DOING THE RIGHT THING FOR PROFIT: MARKETS, TRADE, AND ADVANCING ENVIRONMENTAL PROTECTION

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I. INTRODUCTION

Conventional wisdom holds that capitalism is irresponsible and unconcerned with environmental protection, while governments, acting for the general good, are capable of enlightened oversight. Where international trade and global environmental protection are concerned, conventional wisdom presents a stark choice: commerce or conservation.[1] Conventional wisdom is wrong. Reconciliation is possible.

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1. Fred L. Smith, Jr. & Kent Jeffreys, *A Free-Market Environmental Vision, in* MARKET LIBERALISM: PARADIGM FOR THE 21ST CENTURY 389, 390-91 (David Boaz & Edward H. Crane eds., 1993). An Earth First! organizer states: "It's more economically viable in the long run to run a corporation environmentally benignly, but in the short term, profits are better for rape and pillage." Gretchen Morgenson & Gale Eisenstodt, *"Profits are for Rape and Pillage,"* FORBES, Mar. 5, 1990, at 94, 96. The Executive Director of the Sierra Club argues that the "notion that increased trade means more money for a cleaner environment only applies

To promote cleaner, safer economic activity, free markets and free trade can harness resources beyond democratic governments' reach. They can supplant command-and-control or regulatory schemes, which restrict both liberty and economic growth. Bringing market discipline and efficiency to international environmental protection can yield superior—and less costly—results than either regulation or trade restrictions can produce alone.

II. FREE MARKETS AND THE ENVIRONMENT

A. *The Economics of Environmental Destruction*

In a modern economy, goods and services are exchanged among individuals, firms, and nations. When transactions are voluntary and well informed, all parties benefit.[2] When transactions are involuntary—with one individual's actions affecting another, but no fee or compensation is paid—one party reaps the benefit and another bears the cost.[3] For example, spilling chemicals into a stream forces others to exchange good water for bad, and even though some might be willing to make the exchange for a price, they may not be able to command it.[4] These improper cost allocations, called "neighborhood effects" or "externalities," define pollution because one party does not bear the cost of his activities, but shifts the cost to others instead.[5]

Excessive pollution or other environmental externalities occur when adverse effects on others are not reflected in market transactions.[6] This phenomenon arises when there is either a "market failure,"[7] or there is no market mechanism operating to properly allocate costs.[8] In either event, the

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if the people making the money adhere to environmental standards." Carl Pope, *Don't Trade Environment*, USA TODAY, Nov. 30, 1993, at 10A.

2. MILTON FRIEDMAN, CAPITALISM AND FREEDOM 13 (1982).

3. *Id.* at 30.

4. *Id.*

5. *Id.* Markets thrive on externalities because consumers demand them:

> [W]e must shed the easy belief that pollution is caused solely by corporate greed. It is not. It is caused by us, all of us, because we want convenient products and we want them cheap. We want low jet fares, safe and comfortable cars, we want to toss away our toddlers' diapers, drink soft drinks from lightweight plastic jugs . . . . The polluter is not acting out of greed; he is acting out of an imperative to give us the goods we want at a price we are willing to pay.

Morgenson & Eisenstodt, *supra* note 1, at 96.

6. Richard B. Stewart, *International Trade and the Environment: Lessons from the Federal Experience*, 49 WASH. & LEE L. REV. 1329, 1330-32 (1992) [hereinafter *Federal*]; Kenneth R. Reed, *Economic Incentives for Pollution Abatement: Applying Theory to Practice*, 12 ARIZ. L. REV. 511, 513-14 (1970); *see infra* text and notes, accompanying section III.C.

7. Ursula Kettlewell, *The Answer to Global Pollution? A Critical Examination of the Problems and Potential of the Polluter-Pays Principle*, 3 COLO. J. INT'L ENVTL. L. & POL'Y 429, 431-32 (1992).

8. *Id.* at 431. The "market failure" paradigm is criticized:

> The justification of a centralized decisionmaking process is the assumption that individual humans will often make "wrong" choices, which will

quickest way to kill an externality is to internalize it so that either the producer or consumer bears the true cost of a good or service—including environmental costs.[9] Strict enforcement of property rights, taxes, charges, fees, regulations, or combinations of these act to internalize costs.[10] They demand some government action, but how governments act is both practically and socially important.[11] For economic liberals, government ideally should foster competition because "in most circumstances [it is] the most efficient method known but even more because it is the only method by which our activities can be adjusted to each other without coercive or arbitrary intervention of authority."[12]

B. *Policy Alternatives: General Themes*

The traditional approach to "solving" environmental problems is heavy reliance on command-and-control regulatory schemes. Using markets to solve environmental problems appears to be a radical departure. This section compares the traditional and market-based approaches.

1. *Regulation*

Government may prohibit the discharge of certain chemicals into a body of water because property owners or water drinkers lack the resources to force the polluter to pay for the damage.[13] Restrictions on production, if assessed against all and not used to artificially control prices or quantities,

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> eventually create widespread ecological catastrophe. That argument more accurately applies to the governments of the world. Only governments possess the coercive force necessary to collect revenues for money-losing "development" schemes. Thus, capitalism has scarcely touched the great river systems of the world. Most major hydropower projects have been state sponsored. Even pollution that flows into rivers has been the result of the state's neglect of its duty to defend private rights. Similarly, capitalists mostly ignored the tropical rain forests until state subsidies for clearing them were introduced. In fact, in those nations with secure property rights, capitalism plants far more trees than it cuts. The oceans' living marine resources are at risk precisely because governments deny private property rights to wildlife and fish. Those are not examples of the failure of existing markets; they are examples of the failure to allow markets to exist.

Smith & Jeffreys, *supra* note 1, at 392.

9. Kettlewell, *supra* note 7, at 431-32.

10. *Federal*, *supra* note 6, at 1332-33; *see also* Wallace E. Oates & William J. Baumol, *The Instruments for Environmental Policy*, *in* ECONOMIC ANALYSIS OF ENVIRONMENTAL PROBLEMS 95, 96 (Edwin S. Mills ed., 1975) (acknowledging that efficient resource use through the regulation of externalities results in an internalization of all social costs and benefits).

11. As Milton Friedman notes: "Fundamentally, there are only two ways of co-ordinating the economic activity of millions. One is central direction involving the use of coercion—the technique of the army and of the modern totalitarian state. The other is voluntary co-operation of individuals—the technique of the market place." FRIEDMAN, *supra* note 2, at 13.

12. FRIEDRICH A. HAYEK, THE ROAD TO SERFDOM 36 (1944).

13. FRIEDMAN, *supra* note 2, at 31.

may be acceptable.[14] But active government supervision does not mean better policy, cleaner air, water, or more wildlife. Rather, active government imposes its own externalities—exchanges of personal liberty for environmental protection.[15] The essential question "is whether in the particular instance the advantages gained are greater than the social costs which they impose."[16] In the United States, both the advantages and costs have been great.

U.S. environmental policy relies almost entirely on an elaborate array of regulations.[17] On the federal level alone, at least one dozen agencies make and enforce environmental policy.[18] After two decades, the U.S. system has

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14. HAYEK, *supra* note 12, at 37.

15. As Friedman notes:

> [W]hen government engages in activities to overcome neighborhood effects, it will in part introduce an additional set of neighborhood effects by failing to charge or to compensate individuals properly. Whether the original or the new neighborhood effects are the more serious can only be judged by the facts of the individual case, and even then, only very approximately. Furthermore, the use of government to overcome neighborhood effects itself has an extremely important neighborhood effect which is unrelated to the particular occasion for government action. Every act of government intervention limits the area of individual freedom directly and threatens the preservation of freedom indirectly.

FRIEDMAN, *supra* note 2, at 31-32.

16. HAYEK, *supra* note 12, at 37.

17. Richard B. Stewart, *Controlling Environmental Risks Through Economic Incentives*, 13 COLUM. J. ENVTL. L. 153, 153 (1988) [hereinafter *Controlling*].

18. International Agreements to Protect the Environment and Wildlife, USITC Pub. 2351, Inv. No. 332-287 (Jan. 1991) [hereinafter USITC]. The present federal regulatory regime emerged after the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. § 4321, which established the Council on Environmental Quality (CEQ). *Id.* at 1-3. In 1970, the CEQ, the Environmental Protection Agency (EPA), and National Oceanic and Atmospheric Administration (NOAA) were created to form "Uncle Sam's environmental troika." *Id.* at 1-11 (citing Gershon Fishbein, *Uncle Sam's Environmental Troika: CEQ, EPA, and NOAA*, NATION'S BUS., Apr. 1971, at 34). Joining these bodies in environmental law enforcement are:

- U.S. Department of Agriculture: Forest Service
- U.S. Department of Defense: Army Corps of Engineers
- U.S. Department of Health and Human Services: Food and Drug Administration (FDA)
- U.S. Department of the Interior:
  - Fish and Wildlife Service (FWS)
  - Office of Surface Mining Reclamation and Enforcement
  - National Park Service
  - Bureau of Land Management
- U.S. Department of Justice:
  - Land and Resources Division:
    - Environmental Defense Section
    - Environmental Enforcement Section
    - Environmental Crime Section
    - Wildlife and Marine Resources Section
- U.S. Department of Labor: Occupational Safety and Health Administration (OSHA)
- U.S. Department of State

grown to "nothing less than a massive effort at Soviet-style central planning of the economy to achieve environmental goals," and is "unacceptable as a long-term environmental strategy for a large and diverse nation committed to the market and decentralized ordering."[19] The current U.S. approach limits private initiative and choice, strangles investment and innovation, and encourages excessive cost, litigation, and delay.[20] This should not be a surprise. Regulatory approaches suffer the twin problems of poor information and a lack of incentives.[21]

One cannot regulate in the dark. Regulators often lack information about the effects of what they do, yet routinely fashion rules to apply to a wide variety of circumstances far removed from Washington.[22] The resulting "wholesale" approach treats all sources of pollution alike, despite the diversity of American industrial activity.[23] If regulations were tailored to individual industrial plants, for example, current costs of air and water pollution control could be reduced dramatically.[24] A centralized system of regulation, however, renders such tailoring impossible.[25]

Regulators also face an incentive problem. We easily accept that the private sector will dump production wastes into a nearby stream if they do not have to pay the cost of cleanup. Less obvious, however, is the same operative truth at work in a regulatory scheme. If a regulator is not personally accountable for allowing oil development on federal lands, or for permitting an agency to dump hazardous wastes into the environment, then we can expect too much development or too much dumping.[26] Conversely, if the regulator can stop drilling or dumping at no cost to himself or his political constituency, then he will stop activity regardless of the costs imposed on those he regulates.[27]

U.S. Department of Transportation: U.S. Coast Guard
U.S. Department of the Treasury: U.S. Customs Service
Nuclear Regulatory Commission (NRC)

Id. at 1-11.

19. *Controlling*, *supra* note 17, at 154.

20. *Id.*

21. Bruce A. Ackerman & Richard B. Stewart, *Reforming Environmental Law: The Democratic Case for Market Incentives*, 13 COLUM. J. ENVTL. L. 171, 174 (1988).

22. *Id.*

23. *Controlling*, *supra* note 17, at 156.

24. *Id.*

25. *Id.*

26. TERRY L. ANDERSON & DONALD R. LEAL, FREE MARKET ENVIRONMENTALISM 10-11 (1991). For example, much widespread pollution is the result of a "universal easement" granted by the state to even the worst polluters. *Id.*

27. *Id.* The political sector, like the private, operates to externalize costs. *Id.* at 14. For example, a private landowner will attempt to maximize the value of a resource, and will "price" the opportunity costs of exploiting it, weighing alternatives. *Id.* The bureaucratic manager need not weigh all the opportunity costs; "[h]e will take the values foregone into account only if the political process makes him do so." *Id.* If the political process works perfectly, the countervailing powers would internalize the costs and benefits to the bureaucrat. *Id.* But assuming the political process works perfectly is like assuming the market works perfectly. *Id.*

Despite the flaws of the regulatory approach, active government control continues to hold wide appeal,[28] and the current system is firmly entrenched.[29] Much opposition to market mechanisms comes from business itself: "[t]he taxes and pricing structures that business finds anathema are those that remove government subsidies for resource extraction, and those that incorporate the simple market principle that pollution should be paid for by the polluter, not the taxpayer."[30] Some environmentalists, for example, may prefer the regulatory approach precisely because they benefit from a neighborhood effect; they can impose costs on others with none to themselves.[31] Economic incentives and market-based solutions are gaining ground in the policy debate.[32] "Markets," however, are not a cure-all for regulatory overkill. As noted above, markets thrive on pollution externalities.[33] But the marketplace can provide reservoirs of untapped financial, technical, and human resources—if called upon to do so. As Adam Smith observed, "[i]t is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest."[34]

2. *Markets*

Market-based incentives for environmental protection begin with property rights and orderly exchanges of those rights.[35] When a market exists, or can be created, the information and incentive problems inherent in regulatory control either vanish or can be managed.[36] Moreover, market-based incentives enhance individual choice and "democratize" environmental policymaking.[37]

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28. Oates & Baumol, *supra* note 10, at 105. Activists, lawyers, and businessmen defend regulation. *Id.* Each has a vested interest: activists enjoy the effect of an externality (passing a cost onto others), lawyers earn fees (litigating for or against the regulators), and businessmen shelter themselves (when regulatory constraints freeze out new firms). *Id.*

29. Congressional committees, government bureaucracies and industry, and environmental groups helped design U.S. environmental policy, and form an "iron triangle" resistant to change. Ackerman & Stewart, *supra* note 21, at 172.

30. Carl Pope, *Environmentalists and a Market Free-for-all*, DES MOINES REG., Nov. 16, 1993, at A9.

31. Michael B. Smith, *GATT, Trade, and the Environment*, 23 ENVTL. L.J. 533, 541 (1993). "Until recently, environmentalists tended to take an anti-business point of view, expecting businesses to clean up the environment at their own expense, when, in reality, 'their' expense is everybody's expense." *Id.*

32. "The Sierra Club continues to support the full range of market *and* regulatory mechanisms to clean up the environment." Pope, *supra* note 30, at A9 (emphasis in original). "Domestically or internationally, the key to cleaning up the environment and preserving the 'good earth' is to make it profitable to do so." Smith, *supra* note 31, at 541.

33. *See supra* notes 5-9 and accompanying text.

34. 1 ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS 26-27 (R. H. Campbell et al. eds., Liberty Classics 1976) (1776).

35. Smith & Jeffreys, *supra* note 1, at 397.

36. *Id.*

37. *Id.* at 390.

Free market environmentalism is grounded in property rights.[38] If those rights are defined, defended, and transferable, competitive capitalism links property protection or profit to stewardship.[39] If property rights are poorly defined or defended, externalities flourish and pollution results.[40] Where property rights do not exist at all, the results can be extreme and incurable.[41]

Markets create and adapt to information and incentives. Incentives[42] link the profit motive to socially desirable behaviors.[43] Information—provided by prices—gives near-instant, accurate feedback on alternative resource uses, so that owners or managers stand in the best position to receive time- and place-specific information.[44] For a bureaucratic planner charged with forcing the market to produce a desired level of output at a desired level of environmental cost, no computer model could produce the near infinite range of data the market generates every day, nor predict the choices made every day in the marketplace. The task is simply too great. If one cannot

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38. *Id.* at 397.

39. *Id.* For a full discussion of how property owners capture benefits of producing environmental amenities, such as species protection and breeding, see ANDERSON & LEAL, *supra* note 26, at 67-71.

40. Pollution is a form of trespass; it will be tolerated when it is minor, but an aggrieved owner may sue when it is severe. *Id.*

41. Environmental damage revealed after the Soviet Bloc's collapse is shocking: one author notes Eastern Europe is "the dirtiest, most degraded region on Earth." Laurence Solomon, *The Best Earth Day Present: Freedom*, WALL ST. J., Apr. 20, 1990, at A14, *quoted in* Peter J. Hill, *Environmental Problems under Socialism*, 12 CATO J. 321, 323-24 (1992).

42. Incentive creating policy options range from prices (taxes and subsidies) to direct controls (rationing, prohibition, technical specifications). Oates & Baumol, *supra* note 10, at 97.

43. "Business is the only mechanism on the planet today powerful enough to produce the change necessary to reverse global environmental and social degradation." Paul Hawken, *The Ecology of Commerce*, INC., Apr. 1992, at 93, 94. A well-known example of Hawken's thesis is the Waste Management family of companies, whose 1992 revenues exceeded eight billion dollars with operations in North and South America, Europe, Southeast Asia, and the Pacific. WASTE MANAGEMENT, INC., 1992 ANNUAL REPORT 4-7 (1993). The companies provide a wide range of environmental services to the private and public sectors, including waste collection, hazardous waste treatment, recycling, storage, and radioactive waste processing. *Id.* at 7.

44. ANDERSON & LEAL, *supra* note 26, at 4-11.

> Because ecosystems depend on the interaction of many different natural forces, they cannot be "managed" from afar. The information necessary for good management varies significantly from time to time and from place to place. . . . [K]nowledge cannot be gathered into a single mind or group of minds that can then capably manage all of society's natural resources.

Id. at 4.

Prices represent an efficient information source, but private property rights are required to accurately reflect the consequences of actions. Hill, *supra* note 41, at 329. In market economies, property rights are not always well defined, but externalities based on the resulting inaccurate price information are unusual; in socialist economies, price inaccuracy is the rule, and there is no feedback mechanism whereby a decisionmaker can gauge the effect of his acts. *Id.*

produce information nor predict results, planning is an impossibility. Rather than fall into the planning trap, the state, by setting standards and getting out of the way,

> is completely discharged from a duty, in the attempting to perform which he must always be exposed to innumerable delusions, and for the proper performance of which no human wisdom or knowledge could ever be sufficient; the duty of superintending the industry of private people, and of directing it towards the employments most suitable to the interest of the society.[45]

Markets are not merely mechanisms for efficient production and distribution of goods, or for enhancing wealth. They are preconditions for human freedom.[46] Economic arrangements play dual roles in a free society: freedom in economic arrangements is "a component of freedom broadly understood," and economic freedom is "an indispensable means toward the end of political freedom."[47]

For most citizens, issues relating to their material well-being are of more immediate importance than other "higher" values allegedly pursued by the state or public spirited persons, so "[v]iewed as a means to the end of political freedom, economic arrangements are important because of their effect on the concentration or dispersion of power."[48] A free market prevents the state, which has a monopoly on force, from also capturing a monopoly on economic power.[49] Markets can "democratize" environmental policy by bringing the public into a broad discussion of choices and trade-offs: environmental quality is expensive, and must compete with other values.[50] The necessary tradeoffs should be weighed by citizens in open debate, not in the bureaucracy of legislative hallways.

III. TRADE AND THE ENVIRONMENT

> There is essentially only one argument for free trade or freer trade, but it is an exceedingly powerful one, namely: Free trade promotes a mutually profitable division of labor, greatly enhances the potential real national product of all nations, and makes possible higher standards of living all over the globe.[51]

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45. 1 SMITH, *supra* note 34, at 687.

46. FRIEDMAN, *supra* note 2, at 8.

47. *Id.* Friedman rejects the widely understood notion that politics and economics are separate, and "that any kind of political arrangements can be combined with any kind of economic arrangements." *Id.* at 7.

48. *Id.* at 8-9. Friedman is clear on this point: "I know of no example in time or place of a society that has been marked by a large measure of political freedom, and that has not also used something comparable to a free market to organize the bulk of economic activity." *Id.* at 9.

49. Ackerman & Stewart, *supra* note 21, at 174.

50. *Id.* at 189.

51. PAUL SAMUELSON, ECONOMICS 651 (11th ed., McGraw Hill 1980), *quoted in* JOHN H.

A. *The International Problem*

A basic incongruity exists between the traditional approach to environmental policy—command-and-control—and the dominant characteristic of the international economic order—free, or relatively free, trade and markets.[52] The foundations of market-based solutions—enforceable property rights, information, incentives, and enlightened government policy—are scarce at the international level. International organizations lack power, and international trade agreements are ill-suited to the task of making international environmental regulations. Despite obstacles, however, the incongruity can be resolved creatively by bringing markets and trade into the fight to protect and manage the global environment.

1. *The Basic Problem*

Adam Smith's butchers, brewers, and bakers pursue self-interest through specialization and exchange—and so do nations.[53] Half a century after Smith's work, David Ricardo described how nations specialize in the manufacture or export of certain goods for which their land or other resources give them a comparative advantage.[54] Today, economists define comparative advantage to include differences in labor skills, technology, regulation, taxation, tariffs, and even the ability to assimilate environmental

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JACKSON, THE WORLD TRADING SYSTEM 8 (1989).

52. When trade and the environment are considered together, a "policy' discord" emerges:

> Proposition 1: Protection of the environment has become exceedingly important, and promises to be more important for the benefit of future generations. Protecting the environment involves rules of international cooperation, sanction, or both, so that some government actions to enhance environmental protection will not be undermined by the actions of other governments. Sometimes such rules involve trade restricting measures.
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> Proposition 2: Trade liberalization is important for enhancing world economic welfare and for providing a greater opportunity for billions of individuals to lead satisfying lives. Measures that restrict trade often will decrease the achievement of this goal.

John H. Jackson, *World Trade Rules and Enviromental Policies: Congruence or Conflict?*, 49 WASH. & LEE L. REV. 1227, 1227-28 (1992).

53. 1 SMITH, *supra* note 34, at 379.

> It is the maxim of every prudent master of a family, never to attempt to make at home what it will cost him more to make than to buy. . . . [Thus,] [w]hat is prudence in the conduct of every private family, can scarce be folly in that of a great kingdom. If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy it of them with some part of the produce of our own industry, employed in a way in which we have some advantage.

Id. at 456-57.

54. DAVID RICARDO, THE PRINCIPLES OF POLITICAL ECONOMY AND TAXATION 113-17 (Richard D. Irwin, Inc. 1963) (1891).

damage.[55] The basic characteristic of the international economic order is trade competition. So, whether motivated by greed or enlightened self-interest, persons, firms, and governments compete for resources and customers around the globe.

Not surprisingly, externalities abound. In the "global commons," such as international waters or Antarctica, no person, firm, or government "owns" the air or oceans; therefore, resources are "free" to any one user but "paid for" by all.[56] In short, it is a cliché that trade makes Earth a global neighborhood, and a hard truth that "neighborhood effects" are everywhere.

2. *The Appealing Solution*

When a nation faces domestic environmental problems, the regulatory approach is appealing. But many natural resources are beyond any sovereign state's territory, nations are divided by wealth, education, and politics, and no single legislative body exists to enact binding rules on all nations.[57] An analog to the domestic regulatory approach simply is not possible at the international level.[58] There can be no Global Environmental Protection Agency.

There is, however, a tool available to each nation that operates to extend its particular environmental agenda beyond its own borders: trade restriction. Some nations opt out of free trade in favor of other widely held social goals or preferences.[59] Trade restrictions may be necessary to enforce domestic law, to protect against externalities, or generally to protect the global environment.[60] A government may restrict trade to benefit itself or a few special interests who have the power to influence government trade policy.[61]

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55. *See* NIGEL GRIMSWADE, INTERNATIONAL TRADE: NEW PATTERNS OF TRADE AND INVESTMENT 2-30 (1989); *see also Federal*, *supra* note 6, at 1355-56. Stewart argues that "no reason exists why differences in environmental conditions and preferences among different nations and consequent differences in process regulations should not be regarded as an appropriate aspect of comparative advantage." *Id.*

56. *Federal*, *supra* note 6, at 1357-58; *see also* Oates & Baumol, supra note 10, at 96-97. Oates & Baumol discuss policy tools available for protecting the environment in a setting involving large numbers of actors. *Id.*

57. *Federal*, *supra* note 6, at 1345; *see also* David A. Wirth, *The International Trade Regime and the Municipal Law of Federal States: How Close a Fit?*, 49 WASH. & LEE L. REV. 1389 (1992) (indicating that the international system structure provides less mechanisms for implementing the laws).

58. *See* Wirth, *supra* note 57, at 1391.

59. JOHN H. JACKSON, THE WORLD TRADING SYSTEM 17-21 (1989) [hereinafter WORLD]. Among the justifications for nations not pursuing a free trade policy are national security, or a national preference for "non-economic" goals based on aesthetics, religion, or the desire to promote domestic agriculture or "infant industries." *Id.*

60. *Federal*, *supra* note 6, at 1332.

61. As Professor Stewart notes:

> Trade barriers, in most cases, reflect superior organizational strength and political power on the part of producer interests over consumer interests. . . . the social costs and dislocations from import competition often take dramatic form—plant closings and job losses. The benefits provided to

So, whether motivated by greed or enlightened self-interest, governments use trade restrictions as leverage for resources, customers, markets, or environmental protection.

The difficulty lies in fashioning domestic and international policy that neither unjustifiably restrains economic activity nor serves as disguised protectionism.[62] But where trade and the environment are concerned, "confusion and incoherence" reign.[63] Fashioning good policy is the goal; ill-fitting or unfashionable policy is too often the result.

B. *International Law and Organizations*

Customary international law advances the dual principles that each nation is responsible for pollution control and abatement, and each bears responsibility and liability for its failure to prevent or control pollution.[64] Conventional international law also supports state responsibility for transnational pollution.[65] The number of bilateral and multilateral agreements promoting environmental protection and risk control exploded in the last two decades.[66] These agreements cover a range of categories, including marine life, air and water pollution, terrestrial wildlife and plantlife, and archeological, cultural, historical, or natural heritage.[67]

Multiple organizations, some created for other purposes, influence international environmental policy.[68] The international actor exercising

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consumers are less salient.

Id. at 1331.

62. *Id.* at 1333. U.S. trade barriers, whatever their justifications, cost U.S. consumers approximately $70 billion per year. *See* GARY CLYDE HUFBAUER & KIMBERLY ANN ELLIOT, MEASURING THE COSTS OF PROTECTION IN THE UNITED STATES 3 (1994).

63. Daniel C. Esty, *GATTing the Greens: Not Just Greening the GATT*, 72 FOREIGN AFF. 32, 34 (1993).

64. Kettlewell, *supra* note 7, at 439, *citing* Trail Smelter (U.S. v. Can.), 3 R.I.A.A. 1905 (1938) (initial dec.), 3 R.I.A.A. 1965 (1941) (final dec.) (holding "no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein . . . .").

65. *Id.* at 439-40. Principle 21 of Declaration on the Human Environment declares:

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the *responsibility* to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Stockholm Declaration on the Human Environment, Principle 21, U.N. Doc. A/Conf. 48/14 (1972), *reprinted in* 11 I.L.M. 1416 (1972), *cited in* Kettlewell, *supra* note 7, at 440.

66. USITC, *supra* note 18, at 1-1. The Commission identified 170 bilateral and multilateral environmental agreements of significance to U.S. interests. *Id.* at 5-1.

67. *Id.*

68. *Id.* at 1-2. These include:

The United Nations Environmental Program (UNEP);
United Nations Educational, Scientific, and Cultural Organization (Unesco);
International Maritime Organization (IMO);
World Wildlife Fund; and

perhaps the broadest influence over environmental policy is, however, neither institutionally nor philosophically equipped to reconcile trade and the environment. That task falls, however, to the World Trade Organization (WTO).

C. *GATT*[69]*/WTO*[70]

The General Agreement on Tariffs and Trade (GATT) emerged from a post-World War II consensus among the Western Allies that restricted international trade helped cause the war.[71] One pillar of the new world order was to be an International Trade Organization (ITO), intended to foster liberalized trade and economic cooperation.[72] ITO was stillborn,[73] but GATT survived for nearly half a century.[74] It performed reasonably well.[75] The original post-war vision may now come to full realization. In December 1993, 117 GATT signatories concluded the Uruguay Round of trade negotiations and agreed to transform GATT into the WTO in 1995.[76]

International Union for Conservation of Nature and Natural Resources. *Id.* UNEP is a driving force for international environmental cooperation, and played a key role in such agreements as the 1985 Convention for Protection of the Ozone Layer and its 1987 Montreal Protocol. *Id.* Other United Nations groups advancing environmental policy include the World Commission on Environment and Development (WCED) and five regional Economic Commissions which promote environmental cooperation among their members. *Id.*

69. General Agreement on Tariffs and Trade, Oct. 30, 1947, 61 Stat. A11, 55 U.N.T.S. 187 (effective Jan. 1, 1948) [hereinafter GATT].

70. Agreement Establishing the World Trade Organization, Apr. 15, 1994, art. II, ¶ 1, *in* H.R. DOC. NO. 316, 103d Cong., 2d Sess. 1327 (1994) [hereinafter WTO].

71. WORLD *supra* note 59, at 31; *see also* JOHN H. JACKSON, RESTRUCTURING THE GATT SYSTEM 9-17 (1990) (discussing the origins and history of GATT) [hereinafter RESTRUCTURING].

72. WORLD, *supra* note 59, at 27-32.

73. *Id.* at 32-34. A draft ITO charter was published in 1946. *Id.* at 32. But Congressional opposition to the ITO and a loss of wartime urgency led President Truman to abandon the effort to ratify the ITO in 1950. *Id.* at 34.

74. *Id.* at 32-39. In 1947 and 1948, negotiators met in Geneva and Havana to continue work on the ITO charter and to develop a multilateral agreement on tariff reduction—GATT, which would eventually operate under the ITO umbrella. *Id.*

75. Since World War II, growth of world trade has exceeded growth of world output. GRIMSWADE, *supra* note 55, at 37. Since the 1981-82 recession, world trade and economic integration have been rapid, and for the decade, growth of world trade exceeded output by 50%. MARGARET KELLY ET AL., INTERNATIONAL MONETARY FUND ISSUES AND DEVELOPMENTS IN INTERNATIONAL TRADE POLICY 8 (1992). Success, though, is in the eyes of the beholder. "In 1962 tariffs on manufactured goods averaged 11.5% in the United States, 11.0% in the European Community, and 16.1% in Japan," but average about 5% today—not an impressive result for years of effort. Brink Lindsay, *Taking the Offensive in Trade Policy, in* MARKET LIBERALISM 227, 235-36 (David Boaz & Edward H. Crane eds., 1993). Lindsay argues persuasively that unilateral free trade is the solution to protracted GATT negotiations. *Id.* at 227.

76. *See* Uruguay Round Agreements Act, Pub. L. No. 103-465, 108 Stat. 4813 (1994); "With a view to achieving greater coherence in global economic policy-making, the [Multilateral Trade Organization] shall cooperate, as appropriate, with the International Monetary Fund and with the International Bank for Reconstruction and Development and its affiliated agencies." Agreement Establishing the Multilateral Trade Organization, MTN/FA

1. *GATT Environmental Provisions and Policy*[77]

Despite its successes, many considered GATT a failure and a threat: "[T]he environmental community objects to having its hard-won gains lost in a system that has been developed by, and is answerable to, the economic concerns that often have fought against those gains in the original forum."[78] While "GATT's perceived singular mission and relative success [made] environmentalists both angry and envious," in reality, GATT was "not hostile to the environment but agnostic."[79]

Several GATT provisions governed national environmental measures affecting international trade. Article I obligated parties to treat other parties' products on a nondiscriminatory basis.[80] Article III required "national treatment" so that parties would treat imports no less favorably than domestically produced goods when applying domestic taxes and regulations.[81] Article XI committed parties to eliminating quantitative restrictions on imported products.[82] Article XX directly addressed environmental policy by describing exceptions to tariff and nontariff barrier rules, and recognized reasons why a GATT party might discriminate against imported goods or services:

> Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised

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III.5 (Dec. 15, 1993) [hereinafter MTO]; *see also* Steve Charnovitz, *The World Trade Organization and Environmental Supervision*, 17 INT. ENVTL. REP. CURRENT REP. 89 (1994) (indicating the nations' objectives included transformation of GATT into WTO as well as harmonization of national policies on trade and domestic issues).

77. This section refers to GATT in the past tense. At the time of this writing, the WTO is a new entity. *See id.* Much of what is said about GATT environmental rules should apply to WTO as well. But insufficient time has passed for WTO to develop new rules or procedures for addressing environmental issues; while GATT is gone, its successor has not fully assumed its role.

78. Patti A. Goldman, *Resolving the Trade and Environment Debate: In Search of a Neutral Forum and Neutral Principles*, 49 WASH. & LEE L. REV. 1279, 1280 n.1 (1992).

79. Esty, *supra* note 63, at 34-35.

80. GATT, *supra* note 69, at art. I, 61 Stat. at A12, 55 U.N.T.S. at 196. The most-favored nation clause provides that one GATT party may not discriminate between two other GATT parties; for example, the United States could not treat bicycles imported from Japan any different than bicycles imported from Italy. Jackson, *supra* note 52, at 1232.

81. GATT, *supra* note 69, at art. III, 61 Stat. at A18, 55 U.N.T.S. at 204. Article III's national treatment requires that taxes or regulations shall not be imposed so as to afford protection against import competition. *Id.* Article III has been interpreted as prohibiting government action when it is facially nondiscriminatory but is "de facto" discriminatory. Jackson, *supra* note 52, at 1236-37.

82. GATT, *supra* note 69, at art. XI, 61 Stat. at A32, 55 U.N.T.S. at 224. With certain limited exceptions, "[n]o prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licenses or other measures, shall be instituted . . . ." *Id.*

> restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures . . .
>
> (b) necessary to protect human, animal or plant life or health . . . (g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.[83]

These principles were tested in a series of disputes concerning the taking of tuna in international waters. The tuna problem was a textbook example of an externality in the global commons. The Tuna-Dolphin dispute is also reflective of how trade and environmental policy can conflict with results that please no one.

2. *The Tuna-Dolphin Case:*[84] *Netting Trouble for GATT*

In 1990, the U.S. imposed a ban on tuna caught by foreign fishing fleets in violation of the Marine Mammal Protection Act (MMPA).[85] The MMPA limited U.S. fishing fleets to 20,500 dolphin kills per year in the Eastern Tropical Pacific Ocean, while foreign fleets were restricted to 1.25 times the U.S. fleet's dolphin kill.[86] When Mexico's dolphin kill exceeded the MMPA limit, Mexican tuna was banned.[87] Mexico brought the dispute to the GATT, and ultimately prevailed.[88]

The *Tuna-Dolphin* decision turned on the panel's application of several GATT articles. The GATT panel found the tuna ban was a quantitative

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83. *Id.* at art. XX, 61 Stat. at A60-66, 55 U.N.T.S. at 262. Article XX(b)'s scope was narrowly drawn: a national measure must be "necessary" to promote human, animal or plant life or health—and designed to meet "overriding public policy goals" to the extent that inconsistency with the General Agreement is "unavoidable." *Thailand—Restrictions on Importation of and Internal Taxes on Cigarettes*, GATT Doc.DS10/R (Nov. 7, 1990), *reprinted in* GATT—BASIC INSTRUMENTS AND SELECTED DOCUMENTS 223 (37th Supp. 1989-1990) (finding Thailand's prohibition on imported cigarettes was not "necessary" to protect human health because of the availability of other, less trade-restrictive measures).

Article XX(g) focused on whether measures were "in conjunction with" domestic restrictions on production or consumption, and has also been interpreted narrowly. *United States—Prohibition of Imports of Tuna Products from Canada*, GATT Doc. L/5198 (Feb. 22, 1982), *reprinted in* GATT—BASIC INSTRUMENTS AND SELECTED DOCUMENTS 91 (29th Supp. 1981-1982).

84. *General Agreement on Tariffs and Trade: Dispute Settlement Panel Report on United States Restrictions on Imports of Tuna*, 30 I.L.M. 1594 (1991) [hereinafter *Tuna-Dolphin*].

85. *Id.* ¶ 2.7, at 1599; *see* Marine Mammal Protection Act, 16 U.S.C. §§ 1361-1407 (1994).

86. *Tuna-Dolphin, supra* note 84, ¶ 2.4, 2.6 at 1599. In the Eastern Tropical Pacific Ocean, dolphins swim above schools of tuna, so fishing fleets need only locate dolphins at the surface to find tuna below; purse-seine nets are then set atop the dolphins and tuna, resulting in the capture of both. *Id.* ¶ 2.2, at 1598.

87. *Id.* ¶ 2.7, at 1600.

88. *Id.* ¶ 7.1, at 1623.

restriction barred by Article XI.[89] The United States argued the tuna ban should be classified as an internal regulation enforced at the point of importation; therefore it should be permissible under Article III.[90] Instead, the panel held that Article III applies to only "products as such"[91] and the MMPA provisions could not be regarded as applying to tuna *products* because they regulate only how the tuna is harvested, not the fish themselves.[92] Thus, the MMPA ban was not a product regulation under Article III because it was unrelated to any characteristic of the tuna.[93]

The panel also examined whether the MMPA ban could be justified by any Article XX exceptions.[94] Mexico argued that the Article XX(b) and (g) exceptions did not apply to measures taken to protect life and health outside a party's territory.[95] The panel agreed, noting that without a territorial limitation, "each contracting party could unilaterally determine the conservation policies from which other contracting parties could not deviate . . . ."[96] The panel further concluded that the United States ban was not "necessary" under Article XX(b) because the United States had not exhausted GATT-permissible means to enforce the MMPA.[97] The MMPA dolphin-kill limits and ban could not be justified under Article XX(g) either because conservation restrictions must be imposed in conjunction with restrictions on domestic production and consumption.[98]

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89. *Id.* "The prohibition of imports of certain yellowfin tuna and certain yellowfin tuna products of Mexico and the provisions of the Marine Mammal Protection Act under which it is imposed are contrary to Article XI:1." *Id.*

90. *Id.* ¶ 5.8, at 1617. Under Article III, a GATT party may impose an internal regulation on a product provided it does not discriminate in violation of the Article I's most-favored-nation principle, it is not applied to afford protection to domestic industry, and the party gives imported products no less favorable treatment than like domestic products. *Id.* ¶ 5.9, at 1617. According to the United States, the ban was enforced at the point of importation, and was nondiscriminatory because the MMPA production requirements on imported tuna were as favorable as on domestic tuna. *Id.* ¶ 5.10, at 1617.

An example of a permissible Article III measure is a point of importation ban on food known to be contaminated with pesticides, when the same ban is enforced on domestic food.

91. *Id.* ¶ 5.14, at 1618.

92. *Id.*

93. The panel's product-process distinction has far ranging implications. Under this reasoning, a nation might not be permitted to ban imports of a product which was itself benign, but was produced using an environmentally destructive process.

94. *Id.* ¶ 5.23, at 1619.

95. *Id.* ¶ 5.24, at 1619; *id.* ¶ 5.30, at 1620.

96. *Id.* ¶ 5.32, at 1621. GATT would then "no longer constitute a multilateral framework for trade among all contracting parties but would provide legal security only in respect of trade between a limited number of contracting parties with identical internal regulations." *Id.*

97. *Id.* ¶ 5.28, at 1620. In addition, the panel found that even if the United States had exhausted other possible remedies, the ban itself was not "necessary" to affect MMPA policy because the dolphin-kill rate permitted for foreign fleets was determined on the basis of the U.S. fleet's kill rate, and "a limitation on trade based on such unpredictable conditions could not be regarded as necessary to protect the health or life of dolphins." *Id.*

98. *Id.* ¶ 5.31, at 1620. Because the permissible Mexican dolphin-kill rate was linked to the U.S. kill rate during the same period, Mexican fleets could not know ahead of time

In its conclusion, the *Tuna-Dolphin* panel stated: "[A] contracting party may not restrict imports of a product merely because it originates in a country with environmental policies different from its own."[99] This flat statement captures the heart of the trade-environment debate, and places GATT at odds with many environmental groups. Following the *Tuna-Dolphin* decision, environmentalists' hostility toward GATT boiled over: posters appeared in Washington, D.C., of a "dolphin-eating, pollution-spewing 'GATTzilla.' "[100] The efforts were to no avail. Opposition to GATT environmental policy was not enough to derail formation of the WTO. Free traders and environmentalists alike will have to wait and watch the WTO for signs of hope.

3. *WTO: A New Approach?*

The MTO will enjoy increased powers and a broader mandate than GATT[101]—indeed, the "Uruguay Round strikes a new balance between commerce and the environment."[102] The MTO changes the game with greater supervision of trade-restricting environmental laws.[103] It contains two agreements defining signatories' obligations relating to environment and public health: the Agreement on Sanitary and Phytosanitary Measures (SPS)[104] and the Agreement on Technical Barriers to Trade (TBT).[105] The new rules replace "national treatment" with a new "international treatment" obligation.[106] Nations should apply international standards to imported

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whether their conservation measures conformed to U.S. standards. *Id.* ¶ 5.33, at 1621. Thus, "a limitation on trade based on such unpredictable conditions could not be regarded as being primarily aimed at the conservation of dolphins." *Id.*

99. *Id.* ¶ 6.2, at 1622.

100. Esty, *supra* note 63, at 35. A similar challenge to United States dolphin protection measures yielded similar results and similar hostility among environmentalists. As of this date, WTO has not issued a final report, nor has the United States decided how to proceed in defending the MMPA. *See* "GATT: US Seeks Review of Tuna-Dolphin Decision; Ruling Said to Undermine Environment Laws," BNA Int'l Trade Daily 5/24/94.

101. *See* Agreement Establishing the Multilateral Trade Organization (Dec. 15, 1993) 33 I.L.M. 13. The Multilateral Trade Organization was changed to the "World Trade Organization" in all Uruguay Round documents. *Id* at n.*.

102. Charnovitz, *supra* note 76, at 89.

103. The MTO agreement begins with explicit recognition of the trade-environment nexus:

> Recognizing that their relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living . . . while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment . . . [and] to preserve the basic principles and to further the objectives underlying this multilateral trading system.

MTO, *supra* note 76, pmbl., at 15.

104. Agreement on the Application of Sanitary and Phytosanitary Measures, GATT Doc. MTN/FA II-A1A4 (Dec. 15, 1993).

105. Agreement on Technical Barriers to Trade, GATT Doc. MTN/FA II-A1A6 (Dec. 15, 1993) [hereinafter TBT].

106. Charnovitz, *supra* note 76, at 90. The SPS portion of the MTO is designed to clarify GATT Article XX(b). MTO, *supra* note 76, at pmbl., at 15. The SPS applies to "all

products, but the WTO may permit more restrictive standards in situations involving health or the environment.[107] The rules do not preclude application of domestic environmental product standards to domestic commerce.[108] The rules govern only when domestic standards are applied to imports, and will override "national 'rights' in GATT Articles III and XX."[109] Nations may use their own rather than international standards in environmental regulations if two conditions exist: (1) GATT national and most-favored-nation treatment rules and (2) the new "least trade restrictive" test.[110]

Despite its breadth, the Uruguay Round "does not curtail the most contentious practices in the 'trade and environment' arena—'unrelated' process standards or import restrictions to preserve the global environment."[111] The United States-Mexico Dolphin panel declared all " 'unrelated' process standards are GATT-illegal."[112] The new WTO rules do not expressly outlaw the United States tuna ban, but the text does not tell the entire story.[113] Were this dispute brought to the WTO under the new rules, Mexico could have imposed trade sanctions on the United States for enforcing the MMPA against Mexican tuna.[114]

Reliance on bureaucratic oversight, or cumbersome multilateral trade negotiations, for progress in resolving the trade-environment dilemma will test patience and commitment. While not perfect, markets can advance the cause of environmental protection without endangering international trade. We can "[b]y harnessing the power of the market in the service of ecological

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sanitary and phytosanitary measures which may, directly or indirectly, affect international trade." *Id.* ¶ 1. "Sanitary or phytosanitary measures which conform to international standards, guidelines or recommendations shall be deemed necessary to protect human, animal or plant life or health, and presumed to be consistent with the relevant provisions of this Agreement and of the GATT 1994." *Id.* ¶ 10.

Likewise, the TBT portion of the MTO commits the parties to achieving harmonization through use of international technical standards for products, "except when such international standards or relevant parts would be an ineffective or inappropriate means for the fulfillment of the legitimate objectives pursued. MTO, *supra* note 76, at art. 4.

107. Charnovitz, *supra* note 76, at 90.

108. *Id.* at 89.

109. *Id.*

110. *Id.* National regulations "shall not be more trade-restrictive than necessary to fulfill a legitimate objective, taking account of the risks non-fulfillment would create," and such regulations shall not be maintained if "changed circumstances or objectives can be addressed in a less trade-restrictive manner." TBT, *supra* note 105, at art. 2.2-2.3; *see* MTO, *supra* note 76, ¶ 21.

The least trade restrictive test derives from U.S. and European Union jurisprudence. See infra text and accompanying notes IV.B.1, for a discussion of "least trade restrictive" commerce clause jurisprudence.

111. Charnovitz, *supra* note 76, at 91. The TBT agreement restrains government regulations based on processes and production methods, but only those "related" to the product. *Id.* at 92. For example, the TBT will cover U.S. laws requiring use of recycled ingredients, but the Dutch ban on tropical hardwoods from poorly managed forests will not be prevented by the agreement. *Id.*

112. *Id.* at 91.

113. *Id.*

114. *Id.*

protection . . . harmonize the trade and environmental goals at both a practical and a conceptual level." [115] Market-based policies are radical, but they are not untested. The next section describes efforts to use markets for environmental goals.

IV. APPLYING MARKET-BASED SOLUTIONS INTERNATIONALLY

> The vision of America engaged in creative ecological privatization may be radical, but it offers great promise of lasting success in dealing with the ever-changing circumstances of human interaction with the natural world. Not only is this vision applicable to environmental protection, it is compatible with the traditional American respect for individual liberty.[116]

Market-based approaches to environmental problems are neither new nor novel. They have been tried, with promising results. Widespread implementation of market-based approaches poses problems, however. These stem from the present weakness of the international institutions, the need to improve monitoring and enforcement mechanisms, and practical obstacles to market design.

A. *Markets at Work*

1. *On Land*

Long before European Colonists brought copies of *The Wealth of Nations*[117] to North America, indigenous peoples employed market-like systems to manage natural resources.[118] Today, markets are replacing or complementing traditional environmental measures around the globe.[119]

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115. *Federal*, *supra* note 6, at 1369.

116. Smith & Jeffreys, *supra* note 1, at 389.

117. SMITH, *supra* note 34.

118. ANDERSON & LEAL, *supra* note 26, at 65-66. Montagnais Indians on the Labrador Peninsula hunted beaver communally until European demand for pelts grew and pressure on beaver stocks increased. *Id.* at 65. The Indians established private hunting grounds to manage the beaver on a sustained-yield basis; because the value of pelts was high enough, the effort to define and enforce hunting rights was worthwhile. *Id.* at 66.

119. *See, e.g.*, Kettlewell, *supra* note 7, at 430-31; Derek Asiedu-Akrofi, *Debt-for-Nature Swaps: Extending the Frontiers of Innovative Financing in Support of the Global Environment*, 25 INT'L L. 557, 560 (1991); Robert F. Housman & Durwood J. Zaelke, *Making Trade and Environmental Policies Mutually Reinforcing: Forging Competitive Sustainability*, 23 ENVTL. L. 545, 547 (1993); Richard B. Stewart & Jonathan B. Weiner, *The Comprehensive Approach to Global Climate Policy: Issues of Design and Practicality*, 9 ARIZ. J. INT'L & COMP. L. 83, 86 (1992). For a complete discussion of using markets to control and reduce international air pollution, see U.N. CONFERENCE ON TRADE AND DEVELOPMENT, COMBATING GLOBAL WARMING: STUDY ON A GLOBAL SYSTEM OF TRADEABLE CARBON EMISSION ENTITLEMENTS (1992) [hereinafter UNCTAD, Combating Global Warming (1992)].

Even if the United States flinches at broad application of free market environmental policies, the rest of the world may lead the way instead. Zachary Willey, senior economist at the Environmental Defense Fund, traveled to the Karl Marx University in Budapest to discuss

In Zimbabwe and Botswana, "conservation through use" programs have produced dramatic results in the effort to save the African elephant, with sharp increases in population even while elephants are culled for ivory and other uses.[120] Conversely, in Kenya and most of Central and East Africa, hunting and ivory trade suppression efforts have been disastrous.[121] Conservation through use—including hunting, tourism, or the sale of ivory and hides—gives Southern Africans a financial incentive to conserve elephant herds.[122]

Conservation through use programs face stiff international opposition, however. The international ivory trade restrictions administered under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),[123] undermine conservation through use efforts.[124] But product bans do not eliminate the demand for valued resources; instead, prices increase, poachers set in, and where the resource is "owned" communally, it disappears.[125] Legal trade and enforced property rights, however, produce lower prices, no premium for criminal behavior, and stewardship by owners.[126] Selectively lifting the ivory ban through bilateral agreements with countries who follow wise conservation through use policies would reward stewardship and encourage duplication by others who coexist with endangered species.

Not only wildlife, but the land itself can be the subject of market-based efforts. Environmental organizations increasingly realize how effective property ownership can be. The Nature Conservancy's private land management program is a leading international example of market forces at work: it purchases land and profits from its use.[127] The Conservancy, among others, has participated in "debt-for-nature" swaps with less developed countries as a means of acquiring property for conservation purposes.[128]

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free market environmental policy and lamented: "I wish the EPA was as open to ideas as the Hungarian government is." Morgenson & Eisenstodt, *supra* note 1, at 97.

120. Randy T. Simmons & Urs P. Kreuter, *Herd Mentality; Banning Ivory Sales Is No Way to Save the Elephant*, 50 POL'Y REV. 46, 46 (Fall 1989). Zimbabwe's elephant population grew from 30,000 to 43,000 between 1979 and 1989, while Botswana's rose from 20,000 to 51,000 over the same period. *Id.*

121. *Id.* Between 1979 and 1989, Central Africa's elephant population dropped from 497,400 to 274,800, while East Africa's fell from 546,650 to 154,720. *Id.*

122. *Id.*

123. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Mar. 3, 1973, 27 U.S.T. 1087, 993 U.N.T.S. 243. This treaty prohibits trade in species threatened with extinction. For a detailed discussion of CITES and other international treaties to protect wildlife, see USITC, *supra* note 18.

124. Simmons & Kreuter, *supra* note 120, at 46-47. Kenya, where elephant hunting is illegal, led the international effort to ban trade in ivory—but has seen a decline in population from 65,000 in 1979 to 19,000 in 1989. *Id.* at 46.

125. *Id.* at 49.

126. *Id.*

127. ANDERSON & LEAL, *supra* note 26, at 71. As of 1990, the Conservancy owned over 2.5 million acres in the United States and Canada. *Id.* Nature tours, cattle grazing, and guest ranching on the land raises capital for further acquisitions. *Id.*

128. *See* Asiedu-Akrofi, *supra* note 119, at 564.

"Debt-for-nature" describes an innovative solution to debt crises and environmental problems.[129] A swap generally involves purchase of commercial bank debt by a nonprofit organization, which is then presented to a debtor country's central bank in exchange for currency or ecological bonds.[130] The investor then uses the converted funds for resource management or environmental preservation.[131] Debtor countries, which account for much of the world's biological and natural resource diversity, benefit from reduced financial burdens and can rethink government-sponsored programs to raise export income at the expense of conservation.[132] Environmental groups benefit by "leveraging" their conservation dollars in ecologically threatened areas, making good use of limited financial resources.[133]

A common thread ties the efforts to conserve wildlife and manage other natural resources in less developed countries: stewardship through ownership. The thread extends to the sea as well. Fences and "no trespassing" signs will not spring up on the open ocean. But the global common can, in fact, be "fenced" to promote stewardship through ownership.

2. *At Sea*

Open access to oceans is being curtailed: resulting in a "fencing" of the global commons.[134] Australia and New Zealand employ a system of individual tradeable quotas (ITQs) to reduce fishing fleets and raise incomes of remaining producers.[135] Measures such as ITQs rely on basic market

129. *Id.*

130. *Id.*

131. *Id.*

132. *Id.* Developing countries fear the growing emphasis in developed countries on environmental protection. Smith, *supra* note 31, at 541. Less developed countries (LDCs) become suspicious when labor unions or manufacturers in the United States close ranks with environmentalists in opposing trade liberalization. *Id.* For example, among the most vocal citizens concerned with dolphin welfare when the *Tuna-Dolphin* case was underway were textile lobbies which opposed GATT and NAFTA. Ray V. Hartwell III & Lucas Bergkamp, *Environmental Trade Barriers and International Competitiveness*, 24 ENVTL. L. REP. 10109, 10114 n.59 (Mar. 1994) (citations omitted). LDCs see their interest in trade-based economic development jeopardized, and are reluctant to see GATT become more involved in environmental issues. Smith, *supra* note 31, at 542. Debt-for-nature swaps offer some promise to LDCs that they can accommodate environmentalists and develop as well.

133. Smith, *supra* note 31, at 542.

134. The move away from unlimited access to ocean resources began when the United States claimed exclusive rights to minerals and oil under its continental shelf in 1945 and continued as more nations claimed resources within 200 miles of their shores. ANDERSON & LEAL, *supra* note 26, at 122. Extending national frontiers is not perhaps the final answer to controlling resource use, but it is a step toward addressing the inefficiencies which result from communal ownership. *Id.*

135. *Id.* at 131. Prior to the ITQ program, the Australian tuna fishery suffered from over-capacity and over-capitalization, and was unprofitable. *Id.* ITQs were sold by the government based on the size of the total catch, which was determined on the basis of sustainability of the tuna population. *Id.* at 131-32. New Zealand's ITQ program for abalone has also enjoyed success—fishermen contribute one percent of sales to rearing young abalone, and act together

premises: property rights to take a set amount of a resource; trading, so that more efficient producers may buy out less efficient producers; and incentives to conserve the resource so that capital invested continues to yield a profit.[136]

Beginning in 1995, a system of tradeable fishing rights for Alaskan halibut will be managed by the U.S. National Marine Fisheries Service.[137] Individual Fishing Quotas will be issued to about 6,600 boat owners who have fished the Gulf of Alaska and Bering Sea since before 1990.[138] The quotas may be used or sold, and an estimated thirty percent of quota holders may sell out.[139]

3. *In the Air*

The Montreal Protocol directly addressed international air pollution.[140] Under the Protocol, parties agreed to stop importing chloroflourocarbons (CFCs), and would not export CFCs to countries that are not Protocol signatories.[141] The Protocol's incorporation of trade sanctions to enforce environmental policy is controversial.[142] This appears on its face to contravene GATT/WTO's rejection of import restrictions based on an exporting country's different environmental regulations.[143] The danger that Montreal-style trade sanctions might undermine WTO trade-friendly policies is not pressing. With the WTO's inception, "such treaties can be judged by the WTO on their merit."[144] This is a happy result for trade, but an unhappy one for environmentalists hostile to the continued pre-eminence of trade over ecology. "Instead of giving the WTO a new mission to promote environmentally conscious trade, the [Uruguay] Round gave the WTO a new mission to supervise environmental policies that impinge on trade."[145]

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to manage the size of the total catch. *Id.* at 132.

136. *Id.* at 130-31.

137. Linda Kanamine, *Critics Assail Quota System as Fish Giveaway*, USA TODAY, Nov. 16, 1993, at 7A. The program was prompted by dual goals of safety and averting a fish shortage. *Id.* The annual "halibut derby" is a dangerous race by too many fishing boats chasing too few halibut. *Id.*

138. *Id.*

139. *Id.*

140. Montreal Protocol on Substances That Deplete the Ozone Layer, *opened for signature* Mar. 22, 1985, S. Treaty Doc. No. 99-9, *reprinted in* 26 I.L.M. 1550 (1987) (*entered into force* Jan. 1, 1989).

141. *Id.* at art. 4(1)-(2), 26 I.L.M. at 1555.

142. The Protocol bans imports of controlled CFCs from nonsignatories but allows some trade in the same CFCs among signatories; thus it looks more like a coercive measure against nonsignatories rather than a measure to protect the environment: "Trade sanctions by themselves are a less than effective means of enforcing environmental agreements because they eschew cooperation and coordination for unilateral fiat. . . . In a world of sovereign states, such action cannot be coerced." USITC, *supra* note 18, app. E-6 (quoting written submission of the American Association of Exporters and Importers).

143. *See Tuna-Dolphin*, *supra* note 84, ¶ 6.2, at 1622.

144 Charnovitz, *supra* note 76, at 91.

145. *Id.*

In a conceptual shift from the Montreal Protocol's trade sanction model, the United Nations is actively studying market-based alternatives.[146] Under a tradeable emission entitlement system, for example, countries would determine an overall target for all emissions of a particular type, and "permits" would be issued.[147] Participating countries would have to hold permits equal to their total emissions, and if they did not, additional permits would have to be purchased through bilateral trading.[148] Lower emissions would theoretically result from a direct incentive to either minimize payments for additional permits, or maximize income from selling surplus permits.[149]

The idea of international emission permit trading is based on valuable experience with such trading.[150] In the United States, tradeable permits have been applied to air pollutants, lead in gasoline, ozone-depleting chemicals, and acid rain.[151] For air pollutants, the EPA sponsors a limited emissions trading program which allows pollution sources that reduce emissions below a target to receive a tradeable "reduction credit."[152] These credits can then be bought and sold among polluters—creating financial incentives to lower emissions, and financial costs for failing to do so. To encourage rapid transition to unleaded gasoline, the EPA created a lead banking program with tradeable credits for refiners who produced gasoline with less lead than required by federal standards.[153] In 1988, the EPA began a marketable permit system to achieve targeted reductions in ozone-depleting chemicals, under which producers and consumers were allotted declining emission allowances.[154] The Clean Air Act's approach to controlling acid rain relies in part on a program in which allowances to emit will be issued and traded among producers.[155] Utilities that can reduce emissions cheaply will do so, and sell or lease excess allowances to producers for whom reductions would

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146. *See* UNCTAD, Combating Global Warming (1992), *supra* note 119. The study discusses an international, market-based system for controlling carbon emissions and effectively transferring environmentally sound technologies to developing countries. *Id.* at xiii.

147. Michael Grubb, *Options for an International Agreement, in* UNCTAD, Combating Global Warming (1992), *supra* note 119, at 11, 19.

148. *Id.*

149. *Id.*

150. Tom Tietenberg, *Relevant Experience with Tradeable Entitlements, in* UNCTAD, Combating Global Warming (1992), *supra* note 119, at 37.

151. *Id.* at 38-42.

152. *See* Emissions Trading Policy Statement, 51 Fed. Reg. 43814, 43825 (1986).

153. Tietenberg, *supra* note 150, at 40.

154. *See* Protection of Stratospheric Ozone, 40 C.F.R. § 82. Congress also imposed a tax to offset potential windfall profits allowance holders might reap. Tax on Ozone Depleting Chemicals, 26 C.F.R. § 52.4681-1.

155. *See* Clean Air Act Amendments of 1990, §§ 401-416, Pub. L. No. 101-549, 104 Stat. 2854 (codified as amended at 42 U.S.C. §§ 7651-7651o (Supp. II 1990)). For a full treatment of a local scheme using tradeable permits, *see* Daniel P. Selmi, *Transforming Economic Incentives from Theory to Reality: The Marketable Permit Program of the South Coast Air Quality Management District*, 24 ENVTL. L. REP. 10695 (Dec. 1994).

be more expensive.[156] Thus, the allowances and trading will reward producers who actually emit less, and impose extra costs on the less efficient.

4. *Incentives and Tools: Taxes and Technology*

Where feasible, environmental taxes or other fees can compensate for social costs not captured in market prices.[157] Despite much public antipathy to taxation in general, some industries express a preference for this method of cost internalization.[158] Taxation can replace impermissible GATT/WTO quantitative restrictions or product bans.[159]

Creating incentives to develop and share technology is also a solution. The market for environmental protection adds up to $100 billion per year, and " 'environmental technology creates good jobs and substantial business growth.' " [160] The trend toward flexible environmental regulations, which set tough standards but allows polluters to decide how to meet them, helps support the market for environmental technology.[161] For Less Developed Countries (LDCs), who are reluctant to see green trade barriers bar their products from international trade, transfer of "green" technologies is particularly attractive.[162] Incentives for technology transfer can be created.[163]

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156. Selmi, *supra* note 155, at 10696.

157. Grubb, *supra* note 147, at 11; *see* Kettlewell, *supra* note 7, at 469-70.

158. William Tucker, *Shaking the Invisible Hand*, FORBES, Apr. 1, 1991, at 64. General Motors expresses a preference for a carbon tax rather than the federal government's Corporate Average Fuel Economy (CAFE) standards. *Id.* In addition, General Motors Vice President and Chief Economist George C. Eads told the Energy Department a gasoline tax is insufficiently broad, while federal fuel consumption mandates are "relatively ineffective and highly disruptive regulatory programs." *Id.*

159. Frederic L. Kirgis, Jr., *Environment and Trade Measures after the Tuna/Dolphin Decision*, 49 WASH. & LEE L. REV. 1221, 1222 (1992). Applied to the case of dolphins killed by tuna fishing, a tax would not fall afoul of Article XI quantitative restrictions, but instead would be subject to the national treatment rules in Article III. *Id.* at 1222. Arguably, a tax on a product produced in an environmentally harmful way is no different than a tax on a product which is itself harmful—and Article III requires only that the tax on the imported product equal the tax on the similar domestic product. *Id.* at 1223. In U.S. Commerce Clause jurisprudence, state taxes on imports or exports have been variously upheld or struck down. *See, e.g.*, Complete Auto Transit, Inc. v. Brady, 430 U.S. 274 (1977). *Complete Auto* advanced a four-part test to determine validity under the dormant Commerce Clause: 1) the measure is applied to an activity with a substantial nexus to the taxing state; 2) the tax is fairly apportioned; 3) the tax does not discriminate against interstate commerce; and 4) the tax is fairly related to state-provided services. *Id.*

But some state financial measures are invalid. *See, e.g.*, Baldwin v. G.A.F. Seelig, Inc., 294 U.S. 511 (1935) (invalidating a New York price control measure applied on imported milk).

160. *NAFTA Will Help Sell Green Technology—US EPA Chief*, REUTERS, LTD., Sept. 8, 1993 (quoting EPA Adminstrator Carol Browner).

161. *Id.*

162. *See, e.g.*, Smith, *supra* note 31, at 540.

163. *See, e.g.*, Kettlewell, *supra* note 7, at 474-75.

Whatever the locale or the mechanism, international cooperation can create rather than ban incentives for wise resource use and cleaner economic development. As noted by Professor Richard Stewart:

> [T]rade restrictions designed to eradicate comparative advantages stemming from differences in social and regulatory policies are inconsistent with the logic of the FTR [Free Trade Regime] and principles of national sovereignty. . . there are carrots—in the form of various types of assistance and market-based incentives for resource preservation—that are a more appropriate and likely more effective means of satisfying transnational interests in resource preservation.[164]

B. *Reform: Making Room for Market-Based Policy*

1. *Rulemaking Without a Sovereign*

The effort to rethink and reform stands out starkly against the backdrop of a chaotic, unstructured international system. Questions of national sovereignty and cooperation, international rule making, dispute settlement, unilateral extraterritorial use of sovereign regulatory power, and significant differences among nations in economic and government structure and policy are daunting.[165]

Cooperation must substitute for a nonexistent world sovereign. Because broad-based cooperation is difficult, nations readily adopt unilateral measures violative of GATT/WTO provisions.[166] Regionalism—as evidenced by the NAFTA, is another alternative.[167] But unilateral measures may violate WTO rules or challenge WTO policy. Regional environmental agreements may rely on command and control solutions, or contain trade-distorting enforcement mechanisms.[168] Consequently, prevailing biases in domestic environmental policies echo internationally.[169] If unilateralism or trade restrictive

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164. *Federal*, *supra* note 6, at 1363-64.

165. Jackson, *supra* note 52, at 1229-30.

166. *Federal*, *supra* note 6, at 1348-49.

> Given that actions must be taken at critical points to prevent environmental problems from worsening or becoming irreversible, extraterritorial environmental regulation is an important, if not essential, tool. This is also why it is sometimes necessary for countries to adopt such measures before an international consensus emerges.

Goldman, *supra* note 78, at 1293-94.

167. FREDERICK M. ABBOTT, LAW AND POLICY OF REGIONAL INTEGRATION: THE NAFTA AND WESTERN HEMISPHERE INTEGRATION IN THE WORLD TRADE ORGANIZATION SYSTEM 1 (Kluwer 1995).

168. The prevailing approach reflects U.S. influence. The U.S. approach served as a model for foreign governments and international organizations. USITC, *supra* note 18, at 1-3. For a detailed discussion of NAFTA provisions and enforcement mechanisms, *see, e.g.*, GARY CLYDE HUFBAUER & JEFFREY J. SCHOTT, NAFTA: AN ASSESSMENT 95 (1993); OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE, NAFTA SUPPLEMENTAL: AGREEMENT ON ENVIRONMENTAL COOPERATION (1993).

169. Jackson, *supra* note 52, at 1228-29. Domestic regulatory policies often clash with

regionalism become the norm, the world may witness a race to erect "green" protectionist walls.[170]

But as the volume and importance of international trade grows, the world inches closer to a true common market requiring cooperation. The United States, as a successful common market, provides a relevant model for WTO policymakers to study. Three U.S. responses to interstate trade restrictions include adjudication by a tribunal with authority over the relevant states;[171] harmonization of different state product standards; and legislation setting uniform standards for all states.[172]

Harmonization of environmental standards is difficult and controversial.[173] Nations, in bilateral or multilateral agreements, consent to trade barriers based on widely accepted health standards.[174] Federal legislation in the United States carries the authority of a central government. No international central government exists, so legislative rulemaking in the traditional sense is problematic.[175] By far the most promising avenue is the adjudicative—with the WTO exercising dispute resolution powers similar to those of a court of law. Here, the experience of the United States is instructive.

2. *An International Commerce Clause*

The importance of the United States federal model was not lost at the Uruguay Round. Animating the final agreement was the idea that "certain types of judgments made for American commerce by the Congress or the Supreme Court . . . could, for international commerce, be made by the

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market-oriented economic policies and become more difficult to sustain with ever-increasing global economic competition. *Id.* at 1229-30.

170. Jeffrey L. Dunoff, *Reconciling International Trade with Preservation of the Global Commons: Can We Prosper and Protect?*, 49 WASH. & LEE L. REV. 1407, 1435-38 (1992) (discussing benefits of "green" trade barriers).

171. *Federal, supra* note 6, at 1335.

172. *Id.* at 1331. This section draws heavily from Professor Stewart's thorough treatment of the subject. For further treatment and criticism, see Wirth, *supra* note 57, at 1389; Hartwell & Bergkamp, *supra* note 132.

173. *Federal, supra* note 6, at 1336; *see* Kettlewell, *supra* note 7, at 445-49.

174. For example, the treaty obligates the United States, Canada, and Mexico to harmonize regulations without reducing safety or environmental protection. NAFTA article 906(2) nondiscrimination and national treatment obligations apply to most import and export restrictions. NAFTA art. 301, 309. Under Article 754, however, sanitary and phytosanitary measures are set by each party, and can be in excess of international standards. These standards must, however, be nondiscriminatory, based on scientific principles, and cannot be disguised trade restrictions. NAFTA art. 754(2)-(6).

175. *Federal, supra* note 6, at 1336. Such legislation "requir[es] an across-the-board judgment of the appropriate degree of regulation or risk" and involves "compromise among the interests of the different states as well as between producer, consumer and environmental interests generally." *Id.* at 1336-37. The international system relies on a "legislative" process of multilateral negotiations dependent on consensus and consent. Wirth, *supra* note 57, at 1389-90.

WTO."[176] In future trade-environment disputes, United States Commerce Clause jurisprudence will have an impact on how problems are analyzed and resolved.

The United States Supreme Court wrestles with state-imposed trade restrictions via the Commerce Clause.[177] The Court invalidates facially discriminatory state restrictions on imports but not on domestically produced products.[178] More difficult to deal with is a nonfacially discriminatory state restriction on interstate commerce.[179] With health or natural resource conservation measures, the Court hews a careful line between outright prohibition and deference to state regulations.[180]

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176. Charnovitz, *supra* note 76, at 90.

177. The Commerce Clause gives Congress the power to regulate commerce "with foreign Nations, and among the several States . . . ." U.S. CONST. art. I, § 8, cl. 3. Early courts struggled to delineate the limits, if any, on Congressional power to regulate national commerce. *See, e.g.*, Gibbons v. Ogden, 22 U.S. (9 Wheat.) 1 (1824) (recognizing Congressional supremacy over commercial regulation, but also concurrent state authority emanating from the police power, which includes inspection, quarantine, and health laws). *Gibbons* failed to resolve the question of whether Congressional supremacy translated into exclusive power; for example, if Congress failed to regulate an incident of interstate commerce, whether a state had the power to do so. The question remains vexing. Modern courts use a variety of tests to determine the constitutionality of state commercial "protectionist" regulations. *See, e.g.*, Donald H. Regan, *The Supreme Court and State Protectionism: Making Sense of the Dormant Commerce Clause*, 84 MICH. L. REV. 1091, 1104-05 (1986) (arguing that the Court should use the dormant commerce clause for protectionist purposes only, but that the Court does not).

178. *See, e.g.*, City of Philadelphia v. New Jersey, 437 U.S. 617 (1978). In *Philadelphia*, the state of New Jersey prohibited the importation of solid or liquid waste originating or collected outside the state. *Id.* at 618. The Court noted many subjects of potential federal regulation escape federal attention "because of their local character and their number and diversity." *Id.* at 623 (quoting South Carolina State Highway Dep't v. Barnwell Bros., Inc., 303 U.S. 177, 185 (1938)). Where simple protectionism, however, is affected by a state, "a virtually per se rule of invalidity has been erected." *Id.* at 624 (citations omitted). The Court held the New Jersey law was clearly prohibited by the Commerce Clause because "[o]n its face, it imposes on out-of-state commercial interests the full burden of conserving the State's remaining landfill space." *Id.* at 628.

179. *See, e.g.*, Pike v. Bruce Church, Inc., 397 U.S. 137, 142 (1970).

> Where a statute regulates evenhandedly to effectuate a legitimate local public interest, and its effects on interstate commerce are only incidental, it will be upheld unless the burden imposed on such commerce is clearly excessive in relation to the putative local benefits . . . . If a legitimate local purpose is found, then the question becomes one of degree.

Id.

180. In *Dean Milk Co. v. City of Madison*, the Court struck down a local ordinance barring sale of milk not pasteurized within a five-mile radius. Dean Milk Co. v. City of Madison, 340 U.S. 349, 356 (1951). The Court rejected the health rationale advanced for the ordinance, reasoning that "non-discriminatory alternatives, adequate to conserve legitimate local interests" were available. *Id.* at 354. "To permit Madison to adopt a regulation not essential for the protection of local health interests and placing a discriminatory burden on interstate commerce would invite a multiplication of preferential trade areas . . . ." *Id.* at 356. Thus, the Court adopted a "least trade restrictive" test for subnational health regulations.

Some health-related measures are acceptable. *See, e.g.*, Bowman v. Chicago &

The modern Court's Commerce Clause analysis fits nicely into the international arena and the trade-environment debate: (1) U.S. jurisprudence reflects a strong preference for free trade rather than protectionism;[181] (2) A general prohibition on facially discriminatory trade restrictions comports with GATT/WTO "Most Favored Nation" principles; (3) It avoids the rigid exclusive power argument which proved unworkable in the United States, and which would be impossible on the international level where there is no Congress to exercise exclusive control; (4) A proportionality or "least trade restrictive" test balances national interests against international, allowing deference where one nation's parochial concerns are overriding.[182] Taking a page from U.S. law, WTO dispute resolution panels can draw on a detailed jurisprudence which fairly balances environmental protection with the free flow of goods.

In this light, Professor Stewart claims that the *Tuna-Dolphin* panel may have reached the right result for the wrong reason.[183] The panel's concern—that free trade would greatly suffer if trade restrictions were not based on the products themselves, but instead on the processes by which they were

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Northwestern Ry. Co., 125 U.S. 465, 489 (1888) (discussing prohibitions on disease carrying objects and animals). The restrictive impact of the regulation on interstate commerce, however, will still be weighed. *See, e.g.*, Minnesota v. Clover Leaf Creamery Co., 449 U.S. 456 (1981) (finding Minnesota could ban sale of milk in plastic containers to promote conservation and protect the environment because it did so evenhandedly: the ban applied to in-state and out-of-state sellers alike, and the burden on interstate commerce was not excessive in comparison to local benefits).

Natural resource protection is also problematic. Early cases upheld conservation of water and game. *See, e.g.*, Hudson County Water Co. v. McCarter, 209 U.S. 349, 356-59 (1908); Geer v. Connecticut, 161 U.S. 519, 534-35 (1896). *Geer*, however, was overruled in *Hughes v. Oklahoma*, 441 U.S. 322, 337-39 (1979) (invalidating Oklahoma ban on exporting in-state minnows); *see also* Maine v. Taylor, 477 U.S. 131, 151 (1986) (upholding Maine statute prohibiting importation of live baitfish, despite facial discrimination, because nondiscriminatory protective measures would be ineffective).

181.

> The material success that has come to inhabitants of the states which make up this federal free trade unit has been the most impressive in the history of commerce, but the established interdependence of the states only emphasizes the necessity of protecting interstate movements of goods against local burdens and repressions . . . . Our system, fostered by the Commerce Clause, is that every farmer and craftsman shall be encouraged to produce by the certainty that he will have free access to every market in the Nation.

H.P. Hood & Sons v. Dumond, 336 U.S. 525, 538-39 (1949).

182. In this sense, GATT Article XX exceptions may be viewed as analogous to state police powers, and subject to GATT/WTO's "least trade restrictive" analysis. *Federal, supra* note 6, at 1359. Testing the limits of permissible trade restrictions after *Tuna-Dolphin* raises interesting questions about international resource conservation measures already in force or contemplated. *See* K. Gwen Beacham, Note, *International Trade and the Environment: Implications of the General Agreement on Tariffs and Trade for the Future of Environmental Protection Efforts*, 3 COLO. J. INT'L ENVTL. L. & POL'Y 655, 668-75 (1990).

183. *Federal, supra* note 6, at 1358.

produced—is forceful.[184] But different considerations apply when the process is not internal to the exporting country, but instead affects the global commons.[185] On the global commons, there is no system of property rights or regulation to protect some resources, and unregulated free trade endangers the common welfare.[186] Thus, self-help justifies some national, unilateral conservation effort.[187] Restrictions, however, must "advance environmental rather than protectionist goals and do so through means whose adverse effects on trade are not unduly disproportionate to the environmental benefits obtained."[188] The MMPA tuna ban fails this proportionality test because no showing was made that the dolphins were endangered or that the kill limits were rationally related to dolphin preservation.

V. A NOTE OF OPTIMISM

For free market environmentalism to succeed in the international arena, it must prevail in the marketplace of ideas first, and then produce results. The case for market-based environmental protection emerges from both theory and practice. Efficient markets and effective conservation are not opponents in a zero-sum game—they may reinforce one another. Markets and competition limit or eliminate the need for state control; this can erode individual freedom, which is often subject to pressure from special interests. Markets exploit our most valuable resource: human ingenuity. When property rights, incentives, and careful state intervention coexist, that ingenuity can be fully exploited.

New institutional responses will develop. The WTO can bring environmental protection the attention it deserves while promoting market-based policies. Rethinking the balance between trade and environment can add a third proposition to the two advanced by Professor Jackson[189] and quoted at this Note's beginning. The author of this Note suggests a compromise:

> Proposition 3: Liberalized free trade is essential to global economic growth and enhanced standards of living, as well as a cornerstone of political liberty; environmental protection is essential to global economic health and quality standards of living. Trade or market-based environmental policies ensure achievement of both economic and conservation goals without sacrificing one to the other.

This Note is optimistic, animated by the belief that free markets and open trade enjoyed by this generation are as worthy of nurturing as the planet itself.

Jonathan Scott Miles

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184. *Id.* at 1358-59.
185. *Id.* at 1359.
186. *Id.* at 1358.
187. *Id.*
188. *Id.*
189. Jackson, *supra* note 52, at 1227-28.