queensland, 175 C.L.R. 1 (Austl. 1992) (native land titles survived acquisition of British and Australian sovereignty except where displaced by clear legislative grant).

³²⁹ See supra notes 273-76 and accompanying text.

³³⁰ See supra note 267 and accompanying text.

³³¹ See supra notes 284–85 and accompanying text.

³³² See generally B.J. Preston, Third Party Appeals in Environmental Matters in New South Wales, 60 Austl. L.J. 215 (1986); see also BATES, supra note 15, at 381-85.

³³³ Preston, supra note 332, at 220.

challenging permit decisions than they currently have in Australia or the United States.

The costs of litigation remain a significant obstacle for environmental plaintiffs in Australia. Australia includes attorneys' fees among the costs that a prevailing party is entitled to recover from the losing side, and also allows a defendant to apply for an order requiring the plaintiff to post security for these costs.³³⁴ Together, these rules can pose a substantial burden to a plaintiff who represents conservation rather than economic interests.

Developments over the last decade or so have mitigated the rules regarding costs, but they have not completely eliminated their impact. New South Wales established a legal aid office for environmental matters,³³⁵ but the current economic climate has reduced its funding dramatically. In privately financed litigation, courts have sometimes denied applications for security for costs or declined to enter an order for costs,³³⁶ but the potential for liability undoubtedly deters individual plaintiffs who may be essential to establish standing.

Unlike the United States, Australia has developed external checks on administrative actions other than judicial review. Although the growth of the bureaucratic state may have reduced the effectiveness of parliamentary oversight, 337 agencies must still submit most delegated legislation to Parliament before the legislation becomes effective, 338 and special commissions have been created to consider major reforms. 339 In addition, both the Commonwealth and some states have created ombudsmen with powers to investigate administrative inequities and to propose remedies. 340

From the perspective of United States environmental law, the most interesting development may be the appearance of tribunals that provide an external, quasi-judicial review on the merits of administrative decisions of the Commonwealth and some states.³⁴¹ It will be interesting to see whether these institutions are adapted to cover environmental regulations, as they are expanded in Australia. The President of the Land and Environment Court of New South Wales

³³⁴ BATES, *supra* note 15, at 382.

³³⁵ Id. at 381. See generally Ben Boer, Legal Aid in Environmental Disputes, 3 Envtl. & Plan. L.J. 22 (1986).

³³⁶ BATES, *supra* note 15, at 382-83.

³³⁷ See Allars, supra note 245, at 18-19.

³³⁸ Id. at 69-70.

³³⁹ Id. at 65-66.

³⁴⁰ Id. at 77-80, 118-19.

³⁴¹ See id. at 72-77, 117-18; Bailey & Brash, supra note 242.

has suggested that the availability of such a mechanism for meaningful review of the merits of administrative decisions may discourage courts from expanding the scope of their review to include the merits of administrative decisions.³⁴²

The Land and Environment Court itself represents another legal innovation that the United States has resisted: specialized courts for complex technical problems.³⁴³ Even though the court is subject to the normal limits applicable to judicial review, its jurisdiction is limited. Thus, it has, to some degree, accumulated the special expertise that comes from concentrating on environmental matters. At least one legal scholar has, however, urged the Land and Environment Court to be more assertive in defining the limits of its jurisdiction.³⁴⁴

3. Public Participation

Expanding opportunities for public participation has been a characteristic of modern environmental law in Australia as it has been in the United States. Many of the developments described in the preceding sections have made public involvement in administrative decisions more meaningful. In addition, Australia has created a Resource Allocation Commission to advise the government regarding many development proposals, and the Commission's procedures allow for public input before recommendations are issued. Moreover, like the United States, Australia has a Freedom of Information Act that makes most Commonwealth documents available for public scrutiny. He was a first of the public scrutiny.

In some respects, Australian law remains less sympathetic to public participation than United States law. As environmental standards and

 $^{^{342}}$ J.S. Cripps, Judicial Review of Environmental and Planning Laws, 13 Sydney L. Rev. 7, 10 (1991).

³⁴³ In the United States, review of environmental issues of national significance has increasingly been consolidated in the District of Columbia Circuit; see, e.g., RCRA, 42 U.S.C. § 6976(a)(1); CAA, 42 U.S.C. § 7607(b)(1); but the trend has not been universal. See, e.g., CWA 33 U.S.C. § 1369(b)(1) (allowing appeal of administrative decisions under the Clean Water Act to the circuit court of appeals "for the Federal judicial district in which [the person seeking review] resides or does business which is directly affected by [the agency] action"). Moreover, the caseload of the District of Columbia Circuit is not limited to environmental issues, and much important environmental litigation also occurs in other circuits.

³⁴⁴ See generally T.F.M. Naughton, The Limits of Jurisdiction and Locus Standi in the Land and Environment Court of New South Wales, 65 Austl. L.J. 149 (1991).

³⁴⁵ For an assessment of the commission's work, see generally Brian Galligan & Georgina Lynch, *Integrating Conservation and Development: Australia's Resource Assessment Commission and the Testing Case of Coronation Hill*, 9 Envtl. & Plan. L.J. 181 (1992).

³⁴⁶ See Allars, supra note 245, at 147-60.

regulations expand, pressure may well mount for Australia to provide even more opportunities for public participation.

Unlike the United States,³⁴⁷ Australia has no general requirement that interested persons be given an opportunity to comment before a Commonwealth agency finalizes proposed rules. Some states do provide for public comments, but the state requirements are usually enforced through parliamentary oversight rather than through judicial review.³⁴⁸ As environmental regulations become more pervasive and intrusive, the regulated community as well as conservation groups may demand opportunities for organized participation. Australia has embraced a participatory approach for devising broad strategies of environmental policy and for making important decisions regarding development.³⁴⁹ Whether the Commonwealth and states will extend the approach to the details of environmental regulations remains to be seen.

The approach New South Wales has adopted for enforcing its environmental assessment legislation is similar to the citizen suits of United States environmental statutes but is unusual in Australian law.³⁵⁰ The New South Wales legislation allows any person to enforce its requirements.³⁵¹ By eliminating standing as a barrier to obtaining judicial review, this provision enlists environmental groups as overseers of the government's implementation of environmental policy. Because Australia has made less extensive use of administrative enforcement of environmental regulations than the United States, Australian law has had little occasion to define the public role in that process.

The lack of general environmental standards makes the environmental assessment process a more important vehicle for public participation in the regulatory process in Australia than in the United States. In the United States, most of the EPA's regulatory decisions are exempted from the requirement to prepare an environmental impact statement under the National Environmental Policy Act.³⁵²

³⁴⁷ See supra note 270 and accompanying text.

³⁴⁸ Allars, *supra* note 245, at 27, 242–45.

³⁴⁹ See, e.g., Commonwealth of Australia, National Greenhouse Steering Comm., Commonwealth of Australia, Summary Report on the Implementation of National Greenhouse Response Strategy (Dec. 1993); Commonwealth of Australia, National Strategy for Ecologically Sustainable Development (Dec. 1992).

 $^{^{350}}$ According to one commentator, the Michigan Environmental Protection Act was the inspiration for the New South Wales provision. *See Bates*, supra note 15, at 368. 351 Id.

³⁵² See, e.g., CWA, 33 U.S.C. § 1371 (all actions under the Clean Water Act "[e]xcept for the provision of financial assistance for the purpose of assisting the construction of publicly owned

In Australia, permit decisions remain a central focus of the impact assessment process both at the Commonwealth level³⁵³ and in the states.³⁵⁴ As compared to the United States, the implementation of this process in Australia has been more administrative and bureaucratic than judicial. Judicial review of some issues is, however, available in New South Wales.³⁵⁵ Further, at least one scholar has suggested that the Commonwealth statute may provide substantive protection when judicial review is available.³⁵⁶

VI. CONCLUSION

Perhaps the most obvious lesson of this overview is the demonstration that the differences between Australia and the United States preclude mimicry in the search for solutions to environmental problems. Following his retirement as Prime Minister in 1966, Sir Robert Menzies delivered a series of lectures on the Australian Constitution at the University of Virginia. He pronounced the differences in the constitutional systems of the United States and Australia as "profound" and concluded that the resemblances between the two countries could easily be exaggerated.³⁵⁷ Sir Menzies's comments provide an equally accurate description of the environmental law of the two nations.

The differences between the physical, cultural, and legal environments of Australia and the United States are great. Those differences prevent the United States from embracing the new environmental initiatives of Australia just as they preclude Australia from copying the environmental law of the United States. Each nation must solve its own environmental problems in light of its unique physical, cultural, and legal heritage.

treatment works"); Merrell v. Thomas, 807 F.2d 776 (9th Cir. 1986); cert. denied, 404 U.S. 848 (1987) (Federal Insecticide, Fungicide, and Rodenticide Act); Kilroy v. Quarles, 614 F.2d 225 (9th Cir. 1980) (compliance schedules for the Clean Water Act permit of a publicly owned treatment works); Portland Cement Ass'n v. Ruckelshaus, 486 F.2d 375 (D.C. Cir. 1973), cert. denied, 417 U.S. 921 (1974).

 $^{^{353}}$ See, e.g., Murphyores Pty. Ltd. v. Commonwealth, 136 C.L.R. 1 (Austl. 1976). See generally BATES, supra note 15, at 93–125.

³⁵⁴ See Bailey & Brash, supra note 242, at 197-201.

³⁵⁵ See BATES, supra note 15, at 111-17.

³⁵⁶ See Gary D. Meyers, Divining Common Law Standards for Environmental Protection: Application of the Public Trust Doctrine in The Context of Reforming NEPA and the Commonwealth Environmental Protection Act 15 (paper presented to the Australian Centre for Environmental Law, University of Adelaide School of Law, Aug. 26, 1992, on file with author).

³⁵⁷ MENZIES, supra note 2, at 49.

Recognition of the significance of national differences has importance beyond the immediate comparison of Australia and the United States. If the need for individualized solutions applies to countries with as many similarities as Australia and the United States, it applies with even more force in many other nations. Australia and the United States share much common heritage: the English language, the common law, and federal systems based on written constitutions. If nations with these similarities must devise their own solutions to environmental problems, so much more will an individualized approach be necessary for nations with different languages, legal traditions, and governmental systems. As environmental problems become more global in nature, the developed nations must accept the need and power of other countries, especially less developed nations, to devise and to implement their own schemes for environmental protection.

Comparative study does, however, have more value than offering a warning against national hegemony. Most specifically, understanding how another nation, especially one with similar traditions, has approached environmental problems may help one break free from the temptation to view current institutional arrangements as inevitable. A new framework for approaching environmental problems can stimulate the imagination by demonstrating that the approach adopted by one's own culture is not the only approach that might be adopted. Without forcing inappropriate mimicry, understanding the solutions of another culture can encourage a new way of looking at old problems. That fresh approach can, in turn, prompt suggestions for modifying basic approaches as well as for proposing incremental changes.

The United States has used command-and-control regulation as a device for environmental protection for more than two decades. As a result, the United States' experience offers Australia one model for implementing environmental policy. The successes with the command-and-control model in the United States suggest ideas that might be modified and transplanted; its failures document mistakes that might be avoided.

A major success of environmental law in the United States has been the establishment of minimal federal standards. Although no federal environmental statute has achieved all of its original goals, the federal minima have served at least two purposes. First, they have improved the quality of the ambient environment, or at least maintained existing environmental quality despite the pressures of economic growth. Second, they have minimized the incentives for industries to shop for pollution concessions as they shop for economic incentives.

Increasingly, feasibility-based controls have formed the core of the federally mandated pollution-control standards in the United States. Feasibility-based controls are initially attractive for a variety of reasons. From an environmental standpoint, they are relatively easy to implement, and they usually produce relatively quick results by forcing inefficient plants to modernize. At the same time, the regulated community avoids the threat of closure and the prospect that plants in less polluted areas will achieve a competitive advantage. Politically, developed areas, which are usually heavily populated and politically influential, are protected in the competition for new industry; at the same time, pristine areas are protected—whether the inhabitants want protection or not—from uncontrolled degradation.

As time passes, the feasibility-based approach becomes less satisfactory. The failure to achieve ambient goals frustrates environmentalists, while polluters complain about incurring control costs that produce no commensurate improvements in environmental quality.

Increasingly, these dissatisfactions are producing a mixed system of pollution control in the United States. Feasibility-based requirements are widespread, but controls frequently stop short of the best technology that is available.³⁵⁸ That requirement is normally reserved for new sources³⁵⁹ and hazardous or toxic pollutants,³⁶⁰ or for situations where ambient goals are not likely to be achieved in the near future.³⁶¹ In addition, United States law has combined these feasibility-based standards with ambient goals,³⁶² although the ambient goals have rarely, if ever, been achieved when the alternative is significant industrial dislocation.

The evolution of United States environmental law over the last two decades illustrates that enforcement is important if pollution-control laws are to be effective. At the governmental level, two trends are particularly evident. First, violators face monetary penalties as well as corrective orders. Unless regulatory enforcement eliminates the financial gains associated with violations, strict environmental regulations give a perverse advantage to the polluter who delays compli-

³⁵⁸ See, e.g., CWA, 33 U.S.C. §§ 1311(b)(1)(A), (2)(E).

³⁵⁹ See CWA, 33 U.S.C. §§ 1316(a), (b); CAA, 42 U.S.C. § 7411(d)(4).

³⁶⁰ See CWA, 33 U.S.C. §§ 1311(b)(2), (A), (C), (D), (F); CAA, 42 U.S.C. § 7412(d).

³⁶¹ See, e.g., CAA, 42 U.S.C. §§ 7475(a)(4), 7479(3), 7501(3), 7503(a)(2).

³⁶² See, e.g., CWA, 33 U.S.C. § 1311(b)(1)(C).

ance until after a violation is discovered. Second, administrative enforcement is increasingly significant. In addition to issuing compliance orders, the EPA can now assess penalties administratively for many violations. Although violators are entitled to judicial review of the penalties, the violator does not receive a de novo hearing in the judicial proceeding.

United States environmental statutes have also expanded the role of the public in overseeing the implementation and enforcement of the environmental policies established by Congress. Despite the restrictive interpretations that the Supreme Court has given to these citizen suit provisions, citizen suits provide a mechanism for forcing agency action and for redressing violations. Indeed, citizen suits may be the most important contribution that environmental law has made to administrative law theory in the United States.³⁶³

One feature of citizen suits—allowing successful plaintiffs to recover attorneys' fees—has become a common feature of environmental law, at least when the defendant is a governmental agency. This change from the traditional American rule has provided an important funding source for environmental litigation. If Australia wants to offer similar encouragement for individuals and conservation organizations to litigate environmental issues, it will need to take two steps. First, unsuccessful litigants' exposure to costs must be reduced. Second, some type of funding scheme must be provided to support litigation.³⁶⁴

Unfortunately, environmental law in the United States is far from an unmitigated success story. Perhaps, however, the failures of United States law will be at least as useful for Australians as the successes.

In United States environmental law, a consistent pattern appears: when industrial and commercial reality conflicts with environmental ideology, industrial and commercial reality prevails. In some cases, like the no-discharge goal of the Clean Water Act,³⁶⁵ the consequence may have been no greater than to disappoint the hopes of environmentalists. In other areas, however, rhetorical victories have delayed meaningful governmental action to protect the environment. Section 112 of the Clean Air Act is a good example. As originally enacted in 1970, the Act directed the EPA to set national emission standards for

³⁶³ Cf. Baillie, supra note 4, at 36 ("The vitally significant difference between the United States anti-pollution laws and Australia's, in my opinion, is the provision for citizens' suits which is included in each of the United States statutes.").

³⁶⁴ See Brian J. Preston, Public Enforcement of Environmental Law in Australia, 6-7 J. Env. L. & Lit. 39, 61-65 (1991).

³⁶⁵ CWA, 33 U.S.C. § 1251(a)(1).

hazardous air pollutants at levels adequate to protect the public health with a margin of safety.³⁶⁶ Establishing safe levels for most hazardous air pollutants proved, however, extremely difficult.³⁶⁷ Unwilling to ban all emissions of those pollutants, the EPA had listed only a handful of air pollutants as hazardous when Congress substituted a feasibility-based scheme of regulation in the Clean Air Act Amendments of 1990.

Another unfortunate aspect of pollution-control legislation in the United States is one of its most striking features: legislative complexity. To a considerable degree, the complexity is the product of the combination of a federal system with a constitutional tradition separating legislative and executive powers. By making statutory law extremely difficult to interpret,³⁶⁸ the complexity encourages courts to abdicate responsibility for interpretation to agencies. In addition, the statutory detail also delays needed reform by including details of the regulatory scheme in the statutory text. As a practical matter, most reforms are delayed until the next time Congress reauthorizes the underlying statute, and reauthorization may not occur for a decade.

Finally, environmental law in the United States lacks any coherent focus. Federal environmental statutes are compartmentalized according to the receiving media. Although environmental statutes often borrow language from other environmental laws, neither administration nor enforcement of federal environmental laws is well coordinated. The frustration that compartmentalization has produced is widespread. The regulated community complains of duplicative and inconsistent requirements. Environmentalists bemoan the tendency to transfer rather than to solve environmental problems.

Certainly, the lessons to be learned from the comparative study of environmental law are not one-sided. Australia's fresh look at environmental problems offers some new perspectives for reforming United States law.

One notable aspect of Australian environmental law, its international perspective, derives from Australia's unique system of federal-state relations. The Commonwealth began the expansion of its regulatory power in the context of growing international interest in the preservation of cultural heritage. By contrast, the environmental law of the United States has remained insular in a world that is increasingly interdependent.³⁶⁹ Australia's attention to its international obli-

³⁶⁶ Pub. L. No. 91-604, § 4a, 84 Stat. 1865 (1970).

³⁶⁷ See NRDC v. EPA, 824 F.2d 1146 (D.C. Cir. 1987) (en banc); ROBERT V. PERIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 854–57 (1992).

³⁶⁸ Baillie, supra note 4, at 35.

³⁶⁹ Brian G. Baillie's comments regarding United States attitudes toward its system of gov-

gations can serve as a model as to how the international arena can serve as a place for cooperative action rather than national hegemony.

Throughout the twentieth century, Australia has allowed its states to retain a meaningful regulatory role, even as Commonwealth power has grown. The recent Memorandum of Agreement creating the Environmental Protection Authority³⁷⁰ is simply the latest in a series of cooperative arrangements for structuring intergovernmental arrangements as power has gravitated to the Commonwealth government. At a minimum, the Australian experience demonstrates that "cooperative federalism" can involve far more cooperation than has been typical in the United States.

In general, Australia has taken a more cooperative approach to environmental problems than has been common in the United States. The recent strategy documents for major environmental problems³⁷¹ offer an attractive alternative to the gridlock that has become increasingly characteristic of environmental disputes in the United States. Australians may exaggerate the potential for achieving consensus solutions to environmental problems.³⁷² However, the adversarial approach that has become so common in the United States may discourage environmentalists and regulated industries from reaching consensus on any issues.

Australia has also experimented with non-judicial mechanisms for controlling administrative agencies. The United States has placed heavy reliance on judicial review in courts of broad jurisdiction. While judicial review of agency decisionmaking may be less extensive in Australia, both the Commonwealth and the states have experimented with a variety of mechanisms to provide effective controls. Several of these experiments—specialized courts, administrative tribunals, and ombudsmen—could probably be successfully transported to the United States.

Comparative study also offers other, more general, benefits. It certainly encourages a broader perspective on the system that the student knows best. The expansion and bureaucratization of environmental law leads inexorably to specialization and to the fragmentation

ernment provides a partial explanation for the tendency of the United States to look inward for solutions to environmental problems: "[P]ublicly and privately the view that true democracy exists only in the United States of America is frequently expressed (despite the significantly greater concentration of power in the Executive than is the case in Australia and many other democratic countries)." *Id.* at 15.

³⁷⁰ Summary of Intergovernmental Agreement, supra note 17.

³⁷¹ See supra note 349 and accompanying text

³⁷² See, e.g., Galligan & Lynch, supra note 345.

of knowledge that specialization engenders. To compare one's own legal system to another combats that fragmentation. One must summarize without the qualifications that the specialist demands, and one must search for themes that transcend specific legislative, judicial, or bureaucratic decisions. In short, one must try to understand the system, not just know its parts.

Finally, comparative study offers an opportunity to identify trends that transcend national differences. This comparison of environmental law in Australia and the United States suggests at least four. First, environmental law appears to be exerting a centralizing influence, reinforcing in both countries trends that have dominated political life in the twentieth century. Second, pollution minimization—what has been called the "precautionary principle"373—appears to be emerging as a fundamental guide for selecting environmental policy. Third, permits are becoming an increasingly ubiquitous method of administering environmental policy because they offer benefits to regulators, the regulated community, and environmental activists. Fourth, rights of citizen participation in the formulation, administration, and enforcement of environmental policy are being expanded; these new rights transcend the traditional focus on protecting the property rights of landowners.

Identifying trends and predicting future paths of development is often problematic. One can, however, offer at least one prediction with some confidence: environmental controls will increase in both the United States and Australia. The challenge will be to make those controls effective while minimizing their adverse impacts on economic development. The comparative approach is one vehicle for meeting that challenge.

³⁷³ See generally Cameron & Aboucher, supra note 191.