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The Use and Abuse of Trade Leverage to Protect the Global Commons: What We Can Learn from the Tuna-Dolphin Conflict

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The Use and Abuse of Trade Leverage to Protect the Global Commons: What We Can Learn from the Tuna-Dolphin Conflict

RICHARD W. PARKER*

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I. INTRODUCTION

One hallmark of the modern age is the disappearance of any sense of the infinity of the earth. The limitless seas and skies perceived by Grotius¹ in the sixteenth century are starkly revealed in the twentieth as a strictly finite resource that must be carefully managed.² This task of jointly managing transboundary and global environmental risks has emerged as one of the great and novel challenges facing international law and policy today.

Can a world of over 150 nation-states effectively preserve what is left of its global commons by consensus only, without any use of trade leverage? Thirty years ago, the answer to such a questions would have been an unequivocal "no" in the minds of theorists and policy-makers alike. They held power to be foundational to international relations, and deemed institutions, laws and discourse to be largely epiphenomenal.³ Throughout this century the United States and other powers have regularly made use of economic and trade leverage to promoted a host of objectives, including the protection of the global commons.⁴

But ideas, policy, and law in this area are in flux. In the scholarly arena, empirical studies have called into question the effectiveness of trade sanctions in accomplishing national goals, particularly in the security and "high" foreign policy realm.⁵ International Relations (IR) and International Law (IL) theorists

1. HUGO GROTIUS, *FREEDOM OF THE SEAS: OR, THE RIGHT WHICH BELONGS TO THE DUTCH TO TAKE PART IN THE EAST INDIAN TRADE* (Ralph Van Deman Magoffin ed. & trans., 1916) (1633).

2. See THOMAS M. FRANCK, *FAIRNESS IN INTERNATIONAL LAW AND INSTITUTIONS* 357-58 (1995) [hereinafter *FRANCK, FAIRNESS*] (observing that with the twentieth-century Law of the Sea Conventions "humanity moved in a different direction [from the Grotian concept of freedom of the seas] determined by a new awareness of the finite limits to resource exploitation and began to speak in terms of global management." Franck also claims that the Third Law of the Sea Conference "fundamentally altered Grotius' concept of the sea as owned by none to the modern notion of the high seas and deep seabed as owned by all.").

3. See HANS J. MORGENTHAU, *POLITICS AMONG NATIONS: THE STRUGGLE FOR POWER AND PEACE* (1948), for the classic exposition of this "realist" perspective.

4. See GARY CLYDE HUFBAUER & JEFFREY SCHOTT, *ECONOMIC SANCTIONS RECONSIDERED: HISTORY AND CURRENT POLICY* (1985 & Supp. 1990) (examining 103 episodes in which trade sanctions are employed for national security or non-environmental foreign policy purposes); Alan O. Sykes, *Constructive Unilateral Threats in International Commercial Relations: The Limited Case for Section 301*, 23 *LAW & POL'Y INT'L BUS.* 263 (1992) (examining 94 cases of actual or threatened trade sanctions for trade policy purposes); Steve Charnovitz, *Recent Developments: Environmental Trade Sanctions and the GATT: An Analysis of the Pelly Amendment on Foreign Environmental Practices*, 9 *AM. U.J. INT'L L. & POL'Y* 751 (1994) (examining 14 episodes over the period 1973 to 1993 involving U.S. invocation of the Pelly Amendment to the Fisherman's Protective Act to threaten trade sanctions against a foreign country for "undermining an international conservation agreement"); see also NATIONAL ASSOCIATION OF MANUFACTURERS, *UNILATERAL ECONOMIC SANCTIONS 1997 TO 1998: A PRELIMINARY ASSESSMENT* (1998) (reporting 61 new U.S. laws authorizing unilateral trade sanctions from 1993 to 1996 and 26 unilateral economic sanctions bills pending in the 105th Congress).

5. See HUFBAUER & SCHOTT, *supra* note 4, at 108 (finding only 34% success rate since World War I and 17% since 1973); DAVID A. BALDWIN, *ECONOMIC STATECRAFT* 55-58 (1985) (collecting quotations denigrating utility of economic sanctions); Raj Bhala, *Fighting Bad Guys with International Trade Law*, 31 *U.C. DAVIS L. REV.* 1, 5 (1997) ("[n]ational security sanctions . . . are ineffectual at best and counterproductive at worst."). The relevance of these findings for environmental sanctions is that the two types of sanctions (national security and

have heralded a "post-hegemonic" world in which a variety of non-coercive measures — monitoring, reporting, verification, dispute settlement, issue linkage and, most of all, sustained factual legal and normative discourse — support cooperation without leverage.⁶ In their widely-reviewed book, *The New Sovereignty*, Abram and Antonia Chayes have synthesized these instruments into an "active management" model which they contrast with the "alternative" enforcement model that relies on trade leverage and sanctions.⁷ Although their analysis of international environmental cooperation is cursory,⁸ their conclusions are offered as general ones: the management model works if anything will. Enforcement approaches will fail. Pursuing the management model is "the way to go."⁹

environmental) tend to be lumped together in policy discussions, with empirical evidence about one type used to denigrate all types of sanctions. *See, e.g.,* Richard Haas, *Sanctioning Madness: A Rotten Core*, 76 FOREIGN AFF. 74 (1997) (denouncing all economic sanctions — except for "sanctions introduced to ensure market access or compliance with trade pacts" — based on analyses that focus exclusively on national security sanctions); 143 CONG. REC. E2080 (daily ed. Oct. 24, 1997) (statement of Rep. Hamilton) ("Unilateral sanctions might be worth their price in exports, jobs, and foreign policy interests if they succeeded in achieving their aims. They rarely do."). *But see* Charnovitz, *supra* note 4 (reporting a "58 percent success rate" in U.S. threats of environmental trade restrictions under the Pelly Amendment despite the fact that the United States never actually applied sanctions in any of the cases); Thomas O. Bayard & Kimberly A. Elliott, 'Aggressive Unilateralism' and Section 301: *Market Opening or Market Closing?*, 15 THE WORLD ECONOMY 685, 697 (1992).

6. *See* LAWRENCE E. SUSSKIND, ENVIRONMENTAL DIPLOMACY 107-13 (1994) (reviewing literature on compliance without enforcement). *See also* ROBERT O. KEOHANE, AFTER HEGEMONY: COOPERATION AND DISCORD IN THE WORLD POLITICAL ECONOMY (1984) (constructing the institutionalist model examined herein). Keohane has emphasized that neoliberal theory on its face does not discount the possible necessity or effectiveness of trade leverage. *See* Letter from Robert O. Keohane to Richard W. Parker (Sept. 24, 1999) (on file with author). However, the task which neoliberals traditionally have assigned themselves — explaining the fact of (imperfect) international cooperation in the absence of world government or hegemonic power — has quite understandably led to an emphasis on the role of consensus-seeking factors, and a relative de-emphasis on the role of leverage. *See, e.g.,* INSTITUTIONS FOR THE EARTH: SOURCES OF EFFECTIVE ENVIRONMENTAL PROTECTION 11 (Peter M. Haas et al., eds. 1993) [hereinafter INSTITUTIONS FOR THE EARTH] (establishing an analytical framework for examining environmental cooperation cases consisting of three factors — government concern, hospitable contractual environment, and political and administrative capacity — which contain no placeholder for economic leverage); Ronald B. Mitchell, *Intentional Oil Pollution of the Oceans*, in INSTITUTIONS FOR THE EARTH, *supra* at 183, 211 (noting in passing utility of unilateral U.S. trade threats in obtain participation in and compliance with international vessel design standards, without drawing any larger inferences).

7. *See* ABRAM CHAYES & ANTONIA CHAYES, THE NEW SOVEREIGNTY: COMPLIANCE WITH INTERNATIONAL REGULATORY AGREEMENTS 109-10 (1995).

8. *See id.* at 91 (mentioning in one paragraph the existence of statutory authority for U.S. import restrictions in support of fisheries conservation and documenting) and at 94-95 (recounting, in one-and-one half pages, the early success and, later, partial success of U.S. efforts to support international moratorium on commercial whaling with trade leverage).

9. Regarding unilateral sanctions: "Sanctions are seldom used, seldom effective when used. No single country, or small group of countries, no matter how powerful, can consistently achieve its objectives through unilateral action or ad hoc coalition." *Id.* at 123. As for treaty-based sanctions: "[t]reaties with teeth are a will o' the wisp." *Id.* at 67. By contrast, the authors devote Part II of their two-part book to outlining a "Strategy for Managing Compliance" without sanctions. *Id.* at 109-285. Because Chayes & Chayes limit their analysis to the compliance stage, their position on the use of leverage to *obtain* agreements is not entirely clear. As Keohane has astutely pointed out, regimes are harder to create than to maintain. *See* KEOHANE, *supra* note 6. Nonetheless, most of the criticisms of economic leverage which the Chayeses find persuasive at the compliance stage (problems of inconsistency, illegitimacy, and lack of economic power) appear to apply with equal or greater

In policy circles, the U.S. multinational business community has launched a sustained lobbying initiative, "USA Engage," to persuade Congress to curb its predilection for using trade leverage.¹⁰ The World Trade Organization's (WTO) Committee on Trade and Environment (CTE) has declined even to discuss a possible role for unilateral trade measures in *obtaining* conservation agreements: the Committee's mandate was deliberately drafted to exclude it. The CTE's deliberations on measures "pursuant to" environmental agreements have been uninformed and yielded no recommendations.¹¹ WTO jurisprudence, however, has recently taken a surprising turn. While three (non-binding) GATT/WTO dispute settlement panels categorically rejected U.S. unilateral trade measures aimed at protecting the global commons,¹² the recent Appellate Body decision in the shrimp-turtle case marks a departure from past decisions in tone and reasoning.¹³ Recognizing the 1994 addition of principles of sustainable development to the WTO's normative framework, the decision faults the *manner* in which U.S. trade leverage was applied on behalf of a common resource (endangered sea turtles), but not necessarily the fact that trade leverage was used at all. In so doing, the decision implicitly resurrects questions that have been off the table in the CTE for the last four years: whether there is a constructive role for environmental trade leverage (ETL) in obtaining, as well as enforcing, agree-

force, in their logic, at the regime formation stage. Therefore, there is little reason to suppose that they would value trade leverage more highly at the regime formation stage than after. For a powerfully argued defense of environmental trade leverage as an instrument, see Howard F. Chang, *An Economic Analysis of Trade Measures to Protect the Global Environment*, 83 GEO. L.J. 2131 (1995).

10. See USA*Engage, *Bipartisan Sanctions Reform Legislation Endorsed by USA*ENGAGE — Lott Co-sponsorship Seen as Big Boost in Senate* (Mar. 24, 1999) <<http://www.usaengage.org/news/990324pr.html>>. Their activity has already borne fruit in the form of a bill, sponsored in the Senate by Senators Richard Lugar, Robert Kerrey, and Charles Hagel (with 27 co-sponsors) and in the House by Congressman Phil Crane, Chairman of the House Ways and Means Trade Subcommittee, with 42 co-sponsors. See Sanctions Process Reform Act, S. 757, 106th Cong. (1999); H.R. 1244, 106th Cong. (1999). The bill would establish a procedural rule requiring detailed analysis of the domestic and foreign economic impact, the likely effectiveness, and available alternatives to sanctions; it would also sunset each and every sanction provision after two years unless specifically re-enacted. In itself, of course, the requirement for scrutiny of existing and new sanctions provisions is unobjectionable. But it does highlight the unresolved issue of how the likely effectiveness of environmental trade leverage is to be judged without a better understanding of how, how well, and under what circumstances it "works."

11. The Secretariat of the United Nations Environmental Program (UNEP), which sent an observer to these discussions, recently observed with a bluntness unusual in international diplomacy: "Although the mandate of this Committee is to discuss the legal implications of trade measures, we have rarely felt that these discussions have been guided by a sufficiently clear scientific and technical understanding of how multilateral environmental agreements are designed and actually function." UNEP Secretariat, *Statement by the United Nations Environment Programme to the WTO Committee on Trade and Environment*, WT/CTE/W/94 (1998).

12. See GATT Dispute Panel Report on U.S. Restrictions on Imports of Tuna (Sept. 3, 1991), 30 I.L.M. 1594 (1991) [hereinafter Tuna I]; GATT Dispute Panel Report on U.S. Restrictions on Imports of Tuna (June 1994), 33 I.L.M. 842 (1994) [hereinafter Tuna II]; WTO Dispute Panel Report on U.S. Import Prohibition of Certain Shrimp and Shrimp Products (May 15, 1998), 37 I.L.M. 834 (1998).

13. See Report of the WTO Appellate Body, U.S. Import Prohibitions of Certain Shrimp and Shrimp Products, WT/DS58/AB/R (Oct. 12, 1998), available at (visited Oct. 18, 1999) <<http://www.wto.org/dispute/distab.htm>> [hereinafter Shrimp-Turtle Appellate Body Decision].

ments to conserve the global commons; and if leverage is used, how should it be used?

Both these questions have elicited a flood of legal scholarship and advocacy, but only a trickle of empirical and theoretical study.¹⁴ While the task of designing sensible trade and environment rules obviously requires political and normative judgments, surely those judgments ought to be based upon a clear understanding of whether, under what circumstances and *how* environmental trade leverage actually works, and what impact it has on trade along the way.

This article accordingly takes up these foundational questions. Part II sets the stage empirically by offering an analytical narrative which draws on over fifty interviews and extensive primary research to tell the "story" behind one of the leading trade and environment cases of the era — the tuna-dolphin conflict. For nearly ten years, the tuna-dolphin issue has been identified with trade and environment conflict. Nearly lost in the legal conflict has been the story of the quiet emergence of one of the most innovative and effective environmental regimes in the world — a regime which has reduced dolphin mortality by over 99% while eliciting a very high level of compliance from all fishers and flag states in the fishery.¹⁵

Part III explores the contribution of environmental trade leverage to this accomplishment by re-examining the tuna-dolphin experience through five different perspectives supplied by International Relations (IR) theory. The analysis tests these IR theories against the tuna-dolphin experience, recommends important refinements to theory suggested by that experience and, in so doing, excavates the causal pathways by which trade leverage either empowered or undercut "management" initiatives. I will consider in each case whether and to

14. The legal and normative literature on ETL is vast. For a few leading examples see John H. Jackson, *World Trade Rules and Environmental Policies: Congruence or Conflict?*, 49 WASH. & LEE L. REV. 1227 (1992); DANIEL C. ESTY, *GREENING THE GATT: TRADE, ENVIRONMENT AND THE FUTURE* (1994); Thomas J. Schoenbaum, *International Trade and Protection of the Environment: The Continuing Search for Reconciliation*, 91 AM. J. INT'L L. 268, 268 (1997); Robert E. Hudec, *GATT Legal Restraints on the Use of Trade Measures against Foreign Environmental Practices*, in 2 FAIR TRADE AND HARMONIZATION 95 (Jagdish Bhagwati & Robert E. Hudec eds., 1996). However, there appears to be only one published study, at present, which systematically examines the actual role of trade leverage in promoting environmental cooperation in practice. That study *contradicts* the conventional wisdom that environmental trade leverage is either unnecessary or ineffective. See DUNCAN BRACK, *INTERNATIONAL TRADE AND THE MONTREAL PROTOCOL* xvii (1996) (concluding that the "trade provisions of the Protocol . . . were a vital component in (a) building the wide international coverage the treaty has achieved and (b) preventing industrial migration to non-parties to escape the controls on ODS [ozone depleting substances]."). International Relations (IR) theorists have devoted a great deal of time and effort to theorizing and analyzing empirically the problem of global commons management — but they have not as yet closely studied the special case of environmental trade sanctions. See *infra* Part III.

15. To put this achievement in perspective, the 2,000 per year dolphin mortality rate achieved under the international regime in 1998 is *one-fifteenth* the kill rate achieved by the best performing national fleet, the U.S. fleet, in 1986, under U.S. national regulation, using virtually the same dolphin-conservation technology and techniques. See 1994 NMFS ANN. REP., *supra* note 15, app. C; 1986 IATTC ANN. REP., at 149, tbl. 4; 1995 IATTC ANN. REP., at 174, tbl. 3, 182, tbl. 12.

what degree the tuna-dolphin experience appears relevant to other global commons management efforts.

Part IV presents the implications of the analysis experience for trade and environment law and policy. The argument takes the form of responses to six key questions: (1) when is economic leverage necessary to commons management and why is it not always necessary; (2) what variables contribute to its effectiveness; (3) what are the causal pathways by which leverage operates to shape behavior; (4) what are the conditions of its legitimacy; (5) how are "abuses" of ETL identified and minimized; and (6) what risks does ETL thus cabined pose for the world trading system? Before turning to a preview of the insights this study offers on these questions, it may be well to explain to the skeptical reader why I reason inductively (moving from facts to theory rather than the other way around), why I rely on one extensive case study (rather than several shorter ones), why I choose the tuna dolphin conflict, and why I choose to examine that conflict through the lenses of IR theory.

I begin with an empirical study because the first and foremost requirement is that theory must explain the facts. The dearth of in-depth studies of trade and environment episodes, to date, has starved theory of empirical evidence to explain. I favor close study of a single case over skimpier analyses of multiple cases because, as will be seen, leverage operates within a much larger matrix of economic and political incentives that also influence behavior, and that determine both the necessity and effectiveness of trade leverage. The causal pathways along which leverage exerts its influence can be subtle and indirect. Deep analysis of a single case yields insights into the uses, and limitations, of leverage that skimpier reviews of multiple cases quite understandably have missed.

I choose the tuna-dolphin case for three reasons. First, it is the leading trade and environment case of the era,¹⁶ yet no comprehensive history of this controversy exists,¹⁷ and its basic facts are widely misrepresented and misunderstood in policy and academic circles alike.¹⁸ Second, the case features a wide

16. As Thomas Schoenbaum has observed: "Before 1991, the relationship between the protection of the environment and international trade was an arcane specialty that attracted little attention . . . Everything changed with the decision in the Tuna/Dolphin case." Schoenbaum, *supra* note 14, at 268.

17. Only two published accounts of the tuna-dolphin conservation program have any authority as "history." They are James R. Joseph, *The Tuna-Dolphin Controversy in the Eastern Pacific Ocean: Biological, Economic and Political Impacts*, 25 OCEAN DEV. & INT'L L. 1 (1994) and Nina M. Young et al., *The Flipper Phenomenon: Perspectives on the Panama Declaration and the "Dolphin-Safe" Label*, 3 OCEAN & COASTAL L.J. 57 (1997). Both accounts are by insiders whose articles are principally focused on making the case against the no-encirclement mandate that was under consideration at the time the articles were written. They do not cover in any great depth the early history of the regime, nor is it their purpose to investigate the role of ETL in promoting cooperation generally.

18. Daniel Blank, the former Associate Director for International Trade and Development in the Clinton White House Office on Environmental Policy, stated, in 1996, that "no . . . international agreement on dolphin conservation has yet been negotiated" even though, as will be seen, such a highly successful agreement had existed since 1992. Daniel P. Blank, *Target-based Environmental Trade Measures: A Proposal for the New WTO Committee on Trade and Environment*, 15 STANFORD L.J. 61, 105 n.209 (1996).

range of trade instruments employed for a variety of purposes in diverse circumstances; it is a virtual one-case laboratory for studying the uses and misuses of environmental trade leverage. Third, despite certain peculiarities, the tuna-dolphin case presents a fairly typical global commons conservation problem.¹⁹ While no single case can "prove" a proposition, tuna-dolphin can refute general propositions and offer general hypotheses that can be tested in other contexts.

IR theory is useful to the analysis because it offers a comprehensive and rigorous analytical framework for exploring the central question of why nations cooperate — a question that obviously subsumes the search for the role of environmental trade leverage. It also offers a trove of insights which illuminate important aspects of the cooperative dynamic that might otherwise remain obscure. While there are competing theories within IR, this difficulty is not insurmountable. Leading scholars have observed that a number of these "rival" theories actually complement each other and have combined these models into a single framework.²⁰ This analysis builds on their efforts.

The folkloric (mis)understanding of the case in the trade community is well summarized in Jagdish Bhagwati's account: the United States tried to impose its own sentimental ethical preferences on Mexico with regard to conservation of dolphins within Mexico's own jurisdiction "at the expense of Mexican prosperity" by seeking to prohibit Mexico from using purse-seines in tuna fishing. "Mexican compliance with non-use of purse seines, despite the favorable Tuna-Dolphin Panel ruling, was secured by convincing President Carlos Salinas de Gortari that it would be hard to pass NAFTA in Congress otherwise." Jagdish Bhagwati, *Does Environmental Diversity Detract from the Case for Free Trade?*, in 1 FAIR TRADE AND HARMONIZATION 181, 184-85 (Jagdish Bhagwati & Robert E. Hudec eds., 1996).

In fact, dolphins are a highly migratory *commons* resource that are not confined to any state's jurisdiction. The conservation campaign was popularized by sentimental appeals, to be sure, but a major independent motive was scientific evidence of serious depletion and a threat of irreversible harm to target dolphin stocks. See *infra* Part II.B.4.b. Several countries besides Mexico were involved in the fishery, and no country was ever asked to limit its use of purse seines. The NAFTA connection, we will see, made ultimately no difference to Mexican policy; nor did it influence Venezuela, Vanuatu, and other countries with vessels in the region, all of whom joined forces to create and implement an ambitious, successful conservation program. See *infra* Part II.C.7. While trade leverage did cause short-term economic pain, it has not precluded the emergence of a hugely prosperous international tuna fleet in the region.

19. Namely, an unwanted and unintended environmental harm results from lucrative economic activity. The harm is remediable by use of certain equipment and training. Achieving a remedy requires building a level of knowledge, commitment, and regulatory capacity that is initially lacking in most countries while establishing a control regime to solve looming problems of collective action. The sentimental aspect of the tuna-dolphin case (the public concern with dolphin welfare) was certainly a unique and complicating feature of the case. But the importance of that aspect is easily over-stated. Beneath the public controversy over the moral worth of dolphins lies an on-going scientific debate over the impact of the fishery on dolphin stocks, the impact of dolphin-safe fishing on tuna and other fish stocks, and, in the face of uncertainty, the degree of precaution to be built into dolphin and tuna management practices. This controversy is quite similar to the scientific debates that swirl in and around virtually all conservation efforts, particularly in their early stages. Even the "ethical dimension" of tuna-dolphin (the determination of some to end all killing of dolphins for moral reasons) is not unique: beneath every "scientific" controversy over human health or environmental protection lies a normative conflict over how much pollution, resource depletion, or risk to human health is acceptable under the circumstances. And in every controversy there is a group which answers "none." Science and values cannot be disentangled in the realm of environmental policy.

20. See, e.g., Oran R. Young & Gail Osherenko, *Testing Theories of Regime Formation: Findings from a*

A second reason for using IR theory is that IR scholars have not, to date, applied the theory to the leading trade and environment cases. By the same token, scholars and policy-makers concerned with trade and environment issues have generally ignored IR theory. This disconnect has marginalized IR theory as a guide to trade and environment policy, while leaving policy bereft of any sound theoretical and empirical basis for predicting the likely consequences of the rules and policies being debated. This article seeks to remedy that deficit.

The application of IR theory to the facts of the tuna-dolphin case yields a number of insights that, together, call into question much of the conventional wisdom about the necessity, use, and limits of trade leverage in the environmental realm. First, tuna-dolphin suggests that consensus-based "management" approaches are not always sufficient to preserve global commons resources, notwithstanding the optimistic assumptions of some international lawyers and free-traders.²¹ Trade leverage may be needed to complement and empower management efforts in hard cases where risks are uncertain, temptations to short-term defection are high, and collective action problems prevail. In fact, IR theory indicates, and tuna-dolphin tends to confirm, that trade leverage is *most* needed precisely in the situation where it is now *least* accepted in the trade community: at the regime formation stage, when attention lags, knowledge is inchoate, habits of compliance are still unformed, and resistance to cooperation is at its peak.

Second, the tuna-dolphin case contradicts the widespread assumption that trade leverage cannot alter, but only override states' intrinsic preferences — that is, their perceptions of the costs and benefits of cooperation apart from any external inducements.²² Tuna-dolphin demonstrates how trade leverage can mobilize discourse, contribute to learning, empower creation of a regime, and shape perceptions of legitimacy. All of these effects can cause intrinsic preferences to evolve either towards, or away from, cooperation on particular terms, and tuna-dolphin reveals both situations.

Third, the tuna-dolphin case refutes the common assumption that leverage and management are somehow either/or alternatives.²³ In today's post-hegemonic

Large Collaborative Research Project, in *REGIME THEORY AND INTERNATIONAL RELATIONS* 223, 241 (Volker Rittberger ed., 1993).

21. See, e.g., CHAYES & CHAYES, *supra* note 7; Tuna I, *supra* note 12.

22. See, e.g., Bhagwati, *supra* note 18, at 181.

23. Examples of this either/or dichotomy abound in statements of policymakers and academics alike and always serve the same function: denigrating the utility of trade leverage while forcing the trade instrument into a showdown with "cooperation." See, e.g., Lawrence Summers, then vice-president and chief economist of the World Bank: "While free trade is no panacea, cooperation will produce better results than coercion," *quoted in* David Dodwell, *Survey of the Earth Summit: Trade Bans Unlikely to Succeed*, *FIN. TIMES* (London), June 2, 1992, at 5; *Review of the Administration's Proposal to Promote Dolphin Protection: Hearings before the Subcomm. of Fisheries and Wildlife Conservation and the Env't of the House Comm. on Merchant Marine and Fisheries*, 102d Cong. 16 (1992) [hereinafter *Dolphin Protection Hearings*] (statement of Curtis Bohlen, Ass't. Sec. of State for Oceans, Int'l Env. and Sci. Aff., Dep't of State) ("I am, frankly, very worried as to how effective

world order, major powers can influence, but they generally cannot coerce — even in the weak sense of denying target states all economically viable alternatives. Trade leverage therefore must function in concert with management efforts that supply the other essential ingredients of cooperation. When this happens, nothing like hegemony is required; a moderate degree of pressure will suffice. In fact, the simultaneous application of leverage and management for congruent ends offers synergistic benefits that cannot be captured by either approach alone.

Fourth, tuna-dolphin demonstrates the need for an understanding of the relationship between leverage and legitimacy that is more nuanced than one of pure antithesis.²⁴ Environmental trade leverage, particularly unilateral trade leverage, faces distinct problems of legitimization and risks unfairness. However, in the particular context of the global commons, barring all use of leverage will not restore legitimacy to international relations. It will simply deliver a coercive “trump card” to those who would turn a blind eye to shared problems and despoil the commons. Moreover, trade leverage, properly used, can enhance a fundamental condition of discourse upon which perceptions of legitimacy depend: a situation of “no trumping.”²⁵

Fifth, tuna-dolphin shows that trade leverage is most effective when it involves the credible threat, not the actual use, of a restriction on trade. The economic impact of a trade restriction is hard to predict *ex ante* or even to estimate *ex post*. In many cases, the impact will peak early and decline thereafter as markets adjust.

we could be [with trade sanctions] . . . I really believe it is far better . . . to work cooperatively and get other nations to join us in a voluntary, cooperative program . . .”). The European Community (EC) officially opined to the GATT, in 1992, that “Environmental issues of common concern are complex and require discussion and negotiations among countries on environmental priorities and commitments. . . This process would be circumvented if a country could take unilateral trade restrictions aimed at changing the environmental policies of another country . . .” European Community, *Submission to EMIT Group*, GATT Doc TRE/W/5 (Nov. 17, 1992) (unpublished GATT submission to the EMIT Group), *reprinted in* ESTY, *supra* note 14, at 143.

WTO Director-General Renato Ruggiero: “. . . [T]he best way to tackle global environmental problems is through global environmental policies and institutions . . . [and not trade].” See Renato Ruggiero, *The Coming Challenge: Global Sustainable Development for the 21st Century*, Address at the WTO Symposium *Strengthening Complementarities: Trade, Environment, and Sustainable Development* (Mar. 17, 1998), *available at* (visited Oct. 18, 1999) <<http://www.wto.org/wto/speeches/press97.htm>>. The putative dichotomy has even insinuated itself into international soft law. Rio Principle 12 provides that “unilateral action to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures to address transboundary problems should as far as possible be based on an international consensus.” Rio Declaration on Environment and Development, June 13, 1992, U.N. Doc. A/CONF.15/26, *reprinted in* 31 I.L.M. 874 (1992). The last is a technically true statement, but the implication of mutual exclusivity is, as I will show, false. For academic expressions of the either/or view see, for example, CHAYES & CHAYES, *supra* note 7, at 109 (“If coercive sanctions are not a viable instrument for achieving treaty compliance, what are the alternatives?”) and BALDWIN, *supra* note 5, at 66 (insisting on judging the utility of economic statecraft as compared to “alternative” techniques).

24. For an eloquent expression of the “antithesis” view applied specifically to the tuna-dolphin case itself, see FRANCK, FAIRNESS, *supra* note 2, at 377.

25. *Id.*

Finally, the tuna-dolphin story reveals the potent but double-edged nature of the trade instrument. While trade incentives can energize and empower “legitimate” management efforts, they are also susceptible to “abuse” when pressed into the service of protectionist, peremptory, environmentally arbitrary, or economically unreasonable goals.²⁶ The risks of abuse rise exponentially when import standards are made too specific and carved into statutory stone and thereby rendered non-negotiable. Consumer boycotts do not avoid these pitfalls: in fact, they are even more prone to capriciousness, and there is no evidence that they enjoy any greater legitimacy than embargoes in the eyes of those boycotted/embargoed. The issue raised by the use of ETL is not whether it works, but how and under what circumstances it works, and why it sometimes fails.

II. A HISTORY OF THE TUNA-DOLPHIN CONTROVERSY

On April 13, 1988, Sam La Budde, biologist and “eco-spy,” riveted the attention of the Senate Commerce Committee and the nation with a gruesome spectacle: a videotape of dolphins dying in fishing nets designed to catch the tuna that swam beneath. Posing as a cook, La Budde had smuggled a video camera aboard a Panamanian tuna vessel, surreptitiously shooting hours of footage from which he distilled the ten most telling minutes. His narration explained the carnage:

In this set, the backdown channel has collapsed, the dolphins are forced under the net where they tried desperately to reach the surface for air. Anyone who has ever been unable to breathe for only a moment can empathize with the physical panic and hysteria that accompanies this sensation.

In this scene, a crewman is throwing more explosives in the water in an attempt to scare the dolphins to the far end of the net . . .

Here, those same animals completely terrorized, deafened and disoriented by the effect of this bombing on their extremely sensitive hearing and sonar, have fled in panic toward the ship where they became entangled in the net. . . .

26. For a detailed discussion of the concept of “abuse of leverage” in the environmental setting, see discussion *infra* Part IV.E. Of course, people will disagree about what constitutes “abuse” as opposed to zealous use in any particular case. Some, indeed, may believe that any application of economic power is abuse. Needless to say, I do not subscribe to that view for all the reasons discussed *infra* Parts III, IV. Others may disagree over whether a proximate goal of leverage is environmentally arbitrary or economically unreasonable. The point is not that everyone agrees on what “abuse” is, but that perceptions of abuse — if not allayed by discourse among the players — will provoke heightened resistance to the objects of leverage, thereby undermining its effectiveness in producing cooperation. Moreover, perceptions and allegations of abuse have varying degrees of strength and plausibility, depending on the facts. It will be seen that the targets of the tuna-dolphin embargoes brought quite strongly held and credible allegations of “abuse” of leverage. Those allegations and beliefs did indeed weaken, and in some cases undermined, the particular trade measures so criticized. See *infra* Parts II.C.5, III.B.

If this were happening close to shore where people could see it and experience it for themselves, I know it would be stopped immediately. If it were happening to dogs, cats, or horses, it would be banned instantly because of the waste and cruelty let alone . . . You have the power to stop this slaughter . . .²⁷

For a few momentous days, the national media focused on the problem of dolphin slaughter in the Eastern Tropical Pacific (ETP) tuna fishery. Fleet spokesmen replied that La Budde's film was atypical: mortality rates on most vessels were vastly lower, and rescue efforts greater, than the film suggested.²⁸ The media focused on the video images and on the numerical record: by all accounts, the ETP tuna fleet had killed 130,000 dolphins in 1986, and 100,000 in 1987.²⁹ Most of this mortality, moreover, was caused by the *foreign* fleet.³⁰ Congress accordingly passed the 1988 Marine Mammal Protection Act Amendments, ordering the Executive to negotiate an international conservation agreement and mandating embargoes on tuna imports from countries whose regulatory programs and fleets failed to meet U.S. dolphin conservation standards.³¹ The resulting train of events led directly to trade conflict, disruption to fishers, and, finally, to dramatic environmental achievement.

The La Budde film was by no means the first installment in the tuna-dolphin saga. By 1988, the "tuna-dolphin problem" had been publicly known for twenty years, regulated in the United States for fourteen years, and discussed and researched by the Inter-American Tropical Tuna Commission (IATTC) for twelve years. The training, diplomacy, management efforts, and "quiet" trade leverage applied in these early years laid the foundation for all that followed.

The history of the tuna-dolphin regime will unfold in four sections. Section A examines the nature and structure of the problem of dolphin mortality and explains why collective government action proved to be both necessary and difficult to achieve. Section B examines the efforts of the United States and the IATTC staff to build international knowledge and consensus for dolphin conservation during the formative (pre-La Budde film) years from 1972 to 1988. Section C examines the 1988 Amendments and the dramatic events that followed thereupon: embargoes, boycotts, GATT challenges, and ultimately the formation

27. *Marine Mammal Protection Act Reauthorization: Hearings before the National Ocean Policy Study of the Senate Comm. on Commerce, Science, and Transp.*, 100th Cong. 98, 100 (1988) [hereinafter *1988 Ocean Policy Hearings*] (statement of Sam La Budde, Earth Island Institute).

28. See *1988 Ocean Policy Hearings*, *supra* note 27, at 95-98 (citing Letter from James Joseph, Director of Investigations, IATTC, to Sen. Ernest Hollings (Apr. 27, 1988)) and at 130-36 (statement of David G. Burney, General Counsel, U.S. Tuna Foundation).

29. See 1986 IATTC ANN. REP., at 160, tbl. 16; 1987 IATTC ANN. REP., at 140, tbl. 17.

30. Non-U.S. fleet mortality was estimated at 112,000 in 1986 and 85,000 in 1987. See 1994 NMFS ANN. REP., *supra* note 15, app. C.

31. Marine Mammal Protection Act Amendments of 1988, Pub. L. No. 100-711, 102 Stat. 4766 (codified at 16 U.S.C. §§ 1371(a), 1378(a)(2) (1994)).

of the path-breaking 1992 La Jolla Agreement.³² Section D describes the aftermath of the 1992 La Jolla Agreement: spectacular mortality reductions in dolphin sets, but no end to the boycotts and no repeal of the embargoes. In 1997, a law was finally passed to authorize the executive to lift the embargo and amend the “dolphin-safe” labeling in exchange for a binding international agreement meeting specified conditions.³³ The resulting 1998 La Jolla Agreement is now in effect, having been ratified by four states, including the United States.³⁴ Meanwhile, all flag states are provisionally applying the terms of the Agreement.

A. THE STRUCTURE OF THE CONSERVATION PROBLEM

Virtually all tuna sold in cans today is caught in nets with a method called “purse seining.” Modern seining is a high technology procedure, developed in the late 1950s, which involves encircling schools of target fish with large nets (typically up to a mile long and 600 feet deep), “pursing” the bottom of the net with a huge drawstring to trap the fish, and then hauling in the net with a high-powered block. The key to successful purse seining is finding fish when they are schooled, or aggregated, so that they can readily be encircled by a net. In some cases, seiners spot and encircle free-swimming schools of tuna (“school sets”) or logs or other floating objects which attract fish (“log sets”). For reasons that are still not fully understood, tuna and dolphins swim together in large numbers in the ETP.³⁵ Dolphins can be spotted on the surface from a distance, chased with speedboats and helicopters, and encircled with a net (“dolphin sets”). Through all this, amazingly, the tuna will stay with them. Dolphins thus serve as natural tuna aggregating devices for purse seiners in the ETP.³⁶

Dolphin sets are supported by very powerful economic incentives because they yield very large catches of tuna.³⁷ The tuna that swim with dolphins are large

32. Agreement for the Reduction of Dolphin Mortality in the Eastern Pacific Ocean, June 1992, 1 U.S.T. 230, reprinted in 33 I.L.M. 936 (1992) [hereinafter 1992 La Jolla Agreement].

33. International Dolphin Conservation Program Act, Pub. L. 105-42, 111 Stat. 1122 (1997) (codified as amended in scattered sections of 16 U.S.C.).

34. Agreement on the International Dolphin Conservation Program, May 21, 1998, 37 I.L.M. 1246 (1998) (noted but not reproduced) (entered into force Feb. 15, 1999), available online at (visited Nov. 1, 1999) <<http://www.state.gov/www/global/oes/oceans/index.html>> [hereinafter 1998 La Jolla Agreement].

35. There are anecdotal reports of a significant association of tuna and dolphins in other oceans, but the lack of observers or reliable records in those fisheries precludes confirmation. See Telephone Interview with Martin Hall, Ph.D., Chief Scientist, IATTC Tuna-Dolphin Program (Aug. 18, 1999). The frequency of any tuna-dolphin association is, however, thought to be much lower in other ocean areas. See NAT'L. ACAD. OF SCIENCE, COMM. ON REDUCING PORPOISE MORTALITY FROM FISHING, DOLPHINS AND THE TUNA INDUSTRY 48 (1992) [hereinafter NAS REPORT].

36. For an excellent description of the dolphin-set technique and the incentives supporting it, see *id.* at 6-7, 14-16, 34-37, 47-51.

37. See *id.* at 16 (reporting that from 1984 to 1988, an average of 123,000 tons of yellowfin tuna per year were caught in international waters: 101,000 tons in dolphin sets and only 12,000 tons by other means). The average catch of tuna in dolphin sets increased from 12 to 20 tons of tuna per set over the period 1979 to 1986. See 1986 IATTC ANN. REP., at 109, fig. 34.

yellowfin that fetch a premium price from canners.³⁸ An additional advantage of dolphin sets, from the standpoint of distant-water fleets, is that dolphin-aggregated tuna — as opposed to school or log-aggregated tuna — is more readily found outside the 200-mile Exclusive Economic Zone (EEZ) of the ETP coastal nations.³⁹ Although dolphin sets require large, sophisticated, expensive fishing vessels, the technique easily repays the investment. By the mid-1980s, the international fleet was conducting upwards of 10,000 dolphin sets per year to catch between 150,000 and 200,000 tons of tuna per year (i.e., between 50% and 70% of the total ETP yield of yellowfin).⁴⁰ The balance continued to be caught in log or school sets — wherever tuna were encountered.

Dolphins die in dolphin sets partly because, for reasons still unknown, they are not able or willing to leap over the closing nets and escape. Though sporadic efforts have been made to manually release the dolphins, the tuna fishery killed hundreds of thousands of dolphins per year through at least 1974, when mandatory conservation efforts commenced in the United States fleet.⁴¹

1. Perspectives on the Problem

The problem implicit in this situation is not entirely self-evident inasmuch as dolphins are not endangered or even threatened with extinction as a species. There are an estimated 9.5 million dolphins in the ETP alone.⁴² Why be concerned if a few, or few hundred, or a few hundred thousand dolphins die in tuna nets? To this question, three different sets of answers have been offered, reflecting three different definitions of the problem. The “preservationist” or animal rights perspective focuses on the grace, the beauty, the intelligence, the advanced social structures, the affinity for man, the seemingly deep capacity for complex emotions — in a word, the *wonder* — of the dolphins and other cetaceans.⁴³ This point of view defines the problem as the killing of any dolphins.

38. In 1991 and 1992, for example, large yellowfin taken in association with dolphins sold to canners for about U.S.\$ 907 per ton, while small yellowfin and skipjack caught in dolphin-safe sets fetched only U.S.\$ 727 per ton. In addition, the average catch per day's fishing was about 12 tons per day in school and log sets, and 20 tons per day in dolphin sets. See Joseph, *supra* note 17, at 22.

39. From 1984 to 1988, the U.S. fleet is reported to have caught an average of 66,000 metric tons of yellowfin tuna each year in dolphin sets on the high seas. See NAS REPORT, *supra* note 35, at 16, tbl. 1-1A. For the international fleet as a whole, dolphin-sets on the high seas accounted for an average catch of 101,000 tons per year, which is 42% of all yellowfin caught in the ETP during this period. See *id.*

40. Calculated from figures presented in 1995 IATTC ANN. REP., at 175, tbl. 4.

41. See 1994 NMFS ANN. REP., *supra* note 15, app. C.

42. See 1991 IATTC ANN. REP., at 168, tbl. 16 (providing estimate of average population abundance for 1986 to 1990).

43. See, e.g., 1988 *Ocean Policy Hearings*, *supra* note 27, at 100 (statement of Sam La Budde, Earth Island Institute); Kenneth S. Norris, *Dolphins in Crisis*, 182 NAT'L GEOGRAPHIC, Sept. 1992, at 2; Earthtrust, *Project Delphis: Dolphin Cognition Research* (visited Oct. 21, 1999) <<http://earthtrust.org/delphis.html>> (presenting latest research on advanced intelligence of dolphins in “profound hope that new perceptions of dolphin intelligence will motivate humans to respect and protect these friendly people of the sea and their natural ocean habitat.”).

The premises of this perspective go well beyond the cuteness of dolphins and its origins predate “Flipper” by over a thousand years.⁴⁴

The second perspective focuses on preserving the health of the particular dolphin stocks that lead fishers to tuna. Although dolphins are abundant in the ETP, the vast majority of fishing effort has been targeted on a few stocks that regularly associate with tuna: eastern and white belly spinner, offshore spotted, and common dolphins. Marine mammal stocks are not nearly as resilient as tuna stocks: their reproduction rates are vastly lower (between 2% and 6% per year) and they are accordingly much more vulnerable to over-harvesting.⁴⁵ Had killing continued at the rate that is believed to have prevailed in the 1960s and early 1970s, there is no question that the tuna fleet would have wiped out its own best fishing asset by now.⁴⁶ This is the enlightened fisherman’s perspective.

The third perspective represents a blend of the first and second perspectives. It objects to any killing dolphins, but recognizes the need for fishers in the region to earn a living. It favors minimizing dolphin mortality for its own sake and for the ecosystems in which these animals play a crucial role. It also takes a more cautious view than fishers of the status of the target stocks and the mortality rates they can absorb without peril. This is the “conservationist” perspective of the moderate environmental groups.

2. Why Conservation Proved Difficult

Killing dolphins has never been good business for fishers. Dolphin carcasses cannot be sold, they have to be separated from the tuna (requiring much crew labor), and a dead dolphin will never again lead the fisherman to tuna. Fishers themselves developed both of the innovations — “backdown” and “Medina panels” — that provided the foundation for virtually all subsequent progress in reducing mortality in “dolphin sets.”⁴⁷ This led U.S. fleet spokesmen to predict

44. See Edward H. Linehan, *The Trouble with Dolphins*, 155 NAT’L GEOGRAPHIC, Apr. 1979, at 506 (documenting ancient admiration of dolphins).

45. See *Whales & Porpoise: Hearings on H. 561-10 Before the Subcomm. on Fisheries and Wildlife Conservation and the Env’t of the House Committee on Merchant Marine and Fisheries*, 94th Cong. 86 (1976) [hereinafter *1976 Whales and Porpoise Hearings*] (statements of Patricia Forkan, Program Coordinator, Humane Society of the United States, Toby Cooper, Defenders of Wildlife, and Tom Garrett, Friends of the Earth); Norris, *supra* note 43, at 8 (noting that “a female dolphin may live 35 years and have a dozen young in her life, while a skipjack that lives only ten years may produce two million eggs in a single 90-day spawning season.”).

46. The 200,000 to 300,000 per year estimated mortality in those years is five to six times higher than the maximum sustainable mortality (58,000 per year) for northern offshore reported, even under the most optimistic assumption about dolphin reproductive rates. Assuming, very conservatively, that only half of all sets are on the northern offshore stock, the estimated uncontrolled mortality (150,000 per year) is still clearly unsustainable.

47. Backdown is a ship maneuver that occurs after encirclement when approximately two-thirds of the purse seine net has been brought aboard ship. The remainder of the net is drawn into a long, narrow channel. Dolphins congregate at the far end of the channel near the surface, while tuna remain well beneath. At this point, the captain backs the stern of the ship (to which the net is attached) away from the net. This submerges the corkline at the far end and pulls the net from underneath the dolphins at the surface. Men in rafts or speedboats are

in 1972 that regulation was unnecessary: "this new netting has been the salvation . . . I think we have the problem licked."⁴⁸ Unfortunately, this prediction proved untrue. Over 350,000 dolphins died in the two-year period immediately following this testimony, and mortality rates continued at high levels for two decades thereafter.⁴⁹

Ultimately, achieving major reductions in mortality required a sustained national and international regulatory effort. The reasons for this are important to understand. First, backdown and fine-mesh Medina panels do not eliminate the risk to dolphins. Because of their weight, fine-mesh panels can cover only a small part of the circumference of the net located at the rear of the backdown channel. The remaining portions of the net are made out of larger mesh and can still entangle dolphins. Moreover, nets are prone to "canopies" (underwater bulges) and collapses of the long finger-like backdown channel, which can entangle and drown large numbers of dolphins. A great deal of research during the 1980s and early 1990s was devoted to unraveling the mystery of why "disaster sets" happen and how to prevent them.⁵⁰ But gaining that knowledge required a sustained investigation based on the observations of professional technicians on-board tuna vessels. Collecting that information required a regulatory program.

Then there was the matter of incentives and will. While few fishers kill dolphins intentionally, backdown is a tricky procedure which requires skill, training, and seamanship to perform effectively. Both training and the backdown procedure take money and time away from fishing. Moreover, research revealed that successful backdown requires avoidance of high-risk situations, such as sundown sets on large schools of tuna or dolphins. Turning away from a high-risk set meant, on occasion, turning away from tuna. While dolphin conservation is compatible with a very lucrative fishery overall, the short-term temptation for each fisher is *not* to conserve.

Third, conservation efforts faced a cognitive problem. Fishers' long-term incentive to conserve was certain to be attenuated, at best, so long as dolphins were viewed as essentially non-depletable.⁵¹ An international program was

stationed at the dolphin release area to herd dolphins over the net and prevent any tuna from following them. The Medina panel (or a variant, the super-apron) is a panel of fine-mesh netting situated at the end of the backdown channel where dolphins congregate. It helps prevent them from getting entangled in the net and losing beaks or fins, or drowning beneath the surface. (Dolphins are air-breathing mammals who must surface every 15 to 30 minutes to breathe.) For an excellent description of the process, see NAS REPORT, *supra* note 35, at 36.

48. *Marine Mammals: Hearings before the Subcomm. on Fisheries and Wildlife Conservation and the Env't of the House Comm. on Merchant Marine and Fisheries*, 92d Cong. 353 (1971) [hereinafter *1971 Marine Mammal Hearings*].

49. See 1994 NMFS ANN. REP., *supra* note 15, app. C.

50. See discussion *infra* Part II.B.4.c.

51. As fisherman and fleet spokesman Joe Medina told a House Subcommittee in 1971: "I have been going to sea since I was 7 years old. I would say we see as much porpoise today as we have ever seen." *1971 Marine Mammal Hearings*, *supra* note 48, at 353.

required to provide reliable monitoring of the status of dolphin stocks and the impact of the fishery on those stocks, and to relay this information to the fishers themselves.

Fourth, high-seas fishers and flag states face the classic "tragedy of the commons:" fishers who "cheat" get the full benefit of higher catch while the burden caused by their slaughter of dolphins is distributed across the international fleet. Therefore, in the absence of any collective action, the rational choice is to cheat. There are two known solutions to this dilemma: collective self-regulation by producers and external regulation by national or international overseers. Neither arrangement was in place prior to 1972. Given the vastness of the fishery and the number of states and vessels involved, the self-regulation option was unworkable.

One final aspect merits mention. The mysterious bond between tuna and dolphins in the ETP has yielded, each year, a catch of some 130,000 to 200,000 tons of prime yellowfin tuna valued at U.S.\$ 100 to U.S.\$ 230 million.⁵² Much of this resource is available on the high seas to distant water fleets from around the world. Whatever one thinks of the moral worth of dolphins, there was never, realistically, even a prayer that such a resource would be left alone.

B. THE FORMATIVE YEARS (1972 TO 1988)

Although fishermen first began to set nets on dolphins in 1958, the mortality problem did not come into the public view until 1968, when William Perrin, a government biologist, traveled aboard a U.S. tuna vessel. His eyewitness report of dolphin deaths was not widely circulated; but environmentalist concern did provide some impetus for passage of the Marine Mammal Protection Act (MMPA) of 1972.⁵³ This act provided the statutory framework for all subsequent U.S. efforts to regulate marine mammal takings in the United States and on the high seas.

1. The Marine Mammal Protection Act of 1972

While the MMPA did not ban all taking of marine mammals, neither did it contemplate allowing marine mammal stocks to slide to extinction. Instead, it followed a middle path, directing that all marine mammal populations be managed to maintain an "optimum sustainable population" (OSP), i.e., the number of animals of each stock which will result in the maximum productivity of the population or the species.⁵⁴ Populations or species that fell below their

52. See 1995 IATTC ANN. REP., at 175, tbl. 4.

53. Marine Mammal Protection Act of 1972, Pub. L. No. 92-522, § 3(9), 86 Stat. 1027, 1029 (codified as amended at 16 U.S.C. § 1361-1407 (1994)).

54. See 16 U.S.C. § 1362(8); see also 16 U.S.C. §§ 1361, 1373.

maximum net productivity level were to be declared "depleted."⁵⁵ All taking of depleted stocks was banned.⁵⁶ Any taking (including chase or harassment) of marine mammals (depleted or otherwise) required a permit. No permit was to be issued without a judicially reviewable determination — after formal rule-making — that the taking would not "disadvantage" the species or stock involved.⁵⁷

Dolphins taken incidentally in the tuna fishery were subject to this general scheme, with some additional provisions. For example, the U.S. tuna fleet was given a two-year exemption from the OSP management regime to allow it to continue fishing during the rule-making period. The two-year exemption was immediately followed, however, by a declaration of an "immediate goal" to reduce the incidental kill and serious injury of dolphins in the fishery to "insignificant levels approaching a zero rate."⁵⁸

The task of implementing the MMPA with respect to commercial fisheries fell to the National Marine Fisheries Service (NMFS), a sub-agency of the National Oceanic and Atmospheric Administration acting in consultation with the Department of State on international matters.⁵⁹ U.S. vessels were required to accept on-board observers, comply with gear and practice requirements, and remain within fleet-wide mortality limits established by the NMFS.⁶⁰

2. Regulating the U.S. Fleet

Agency implementation of the statute began late, reluctantly, and under court order.⁶¹ Once forced to act, however, the agency faithfully carried out its mandate. Based on the recommendations of dolphin experts, the agency established a steadily declining schedule of fleet-wide mortality limits with individual

55. 16 U.S.C. § 1362 (1)(A).

56. *See* 16 U.S.C. § 1371(3)(B).

57. *See* 16 U.S.C. §§ 1373(a)-(d), 1374(d).

58. 16 U.S.C. § 1371(a)(2). The two-year exemption was intended to allow continued dolphin-sets during the time needed to go complete formal rulemaking to establish taking limits. The zero mortality goal reflected recognition of two factors. First, the target stocks of dolphins — unlike seals, otters, and the like — are migratory, high seas creatures who do not need to be culled to keep them from over-running the carrying capacity of their environment. Strictly speaking, managing dolphins for the benefit of dolphins means not killing dolphins at all. Second, fleet spokesmen had prophesied in Congressional hearings that a technological solution was just around the corner: "we have the problem licked." Legislative history clarifies that this "near-zero mortality goal" was meant to be just that — a goal. *See, e.g.*, 118 CONG. REC. H34642-34643 (daily ed. Oct. 10, 1972) (statement of Rep. Goodling) ("I wish to make it crystal clear that this [zero mortality] language in no way will or should result in closure or drastic curtailment of the Nation's commercial fishing industry . . . there must be an appropriate balancing of equities between the two extremes of a zero mortality rate and elimination of a commercial fishing industry."). *See also Joint Explanatory Statement of the Committee of Conference, Marine Mammal Protection Act of 1972*, H.R. CONF. REP. NO. 92-1488, at 23 (1972). Nonetheless, that goal would establish the agenda for conservationists from 1972 to the present day.

59. *See* 16 U.S.C. §§ 1362(11), 1371, 1373, 1378.

60. *See* 16 U.S.C. §§ 1381(d) (observers), 1381(b) (gear and practice requirements), 1374 (permit requirement and mortality limits).

61. *See Committee for Humane Legislation v. Richardson*, 414 F. Supp. 297 (D.C. Cir. 1976).

stock sub-quotas for each of the key target stocks.⁶² All sets on eastern spinner dolphins were banned after a 1976 expert workshop found this stock depleted under the MMPA definition.⁶³ The agency promulgated gear and practice standards, placed observers aboard a third of the vessels, established a research program in collaboration with the industry's "Porpoise Rescue Foundation," and established programs to train skippers and crew in dolphin rescue techniques.⁶⁴

The program achieved impressive results in the early years. U.S. fleet mortality declined from over 300,000 (estimated) in 1972, to 15,000 in 1980.⁶⁵ At that point progress stalled. In 1980, NMFS promulgated a five-year static mortality limit of 20,500 dolphins per year.⁶⁶ In 1981, Congress "clarified" the MMPA to provide that the use of best practicable technology would satisfy the zero-mortality goal.⁶⁷ In 1984, Congress legislatively extended the 20,500 mortality limit indefinitely and repealed the ban on encirclement of eastern spinner, replacing it with a legislated mortality limit of 2,750 dolphins per year.⁶⁸ Static standards produced static performance. U.S. fleet kill rates hovered at just under 20,500 per year for most of the 1980s (prior to the Sam La Budde videotape). Mortality per ton of tuna caught by the U.S. fleet actually *rose* substantially during the decade, because the static fleet-wide limit applied without adjustment to a rapidly shrinking U.S. fleet.⁶⁹

Not only did the U.S. program stall well short of the zero-mortality goal, but it was never marked by anything remotely resembling consensus. The program was launched amid street protests and demonstrations following a court-ordered ban on dolphin sets in response to an environmentalist lawsuit.⁷⁰ Relations among fishers, NMFS, and environmental groups remained antagonistic throughout the period, as opposing interests adopted scorched-earth legal tactics to try to defeat one another.⁷¹ The U.S. fleet claimed that dolphin regulations had cost tuna vessel

62. See Regulation Governing the Taking and Importing of Marine Mammals, 42 Fed. Reg. 64,548 (1977).

63. See NMFS, Marine Mammals: Incidental Taking in the Course of Commercial Fishing Operations, 40 Fed. Reg. 12,010, 12,016-12,017 (1977).

64. See *id.*

65. See 1994 NMFS ANN. REP., *supra* note 15, app. C.

66. See Taking of Marine Mammals Incidental to Commercial Fishing Operations — Permits, etc., 42 Fed. Reg. 72,178, 72,178 (1980).

67. See Marine Mammal Protection Act Amendment of 1981, Pub. L. No. 97-58 § 2, 95 Stat. 979, 980 (1981).

68. See Act of July 17, 1984, Pub. L. No. 98-364, 98 Stat. 440 (authorizing appropriations to carry out the Marine Mammal Protection Act of 1972).

69. From 1980 to 1988, the U.S. fleet in the ETP shrank from 94 vessels catching 115,000 tons of tuna while killing 15,000 dolphins (yielding a kill rate of 133 dolphins per thousand tons of tuna) to 40 vessels catching 97,000 tons of tuna while killing 19,700 dolphins. In other words, the U.S. fleet kill rate (measured in dolphins killed per thousand tons of tuna) *increased* from 133 to 203 over the period. The U.S. 1986 kill rate, if matched by the foreign fleet would have yielded a total annual kill of 64,000 dolphins compared to the 80,000 actually killed in that year. Only after 1988 did U.S. fleet mortality drop sharply, in response to new legislation. Compare 1980 IATTC ANN. REP., at 216, tbl. 1, with 1988 IATTC ANN. REP., at 169, tbl. 3, ref. App. C.

70. See Committee for Humane Legislation v. Richardson, 414 F. Supp. 297 (D.C. Cir. 1976).

71. See, e.g., Dan Mayer & David Hoch, *International Environmental Protection and the GATT: The*

owners over U.S.\$ 137 million in direct vessel costs, lost catch, and legal proceedings by 1981.⁷² In 1986, the U.S. fleet was forced to stop setting on dolphins in October, at a cost of millions of dollars in lost catch, when it exceeded the fleet-wide mortality limit for the year.⁷³

3. Early U.S. Diplomatic Efforts

Although the U.S. fleet dominated the fishery in the 1970s, U.S. fishers complained vociferously of the competitive advantage they would lose if unilaterally regulated.⁷⁴ All parties recognized that conserving a high seas resource would require an international effort. The MMPA of 1972 thus instructed the Secretary of Commerce, through the Secretary of State, to initiate negotiations with foreign governments whose nationals engage in commercial fishing operations found by the Secretary [of Commerce] to be "unduly harmful to any species of marine mammal."⁷⁵ Having called for "negotiations," the MMPA simultaneously ordered a ban on imports of tuna caught with an "incidental kill or incidental serious injury of ocean mammals *in excess of United States standards*."⁷⁶ One wonders what sort of "negotiation" Congress had in mind, given that the legally required outcome under 1972 Act was application of U.S. standards.

In any case, NMFS apparently made some effort to get an international

Tuna/Dolphin Controversy, 31 AM. BUS. L.J. 187, 197-207 (1993) (providing overview of this conflict); see also *Marine Mammal Protection Act Authorizations: Hearings on H.R. 4189 Before the Subcomm. on Fisheries and Wildlife Conservation and the Env't of the Comm. on Merchant Marine and Fisheries*, 100th Cong. 37, 76-81 (1988) (statement of Greenpeace USA) [hereinafter 1988 *Greenpeace Statement*].

72. See *Marine Mammal Protection Act: Hearings on H. 561-77 Before the Subcomm. on Fisheries and Wildlife Conservation and the Env't of the House Comm. on Merchant Marine and Fisheries*, 97th Cong. 65 (1981) (statement of George E. Steele, Jr., Washington Representative, American Tunaboat Association). One problem was simply the design of the U.S. regulatory scheme. Rather than establish vessel-specific limits that encouraged each fisher to conserve dolphins in his own best interest, NMFS promulgated a fleet-wide quota for each calendar year that allowed unlimited dolphin-kills until the quota was reached, followed by complete closure of the tuna-dolphin fishery to the entire U.S. fleet for the remainder of that calendar year once the quota was reached. This strategy of collective punishment had the effect of punishing careful skippers for the sins of the careless.

73. See 1988 *Greenpeace Statement*, *supra* note 71, at 100. The principal reason for the highly polarizing 1986 fleet shutdown lay in the failure of the NMFS to issue vessel-specific limits. Rather, it issued a yearly fleet-wide limit which, once reached, would force the end of fishing for the entire fleet for the remainder of the calendar year. See, e.g., *Marine Mammals: Taking of Marine Mammals Incidental to Commercial Fishing Operations; Final Decision and Final Regulations*, 42 Fed. Reg. 64,548, 64,550 (1977). This policy of collective punishment sent perverse signals to the fleet, punishing careful skippers for the sins of the careless ones. It also set the fleet squarely against the tuna-dolphin program.

74. For a sample of the many expressions of concern on this point, see *Oversight of the Marine Mammal Protection Act of 1972: Hearings on H. 561-9 Before the Subcomm. on Fisheries and Wildlife Conservation and the Environment of the House Comm. on Merchant Marine and Fisheries*, 93rd Cong. 4, 12, 24 (1973) (statement of Franklin G. Alverson, American Tunaboat Association).

75. 16 U.S.C. § 1378.

76. 16 U.S.C. § 1371(a)(2) (emphasis added).

agreement in the 1970s and was rebuffed.⁷⁷ During the early 1980s, the Reagan Administration relegated the issue to the back burner.⁷⁸ Meanwhile, both the Carter and the Reagan Administrations failed to implement the import provisions of the MMPA. Foreign governments were asked to certify the compliance of their regulatory programs and fleet performance with U.S. standards. But, from 1972 until the court-ordered embargo in 1990, the NMFS simply granted an MMPA certification for every country that applied for it, although no one, not even NMFS itself, believed that foreign regulatory programs or fleet performance met U.S. dolphin protection standards.⁷⁹

4. The IATTC Dolphin Conservation Initiative

By far, the most important contribution of NMFS during this pre-1988 period was the enlistment of the IATTC in the cause and the empowerment of its observer program through quiet leverage. The IATTC is an inter-governmental fisheries management commission, founded in 1948, charged with making recommendations for the management of the tuna resource in the ETP. The IATTC began as a well-funded commission with a small but highly capable staff who had long-standing relationships with the flag-states, boat owners, skippers, and crews whose cooperation would be essential to a successful dolphin conservation program.⁸⁰ The Commission was led by a widely respected director, James Joseph, who had served in that capacity since 1972. In these respects, the IATTC seemed a natural jurisdictional home for an international tuna-dolphin regime.

77. The NOAA Administrator, Robert White, would tell a Congressional committee in 1976, "Based on our past efforts, it simply does not appear feasible, for us, through the IATTC, or through any other forum, to establish porpoise kill quotas, and see that each of these nations adheres to such restrictions." *1976 Whale and Porpoise Hearings*, *supra* note 45, at 211.

78. According to David Colson, the lead fisheries negotiator during the 1980s and early 1990s, "The MMPA was out there. There was a mandate that we were supposed to be trying to get other governments to conform their behavior in some way with respect to dolphins. But apart from very low level international efforts, we didn't really put much energy into the international program [before 1990]. The focus I think was largely on the U.S. fleet." Interview with David Colson, former Dep. Asst. Sec. for Oceans, U.S. Dept. of State, in Washington, D.C. (Sept. 27, 1997).

79. Robert White, Administrator of NOAA, would admit in 1976 that he himself had no confidence in the certification applications his own department was routinely approving: "We are not satisfied that the certificate process we now have is achieving the objective we want, which is to get foreign vessels to observe the standards set by the kinds of regulations we have. In fact, my own personal view is that they probably are not. That means that we have got to give consideration to other steps beyond the certificate to assure us that the foreign vessels are indeed following the standards set by the regulations we place on our own industry." *Marine Mammals: Hearings on H. 561-29 Before the Subcomm. on Fisheries and Wildlife Conservation and the Environment of the House Comm. on Merchant Marine and Fisheries*, 95th Cong. 27 (1977). The following colloquy between a Congressman Murphy and William C. Brewer, Jr., General Counsel of NOAA, put the matter starkly, if somewhat humorously. "Chairman Murphy: Other than receiving the certificates [from foreign nations], has the Department done one single thing to investigate even the validity of the signature on the certificate? [Silence] Congressman Gerry Studds: Let the record reflect that counsel is casting about the back of the room and nothing is forthcoming [Laughter]. Mr. Brewer: I'm afraid that is correct." *Id.*

80. See 1976 IATTC ANN. REP., at 7, 17.

However, the IATTC was far from ideal. The organization was, and still is, comprised exclusively of fishing and coastal states: i.e., states with vested economic interests in the tuna resource. Moreover, by the end of the 1970s, the IATTC had lost most of its members as one state after another walked out in anger over disputed catch limits.⁸¹ The fishery was badly over-capitalized and over-fished, management recommendations were not being followed, and the average catch size was declining. Only the severe El Niño of 1982, which dispersed the tuna and made fishing for tuna unprofitable in the region for a period, saved the stocks from collapse.⁸² The IATTC thus found itself in a decidedly weak position when the international tuna-dolphin controversy arose in the 1980s. Nevertheless, the United States regarded the IATTC as the clear forum of choice for the dolphin conservation initiative.

The effort began slowly. From 1972 to 1976, virtually nothing happened in that forum relative to dolphin conservation. In 1976, NMFS Administrator Robert White promised Congress that, despite his pessimism about the prospects of getting an agreement, NMFS would push hard to get an IATTC program into operation.⁸³ Apparently, his staff did so, for at the next meeting it was "agreed that the IATTC should concern itself with the problems arising from the tuna-porpoise relationship in the eastern Pacific Ocean" and that "(1) the Commission should strive to maintain a high level of tuna production and (2) to maintain porpoise stocks at or above levels that assure their survival in perpetuity, (3) with every reasonable effort being made to avoid needless or careless killing of porpoise."⁸⁴ The resulting program played a vital role in laying the foundation for future progress. It also illustrated the difficulties of trying to manage the commons without credible trade leverage.

The IATTC dolphin conservation initiative in these years consisted of a four-part effort: (1) a tuna vessel observer program to gather essential data on fishing techniques and dolphin mortality; (2) a dolphin abundance estimation program; (3) a research program to develop or refine gear and techniques for reducing mortality; and (4) an outreach program to gather information on tuna vessel experience with dolphin sets and to disseminate the results of research to vessel captains and crews.⁸⁵ The program was open to all states with tuna vessels

81. See 1984 IATTC ANN. REP., at 7 (noting withdrawal of Ecuador, Mexico, Costa Rica, and Canada from IATTC membership, leaving only the United States and Panama as formal members).

82. For an excellent overview of these problems, see James J. Joseph, *The Management of Highly Migratory Species: Some Important Concepts*, MARINE POLICY (Oct. 1977). See also 1984 IATTC ANN. REP., at 7 (noting withdrawal of Ecuador, Mexico, Costa Rica, and Canada from IATTC Membership, leaving only the United States and Panama as formal members); 1988 *Greenpeace Statement*, *supra* note 71, at 117; Restrictions on Tuna Imports, 48 Fed. Reg. 32,832 (1983) (noting that the IATTC has had no management program for tuna in ETP since 1980).

83. See 1976 *Whales and Porpoise Hearings*, *supra* note 45, at 207 (statement of Dr. Robert White, Administrator, NOAA).

84. 1979 IATTC ANN. REP., at 51.

85. See 1980 IATTC ANN. REP., at 51.

in the region whether or not they were members of the IATTC. Additionally, tuna-dolphin “inter-governmental” meetings were held, in parallel with IATTC meetings, so that non-members could participate.

a. Getting International Observers on Tuna Boats

IATTC observers were, and are, biologists — typically nationals of the country whose fleet they monitor — hired and trained by the IATTC to travel aboard tuna vessels of the fleet during fishing and to gather data on dolphin mortality, causes of mortality, relative dolphin abundance, and, later, the problem of by-catch in school and log sets.⁸⁶ Their data played a vital role in all future conservation efforts by proving massive mortality, demonstrating techniques for drastically reducing it, and later, documenting the ecological harm to be expected from a complete moratorium on all sets of nets on dolphins.⁸⁷ Observers had no enforcement role (initially), took up little space, and were paid for by the IATTC.

Despite this attractive packaging, it was not easy, at first, to get statistically adequate observer coverage of the foreign fleet. From 1979 through 1984, less than 5% of foreign-flag trips actually carried scientific technicians on board, despite the repeated exhortations of IATTC staff.⁸⁸ Mexico refused to require its large fleet to participate at all. Then there was a breakthrough. Observer coverage of the non-U.S. fleet jumped from 7% in 1985, to 24% in 1986 and 1987, to 35% in 1988. In 1985, Mexico announced that it would join the IATTC Dolphin Conservation Program and allow a full complement of IATTC observers aboard its vessels.⁸⁹

The dramatic turnabout, by no means a random event, reflected the confluence of three factors. The first contribution was made by the polite but persistent effort over several years of Martin Hall, the Argentinian Director of the IATTC Tuna-Dolphin Program, in urging fishers to carry IATTC observers, and lobbying their governments and cannery customers to require IATTC observers, while promising that trade secrets would be respected.⁹⁰

Second, the MMPA was amended in 1984 to require a “comparable” regulatory program, which was to include, according to NMFS, a “comparable”

86. See Interview with David Bratten, Senior Scientist, IATTC Tuna-Dolphin Program, in La Jolla, Cal. (Aug. 11, 1997).

87. See discussion *infra* Parts II.B.4.c, II.C.5.

88. See generally 1979-1985 IATTC ANN. REPS (describing number of flag ships which actually carried scientific technicians).

89. See Taking of Marine Mammals Incidental to Commercial Fishing Operations: Notice of Determination, 51 Fed. Reg. 18,644 (1986).

90. Hall reports that during the second half of 1994 and the first half of 1995 he was individually calling each company, prior to each vessel departure, to request permission to send an IATTC observer on the trip, which the IATTC would pay for. See Telephone Interview with Martin Hall, Ph.D., Chief Scientist, IATTC Tuna-Dolphin Program (Aug. 18, 1998).

on-board dolphin mortality observer program.⁹¹ Participation in the IATTC program would automatically count as comparable; otherwise, equivalency would have to be demonstrated.

Third, Mexico had, for the first time in six years, an opportunity to start exporting yellowfin tuna to its primary market, the United States. Mexican tuna had been under a U.S. embargo since 1980 for reasons unrelated to dolphin: Mexico had seized a U.S. tuna vessel fishing illegally in the Mexican EEZ.⁹² In 1985, however, the tuna vessel seizure dispute was on the verge of settlement and the door to the U.S. market was beginning to swing open, guarded only by MMPA dolphin conservation requirements. So, after holding out for six years, Mexico agreed in November 1985 to participate in the observer program. The U.S. certification promptly followed, citing Mexico's participation in the IATTC observer program as a principal basis for the conformance finding.⁹³ The other flag-states followed suit and the IATTC observer program was up and running, reaching 33% coverage of vessel trips (the ratio which IATTC staff felt was necessary to provide reliable mortality estimates) by 1988.⁹⁴

The quiet, unheralded use of U.S. trade leverage empowering IATTC efforts to get observers on board fishing vessels was perhaps the most important single contribution of the trade instrument to the formation of the regime — providing a vital source of reliable data on dolphin mortality *and* ways to reduce mortality — all while opening markets.⁹⁵

The results of the first year of large-scale observer data were startling. Between 1985 and 1986, the estimate of non-U.S. fleet mortality jumped from 40,000 to 112,000 dolphins.⁹⁶ Part of the explanation lay in the greater effort on dolphins in

91. See Act of July 17, 1984, Pub. L. No. 98-364, 98 Stat. 440 (codified as amended at 16 U.S.C. § 1371(a)(2)); NMFS, Regulations Governing the Taking and Importing of Marine Mammals, 51 Fed. Reg. 28,963-28,964 (1986) (recognizing the intent of Congress to require a comparable observer program).

92. See Taking of Marine Mammals Incidental to Commercial Fishing Operations: Notice of Determination, 46 Fed. Reg. 10,974 (1981). U.S. law at that time did not recognize 200-mile EEZ jurisdiction over tuna, a highly migratory resource, and it called for an embargo on tuna imports from any country that seized a U.S. tuna vessel in that zone.

93. See *id.* at 18,644.

94. The principal flag states with jurisdiction over vessels setting on dolphins during this period were the United States, Mexico, Ecuador, Venezuela, Vanuatu, and Panama. IATTC Annual Reports reveal that the United States required observers on more than 40% of trips over the period 1985-1988. As noted, the number of Mexican trips covered by IATTC observers jumped from 0 (1985) to 42 (1986) to 51 (1987) to 83 (1988). This meant that the percentage of Mexican trips covered rose from 0% to 26% (1986) to 30% (1987) to 39% (1988). The other states likewise "ramped up" from statistically insignificant coverage in 1985 to 33% coverage by 1988; some (like Panama and Venezuela) achieved that sampling rate as early as 1986. One reason for the phase-in period was simply to hire and train the observers that were suddenly in demand. For detailed data on U.S. and foreign fleet observer coverage during this period, compare 1985 IATTC ANN. REP., at 239, tbl. 8, 1986 IATTC ANN. REP., at 159, tbl. 15, 1987 IATTC ANN. REP., at 139, tbl. 16, and 1988 IATTC ANN. REP. at 185, tbl. 19. See also 1986 IATTC ANN. REP., at 36 (stating 33% as the IATTC desired rate of trip coverage).

95. As will be seen, leverage was also used to promote participation in the IATTC gear program. See discussion *infra* Part II.B.4.d.

96. See 1994 NMFS ANN. REP. *supra* note 15, app. C.

the latter year. But much of it was due to greater observer coverage. As Martin Hall observed, much of the fleet had been “in denial” about the levels of mortality prior to that time.⁹⁷ Observer data thus provided a wake-up call to the international fleet.

b. Estimating Dolphin Abundance

Achieving international cooperation in addressing an environmental problem requires building as much consensus as possible about the existence and severity of the problem at hand, or at least the advisability of precaution in the face of uncertainty. Because fishers did not, and would never, agree that killing dolphins was a problem in itself, obtaining the voluntary cooperation of fishers and flag states in the tuna-dolphin case required demonstrating that the activities of the ETP tuna fleet were causing some identifiable harm to dolphin stocks. Although the observer data established higher-than-expected mortality rates, the impact of historic and current mortality rates on stock abundance was exceedingly difficult to estimate confidently. The scientific uncertainty surrounding abundance estimates emerged as perhaps the single greatest barrier to consensus or cooperation in the tuna-dolphin case.

One source of dolphin stock abundance data came from the IATTC’s new observer program. Commission staff quickly realized that international observers sent to document dolphin mortality on commercial tuna vessels could also be charged with recording the location, size, and composition of free-swimming dolphin herds sighted along the way. Such a cheap and plentiful source of data seemed particularly attractive in light of the very high expense of scientific research surveys by dedicated research vessels.

Thus, beginning in 1986, IATTC dolphin experts and statisticians began to use the data flowing in from tuna vessel observations to calculate abundance and trends in dolphin abundance. The first IATTC abundance estimate in 1986 reported “strong evidence of a decline” in northern offshore spotted stocks.⁹⁸ Otherwise, the IATTC has consistently found no discernable, statistically-significant trend in any of the target stocks.⁹⁹ From this, fishers and foreign governments concluded that stocks were not declining.

Environmentalists and NMFS were not so sure. A series of expert workshops, convened by NMFS over the period 1976 to 1992, painted a contrasting

97. Telephone interview with Martin Hall, Ph.D., Chief Scientist, IATTC Tuna-Dolphin Program (Feb. 11, 1998).

98. Estimates showed a significant decline: from four to five million animals in the late 1970s to around three million animals in the early 1980s, with evidence of higher population in 1985 to 1986. See 1986 IATTC ANN. REP., at 46. Historical abundance was extrapolated from current abundance estimates using back-calculation: a process which entailed adding to the (estimated) current abundance figure, the (estimated) human-caused mortality over the retrospective period with an adjustment to account for the (estimated) effects of “natural” births and deaths over the period. See *id.*

99. See, e.g., 1988 IATTC ANN. REP., at 48-49.

picture.¹⁰⁰ In these workshops, U.S. dolphin experts examined the results of research cruises and aerial surveys of key target stocks, two of which — the eastern spinner and offshore spotted stocks — accounted for about 80% of all sets made on dolphin. These surveys indicated that the population of both stocks had been reduced by the fishery to a level far below their historic (pre-exploitation) level, and were well beyond the point where net reproduction rates begin to decline with each decline in the stock.¹⁰¹ The stocks, in MMPA parlance, were “depleted.” However, there was no way to know what the net reproduction rate was at any given estimated population level, or how fast it was declining. Depending on one’s assumptions on these points, the mortality rates documented in the 1980s could be either benign, or very worrisome.¹⁰² The lack of a discernible trend in relative abundance (as reported by the IATTC) might be due to the insensitivity of the tuna-vessel observer data as an index of change.¹⁰³ On

100. For summaries of the 1976 and 1979 workshop results, see *1988 Greenpeace Statement*, *supra* note 69, at 79-80, 83 (reporting results of workshops held in 1976 and 1979). For a summary of the 1992 Status of Porpoise Workshop results with regard to the two principal target species, see *Taking and Importing Marine Mammals; Listing of the Northern Offshore Spotted Dolphin as Depleted*, 57 Fed. Reg. 27,207 (June 18, 1992) and *Taking and Importing Marine Mammals; Listing of the Eastern Spinner Dolphin as Depleted*, 57 Fed. Reg. 27,010 (June 17, 1992). See also Paul R. Wade & Tim Gerrodette, *Estimates of Cetacean Abundance and Distribution in the Eastern Tropical Pacific*, 43 REP. INT. WHAL. COMMN. 477 (1993) [hereinafter 1992 Workshop Report] (reporting results of 1992 Status of Porpoise Workshop).

101. See *id.*

102. Specifically, the 1979 Status of Porpoise workshop estimated eastern spinner and northern offshore spotted populations at 16% to 21% and 35% to 55%, respectively, of pre-exploitation levels. See *1988 Greenpeace Statement*, *supra* note 71, at 79-80. Twelve years later, the 1992 experts workshop convened to assess the results of a mammoth five-year research survey of ETP stocks produced abundance estimates of 26% to 44% (eastern spinner) and 23% (northern offshore spotted). See 1992 Workshop Report, *supra* note 100. The significance of these ratios is that, according to population dynamics theory, the net reproductive rate of any stock (“NRR” — the excess of births over deaths) begins to decline when the population falls below the “maximum net productivity level,” which for dolphins has been estimated at about 60% of the pre-exploitation (i.e., pre-fishery) abundance level. If it falls below zero the stock goes extinct. At the sub-optimal levels documented by the research surveys, the NRR is unknown. See Interview with Timothy Gerrodette, Operations Research Analyst, NMFS, in La Jolla, Cal. (Oct. 27, 1997). The implications were potentially serious in relation to then-extant mortality rates, though not certainly so. For example, the northern offshore spotted stock estimated by the 1986 to 1990 survey could sustain a take of 35,000 to 58,000 per year at 6% NRR; 12,000 to 20,000 at 2% NRR; and zero at 0% NRR. Actual mortality of the stock was believed to be 36,000 to 68,000 for 1986, 23,000 to 35,000 for 1989, and 20,000 to 28,000 for 1990. See Letter from James Joseph, Director of Investigations, IATTC, to Michael Tillman, IATTC Commissioner and Director, Southwest Fisheries Science Center, U.S. National Marine Fisheries Service (Sept. 6, 1994) (on file with author). Thus, depending on one’s assumed NRR and belief about the absolute abundance of the stock, one could conclude that the pre-1990 fishery was having a serious impact, a moderately harmful impact, or no adverse impact on the stock. The same was true of the eastern spinner stock.

103. The International Whaling Commission, applying a statistical “power analysis” of IATTC tuna vessel observer data, reported that declines in observed stocks would have to have been on the order of 6% to 7% per year for ten years in order to be reliably detected by the measures used. See International Whaling Commission, *Gillnets and Cetaceans: Incorporating the Proceedings of the Symposium and Workshops on the Mortality of Cetaceans in Passive Fishing Nets and Traps*, Report of the IWC, Special Issue 15, at 113 (1994).

the other hand, the NMFS methodology was plagued by its own uncertainties that tend to undermine its credibility to skeptics.¹⁰⁴

For all these reasons, the “risk” to dolphin stocks from tuna fishing remained uncertain throughout the period of this study. While fishers and flag states probably would have agreed that unlimited killing of dolphins was unsustainable and that *some* international conservation effort was required, there certainly was no agreement on the sustainable level of mortality, or how much precaution should be built into conservation efforts in light of the existing degree of uncertainty. Ultimately, the way forward would be found, not in attempts to forge a consensus on the exact parameters of the risk, but in finding a cost-effective solution to a different problem: the problem of wasteful killing.

c. Researching Fishing Methods

The IATTC gear research program consisted of parallel-track investigations into alternatives to dolphin-sets and options for reducing dolphin mortality in dolphin sets. While the first bore no early fruit and was quickly abandoned,¹⁰⁵ the second proved brilliantly successful.¹⁰⁶

The key to the success of the mortality-reduction initiative was abundant observer data — documenting fishing practices and external conditions in each dolphin set and recording the associated level of dolphin mortality. Compiling the

104. The NMFS estimation method involving conducting periodic large-scale, multi-year surveys of the habitat of the dolphin stocks — over an expanse of ocean covering five million square miles — using trained observers and a dedicated research vessel “searching” in a deliberately random pattern so as to obtain a representative sample. Observers would record the location, size, and composition of dolphin stocks that they saw, and statisticians would extrapolate from that an estimate for abundance of the various stocks — eastern spinner, northern offshore spotted, etc. — in the region. This exercise would yield an estimate of absolute abundance as of the time of the survey. Controversy would swirl around these estimates of current abundance based on a host of methodological objections that were vociferously championed by the U.S. tuna fleet in particular. Moreover, the methodological objections did not stop here. Population dynamics theory indicates that the relevant statistic for determining the health of the stock is not absolute abundance now, but the *ratio* between current abundance and historic, pre-exploitation abundance. Determining pre-exploitation abundance required adding back to current abundance estimates a further estimate of the level of fleet-caused dolphin mortality that may have occurred (unobserved) over the period 1958 to 1986, the first years that reliable estimates of fleet-caused mortality were available. This estimation procedure obviously required adjustment to account for *natural* births and deaths over the period, and computing that adjustment required yet a further prediction as to the “net reproduction rate” (the excess of natural births over natural deaths) during that period. As seen, no reliable estimates of net reproduction rates were available for most dolphin stocks. For an overview of these methodological issues, see *Taking of Marine Mammals Incidental to Commercial Fishing Operations — Permits*, 45 Fed. Reg. 72,178 (1980) and *American Tunaboat Ass’n v. Baldrige*, 738 F.2d 1013 (9th Cir. 1984) (rejecting NMFS methodology and ordering a re-calculation).

105. See Interview with James Joseph, Director of Investigations, IATTC, in La Jolla, Cal. (Dec. 15, 1997).

106. See Elizabeth F. Edwards, *Separation/Attraction Research on the Tuna-Dolphin Bond: Review and Criteria for Future Proposals*, NMFS Admin. Rep. LJ-96-17, 11-12 (Oct. 1996) (internal NMFS document, on file with author) (noting greater proportion of successful sets in dolphin sets as compared with school and log sets). Contrast, however, Charles W. Oliver and Elizabeth F. Edwards, NMFS, *Dolphin-Safe Research Program Progress Report II* (1992 - 1996), Admin. Rep. LJ-96-13, 25, 35 (internal NMFS document, on file with author) (noting considerable promise of laser and acoustical techniques for finding non-associated tuna).

data, IATTC staff discovered that high dolphin mortality was associated with: (1) sets on large herds of tuna or dolphin; (2) sets in new areas where stocks had not been chased before; (3) sundown sets (sets that finish after dark); (4) sets in strong sub-surface currents (which contribute to canopies and collapses); (5) gear malfunctions and misaligned safety panels; (6) lack of crewmen in a raft in backdown channel to manually aid release; and (7) longer sets.¹⁰⁷

The new data demolished the long-cherished myth among fishers that dolphin mortality in sets is largely "something that happens," which skipper and crew have little power to influence. Based on this myth, the U.S. fleet had vigorously resisted proposals for vessel-specific mortality limits: it seemed unfair for a vessel to lose its right to fish for reasons beyond its control.¹⁰⁸ Lack of vessel-specific limits undermined individual incentives for excellence. The new observer data, by contrast, showed that risk to dolphins is largely (though not completely) within the control of captain and crew. In so doing, the new data opened the door to acceptance of vessel-specific mortality limits in the 1992 La Jolla Agreement and enabled those limits, moreover, to be ambitious. Herein lay another indirect pathway of influence for trade leverage: providing the observers that produced the data that transformed thinking about *solutions* to the problem.

d. Training the Fleet

Knowledge of risk reduction techniques is useless if only researchers possessed this knowledge. To get the message out, IATTC staff (Hall and Bratten) went on the road, interviewing and distributing literature on dolphin protection to tuna fishing captains while their vessels were in port. They offered free "panel alignments" to help ensure that the Medina panels would function properly and that skippers and crews could use them properly.¹⁰⁹ Most importantly, they held dolphin mortality reduction workshops for captains and crews. These workshops began by highlighting public concern with dolphin mortality (through videos of news broadcasts and magazine and newspaper articles) as a way of "focusing the mind" of the participants. But they quickly turned to solutions: techniques and gear for reducing mortality, the performance of the best skippers, the latest research into the causes of disaster sets and ways to avoid them.¹¹⁰ IATTC staff also made a point of interviewing the fishers, to learn the techniques they had used, the innovations they had tried, what worked, and what did not work. The

107. See 1988 IATTC ANN. REP., at 43-46.

108. See *Tuna-Porpoise: Hearings before the House Comm. on Merchant Marine and Fisheries*, 95th Cong. 296 (1976) (statement of Franklin G. Alverson, Living Marine Resources, Inc.).

109. These alignments included a trial set in which an IATTC employee would observe the performance of the net from an inflatable raft during backdown, transmit his observations, comments, and suggestions to the vessel's captain, and try to resolve any problems which arose during the set.

110. See Telephone Interview with Martin Hall, Ph.D., Chief Scientist, IATTC Tuna-Dolphin Program (Dec. 17, 1997).

IATTC thus became a fleet-wide clearinghouse of information on dolphin mortality reduction gear, techniques, and experience.

The major difficulty facing IATTC outreach efforts in this early period was meager participation by fishers. During the nine-year period from 1980 to 1988, IATTC held a grand total of three dolphin mortality workshops and seventeen panel alignments.¹¹¹ In contrast, during the seven-year period from 1989 to 1995, the Commission hosted 43 workshops (in which 209 captains and 420 other attendees enrolled) and conducted 254 panel alignments.¹¹² Fleet interest in receiving IATTC advice on ways to reduce dolphin mortality greatly increased after passage of the trade provisions of the 1988 MMPA Amendments. Through much of the early 1980s, however, the focus of U.S. attention remained on the U.S. fleet and international progress was slow.

C. THE ORIGINS OF THE 1992 LA JOLLA AGREEMENT

From 1981 to 1988, the U.S. fleet presence in the ETP declined from ninety-seven seiners to forty as U.S. vessels either re-flagged or migrated to the Western Pacific.¹¹³ As the U.S. fleet shrank, the foreign fleet grew: together Mexico, Venezuela and Vanuatu added eighty-four new Class 6 boats equipped to set nets on tuna.¹¹⁴ As the foreign fleet grew, so did its dolphin mortality. In 1986, the first year of significant observer coverage, an estimated 112,000 dolphins died in foreign nets, compared to 20,000 killed by the U.S. fleet.¹¹⁵

Attention increasingly focused on the foreign fleet. Congress amended the MMPA in 1984 to require specifically, as a condition of imports, that the government of each harvesting nation adopt a "comparable" (to the U.S.) regulatory program and that its fleet achieve a "comparable" dolphin kill rate.¹¹⁶ While Congress left the definition of "comparable" to agency regulation, it has been seen that NMFS interpretation of this mandate was largely responsible for empowering IATTC efforts to get its observer program up and running — even before final regulations implementing the law were promulgated.¹¹⁷ The fact remained, however, that NMFS did not issue proposed regulations until 1986, or final regulations until March 1988.

This was too little too late for fishers and environmentalists alike. The forthcoming response of flag-states in accepting credible observers exposed, in

111. See 1980-1988 IATTC ANN. REPS.

112. See 1989-1995 IATTC ANN. REPS.

113. See 1981 IATTC ANN. REP., at 270, tbl. 4; 1988 IATTC ANN. REP., at 171, tbl. 5. The reported figures are for "Class 6" seiners, a category which was thought to comprise virtually all the vessels capable of setting nets on dolphins.

114. See *id.*

115. See 1994 NMFS ANN. REP., *supra* note 15, app. C.

116. See Act of July 17, 1984, Pub. L. No. 98-364, 98 Stat. 440 (codified as amended at 16 U.S.C. § 1371(a)(2)).

117. See discussion *supra* Part II.B.4.a.

stark relief, the huge disparity between U.S. and foreign fleet dolphin mortality rates. Environmentalists were concerned with the stocks. U.S. fishers were concerned with their loss of competitive advantage as a result of the exemption of the foreign fleet from strict conservation requirements. Both stressed the *environmental futility* of requiring the U.S. fleet to conserve while leaving the now-much-larger foreign fleet — which was causing 75% of the dolphin deaths — totally uncontrolled. Dissatisfaction with NMFS mounted rapidly on all sides. The nationwide airing of the La Budde video in the spring of 1988 brought the simmering discontent to a boil, initiating a course of events that led directly to the November passage of the 1988 MMPA Amendments.

1. The 1988 MMPA Amendments

Energized by the videotape and its powerful public response, environmental groups pressed hard, once again, for a complete ban on killing of dolphins in the tuna fishery. Despite the public pressure, however, Congress declined to go so far. The stated reason was that the United States lacked sufficient trade leverage to get other nations to comply with a ban. If the other nations defected completely, the U.S. fleet would be disadvantaged, and mortality would *increase*.¹¹⁸

Instead, the 1988 MMPA Amendments tightened U.S. fleet standards slightly, while leaving the U.S. fleet-wide mortality limit at 20,500 dolphins per year.¹¹⁹ With regard to foreign fleets, the 1988 Amendments instructed the Secretaries of State and Commerce to seek an international agreement through the IATTC *and* to embargo imports of yellowfin ETP-harvested tuna from any country that lacked a regulatory program and fleet kill rate “comparable” to that of the United States.¹²⁰ This time, however, Congress narrowed executive discretion by mandating very specific comparability standards:

- Foreign *regulatory* programs were to contain the same prohibitions on fishing activities as U.S. law (e.g., bans on “sundown sets,” explosives, sets in depleted stocks).¹²¹
- *Foreign fleet kill rates* were to be no more than twice the kill rate of U.S. vessels in 1989, and no more than 1.25 times that of U.S. vessels thereafter.¹²²
- *Total eastern spinner dolphin mortality* by each national fleet was not to exceed 15% of the total mortality by that fleet in any given year.¹²³
- *Observer coverage* was to be at the same rate as U.S. vessels (100%) unless

118. See H.R. Rep. No. 100-970, at 20.

119. Specifically, the 1988 Amendments required a limited ban on sundown sets, restricted the use of explosives in herding dolphins, and instructed NMFS to develop skipper and crew performance standards. See Marine Mammal Protection Act Amendments of 1988, Pub. L. No. 100-711 § 2(d), 102 Stat. 4766 (1990) (amending 16 U.S.C. § 1378(h)(2)(B)).

120. See 16 U.S.C. §§ 1371(a)(2), 1378(a)(2).

121. See 16 U.S.C. § 1371(a)(2)(B)(ii)(I).

122. See 16 U.S.C. § 1371(a)(2)(B)(ii)(I).

123. See 16 U.S.C. § 1371(a)(2)(B)(ii)(III).

the Secretary of State determined that an alternative observer would provide "sufficiently reliable" evidence.¹²⁴

The 1988 Amendments also increased the trade hazard of failure to meet U.S. comparability standards by requiring a secondary embargo on imports of yellowfin tuna from any "intermediary nation."¹²⁵ In addition, any primary embargo of a country's tuna imports would, after six months, authorize the President to apply broader trade sanctions against non-tuna imports.¹²⁶

The effect of the 1988 Amendments on foreign fleets and flag state governments was electric. As Felipe Charat Levy, a prominent tuna vessel owner and Mexican fleet spokesman, told the author in a recent interview, "I sat through those hearings. I read that law. 1988 was the first time you could see the handwriting on the wall."¹²⁷ The fishing nations of the ETP met in San Jose, Costa Rica in March 1989 to consider their response.¹²⁸ After an extended period of Latin protests, the IATTC staff presented the results of the IATTC gear program. They estimated that total mortality could be reduced by 80% simply by getting the mortality rates of the worst captains down to the level of the best. The minutes of the meeting report that "[it was] agreed that motivation was probably the single most important factor in attaining low mortality rates."¹²⁹ After the March workshop, the number of IATTC dolphin mortality reduction seminars jumped dramatically and so did attendance.¹³⁰

From 1988 to 1991, foreign governments and fleets rushed to meet U.S. requirements. While the *regulatory* comparability test proved easy to meet (or finesse),¹³¹ the *fleet performance* standard proved very difficult. Notwithstanding

124. 16 U.S.C. § 1378(a)(2)(B)(iv). To the intense dissatisfaction of environmental groups, NMFS determined that participation in the IATTC observer program calling for 33% trip coverage would provide "sufficiently reliable" evidence. See *Marine Mammal Protection Act Amendments: Hearing before the Subcomm. on Fisheries & Wildlife Conservation & the Env. of the House Comm. on Merchant Marine & Fisheries*, 101st Cong. 12 (1989).

125. An "intermediary nation" is any nation that imports yellowfin tuna from a country subject to the primary embargo and exports yellowfin tuna to the United States. See 16 U.S.C. § 1371(a)(2)(C).

126. See *Marine Mammal Protection Act Amendments of 1988*, Pub. L. No. 100-711, § 4 (a), 102 Stat. 4766 (1990) (codified at 16 U.S.C. § 1361-1407 (1994)).

127. Interview with Felipe Charat Levy, Director of Tuna Operations, CANAINPES [Mexican fisheries trade association], in La Jolla, Cal. (Aug. 11, 1997).

128. See IATTC, REPORT OF THE TUNA-DOLPHIN WORKSHOP 13 (1989).

129. *Id.*

130. See *supra* notes 111, 112 and accompanying text.

131. As NMFS staff observed, "Since 1984, IATTC has been working with each of the harvesting nations to develop model legislation that would satisfy the requirement for comparability. As a practical matter, Ecuador, Mexico, Panama, Vanuatu, and Venezuela have submitted their legislation and detailed regulatory program descriptions, and these programs were found to be comparable to the U.S. program in 1989." See *Taking of Marine Mammals Incidental to Commercial Fishing Operations: Final Rule*, 55 Fed Reg. 11,921 (1990). The statement was misleading. Although NMFS found the foreign programs to be comparable, they were not, in fact, comparable, even on paper. The heart of the U.S. program was a fleet-wide mortality limit. Yet Mexico did not promulgate a dolphin mortality limit of any kind — whether on a fleet or vessel basis — until September 1991. See SEPESCA, Regulation of the Incidental Capture of Dolphins in the Eastern Pacific Ocean, Sept. 27, 1991

sixteen years of NMFS certifications, the overall foreign kill rate in 1988 was estimated to be at least twice the U.S. rate.¹³² Despite the increased enrollment of tuna vessel captains and crews in IATTC dolphin mortality reduction workshops, it proved impossible for foreign fleets to close the gap overnight, particularly because U.S. fleet mortality declined sharply during this period (thereby raising the performance bar).¹³³

2. The Cannery Boycotts

In April 1991, in the middle of this frenzy of efforts to meet U.S. standards, the Heinz company, which markets tuna under the "StarKist" label, announced that henceforth it would no longer purchase any tuna that was not "dolphin-safe."¹³⁴ Dolphin-safe tuna was defined to mean tuna caught without chasing and encircling dolphins. Within weeks, all other major U.S. brands had followed suit. By the end of 1990, the U.S. market was virtually closed to dolphin-encircled tuna from any source, foreign or domestic.¹³⁵ Dolphin-safe tuna began to carry a label on the can — the now-familiar blue dolphin. Consumers were never offered a choice, as unlabeled tuna simply disappeared from the grocery store shelves.¹³⁶

(Mexican fisheries regulation on file with the author). No one seems to have noticed that fact, however, as all eyes focused on fleet mortality rates.

132. See *Marine Mammal Protection Legislation: Hearing before the National Ocean Policy Study of the Senate Comm. on Commerce, Science and Transp.*, 102d Cong. 24-25 (1992) [hereinafter 1992 *Ocean Policy Hearings*] (prepared statement of Amb. Colson, Dep. Ass't. Sec. For Oceans and Fisheries Aff., Dep't of State).

133. The crucial performance statistics for comparability purposes were U.S. versus foreign fleet kill-per-set rates. Although country-specific data are not readily available, overall foreign fleet kill-per-set rates were 10.87 (1988), 10.87 (1989), 6.35 (1990), 2.90 (1991). U.S. kill-per-set rates over the same period were: 5.28 (1988), 3.60 (1989), 2.75 (1990), and 2.49 (1991). See MARINE MAMMAL COMMISSION, 1992 ANN. REP., at 101, tbl. 9.

134. The decision appears to have been based on four factors. First, although consumption of tuna was not declining appreciably, Heinz was receiving bad publicity and numbers of angry letters that threatened the brand name. Second, Heinz may have been concerned with heading-off prospects for a mandatory dolphin-safe ban, which had been proposed in Congress. Third, Heinz realized that only a small fraction of its supplies came from the ETP region. The shortfall could readily be made up by expanded fishing in the Western Pacific where tuna and dolphins do not swim together. Finally, the President of Heinz was apparently subjected to a compelling personal appeal from a friend. Sentiment and sound business thus merged to yield an historic policy shift. See *Tuna Boycott Victory: How a Small Environmental Group Took on the Multi-Billion-Dollar Tuna Industry, and Won!*, NATIONAL BOYCOTT NEWS, Winter 1992/93, at 25.

135. See *id.* at 28.

136. Industry-based regulation inevitably raised the problem of monitoring and enforcement. How was the consumer to know that the cannery was sticking by their promise, and that tuna labeled "dolphin-safe" was truly caught without encirclement of dolphins? How were individual canners to be assured that their rivals were honoring their public commitment? The problem was highly difficult, and great controversy still rages about how successfully the enviro-cannery coalition has resolved it. The way they *tried* to resolve it was by allowing the staff of Earth Island Institute, a leading animal rights group, full access to cannery records and on-the-spot inspection rights in the cannery facilities and unloading docks. Earth Island became, in effect, the watchdog of the industry. See Earth Island Inst., 1996 Final Report of the International Monitoring Program 2-3 (1996) (unpublished manuscript on file with author) [hereinafter International Monitoring Report]. The problem, according to critics, is that Earth Island depended on cannery contributions for revenues to fund its monitoring program, and never had the staff to provide adequate coverage of all the facilities needing supervision. See Interview with Traci Romine, Tuna-Dolphin Coordinator, Greenpeace International, in La Jolla, Cal. (Oct. 28,

Congress supported the boycott by passing a law which made it a violation of the deceptive advertising provisions of the Federal Trade Commission Act to use the term "dolphin-safe" or any label suggesting that tuna was caught in a manner not harmful to dolphins if the tuna was harvested by either a driftnet or on a trip in which dolphins had been encircled. Violations were punishable by civil penalties of up to U.S.\$100,000 per offense.¹³⁷

Having effectively closed the U.S. market to dolphin unsafe tuna, Earth Island Institute, which by then had emerged as the leader of the dolphin-safe movement, targeted all the major European and Asian canners and distributors. By the end of 1992, a number of individual canners and distributors in Italy, Spain, Britain, Germany, Thailand, Philippines, and Australia had announced their intention to buy only dolphin-safe tuna. Most of these canners, wherever located, served the European market.¹³⁸ Because the European and U.S. markets together accounted for over two-thirds of the world canned tuna market at that time, the prospect of Europe "going dolphin-safe" became a source of acute concern to the fishery.¹³⁹

3. The U.S. Primary and Secondary Embargoes

By mid-1990, it was clear that foreign fleet dolphin mortality was falling, but not fast enough to meet the statutory timetable.¹⁴⁰ Though the MMPA Amendments were not enacted until late November of 1988, the embargo determinations had to be made in 1990, based on 1989 performance. As a spokesman for the Mexican tuna industry recalled, "We had to have more time. They were legislating us to fail."¹⁴¹

NMFS duly tried to buy time, first by delaying the comparisons that the 1988 law required and then by adopting creative statutory interpretations that favored importers.¹⁴² This gambit came to an end in February 1991, when Earth Island Institute won a court-ordered embargo against ETP-caught yellowfin tuna from

1997). Martin Hall claims that IATTC staff could not even document the existence of inspectors Earth Island claimed to have in place, and that one Earth Island Institute "monitor" turned out to be an employee of a Mexican cannery in Manzanilla, Mexico. See Telephone Interview with Martin Hall, Ph.D., Chief Scientist, IATTC Tuna-Dolphin Program (Aug. 18, 1999).

137. See Fishery Conservation Amendments of 1990, Pub. L. No. 101-627, § 901(d)-(e), 104 Stat. 4436 (1990) (repealed).

138. See International Monitoring Report, *supra* note 136, at 1-13.

139. Europe (20%) and United States (44%) together accounted for about 64% of the total world market for ETP tuna in 1990, with Asia representing only 5% of the demand. Moreover, the 30% demand accounted for by Latin American states themselves was often below world market prices, and less profitable to fishers. See *IATTC Comments on an International Program for the Conservation of Dolphins in the Eastern Pacific Ocean, 1992 IATTC Background Paper I*, app. IV, for a special meeting of the IATTC, Apr. 21-23, 1992 (prepared Apr. 20, 1992) [hereinafter *1992 IATTC Background Paper*]; Interview with Felipe Charat Levy, Director of Tuna Operations, CANAINPES [Mexican fisheries trade association], in La Jolla, Cal. (Aug. 11, 1997).

140. See kill rate statistics *supra* note 133.

141. Interview with Felipe Charat Levy, Director of Tuna Operations, CANAINPES [Mexican fisheries trade association], in La Jolla, Cal. (Aug. 11, 1997).

142. See *Earth Island Inst. v. Mosbacher*, No. C88 1380, 1991 WL 163753 (N.D. Cal. 1991).

Mexico.¹⁴³ Within months, all the major fishing states in the fishery were embargoed except Ecuador and Panama, both of which had responded to the 1990 boycotts by banning all sets on dolphins.¹⁴⁴ Effective January 31, 1992, a court-ordered secondary embargo was imposed on thirteen "intermediary" nations.¹⁴⁵ By December 1992, all of these had either joined the embargo or officially abstained for six months from importing embargoed tuna — except for Costa Rica, Italy, Japan, and Spain.¹⁴⁶ Of the four holdouts, Italy and Spain were by far the most important markets, and Spain would join the dolphin-safe bandwagon in 1994.

4. Economic Impact of the Embargoes and Boycotts

The exact impact of U.S. trade measures is difficult to determine either *ex ante* or *ex post*. As Ambassador David Colson, the lead U.S. fisheries negotiator remarked, "no one really knew very well what our leverage was."¹⁴⁷ There are several reasons for this. First, the overlap of boycotts and embargoes makes the separate impact of each hard to discern. Also, the combined impact of boycotts and embargoes is obscured by the fact that the target category — yellowfin tuna caught with purse-seines in the ETP — is scattered across half a dozen much larger categories in the Harmonized Tariff Schedules.¹⁴⁸ Further uncertainty arises from the enforcement problems that afflicted both boycotts and embargoes. No country, to date, has installed any official system for verifying the dolphin-safe claims of imported tuna.¹⁴⁹ Nor, it appears, has the NMFS been given funds to so much as read, much less verify, the import declarations it receives every day

143. See Taking of Marine Mammals Incidental to Commercial Fishing Operations: Notice to Importers, 56 Fed. Reg. 26,995 (1991).

144. See Taking and Importing of Marine Mammals: Notice of Embargo and Revocation of Findings, 56 Fed. Reg. 21,096 (1991).

145. The secondary embargo applied initially to Canada, Colombia, Ecuador, Indonesia, Korea, Malaysia, the Marshall Islands, Netherlands Antilles, Singapore, Thailand, Trinidad and Tobago, the United Kingdom, and Venezuela. See Taking and Importing of Marine Mammals: Interim Final Rule with Request for Comments, 57 Fed. Reg. 41701 (1992) (codified at 50 C.F.R. § 216).

146. See Taking of Marine Mammals Incidental to Commercial Fishing Operations, 57 Fed. Reg. 59,979 (1992).

147. Interview with David Colson, former Dep. Asst. Sec. for Oceans and Fisheries Aff., U.S. Dept. of State, in Washington, D.C. (Sept. 27, 1997).

148. See 50 C.F.R. §§ 216, 224(e)(5)(1) (1998) for enumeration of target categories. Further complications arise from the fact that tuna may be caught by a vessel of one country, loined in a second country, canned in a third and consumed in a fourth. It can pass through any number of tender vessels and warehouses along the way. In each intermediary country, the tuna may be sub-divided among several different tariff categories where it commingles with non-ETP and/or non-yellowfin tuna. The tracking problems are formidable. See Telephone Interview with Martin Hall, Ph.D., Chief Scientist, IATTC Tuna-Dolphin Program (Dec. 17, 1997).

149. Earth Island Institute has set up a voluntary, industry-funded monitoring network to police the dolphin-safe claims of canners in Europe and elsewhere (another remarkable instance of an NGO police force operating at the international level). But the network of monitors is very thinly staffed, it operates only at the sufferance of the canners, and its credibility has been questioned. See *supra* note 136.

from the Customs Service.¹⁵⁰ Intermediary countries are almost certainly equally lax with their surveillance. As a result, the “laundering of tuna has become big business,” in one observer’s words, particularly in recent years.¹⁵¹ Official trade statistics are obviously unreliable where there is a large black market.¹⁵²

A final problem of impact estimation arises from the fact that trade impact is not the same thing as economic impact. The economic impact of an embargo is measured not by the total value of producers’ exports to the United States but by the differential between the price their tuna would fetch in the U.S. market and the price it commands in alternative markets, multiplied by the volume moving at each price. Ultimately, the economic impact on producers is measured by the effect on producer profitability. The magnitude of this effect is hard to establish and is subject to large *natural* variability in response to fishing and market conditions.

Nonetheless, circumstantial evidence provides a general impression of the economic impact of the embargos and boycotts. Reported U.S. imports of yellowfin dropped precipitously in the intermediate aftermath of the boycotts and embargoes, as the legal U.S. market closed.¹⁵³ U.S. consumers saw no price increase because the shortfall was easily supplied by Western Pacific stocks. ETP yellowfin diverted to Europe met declining legal markets and prices through about 1995,¹⁵⁴ but sales and prices recovered thereafter and reached all time highs in 1997.¹⁵⁵ Beginning in 1990, Mexico and Venezuela both undertook concerted, successful campaigns to develop their domestic markets for canned tuna. Initially, this tuna was sold at steep price discounts, though that discount

150. See Telephone Interview with Allison Routt, Fishery Policy Analyst, NMFS — Long Beach office (Dec. 11, 1997).

151. Interview with Felipe Charat Levy, Director of Tuna Operations, CANAINPES [Mexican fisheries trade association], in La Jolla, Cal. (Aug. 11, 1997). A Venezuelan spokesman said European canners pursue a “don’t ask, don’t tell” policy with regard to the tuna they import. See Interview with Dr. Francisco Herrera Terán, President, Asociación Empresarial Pesquera de América Latina (ALEP), in La Jolla, Cal. (Oct. 28, 1997). Otto Obrist, an industry analyst, believes that the dolphin-safe boycotts in Italy, in particular, have grown much more lax in recent years. See Telephone Interview with Otto Obrist, President, Ocean Ventures, Inc., La Jolla, Cal. (Nov. 24, 1997).

152. Although the embargoes and boycotts were circumventable, many fishers and canners probably abided by them on principle. Those that sold on the black market encountered significant risks and costs in the process. See Telephone Interview with Martin Hall, Ph.D., Chief Scientist, IATTC Tuna-Dolphin Program (Dec. 17, 1997).

153. See Joseph, *supra* note 17, at 15.

154. The average price of yellowfin fell from U.S.\$ 968 per short ton in the first quarter of 1990 to U.S.\$ 740 per short ton in last quarter of 1991. Part of this is accounted for by lower price of smaller yellowfin due to higher processing costs. See U.S. INT’L TRADE COMMISSION, TUNA: CURRENT ISSUES AFFECTING THE U.S. INDUSTRY: REP’T TO THE COMM. ON FINANCE, U.S. SENATE, INVESTIG. NO. 332-313 UNDER § 332(g) OF THE TARIFF ACT OF 1930 AS AMENDED, USITC PUB. NO. 2547 at 38 (1992) [hereinafter 1992 ITC REPORT]. Pressure on prices was exacerbated worldwide by large new supplies coming onto the market from U.S. fishers in the Western Pacific.

155. See United Nations, Food and Agric. Org., *Globefish Databank* (visited Oct. 20, 1999) <<http://www.fao.org/WAICENT/FAOINFO/FISHERY/globe/GlobFish/fishery/globefi/doc/globe.htm>> (password protected).

appears to have narrowed over time.¹⁵⁶ Jobs were lost in Mexican canneries in Ensenada which were geographically situated to serve the U.S. market, but were added in Mazatlan canneries serving the Mexican and European markets.¹⁵⁷ Ironically, the principal *consumer* impact of the boycotts/embargoes was to make prime quality tuna available to Mexican and other Latin America consumers at lower prices.

The number of non-U.S. Class 6 (dolphin-set-capable) vessels in the fishery declined from 90 (1988) to 88 (1993) and then rebounded to 101 in 1996: the highest number of dolphin-set-capable vessels ever to fish in the ETP.¹⁵⁸ In the latter year, tuna catch in the ETP reached 418,500 tons, a level achieved only three times previously in the history of the fishery.¹⁵⁹ This, combined with resurgent tuna prices worldwide, explains the high profit-margin enjoyed by tuna fishers today.

From this analysis a few clear conclusions emerge:

- The economic impact of the embargoes and boycotts, severe through 1992, declined as world markets adjusted and domestic markets in fishing states expanded. The economic attraction of regaining assured, legal access to hard currency European and U.S. markets has remained considerable nonetheless.
- The fear of losing Europe became a paramount concern after the loss of legal access to the U.S. market.
- The boycotts and embargoes created contrary incentives which undercut each other. The boycotts greatly diminished the economic attractiveness of complying with U.S. comparability standards in order to get the embargoes lifted. Conversely, the embargoes eliminated any incentive for fishers in embargoed countries to fish dolphin-safe: they would qualify for the label but would still be embargoed.
- Latin fleets were not "coerced" although they went through a painful adjustment. Notwithstanding the embargoes and boycotts, the fleets continued to set nets on dolphins. Nor did the fleets, or their flag governments, capitulate to the detailed demands set forth in the 1988 MMPA Amendments.

5. Responses to Trade Pressure

Trade embargoes are not purely economic events. They are also communicative and political events, and evoke a political response that is a crucial part of the cognitive dynamic of any trade and environment episode. The discussion that follows explores the reaction of each of the following key players: (1) IATTC

156. See Interview with Felipe Charat Levy, Director of Tuna Operations, CANAINPES, in La Jolla, Cal. (Aug. 11, 1997).

157. See Interview with Carlos Camacho Gaos, Sub-secretary of Secretaria del Medio Ambiente, Recursos Naturales y Pesca (SEMARNAP), in La Jolla, Cal. (Oct. 29, 1997).

158. Compare 1988 IATTC ANN. REP., at 172, tbl. 6 with 1993 IATTC ANN. REP., at 165, tbl. 6 and 1996 IATTC ANN. REP., at 164, tbl. 2(b).

159. See 1996 IATTC ANN. REP., at 165, tbl. 3.

staff; (2) the United States; (3) the Mexican and Venezuelan fleets, governments, and print media; (4) the secondarily embargoed countries and their canneries; and (5) Greenpeace and the moderate environmental groups. It will be seen that the reaction of all players (other than the United States) was the same: opposition to the embargoes and boycotts; rejection of an immediate transition to dolphin-safe fishing; active support for efforts to reduce dolphin mortality; strong support for an international agreement to accomplish such reductions.

a. The IATTC Reaction

Perhaps, the most influential reaction to understand is that of the IATTC staff — particularly the director, James Joseph, and his deputy Martin Hall, who became the intellectual and organizational leaders of the pro-dolphin-conservation and anti-“dolphin-safe” movement. Their principal motives lay in recollection of the near collapse of the ETP tuna fishery in the 1970s as fishing capacity grew beyond the carrying capacity of the fishery. While the main reason for that crisis was the over-expansion of fishing capacity and the breakdown of catch discipline, a major contributing factor, in their view, was the tendency of log and school sets (the alternatives to dolphin sets) to diminish the stock by netting juvenile tuna before they had reproduced.¹⁶⁰

This fishery was rescued from that crisis only by a fortuity in the weather: the 1982 El Niño dispersed the tuna stocks, rendering the fishery unprofitable. Greatly reduced effort in the years 1982 to 1984 allowed tuna stocks to rebuild. When El Niño ended, the returning vessels tended to be larger, distant water vessels heavily focused on dolphin sets. They caught only mature yellowfin with little or no by-catch of non-target species. The result was a very healthy and profitable fishery in the ETP throughout the late 1980s. To Hall and Joseph, “dolphin-safe” threatened a return to the “bad old days” of the late 1970s, when heavy log fishing had contributed to depleted tuna stocks. IATTC’s reaction to the boycott, then, was to begin to gather data and put together a message that would check the gathering momentum for an immediate transition to exclusively dolphin-safe fishing. In the short term, Joseph highlighted the risks to tuna management, predicting that the concentration of effort on log and school sets under a no-encirclement policy would hugely increase catch of juvenile tuna, causing a 20% to 35% reduction in the catch of yellowfin,¹⁶¹ an estimate he later revised to 30% to 60%.¹⁶² Over the longer term, IATTC observers were tasked to

160. See *Tuna Dolphin Issues: Hearings to Obtain Testimony on H.R. 2823, International Dolphin Conservation Act and H.R. 2856, International Dolphin Protection and Consumer Information Act of 1995, Before the Subcomm. on Fisheries and Wildlife and Oceans of the House Comm. on Resources*, 104th Cong., 2d Sess. 321 (1996) (statement of James Joseph, Director, IATTC); see also *1988 Greenpeace Statement*, *supra* note 71, at 116-18.

161. See *1992 IATTC Background Paper*, *supra* note 139, app. IV.

162. See Joseph, *supra* note 17, at 20.

TABLE 1

ESTIMATES OF BYCATCH OF SPECIES THAT WOULD BE CAUGHT AND DISCARDED IN 10,000 SETS OF THE NET IN THE THREE MODES OF FISHING USED IN THE EASTERN PACIFIC OCEAN (EPO)

Species	School Fishing	Log Fishing	Dolphin Fishing
Dolphins	8	25	5,000
Small tunas	2,430,000	130,080,000	70,000
Mahi mahi	2,100	513,870	100
Sharks	12,220	139,580	—
Wahoo	530	118,660	—
Rainbow Runner	270	30,050	—
Billfish	1,440	6,540	520
Sea Turtles	580	1,020	100

start gathering data on non-tuna by-catch in log, school, and dolphin sets. As seen in Table 1, the results were dramatic.¹⁶³

In other words, school and log-sets caused a huge by-catch of young tuna and non-tuna species. Dolphin-fishing might be stressful and dangerous for dolphins, but it effectively conserved tuna and reduced by-catch. Joseph and Hall toured Latin America and the United States spreading the word of the economic, social and ecological risks of a no-encirclement policy.

The third prong of the strategy was to propose a dolphin conservation program that would "bring a critical mass of engineering talent" to bear on reducing dolphin mortality to near-zero levels within the framework of continued sets on dolphins.¹⁶⁴

b. The U.S. Reaction

Meanwhile, the immediate reaction of the U.S. fleet to the dolphin-safe boycotts was to leave *en masse* for the Western Pacific fishing grounds, to which U.S. treaty gave them special access.¹⁶⁵ U.S. canners likewise shifted their procurement to the Western Pacific, substituting skipjack caught there for the prime yellowfin they had formerly purchased.¹⁶⁶ With the U.S. fleet largely out of

163. See *id.* at 21, tbl. 4.

164. See 1992 IATTC Background Paper, *supra* note 139, app. IV. The results of that campaign will be explored in Part II.C.7.

165. By 1992, only eight U.S. vessels remained in the ETP, down from thirty in 1989. See 1991 IATTC ANN. REP., at 171, tbl. 6; 1989 IATTC ANN. REP. By 1995, the first full-year of mandatory dolphin-safe fishing for U.S. vessels in the ETP, only five U.S.-flag vessels remained. See 1995 IATTC ANN. REP., at 178, tbl. 7.

166. Because skipjack is inferior to yellowfin, the quality of American tunafish declined. But there appears to

the ETP, and canners assured an adequate supply of "dolphin-safe" tuna, political opposition to the dolphin-safe movement collapsed in Congress. The tuna-dolphin issue disappeared from mass public view, though it remained an issue of intense concern for animal rights groups and their five million members as well as the moderate non-governmental organizations (NGO) who were participating in the regime. The relevant Congressional committees remained actively engaged through dozens of oversight hearings.¹⁶⁷

c. Target State Reactions

The dolphin-safe boycotts assumed a quite higher profile in the target states, where fleets and foreign governments strongly objected to the U.S. embargoes. Only the reactions of the key states, Mexico and Venezuela, will be fully explored here for reasons of space. The reactions of other states will be presented only briefly.

The U.S. tuna-dolphin embargoes were viewed in Mexico against the backdrop of a long history of commercial conflict with the United States in the tuna sector.¹⁶⁸ The first and foremost reaction, therefore, was to suspect protectionism.¹⁶⁹ Fishers also accused the United States of hypocrisy for singling out the ETP for special scrutiny while automatically granting the label "dolphin-safe" to all tuna caught in the Western Pacific, where the U.S. fleet had migrated.¹⁷⁰ They

be no strong evidence that consumers noticed the difference. See Interview with Felipe Charat Levy, Director of Tuna Operations, CANAINPES, [Mexican fisheries trade association], in La Jolla, Cal. (Oct. 28, 1997).

167. See Lexis Federal News Service (Lexis; LEGIS/HEARING) (recording 148 prepared statements on the tuna-dolphin controversy before Congressional committees since March 1992).

168. Briefly, Mexico joined many other states in the 1970s in extending its exclusive fisheries jurisdiction to 200 miles. The United States refused to recognize the extension with respect to tuna, citing the highly migratory nature of the species. So the United States encouraged its vessels to violate Latin states' sovereignty, reimbursed all vessel expenses when they were seized, demanded compensation from the target states, and if the states refused to pay, embargoed their tuna. For an excellent history of this conflict from the Latin perspective see Juan Jacinto Silva, *La pesca en México, Prendida con Alfileres: González Pacheco* [Fishing in Mexico, Hanging by Pins: González Pacheco], 2 LA JORNADA ECOLÓGICA, Feb. 14, 1992, at 6. See also RAUL O. PAEZ DELGADO, MERCADO GLOBAL DEL ATUN Y EMBARGO ESTADOUNIDENSE: UN CASO DE NEOPROTECCIONISMO COMERCIAL [THE GLOBAL TUNA MARKET: A CASE OF COMMERCIAL NEOPROTECTIONISM] (1996) (a treatise commissioned by the Mexican fisheries commission) (on file with author).

169. Mr. Andres Armenta Gonzalez, President of CANAINPES (the Mexican fishing industry trade association) stated: "The objective of the embargo is an intent to break up the Mexican fleet so the U.S. fleet can have access to the Mexican fishery — which is in Mexico's exclusive economic zone, to exploit it for the U.S." *Quieren en E.U. la Quiebra de la Flota Mexicana; así lo Afirma el Presidente de CANAINPES: AAG* (Andres Armenta González) [U.S. Wants the Breakup of the Mexican Fleet-Thus Affirms the President of CANAINPES, AAG (Andres Armenta González)], EL MEXICANO, Feb. 26, 1991, at A3.

170. There was no clear evidence of a regular association between tuna and dolphin in the Western Pacific, though rumors and allegations persisted. See *Argumento Ecológico sin Validez Científica, lo del Embargo Atunero: Disminuye la Muerta Incidental de Delfines* [Ecological Argument Without Scientific Validity In the Tuna Embargo: Incidental Death of Dolphins Decreases], EL MEXICANO, Apr. 26, 1991, at A4 (quoting Carlos Agostoni Colombo, CANAINPES); see also 79-91, *Las pesquerías: embargo atunero a México* [The Fisheries: Tuna Embargo On Mexico], PERFILES PESQUEROS, Oct.-Nov. 1990, at 9-10 (Felipe Charat Levy of CANAINPES complaining of unfairness of dolphin-safe label, which ensures boycott of boat's entire load of tuna if one

joined other Latin states and, indeed, IATTC staff in strongly objecting to the arbitrariness of the U.S. statutory standards.

The complaints of means-end arbitrariness in the U.S. standards were numerous and telling. First, the comparability standard precluded all predictability and planning. Because U.S. and foreign fleet mortality rates were compared each year for the prior year, the foreign fleet had no way of knowing in advance of any season what the U.S. mortality rate for that season would be. Second, not enough U.S. vessels remained in the ETP in the wake of the cannery boycott to provide a statistically-valid basis for comparison. Third, the 2x/1.25x kill rate limit for foreign mortality had no discernable biological basis. Fourth, the ban on all encirclement of eastern spinner dolphins was irrational even when viewed from *within* the logic of U.S. conservation philosophy: a "depletion" finding meant only that the rate of *growth* of population stocks was declining, not that the *population* was declining.¹⁷¹ Fifth, the purpose of the 15% limit for eastern spinner dolphins was unclear even to NMFS.¹⁷² Hall observed that the ratio created perverse incentives for vessels with a high kill of eastern spinner early in the season to kill more dolphins of other species so as not to exceed the 15% ratio decreed by the 1988 Amendments.¹⁷³ Sixth, the kill-per-set comparability standard of the 1988 Amendments created equally perverse incentives for vessels to *increase* the number of sets on dolphins, in order to average the risk over a larger number of sets.¹⁷⁴ Finally, the fishers bitterly complained that the timetables for Latin American improvement were unrealistic. There was simply no way to transform the foreign fleet performance on the decreed timetable.¹⁷⁵

In truth, many of these were *valid* objections: the standards were simply irrational. But, they were also cast in statutory stone. While the fleets criticized the embargo standards, they were even more alarmed by the canneries' dolphin-safe policy, which fishers believed were certain to ruin the fishery and bankrupt the industry. Anxious as they were about the embargoes, opposing dolphin-safe became their number one priority.¹⁷⁶

Despite their manifold defects and the scorn heaped upon them by the target

dolphin is killed in the ETP, while boats in the Western Pacific may kill a thousand dolphins and still have their cargo labeled dolphin-safe).

171. See Comments of Participants at IATTC, Report of the Tuna-Dolphin Workshop, Mar. 14-16, 1989, San Jose, Costa Rica, at 5-10 [hereinafter 1989 IATTC Workshop].

172. The agency speculated that the figure may have derived from the fact that the 1984 MMPA Amendments allowed a take of 2,750 eastern spinners, which is 13.4% of the allowable overall kill rate of 20,500. But this was just a guess on the agency's part. See Taking and Importing of Marine Mammals Incidental to Commercial Fishing Operations, 55 Fed. Reg. 11,921 (1990).

173. See Telephone Interview with Martin Hall, Ph.D., Chief Scientist, IATTC Tuna-Dolphin Program (Aug. 18, 1999).

174. See *id.*

175. See Interview with Felipe Charat Levy, Director of Tuna Operations, CANAINPES, [Mexican fisheries trade association], in La Jolla, Cal. (Oct. 28, 1997).

176. As Felipe Charat told this author, with perhaps slight over-statement, "What got us to La Jolla was dolphin-safe." *Id.* (Oct. 27, 1997).

states, the boycotts and embargoes succeeded in galvanizing a public dialogue in target states about dolphin mortality and mortality reduction.¹⁷⁷ They also elicited a broad range of constructive actions. New centers and programs for dolphin conservation were founded, new agencies created. The Mexican government announced a joint Mexico – U.S. research program to bring academic, government, and industry experts together to investigate improved methods of dolphin release.¹⁷⁸ It established a Center for Fishing Training in Mazatlan to train national observers. Mexican universities were given research grants.¹⁷⁹ The Mexican National Fishing Institute undertook an active program in dolphin abundance estimation and experimentation with improved dolphin release techniques in collaboration with Mexican fishers.¹⁸⁰ In September 1991, Mexican President Salinas de Gortari announced a ten-point plan that included a strict enforcement of dolphin regulations and an observer on every boat.¹⁸¹ By the end of 1991, the Mexican tuna industry was boasting of its rapid improvement in mortality rates, and expressing confidence in its ability to do even better.¹⁸²

In Venezuela, the embargoes led the Venezuelan Ministry of Environment and Natural Resources to bring public pressure on the Ministry of Agriculture and Breeding (MAC) to increase its efforts to conserve dolphins.¹⁸³ The Environment Ministry let it be known that while the Agriculture Ministry had primary jurisdiction over the tuna-dolphin issue by mutual consent, the former ministry

177. See Felipe Olvera Cruz, *Coordinación entre México y EU: Es Posible Disociar el Atún del Delfín* [Coordination/Cooperation Between Mexico and the United States: It is Possible to Separate the Tuna from the Dolphin], EL MEXICANO, Sept. 30, 1991, at 1 (reporting results of U.S.-Mexican cooperative research in dolphin-release techniques). *Epoca*, a national magazine, devoted four articles to the tuna-dolphin controversy, expressing a range of views of Mexican conservationists and civic leaders, all sympathetic to dolphin conservation. See Alfonso Rodríguez, *Sacar a México del Mercado Mundial, fin de Estados Unidos*, EPOCA, Sept. 30, 1991, at 29-30; *Medidas Para Proteger al Mamífero* [Measures to Protect Mammals], EPOCA, Sept. 30, 1991 at 30-31; Elisa Robledo, *En 30 Años se Han Matado Más de 6 Millones de Delfines* [In 30 Years More Than 6 Million Dolphins Have Been Killed], EPOCA, Sept. 30, 1991, at 31-32; Miguel Bárcena, *No Más Matanzas de Delfines* [No More Killings of Dolphins], EPOCA, Sept. 30, 1991, at 32.

178. See Cruz, *supra* note 177, at 1.

179. See *La Captura Accidental de Delfines se ha Reducido a 2.9%* [Incidental Dolphin Capture Reduced to 2.9%], EL HERALDO, Feb. 18, 1992, at A23.

180. See Gerardo Moncada, *Balance de los Diez Puntos del Código de Ensenada* [Balancing the 10 Points of the Ensenada Code/Plan], LA JORNADA ECOLOGICA, Feb. 14, 1992, at 6; see also *Armadores Prueban Nuevo Equipo y Aditamentos* [Tuna Boat Owners Test New Equipment and Additions/Fixtures], EL MEXICANO, May 25, 1992; Felipe Olvera Cruz, *Nueva Técnica para el Salvamento de Delfines* [New Technique for Saving Dolphins], EL MEXICANO, Oct. 11, 1992, at D1.

181. See *La Recuperación Económica no Riñe con la Protección del Ambiente: Carlos Salinas* [Economic Recovery Doesn't Quarrel With Environmental Protection: [says] Carlos Salinas], DIARIO 29 EL NACIONAL, Sept. 25, 1991, at 3.

182. See *Por Televisión, el Trabajo de la Flota Atunera Mexicana* [On Television: The Work of the Mexican Tuna Fleet], EL MEXICANO, Dec. 5, 1991, at A8.

183. See *Solicitan Colaboración del MAC y de Comercio Exterior para Controlar Pesca Atunera; Ministerio del Ambiente Admite Matanza de Delfines*, [Cooperation/Collaboation Between MAC and Exterior Commerce is Solicited in Order to Control Tuna Fishing; Minister of Environment (MARNR) Admits Killing of Dolphins [is occurring], EL DIARIO DE CARACAS, May 27, 1991, at 34.

retained concurrent jurisdiction of the matter and planned to increase its oversight.¹⁸⁴

The embargoes also activated environmental groups in both Mexico and Venezuela: FUDENA in Venezuela, the Group of 100 in Mexico, and chapters of Greenpeace in both countries. None of these groups supported capitulation to U.S. embargoes. But when the IATTC La Jolla process (and agreement) came along as a "third-way" between U.S. demands on one hand, and dolphin destruction on the other, it commanded the active support of fishers, government agencies, and environmental groups alike.¹⁸⁵ The corollary of the demonization of unilateral embargoes and boycotts was the beatification of the La Jolla Agreement.

In the end, only Panama and Ecuador chose to ban encirclement by their fleets, and Panama later rescinded the ban. Nor did fishermen abandon dolphin fishing, although dolphin-sets did decline substantially over the period from 1990 to 1996.¹⁸⁶ At the same time, the total number of dolphin-safe certificates (certifying a fishing trip with no dolphin sets) issued by IATTC observers steadily increased from 67 in 1991 to 221 in 1996.¹⁸⁷ Clearly, fishers were concerned with dividing their fishing into dolphin-safe trips and non-dolphin-safe trips, and getting dolphin-safe label for tuna caught in the former. While the number of dolphin sets substantially declined after 1990, they continued to occur in very large numbers.¹⁸⁸

d. The European Response

The EEC itself made clear early on that while it would support a comprehensive management initiative, it would not be persuaded to rubber-stamp unilaterally-determined standards, particularly by the minuscule trade leverage mobilized through the secondary embargoes.¹⁸⁹ However, the boycotts and embargoes

184. See Felix Reyes Y., *Entre el MAC y el MARNR: Conflicto de Competencia por el Caso de los Delfines. El Despacho Quiere que Agricultura y Cría le Informe lo que Hace para Hacer Cumplir la Normativa de Pesca Atunera* [Between the MAC and the MARNR: Conflict over Competence in the Matter of the Dolphins; The [MARNR] Headquarters Requests the Ministry of Agriculture and Breeding [MAC] to Report Back to It on What Is Being Done to Enforce Compliance with Tuna Fishing Regulations/Standards], EL NACIONAL, Mar. 30, 1991.

185. See Ethel Riquelme F., *Manipulan en EU argumentos Seudoecologistas: Los 100* [Per the Group of 100: The US is Manipulating Through the Use of Pseudoecologist Arguments], EXCELSIOR, Dec. 27, 1992, at 1.

186. The total number of dolphin sets declined from 9,000 to 11,000 per year in the years 1985 to 1990, to 7,000 to 9,000 in 1991 to 1993, to 6,000 to 7,000 in 1994 to 1996. See 1996 IATTC ANN. REP., at 170, tbl. 5. I present the figures in ranges because dolphin sets exhibit a wide stochastic variation in response to natural or random factors. Precise numbers tend to mask this variation.

187. See *id.*

188. During the years 1989 to 1995, inclusive, ETP fishers conducted 11,300 sets (1989), 10,300 (1990), 8,900 (1991), 9,700 (1992), 6,660 (1993), 7,140 (1994) and 6,272 (1995). See 1995 IATTC ANN. REP., at 175, tbl. 4. This represents a 44% decline over the period 1989 to 1995.

189. As explained to the dispute settlement panel in Tuna I: "The EEC is a relatively small supplier of tuna products to the United States . . . The EEC [is] . . . ready to offer full support to current efforts to ensure the protection of the dolphin population [referring to the IATTC Dolphin Program] . . . [but] the EEC does not

(aided by an energetic Earth Island publicity campaign) focused enough public and cannery attention on the issue that inaction was no longer a viable response. In November 1991, the European Parliament adopted a resolution calling for an EC-wide ban on dolphin setting by EC nationals and on import of tuna caught on dolphin. However, as seen, Earth Island had some success in getting voluntary cooperation from a number of major European canners. Much more significantly, Mr. Silvio Lucena of ANCIT, the Italian canners' trade association, attended a key April 1992 meeting of the IATTC fishing states. He reminded the gathered assembly that

Italian tuna canners annually process 120,000 tons of large yellowfin, nearly all of which is imported. . . . Italian tuna canners are closely involved in the tuna [dolphin] issue and earnestly interested in its solution. . . . A solution must be aimed at the creation of a multilateral program seeking as a long-term goal the elimination of setting on dolphins. Such a program should include strong enforcement . . . Many of these ideas have already been presented in Dr. Joseph's proposal [foreshadowing the 1992 La Jolla Agreement].¹⁹⁰

Lucena concluded with a warning: "We think the time has arrived for a combined final effort. We sincerely hope that no more unpleasant measures will be necessary."¹⁹¹ This blunt message from the fishers' biggest European customer must certainly have carried considerable weight.

e. Reaction of the Environmental Community

In March 1992, Traci Romine testified for Greenpeace before the Fisheries Subcommittee of the House Merchant Marine Committee. She called summarily for an end of dolphin encirclement and demanded "full scale embargoes" on tuna from countries that continued to allow dolphin sets.¹⁹² Even as Romine spoke, however, Greenpeace had already been charting a new course for tuna-dolphin policy which Romine herself later would navigate.

Earlier that year, on February 11, 1992, Greenpeace's flagship, the Rainbow Warrior, sailed into harbor at Ensenada, Mexico, the headquarters of much of Mexico's tuna fleet. The ship was greeted by dockside demonstrations and denunciations in the press. Juvenal Hernandez Acevedo, the director of

consider application of unilateral trade restrictions to be an adequate means to limit dolphin mortality, secondly, the EEC has doubts as to whether the direct embargo by the United States was GATT-compatible . . . and thirdly, the EEC would not introduce trade measures because of a third-country's requirements nor on the basis of that country's unilaterally defined standards." Tuna I, *supra* note 12, at ¶¶ 4.10, 4.11.

190. IATTC, Summary Minutes of the Special Meeting, La Jolla, Cal., Apr. 21-23, 1992, app. IX (Considerations for an International Dolphin Conservation and/or Management Program for the Eastern Pacific Ocean) (Apr. 20, 1992).

191. *Id.*

192. *Dolphin Protection Hearings*, *supra* note 23, at 342-44 (statement of Traci Romine, Greenpeace International) (Mar. 18, 1992).

CANAINPES, Mexico's fisheries trade association, declared that "The fishing sector of Ensenada and of the country rejects the false and hypocritical position of the mercenary ecologists of the Greenpeace Group . . . they have no business being in our country."¹⁹³ He called on "all the sectors affected by the tuna embargo, and also the community in general, to unite and to show an attitude of frank rejection of these pseudo-ecologists — and to do so during the press conference that Greenpeace will hold in Ensenada at 11:30 this morning."¹⁹⁴

At the press conference, however, Greenpeace's representative, Juan Carlos Cardenas, amazed everyone by denouncing the U.S. embargoes, supporting a truly multilateral solution, and proposing the development of an international arrangement that would permit continued fishing on dolphins until a feasible alternative could be found.¹⁹⁵ The reasons for this dramatic turnaround by Greenpeace are vital to understanding the tuna-dolphin story. Together, they form a fable of the environmental movement coming of age.

Learning. As of 1992, research had not yet revealed a short-term alternative to the existing menu of dolphin sets, log sets, and school sets.¹⁹⁶ Greenpeace accepted the emerging IATTC data on juvenile tuna and non-target species by-catch in school and log sets. As Romine put it: "The NGO community was faced with the question, what's our mandate? Are we environmentalists or are we concerned about marine mammals?"¹⁹⁷ Greenpeace decided they were environmentalists first.¹⁹⁸

Pragmatism. By the spring of 1992 it seemed clear that the dolphin-safe gambit was not working. Dolphin sets continued in great numbers, the IATTC and industry were united in opposition to no-encirclement policy. Because of the by-catch data, they now held the ecological high ground. It was time to compromise. Traci Romine: "We spent years . . . saying 'end of encirclement, end of encirclement, end of encirclement.' Every year all these NGO's sat around and said 'end of encirclement,' 100,000 dolphins died. When we started to say 'reduce mortality, save dolphins . . . let's get together and do this thing' we went from dolphin mortality of 100,000 per year . . . to 25,000."¹⁹⁹ By 1992, the IATTC and the fishers were talking about a comprehensive program that would put an observer on every boat and stage in a declining schedule of dolphin mortality with the goal of reducing mortality to insignificant levels. That seemed a good compromise.

193. Felipe Olvera, *Fishing Sector Rejection of Greenpeace: Frank Repudiation of the Psuedo-Ecologists*, EL MEXICANO - ENSENADA EDITION, Feb. 11, 1992, at sec. A.

194. *Id.*

195. See Felipe Olvera, *Greenpeace Opposes the Embargo*, EL MEXICANO — ENSENADA EDITION, Feb. 13, 1992, at sec. A.

196. See NAS REP., *supra* note 35, at 6.

197. Interview with Traci Romine, Tuna-Dolphin Coordinator, Greenpeace International, in La Jolla, Cal. (Oct. 29, 1997).

198. See *id.*

199. *Id.*

Globalism. Globalism is the hallmark of our age. For corporations, it means looking worldwide for a source of profits. For international NGOs like Greenpeace, it means forging consistent positions on linked issues (“issue globalism”) and looking worldwide for alliances to address global problems (“political globalism”). Issue globalism required linking the tuna-dolphin issue to the deepening global crisis in the world’s fisheries caused by over-fishing and land-based pollution.²⁰⁰ This crisis demanded a strong management response. Again, the proposed IATTC regime — with its 100% observer coverage, vessel specific limits, rigorous compliance oversight and fleet-wide education and outreach programs — was the very model of modern major management regime.

Political globalism meant developing chapters and alliances in the countries whose support was needed for successful conservation efforts. But that entailed accommodating a development perspective.²⁰¹ In particular, it meant abandoning the rhetoric and the “dolphin-safe” goal until there was an economically viable alternative.

Finally, globalism required abstaining from policies focused solely on unilateral trade coercion isolated from management initiatives. As Greenpeace later testified: “In the case of tuna-dolphin it is not sufficient to look to unilateral trade sanctions or closing of industrialized markets to fish from one fishery as the only tools available. This focus could exacerbate our nation’s political isolation on the international stage and will not bring about the radical reform that is needed”²⁰² Trade leverage was necessary but it had to be linked to a multilateral initiative.

Greenpeace ended up joining the La Jolla process, along with four other prominent environmental NGOs: Environmental Defense Fund, World Wildlife Fund, Center for Marine Conservation, and National Wildlife Federation. For their pains, they would be called the “Slaughterhouse Five” and be pilloried by the animal rights groups and the left wing press.²⁰³ But they had opened a

200. See, e.g., Michael J. Savini, FAO, Summary Information on the Role of International Fishery Bodies with Regard to the Conservation and Management of Living Resources of the High Seas (1991); William T. Burke & Francis T. Christy, Jr., Options for the Management of the Tuna Fisheries in the Indian Ocean, FAO Fisheries Technical Paper No. 315 (1990). The concern intensified with future reports. See, e.g., FAO Fisheries Department, World Review of High Seas and Highly Migratory Fish Species and Straddling Stocks, FAO Fisheries Circular No. 858 (1993); Review of the State of the World Marine Fishery Resources, FAO Fisheries Technical Paper No. 335 (1994).

201. Traci Romine of Greenpeace: “You have to be able to marry an international approach and an approach that develops good public sympathy in these countries. Now, to do that in Latin American, you have to talk about development issues — you cannot talk only about environmental issues. . . . We started out saying end of encirclement, but what did that mean to the Latin countries? It meant joblessness, serious dislocation in certain communities, huge social problems added onto a number of existing social problems, so that’s what they heard. . . . That was the translation of end of encirclement.” Interview with Traci Romine, Tuna-Dolphin Coordinator, Greenpeace International, in La Jolla, Cal. (Oct. 29, 1997).

202. 1988 *Ocean Policy Hearings*, *supra* note 27, at 73.

203. Romine says she became, to these groups, “the devil incarnate.” Interview with Traci Romine, Tuna-Dolphin Coordinator, Greenpeace International, in La Jolla, Cal. (Oct. 29, 1997). For a sampling of the

dialogue with Latin fishers, fleets, and governments. When Juan Carlos Cardenas of Greenpeace Latin America denounced the embargoes, offered a compromise, and invited dialogue, CANAINPES accepted the overture.²⁰⁴ The dialogue opened between fishers and Greenpeace would expand in the months and years ahead. By contrast, Earth Island Institute severed relations with its former ally, Greenpeace, and pursued, with a phalanx of animal rights groups, an ambitious campaign aimed at forcing fishers to capitulate to the "public's" dolphin-safe demands.

6. The GATT Challenge

The reaction of the trade community in the target states was somewhat less moderate. On January 25, 1991, Mexico filed a GATT challenge to the U.S. primary embargo *and* the dolphin-safe label. While few in the U.S. trade community expected a clean win, the September 3, 1991 report of the panel — rejecting the embargo and upholding the dolphin-safe label — would prove unsatisfactory to both Mexico and the United States.²⁰⁵ Mexico was dissatisfied because the GATT decision upheld the cannery boycott, which was more economically threatening than the embargo.²⁰⁶ The United States, on the other hand, objected to the Tuna I panel report principally because of the panel's reasoning on the embargoes.²⁰⁷ Rather than hold on narrow grounds — rejecting the nature of the U.S. comparability standards and the manner of their application — the panel opined, famously, that no country may restrict imports in any manner for the purpose of protecting the environment outside its own

sentiment, see *Save the Dolphin from Purse Seine Nets; a Planet Ark and Earth Island Institute Campaign* (visited Oct. 12, 1999) <<http://www.planet.ark.com.all/new/dolphnewt.html>>: "Now in a shocking turnaround, the U.S. administration, together with Republicans and the anti-environmentalist 'wise-use' movement, has formed an unholy alliance with 5 mainstream 'trade conscious' environmental groups that have been dubbed 'The Slaughterhouse.' " *Id.*

204. Felipe Charat Levy, President of the Tuna Section of CANAINPES, announced in a subsequent press conference, "We are pleased to see that they have changed their politics concerning the tuna-dolphin problem and the embargo We congratulate them for that." *Ecologically and Environmentally, Mexico Has Done More than any Other Country, Says Felipe Charat*, EL MEXICANO - ENSENADA REG. EDITION, Feb. 13, 1992, at sec. D (unofficial translation).

205. See Tuna I, *supra* note 12.

206. It is commonly assumed that Mexico did not press for adoption of the panel report because the United States pressured it not to do so, using NAFTA as leverage. I put the question directly to Mexican Fisheries Undersecretary Carlos Camacho Gaos. He rejected that rumor and offered, instead, the explanation given above. See Interview with Carlos Camacho Gaos, Sub-secretary of Secretaria del Medio Ambiente, Recursos Naturales y Pesca (SEMARNAP), in La Jolla, Cal. (Oct. 28, 1997). Camacho's account rings true. It is certainly consistent with the testimony of other industry spokesmen who stressed the powerful effect of, and concern with, the dolphin-safe campaign. See, e.g., Interview with Felipe Charat Levy, Director of Tuna Operations, CANAINPES, [Mexican fisheries trade association], in La Jolla, Cal. (Oct. 28, 1997) ("What got us to La Jolla was dolphin-safe.").

207. Based on author's personal knowledge and gained while serving as Coordinator for Trade and Environment Policy, USEPA.

jurisdiction.²⁰⁸ Such language, applied literally, would emasculate trade-backed multilateral environmental agreements, including the recently concluded Montreal Protocol on Ozone Depleting Substances. Environmentalists papered street corners with placards showing “GATT-zilla” over-riding national laws, and trampling over the U.S. capitol with a can of DDT in one hand and a dolphin in the other. The free-trade-uber-alles message of the panel decision hardened environmental groups’ opposition to the Uruguay Round and NAFTA alike.

Under these circumstances, both Mexico and the United States agreed not to adopt the panel report. But some sort of response was required. Mexico wanted the embargoes to cease. Continued inaction would weaken U.S. credibility in the GATT because the report, though not adopted, was widely supported by the trade community in Geneva. Both sides sought a solution. David Colson, the chief U.S. State Department fisheries negotiator at the time, concluded that Congress would not lift the embargoes for anything less than a five-year moratorium on dolphin fishing.²⁰⁹ Accordingly, Colson sought and received letters from the Mexican and Venezuelan officials indicating their support for a moratorium on dolphin sets to begin in 1994, in exchange for a lifting of the U.S. embargo in 1992.²¹⁰ Armed with these letters, the Administration submitted legislation to implement the exchange, introduced by Congressman Gerry Studds (the “Studds bill”).

7. The 1992 La Jolla Agreement

Before any such legislation could be passed, however, Mexico, Venezuela, the United States, and the other flag states signed the 1992 La Jolla Agreement, with the support of Greenpeace and the other moderate NGOs.²¹¹ This Agreement — the main contours of which were negotiated at a meeting of the flag states only a month after the exchange of letters — was flatly inconsistent with a moratorium on dolphin sets. The Agreement allowed dolphin sets to continue without restriction, while committing signatories to implement an International Dolphin Conservation Program that would “progressively reduce dolphin mortality in the eastern pacific ocean (EPO) to [insignificant] levels approaching zero . . . while maintaining the populations of yellowfin in the EPO.”²¹² Overall dolphin

208. See Tuna I, *supra* note 12, ¶ 5.31.

209. See Interview with David Colson, former Dep. Asst. Sec. for Oceans and Fisheries Aff., U.S. Dept. of State, in Washington, D.C. (Sept. 27, 1997).

210. See Letter from Guillermo Jimenez Morales, Sec. of Fisheries, Mex. to Hon. James A. Baker III, Sec. of State, U.S. (date not reprinted), reprinted in 1992 *Ocean Policy Hearings*, *supra* note 132, at 13-15; Letter from Jonathan Coles-Ward, Minister, Rep. of Ven. to Hon. James A. Baker III, Sec. of State, U.S. (Mar. 7, 1992), reprinted in 1988 *Ocean Policy Hearings*, *supra* note 27, at 16-17.

211. See 1992 La Jolla Agreement, *supra* note 32. The signatories were Colombia, Costa Rica, Ecuador, Mexico, Nicaragua, Panama, Spain, the United States, Vanuatu, and Venezuela. This included virtually all the flag states. The only non-signatory with a Class 6 vessel in the region the following year was Cyprus, with one vessel. See 1993 IATTC ANN. REP., at 165, tbl. 6.

212. This language made crystal clear the intention of the parties to accept the basic tenets of the U.S. Marine

mortality in the fishery was placed under an aggregate cap that was to decline from 19,500 (1993) to less than 5,000 (1999).²¹³ This cap would be allocated *pro rata* in the form of a dolphin mortality limit (DML) for each "qualified vessel" reasonably expected to set on dolphins in the ensuing year.²¹⁴ Any vessel reaching or exceeding its limit in a given year would be barred from further sets on dolphins for the remainder of that year, and any mortality in excess of a vessel's limit would be deducted from that vessel's mortality limit in the succeeding year.²¹⁵ Every Class 6 vessel would be required to carry an observer to monitor dolphin mortality. Flag governments were allowed to hire their own observers, but IATTC observers were required to cover at least half of the trips. The La Jolla Agreement also created an Implementation Review Panel (IRP) consisting of IATTC staff plus five government delegates (later expanded to six) of participating governments with vessels in the fishery, two industry representatives, and two NGO representatives.²¹⁶

Although the 1992 La Jolla Agreement was officially "non-binding" all signatories complied with it.²¹⁷ In fact, it proved to be the breakthrough agreement on which all future progress has been built.²¹⁸ The Agreement quickly

Mammal Protection Act as it stood prior to the latest dolphin-safe gambit. Since 1972, the MMPA called for reductions to insignificant levels approaching a zero mortality and serious injury rate, without imposing a complete ban on dolphin sets. See 16 U.S.C. § 1371(a)(2). Most marine mammal scientists consider mortality levels of less than 0.1% of the minimum population size for dolphin stocks to be negligible. See National Marine Fisheries Service, Office of Protected Resources, 1994 Report of the PBR (Potential Biological Removal) Workshop, cited in Young et al., *supra* note 17, at 90 n.215. As the 1992 La Jolla Agreement would observe in its preamble, a mortality level of 5,000 per year corresponds to less than 0.1% of the combined population of spotted, spinner, and common dolphins. See 1992 La Jolla Agreement, *supra* note 32, pmbl.

213. See *id.*

214. Participating governments were allowed to adjust the DMLs of qualified vessels either upward or downward "provided that no vessel is assigned an adjusted DML in excess of 15% above the original DML, and that the collective DMLs for that nation's fleet do not exceed that nation's collective DMLs prior to adjustment." *Id.* § 3.

215. See *id.* § 6.

216. See *id.* The IRP was charged with reviewing the observer reports from all Class 6 purse seine vessels in the ETP; identifying rule infractions and reporting them, through the IATTC staff, to the flag-state of jurisdiction; and receiving reports from flag states as to their response to the infraction. The IRP was also given a policy-development role: recommending gear and practice standards, recommending a standardized certification system for captains, maintaining a list of vessels that carry the appropriate gear and captains that have received adequate training, recommending a set of national sanctions for violations of regime rules, and recommending actions to be taken to ensure compliance by non-parties. The first IRP meeting drafted rules of procedure which provided, inter alia, for two-year terms of membership, and gave governmental representatives not only the power to elect individual industry and NGO organizations, but to confirm or veto individuals nominated by those organizations. See *id.* app. II; 1992 IATTC ANN. REP., at 19.

217. See MARINE MAMMAL COMMISSION, 1994 ANN. REP. TO CONG., at 121-23.

218. The IATTC Implementation Review Panel (IRP) has met twice a year every year to review observer reports of vessels and make recommendations in regard to vessel infractions and offer other policy recommendations. Minor infractions have been numerous, but major infractions (tampering with observers, exceeding DML, fishing without a DML) have been relatively few. Flag states have investigated and at times taken disciplinary action against offending captains, owners, and crews, though not always with the alacrity that environmentalists would like. The IRP has issued an annual report setting forth a full description of the IRP's

gained the support of the U.S. and foreign fleets, all foreign governments having vessels in the fishery, and environmental groups across Latin America. It received the strong endorsement of Greenpeace, which testified in July *against* the moratorium (reversing the stance it had taken in March).²¹⁹ Senator Breaux of Louisiana introduced a bill to lift the embargo on any country joining and complying with the 1992 La Jolla Agreement. The Bush Administration, however, favored the Agreement only as an alternative to the moratorium, to be supported should the latter fail to pass.²²⁰

D. LONG-DELAYED RESOLUTION (1992 TO 1999)

Congress thus had a choice between two bills in the summer of 1992. The Studds bill called for a moratorium on dolphin sets beginning March 1, 1994 and a ban on the sale in the United States of non-dolphin-safe tuna after that date.²²¹ The Breaux bill would have lifted the embargo on countries complying with the La Jolla Agreement.²²² Passage of the latter would have ended the tuna-dolphin controversy in 1992 (except for the remaining issue of the dolphin-safe label).

It was, however, the Studds bill that passed, albeit with a self-immolating

compliance assurance activities, findings, recommendations, and government actions taken in response to IRP recommendations. *See, e.g.*, 1996 IATTC INTERNATIONAL REVIEW PANEL ANN. REP. (unpublished manuscript on file with author). The IATTC staff has taken pains to ensure the integrity of observer reports by hiring biologists who do not have economic links to any fleet, by constantly rotating them among vessels, and by carefully cross-checking data of the reports of observers against those of other observers on prior trips of the same vessel, looking for discrepancies. If the staff develops questions about an observer which inquiry does not resolve, it simply does not hire him or her for the next trip. *See* Interview with David Bratten, Senior Scientist, IATTC Tuna-Dolphin Program, in La Jolla, Cal. (Aug. 11, 1997). There have been reports of attempts to corrupt IATTC observers. In these cases, obtaining legal disciplinary action against offenders has been complicated by the lack of legal authority in certain Latin states to punish infractions of a "non-binding" agreement. *See* Telephone Interview with Martin Hall, Ph.D., Chief Scientist, IATTC Tuna-Dolphin Program (Aug. 18, 1999). And, of course, the most troublesome instances are those that are not reported. Though worries about integrity are inescapable in any observer program, the credibility of the IATTC program is enhanced by the energetic concern manifested by IATTC officials, by the statistical means they employ for cross-checking reports, and by their sole discretion to hire (and decline to re-hire) the observers under their supervision. The Mexican observer program presents more difficult problems. Mexico is the only country to insist on its own observers, which cover 50% of all dolphin trips by Mexican vessels. The policy probably originated in response to the U.S. observer program, which likewise employed NFMS observers. The U.S. program was disbanded in 1995, however, while Mexico's was not. Mexican observer reports come to the IRP like any other, and statistical discrepancies have emerged on occasion which have no satisfactory explanation. Moreover, given the unfortunate difficulty that Mexico has experienced with controlling corruption at many levels, one must wonder about an arrangement that allows 50% of the trips of the largest fleet in the region to be monitored by Mexican observers which IATTC staff does not hire and cannot control. If there is interest in strengthening the IATTC Dolphin Program, and rendering it more credible, this would be a good place to start.

219. *See* 1992 *Ocean Policy Hearings*, *supra* note 132, at 77-79 (prepared statement of Bruce McKay, Greenpeace).

220. *See id.* at 24-29 (prepared statement of Amb. Colson, Dep. Ass't. Sec. For Oceans and Fisheries Aff., Dep't of State).

221. *See* H.R. 5419, 102d Cong. (1992).

222. *See id.*

amendment ("the Tauzin amendment") that the Bush Administration did *not* support. The International Dolphin Conservation Act of 1992 ("1992 Act") stipulated that any nation that joined the moratorium and then violated it would be subject to a mandatory import ban (not a discretionary one as per the Pelly Amendment) on all yellowfin tuna products *and* on all fish products in categories which comprised more than 40% by value of total fish products from that country in the preceding year.²²³ The Amendment effectively invited Mexico and Venezuela to mortgage their pledge to fish dolphin-safe (an economically uncertain proposition) using their entire shrimp industry as collateral. Ambassador Colson has said that the Tauzin amendment "killed" the U.S. deal with Mexico and Venezuela.²²⁴ However, it seems probable that the deal was already a dead letter by the time the Act was passed, due to the vehement opposition of Mexican and Venezuelan fishers combined with the groundswell of support that emerged for the La Jolla Agreement.²²⁵

In any case, the Latin states' rejection of the moratorium triggered the Act's fallback provision, which stipulated that in the event that all major fishing nations refused the moratorium, U.S. fleet mortality was to be capped at 1000 for calendar year 1992 and 800 for the fourteen month period from January 1, 1993 to February 28, 1994.²²⁶ Thereafter, the Act required statistically significant reductions in U.S. fleet mortality each year, to levels approaching zero by 1999.²²⁷ Moreover, the Act categorically banned the sale of all non-dolphin-safe tuna in the United States after June 1, 1994, regardless of whether any country joined the moratorium.²²⁸ The law thus ensured that the very significant conser-

223. See International Dolphin Conservation Act of 1992, Pub. L. No. 102-523 § 2(a), 106 Stat. 3425, 3425-32 (codified at 16 U.S.C. § 1415(b)(2) (1992)). As Colson observed, this was an oblique way of saying "shrimp." See 1992 *Ocean Policy Hearings*, *supra* note 132, at 29 (prepared statement of Amb. Colson, Dep. Asst't. Sec. For Oceans and Fisheries Aff., Dep't of State). Representative Tauzin of Louisiana had sponsored the amendment on behalf of his shrimping constituents. Environmental groups embraced it because they harbored a deep suspicion that the Latin fleets planned to pull a "bait and switch:" get the embargo lifted for two years, then renounce the deal and continue dolphin-sets. The Tauzin amendment promised to punish nations who did that. See Interview with David Colson, former Dep. Asst. Sec. for Oceans and Fisheries Aff., U.S. Dept. of State, in Washington, D.C. (Sept. 27, 1997). In other words, the Tauzin amendment was a classic "Baptist-bootlegger" alliance conveniently struck for the protection of high-seas dolphins and U.S. shrimpers.

224. See Interview with David Colson, former Dep. Asst. Sec. for Oceans and Fisheries Aff., U.S. Dept. of State, in Washington, D.C. (Sept. 27, 1997).

225. See, e.g., Letter from Guillermo Jimenez Morales, Sec. of Fisheries, Mex. to Hon. James A. Baker III, Sec. of State, U.S. (July 20, 1992), reprinted in 1992 *Ocean Policy Hearings* *supra* note 132, at 15-16 (stating that Mexico would not accept the Studds bill as amended *and* that the 1992 La Jolla Agreement "offers the opportunity to resolve, in a responsible and sustainable manner, tuna fishing and incidental dolphin mortality. Its approval by the countries with the active participation of the business, ecological groups, and scientists demonstrates that *this is the way to a joint solution of the problem.*" (emphasis added)).

226. See International Dolphin Conservation Act of 1992, Pub. L. No. 102-523, § 2(a), 106 Stat. 3425 repealed by International Dolphin Conservation Program Act, Pub. L. No. 105-42, § 6(a), 111 Stat. 1122 (1997).

227. See *id.*

228. See *id.* § 307.

vation efforts called forth by the 1992 La Jolla Agreement would be rewarded by continuing embargoes and boycotts.

Perhaps the most remarkable fact of the tuna-dolphin controversy is that the Agreement did not immediately collapse. The reasons for such resilience are by no means obvious. The fleets were certainly ready to bolt and they pressed their governments to do likewise. Great credit is due to the leadership effort of IATTC staff in working behind the scenes to hold together the coalition they had worked so hard to forge. Also helpful was the fact that U.S. Ambassador Colson had been savvy enough to support the La Jolla process as "the right thing to do" without holding out much hope that it would get the embargoes and boycotts lifted in the short-term.²²⁹ As a result, expectations had not been unduly raised. The following factors provided additional sources of resilience.

- *Buy-in.* Through many weeks and months of dialogue and negotiation, target states, if not the fleets themselves, accepted the design and the normative framework articulated in the La Jolla Agreement: reducing mortality to insignificant levels while maintaining yellowfin stocks at a level that would ensure maximum sustainable yield. The lead fishing states responded to the environmental stigma implied by the U.S. embargoes by embracing a strong "conservationist" position in the IATTC forum and elsewhere.²³⁰
- *Low cost of compliance.* By 1992 it was clear that significant mortality reductions were achievable at a low cost, though no one yet anticipated the dramatic gains that would flow from installing the right kind of program.
- *Residual market risk.* The European market was still in some jeopardy. Presented with an either/or choice between dolphin-safe and unbridled dolphin slaughter the EU countries or canners might well choose dolphin-safe. The fishers and flag states needed a third option to offer.²³¹
- *Continued hopes for re-opening the U.S. market.* It was clear that failing to conserve would guarantee indefinite prolongation of the U.S. embargoes. All recognized that the program would have to prove itself in the field before it would change the political climate in the United States or Europe. Although no one promised that Congress would quickly repeal the embargoes, it was hoped that a Congress confronted with a proven regime and real conservation accomplishments would realize, in time, the error of its ways, lift the embargoes and amend the legal definition of dolphin-safe.²³² The key to this

229. See 1992 *Ocean Policy Hearings*, *supra* note 132, at 28 (prepared statement of Amb. Colson, Dep. Ass't. Sec. For Oceans and Fisheries Aff., Dep't of State).

230. See Letter from Guillermo Jimenez Morales, Sec. of Fisheries, Mex. to Hon. James A. Baker III, Sec. of State, U.S. (July 20, 1992), *reprinted in* 1992 *Ocean Policy Hearings* *supra* note 132, at 15-16; Letter from Jonathan Coles-Ward, Minister, Rep. of Vem. to Hon. James Baker III, Sec. of State, U.S. (July 22, 1992), *reprinted in* 1992 *Ocean Policy Hearings* *supra* note 132, at 17-18 (citing these considerations, La Jolla Agreement, and Tausin Amendment as joint bases for renouncing the Studds legislation).

231. See Interview with Felipe Charat Levy, Director of Tuna Operations, CANAINPES, [Mexican fisheries trade association], in La Jolla, Cal. (Oct. 28, 1997).

232. See Interview with Carlos Camacho Gaos, Sub-secretary of Secretaria del Medio Ambiente, Recursos Naturales y Pesca (SEMARNAP), in La Jolla, Cal. (Oct. 29, 1997). Of course, no one in 1992 anticipated how

TABLE 2
DOLPHIN MORTALITY UNDER THE LA JOLLA AGREEMENT

Year	Allowable Mortality Cap	Actual Mortality
1993	19,500	3,601
1994	15,500	4,095
1995	12,000	3,274
1996	9,000	2,547

perception lay in the rapprochement with Greenpeace and the other moderate environmental groups.

In any case, flag states did comply with the La Jolla Agreement and their fleets' performance exceeded all expectations. Table 2 tells the story.²³³

All Class 6 vessels fishing in the ETP participated in the program, received DMLs, and carried observers. In 1993, no vessel exceeded its mortality limit; in 1994, only two vessels exceeded their limits; in 1995, only four.²³⁴ Notably, most of the reduction in mortality was due to improved performance of vessels in releasing dolphins alive from dolphin sets, rather than a decline in the number of sets.²³⁵ Indeed, the kill rate achieved by the international fleet under the IATTC regime was *one-tenth* the kill rate of the highly regulated U.S. fleet in 1988, using virtually the same technology (but with greater skill and care).

long it would take to get the U.S. law and label changed. As Charat remarked to this author years after the event: had they known, they probably would not have bothered. *See* Interview with Felipe Charat Levy, Director of Tuna Operations, CANAINPES, [Mexican fisheries trade association], in La Jolla, Cal. (Oct. 28, 1997).

233. *See* 1993 IATTC ANN. REP. at 177, tbl. 20; 1994 IATTC ANN. REP. at 173, tbl. 16; 1995 IATTC ANN. REP. at 182, tbl. 12; 1996 IATTC ANN. REP. at 203, tbl. 34.

234. *See* IATTC INT'L REVIEW PANEL, 1993 ANN. REP. TO GOV'TS ATTENDING THE 27TH INTERGOVERNMENTAL MTG., at 2 app. V (June 5, 1994) (providing 1993 data) [hereinafter 1993 IRP ANN. REP.]; Minutes of the 8th Mtg. of the Int'l Review Panel, Jan. 23-24, 1995 app. III (providing 1994 data); and 1995 IATTC ANN. REP. at 43 (providing 1995 data).

235. Mortality rates declined from 1.5 dolphins per set in 1992 to 0.5 dolphins per set in 1993, and 0.45 dolphins per set in 1995, with no change in technology or know-how. *See* MARINE MAMMAL COMMISSION, 1994 ANN. REP., *supra* note 234, at 2. At this kill-per-set rate the dolphin sets that occurred in 1986 would have yielded an aggregate mortality of 5,450 dolphins instead of the 133,000 that died in that year. *See* 1995 IATTC ANN. REP., at 44; 1993 IATTC ANN. REP., at 51. The Dolphin Program inspired dramatic over-compliance because of the way the regime was designed. Each vessel received a very limited share of the overall quota: 183 dolphins in 1993, *see* 1993 IRP ANN. REP., *supra* note 234, at 2; 127 in 1994; and 114 in 1995. *See* 1994 IATTC ANN. REP., at 52-53. This was the vessel's quota for the entire calendar year. Because of the huge variability of fishing conditions and associated mortality levels, a vessel that does not take careful precautions can easily kill this many dolphins in a single set. In fact, significant mortalities can happen even with the best of precautions. Each vessel, therefore, has strong incentives to release every dolphin that could be released up to the last set of the year. The consequence of non-tradable dolphin mortality limits has been that most vessels stay well under their quota throughout the year, leading to over-compliance.

Since 1993, there has been only one recorded instance of flag governments allowing vessels to fish outside IATTC supervision. In 1997, Belize and Honduras, who were not regime members, extended their flag to vessels equipped to set on dolphins. The matter was resolved quietly after consultations with the IATTC and the United States, who reminded these countries of U.S. trade policy with regard to countries that undermine international conservation agreements.²³⁶ However, the regime participants themselves have never authorized trade measures to enforce the agreement against outsiders. It appears that they have been dissuaded from doing so in part by GATT/WTO concerns.²³⁷ Nonetheless, they have assumed the United States would use ETL against outside violators. So, apparently, have the outsiders.

Despite the success of dolphin-release and growing isolation of the no-encirclement policy, the MMPA left little room for discretion, and Congress failed to amend the MMPA. Through 1994 and 1995 anger built among foreign fleets and ETP-flag governments. On July 14, 1995, the governments of Costa Rica, Colombia, Ecuador, Mexico, Panama, and Venezuela declared that "the stability of the La Jolla Agreement is endangered" if Congress failed in that session to lift the embargoes and amend the label to include all tuna harvested in compliance with the La Jolla program.²³⁸ Nevertheless, the Clinton Administration showed no leadership. Finally, in the spring of 1995, negotiations opened directly in Washington between the five moderate NGOs and Carlos Camacho Gaos of Mexico (representing the Latin state interests).²³⁹ Their discussions were lengthy and difficult, but they produced an agreement which all relevant governments (including the United States) would later accept and formalize as the Declaration of Panama.²⁴⁰ In exchange, the five moderate NGOs pledged their support for changes in U.S. law to implement the U.S. *quid pro quo*.²⁴¹

The Panama Declaration strengthened the Agreement by establishing a per-stock per-year mortality cap of 0.2% of the Minimum Estimated Abundance (Nmin) through 2000, followed by a 0.1% cap thereafter, with all sets on such stocks to be banned for the remainder of the calendar year once that limit was reached in a year. It also called for a comprehensive by-catch assessment and

236. See 1996 IATTC INTERNATIONAL DOLPHIN CONSERVATION PROGRAM INTERNATIONAL REVIEW PANEL ANN. REP., at 5; see also *id.* app. V (U.S. Statement on Non-compliance).

237. See Declaration of Panama, Annex II, Oct. 4, 1995, *reprinted in* 143 CONG. REC. S397 (1997) [hereinafter Panama Declaration].

238. See Declaration of the Governments of Columbia, Costa Rica, Ecuador, Mexico, Panama, and Venezuela, in the framework of the intergovernmental Meeting of the La Jolla Agreement held in San Jose, Costa Rica, on July 14, 1995 [hereinafter San Jose Declaration] (on file with author).

239. See Interview with Carlos Camacho Gaos, Sub-secretary of Secretaria del Medio Ambiente, Recursos Naturales y Pesca (SEMARNAP), in La Jolla, Cal. (Oct. 27, 1997).

240. See Panama Declaration, *supra* note 237.

241. See IATTC International Review Panel, Minutes of the 10th Meeting, held in Panama City, Panama, Oct. 1-2, 1995, app. 8.

reduction program.²⁴² In return, Annex I set forth the "envisioned changes in U.S. law:" (1) the United States would lift the primary and secondary embargoes on tuna caught in compliance with the La Jolla Agreement as modified by the Panama Declaration; (2) provide effective market access for such tuna; and (3) amend the definition of dolphin-safe to apply to any tuna caught in a set in which no dolphin mortality was observed.²⁴³ Although the moderate environmental groups regarded the Panama Declaration as the essence of what they had been trying to achieve since 1972 (commitment to reduce incidental marine mammal mortality to "insignificant" levels), the Panama Declaration was not nearly as popular with fishers and flag states. They considered the 0.2% / 0.1% annual stock mortality limits to be more strict than biology required.²⁴⁴ They noted the inconsistency of these very stringent targets with the levels of marine mammal mortality allowed under other MMPA management programs.²⁴⁵ Most of all, they harbored serious doubts as to whether the 0.1% rate was achievable.²⁴⁶ And the fleet-wide ban that would be triggered by exceeding these limits seemed like a throwback to the era of collective punishment that the U.S. fleet had endured in the 1970s and 1980s. Nonetheless, the flag states and fishers agreed to the Panama Declaration in hopes of getting the dispute resolved, with an understanding that the issue will be revisited should compliance problems arise.²⁴⁷

In the spring of 1996, the Clinton Administration submitted new legislation to implement the Panama Declaration, but it still failed to pass. Mexico suspended its formal participation in the IATTC Tuna-Dolphin Program in protest; other parties issued threats of non-cooperation.²⁴⁸ Finally, on July 15, 1997, President Clinton signed into effect a law that implemented most, though not all, of the U.S. commitment. The law authorized the President to lift the embargoes on countries complying with a still-to-be-negotiated binding agreement implementing the Panama Declaration once the Secretary of State certified that such an agreement was in effect.²⁴⁹ However, the amendment of the dolphin-safe label was deferred

242. See Panama Declaration, *supra* note 237.

243. See *id.*

244. The fishers' view was supported by NMFS research. See Timothy Gerodette, NMFS Report: A Comparison of Mortality Limits for the Eastern Tropical Pacific dolphins Under the Declaration of Panama and Under Potential Biological Removal Management, Admin. Rep. LJ-96-18 at 2-3, 10 (internal NMFS document, on file with author) (noting that the MMPA allows marine mammal kill rates in other fisheries that are several times the 0.2% Nmin rate applicable to ETP dolphin stocks, and showing that the fleet's actual take of the two key target stocks in 1995 exceeded the 0.1% of Nmin ceiling).

245. See *id.*

246. James Joseph concurred with their concern on this point. See Interview with James Joseph, Director of Investigations, IATTC, in La Jolla, Cal. (Aug. 11, 1997).

247. "In the event that annual mortality of 0.1% of Nmin is exceeded for either Eastern Spinner or Northeastern Spotted dolphin stocks [the primary target stocks], the governments commit to conduct a scientific review and assessment and consider further recommendations." Panama Declaration, *supra* note 237.

248. See IATTC International Review Panel, Minutes of the 14th Mtg., held in Santa Maria, Colombia, Feb. 19-20, 1997, app. 6.

249. Congress could not, however, resist one final act of legislative micro-management. Rather than simply

until March 1999, pending the results of new research — which Congress funded at U.S.\$ 11 million — to determine whether there is basis for a finding that the tuna fishery is having a “significant adverse effect” on any ETP dolphin stock.²⁵⁰ Only if the March 1999 finding was negative (i.e., no finding of significant adverse impact) would the no-encirclement definition of dolphin-safe be changed to the no-observed-dolphin-mortality-in-the-set definition contemplated by the Panama Declaration.²⁵¹ The law provides that sometime during the period from July 2001 to December 2002, NMFS is to render a final decision on whether intentional encirclement of dolphins has had an adverse impact on stocks. Based on that finding, NMFS will either revoke or finalize the label definition change.

The proposal to lift the embargoes on nations participating in the IATTC program was relatively non-controversial: the animal rights groups recognized that the embargoes were undercutting the label. But they strenuously resisted any change in the “dolphin-safe” definition on grounds that a practice of encircling dolphins that produces over 2,000 fatalities a year is hardly “dolphin-safe.” They also claimed that observed mortality may underestimate actual mortality because observers do not record the deaths of dolphins who die later as a result of injuries sustained in the chase, infant dolphins who lose their mothers, and dolphins who fall prey to sharks while in an exhausted, weakened, or injured state. And they pointed to (controversial) studies indicating that the stress of repeated chase and encirclement — fishers tend to set on the same herds over and over again — could impair reproductive functions.²⁵² IATTC and fishers disputed all three claims. Ultimately, the issue was resolved by the compromise described above, which was itself helped considerably by Senator Boxer’s threat of filibuster.

Among target states and fleets, the United States’s failure to pass a clean bill implementing the Panama Declaration was a source of considerable resentment. Nonetheless the bill that passed appears to have provided a sufficient basis to go

require conformity to the terms of the 1998 Agreement as a condition of imports, Congress saw fit to further require that any nation importing ETP purse-seine caught yellowfin tuna into the United States must ensure that the “total dolphin mortality limits . . . permitted for that nation’s vessels under the International Conservation Program [of the IATTC] . . . do not exceed the limits determined for 1997, or for any year thereafter,” consistent with the objective of progressively reducing dolphin mortality to a level approaching zero through the setting of annual limits and the goal of eliminating dolphin mortality, and the requirements of the International Dolphin Conservation Program.” 16 U.S.C. § 1371(a)(2)(B)(iii) (1999). But the IDCP does not require continual reduction in mortality if research shows that the key target stocks are increasing.

250. See International Dolphin Conservation Program Act, Pub. L. No. 105-42, § 8, 111 Stat. 1122 (1997) (codified as amended at 16 U.S.C. § 1362 (1997)).

251. The latter definition will trigger a major verification and tracking arrangement (of uncertain workability and credibility) by which tuna caught in zero-mortality sets and other tuna will be segregated in different holds of the ship for labeling purchases, and kept segregated throughout the distribution process thereafter. The Act instructs NMFS to figure out how to do this and issue regulations. See *id.* § 5(b), amending 16 U.S.C. § 1385(f).

252. Compare *Tuna Dolphin Issues: Hearings to Obtain Testimony on H.R. 2823, International Dolphin Conservation Act and H.R. 2856, International Dolphin Protection and Consumer Information Act of 1995, Before the Subcomm. on Fisheries and Wildlife and Oceans of the House Comm. on Resources*, 104th Cong., 2d Sess. 321 (1996) (statement of James Joseph, Director, IATTC), with *id.* at 249, 369 (statement of Jeffrey B. Pike, Coordinator, Dolphin-safe Fair Trade Campaign).

forward. The 1998 Agreement on the International Dolphin Conservation Program ("1998 Agreement"), signed on May 15, 1998 codifies the specific commitments made in the Panama Declaration; establishes the rudiments of a verification and tracking system which will come into play if and when the dolphin-safe label is amended; and calls for a comprehensive program to address the problem of non-dolphin by-catch in the fishery.²⁵³ As of this writing, four nations (Mexico, Panama, Ecuador, and the United States) have ratified the agreement, and it is now in force.²⁵⁴ On March 18, 1999, NMFS released the preliminary results of its investigation into the status of dolphin stocks. The agency found no evidence that existing levels of mortality were harming the stocks and authorized the provisional lifting of embargoes and amendment of the dolphin-safe label, effective March 3, 1999, the effective date of the 1998 Agreement.²⁵⁵

Such are the events that gave rise to one of the most effective environmental regimes in the world today. The turbulent and tortuous history of the regime appears to have left the IATTC management program for *both* tuna and dolphins stronger than it has ever been. Profitability is high, members are returning to the organization, and IATTC observers are on every boat. These observers monitor tuna catch as well as dolphin mortality, and will clearly strengthen the Commission's *tuna* conservation program. Building on the success of the IATTC Tuna-Dolphin Program, the member states are now pursuing a by-catch reduction program. Most of all, the IATTC Tuna-Dolphin Program has created a political consensus and momentum for cooperation in that regime which has few if any parallels in other international fisheries commissions or even pollution control regimes.²⁵⁶

Yet the history of this regime raises as many questions as it answers. Why did nations and fleets agree to form this regime and then so fully comply with it? Was it concern with dolphin mortality and/or discovery of inexpensive ways to avoid it? Or did success derive from the ingenuity of regime designers in finding a simple, salient regulatory mechanism for reducing mortality — one that sent the right signals to fishers and fleets, providing each fisher and flag state with assurance that its conservation efforts would be matched by others? Were states seeking to preserve their reputation as reliable negotiating partners or to achieve

253. 1998 La Jolla Agreement, *supra* note 34.

254. *See id.*

255. *See* Taking of Marine Mammals Incidental to Commercial Fishing Operations: Proposed Rule, 64 Fed. Reg. 31,806, 31,808 (1999).

256. The effectiveness of the Tuna-Dolphin Program is disputed by some. Dolphin lovers and animal rights activists object that it allows fishers to continue the practice of chasing, encircling, and setting nets on dolphins in order to catch the tuna that swim beneath them. For environmentalists, policymakers, and students of international law and relations, however, the salient facts are that the Program established ambitious, verifiable, and environmentally defensible goals for environmental performance — goals, in fact, that had eluded the *best* performing national program in previous years — and achieved those goals. By this measure of effectiveness, the Tuna-Dolphin Program has been effective.

gains in other fora? Was it because parties considered the 1992, 1995, and 1998 Agreements legitimate and fair? Was success the product of visionary leadership? Or does trade leverage get the credit?

Clearly, trade leverage, when it is used, operates in a complex policy domain in which a panoply of forces and incentives also play a role. These other incentives may favor cooperation, oppose it, or favor cooperation on some terms but not others. To understand the role of trade leverage one must view its impact holistically and contextually, within the framework of a general explanation of why nations cooperate in international relations.

III. THE TUNA-DOLPHIN CASE AND INTERNATIONAL RELATIONS THEORY

The question of why nations cooperated in the tuna-dolphin case is obviously part and parcel of a broader question of why nations cooperate in the absence of world government or coercive hegemonic power. In recent years, International Relations (IR) and International Law (IL) theorists have formed a partnership of sorts in exploring this question in a variety of policy contexts.²⁵⁷ The strength of IR theory lies in its ability to isolate and reveal the manifold forces and constraints that shape the behavior of states and non-state actors and to explore the dynamic of their operation in an organized and rigorous way. However, there are two main weaknesses of IR theory: a proliferation of competing models;²⁵⁸

257. Compare Kenneth W. Abbott, *Modern International Relations Theory: A Prospectus for International Lawyers*, 14 YALE J. INT'L L. 335, 337 (1989) ("With a few notable exceptions, scholars in these two fields have long proceeded on separate tracks."), with Anne-Marie Slaughter et al., *International Law and International Relations Theory: A New Generation of Interdisciplinary Scholarship*, 92 AM. J. INT'L L. 367, 383 (1998) (reviewing a wide range of IR/IL collaborative projects and noting that, as of 1998, "political scientists and international lawyers have been reading and drawing on one another's work with increasing frequency and for a wide range of purposes").

258. Keohane has dubbed the first problem "model mania." Robert O. Keohane, *Studying Cooperation and Conflict: Intra-Rationalistic and Extra-Rationalistic Research Programs*, Address at a Roundtable on Conflict and Cooperation, American Political Science Association Annual Meeting, in San Francisco, Cal. (Aug. 1996), quoted in Slaughter et al., *supra* note 257, at 375. For a superb overview of the field, see ANDREAS HASENCLEVER ET AL., *THEORIES OF INTERNATIONAL REGIMES* (1997). In that review, the authors have usefully grouped these contending models into three broad categories — "knowledge-based," "interest-based," and "power-based" theories — each of which has a number of variant subdivisions. I basically follow their taxonomic lead in the analysis that follows, except that I give special mention to Franck's concept of legitimacy and Young's concept of leadership, which Hasenclever et al. review under the rubric of "knowledge-based" and "interest-based" theory, respectively.

The authors have likened the rivalry among these models to "trench warfare." In particular, they observe that "[r]ealists (power-based theorists) and neoliberals (interest-based theorists) have recently been engaged in an intense, at times almost bitter, dispute about which of the two schools is better equipped to analyze and explain international regimes and other phenomena in world politics." *Id.* at 212. But they, like others, also point out that much of the rivalry is unnecessary and they devote the final chapter of *Theories of International Regimes* to exploring the possibilities for synthesis. *Id.* at 211-24; see also Robert Keohane, *Institutionalist Theory and the Realist Challenge after the Cold War*, in *NEOREALISM AND NEOLIBERALISM: THE CONTEMPORARY DEBATE* 269 (David A. Baldwin ed., 1993) (calling for synthesis of doctrine); Duncan Snidal, *The Relative-Gains Problem for International Cooperation: Response*, 87 AM. POL. SCI. REV. 701, 741 (1993) (same); Slaughter et al., *supra* note 257, at 381-82 (reviewing various challenges to the law/power dichotomy); *id.* at 383-93 (mapping out a

and the failure, so far, of IR theorists to address the special case of environmental trade leverage.²⁵⁹ The first weakness has impeded efforts to arrive at a single, comprehensive model of international behavior; the second, regrettably, has marginalized IR theory as a guide to trade and environment policy. Nonetheless, IR theory provides a trove of hypotheses and insights that shed significant new light on the basic questions of whether, when, how, and why environmental trade leverage works or fails.

This Part will re-examine the tuna-dolphin case through the optic of five leading theories of international cooperation, each focused on a distinct dimension of the cooperative dynamic. In simplest terms, "cognitivist" or "knowledge-based" models focus on the role of knowledge and self-identification in forming perceptions of a shared interest in cooperation. "Moral" accounts focus on the compliance-pull of notions of legitimacy and fairness and of law itself. "Neoliberal" or "interest-based" models assume a prior national interest in cooperation on some terms, and focus on the functions of international institutions in reducing transaction costs and solving certain structural problems of collective action. "Power-based" accounts stress the role of national power and leverage, either as

proposed collaborative IR/IL research agenda). Reporting the results of a large-scale empirical investigation of international cooperative projects in polar regions, Young and Osherenko conclude: "we are now convinced that it will not do to confine scholarly attention in this field to a search for bivariate relationships governing the process of regime formation. Those who proceed in this manner will . . . fail to develop a clear picture of the process of regime formation . . . *Whereas students of regime formation have often sought to demonstrate the primacy of power factors, or interest factors, or knowledge factors in the formation of international regimes, we have become convinced that some of the most illuminating insights . . . arise when we direct our attention to the interactions among these factors.*" Young & Osherenko, *supra* note 20, at 239-41 (emphasis added). The tuna-dolphin experience, it will be seen, powerfully confirms this insight. In the analysis that follows I adapt the basic (broad and inclusive) framework and hypotheses developed by Young and Osherenko with, again, a special mention of legitimacy. And I implement their advice to focus on the interactions of key variables. These interactions, in fact, provided many of the channels along which flowed the influence of trade leverage.

259. See, e.g., INSTITUTIONS FOR THE EARTH, *supra* note 6 (focusing on concern, governmental capacity, and international contractual environment but without focus on leading trade and environment cases or on the role of trade leverage in cases where it was used); Ronald B. Mitchell, *Regime Design Matters: Intentional Oil Pollution and Treaty Compliance*, 48 INT'L ORG. 425, 431 (1994) (noting the successful use of trade threats to obtain participation in and compliance with international vessel design standards, without drawing any larger inferences). One exception to the general rule of IR theory disinterest in trade leverage is found in Peter Haas's insightful, if brief, analysis of the role of trade leverage in the formation of the ozone treaty. See Peter M. Haas, *Stratospheric Ozone: Regime Formation in Stages*, in POLAR POLITICS: CREATING INTERNATIONAL ENVIRONMENTAL REGIMES 152, 165-69 (Oran R. Young & Gail Osherenko eds., 1993) (analyzing five global commons regimes, only one of which, the ozone treaty, was brought into being with the assistance of trade measures); see also LISA L. MARTIN, *COERCIVE COOPERATION: EXPLAINING MULTILATERAL ECONOMIC SANCTIONS* (1992) (using game theory to explore the determinants of one important aspect of trade leverage — the degree of multilateral cooperation in applying leverage — but focusing exclusively on "high" foreign policy cases). Chayes & Chayes' *The New Sovereignty* is devoted to de-bunking the legitimacy and effectiveness of economic sanctions generally, as a tool of cooperation. See CHAYES & CHAYES, *supra* note 7. But their analysis is anecdotal, confined to the study of leverage as a tool of *compliance* (rather than regime formation), and focused almost exclusively on "high" foreign policy cases, such as Libyan sanctions, the Cuba embargo, etc. For reasons explained *infra* note 261, I do not believe it is valid to draw inferences about the legitimacy or effectiveness of leverage across disparate policy contexts.

goal or instrument of policy. Finally, Young, Osherenko, and others have called attention to the importance of individual leadership in international relations.²⁶⁰

In each case, the analysis will involve testing each theory against the experience of tuna-dolphin; indicating the refinements to theory suggested by that experience; tracing the causal pathways, direct and indirect, by which trade leverage shaped behavior; and, finally, considering, in each case, whether and to what degree the tuna-dolphin experience is generally relevant, or *sui generis*, as the case may be. Obviously, the complete details of the various theories cannot be presented here, nor are these hypotheses intended to be exhaustive of the IR field. The aim is simply to set out in clear, understandable terms the basic theories which illuminate the pathways through which trade leverage shapes behavior, and the factors that constrain its effectiveness in promoting environmental cooperation.

While the focus will be on substance, two points of method merit special mention here. First, environmental cooperation is not fungible with cooperation in other contexts and environmental trade leverage is not fungible with other types of trade leverage. While ETL bears some similarities to sanctions deployed in the "high foreign policy" setting, there are also important differences.²⁶¹ The

260. The first three categories follow the classification scheme adopted in the Hasenclever et al. study and the Young and Osherenko empirical project. See HASENCLEVER ET AL., *supra* note 258; Young & Osherenko, *supra* note 20. Separate mention of the role of individual leadership follows Young and Osherenko in regarding individual leadership as an important and cross-cutting variable. *Id.* at 230 ("the role of individual leaders received such strong support that we now believe it constitutes a necessary condition for regime formation"); *id.* at 232 ("One of the clearest and strongest findings of the project is that [individual] leadership is a cross-cutting factor. Leadership is both affected by and affects power relationships; it also shapes the values and ideas discussed in connection with knowledge-based hypotheses."). I have chosen *not* to formally include contextual factors, as Young and Osherenko do, because such factors are by definition a residual variable which eludes systematic theorizing. Finally, I have chosen to give special and separate mention of perceptions of legitimacy and fairness, which Hasenclever and Young subsume under the "cognitive" and "interest-based" theories, respectively. See *id.* at 232; HASENCLEVER, *supra* note 258, at 169-76. The very disagreement on the classification is evidence of the imperfectness of the fit within other classifications. Clearly, perceptions of legitimacy and fairness involve knowledge and perceptions of interest of a sort: a moral sort. In any case, the rubric is less important than the analysis. For prominent expositions of the moral force of perceptions of legitimacy and fairness in international politics, see LOUIS HENKIN, *HOW NATIONS BEHAVE: LAW AND FOREIGN POLICY* (1968); THOMAS M. FRANCK, *THE POWER OF LEGITIMACY AMONG NATIONS* (1990) [hereinafter FRANCK, *LEGITIMACY*]; FRANCK, FAIRNESS, *supra* note 2; Abram Chayes & Antonia Handler Chayes, *On Compliance*, 47 INT'L ORG. 175 (1993); CHAYES & CHAYES, *supra* note 7.

261. For example, ETL typically does not implicate fundamental security interests or the basic power structure of the target state. ETL is generally much more narrowly focused and less invasive than sweeping national security embargoes or export controls. ETL often (though not always) sends direct economic signals to economic actors abroad, yielding an economic calculation that is quite unlike the essentially political calculation involved in the high foreign policy setting. ETL operates in the milieu of an international environmental policy discourse that has its own unique features. There is a heavy scientific and technical component to environmental policy making which is almost entirely lacking in most trade or foreign policy disputes. The national policies sought by environmental sanctions often require significant national scientific, technical, administrative, and law enforcement capacity, a capacity that is often lacking in many countries and needs to be built. Environmental disputes often have an emotional resonance with the public that is lacking in most trade and even foreign policy disputes. ETLs are often targeted at democracies; foreign policy sanctions

burden of proof should rest on those who would generalize about the effectiveness of trade leverage across broad policy contexts.²⁶² Second, much, if not most of the influence, of ETL is indirect or contingent: that is, it operates in interaction with or substitution for other, non-trade motive forces. The pathways by which it operates can be subtle, as when quiet use of behind-the-scenes leverage obviates the need for highly publicized threats or sanctions, and indirect, as when leverage promotes experimentation that leads to discovery of new ways to reduce the harmful impacts of production. This being so, the role of leverage *must* be approached by holistic ("multivariate") analysis of the cooperative dynamic in particular policy contexts, with theory well-grounded on close empirical study of individual cases.

A. COGNITIVE THEORY

Cognitive theory rejects the rationalist assumption that states' interests can be discerned deductively through simplifying assumptions that state perceptions of interest are egoistic, homogeneous, rational, static, and exogenously determined.²⁶³ State perceptions of interest are not always unitary and egoistic

are often targeted at dictatorships or oligarchies. And so forth. A ban on imports of purse-seine caught yellowfin tuna harvested in the ETP is simply not the same thing, in its economic or political dynamic, as a wholesale ban on commercial relations with Cuba. That environmental sanctions operate differently than trade or foreign policy sanctions does not mean that they are necessarily more effective. It just means that apples must be compared to apples. For a fuller discussion of methods for evaluating effectiveness of sanctions see Richard Parker, *How (and How Not) to Measure the Effectiveness of Trade Leverage* (forthcoming).

262. Chayes and Chayes, for example, make their empirical case for the ineffectiveness of "treaty-based" economic sanctions on the basis of four episodes of economic sanctions against: South Africa (during apartheid), Iraq (after the Gulf War), Haiti (during the 1993-94 insurrection), and the former Yugoslavia (during the ethnic cleansing of Bosnia). What the failure of sanctions to topple or deter hostile governments in these cases tells us about the utility of trade leverage in securing compliance with the Montreal Protocol is anybody's guess. Yet the Chayeses see no difficulty in generalizing the ineffectiveness of treaty-based sanctions in all contexts from the failure of sanctions in these four cases: "We derive these lessons from situations in which the Security Council was called upon to deal with threats to the peace, however broadly defined. But the lessons are not confined to such situations. They are inherent characteristics of the international system. If anything, they have even greater impact when the high stakes and the unifying and galvanizing features of a threat to the peace are absent. Coercive sanctions are more infeasible for everyday treaty enforcement than as a response to crisis. Treaties with teeth are a will-o'-the-wisp." CHAYES & CHAYES, *supra* note 7, at 67.

263. This is not meant as a criticism of rationalist theories *per se*, because they typically do not pretend that their simplifying assumptions are literally true. Rather, rationalists employ simplifying assumptions as a convenience to facilitate the rigorous exploration of other facets of cooperation.

For excellent overviews of cognitive theories, see HASENCLEVER ET AL., *supra* note 258, at 136-85; James A. Caporaso, *International Relations Theory and Multilateralism: The Search for Foundations*, in MULTILATERALISM MATTERS: THE THEORY AND PRAXIS OF AN INSTITUTIONAL FORM 51, 67-73 (Helen Milner & John Gerard Ruggie eds., 1993); FRIEDRICH V. KRATOCHWIL, RULES, NORMS, AND DECISIONS: ON THE CONDITIONS OF PRACTICAL AND LEGAL REASONING IN INTERNATIONAL RELATIONS AND DOMESTIC AFFAIRS (1989). It is important to clarify that the term "knowledge" does not include everything in the mind of relevant actors at the moment that they act. It does not, for example, include the awareness that one will be sanctioned if she does not cooperate: that sort of knowledge lies in the realm of power theory. Rather, the term refers to two particular kinds of belief: (1) the causal and normative beliefs that shape actors' intrinsic assessment of the costs and benefits of cooperation on particular terms, without regard to any external inducements such as bribes, threats,

because they may reflect the confluence of pressures brought by internal agencies and domestic interests — some of which may have altruistic motives such as conserving dolphins for their own sake or the sake of the ecosystem.²⁶⁴ State interests are not purely “rational” (in the sense of being deductively derivable from prior assumptions) because, again, they may contain a strong bureaucratic or political component, are often bounded by uncertainty and misinformation, may involve beliefs which are not necessarily proveable or disproveable, and harbor an irreducible normative core (values).²⁶⁵ Preferences are not exogenous but rather may be shaped by discourse and cooperation (or discord) within the regime itself.²⁶⁶ Most of all, cognitivists emphasize that perceptions of interest are not static: they may evolve over time as beliefs and values change in response to research, knowledge diffusion, normative discourse, and change of players. Cognitivists call this “learning.”²⁶⁷ Accepting that states will always pursue their own “interests,” cognitivists thus focus on mapping the process by which states decide what their interests *are* and how they should be expressed.

One frequently mentioned pathway of cognitive influence in the environmental realm is through so-called “epistemic communities” of experts who share a common involvement with a particular environmental problem which policy-makers are concerned about but do not fully understand.²⁶⁸ The expertise and

or political linkage to other issues that may be brought to bear by other actors (weak cognitivism); and/or (2) beliefs about what is appropriate conduct in a given circumstance, based on perceptions of the actors' roles in international society as well as states' perceptions of requirements of legitimacy, fairness, and community (strong cognitivism). See HASENCLEVER ET AL., *supra* note 258, at 154-61. The discussion that follows will focus on the forces of weak cognitivism and role definition. For reasons identified earlier, the role of legitimacy and fairness discourse will be treated separately. See discussion *supra* note 260.

264. See, e.g., Peter Haas, *Epistemic Communities and the Dynamics of International Environmental Coordination*, in REGIME THEORY AND INTERNATIONAL RELATIONS 168 (Volker Rittberger ed., 1993) [hereinafter Haas, *Dynamics*] (focusing on the role of trans-national groups of like-minded experts in shaping national preferences regarding cooperation).

Note that I use the term “cognitive” broadly to encompass a range of theories focusing on the process by which state preferences are determined. See, e.g., Anne-Marie Slaughter, *Liberal International Relations Theory and International Economic Law*, 10 AM. U. J. INT'L L. & POL'Y 717, 728 (1995) (stating that one premise of “Liberalism” is that “state preferences are derivative of individual and groups preferences, but depend crucially on which individuals and groups are represented.” Cognitive theory, as used herein, obviously subsumes this premise of Liberalism.).

265. See generally HASENCLEVER ET AL., *supra* note 258, at 140-44 and sources cited therein.

266. See PETER M. HAAS, *SAVING THE MEDITERRANEAN: THE POLITICS OF INTERNATIONAL ENVIRONMENTAL COOPERATION* (1990) (noting role of United Nations Environmental Programme, itself the product of international cooperation, in stimulating the growth of awareness among coastal states of the problem of land-based pollution of the Mediterranean Sea).

267. Ernst Haas has usefully defined learning for IR theory purposes as “the process by which consensual knowledge is used to specify causal relationships in new ways so that the result affects the content of policy. [However, learning also may have a normative dimension because . . .] learning in and by an international organization implies that the organization's members are induced to question earlier beliefs about the appropriateness of ends of action and to think about the selection of new ones.” ERNST HAAS, *WHEN KNOWLEDGE IS POWER* (1990), *quoted in* HASENCLEVER ET AL., *supra* note 258, at 146.

268. “Epistemic community” is defined as a “knowledge-based network of specialists who share beliefs in

coherence of the epistemic community allow it to either infiltrate its members into positions of power in key states or at least gain deference of decision-makers to their judgments.²⁶⁹ Another pathway of cognitive influence is simply through sustained factual and normative discourse among a more or less stable set of players.²⁷⁰ In conditions where uncertainty is recognized, such discourse may promote both a convergence of beliefs and values, and a developing sense of community (a sense of "we") among participants that further supports cooperation.²⁷¹

A third, and very important, pathway of cognitive influence on state action is through domestic politics — as media, voters, interest groups, and even other branches of government weigh in with views that negotiators (at least those representing democratic governments) must try to accommodate. Professor Robert Putnam likens this process to a "two-level" game in which states negotiate agreements subject to the constraint of having to "sell" the agreement to domestic interest groups and other branches of government back home (second level).²⁷² As Putnam observes, such second-level constraints may become a factor in the bargain equation itself: states that can point to particularly intransigent constituencies at home, or an utterly inflexible legislature, may gain advantage in bargaining at the international level.²⁷³ But Liberal theorists also emphasize that domestic and transnational discourse within and among governmental agencies, non-governmental groups, and inter-governmental organizations may also play an important role in actually *changing* state perceptions of interest.²⁷⁴

cause-effect relations, validity tests, and underlying principled values and pursue common policy goals." Peter M. Haas, *Banning Chlorofluorocarbons: Epistemic Community Efforts to Protect Stratospheric Ozone*, 46 INT'L ORG. 187, 189 (1992) [hereinafter Haas, *Banning Chlorofluorocarbons*]; see also HAAS, *supra* note 266; Peter M. Haas, *Introduction: Epistemic Communities and International Policy COORDINATION*, 46 INT'L ORG. 1, 3 (1992); Haas, *Dynamics*, *supra* note 264, at 188 (noting the need for national diversity of experts and an initiating calamity to get leaders to turn to experts).

269. This means that the epistemic community should include nationals of the key states, because the latter tend to be suspicious of foreign experts. See Haas, *Banning Chlorofluorocarbons*, *supra* note 268, at 216, 222 (noting the suspicion of the British government of research results of U.S. scientists concerning stratospheric ozone depletion).

270. See, e.g., Robert D. Putnam & C. Randall Henning, *The Bonn Summit of 1978: A Case Study in Coordination*, in CAN NATIONS AGREE?: ISSUES IN INTERNATIONAL COOPERATION 110 (Richard N. Cooper et al. eds., 1989) ("our account of the events of 1977-78 [involving the Bonn Summit effort to achieve more effective G-7 economic policy coordination] suggests that it is highly misleading to disregard the degree to which policymakers, negotiating internationally, actually try to convince one another that their respective models of the world and even their respective preferences are mistaken. Under uncertainty, international communication and persuasion can change minds").

271. See HASENCLEVER ET AL., *supra* note 258, at 186-87; Alexander Wendt, *Collective Identity Formation and the International State*, 88 AM. POL. SCI. REV. 384-96 (1994).

272. See Robert D. Putnam, *Diplomacy and Domestic Politics: The Logic of Two-Level Games*, 42 INT'L ORG. 427 (1988).

273. See *id.* at 440.

274. See discussion *supra* note 264.

The preceding discussion has focused on so-called “weak cognitive” theories which seek to explain the formation of preferences and interests. By contrast, “strong” cognitive models tend to focus on more fundamental perceptions of key actors. Hasenclever and others identify three main strands of strong cognitive theory. “Moral” theories focus on the power of legitimacy and fairness.²⁷⁵ “Communicative action” theories focus on the power of transnational discourse to shape both cooperative behavior and inter-subjective meaning, particularly in situations where power is unavailing and the issues are technically or morally complex.²⁷⁶ This branch may be treated as a variant of weak cognitive theory. Finally, so-called “constructivist” theories focus on the cooperation-pull of “social identities” of states: that is, the degree to which states conceive of their interests in collective as opposed to individualistic terms, seeking joint gains as opposed to individual gains.²⁷⁷ They also examine the forces affecting the process of “collective identity formation” among states.²⁷⁸

Cognitive theory does not appear to have addressed the interaction between power and cognitive processes, but cognitivism on its terms would view leverage as simply an attempt to override the preferences of target players. In other words, leverage in cognitive theory operates outside the cognitive process rather than generating a cognitive dynamic of its own.²⁷⁹

1. Role of Knowledge in the Tuna-Dolphin Case

In many respects the tuna-dolphin experience confirms the broad tenets of cognitive theory: learning occurred and shaped behavior powerfully. The knowledge of key actors evolved in response to four main discoveries: (1) mortality in the foreign fleet was high; (2) mortality in dolphin sets could be reduced to low levels with only a minor impact on fishing efficiency and profits; (3) no equally efficient alternatives to dolphin sets existed in the ETP; and (4) a mandate to fish exclusively dolphin-safe would increase by-catch of juvenile and non-target species tuna. The first two discoveries caused fisher and flag state beliefs to change from an assumption that dolphin mortality was outside the control of captains and crews, to acceptance of ambitious vessel-specific mortality limits in

275. See HASENCLEVER ET AL., *supra* note 258, at 169-76.

276. *Id.* at 176-85; see also Friedrich Kratochwil & John Gerard Ruggie, *International Organization: A State of the Art on an Art of the State*, 40 INT'L ORG. 753, 768 (1986).

277. See HASENCLEVER ET AL., *supra* note 258, at 186-91. The leading theorist of this school is Alexander Wendt, *Anarchy is What States Make of It: The Social Construction of Power Politics*, 46 INT'L ORG. 391 (1992) and *Collective Identity Formation and the International State*, 88 AM. POL. SCI. REV. 384 (1994).

278. See Wendt, *supra* note 271, at 388.

279. David Baldwin, though not a cognitivist per se, has stressed the discursive function of economic sanctions, but his view of that function is mostly as a signaling device (indicating sender state intentions or expressing sender state concern to foreign or domestic audiences). See BALDWIN, *supra* note 5. Nor does he address the function of economic sanctions in the environmental realm. He has had, therefore, no reason to anticipate the rather more elaborate role of economic leverage in generating autonomous learning and discourse in that realm.

the context of continued dolphin sets.²⁸⁰ The last three discoveries stopped fishers, flag states, and ultimately even Greenpeace and its moderate allies from heeding the call for an absolute no-encirclement policy.²⁸¹

Each of the three pathways of influence described by cognitive models was traveled in this case. IATTC estimates of dolphin abundance, dolphin mortality, and by-catch associated with dolphin-safe fishing attracted the deference and belief of fishers, flag states, and moderate environmentalists alike — as did IATTC staff assessments of the mortality reductions that could be achieved in practice, and the lack of attractive alternatives to dolphin-sets. The IATTC staff thus formed the nucleus of an epistemic community that considered dolphin mortality a manageable problem in the fishery and was concerned with minimizing dolphin mortality through improving release methods.²⁸²

This nucleus expanded principally through persuasion that took place at twice-yearly IATTC meetings (which fleet representatives, governments, and NGOs all attended), dolphin mortality workshops with vessel captains and crews, “panel alignments,” and informal conversations among actors. Persuasion propelled Greenpeace’s transition from an insistence on dolphin-safe to acceptance of continued sets on dolphins over the short term. Persuasion surfaced in the heightened conservation efforts of fishers after attending IATTC workshops, and in the resilience of conservation efforts through years of embargoes and boycotts.²⁸³ The sense of “we-ness” (what Wendt calls “collective identity”) among

280. Nowhere is this learning more evident than in the change of perception among NMFS regulators, who long had resisted vessel-specific limits on grounds that dolphin mortality was beyond skipper control: “There are so many variables that may affect a set and lead to disaster that are really not the fault of the skipper, that we have in the past had the view that it would be impractical to have skipper performance standards. My view is changing somewhat . . . Disaster sets occur in only 6% of all sets, yet result in over 76% of observed porpoise mortality. These may be acts of God, but it may be that it also relates to the skill and experiences of the skipper.” *1988 Ocean Policy Hearings*, *supra* note 27, at 7 (statement of James W. Brennan, Assist. Admin. for Fisheries, NOAA).

281. These “discoveries” never impressed dolphin-safe advocates, who continued to demand a complete cessation of sets on dolphins. Yet they, too, took pains to support their arguments with “science” (citing the problem of unobserved mortality resulting from injury during sets or the stress of the chase), thereby eliciting a vigorous campaign of counter-science, with Congress as a forum. *Compare Tuna Dolphin Issues: Hearings to Obtain Testimony on H.R. 2823, International Dolphin Conservation Act and H.R. 2856, International Dolphin Protection and Consumer Information Act of 1995, Before the Subcomm. on Fisheries and Wildlife and Oceans of the House Comm. on Resources*, 104th Cong., 2d Sess. 236, 321 (1996) (statement of James Joseph, Director, IATTC) with *id.* at 249, 369 (statement of Jeffrey Pike, Coordinator of the Dolphin Safe Fair Trade Campaign). Ultimately, as seen, Congress delayed a decision to change the label to one that permitted dolphin sets pending further research (costing millions of U.S. dollars) to clarify the impact, if any, of stress and unobserved mortality on target dolphin stocks. See 16 U.S.C. § 1385(g). The vigor of the scientific debate that has surrounded these discoveries (and, indeed, all tuna-dolphin decision making from 1972 to the present day) testifies to the importance that the actors themselves attach to the role of factual knowledge in shaping outcomes.

282. See discussion *supra* Part II.C.5.a.

283. The evolution of values (so-called second-order learning) and the exact impact of knowledge on behavior is hard to isolate or quantify. Did fishers and fishing states agree to conserve (1) because, once the problem was documented, they became conservation-minded, as they claimed; (2) because they discovered and perfected highly cost-effective methods of dolphin release; or (3) to avoid trade sanctions? Did the Clinton

IATTC insiders is unmistakably evident to anyone who has attended IATTC meetings. But so is the clear foundation and boundary limit of that collective identity — agreement with the basic ethos supporting vigorous dolphin conservation in dolphin sets, but rejecting a strict no-encirclement policy.

If the tuna-dolphin conflict confirms cognitive theory in broad outline, it requires several refinements in key details that bear directly on the interaction of knowledge and leverage. First, cognitive accounts typically focus on the evolution of shared concerns with a perceived problem.²⁸⁴ Yet tuna-dolphin reveals the elusiveness of consensus on the problem, and the importance of converging appraisals of available solutions.²⁸⁵ Consensus on solutions may substitute, in part, for full agreement on the dimensions of the problem while, conversely, a lack of consensus on cost-effective solutions will often exacerbate the difficulty of achieving agreement on the risk.²⁸⁶

The substitution of technology-based for risk-based knowledge as a foundation for regulation is by no means unique to tuna-dolphin. U.S. environmental laws are rife with examples where technology-based regulation has been accepted in lieu of precise specification of risk simply because the latter is, at times, so

Administration and the moderate environmental groups eventually drop their insistence on an immediate transition to dolphin-safe fishing because they became more sensitive to the needs of fishers? Or was it that they grew more concerned with the (unfolding) ecosystem impacts of log sets? Or was it simply that they sensed that they lacked the leverage to impose a dolphin-safe standard? The collinearity of circumstances (and incentives) in the case renders definitive answers difficult if not impossible. But the statements of key participants strongly suggest that perceptions of leverage and “cognitive” factors both played important roles — certainly in shaping rhetoric and probably in shaping behavior. See Interview with Traci Romine, Tuna-Dolphin Coordinator, Greenpeace International, in La Jolla, Cal. (Oct. 29, 1997); cf. discussion *supra* at Part II.C.4.e; Interview with Felipe Charat Levy, Director of Tuna Operations, CANAINPES, [Mexican fisheries trade association], in La Jolla, Cal. (Oct. 29, 1997).

The impact of normative learning seems particularly evident in the emerging rift within the environmental community over the question of dolphin-safe fishing. It cleaved the environmental movement into two camps, forcing groups to define their normative identity. Were they, first and foremost, for preserving the resources of the oceans as resources; or were they principally about ending all killing of certain species of animals that humans cherish? Before the discovery the ecosystem impacts of dolphin-safe fishing, this normative dilemma was avoidable. Afterwards, it was not. The result, as seen, was a split within the environmental movement.

284. See, e.g., Marc A. Levy et al., *Improving the Effectiveness of International Environmental Institutions*, in INSTITUTIONS FOR THE EARTH, *supra* note 6, at 397, 399-408 (in which the authors aver that the three key ingredients of effective regimes are (1) increasing government concern with a problem; (2) improving capacity to manage the problem; and (3) strengthening the contractarian environment).

285. See discussion *supra* Part II.B.4, C.7.

286. This lack of consensus has hence led to the national industry of denial that has grown up in the United States in fear of the economic costs that acknowledging the threat of global warming might entail; and the denial of ozone-depletion risks by EC chemical industries that perceived that they trailed in the race for substitutes. See, e.g., Frederick D. Palmer, *Not So Hot*, WASH. POST, Dec. 12, 1998, at A23 (warning that “[t]he train that is coming at us . . . is the cost of the Kyoto Protocol [committing signatories to significant reductions in greenhouse gas emissions] the Clinton Administration is rushing to make despite obvious scientific uncertainty and despite the likelihood of wrenching effects on the U.S. economy and our way of life.”); Richard Benedick, *Protecting the Ozone Layer: New Directions in Diplomacy*, in PRESERVING THE GLOBAL ENVIRONMENT: THE CHALLENGE OF SHARED LEADERSHIP 112, 124 (Jessica Tuchman Mathews ed., 1990).

difficult to specify and controversial to estimate.²⁸⁷ Of course, consensus on solutions may likewise prove elusive particularly in the early stages of an emerging regime. The 1992 La Jolla Agreement signatories had no clear idea how the 1999 mortality targets were to be met until they achieved those targets in 1993.²⁸⁸ Again, the tuna-dolphin experience is rather typical: it is not uncommon for costs of environmental compliance to turn out later to be much less than originally expected.²⁸⁹ Because costs of alternatives to harmful activities are very often overstated in the early stages, technology-forcing regulation is often deemed necessary and desirable as a catalyst to research and invention. Costs of compliance quite often, though not always, turn out later to be less than expected. At the domestic level, government regulation fills that technology-forcing function. At the international level, tuna-dolphin illustrates how trade leverage may serve that function.²⁹⁰

Tuna-dolphin also calls into question the presumed singularity of epistemic communities in current cognitive models.²⁹¹ The tuna-dolphin experience reveals at least three different epistemic communities with different perspectives on the nature and severity of the "problem." One group of experts in and around NMFS emphasized measurements of absolute dolphin abundance and showed special solicitude for "depleted" stocks. A second group followed the IATTC emphasis on trends in relative abundance with little faith in the biological relevance of "depletion," and was generally content to preserve the stocks. Yet a third epistemic community focused on the moral worth of dolphins and on the dangers of encircling dolphins at all, even if they are later released.²⁹² As seen, agreement was reached, ultimately, not by complete convergence of beliefs and values around a single perspective, but by a frankly political accommodation of

287. See, e.g., Clean Air Act, § 112, 42 U.S.C. § 7412 (1999) (replacing risk-based emissions control standard for hazardous air pollutants with technology-based standard); Federal Water Pollution Control Act, §§ 301, 304, 306, 307, 33 U.S.C. §§ 1311, 1314, 1316, 1317 (1998). See also RELATIVE RISK REDUCTION STRATEGIES COMMITTEE, U.S. EPA SCIENCE ADVISORY BOARD, REDUCING RISK: SETTING PRIORITIES AND STRATEGIES FOR ENVIRONMENTAL PROTECTION 7 (1990) (noting frequent inadequacy of data to support rigorous risk assessment).

288. See interview with Felipe Charat Levy, Director of Tuna Operations, CANAINPES, [Mexican fisheries trade association], in La Jolla, Cal. (Oct. 29, 1997).

289. For example, Benedick reports that "the European chemical companies, which for over a decade had been informing their governments that CFCs [chlorofluorocarbons — i.e., ozone-depleting substances] were indispensable in spray cans, discovered after Montreal that an American-style aerosol ban made sense after all." Benedick, *supra* note 286, at 136. In fairness, not all overestimates of availability and cost of solutions are disingenuous. Technology does change and production costs do decline — through learning curves and economies of scale — along pathways that are intrinsically unpredictable.

290. Specifically, trade leverage "inspired" fishers and flag states to accept mortality targets that exceeded their past performance, or even their expectation of what was possible. As with the ozone treaty, the performance that resulted exceeded all expectations. See discussion *supra* Part II.C.7, D.

291. See, e.g., Haas, *Banning Chlorofluorocarbons*, *supra* note 268, at 189 (documenting the role of "the ecological epistemic community").

292. See discussion *supra* Part II.A.1, D.

divergent views.²⁹³ In dolphin conservation, as in global warming or fisheries conservation there was, and is, more than one "epistemic community."²⁹⁴

Tuna-dolphin experience also calls into question the wisdom of limiting the concept of "epistemic communities" to scientific or governmental experts.²⁹⁵ These are certainly not the only persons whose knowledge and beliefs are important. For example, the knowledge of producers is often key to finding and implementing solutions to environmental problems. Environmental groups, consumer groups, members of congress, judges, and media representatives all have important impacts on outcomes, and all have knowledge and beliefs that matter to decision-making. The term "discursive community" will be used to refer to groupings of this broader cast of characters who share common causal beliefs, values, and policy preferences. For example, the animal rights groups with their five-million members do not, by the classical definition, rise to the level of an epistemic community because they are not experts. But they certainly formed an important discursive community that played a powerful role in events surrounding the tuna-dolphin controversy.²⁹⁶

Fourth, tuna-dolphin reveals the Putnam model of a two-level game to be a useful but, for present purposes, over-simplified picture of the pattern of transnational discourse.²⁹⁷ The case reveals environmental groups negotiating directly with governments and with fishers; an inter-governmental agency dealing directly with private parties; a cannery boycott essentially trumping government trade policy, and creating a private trade regime; an inter-governmental agreement providing environmental groups, fishers, and government representatives with a formal oversight role.²⁹⁸ In short, the players are much more varied and their interactions more multi-dimensional than Putnam's model can account for. As will be seen, empowering or dis-empowering these

293. The compromise was between conservationist and fishing perspectives drawing on NMFS and IATTC data, respectively. No accommodation could be reached with the animal rights perspective. The rift caused the creation of a separate regime comprised of animal rights groups and a number of sympathetic tuna canners. See discussion *supra* Part II.C.2.

294. See discussion *supra* notes 286, 289 for examples of adversarial science and plural epistemic communities in global atmosphere regimes. For a poignant example of interest-driven scientific controversy (and plural epistemic communities) in high seas fisheries management see Report of the United States Delegation to the Thirteenth Regular Meeting of the International Commission for the Conservation of Atlantic Tunas, Madrid, Spain, Nov. 8-12, 1993, A Report Submitted to the Secretary of State by Carmen J. Blondin, Chairman, United States Delegation, at 5-7 (1993) (unpublished manuscript on file with author) (documenting highly divisive scientific controversy over status of bluefin tuna stocks in the North Atlantic).

295. See Haas, *Banning Chlorofluorocarbons*, *supra* note 268.

296. See discussion *supra* Part II.C.2.

297. See Putnam, *supra* note 272. The simplicity of Putnam's model is no doubt deliberate and highly useful in bringing out dimensions of the cooperative dynamic that he wishes to emphasize: e.g., the strategic enhancement of international bargaining power that arises from a domestic constituency (say, Congress) that must be placated by the terms of any agreement. See Putnam, *supra* note 272. I take issue with his simplification only because it occludes the role of trade leverage in empowering a broad-ranging discourse that is simply not captured by his model.

298. See *supra* Part II.C, D.

various actors — and energizing the multi-directional pattern of discourse among them — is a vital contribution of trade leverage in the cases where it is used.²⁹⁹

Finally, the cognitive model furnishes no satisfactory account of the *primum mobile* for the growth and dissemination of knowledge and concern in the tuna-dolphin case and, one suspects, in other international environmental regimes. Particularly at the outset of each regime, knowledge and concern with environmental problems are likely to be quite unevenly distributed within and among countries. Until the regime is formed, and possibly for a long while thereafter, the issue in question is simply not on the agenda of many countries. Learning requires attention and the attention is lacking. Cognitive theory does not explain how an aroused public in one country may convey its concern to another country and inaugurate a dialogue that may, if conditions are right, win international cooperation.³⁰⁰ Such an explanation reveals a role for the factor that propelled the growth of knowledge and discourse in the tuna-dolphin case: trade leverage.³⁰¹

2. Tracing the Interaction of Knowledge and Leverage

In the case of tuna-dolphin, trade-leverage initiated and energized the cognitive processes of sustained research, training, field experimentation, and dialogue among key stakeholders. This leverage operated through at least seven causal pathways.

a. Promoting Monitoring and Research

Prior to 1986, conservationist interests seeking to mobilize knowledge in the

299. See *infra* Part III.A.2.

300. For example, Haas has predicted that "regimes are most likely to be created following widely publicized environmental disasters which mobilize the demands of the public and of experts for governmental action." Haas, *supra* note 264, at 188. This is a true statement, but one is hardly reassured by a prediction that regimes will form only after disaster has already occurred. The implication is that other harms — future (but irreversible) harms, damages that are serious but less than global disasters, and/or injuries to countries that are not democracies where public demands matter — are unlikely to elicit cooperation to prevent them. If so, this is a gloomy prospect. The question arises whether cognitive theory must invariably predict no cooperation in all other cases: e.g., those involving future harms, non-disastrous harms and/or harms caused by authoritarian governments who are not accountable to public pressure.

301. Of course, dyed-in-the-wool cognitivists may retort that the necessity of trade leverage merely proves that the essential precondition of cognitive theory — shared knowledge and concern — was missing in this case. After all, cognitive theory does not predict cooperation in all cases, only in the cases where shared identities and/or perceptions of interest emerge. But that rejoinder faces the same objection (circularity) that Keohane leveled against those who insist that cooperation will occur wherever it is in states' interest, and if it doesn't occur that is because states weren't interested. See KEOHANE, *supra* note 6, at 65. The fact is that, prior to the mobilization of U.S. trade leverage, ETP fishing fleets were well on their way to wiping out the dolphin stocks that led them to tuna. It took observers and discourse to demonstrate that fact, and trade leverage to get the observers in place and discourse going. The fact that U.S. trade leverage later veered off into a direction which contradicted the consensus emerging from intra-regime dialogue does not vitiate the importance of trade leverage in getting that dialogue going. It merely demonstrates the inherently wayward tendencies of unilateral leverage, a problem to which I return later. See *infra* Part IV.E.

interest of cooperation faced a Catch-22 situation: getting fishers to cooperate required demonstrating both the problem and cost-effective solutions, but demonstrating the problem and the existence of solutions required getting the fishers to cooperate. The same thing is true for fishing flag governments whose principal orientation initially aligned with their national fleets. Yet, prior to the application of leverage, fleets and flag states remained, in the words of one IATTC official, in a "state of denial" over the level of dolphin mortality that was occurring.³⁰²

Threatened trade sanctions resolved this dilemma by promoting "precautionary" international cooperation in building knowledge of both problem and solution.³⁰³ As previously discussed, it was IATTC observers who documented the extent of the mortality caused by the foreign fleet; observers who studied fishing practices and reported on the conditions leading to high mortality dolphin sets; and observers who collected the by-catch data which undermined the case for a mandate of exclusively dolphin-safe fishing. But it took the indefatigable efforts of IATTC staff, backed by the implicit threat of U.S. trade leverage, to get observers on a sufficient sample of boats. It took implicit trade threats to get boats equipped with dolphin rescue gear, skippers practicing backdown and trying different methods to reduce mortality, and skippers and crews attending IATTC dolphin mortality reduction workshops and gear alignments.³⁰⁴ The workshops raised their consciousness of the problem, lowered their estimation of the difficulty of the solution, and taught them how to implement the solution. Their preferences and performance changed thereafter.

b. Raising Public Awareness in Target Countries

Embargoes (or threats thereof) make news, thereby calling attention both to themselves and to the problems to which they are linked. Trade leverage galvanizes public debate in target countries. Tuna-dolphin reveals that trade leverage may provoke a nationalist backlash that discourages cooperation, but leverage may also galvanize a useful public discourse about conservation issues in the target state. Contrary to popular stereotype, the publics of developing countries such as Mexico, Venezuela, and Ecuador are not environmentally

302. See Telephone Interview with Martin Hall, Ph.D., Chief Scientist, IATTC Tuna-Dolphin Program (Aug. 18, 1999).

303. See discussion *supra* Part II.C.5. To some degree, this "demonstration" phase can be accomplished by the "benevolent hegemon" in unilaterally monitoring and regulating its domestic producers (here, its fleet) so as to demonstrate the magnitude of the harm, and the viability of various harm-reduction strategies. See discussion of power-based theories *infra* Part III.D. In the case of tuna-dolphin, the United States unilaterally regulated its own fleet for almost twenty years before attempting to externalize its domestic standards to the foreign fleet through trade leverage. But the U.S. fleet considered this to be an unfair burden, with some justification. Moreover, the demonstration effect of one fleet for another is likely to be limited — it is always tempting and easy to find distinctions between one group and another, whether or not those distinctions make any difference.

304. See discussion *supra* Part II.C.5. Nor is it a coincidence that each dolphin mortality reduction workshop opened with coverage of the MMPA and developing public opinion in the United States, Europe, and Latin America on the merits of dolphin protection.

oblivious or indifferent.³⁰⁵ While the reactions to U.S. trade pressure evident in local Latin media certainly do not reflect support for capitulating to U.S. trade pressure, the surfacing of the dolphin issue in consequential terms did indeed mobilize popular opinion in target states in favor of a negotiated settlement, partly for the sake of the dolphins. In the case of tuna-dolphin this took the form of strong public and environmental group support for the La Jolla 1992 Agreement in the target states.³⁰⁶

c. Empowering Local Interest Groups

The literature of public choice is rich in testimonials to the policy-shaping power of interest-group pressures.³⁰⁷ But interest groups are not evenly distributed either within or among nations. Generally speaking, concentrated economic interests are more effectively represented in policy circles than diffuse environmental ones.³⁰⁸ In a few advanced industrial countries, this imbalance has been largely eliminated through the rise of environmental NGOs funded by membership contributions and large grants from private foundation donors. In developing countries, weaker organizations may exist either independently or as chapters of international organizations such as Greenpeace. As always, the influence they have is based on two foundations: (1) their power to influence public opinion (in a democracy); and (2) their access to policy-makers and power to persuade. These target state groups generally will not support trade sanctions, but may capitalize on (threatened) sanctions by participating in the environmental dialogue that follows in their wake.

d. Promoting Transnational Non-Governmental Organization Dialogue

The mobilization of local NGOs in target states reveals a further discursive role of ETL: it energizes dialogue and harmonization of positions among sending state and target state environmental NGOs. The urge to find common ground is natural. Target-state NGOs seek information and assistance from their colleagues in advanced industrial democracies; sending state NGOs need the international legitimacy that only local allies can provide. Yet, if tuna-dolphin is any guide, developing country NGOs are likely to have a much more "developmental" or growth-oriented perspective than their colleagues in advanced industrial countries — and to resist the idea of economic sanctions against their own government and producers.³⁰⁹ The need to present a united front thus encourages sending

305. See *supra* Part II.C.5.c.

306. See *id.*

307. See Daniel C. Esty, *Revitalizing Environmental Federalism*, 95 MICH. L. REV. 570, 597 n.79, 609 (1996) and sources cited therein.

308. See *id.*

309. See *supra* Part II.C.5.e.

state NGOs to moderate their expectations and demands — as Greenpeace International did when, partly at the behest of members of Greenpeace Latin America, it dropped its insistence on immediate transition to dolphin-safe fishing.³¹⁰

e. Stimulating Diagonal Discourse

Even as trade leverage energizes domestic and inter-state dialogue, it may also stimulate “diagonal” conversations between target states and foreign or transnational NGOs and inter-governmental organizations. Tuna-dolphin illustrates this in extreme form: Greenpeace and its moderate NGO allies directly negotiated, with Carlos Camacho Gaos of Mexico, the substantive core of what would become the Panama Declaration. Diagonal conversations occur not because the target governments feel any sense of fiduciary obligation to interest groups in foreign lands, but because the latter control or influence an outcome that target governments and producers desire: trade. Moreover, diagonal conversations are taken seriously only to the extent that such groups are perceived to be able to control or influence trade outcomes. Once through the door, however, such groups wield both their leverage and their power to persuade. These conversations are not one-sided. Governments and producers also wield the power to refuse agreement (leverage) and the power to persuade. Dialogue may promote convergence of beliefs and values, but trade leverage empowers the dialogue. This is the agenda-setting role of trade leverage.

f. Challenging State Images

The modern age is characterized by an ethos of conservation that prevails in rhetoric, in hortatory legal instruments, in a wealth of agreements, and, most of all, in the image and the self-image of states. Environmental trade restrictions challenge this image in ways, and with effects, that mere words cannot. They give weight to pledges that would otherwise vanish in air and call into question the target state’s commitments in other linked areas, such as fisheries conservation in the case of tuna-dolphin. Target states may resent the challenge. They may dispute its validity. But in tuna-dolphin they did so by demonstrating their commitment to dolphin conservation and possibly other areas of conservation. Thus, Mexico zealously set out to rehabilitate its image by not only undertaking strenuous dolphin conservation efforts, but also hosting the Cancun conference for developing a Code of Responsible Fishing.

g. Negative Interactions of Knowledge and Leverage

This article has addressed the positive aspects of the leverage-knowledge

310. See *id.*

interface. But there are at least two ways that ETL may conflict with the cognitive and discursive process, thereby raising resistance and losing effectiveness. Tuna-dolphin illustrates both of them. First, the use of leverage may trigger a nationalist backlash in target countries against "outside pressure" which galvanizes public and interest-group opinion against cooperation *per se*.³¹¹ Second, the use of leverage may impede cooperation if it is employed against the grain of emerging knowledge and beliefs. This can occur when leverage is viewed as protectionist, when it is employed to impose standards that are arbitrary in relation to the goal (means-end arbitrariness), or when the sending state views the goals of leverage itself as idiosyncratic, contrary to the goals of on-going environmental management efforts, or both. This "cognitive dissonance," so to speak, undermined the impact of the 1988 MMPA Amendments (with their ambitious but environmentally arbitrary rules) as well as the dolphin-safe boycotts and embargoes (research, observer data, and discourse all revealed that a strict no-encirclement policy was economically infeasible and environmentally unsound). The result was heightened resistance to accommodation and a prolonged restriction of trade that may well have been unnecessary. In fact, leverage deployed so strongly against the grain of knowledge might have failed altogether had it not been for the farsightedness of IATTC staff and others in predicting that a highly successful dolphin conservation program would eventually undercut the dolphin-safe boycotts and persuade Congress to change its mind and repeal the embargoes for those participating in the program.

The double-edged relationship between knowledge and leverage, evident in tuna-dolphin, is manifest in other international environmental regimes as well. In the International Whaling Convention (IWC), U.S. trade threats have proved highly effective in deterring commercial whaling of endangered or depleted stocks. But trade threats have been ineffective when wielded in opposition to a very limited take of minke whales which accumulating scientific research has revealed to be in plentiful supply. Countries like Norway and Iceland have refused to accept that there is a collective interest, much less an individual one, in abstaining from all taking of plentiful minke whales.³¹² In the case of the high seas large-scale driftnet ban, United States trade leverage has proved effective in deterring flagrant, government-sanctioned violations of the ban. U.S. threats of

311. This may occur because of a history of past conflict with the United States (e.g., Mexico), ideology (e.g., the force of Marxist "dependencia" theory still prevalent among many developing country elites), or just the natural resentment of a small country that feels picked on by an economic bully and wants to show — out of pride or principle — that it will not be pushed around.

312. See, e.g., M.J. Peterson, *Whalers, Cetologists, Environmentalists and the International Management of Whaling*, 46 INT'L ORG. 147 (1992); David D. Caron, *Current Development: The International Whaling Commission and the North Atlantic Marine Mammal Commission: The Institutional Risks of Coercion in Consensual Structures*, 89 AM. J. INT'L L. 154, 159-63 (1995); Sarah Suhre, *Misguided Morality: The Repercussions of the International Whaling Commission's Shift From a Policy of Regulation to One of Preservation*, 12 GEO. INT'L ENVTL. L. REV. 307 (1999).

trade sanctions, addressed to a practice which repeated General Assembly resolutions have strongly condemned, have played a powerful stigmatizing role that has contributed to bringing states like Taiwan, China, and Italy into compliance.³¹³ Trade threats have also inspired dialogue that has led to new and unexpected solutions. For example, Italy is reported to have found it very difficult to enforce the driftnet ban against its own Mediterranean swordfish fleet because its fishers insisted that following the rules would put them out of business. This discovery led to detailed discussions between the U.S. and Italian governments about a third-way response, leading to an agreement under which Italy agreed to implement a U.S.\$ 88 million program to convert the Mediterranean driftnet fleet to other types of fishing gear.³¹⁴

Yet another fine example of the (double-edged) trade-knowledge interface is found in the shrimp-turtle case, where unilateral trade leverage empowered a discourse leading to effective cooperation with and among the Latin and Caribbean States. By contrast, the subsequent court-ordered application of peremptory trade leverage to Asian states elicited major resistance and a GATT challenge.³¹⁵

B. LEGITIMACY AND FAIRNESS THEORY

While political scientists have tended to focus on non-legal factors, such as knowledge, institutions, and power, in explaining international cooperation, legal scholars have focused on the compliance-pull of legal and moral notions of legitimacy and fairness, including the moral force of law itself.³¹⁶ Reasoning that the international order is peopled with individuals who have a moral sense, Thomas Franck predicts that international compliance with law is most likely when decisions are arrived at through procedures that stakeholders deem to be procedurally "legitimate" and substantively "equitable." Legitimacy and equity together form the composite concept of fairness. Franck enunciates two threshold principles that stand as "gatekeepers" of fairness discourse.³¹⁷ The first is the acceptance of "no trumping;" a sense of fallibility and willingness to compromise that permits discourse.³¹⁸ The second gatekeeper is the so-called

313. See 1996 Report of the Secretary of Commerce to the Congress of the United States Concerning U.S. Actions Taken on Large-Scale High Seas Driftnet Fishing Pursuant to Section 206 of the Magnuson-Stevens Fishery Conservation and Management Act, at 2-6.

314. See *Humane Society of the United States v. Brown*, 920 F.Supp. 178, 194 (Ct. Int'l Trade 1996).

315. See *Shrimp-Turtle Appellate Body Decision*, *supra* note 13.

316. Indeed, the controversy over the role of law and justice (versus that of power, ideology or interest) in explaining cooperation has divided IR and IL theory for years. Only recently, as Anne-Marie Slaughter reports, has this inter-disciplinary chasm been spanned, in places at least. See Slaughter et al., *supra* note 257.

317. FRANCK, FAIRNESS, *supra* note 2, at 7-8. Franck recognizes that legitimate rules may not necessarily be fair and that fair rules are not necessarily legitimate, and that, in fact, advocates of the two concepts may "clash fiercely." *Id.* at 22-23. In this regard he departs from Nozick who basically defines fair results as those obtained by "right process," *id.* at 20; but follows Rawls and Koskeniemi who stress the distinction between substantive and procedural concepts of fairness. See *id.* at 7, 23.

318. See *id.* at 16-17.

"maximin" principle which requires that "unequal distribution [of burdens and benefits] is justifiable only if it narrows, or does not widen, the existing inequality of persons' and/or states' entitlements."³¹⁹

While Franck's account of the concepts of legitimacy and fairness is by no means the only one available, it is recent, influential, cogently reasoned, carefully documented, specifically addressed to the international realm, and devoted to explaining behavior rather than merely prescribing it. While it is possible to disagree with some of Franck's conclusions, his analysis provides an excellent framework for investigation.³²⁰ This section adopts his framework to explore the role of perceptions of legitimacy and fairness in the tuna-dolphin controversy.³²¹

1. Franck's Concept of Legitimacy

Franck defines legitimacy as "a property of a rule or rule-making institution which itself exerts a pull toward compliance on those addressed normatively because those addressed believe that the rule or institution has come into being and operates in accordance with generally accepted principles of right process."³²² He defines "right process" in terms of four indicators: (1) determinacy; (2) symbolic validation; (3) coherence; and (4) adherence. In a nutshell, determinacy is clarity — achieved either through textual specificity or authoritative process of interpretation — and rationality as applied to particular cases.³²³ Symbolic validation, ritual, and pedigree are all "cultural and anthropological" artifacts that provide the "authority signal" conveyed by a rule or institution.³²⁴ Coherence requires that the rule relate in a principled fashion to other rules in the same system and that it treat like cases alike.³²⁵ Adherence refers to conformity with secondary rules of recognition governing the making of rules. Franck proceeds to identify four such rules: (1) states are sovereign and equal; (2) state sovereignty can be restricted only by consent; (3) consent binds (*pacta sunt servanda*); and (4) states, in joining the international community, are bound by these and other basic ground rules of community even if they do not formally

319. Interestingly, both the maximin and the no trumping principle are justified in Franck's account on empirical grounds: they come "closest to according with the moral sense of most states and most persons." *Id.* at 22. Indeed, *Legitimacy and Fairness* both devote much effort to "documenting" the appearance of these principles in the statements and actions of states.

320. For other treatments of the normativity factor in IR see MARTTI KOSKENNIEMI, *FROM APOLOGY TO UTOPIA: THE STRUCTURE OF INTERNATIONAL LEGAL ARGUMENT* (1989) and DAVID KENNEDY, *INTERNATIONAL LEGAL STRUCTURES* (1987). For more brief treatments upon which Franck's account builds, see H.L.A. HART, *THE CONCEPT OF LAW* 208-31 (1961); RONALD DWORKIN, *LAW'S EMPIRE* 195-202 (1986); JOHN RAWLS, *A THEORY OF JUSTICE* 377-82 (1971).

321. See FRANCK, *LEGITIMACY*, *supra* note 260; FRANCK, *FAIRNESS*, *supra* note 2.

322. FRANCK, *LEGITIMACY*, *supra* note 260, at 19.

323. See *id.* at 52.

324. *Id.* at 91.

325. Franck draws his coherence criterion from Dworkin's similar analysis of the predicates of "integrity." See *id.* at 138 (citing RONALD DWORKIN, *LAW'S EMPIRE* 178-84 (1986)).

consent to them.³²⁶ The higher a rule scores on these criteria, the greater its claim to legitimacy — legitimacy is thus a matter of degree. At the heart of all these qualities is the principle of no-trumping, a principle which requires that parties bargain in good faith, rather than unilaterally issuing diktats.

a. Legitimacy

Franck has applied his own model specifically to the tuna-dolphin case and found both U.S. unilateral standards and the trade leverage used to impose them illegitimate: a clear violation of the no trumping rule.³²⁷ The record of the tuna-dolphin controversy likewise demonstrates that Latin fishers and flag states also perceived U.S. unilateral standards as illegitimate. Although they obviously did not use Franck's terminology, their criticisms tracked Franck's concepts well. They complained that the 1988 MMPA standards were vague, arbitrary ("indeterminate"), or both.³²⁸ They were also novel and fickle.³²⁹ The GATT decisions rejecting U.S. trade measures under international trade law merely heightened the sense of illegitimacy that dogged U.S.-set standards during this period.

Most of all, fishers felt aggrieved by the incoherence and inconsistency of U.S. standards and, in particular, by the standard. It was incoherent in the sense that it bore no rational relation to prevailing norms of fishery conservation: a strict no-encirclement policy in the ETP would worsen by-catch of juvenile tuna and other non-dolphin species. U.S. policy was inconsistent in the sense that, despite rumors of dolphin mortality in those regions, it imposed strict requirements in the ETP but not in the Western Pacific and Mediterranean. U.S. policy for the ETP also overlooked a directed take of dolphins in Japan and elsewhere. It did not even conform to U.S. marine mammal policy in U.S. waters, where incidental take of small cetaceans, including a limited take of "depleted stocks" was allowed.³³⁰ These deficiencies further diminished the perceived legitimacy of U.S. trade measures.

326. See FRANCK, FAIRNESS, *supra* note 2, at 29.

327. See *id.*

328. As seen, fishers and foreign fleet representatives launched withering critiques of the U.S. standards on determinacy grounds, focusing on the *ex post* nature of the U.S. fleet standard for dolphin mortality (which made the standard unknowable *ex ante*); the arbitrary character of the 15% eastern spinner mortality ratio; and the perverse incentives created by the mortality *rate* standard (which created incentives to intensify sets of dolphins after a bad set, in order to get down the rate). See *supra* Part II.C.5.c.

329. U.S. standards were lacking in symbolic validation and pedigree in the sense that they were brand new, constantly changing, and supported by not even the most perfunctory process of consultation with foreign governments either at the standards formation stage or in application to particular countries.

330. The 1994 Amendments to the MMPA allowed a limited take of other marine mammals, including depleted stocks, while specifically exempting the ETP yellowfin tuna fishery which faced an immediate zero-mortality mandate. See 16 U.S.C. § 1387(a)(2)-(4) (1994). The Amendments required all other commercial fisheries under U.S. jurisdiction to reduce incidental marine mortality to "insignificant levels approaching zero mortality and serious injury" by 2001. 16 U.S.C. § 1387(a)(3), (b)(1), (f)(2). The ETP tuna fishers had accepted that goal in 1992 and largely achieved it by 1994, yet they remained embargoed. As Joseph remarked, "Representatives of a number of different governments have noted that U.S. policy regarding the conservation

In contrast, the 1992 La Jolla Agreement achieved a high degree of consensus and voluntary cooperation from its participants, even if outsiders such as Earth Island and its cooperating cannery continued to refuse to honor it. Moreover, the legitimacy of the Agreement derived from many of the specific factors that Franck identifies. The La Jolla Agreement was determinate in that it set specific, verifiable standards firmly grounded in an agreed rationale (minimizing dolphin mortality while preserving a viable and economically-profitable fishery). It was coherent because it treated all tuna fishers alike within the jurisdictional boundaries of the agreement itself (the ETP tuna fishery) and because it was rationally related to evolving community norms of high seas fisheries and ecosystem management. It was validated by first informal and then formal binding agreements among sovereign states. And it adhered to the fundamental rules of recognition about how agreements are made — the traditional multilateral agreement negotiating process. One tempting construction of the tuna-dolphin controversy in legitimacy terms, then, is to conclude that unilateral U.S. standards were rejected while IATTC standards were accepted, because the latter were legitimate and the former were not.

While this explanation captures a significant part of the picture, it fails in two ways as a comprehensive explanation. First, it overstates the power of legitimacy. Although fishers and flag states roundly denounced the 1988 U.S. standards as illegitimate, they tried very hard to comply with them from 1988 to 1991. Fishers gave up only when it became apparent that the opacity, fickleness, and stringency of U.S. standards would make compliance either impossible or unreasonably expensive. Their efforts suggest that legitimacy is a significant but relatively weak force when compared to perceptions of power and interest.

Second, and more fundamentally, Franck's analysis overlooks the problem that plagued both the U.S. fleet and environmental groups through the 1980s. Where the global commons is concerned, there is no neutral outcome. Absent some agreement, either would-be conservers are "forced" to accept depletion of the commons, or users are "forced" to conserve.³³¹ The obvious way out of this

of marine mammals sets a double standard. On the one hand, the United States applies restrictive laws to a resource that is beyond its jurisdiction, while at the same time permitting the harvest of marine mammals taken incidentally in fisheries operating within its own EEZ." Joseph, *supra* note 17, at 25-26. This inconsistency was a theme of fishing fleet spokesmen in interviews with this author. See Felipe Charat Levy, Director of Tuna Operations, CANAINPES, [Mexican fisheries trade association], in La Jolla, Cal. (Oct. 30, 1997); Dr. Francisco Herrera Terán, President, Asociación Empresarial Pesquera de América Latina (ALEP), in La Jolla, Cal. (Oct. 28, 1997). For an excellent history of the evolution of the 1994 MMPA Amendments and U.S. marine mammal protection policy generally, see Nina Young & Suzanne Iudicello, *Blueprint for Whale Conservation: Implementing the Marine Mammal Protection Act*, 3 OCEAN & COASTAL L.J. 149 (1997).

331. Edith Brown Weiss has captured the point nicely: "But surely there may be instances where countries are at the forefront of identifying risks to areas of common concern and should not be forced as a principle of international law to continue to contribute to such environmental degradation." Edith Brown Weiss, *Environment and Trade as Partners in Sustainable Development: A Commentary*, 86 AM. J. INT'L L. 728, 732 (1992); see also Chang, *supra* note 9, at 2163 n.124 (answering Bhagwati's criticism that sanctions enable strong powers to force their preferred values on weaker nations by rejecting his implicit assumption that the "alternative is 'morally' neutral").

dilemma is to negotiate a legitimate agreement. But that requires specifying two elements that logically inhere in any specification of process, yet are not squarely addressed either in Franck's account or the current order of international environmental protection generally. These factors are: (1) the default entitlement against which parties negotiate and (2) the criteria for deciding who participates and who votes in shaping management rules.

The default entitlement specifies whose choice prevails when there is no agreement between source and victim of environmental harm.³³² The allocation of entitlement is likely to influence both the distribution of gains from cooperation and, except under certain rather restrictive assumptions, the overall level of environmental protection provided. Franck's third "rule of recognition" — states may not be bound without their consent — would imply that the default entitlement goes to the commons exploiter, yet plain necessity and emerging positive law both indicate otherwise. The necessity of qualifying the sovereign right to refuse cooperation arises inevitably from the huge expansion that has occurred during this century in the scale of human activities affecting the planet's seas and skies. As a result, a few significant holdouts now have the capability to undermine conservation efforts and irretrievably destroy a common resource.³³³

This changed circumstance is evident in the growing body of positive law which clearly articulates a duty of states to cooperate in regard to transboundary harms and global commons conservation.³³⁴ The duty to cooperate is further

332. See R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

333. See *Hearings Before the Subcomm. on Fisheries, Wildlife, and Oceans of the Comm. on Resources*, 1995 WL 26825 (Jan. 25, 1995) (statement of Amb. Colson, Dep. Ass't. Sec. For Oceans and Fisheries Aff., Dep't of State) (noting that the United Nations Food and Agriculture Organization has reported a declining trend in catch of marine species over the period 1989 to 1992, and observing that "absent concerted efforts to bring about responsible fishing practices, we can expect this downward trend to continue. The fishing power in the world is simply too great . . ."); see also FOOD AND AGRICULTURE ORGANIZATION, IN-DEPTH STUDY: PATTERNS OF MARINE FISHERY LANDINGS AND FUTURE PROSPECTS 42 (1996) (documenting the dramatic intensification of fishing activity since 1945 and dramatic impact on the status of stocks, and noting that 60% of the world's fish stocks were either over-exploited or fully exploited and threatened by uncontrolled growth in world fishing capacity).

334. The evidence of this sea-change in international law is too abundant to cite exhaustively here. Prime evidence of this change is the Third Convention on the Law of the Sea (LOS III), which is widely accepted as indicative of customary law as applied to the marine commons. LOS III (1) authorizes extension of national exclusive economic and fishing zones out to 200 miles offshore (thereby enclosing 90% of the world's fish stocks in national jurisdiction — see Arts. 55-59); (2) requires coastal states to ensure that maintenance of living resources in the EEZ is not endangered by over-exploitation (Art. 61); (3) requires coastal states to cooperate with relevant international organizations in ensuring conservation of highly migratory species, anadromous, catadromous, and straddling stocks (Arts. 64, 66, 67); (4) requires states to cooperate with regional organizations in conserving marine mammal stocks in the EEZ and on the high seas (Arts. 65 and 120); (5) authorizes high seas fishing only "subject to" the foregoing cooperative requirements (Art. 116); imposes a generalized duty of cooperation in conservation and management of high seas resources (Art. 118). United Nations Convention on the Law of the Sea: Final Act, Dec. 10, 1982, 21 I.L.M. 1261 (1982). As Franck observes, "LOS III . . . fundamentally altered Grotius' concept of the sea as owned by none to the modern notion of the high seas and deep seabed as owned by all." FRANCK, FAIRNESS, *supra* note 2, at 358.

See also United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks: Agreement

underscored by considerations of sound policy.³³⁵ Significantly, no one of importance in the tuna-dolphin controversy asserted the right of fishers to fish without restraint. The issues, rather, were the terms of cooperation and the process by which those terms would be decided.

Clearly, terms of cooperation must be decided through negotiation. The disregard of the right and duty to negotiate, manifest in the 1988 MMPA amendments, was a talisman of the illegitimacy of U.S. trade leverage in the tuna-dolphin conflict. But the duty to cooperate via negotiation and, where possible, agreement raises a second element of "right process" that is bracketed in Franck's account as well as in the current international order. It is the problem of determining who participates in the commons management decision process and on what basis. The twin examples of the IATTC and the IWC illustrate the problem well. The IATTC has always been structured as a "user-only" club, comprising fishing and coastal states, both of whom have a direct exploitation interest in the resource. Non-use interests, and states holding such interests, have been excluded, at least as voting members. In contrast, the IWC has open participation and voting. But this arrangement has resulted in non-whaling states out-voting whaling states, leaving the latter feeling "trumped" and cheated by the process.³³⁶ The IATTC has maintained itself as a fishing-and-coastal-state-only club precisely to avoid the IWC problem. The IATTC voting rule, however, effectively disenfranchises non-user or conservation-minded states as well as future generations. A regime that disenfranchises all these interests may be legitimate in the eyes of fishers and their flag governments, but it is legitimate *only* in their eyes.³³⁷ In short, the "no trumping" principle requires a good-faith

for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of December 10, 1982, Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, Sept. 8, 1995, 34 I.L.M. 1542 (1992) (reaffirming duty to cooperate in respect of covered stocks — see Art. 8); G.A. Res. 2749(XXV), U.N. GAOR, 25th Sess., 1933rd mtg. at 7, U.N. Doc. A/PV.1933 (1970) (declaring the global commons the "common heritage of mankind"); Fisheries Convention on Anadromous Stocks in the North Pacific, Feb. 11, 1992, T.I.A.S. 11465 (ending all high seas fishing for anadromous stocks such a salmon in covered region); *Large-Scale Pelagic Driftnet Fishing and its Impact on the Living Marine Resources of the World's Oceans and Seas*, G.A. Res. 46, U.N. GAOR, 46th Sess., 79th plen. mtg., Agenda Item 77(e), UN Doc. A/RES/46/215 (1992) (calling for the termination of large-scale driftnet fishing on the high seas by 1992 and encouraging states to take measures "individually and collectively" to implement and enforce the ban).

For sources of general obligation to cooperate in respect of transboundary and global environmental harm, see Rio Declaration on Environment and Development, *supra* note 23, Principle 2: "States have . . . 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."

335. The victim-pays rule implicit in a no-obligation-without-consent rule would, as Chang has observed, produce several perverse consequences: it would "punish" victims of pollution or resource exploitation by others; encourage over-production of a harm-causing product; and inspire strategic behavior by producers (who would line up to qualify for incentive payments). See discussion *infra* note 417 and accompanying text.

336. For excellent accounts of the participation dilemma in the IWC, see Peterson, *supra* note 312, at 147-49, 177-82; and Caron, *supra* note 312, at 159-63.

337. If Franck misses this aspect (and my reading suggests he does) the reason may be that he does not

bargain between use and non-use interests and their respective state champions, but neither the open participation rule nor the producers-only rule seems able to generate this result.³³⁸

b. The Interaction of Leverage and Legitimacy

The legitimacy gap plaguing current decision processes in respect of the global commons points directly to the role of trade leverage as a second best device for restoring a rough, *de facto* balance to an otherwise skewed voting rule. It was U.S. trade leverage, not its single vote in the IATTC process, that prevented trumping (in the form of unrestrained fishing) by fishers and flag states and brought them to the bargaining table. It was the demonstrated limits of U.S. leverage in the canned tuna market that ultimately forced the United States to negotiate mutually acceptable terms. Finally, it was trade leverage that empowered and legitimized environmental groups as informal, but meaningful interlocutors in the IATTC decision process.³³⁹ This rough-and-ready equilibrium of bargaining power ultimately yielded a highly-regarded, negotiated agreement which held the loyalty of fishers, moderate environmental groups, and governments alike. The failure of legitimacy in the tuna-dolphin case, on this view, lies not in the use of U.S. trade leverage to promote a negotiated bargain. Rather, it lies in Earth Island's and the U.S. canners' refusal to accept anything other than unconditional surrender; and in the U.S. Congress' rejection, until 1997, of a highly-effective negotiated bargain that met virtually all indices of legitimacy. Conversely, the thing that rendered the La Jolla agreement legitimate (and therefore a permissible validator of trade leverage used to enforce *or* obtain it) is that it squarely met the criteria of legitimacy adduced above.³⁴⁰

specifically focus on global commons management problems in *Legitimacy*. See FRANCK, FAIRNESS, *supra* note 2. The participatory dilemma outlined above arises only in cases (like global commons management) which require cooperation in furnishing or managing non-excludable public goods. In other contexts — such as international trade, civil aviation, diplomatic recognition, laws of war, etc. — holdouts are easily dealt with: they are excluded from both the responsibilities *and the benefits* of the regime. This limits the windfall gains of defection as well as the “sucker losses” to cooperators. Limited participation and voluntary assent rules work reasonably well in such cases, and issues of right process are much less acute.

338. For an excellent review of the “participatory legitimacy dilemma” and various proposals to resolve it, see ESTY, *supra* note 14, at 145-47.

339. The moderate groups, the Bush and Clinton Administrations, the fishers and the flag-states, and the IATTC staff all more or less correctly perceived the extent and limits of U.S. trade leverage, the political merits of a compromise along the lines of the 1992 La Jolla Agreement and, increasingly over time, the ecological and economic merits of that same Agreement. Had these been the only decision-makers, the role of credible trade leverage would have been unconditionally positive from the standpoint of legitimacy *and* effectiveness. The problem on both counts arose from the interventions of Congress (who did not participate in the dialogue) and Earth Island Institute and its animal rights allies (who would not): the former by passing arbitrary and unworkable requirements in the 1988 MMPA Amendments, and the latter by organizing consumer boycotts and then gaining effective control of U.S. trade policy in the 1992 Amendments.

340. For a distinct though similar approach to legitimating environmental trade leverage, see ESTY, *supra* note 14 (in the absence of a governing international agreement, endorsing “unilateral actions in support of

c. General Implications

While the in-kind trade leverage of the United States proved just sufficient (with some timely assistance from European canners) to yield a good-faith bargain in the tuna-dolphin case, it seems clear that such will not necessarily be the result in other cases. One may imagine situations where in-kind leverage is too weak to force anyone to negotiate. Or, less likely, an importer's unilateral leverage may be so overwhelming as to allow it essentially to dictate terms of choice to grudging but dependent exporters. The former possibility requires that importers be allowed, on some occasions, to expand sanctions to unrelated goods, just as the WTO allows states to do in response to WTO violations. The latter risk (overbearing use of leverage) requires *ex ante* rules of proportionality and clear rules (such as negotiating requirements) to prevent "abuses" as defined and discussed in more detail below.³⁴¹

2. Franck's Concept of Substantive Fairness

Franck defines substantive fairness in terms of John Rawls' "maximin" principle which, Franck believes, "may be coming close to universal acceptance as a core principle of fairness."³⁴² This principle, in Franck's rendering, presumes that any new rule is "justifiable only if it narrows, or does not widen, the existing inequality of persons' and/or states' entitlements."³⁴³ The presumption in favor of equilization may be rebutted only by a showing that the rule in question will benefit the "long-term expectations of the least fortunate group in society."³⁴⁴ Franck argues for extending Rawls' principle to the international realm as well, recognizing that Rawls himself has disavowed that move.³⁴⁵

There are certain threshold difficulties that arise in extending maximin from the level of individual entitlement for which it was designed to the level of

internationally agreed environmental standards or in response to significant transboundary or global environmental harms") and *id.* at 144, 148 (where a governing agreement exists, proposing to allow leverage only in support of objectives that have received the prior endorsement of "60 percent majority of weighted votes — based half on population and half on GDP — of all nations that can demonstrate more than a de minimus connection (as producers, consumers, or guardians of affected resources) to the issue at hand.").

341. See *infra* Part IV.E, F.

342. FRANCK, FAIRNESS, *supra* note 2, at 18.

343. *Id.* In the international environmental area, Franck claims to find evidence for this principle in, *inter alia*, the Pardo doctrine in the Law of the Sea Convention; the promise of developed states to reimburse incremental costs of developing country compliance with the ozone and climate change treaties; and treaty provisions for the "equitable sharing" of Antarctic and outer space resources. *Id.* at 380-412. However, the ozone and climate episodes, at least, can be fully explained in terms of a principle that is slightly different from maximin: the criterion (which may be called the "loss avoidance" principle) that poor states should not be made worse off in absolute terms, economically, by virtue of participation in a regime that benefits the global commons. The distinction is clear: whereas the maximin principle focuses on relative gains or losses, the "loss avoidance" principle focuses on absolute gains and losses.

344. *Id.* at 18 (quoting JOHN RAWLS, A THEORY OF JUSTICE 151 (1971)).

345. See *id.* at 18-19.

international entitlement where Franck wishes to apply it. Among them is the fact that states are not unitary actors, and their interests are not unitary interests. States' entitlements include, *inter alia*, the entitlements of producers, consumers, government agencies, issue advocacy groups and interests. Moreover, the claims of the various groups, agencies and interests that collectively define the interests of the state may themselves be in conflict. For example, the "entitlement" of Mexico's conservation-minded "Group of 100" to the preservation of dolphin stocks may conflict with the Mexican fleets "entitlement" to the lowest-cost access to tuna that swim with dolphins. Franck's simple reference to "states' entitlements" occludes this internal structure, thereby masking (without eliminating) the need for further assumptions about which sub-national interests matter in defining each state's definition of interest and sense of "entitlement." This does not obviate all application of the maximin principle or the relevance of fairness discourse generally. It simply means that the principle cannot be applied to states as if they were monolithic blocs. Rather, it must be applied in relation to the various sub-national, component interests that collectively define the "entitlement" of each state.

The discussion that follows will examine the role of the maximin principle in relation to four broad categories which jointly define the fairness discourse of states in the realm of international environmental protection: (a) fairness to producers; (b) fairness to consumers; (c) fairness to non-users and future generations; and (d) fairness to states *per se*.

a. Fairness to Producers

In any area of economic activity, states are certain to be concerned (often primarily) with the impact of rules on the interests of their domestic producers. As applied to fleet interests in the tuna-dolphin case, the maximin principle on its terms would require that any cooperative agreement tend to equalize the profitability of U.S. and target state tuna fleets or, at least, not worsen existing inequalities in profits and revenues. Moreover, if Franck is correct in asserting maximin as an empirical reality (not simply a philosopher's prescription) then all fleets and flag states should have accepted the maximin principle as a normative framework for negotiation, even if they disagreed about how it should apply in practice.

While Franck correctly focuses on perceptions of substantive fairness as a motivating force of behavior, the tuna-dolphin experience provides little empirical support for Franck's claim that maximin "is coming close to universal acceptance as a core principle of fairness" in the allocation of national producer entitlements."³⁴⁶ In fact, the case reveals equitable criteria at work which clearly are not encompassed by maximin.

346. See *supra* note 342.

To begin, the record and statements of the actors demonstrate that neither the U.S. tuna fleet nor the U.S. government were concerned in the least with equalizing the ultimate "entitlement" of the U.S. fleet with that of other fleets in the name of fairness.³⁴⁷ Nor is there evidence that Latin fleets (or their flag governments) were demanding redistributive outcomes. Instead, fishers, fleets, and flag states demanded a "level playing field" for commercial interests; and charges of unfairness arose from perceptions that one side or the other was exploiting the dolphin conservation issue to obtain unilateral commercial advantage.³⁴⁸ There is no reason to suppose tuna-dolphin unique in this regard. "Level playing field" is the ethic of the marketplace, encompassing developed and developing country producers alike. It offers a principle of equal opportunity not equalized outcomes; it accepts the possibility of greater inequalities emerging from a level playing field. Competitive equity is thus a quite different concept from maximin.³⁴⁹

Level playing field demands were met in the tuna-dolphin case by uniform international standards, reflecting the fact that Latin American and U.S. producers were all sophisticated high-tech producers using a homogeneous process to compete head-to-head in furnishing a middle-class product for a global market. In fact, developing country producers operating under the La Jolla Agreement out-performed the U.S. fleet operating under U.S. domestic regulation, while employing the same technology and techniques (albeit with greater skill and diligence). While this obviously will not always be the case — there may be situations in which norms of competitive equity call for non-uniform standards for producers of different nationalities. Tuna-dolphin offers a powerful rebuttal to the condescending judgment that developing country producers are not "capable" of high environmental performance. It also reinforces the fundamental insight that in negotiations implicating the activities of economic actors, the ethic of competitive equity may guide in situations where explicitly distributive discussions would founder. By the same token, demands for competitive equity will plague and may undermine any agreement that ignores them. Because the interest of producers is to gain advantage rather than equity, competitive-equity demands are not merely expressions of interest. Rather, they are an integral element of fairness discourse in the environmental realm.

347. See discussion *supra* Part II.B.2.

348. Thus, Latin fishers and flag states charged that the U.S. emphasis on dolphin-safe fishing after 1990 was simply a protectionist device to favor the U.S. fleet, which by then had largely left the ETP for the "dolphin-safe" tuna-rich waters of the Western Pacific where the United States enjoyed preferential treaty-based access. U.S. fishers charged, in return, that they had been forced to leave the fishery by U.S. unilateral self-regulation of dolphin mortality.

349. Competitive equity is not, however, an affirmation of Nozick's claim, as described by Franck, that a "fair" distribution is any outcome that results from people playing by the rules in place at any given time. Competitive equity provides a basis for critiquing rules that, say, have a discriminatory impact. See FRANCK, FAIRNESS, *supra* note 2, at 19-20 (describing Nozick's theory of justice).

b. Fairness to Consumers

States also concern themselves with impact of environmental regimes on consumer entitlements. Here, the maximin principle might be viewed as prohibiting rules which disproportionately harm developing country consumers, either because they are more dependent on the products in question, or because they have a lower ability to absorb price hikes caused by the cost of environmental protection efforts.

Consumer interests were not central elements in the tuna-dolphin case for two reasons. First, most canned tuna is sold in developed country export markets.³⁵⁰ Second, the impact of dolphin conservation on price is small in any event, both because dolphin conservation under current arrangements does not require significant price hikes and because the abundance of non-dolphin-associated tuna on world markets precludes such price hikes from occurring. Both of these circumstances are unique to tuna-dolphin, however. Other cases may provide opportunities to test the application of maximin principle to fairness discourse in the allocation of states' consumer entitlements.

c. Conservation Entitlement

While states clearly are concerned with producer and consumer entitlements, they also have constituents who depend on environmental preservation either for their livelihood (e.g., tourism) or their well-being and enjoyment of life. In addition, states presumably feel some fiduciary responsibility to future generations who will be summarily denied all entitlement to resources irreversibly consumed today. In all environmental cases (both domestic and international) the issue thus arises, what is the "fair" allocation of entitlement between use and non-use (or conservationist) interests, and/or between present and future generations?³⁵¹

To such questions, the maximin principle applies only awkwardly, if at all. To begin with, it is very hard to make the determination (which maximin seems to require) of whether future generations will be more, or less, advantaged materially than present ones. The defining premise of the concept of "sustainable development" is that this remains an open question and, in any case, there is far too much diversity of circumstance within each "generation" to render such a comparison meaningful.

Nor is it obvious that the question of who is least advantaged is dispositive of the use or non-use of commons resources (as opposed to the allocation of

350. While target states did divert tuna to domestic markets when export markets were closed by trade embargoes, this stop-gap measure was intended to be reversed once the embargoes were lifted.

351. While some might answer this question by holding that the fair outcome is one that derives from a legitimate process, Franck explicitly considers, and rejects, this criterion in FRANCK, FAIRNESS, *supra* note 2, at 30.

commons resources that are used). The poor of New York City are not allowed to chop down the trees of Central Park for firewood even though they may be less advantaged than those restraining them. Some alleviation of poverty through redistribution of wealth may be desirable and, indeed, required both within and among nations. But this does not prove that such alleviation must be allowed to take the form of unlimited exploitation of the commons by the poor.

If maximin itself does not provide a viable rule for striking a "reasonable" balance between environmental and economic interests, the question arises: what does? In the tuna-dolphin case, fishers, flag states, and moderate environmental groups approached this question from the anthropocentric, but widely accepted, perspective of sustainable development. That principle called for preserving, with a reasonable margin of safety, dolphin populations and ecosystems for future generations. Fairness discourse within this perspective centered on disagreements between environmentalists and fishers over mortality levels required to achieve this goal and over the benefits of pushing mortality to ever lower levels in relation to the rising cost of doing so. Although disagreements were vigorous and sometimes emotional, these differences of opinion ultimately proved capable of management through integrative bargaining that led to compromise.³⁵²

In contrast, Earth Island and other animal rights groups considered marine mammals as moral agents whose rights trump economic interests and therefore could not be balanced with these interests. Fishers rejected this view not only because they thought it would harm them economically but because they considered it unreasonable and hence unfair to be asked to accept great economic sacrifice for nothing more than sentimental gain (in their view). The latter, moral perception transformed mere resistance based on interest into morally indignant, categorical refusal.

d. Fairness to States Per Se

While much of the burden of preventing or remediating environmental harm is borne by private producers, most agreements also place heavy demands on national administrative standard-setting, monitoring, and enforcement capacity. That fact has direct distributive consequences for state agencies as such, beyond

352. The 1992 La Jolla Agreement thus established a broad consensus that its objectives were reasonable in the sense that (1) they appeared likely to preserve the ETP dolphin population on almost any assumption about dolphin stocks; (2) without competitive harm to producers; and (3) without significant price increases for the (largely middle-class) consumers of the product. 1992 La Jolla Agreement, *supra* note 32. The 1998 Agreement, on the other hand, imposed requirements which many fishers considered excessively expensive in relation to the marginal benefits gained (reduction of annual mortality from 0.2% to 0.1% of minimum estimated stock abundance). It was not simply the cost of compliance that mattered (a question of economic interest) but one of imbalance between costs incurred and benefits gained (a question of fairness). Ultimately, the issue was resolved in 1998 through leverage, but the fairness discourse is not over. Under the 1998 Agreement, if the mortality limits prove unachievable in practice, they will be revisited by the parties. 1998 La Jolla Agreement, *supra* note 34.

the derivative fairness concerns of agencies acting as representatives of producer, consumer, or environmental interests, or some combination of these.

The issue of fairness to states *per se* arises from the fact that states entering environmental agreements are typically asked to accept aggregate national obligations and then take on the burden of ensuring that enterprises under their jurisdiction and control behave in such a manner as to permit fulfillment of these national obligations. For many states, particularly in developing countries, this strains government capacity which is already challenged by other pressing environmental and social problems of a more local nature. Given the disparity between developing and developed country resources, fairness seems to require some assistance by the latter to the former. For example, much of the international assistance provided under the stratospheric ozone and climate change treaties is designed to offset the incremental costs to governments of complying with various treaty obligations, such as monitoring and reporting.³⁵³ Trade leverage that penalizes governments for lack of capacity without providing any assistance does not merely fail cost-benefit analysis (an interest-based calculation). It is denounced as "unfair."

The ozone and climate change models represent one way of dealing with the government-capacity element of fairness discourse. Tuna-dolphin demonstrates a rather different way. Rather than impose new obligations on national governments and then transferring funds and know-how to help them meet their obligations, the La Jolla Agreement levied minimal standard-setting and oversight obligations on national governments, promulgated international standards that applied directly to individual vessels, and centralized administration of standards in a well-funded international secretariat financed largely by the United States.³⁵⁴ This proved to be a more efficient way to meet the basic fairness demand with respect to governments. While there are different ways to deal with the capacity problem, the fundamental point is the same. Fairness requires cooperative arrangements that impose "reasonable" demands on governmental regulatory capacity. Fairness discourse revolves around differences of opinion over what "reasonable demands on capacity" are in a particular case and how to meet them.

In general, whether the issue is fairness to producers, consumers, non-users, future generations, or states *per se*, the fundamental role of fairness discourse in international relations is the same: perceptions of legitimacy and fairness play a significant role in determining the voluntary "compliance pull" of any normative regime. Trade threats applied in support of rules that are perceived as "unfair" in respect of any these state interests will encounter heightened resistance in the target state. They are less likely to be supported by other potential sending states

353. See Daniel Bodansky, *The United Nations Framework Convention on Climate Change: A Commentary*, 18 YALE J. INT'L L. 451, 523, 526-27 (1993) (discussing financial assistance provisions of ozone and climate change treaties).

354. See discussion *supra* Part II.C.7 and *infra* note 367.

and may be less credible when issued by the primary sender. While the impact of the legitimacy and fairness factor is hard to measure, and will likely vary case to case, no analysis of trade leverage is complete without accounting for the degree of conflict or congruence, as the case may be, between the goals of leverage, on one hand, and perceptions of fairness and legitimacy, on the other.

C. THE NEOLIBERAL MODEL

The neoliberal, "institutionalist," or "interest-based" model assumes a prior national interest in cooperation on some terms, and focuses on the functions of international institutions in reducing transactions costs and solving certain structural problems of collective action.³⁵⁵ These structures are often described in game theory terms involving binary pairs of unitary, rational state actors. *Harmony* or *coordination* games arise in situations where a hypothetical State A has an unconditional interest in cooperation with State B (e.g., conserving dolphins) and vice versa. Because neither A nor B gain from "defection" (e.g., failing to conserve), game theory predicts that harmony games will result in "cooperation" without any special international effort: each state will simply conserve in its own short-term best interest.³⁵⁶ At the other extreme, *suasion* games involve situations in which either State A has an unconditional incentive to cooperate regardless of what State B does (assuming B's interest in cooperating is not unconditional as well), or State B has an unconditional incentive to defect regardless of what State A does. In either case, game theory predicts that the outcome of suasion games will be non-cooperation by B unless State A can somehow (by "suasion") change State B's "payoff structure" to one more conducive to cooperation.³⁵⁷

The more conducive situation that preoccupies neoliberal theory is the intermediate case: the prisoners' dilemma game. In this situation, which plausibly includes many international environmental situations, cooperation in solving a transboundary problem entails both costs and benefits, but the ratio between the two depends on the actions of other states. Mutual "cooperation" all around is perceived by everyone to be a preferable outcome to defection. However, windfall gains, or "rents," accrue to states who manage to "defect" while others cooperate; and the "sucker payoff" goes to states that cooperate, while others defect (e.g., spending money to conserve dolphins while others catch more tuna

355. The following summary is based on Keohane's classic exposition. See KEOHANE, *supra* note 6, at 5-17, 65-109. Egoistic and "rational" state interests are often assumed in neoliberal accounts, but this assumption is not strictly necessary. See *id.* at 110-32 (expanding neoliberal theory to take account of the fact of "bounded rationality").

356. See *id.* at 51-54.

357. In the first case, B will not cooperate because it knows it can free ride on A's efforts. In the second situation, B will not cooperate because it is by hypothesis unconditionally opposed to cooperation. For good discussions of game theory as applied to analysis of international sanctions, see Abbott, *supra* note 257, at 354-75 and MARTIN, *supra* note 259.

in less time by killing dolphins). State actors face the same incentives to the extent that the actors identify their national interest with their fleets' interest (i.e., to the extent that short-term economic incentives prevail). Neoliberal theories predict that rational, egoistic state actors will cooperate in this case only conditionally, and in the context of on-going relationships that provide assurance that other states will cooperate as well.

Regimes provide five main kinds of assurance functions: (1) providing, usually by means of a written agreement, a clear statement of what cooperation entails; (2) establishing a monitoring, reporting, and verification system to detect non-compliance; (3) providing mechanisms for consultation, mediation, arbitration, or dispute settlement to adjudicate non-compliance and proffer remedies; (4) opening channels of technical or financial assistance to assure that states have reasonable ability to comply with commitments; and (5) instituting a feedback process whereby behavior may be brought into conformity with rules either by change of behavior or change of rules. Instruments of behavioral change can include jaw-boning, peer pressure, loss of reputation as a reliable negotiating partner, tit-for-tat defections by others, linkage to other issues and regimes, and economic sanctions.

Besides supplying assurance about the conduct of other players, regimes and institutions provide an efficient forum for negotiating and amending norms and rules, thereby lowering the transactions costs for cooperation. In addition, they help establish basic commitments to cooperation that are costly for future governments or administrations to recalculate or repudiate. Once implemented, they establish routine patterns of behavior, thereby adding habit and inertia to the incentives favoring cooperation and compliance. For all these reasons, neoliberal theory predicts that regimes will be harder to create than to maintain.³⁵⁸

Neoliberal theory emphasizes that "regime design matters."³⁵⁹ A well-designed, equitable, and efficiently functioning regime generates greater benefits at less cost and therefore is more likely to win adherence and compliance than one which establishes perverse incentives, disproportionately favors certain parties, or is difficult or expensive to implement.³⁶⁰ Finally, regimes involve choosing among many possible terms of cooperation. Those choices often have

358. See KEOHANE, *supra* note 6, at 90, 100-02.

359. Mitchell, *supra* note 6, at 431 (noting the dramatic improvement in regime effectiveness when the International Convention for the Prevention of Pollution of the Seas by Oil — which tried to regulate intentional discharges of mixed oil-water ballast by ships at sea — was replaced by the International Convention for the Prevention of Pollution for Ships which focused on requiring re-design of oil tankers to segregate oil from water ballast) (citations omitted).

360. Herein lies a further, unexplored interaction effect — between regime design and knowledge. If *ex ante* cooperative preferences are based on the utility associated with various levels of dolphin conservation, then regimes that over- or underperform expectations thanks to their design or implementation will cause exogenous shifts in preference curves. For example, over-performing regimes will, by definition, yield a higher-than-expected ratio of benefit to cost, meaning that the utility associated with any given level of output will increase beyond the *ex ante* level.

distributive consequences, which, in turn, raise fairness concerns that will be discussed separately.³⁶¹ Neoliberals simply predict that regimes will work better when distributive issues are minimized.³⁶²

Nothing in the neoliberal model precludes a role for economic leverage in promoting cooperation. Indeed, neoliberal game theory predicts the need for some form of external inducement in suasion situations where a major player is perceived by others as having an unconditional incentive to cooperate — thereby giving other states a dominant incentive to free-ride.³⁶³ Likewise, external inducements are needed in situations where one or more players has a dominant incentive to defect even when others cooperate.³⁶⁴ Even where both sides perceive an *ex ante* interest in cooperation, neoliberal theory recognizes that sanctions may be useful as enforcement mechanisms for cooperative agreements: enhancing participation by reassuring the players that their cooperation will not be punished by the sucker payoff, and vindicating the compliance expectations of parties thereafter.³⁶⁵

1. The Neoliberal Model Tested

Of all the models reviewed in this essay, the neoliberal model best fits the tuna-dolphin experience. The IATTC Tuna-Dolphin Program escaped the prisoner's dilemma by placing an observer on every boat to ensure that non-compliance with gear, practice standards, and dolphin mortality limits would be detected and reported, and by establishing vigorous oversight through an International Review Panel that facilitated the mobilization of peer pressure against non-complying states.³⁶⁶ The Program built, or at least conserved, state capacity to comply by centralizing most of the research, education, training, monitoring, and

361. See *infra* Part III.B.

362. See Young & Osherenko, *supra* note 20, at 249, 251.

363. The tuna-dolphin case, in the early years, arguably constitutes a case in point. The U.S. fleet was by far the largest fleet in the region and the U.S. government displayed an unconditional resolve to force its own fleet to conserve dolphins regardless of what other fleets did. See discussion *supra* Part II.B. In such "suasion" games, game theory recognized that the "dominant" for other states will be to free ride and external inducements may be needed to counter-act that tendency. For a good discussion of this suasion situation, see MARTIN, *supra* note 259, at 20, 26-27.

364. See *id.*

365. While both neoliberal and realist theory acknowledge the potential necessity and efficacy of power (including economic sanctions) in promoting cooperation, two factors distinguish these schools of thought. First, some realists assume that, in most situations, power and wealth maximization are the principal aims of international policy, and that states perceive themselves as rivals of other states — meaning that they are as concerned with "relative gains" (e.g., competitive advantage) as with absolute gains (e.g., total wealth). Neoliberals do not share that assumption as a categorical matter. Second, realists focus on the distributive conflicts arising from the fact that, in many situations, more than one possible form of cooperation may present itself. They predict that the actual arrangement that results will be driven by perceptions of bargaining power. Neoliberals acknowledge this possibility as well, but are less preoccupied with it than realists and do not offer a clear theoretical basis for predicting how such distributive conflicts will be managed.

366. See discussion *supra* Part II.C.7.

administrative functions in a well-funded international secretariat. The Program reduced transaction costs to cooperation by serving as a clearinghouse of information and providing a ready forum for discourse and negotiation. Most of all, the Program attracted participation and compliance by the sheer excellence of its regulatory design, which minimized the degree of leverage needed to "sell" it to states.³⁶⁷

At the compliance stage, the 1992 La Jolla Agreement quickly obtained the adherence of all fishing states and vessels.³⁶⁸ As predicted, the effect of this accomplishment has been to restructure incentives to favor compliance. Fishers and flag states who resisted, or only grudgingly accepted the formation of the regime, now demand strict compliance oversight. If they are required to comply, so should others. As predicted, the La Jolla regime has proved much easier to maintain than it was to create.

2. Insufficiency of the Neoliberal Model

The neoliberal model assumes a prior conditional interest in cooperation without attempting to offer an account of how interests come to be defined initially or how they evolve over time.³⁶⁹ That is the domain of cognitive theory. Similarly, neoliberal theory predicts that agreement will be harder when distributive issues are salient, but it does not attempt to explain how such issues will be resolved when they arise. That is the domain of fairness and power theory.³⁷⁰ Within its domain, however, neoliberal theory correctly identifies the variables, and the contributions of the variables, that mattered in the tuna-dolphin case.

A separate, but important, question is whether the factors identified by the neoliberal model can — when supplemented by knowledge, learning, and

367. Specifically, the Program embodies a "simple and salient" solution which established clear, predictable, and essentially uniform standards of performance for individual vessels, and a reasonable timetable on which to achieve them. It created built-in structural incentives for vessels to comply and avoided the kind of group regulation and group punishment which, in the U.S. regulatory system, had undermined individual incentives to conserve while inflicting huge costs (in the form of fleet-wide bans on dolphin-sets) when fleet mortality exceeded limits due to the actions of individual operators. By treating every vessel alike, the program shifted discussion away from allocative bargaining (who gets to kill how many dolphins) to integrative bargaining over technical issues (how low can mortality be reduced and at what cost). By stating performance standards in a form directly applicable to vessels, and providing for direct international oversight of vessel compliance, the Program avoided the international friction, and compliance-drag, that results in more conventional regimes which require one nation or group to point the accusing finger at non-complying nations for their actions. In fact, one of the Program's key innovations lies in the way it has applied "blind justice," placing the initial compliance oversight function behind a veil that screens out the identity, including the national identity, of individual vessels. IRP members were (and are) asked to review observer reports, and make recommendations regarding infractions, without knowledge of the identity or nationality of the vessel concerned. The effect has been to radically de-politicize and strengthen the compliance oversight function. See Telephone Interview with Martin Hall, Ph.D., Chief Scientist, IATTC Tuna-Dolphin Program (Dec. 17, 1999).

368. See discussion *supra* Part II.D.

369. See KEOHANE, *supra* note 6, at 6 ("The theory that I develop takes the existence of mutual interests as given and examines the conditions under which they will lead to cooperation.").

370. See discussion *supra* Part III.B.2 (fairness) and *infra* Part III.D (power).

fairness discourse — assure adequate protection of the global commons without leverage, as the Chayeses implicitly predict. On this question, history has been unkind to management optimists. In the case of tuna-dolphin, significant cooperation in reducing dolphin mortality did not materialize for fourteen years (1972 to 1986) after the clear identification of the mortality problem, and it indisputably required the assistance of credible U.S. trade leverage. While some delay may perhaps be explained by the time required for research, knowledge dissemination, and negotiation of an agreement, this rejoinder becomes more alibi than explanation after about 1980.

Of course, as Keohane observes, it is always possible to argue that when states perceive an interest in cooperation, regimes will form; and if they do not form, it is because cooperation was not in states' interest.³⁷¹ But that, as he also observes, is circular reasoning reminiscent of Pangloss's insistence in Voltaire's *Candide* that everything, no matter what happens, is for the best in this best of all possible worlds.³⁷² Another explanation is that cooperation did not happen without leverage because the "soft" forces of the management model are not always as competent to deal with problems of collective action as certain legal optimists and free traders suppose.³⁷³

D. THREE "REALIST" MODELS

Realist models focus explicitly on the role of power in explaining both the extent and the terms of international cooperation.³⁷⁴ Realist theory has three main strands. The first strand, "hegemonic stability" theory, focuses on the role of a dominant actor, or small group of actors, in providing the necessary infrastructure of cooperation including, possibly, rule enforcement. The second strand, described here as "instrumental realist" theory, focuses on the use of power as a means for dictating the terms of international cooperation. The third strand, "relative gains" theory, assumes that relative power and wealth maximization are primary goals of policy and explore the consequences of that assumption. Each captures an aspect of the tuna-dolphin experience, but not the whole.

1. Hegemonic Stability Theory

Hegemonic stability theory posits that cooperation in a large-group context generally requires the existence of a "hegemon," a single state or small group of states. In turn, this hegemon must perceive an interest in providing certain

371. See KEOHANE, *supra* note 6, at 65.

372. See *id.*

373. The reasons for this are discussed more fully in Part IV.

374. Although realist theory addresses the role of power generally, the principal concern here is with economic power, which realist theory identifies with "control over raw materials, control over sources of capital, control over markets, and competitive advantage in the production of highly valued goods." See KEOHANE, *supra* note 6, at 32.

non-excludable "public goods," which successful cooperation often requires, including a common currency, financial support, non-reciprocal trade concessions, scientific information and rule enforcement. The theory predicts that cooperation will flourish where there is a hegemon that is able or willing to perform the public-good-providing role and will diminish to the extent that concentration of power is diffused.³⁷⁵

Tuna-dolphin offers some support for the predictions of hegemonic stability theory. For many years, the United States provided, for many years, most of the financial support for the IATTC Tuna-Dolphin Program, supplied all relevant U.S. research and technology free of charge, and set an example by unilaterally regulating its own fleet first, allowing foreign fleets to free-ride for nearly fifteen years. Subsequently, the United States, together with U.S. and several European canners, applied its market-power as a coercive hegemon to try to end foreign free riding on U.S. fleet conservation efforts and to gain foreign fleet cooperation in conserving dolphins in the ETP. This market power declined as fishing states developed alternative export markets and as Mexico and Venezuela, the principal fishing nations, developed their own internal markets.³⁷⁶ Beyond these insights, however, hegemonic stability theory suffers from several shortcomings that it shares with instrumental realism.

2. Instrumental Realist Theory

Unlike hegemonic stability theory, instrumental realism analysis does not predict that effective regimes require a hegemon. Nor does it assume, as relative gains models generally assume, that states are homogeneous and exclusively power-seeking. Conservation, for example, is viewed as possible object of policy.³⁷⁷ But instrumental realism does predict that states will wield their

375. The seminal work in the hegemonic stability literature is CHARLES P. KINDLEBERGER, *THE WORLD IN DEPRESSION, 1929-1939* (1973). See also Charles P. Kindleberger, *Dominance and Leadership in the International Economy: Exploitation, Public Goods, and Free Rides*, 25 INT'L STUD. Q. 242 (1981); ROBERT GILPIN, *WAR AND CHANGE IN WORLD POLITICS* (1981); Timothy J. McKeown, *Hegemonic Stability Theory and 19th Century Tariff Levels in Europe*, 37 INT'L ORG. 73 (1983); Robert O. Keohane, *Hegemonic Leadership and U.S. Foreign Economic Policy in the "Long Decade" of the 1950s*, in *AMERICA IN A CHANGING WORLD POLITICAL ECONOMY* 49 (William P. Avery & David P. Rapkin eds., 1982); Robert O. Keohane, *The Theory of Hegemonic Stability and Changes in International Economic Regimes, 1967-1977*, in *CHANGE IN THE INTERNATIONAL SYSTEM* 131 (O. Holsti et al. eds., 1980); KEOHANE, *supra* note 6, at 31-46. For excellent brief accounts see HASENCLEVER ET AL., *supra* note 258, at 86-104; Duncan Snidal, *The Limits of Hegemonic Stability Theory*, 39 INT'L ORG. 579, 580-90 (1985). Although classic hegemony theory has focused on the power of single states, more recent scholarship has recognized the potential relevance of oligopolies (such as the OPEC oil cartel) who wield power jointly. See KEOHANE, *supra* note 6, at 38-39. Provision of these public goods requires a single or small group of states because of the collective action problems attendant in large group cooperation.

376. See discussion *supra* Part II.C.4.

377. As Stephen Krasner observed: "All states share the same minimalist objectives of preserving territorial and political integrity. States may pursue a more diverse range of non-minimalist objectives. The particular strategies adopted by a given state will be constrained by structural considerations — the distribution of power in the international system as a whole and the place of a given state in that distribution. Within these structural

"bargaining power" to advance their perceived own interests and that the outcome of negotiations will reflect, in considerable part, the perceived balance of bargaining power among the parties. This means that the success of large states in winning cooperation on or close to the terms they propose will depend in large part on the strength of their perceived bargaining power. Moreover, the application of power is most needed at the regime formation and adaptation stage—the stage at which cooperative patterns are being formed or reformed and therefore lack the benefits of inertia, reputation, and reliance on established patterns of interaction, etc.³⁷⁸ However, power is also needed at the compliance stage because weak states are presumably willing to comply only to the extent that they either rewarded or compelled by incentives mobilized by the stronger states.³⁷⁹

Applied to the tuna-dolphin case, instrumental realists might observe that cooperation in dolphin conservation could occur at many levels: if 300,000 dolphins would be killed per year without any formalized cooperation, then cooperation in reducing dolphin mortality could have yielded 300,000 different outcomes, ranging from one death below the uncontrolled death rate to no deaths at all.³⁸⁰ Instrumental realist theory focuses our attention on the role of market power in determining the choice among these possible outcomes and predicts that the level of dolphin conservation agreeable to target states should decline as U.S. market power declines.³⁸¹ This predicted phenomenon was evident in

constraints, strategies will also be affected by domestic attributes such as ideology, interest groups, and state-society relations." STEPHEN D. KRASNER, *STRUCTURAL CONFLICT: THE THIRD WORLD AGAINST GLOBAL LIBERALISM* 28 (1985).

378. See *id.* at 29. ("I accept the critical importance of political power for regime formation. It is impossible to establish *de novo* durable principles, norms, rules, and decision-making procedures unless they are supported by the more powerful states in the system. Once regimes are actually in place, however, the relationship between power and regimes can become more attenuated [by inertia, bureaucratic interest, one-nation-one-vote decision procedures, discourse, etc.]."). This prediction is fully consistent with the neoliberal insight that regimes are harder to create than to maintain. See *supra* note 358 and accompanying text.

379. See Peter M. Haas, *Why Comply, or Some Hypotheses in Search of an Analyst*, in *INTERNATIONAL COMPLIANCE WITH NONBINDING ACCORDS* 21, 26 (Edith Brown Weiss ed., 1997).

380. Somewhat less arbitrarily — and assuming that actors will seek some salient basis for controls — dolphin mortality limits might have been set at: (a) the level which fishers voluntarily agree to achieve; (b) the level of mortality necessary to perpetuate stocks in perpetuity; (c) the level consistent with best practice and best available technology; (d) ecologically insignificant levels of mortality; or (e) zero.

381. In game-theoretic terms they might say that, nested within the prisoners' dilemma game, is a Battle of the Sexes game. The latter is named after an imaginary situation which illustrates the problem dynamic in familiar terms: boy and girl, let's say, want to go out to a movie together. They both prefer to go together (cooperate) than separately (defect), but there is a wide range of movies (cooperative outcomes) they could choose. Moreover, they have different preferences in movies. Because they can only go to one movie, one of them will be better off than the other, no matter what the outcome. Realists predict that when situations like this arise in international relations they will be decided on the basis of relative power concerns. Legal scholars predict, or at least advocate, that they be decided through "fairness discourse" (we went to your movie last time). Cognitivists would predict that each would try to sell the other on the merits of his/her preferred movie. See HASENCLEVER ET AL., *supra* note 258, at 109. Note one important distinction between the movie metaphor and dolphin conservation cooperation: in the former, the options are perfectly dichotomizing (they can only go to one movie), whereas there is a wide, continuous range of options for dolphin conservation. The latter allows compromise in a way that the former does not. Therefore, the analogy of international environmental bargaining to Battle is inexact.

tuna-dolphin. From 1992 onwards, the prospects for acceptance of a complete moratorium on encirclement went from probable, to possible, to nil, as new legal markets were opened for “dolphin-unsafe tuna,” as black markets developed in the United States and Europe, and as the economic impact of the embargo eased. Nonetheless, the continued economic allure of the U.S. market remained sufficient to motivate significant conservation efforts — at a level much closer to zero than 300,000 — so long as it seemed apparent that such efforts would eventually be rewarded by restored market access.³⁸²

At the compliance stage, high compliance was assured by making cheating detectable with near certainty through on-board international observers and by fostering the mutual understanding that cheating would beget cheating, cause the regime to unravel, and undermine prospects for market access. In addition, knowledge that cheaters would remain excluded from the U.S. market contributed to high rates of compliance. Would-be newcomers were deterred from fishing outside the system by the near-certain prospect of triggering economic sanctions against themselves.³⁸³ In all these respects, instrumental realism seems to offer a strong description of the tuna-dolphin experience.

Despite this considerable explanatory power, both hegemonic stability theory and instrumental realist theory test negatively against the tuna-dolphin case in several key respects. First, they tend to define hegemony or bargaining power in term of “structural power” cross-cutting national attributes, such as aggregate gross national product and military power. Tuna-dolphin reveals, however, that the relevant power in the environmental realm is not structural power but bargaining leverage, which is different from structural power in at least three ways.³⁸⁴ First, great nations tend to self-limit their use of trade leverage in environmental cases to in-kind or closely related products, or at least to “proportional” responses.³⁸⁵ This means that in-kind bargaining leverage may depend on non-power variables such as consumer tastes and the degree of

382. See discussion *supra* Part II.C.4.

383. See *supra* note 236 and accompanying text.

384. For an excellent discussion of the distinction see ORAN YOUNG, *INTERNATIONAL GOVERNANCE: PROTECTING THE ENVIRONMENT IN A STATELESS SOCIETY* 117-39 (1994) (noting tension between classic definitions of structural power and issue-specific formulations of bargaining power).

385. Such self-restraint may be variously explained by (1) rules of restraint built into the world trade law and international law generally; (2) the need to maintain order and friendly relations in both fisheries and non-fisheries matters; (3) the need to husband the resources of leverage for use in other disputes; (4) the costliness of sanctions to the sender; (5) threats of retaliation or counter-retaliation (which will increase as the magnitude of the provocation increases); and (6) the inherent messiness, politically and conceptually, of linking unlike issues. On international legal constraints on massive retaliation strategies, see for example, Marrakesh Agreement Establishing the World Trade Organization, Annex 2, Understanding on Rules and Procedures Governing the Settlement of Disputes, art. 22, Apr. 15, 1994, 33 I.L.M. 1226 (1994) [hereinafter WTO Dispute Settlement Understanding] (limiting trade retaliation — after successful dispute settlement and failed efforts to negotiate compliance with panel or Appellate Body decision — to like products as those involved in the dispute (wherever possible) and requiring “equivalent” suspension of trade rights in retaliation).

economic or environmental harm associated with a particular practice.³⁸⁶ Second, trade restrictions impose costs on the sending state, costs which vary depending on the sending state's degree of dependence on the imports or exports in question. Third, because not all resources are mobilized in support of or in opposition to power-based demands, bargaining leverage depends in part on the degree of resolve of both sending and target states. But this implicates the will of each state, and thereby brings the force of ideas and domestic political structures into the calculus of bargaining leverage. Whereas realists tend to model bargaining leverage as an exogenous, structural variable, leverage in the environmental realm is contingent and endogenous even in the short-term.³⁸⁷

If the amount of bargaining leverage is endogenous and cognitively determined, so is the response to it. In the tuna-dolphin case, the same degree of leverage mobilized by the United States on behalf of a certain level of mortality would have triggered very different responses, depending on target state's perceptions of factors such as: (1) the economic cost of achieving that level of mortality; (2) the environmental benefits of doing so (in terms of stock preservation); (3) the domestic political profile of the issue; (4) linkage to other issues; and (5) the efficiency of the administrative mechanism set up to achieve the target level of mortality. The relationship between leverage inputs and behavioral outputs is not linear. Rather, the relation is modulated by all the cognitive, moral, and institutional factors reviewed above. And those factors are themselves influenced by their interactions with power in subtle, important, and hard-to-predict ways — for example, leverage used to get observers on tuna vessels worked strongly in favor of the La Jolla Agreement, and equally strongly against the subsequent dolphin-safe policy of the United States.

Finally, economic hegemony is not required in order for trade leverage to be effective, so long as importing states are able to impose political and economic benefits that exceed the anticipated costs of cooperation. The costs are subject to change under the influence of all the factors — cognitive, institutional, moral, and individual — discussed above.

386. The United States had market power in the canned tuna industry because U.S. consumers eat a lot of canned tuna. Italy and Spain were also major players in the canned yellowfin tuna market, not because these countries are economic superpowers, but because their consumers love to eat yellowfin tuna. Trade sanctions (restrictions on non-harm-causing products) offer a way of escaping the vagaries of market patterns, allowing large states to wield effective leverage even when they may not constitute the primary market for a harm-producing good. Yet even sanctions are, in practice, self-restrained in the environmental field by a sense of rough proportionality (e.g., calibration to deny the target the economic benefit of the harmful activity in question).

387. I do not mean to suggest that structural power is irrelevant to bargaining outcomes. To begin with, structural power often correlates with issue-specific leverage: small states rarely have huge bargaining leverage, while great states often do. Moreover, as Oran Young astutely observes, structural power, even when it is not going to be fully mobilized, inherently gives a state a certain "heft" in international negotiations (a claim to leadership or at least a right to be heard and taken seriously) which smaller powers lack. See YOUNG, *supra* note 384, at 136-37.

3. Relative Gains Theory

While hegemonic stability and instrumental realist models focus on the uses and limits of power as a *means* of policy, relative gains models examine the implications of assuming power-seeking and material-wealth-maximizing ambitions as goals of foreign policy. Beginning with the observation that bargaining situations typically offer many possible cooperative outcomes, relative gains theory assumes that each state will always favor the outcome which maximizes its power and wealth relative to its rivals.³⁸⁸ As Jonathan Wiener has observed, self-interested actors may also be expected to pursue “rents” through international regulation by using their influence to skew regulations in their own competitive favor, thereby threatening both the efficacy of international regulation and its rationality.³⁸⁹ But relative gains models, properly viewed, also capture another important aspect of the cooperative dynamic that Wiener misses: the rent-seeking motive for non-participation in international environmental regulation. It is, after all, the essence of the prisoner’s dilemma game that rational states who can get away with it will free-ride on the cooperative efforts of others. At least in cases where relative gains motives are dominant, realist models predict that cooperation will depend on the ability of a large state or group of states to bribe or coerce cooperation through external incentives.

Applied to tuna-dolphin, relative gains models aptly capture the ubiquitous concern of the various fleets with competitive advantage.³⁹⁰ In the United States, fear of losing competitive advantage (what IR theorists call “defensive position-alism”) acted as a brake on upward movement of U.S. dolphin mortality standards.³⁹¹ Relative gains concerns reappeared in certain discriminatory and protectionist elements of the 1988 Amendments.³⁹² Congress refused to impose

388. For an example of this line of analysis, see J. Grieco, *Anarchy and the Limits of Cooperation: A Realist Critique of the Newest Liberal Institutionalism*, 42 INT’L ORG. 485, 500 (1988) [hereinafter Grieco, *Anarchy*]; and J. Grieco, *Realist Theory and the Problem of International Cooperation: Analysis with an Amended Prisoner’s Dilemma*, 50 J. POL. 600 (1988).

389. See Jonathan Baert Wiener, *On the Political Economy of Global Environmental Regulation*, 87 GEO. L.J. 749, 771 (1999) (collecting examples demonstrating that “rent-seeking . . . is rife in global environmental regulation. Global environmental treaty negotiations are not solely about protecting the global environment; countries bring diverse interests to the table, including both global environmental protection and national economic advantage.”).

390. This version of relative gains theory echoes the familiar though misnamed “race-to-the-bottom” dynamic which has aroused so much controversy in the literature on both domestic environmental protection and trade and environment. For a good general discussion, see Esty, *supra* note 307; Richard Revesz, *A Race to the Bottom and Federal Environmental Regulation: A Response to Critics*, 82 MINN. L. REV. 535 (1997). For studies of regulatory competition internationally, see Joel P. Trachtman, *International Regulatory Competition, Externalization, and Jurisdiction*, 34 HARV. INT’L L.J. 47 (1993); Sanford E. Gaines, *Re-thinking Environmental Protection, Competitiveness, and International Trade*, 1997 U. CHI. LEGAL F. 231 (1997).

391. It was the major reason underlying the static and unambitious U.S. fleet mortality limit of 20,500 dolphins per year from 1980 to 1992. See discussion *supra* Part II.B.2, C.1.

392. On the U.S. side, Congress made the U.S.-fleet mortality rate the benchmark of acceptability. This meant that U.S. fishers would never see their catch blocked from market — only foreign fishers were at risk of

dolphin safe requirements until the U.S. fleet was safely out of harm's way in the Western Pacific, though Latin fishers could not follow it there. Foreign fleets showed their relative gains concerns in the readiness with which they sprang to meet the opportunity of expanding their fleets and catch, resisting conservation efforts while the U.S. fleet labored under onerous requirements.³⁹³ These concerns also surfaced in their vehement objection to the discriminatory aspects of U.S. standards, and in their refusal to accept a dolphin-safe mandate, which they assumed would seriously handicap them competitively vis-à-vis other fishers and flag states. In all these situations, the core problem was with profits, an absolute gain concern. But the profit concern derived from worries about the impact of new rules on the cost curve of fishers relative to that of their competitors.

In sum, relative gains theory clearly captures the force of the mercantile interests that surface in virtually every sphere of international economic relations, including the environmental sphere. But the evidence simply does not support allegations that the dolphin conservation campaign was nothing more than a protectionist ploy to advance U.S. or any other country's commercial interests.³⁹⁴ Nor is it fair to assume that the entire motivation of non-U.S. fleets and flag states was crassly commercial. Relative gains theory, as its leading proponents acknowledge, captures one set — but only one set — of the incentives in the environmental realm.³⁹⁵

E. LEADERSHIP AND LEVERAGE

One of the defining tendencies of IR theories (or at least many of them) is their tendency to structuralize and depersonalize the bargaining dynamic, preferring a systemic focus over a psychological or personal one. As Keohane remarks, this tendency is due partly to desire for explanatory parsimony and objectivity and partly to a belief that systemic factors at the international level often constrain human and state actions, by preventing the expression of human impulses except

that. Foreign fishers were also forced to guess what the U.S. fleet mortality rate might be in deciding their own performance targets — though accurate guesses would have required clairvoyance.

393. In game theory terms, U.S. unilateral self-regulation beginning in 1972 transformed what might have been a Prisoner's Dilemma game (yielding conditional cooperation within a framework of monitored behavior and iterated games) into a "suasion game" in which awareness of the United States's dominant strategy to cooperate gave the foreign governments' fleets an added incentive to defect.

394. The concerns behind the dolphin conservation movement were sincere, and had nothing whatever to do with the achievement of competitive advantage. The movement was launched and led by individuals and groups who had no ties with (and indeed developed a deep antipathy for) the U.S. tuna fleet, which itself was regulated unilaterally for 20 years before any import embargoes were imposed. The U.S. fleet, for its part, fought strict conservation rules every step of the way, opposed the dolphin-safe mandate with particular vehemence, and ended up being forced out of the fishery by the cannery boycotts — hardly an instance of successful "rent-seeking" through international regulation.

395. See Grieco, *Anarchy*, *supra* note 370, at 500 for a discussion taking account of both absolute and relative gains motives in cooperation, and offering a cogent conceptual formula for ascertaining state utility functions based on the weights assigned to both absolute and relative gain.

along certain channels.³⁹⁶ However, the emergence of cognitive theories in recent years has given new salience to the individual and subjective dimension of cooperation. Furthermore, it seems clear that while systemic structures and social forces clearly influence history, they do not fully determine the outcomes of human interaction. Because state and non-state actors are comprised of and led by people, no analysis is likely to be complete without taking account of the perspectives and attributes of individual leaders. Young and Osherenko accordingly have offered a rudimentary analytical framework for considering this intrinsically unpredictable variable of history.³⁹⁷ In the last analysis, however, the role of individual leadership remains as much a caveat to theory as a component of it.

Leadership made immense differences in the tuna-dolphin case. Based on long experience, Joseph and Hall were committed to dolphin conservation but harbored strong convictions about the ecological and tuna management hazards of dolphin-safe fishing. That fact can be explained by cognitive theory. But cognitivism alone cannot predict the skill and tenacity with which they advanced their pro-conservation, anti-preservationist agenda with the fleets, environmental NGOs, governmental representatives and the publics of many states.³⁹⁸ Weaker wills or less skillful or resolute marshaling of data by these individuals could easily have resulted either in complete dolphin-safe fishing (surrendering to U.S. pressure) or the collapse of the Program (defying U.S. pressure). In the field, the fishing knowledge and personal qualities of Dave Bratten and his colleagues in the IATTC gear program enabled them to establish a rapport and a line of communication with fishers, which proved indispensable to the foreign fleet's acceptance of observers and of the Program generally. This rapport should not be taken for granted. International secretariats and fishers will not always get along.³⁹⁹

Among the government delegates, Licensio Carlos Camacho Gaos of Mexico emerged as the principal spokesman for the Latin fleets and states because of his position as representative of the state controlling the largest fleet, his pragmatic temperament, and his personal leadership skills. He replaced an uncompromising

396. See KEOHANE, *supra* note 6, at 25-26.

397. Young and Osherenko posited three types of leaders: structural (leaders of important states); entrepreneurial (effective organizers and negotiators); and intellectual (those possessed of superior knowledge or analytic skill). They found strong confirmation in their environmental case studies for the hypothesis that "success in institutional bargaining is likely to occur when effective leadership emerges; it will fail in the absence of such leadership." Gail Osherenko & Oran R. Young, *The Formation of International Regimes: Hypotheses and Cases*, in POLAR POLITICS, *supra* note 259, at 1, 18. The tuna-dolphin experience suggests that a more fruitful way of looking at leadership may be to determine — through close historical analysis — who the structural, entrepreneurial and/or intellectual leaders are in any given case (remembering that a single individual may be, in some cases, all three); then, to consider the systemic and structural determinants of the choice of leaders; and finally, to take into account the degree of freedom and discretion allowed them by their position, explore how their choices influence outcomes.

398. See discussion *supra* at Part II.C.5, 7.

399. In fact, Hall's British predecessor at IATTC had been unable to secure Latin fleet cooperation on any level in part because of his lack of rapport with the Latin fleet.

nationalist who viewed relations with the United States in purely confrontational terms. As Ambassador David Colson of the United States reported, no progress or even constructive dialogue was possible with Mexico until Camacho came along.⁴⁰⁰ He enabled dialogue and progress, not only because he was pragmatic, but because he commanded the respect and trust of the other delegates.

Colson himself influenced events significantly by his ready acceptance of the dolphin-safe solution. The resulting decision not to press hard in 1992 for the Breaux bill (to support the La Jolla process) may have prolonged the embargoes for years. Colson's actions were determined largely by his subjective evaluation of the political landscape in Congress, where Studds and Boxer, acting on their personal convictions, were powerful forces for passage of the 1992 Act that ensured prolongation of the embargoes.⁴⁰¹

While tuna-dolphin vividly demonstrates the vital role of individual leadership in shaping events, it also suggests that the difference made by individual leadership, though fundamental, may not be entirely random or exogenous. Pulvenis of Venezuela and Camacho of Mexico were given the leadership of their respective delegations after the embargoes, with a mandate to negotiate a solution. Both were pragmatists who displaced hard-line nationalists. They vigorously asserted their countries' position but did so by engaging in zealous dialogue and actively seeking a "zone of agreement." Thus, trade leverage sometimes works by producing a change in leadership which makes accommodation possible. This minor and contingent role of leverage, however, should not detract from acknowledgment of the vital, intrinsically unpredictable role of leadership in international relations.

IV. ENVIRONMENTAL TRADE LEVERAGE AND COOPERATION: IMPLICATIONS FOR LAW AND POLICY

Examining the tuna-dolphin case through a variety of IR "optics" yields a number of individual insights. The discussion that follows will gather the insights yielded by Part III into a preliminary model for understanding the role of ETL in conserving the global commons, a model which others may test against their understanding of theory and the experience of other cases. The goal is not to attempt to develop a rigorous, deductive model that moves from axioms to conclusions in the manner of mathematical reasoning, but simply to offer a set of hypotheses which address the basic questions of law and policy that any

400. As Colson remarked, "Somewhere in the middle of 1992, players changed. We got a new group of people that were easy to work with. It wasn't that they were giving up their national positions or anything. But you could sit down and have a face-to-face discussion that wasn't personal or nationalistic, but was based on solving problems . . ." See Interview with David Colson, former Dep. Asst. Sec. for Oceans and Fisheries Aff., U.S. Dept. of State, in Washington, D.C. (Sept. 27, 1997) (also noting that Camacho was a natural leader, and that Mexico had the proxy of other fishing nations largely because of their respect for Camacho).

401. See discussion *supra* Part II.D.

explanation of the role of environmental trade leverage must address: (1) when is leverage necessary to commons management and why is it not always necessary; (2) what variables contribute to its effectiveness; (3) what are the causal pathways by which leverage operates to shape behavior; (4) what are the conditions of its legitimacy; and (5) how are "abuses" of ETL identified and minimized; and (6) what risks does ETL thus cabined pose for the world trading system.

A. ON THE NECESSITY OF ENVIRONMENTAL TRADE LEVERAGE

The most important and divisive question in the realm of trade and environment law and policy is whether the global commons can be adequately protected without the use of trade leverage and, in particular, without the use of unilateral trade leverage.⁴⁰² The environmental community resolutely defends the use of unilateral sanctions largely because it is deemed essential for protection of the planet. Presumably, free traders who condemn the use of unilateral sanctions also do not wish to see the global commons destroyed. Implicit in the "free trader" position, then, is the premise that the global commons can be adequately protected without the use of leverage.⁴⁰³ The validity of that premise is an empirical question on which theory and past experience can shed some light.

While tuna-dolphin is only one episode in history, it clearly refutes the assumption of free traders and legal optimists that "management" alone will suffice to protect the truly global commons. The history of events recounted in Part II makes clear that U.S. trade leverage, though misapplied, played an essential role in preventing the ETP fishers from wiping out the key target stocks of the fishery.⁴⁰⁴ Moreover, the reasons for the presumed necessity of ETL in

402. See Hudec, *supra* note 14, at 117. In the WTO the term "unilateral" typically includes any trade measures not specifically required by a pre-existing international environmental agreement.

403. As Renato Ruggiero, Director-General of the WTO, remarked in 1998:

[M]ultilateral approaches in the environmental and social fields are working. And . . . nothing in the WTO stands in the way of the international community pursuing shared goals in other international agreements If the problem is the environment, then our goal must be to develop global policies which address the environment — and not trade.

Renato Ruggiero, *The Coming Challenge*, *supra* note 23.

404. See discussion *supra* Part II. The salient facts supporting this judgment are: (1) the demonstrated tendency of fishers to deny or underestimate the true extent of dolphin mortality they were causing in the fishery; (2) the reluctance of fishers and flag states to accept on-board observers until motivated by trade threats; (3) fishers' egregious over-estimate of dolphin conservation costs prevailing among fishers prior to their serious involvement in the IATTC Dolphin Program (i.e., after the issuance of trade threats); (4) the high level of mortality that was found to be occurring once observers were on board; (5) the seriously depleted condition of the observed stocks even after years of modest conservation efforts; (6) basic marine mammal population dynamics — the low reproduction rates of marine mammals combined with the tendency of reproduction rates to decline with diminishing population (creating a vicious cycle of excess mortality causing diminished birth rates among the living); and (7) a possible basin effect whereby dolphins from the periphery replace those killed in the central fishing areas, giving tuna vessels a false impression of dolphin abundance. These factors together strongly suggest the following scenario: fishers, left to themselves, would someday have woken up to the fact that they were slaughtering their own tuna scouts in unsustainable numbers; they would have banded together to

cases like tuna-dolphin are clearly set forth in neoliberal IR theory. Resource users are often able to manage their shared resources, without outside enforcement, if and only if the users are a limited group, see themselves as equally dependent on the shared resource, and, as Ostrom has observed, "are involved in a network of relationships that depend on the establishment of a reputation for keeping promises and accepting the norms of the local community regarding behavior."⁴⁰⁵ On the other hand, "appropriators who are involved in activities that take them away from their CPR (commonly pooled resource) and into an economy in which other opportunities exist are most likely to adopt a high discount rate [i.e., be uninterested in conservation] than are appropriators who presume that they . . . are dependent on the local CPR for major economic returns."⁴⁰⁶ Regional agreements for managing regional seas, air flows, or straddling stocks generally approximate the first, more favorable situation: a fairly small group of states is able to internalize virtually all the benefits of conservation. There is a reciprocity of advantage in seeing that conservation works, and no pressing need for use or threat of leverage.

As Ostrom herself observes, however, the latter, less-favorable situation is reflected in high-seas, distant-water fisheries.⁴⁰⁷ Distant-water fleets are not dependent on any particular fishery. Their horizons are virtually global. If one fishery is exhausted they move on to raid the next, and their economic dependence on any single fishery is attenuated at best. Distant water vessels can fly virtually any flag. While there is often a stable core of repeat "players" in each high seas fishery, the players are constantly changing at the periphery, and the periphery constantly threatens to encroach if the central actors give them a market opening.⁴⁰⁸ Adding to this built-in structural problem is the fact that the international fishing fleet is hugely over-capitalized, leading to cutthroat competition

do something about it; but their efforts — hampered by the free rider problems (sans leverage) — would be too little, too late.

405. ELINOR OSTROM, *GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* 206 (1990).

406. *Id.*

407. *See id.* at 205.

408. In the case of the ETP tuna-dolphin fishery, the United States controlled upwards of 70% of the Class 6 vessels in the fishery through the 1970s. *See, e.g.*, 1976 IATTC ANN. REP., at 173, tbl. 4 (reporting that 112 of the 156 Class 6 vessels in the fishery (71%) were under the U.S. flag). By 1987, Mexico, Vanuatu, Venezuela, and Ecuador had entered the tuna-dolphin fishery in force. *See* 1988 IATTC ANN. REP., at 171, tbl. 5. Moreover, numerous other countries — Bermuda, Canada, Cayman Islands, Congo, Costa Rica, Korea, Netherlands, Netherlands Antilles, New Zealand, Nicaragua, Peru, Senegal, Spain — had vessels in the region at one time or another. *See* 1977 IATTC ANN. REP., at 152, tbl. 5; 1980 IATTC ANN. REP., at 20, tbl. 4. As seen, even with the deterrent of mandatory trade sanctions, Belize and Honduras-flagged vessels tried to enter the fishery unregulated after the La Jolla Agreement. *See* discussion *infra* Part II.D. As a U.S. tuna fleet spokesman observed in 1992, "I am sure the Administration would admit that if the Mexican and Venezuelan Governments truly prohibit their tuna fleets from fishing on dolphins in 1994, that many of those boats will seek other nations' flags, some of which will fish for tuna without much concern for dolphin mortality." *See Dolphin Protection Hearings*, *supra* note 23, at 27-28 (statement of Richard Atchison, Executive Director, American Tunaboat Association).

for catch.⁴⁰⁹ Under such circumstances distant water fleets can be expected to devalue long-term, systemic conservation benefits, as can flag states that embrace fleet interests. Moreover, if such fishers and states believe that others will unconditionally cooperate in conserving fish, whales, and dolphins, they will prefer defection even more: now they can reap many of the gains of cooperation without enduring the costs. The same is true for global atmospheric harms, such as climate change and ozone depletion.⁴¹⁰ These are the hard cases presented by truly global environmental challenges.

Of course, the lack of sufficient intrinsic (intra-regime) incentives to cooperate in true global commons situations does not of itself prove the necessity for the use of trade leverage. IR theory and past experience both offer a variety of extrinsic incentives for shaping preferences, the sufficiency of which must be explored as part of the necessity question. But each rather quickly reveals its limitations.

Although the threat of "tit-for-tat" defection has long been a staple of neoliberal theory, it is neither credible nor effective in most global commons management cases, where the strategy simply leads to the accelerated destruction of the commons.⁴¹¹

Issue linkage is another highly touted management option. IR theory predicts greater success for countries bound together by dense interrelationships that permit trading among issues. Although this is generally true, issue linkage works best, when a number of "like issues" are grouped together, such as when market-opening measures are swapped in multilateral trade negotiating rounds.⁴¹² No comparable global environmental regime now exists to foster linkage of substantive global commons concessions. Moreover, linking unlike issues can be messy business, especially where the interests of private actors are implicated by government decisions. Linkage in this context tends to muddy the waters of diplomacy in the issue area to which a dispute is linked, breeding cynicism and

409. See Jessica Mathews, *On the High Seas: The Law of the Jungle*, WASH. POST, Apr. 9, 1995, at C7.

410. The situation facing efforts to jointly manage "one-way" transboundary harms involving upwind/upstream and downwind/downstream states is even more difficult: the upwind/upstream states have almost no selfish incentive to cooperate. Witness the difficulty the Nordic states and Canada have had in getting Great Britain and the United States, respectively, to curb their emissions of acid rain precursors causing downwind harm. For a thorough study of these confrontations, see GREGORY S. WETSTONE AND ARMIN ROSENCRANZ, *ACID RAIN IN EUROPE AND NORTH AMERICA: NATIONAL RESPONSES TO AN INTERNATIONAL PROBLEM* (1983).

411. The prospect of tit-for-tat commons destruction might act as a deterrent if all states are assumed more or less equally concerned with preserving the resource in question. But where preferences are strongly asymmetric (i.e., lead states are much more concerned than the trailing states), then the "threat" of retaliatory destruction of the commons by lead states is unlikely to be credible. Trailing states will guess that the lead state will cooperate unconditionally (for domestic political reasons if nothing else), while lead states will have no comparable assurance that trailing will be moved by retaliation (the latter may simply not care about the resource). This uncertainty will further sap the resolve of the lead state to retaliate and the credibility of the threat.

412. For a description of the log-rolling process in multilateral trade negotiations see, for example, KENNETH DAM, *THE GATT: LAW AND THE INTERNATIONAL ECONOMIC ORGANIZATION* 56-78, 82-91 (1970).

political resentment among those who see their interest sold out for gain in an unrelated issue area.⁴¹³

Capacity building through technical and financial assistance and through technology transfer is an appealing option when the environmentally-concerned states are also the wealthy states who have contributed disproportionately to the harm or when developed countries have regulatory or technological expertise which developing countries need and lack. Such is the case with climate change and ozone depletion. Capacity building is certainly a vital part of any management package. But the utility of capacity building requires a prior predisposition of target states to cooperate. As tuna-dolphin proves, capacity building is a necessary but not sufficient condition of cooperation.

Compensation may be appropriate when one state seeks cooperation from others in pursuit of an idiosyncratic goal such as dolphin safety, as opposed to dolphin conservation at a level that preserves the stocks with an ample margin of safety.⁴¹⁴ Compensation also has been recommended when countries are asked to provide global benefits by conserving a resource that is strictly within their own jurisdiction, as in the case of terrestrial biodiversity conservation. But as a general matter, a rule of victim-pays is neither an efficient, fair, nor viable precondition for cooperation as a general matter. As Chang has observed, a universal compensation condition would penalize conservation interests, encourage over-production of a harm-causing product, and promote strategic behavior by producers, who would line up to qualify for incentive payments.⁴¹⁵ It would create perverse incentives for producers to over-state their costs, while hobbling every nascent regime with the prospect of huge financial liabilities arising from the fact that compliance costs in the early stages of a regime generally appear much higher than they turn out to be. Moreover, it would eliminate any incentive for producers to get the cost of compliance down, as they have done brilliantly in both tuna-dolphin and other environmental regimes. For all these reasons, elementary economics warns that subsidizing polluters to clean up their act is not the way to go.⁴¹⁶

In fact, confining conservation-minded states to strictly managerial instruments

413. Seen in this light it is unsurprising that the U.S. and Mexico were ultimately more concerned with *de-linking* dolphin protection and NAFTA than with linking them: it became important for both sides to show that they were *not* selling out their position on the dolphin issue to win gains in NAFTA. See Interview with Carlos Camacho Gaos, Sub-secretary of Secretaria del Medio Ambiente, Recursos Naturales y Pesca (SEMARNAP), in La Jolla, Cal. (Oct. 28, 1997).

414. The rationale for this distinction is discussed more fully *infra* Part IV.E.

415. See Howard F. Chang, *Carrots, Sticks and International Externalities*, 17 INT'L REV. L. ECON. 309, 312-15 (1997).

416. Hence, the WTO Subsidies Agreement provides, with only a narrow exception, that environmental subsidies given to domestic producers are countervailable (compensation of foreign producers being too unthinkable to warrant mention). See Agreement on Subsidies and Countervailing Measures, in Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, Apr. 15, 1994 (Marrakesh), Annex IA, (1994) (not reproduced).

would open them to “blackmail” by target states seeking to extract concessions from the concerned state as a price of cooperation.⁴¹⁷ For all these reasons, the global commons is unlikely to be preserved by a rule that assigns producers or states an unconditional right to destroy the global environment unless they are compensated in an amount sufficient to persuade them *ex ante* to cooperate.

Regime design. High-quality regime design — finding the right point and technique, of regulation — can play a powerful role in minimizing distributive conflict, reducing compliance costs, promoting monitoring and verification of compliance, and generally enhancing regime effectiveness.⁴¹⁸ Much of the credit for the success of that regime can be attributed to the ingenuity and efficiency of the Dolphin Conservation Program. Trade leverage alone would probably have failed without it. But a regime cannot prove its merit until it is in place. To trade leverage goes the credit for empowering efforts to put the regime in place and obtain the adherence of key states.

Monitoring, reporting, and verification of compliance are essential, as the neoliberal model predicts. They are essential not only to compliance assurance, but also to knowledge creation. In tuna-dolphin, trade leverage had the vital function of getting unwilling countries to accept monitors funded by an international secretariat. The absence of comparable monitoring in any other high seas fishery speaks volumes about the role of trade leverage in empowering this crucial source of technical knowledge and compliance oversight.

Reputational concerns are a mainstay of neoliberal theories of compliance. They are the external correlative of the presumed sense of moral obligation that animates legal and ethical models. But reputational incentives are essentially inoperative at the regime formation stage or with respect to hold-outs: by definition, the states in question have no antecedent commitment to honor. Even at the compliance level, the potency of reputational concerns has never been proven and is by no means obvious with respect to “small” agreements (which most environmental agreements are deemed to be).⁴¹⁹

417. As Chang has observed, the opportunity for blackmail arises from the fact that the governments cannot directly observe “the political costs and benefits that other governments face as they contemplate regulations to restrain exploitation of the global environment by their own nationals. Under conditions of asymmetric information, countries may seek to convince others that they derive large benefits from exploitation and suffer large costs from environmental protection . . . [in order to secure concessions from the leading conservation state].” Chang, *supra* note 9, at 2162-63.

418. See discussion *supra* notes 216-218, 235, 367 and accompanying text.

419. As other scholars have noted, the potency of the reputation factor has been never been empirically documented. See HASENCLEVER ET AL., *supra* note 258, at 221. On very high profile issues, few would dispute its potency: the United States is not going to fire on withdrawing Serbian troops having just promised Milosevic not to do so. But the force of reputation at the level of compliance with fisheries agreements is much less apparent, and may well be an artifact of theorists. *A priori*, it would seem that the sheer number and weightiness of economic, political and security ties that link the United States with, say, Japan, Korea or Mexico would tend to diminish the importance of any single fisheries agreement. Moreover, any reputational harm from non-compliance can often be minimized by strategies of interpretation or excuse. See Geoffrey Garrett & Barry

Cognitive factors play an important role in determining the success of cooperative efforts. But they, too, reveal the need for the energizing and catalyzing power of leverage. At the regime formation stage, the contribution of knowledge is hampered by the fact that informed preferences have not yet emerged: the environmental risk is uncertain; the technologies for reducing risk are poorly understood; the cost of risk reduction is poorly understood; and worst case scenarios tend to prevail among producers. "Scientific" and "expert" communities may be riven by adversary science in which "experts" are deployed as foot soldiers to advance the interests of their allies or employers. The engagement of producers — in monitoring their own environmental impacts and exploring various harm-reducing alternatives — can be vital to the learning process. But it will be exquisitely difficult to get producers and states to cooperate in researching problems they do not recognize, and in experimenting with solutions that they assume *ex ante* will be too expensive. This is the cognitive Catch-22 of global environmental management. Trade leverage can help break this logjam by providing a short-term material incentive to engage the cognitive process, notwithstanding initial beliefs on the merits.

The common objection to all these tools — and to the "management-only" thesis generally — is that the management model, taken alone, answers tangible, short-term temptations to defect with intangible (from producers' perspective) and long term incentives to cooperate, and blithely predicts the latter will win.⁴²⁰ This asymmetry between temptation and response is problematic at any stage, but it is particularly questionable at the regime formation stage in the hard cases described above. As Keohane has observed, regimes are harder to create than to maintain.⁴²¹

The global commons represents a hard case for international cooperation, a case that offers little encouragement for sanguine hopes that consensual management, without any leverage, will preserve the planet's seas and skies. In fact, the experience of other truly global environmental regimes almost uniformly demonstrates that management alone will not preserve the environment. For example, U.S. trade leverage (expressed through a U.S. threat to exclude from U.S. ports ships not employing segregated ballast tanks) proved essential to the success of

R. Weingast, *Ideas, Interests, and Institutions: Constructing the European Community's Internal Market*, in IDEAS AND FOREIGN POLICY: BELIEFS, INSTITUTIONS, AND POLITICAL CHANGE 180-83 (1993), cited in HASENCLEVER ET AL., *supra* note 258, at 175 n.14. Nor is there any known "scorecard" of compliance that would provide a basis for establishing reputation. In any case, the force of reputational concerns is weakened by a little-noted but stark fact: State A knows that in any future case, if States B and C desire A's cooperation in protecting the commons, they have little choice but to contract with A and hope that A complies. For a penetrating critique of much of the current woolly thinking about reputation and its effects, albeit in the high foreign policy realm, see JONATHAN MERCER, REPUTATION AND INTERNATIONAL POLITICS (1996).

420. More accurately, the prediction is that cooperation will occur whenever there is a mutual interest in cooperation. And if cooperation doesn't happen, that is because there was no mutual interest. The argument at that point becomes circular.

421. See KEOHANE, *supra* note 6, at 102.

efforts to control the high-seas discharge of oil from ocean-going oil tankers.⁴²² Leverage was also key to the success of the Montreal Protocol on Protection of the Ozone Layer.⁴²³ As Charnovitz observes, the high-seas driftnet ban, the moratorium on commercial whaling, and the Convention on International Trade in Endangered Species (CITES) have all, at one time or another, depended on the support of U.S. trade leverage.⁴²⁴ Conversely, global commons management regimes that have tried to do without the support of trade leverage have almost uniformly failed. The ineffectiveness of most high seas fisheries management regimes, without leverage, is now common knowledge.⁴²⁵ As a result, the Food and Agriculture Organization has estimated that 70% of the world's fish stocks are over-fished.⁴²⁶

Canada's experience with managing straddling stocks off the once-rich Georges Bank offers a particularly poignant testimonial to the value of leverage in the fisheries context. Canada, an economically "small" country, lacks effective trade leverage and has long opposed any WTO rule or policy allowing it. But Canada's effort to manage its straddling turbot stock through a multilateral agreement not backed by trade leverage failed badly: Spain's refusal to cooperate with the multilateral regime led ultimately to armed conflict, as Canadian naval vessels forcibly boarded and seized Spanish vessels.⁴²⁷

Nor does the case for management-only gain much support from the climate treaty. That treaty, of course, faces many obstacles besides its lack of support from economic leverage. Nor is it clear that economic leverage would help the climate treaty, because the United States is both the principal wielder of leverage and the principal deadbeat in that regime. Nonetheless, the current state of near-complete disarray in the climate regime is hardly strong evidence of the sufficiency of the management model without leverage.⁴²⁸

422. See Mitchell, *supra* note 6, at 186.

423. Duncan Brack has concluded, after careful study, that the "trade provisions of the [Montreal Protocol] which require restrictions on trade between parties and non-parties to the agreement . . . were a vital component in (a) building the wide international coverage the treaty has achieved and (b) preventing industrial migration to non-parties to escape the controls on ozone depleting substances"). BRACK, *supra* note 14, at xvii. Moreover, the role of trade leverage in that agreement is by no means clearly past. The obligations of developing countries have only begun this year (1999) and it is not at all clear that all developing countries will voluntarily comply with their obligations. See *Special Report*, 20 INT'L ENV. REP. 840 (1997).

424. See Charnovitz, *supra* note 4, at 751.

425. See M. J. Peterson, *International Fisheries Management*, in INSTITUTIONS FOR THE EARTH, *supra* note 6, at 249-305; Evelyne Meltzer, *Global Overview of Straddling and Highly Migratory Fish Stocks: The Non-sustainable Nature of High Seas Fisheries*, 25 OCEAN DEV. & INT'L L. 255 (1994).

426. *World Said Facing Catastrophe from Over-Fishing*, Reuters North American Wire, June 6, 1996, available in LEXIS, Nexis Library, World file (citing FAO Report).

427. See Mathews, *supra* note 409.

428. The majority of industrialized countries are expected to fail to meet even the limited targets for greenhouse gas reductions adopted in the Framework Convention on Climate Change. See United Nations, Framework Convention on Climate Change, Conference of the Parties, Review of the Implementation of the Convention and of Decisions of the First Session of the Conference of the Parties' Commitments in Article 4, Second Compilation and Synthesis of First National Communications from Annex I Parties, FCCC/CP/1996/12

This is not to suggest that trade leverage is always sufficient or appropriate in commons management cases. Trade leverage may fail; management may work by itself. The latter certainly should be tried first. The point is simply that the track record of the "management model" — in the hard case of the global commons — offers little basis for complacency.

Finally, the presumptive need for leverage in commons management is reinforced by demonstrated necessity of "creative unilateralism" as an agent of change in other areas of international relations. To take just two examples, the extension of EEZ jurisdiction did not take place by countries simply agreeing to it. It was practiced unilaterally by one, then a few, then an avalanche of states.⁴²⁹ By the time the extension was codified in the Convention on the Law of the Sea, it was already customary international law based on the practice of states.⁴³⁰ Nor did the WTO Agreement on Protection of Intellectual Property Rights (IPR Agreement) just happen. It developed as the result of a sustained negotiation motivated in considerable part by unilateral trade pressure brought by the United States against individual countries in one "Section 301" case after another.⁴³¹ These situations are similar in that they both involved unilateralism. But they are different in a key respect: the EEZ extension was accomplished without use of trade leverage while the negotiation of the IPR Agreement required sustained, unilateral trade leverage. The reason for the difference is manifest: EEZ extension involves a unilateral *appropriation* of a public good and yields a short-term economic benefit. Tit-for-tat strategies easily resulted in the emergence of a de facto regime. On the other hand, IPR protection, involves *provision* of a public good which yields only mid- to long-term benefits to a larger collective which includes the target state. That is a prisoner's dilemma game precisely analogous to the protection of dolphins or the global environment generally. And it required trade leverage to accomplish.

at ¶ 43. Moreover, even those commitments are recognized as grossly inadequate to address the problem at hand. See United Nations, Framework Convention on Climate Change, Report of the Conference of the Parties on its First Session, held at Berlin from March 28 to April 7, 1995, FCCC/CP/1995/7/Add.1 at 4 (officially recognizing that the commitments made in the 1992 FCCC "are not adequate"); see also B. Bolin, *The Kyoto Negotiations on Climate Change: A Scientific Perspective*, 279 SCIENCE 330 (Jan. 16, 1998) (concluding that the existing targets in the 1997 Kyoto Protocol, even if fully implemented, would have little effect on atmospheric concentrations of greenhouse gases or predicted global warming). While it is true that in each of cases reviewed above one may identify one or more major management failings that also hamper effectiveness, that does not derogate from the case for leverage. One of the crucial functions of trade leverage is to galvanize the formation of an effective management regime.

429. See WILLIAM T. BURKE, *THE NEW INTERNATIONAL LAW OF FISHERIES: UNCLOS 1982 AND BEYOND* 22-23 (1994).

430. See *id.*

431. See Sykes, *supra* note 4 (collecting cases); THOMAS O. BAYARD & KIMBERLY ANN ELLIOTT, *RECIPROCITY AND RETALIATION IN TRADE POLICIES* (1994). Indeed, Esty reports that the U.S. Council for International Business (USCIB), as of 1994, "acknowledges the inevitability of some unilateral environmental trade measures and argues for a new interpretation of the GATT safeguards rules to accommodate such actions." ESTY, *supra* note 14, at 144.

In sum, tuna-dolphin is not unique. It is simply another installment in a line of cases that establish the more-than-occasional need for unilateral action, including trade leverage. These are the “hard cases” of cooperation. In such cases the truth is plain: to deny a regime the benefits of unilateral action is to deny it the prospect of change.

B. DETERMINANTS OF EFFECTIVENESS

As seen earlier,⁴³² one of the more striking features of the contemporary trade and environment debate is the tendency of scholars and academics alike to assume that leverage and management approaches are somehow mutually exclusive. Yet the tuna-dolphin experience powerfully confirms what logic, intuition, and theory all suggest: leverage and management are not either/or alternatives.⁴³³ Indeed, the greatest single determinant of the effectiveness of trade leverage is the degree to which it supports, and is supported by, effective management approaches. Tuna-dolphin vividly illustrates that in today’s interdependent world great powers wielding “proportional” trade leverage can impose costs, but they generally cannot coerce in the sense of denying target states all economically-viable alternatives. By the same token, leverage joined with effective management does not require anything like hegemony in order to be effective. All that is required is that importing states be perceived as able and willing to mobilize sufficient economic and political impact to render the prospective benefits of cooperation greater than the costs. Perceptions of these costs and benefits are malleable, and may evolve under the influence of all the varied tools of “active management” described earlier.

Thus, the key determinants of the effectiveness of environmental trade leverage are: (1) the availability of a large state or group willing to apply trade leverage; (2) the magnitude of actual or threatened (political and economic) impact of leverage when measured against the (political and economic) cost of cooperation; and (3) the degree to which ETL, as applied, supports or conflicts with other, non-trade incentives for compliance. By far the most effective instance of leverage is the trade restriction that is quietly and credibly-threatened but *not* imposed — accomplishing its goals without any actual restriction of trade, and often without much public notice.⁴³⁴

432. See examples cited *supra* note 23.

433. Harold Koh has made this precise point in his review of Chayes and Chayes’ *New Sovereignty*. The author observes that “by emphasizing the power of the managerial model and the weakness of the enforcement model, the Chayeses create the false impression that the two are alternatives. In fact, they strongly complement one another.” Harold Hongju Koh, *Review Essay: Why do Nations Obey International Law?*, 106 YALE L.J. 2599, 2639 (1997). What Koh means is that they “complement” each other in the explanatory sense. They interact. Their interaction may be mutually reinforcing or mutually canceling, depending on how and for what purposes the two instrumentalities are wielded.

434. A classic example of this is NMFS’s notification of Mexico and others, in 1986, that in order to continue exporting to the United States they would need to accept IATTC observer coverage on their vessels, which they

Condition 1, the requirement for a large state wielder of leverage, means that ETL may not be available in all cases where it is needed. That is in the nature of the instrument. Condition 2, sufficient impact, depends on the *product scope* of the embargo, the *market power* of the sending state in the products covered, the degree of *enforcement* of any trade restrictions applied, and the prospective degree of *multilateral cooperation* with the embargoes. Determining product scope requires very careful judgment and raises considerable possibilities for abuse.⁴³⁵ Market power is very difficult to measure either *ex ante* or *ex post*, for all the reasons discussed in Part II.⁴³⁶ Enforcement of sanctions is not to be taken for granted: in the case of tuna-dolphin, the embargoes and boycotts were made porous in the United States due to the inadequacy of resources given to scrutinizing import declarations of primary and intermediary nations. Achieving a strong economic impact will normally require the cooperation of other major importing states — cooperation which is less likely to be forthcoming if they believe the leverage as applied is GATT-inconsistent or otherwise illegitimate in its means or ends.⁴³⁷ Therefore, the cognitive and discursive process must be expanded to include the other states and non-state actors whose import-side

then did. The result was a breakthrough in the cognitive and institutional process of regime formation, from which all further progress followed — accomplished without a trade shot being fired, and with so little fanfare that no one until now has even reported that it happened. See discussion *supra* Part II.B.4.a.

Ironically, it is precisely these quiet success stories which are missed by the multi-case "scorecard" approaches that are now so much in vogue as litmus tests of the "effectiveness" of trade leverage: they only focus on high-profile confrontations where trade sanctions are actually imposed or formally, publicly threatened. Such situations only arise in intractable cases. See, e.g., HUFBAUER & SCHOTT, *supra* note 4. The methodology is almost tailor-made to minimize the measured effectiveness of the trade instrument.

435. This issue will be revisited in Section E. As Hudec has remarked, the issue of product scope is not at all straightforward. There is a strong tendency to limit leverage to "like products" of the offending goods. But this creates a haphazard pattern of influence, while depriving the sending state of all leverage in cases such as whale and endangered species conservation, where the sending state does not import any of the products in question. These difficulties can be overcome by authorizing the expansion of leverage to unrelated products, as U.S. law does, but that comes at the cost of eliminating the one fire-break which keeps leverage "proportional." Hudec, *supra* note 14, at 116. However, as Chang has observed, protectionist or grossly disproportionate leverage has not been an issue in the history of ETL to date, and there are good, if not conclusive, reasons to expect the pattern of self-restraint to continue. See Chang, *supra* note 9 at 2162-63.

436. See discussion *supra* Part II.C.4.

437. The tuna-dolphin experience suggests that secondary embargoes, even if enforced diligently, are probably not the answer in most cases. They will be economically significant only in cases where there is, pre-embargo, a large triangular pattern of trade, which was not the case in tuna-dolphin. They cause a level of political affront which may outweigh their economic significance. (Thus, in the tuna-dolphin case, the secondary embargoes had little economic impact because Italy and Spain export relatively little canned tuna to the United States. What got the Spanish and Italian cannery industry involved was Earth Island Institute's street-level activism with local affiliates in Italy and Spain: i.e., discourse.) The one exception to the presumption against secondary embargoes will arise in cases where a substantial volume of third-country exports to the sending state arises *after* the primary embargo, giving good reason to believe large-scale trans-shipment is occurring. Unless third countries cooperate in shutting down this trade of essentially fraudulently marked goods, the primary embargoes will lose all effect. Under these circumstances, a secondary embargo may be necessary and appropriate if the third country refuses to cooperate in customs enforcement, after good cause shown. But that, it should be clear, is a response to refusal to cooperate on a customs fraud matter. It is not an embargo linked to the third country's failure to limit imports for its own consumption.

cooperation is necessary. Moreover, the impact of leverage, for good or ill, is not entirely economic. Sanctions have a symbolic and discursive impact that can be potent at the political level. The political impact can be positive if it stigmatizes harmful conduct and galvanizes a public discourse about the need for change; or negative, if sanctions trigger a nationalist backlash that calls for resistance to foreign pressure at all costs.⁴³⁸

The tuna-dolphin experience strongly suggests that the greatest single determinant of the effectiveness of ETL in protecting the global commons is Condition 3, the degree to which ETL supports or conflicts with the non-trade incentives that comprise the "management model." These incentives are knowledge, self-identity, institutions, and perceptions of legitimacy and fairness.⁴³⁹ In short, trade leverage may enhance or undermine environmental management. Management may enhance or undermine leverage. Effectiveness will typically require that the two support each other. In any case, they are not alternatives.

C. PATHWAYS OF INFLUENCE

Trade leverage is commonly assumed to operate simply by overriding the intrinsic preferences of target actors on the ultimate issue of the level of conservation. While trade leverage *may* operate this way, it may also be applied at strategic decision points prior to final decision on the ultimate issue, thereby contributing to the evolution of national preference on the principal matter in question. Part III revealed the subtle but strategically vital pathways by which this oblique influence may occur:

1. Obtaining agreement to monitor risk and producer contributions to it.
2. Securing producer and foreign state participation in international programs to develop and disseminate cost-effective alternatives for reducing environmental risks.
3. Triggering national and transnational discourse on environmental risk and risk avoidance strategies, while empowering and legitimating the voices of conservation within that discourse.
4. Deterring trumping behavior by producers.

438. In the case of tuna-dolphin, sanctions had both of these effects. The resultant vector of forces favored defiance of the unilateral standards imposed by the United States, but cooperation in an ambitious, "third-way" IATTC dolphin mortality reduction program which met all U.S. goals (Barbara Boxer notwithstanding). Hence, the enormous value of international institutions as mediators between sending state pressure and target state response.

439. This finding has significant implications for empirical method. Professor Hudec, for example, has observed that ETL appears to have been at least partially successful in some cases (turtles, driftnets, early whaling moratorium, protection of endangered species) but unsuccessful in others (Norway's more recent defiance of the whaling moratorium). See Hudec, *supra* note 14, at 112. My research suggests that one way to explain such different results is by examining the interaction of leverage with management factors in each case: e.g., the diminished legitimacy of the recent whaling moratorium as applied to plentiful whale stocks, such as minke whales.

5. Catalyzing formation of an international control regime, and securing wide participation in it.
6. Calling forth leaders who are focused on accommodation and environmental progress.
7. Promoting follow-up compliance assurance.

These indirect pathways of influence tend to be overlooked, but they are of fundamental importance to understanding the role of environmental trade leverage in protecting the commons.

The variety of these pathways implies that the optimal use of trade leverage at any time depends on the evolutionary stage of the regime. In the early stages of regime-building the optimum focus is on creating a program for monitoring, education, training, capacity-building, discourse, and international organization, staffed by a capable secretariat that is charged with superintending all these activities. As exploratory discussions mature, the focus of leverage should broaden to include catalyzing formation of a negotiated regime to address the problem, by a date certain. The standards should be negotiable within broad bounds; the deadline should be reasonable but firm and the design of the regime should be as efficient and equitable as possible. Most of all, leverage must be tied to a reasonable timetable for progress and must promote, rather than displace, negotiations. The higher the score of the regime on these criteria, the more effective the leverage deployed in support of it. ETL lives up to its stereotype as an "enforcement" mechanism only in the conceptual "final" stage of the regime evolution: compliance assurance.

D. THE POWER OF LEGITIMACY

If tuna-dolphin is any guide, legitimacy matters to cooperation. Accusations of illegitimacy figured prominently in the rhetorical opposition of target states and fleets to U.S. sanctions — as well as in the environmentalist critique of the IATTC (prior to the La Jolla Agreement) as a "user-friendly" but conservation-hostile forum which excluded non-use interests — and there is no reason to dismiss either category of statements as epiphenomenal.⁴⁴⁰ The tuna-dolphin experience suggests that legitimacy is a significant factor, though of modest magnitude, in the bargaining equation. Perceptions of illegitimacy will increase the political cost of accommodation to ETL and correspondingly diminish its effectiveness. The stronger the repugnance on moral grounds, the greater this resistance will be. Conversely, the establishment of a legitimate process for rule-making and enforcement will significantly amplify the voluntary compliance-pull of the rules that are made thereby.

The application of ETL in any case raises two distinct kinds of moral issues:

440. See discussion *supra* Part II.C.5.

(1) the legitimacy of the goals pursued, and (2) the legitimacy of ETL as means to an end. In both cases, the fundamental touchstone of legitimacy — articulated by Franck, intuited by the common man — is the threshold requirement of “no trumping.” This principle holds that, where sovereigns are concerned, terms of cooperation must be based on good faith negotiation if the outcome is to be “legitimate.”

The goal-legitimacy factor plausibly rests on a number of the criteria suggested by Franck — namely, the coherence, determinacy, and symbolic validation of the rules thus backed by leverage, as well their birthright in accepted “secondary rules of recognition.”⁴⁴¹ This means that leverage wielded in support of goals that are protectionist, arbitrary, fickle, or inconsistent with the internal practice of the sending state will be viewed as goal-illegitimate and will lose a measure of compliance-pull and effectiveness. So will efforts to impose goals that are perceived as unfair in the sense of being protectionist, or economically unreasonable for target producers or consumers, or administratively unworkable for target states. Fairness and legitimacy are thus intertwined. The stronger the perception, the greater will be the target’s resistance to the goals of leverage.

It does not follow, however, that ETL is invalid *per se* as an instrument of commons management. Four arguments have been made for the illegitimacy of ETL as instrument but none is compelling. *The GATT* has never stated a clear prohibition on ETL, unilateral or otherwise, and the only authoritative decision on point (the Appellate Body report in the shrimp-turtle case) has also chosen not to do so.⁴⁴² The *sovereignty* of target states has been raised as an objection, yet it is clear that under international law, the only sovereignty implicated by an import decision is that of the importing state.⁴⁴³ It has been alleged that unilateral ETL violates the *no-trumping principle*. This argument is belied by the fact that, where the commons is concerned, there is no neutral outcome. Either the commons is preserved at some level, or it is not. Either way, absent an agreement, someone is coerced — that is in the very nature of a common resource.⁴⁴⁴

Finally, it is sometimes objected that ETL is a *one-way street* — wielded by great powers against the small — and is illegitimate on that ground.⁴⁴⁵ But ETL is not a privilege. It imposes costs on the sending state with benefits accruing to the

441. See discussion *supra* Part III.B.1.

442. See Appellate Body Shrimp-Turtle Report, *supra* note 13, at 51-53, 60-85 (refusing to issue categorical rejection of ETL in light of the addition of sustainable development as one of the goals of the WTO, but faulting the manner in which the United States applied ETL in that case).

443. As Hudec has observed, “Under customary international law, a state is free to deny market access to any other state for any reason or for no reason at all. Likewise, a state is free to impose trade restrictions discriminatorily. The legal problem with externally-directed trade restrictions for environmental purposes rests on the contractual obligations of the GATT.” Hudec, *supra* note 14, at 117; see also Chang, *supra* note 9, at 2193-94; Steve Charnovitz, *Encouraging Environmental Protection Through the Pelly Amendment*, 3 J. ENV’T & DEV. 3, 38 (1994).

444. See discussion *supra* Part III.B.1.a.

445. See CHAYES & CHAYES, *supra* note 7, at 107-08.

commons and all those who value its protection. Hegemonic stability theory, applied to the protection of the commons, suggests that rule enforcement (like funding for secretariats) may be the sort of "public good" which requires leadership,⁴⁴⁶ which, in turn, is intrinsically asymmetrical. In any case, a rule of no leverage also creates a one-way street in which commons exploiters could impose their will on those who value its conservation.

For all these reasons, the better argument is that unilateral ETL is not illegitimate *per se*, but may be both illegitimate, unfair, and ineffective as applied. And this takes highlights the greatest single liability of ETL: its vulnerability to abuse.

E. MANAGING THE RISKS OF ABUSE

While trade leverage proved both necessary and effective in calling the 1992 La Jolla Agreement and its successors into being, the tuna-dolphin episode will be remembered — and ought to be remembered — as a case study in the use *and abuse* of trade leverage. "Abuse" is used here to designate the use of trade leverage in a manner, or for purposes, that undermines its own legitimacy, fairness, or effectiveness in procuring cooperation — thereby either failing to accomplish cooperation or achieving it through unnecessary conflict and restriction of trade. Abuse may take the form of trade measures that are (1) protectionist, (2) applied inconsistently or incoherently, (3) capricious in the goals chosen, (4) linked to requirements that are arbitrary in relation to the stated goals of the leverage, (5) unfair, and (6) unnecessarily trade restrictive or disruptive of the world trade system. One of the virtues of the tuna-dolphin case, as an investigative tool, is that it illustrates almost every vice.

Faced with an instrument that has a potential for good or ill, there are two possible responses. One is to decide categorically that the risks outweigh the benefits, and ban the instrument. That in essence was the response of the GATT panel in Tuna I. The second response is to recognize that any tool of policy can be abused. If potential for misuse were the sole standard of acceptability, technology itself would have been rejected long ago: Prometheus would have been asked to return his stolen fire to the gods. The challenge for trade and environmental policy is to find ways and means by which nations and the international system may distinguish between environmentally justifiable trade measures on the one hand, and protectionist or arbitrary measures on the other — and allow the first while abjuring or prohibiting the second. This appears to be the position taken by the WTO Appellate Body in the shrimp-turtle case.

This closing section will address these risks of abuse, as illustrated by the tuna-dolphin case, and offer some preliminary observations — springing directly from close observation of the tuna-dolphin experience — about how such

446. See discussion *supra* Part III.D.1.

hazards of abuse might be managed. In some cases, the recommendations will involve WTO rules and policies. In other cases, the recommendations will be directed at the policies and practices of the United States, the chief user of ETL.

Disguised protectionism. ETL, like any trade restriction, can be diverted to the service of commercial goals. In the case of tuna-dolphin, protectionist effects, if not intent, was evident in two circumstances. First, Congress gave the U.S. fleet a clear standard (20,500 dolphins killed per year), but denied the foreign fleet an equally clear and predictable goal: the foreign standard was the actual U.S. kill rate, whatever it turned out to be. Second, Congress imposed dolphin-safe fishing requirements only after most of the U.S. fleet had left the ETP for the Western Pacific (where the Latin fleet could not follow).

Response. While self-serving provisions may creep into environmental trade provisions, there is no evidence that protectionism has, so far, been a dominant motive or effect in the cases where ETL has been used. The motives have been as announced: to protect whales, endangered species, dolphins, or the ozone layer.⁴⁴⁷ In any case, the task of ferreting out disguised trade restrictions — environmentally justified or otherwise — will continue to be a front-line responsibility of the WTO. So far, the WTO has done rather well in separating environmentally protectionist wheat from commercially protectionist chaff.⁴⁴⁸ The problems have arisen when the WTO has tried to go beyond that mandate to regulate the non-protectionist use of trade leverage.

Inconsistency. The requirement of consistency — treating like cases alike — is at the heart of native notions of legitimacy. In tuna-dolphin, fishers complained vociferously that the United States applied a double standard for dolphin conservation: strict requirements in the ETP, much more lax standards in other fisheries, and no standards for the intentional killing of dolphins for food in Japan and other places.⁴⁴⁹ More generally, critics of trade leverage have predicted that the vagaries of available leverage and foreign policy concerns will prevent the consistency of application needed for leverage to be a credible and legitimate enforcement tool.⁴⁵⁰

Response. There are two basic rejoinders to charges of inconsistent application of any rule or sanction. First, the inconsistency of trade leverage when applied is really an argument for wider application of such leverage, not abolition of it, in

447. Indeed, the problem of “disguised trade restrictions” has arisen much more frequently with alleged efforts to protect the domestic environment of the importing country: witness the Canadian restrictions on exports unprocessed herring and salmon (allegedly to conserve fish, in fact to protect domestic processors) and U.S. discrimination against Venezuelan gasoline (allegedly to protect U.S. air quality, in fact to protect domestic refiners). See *Canada - Measures Affecting Exports of Unprocessed Herring and Salmon*, Mar. 22, 1988, GATT B.I.S.D. (35th Supp.) at 98 (1987-88); WTO Appellate Body: Report of the Appellate Body in *United States — Standards for Reformulated and Conventional Gasoline*, 35 I.L.M. 603 (1996).

448. See cases cited *id.*

449. See discussion *supra* note 330 and accompanying text.

450. See CHAYES & CHAYES, *supra* note 7, at 106-07.

order to establish greater consistency. More fundamentally, although perfect consistency is always desirable, it is never attainable in practice. Whether the issue is genocide in Bosnia, Rwanda, and Indonesia or dolphin killing in the ETP, Japan, and the Philippines, it simply is not possible for great powers to be everywhere at once, using their leverage for everything at once. So long as checkerboard application of leverage is avoided (e.g., exempting certain participants in a regime from rules that apply to all others in that same regime), failure to extend leverage to all analogous cases is hardly a fatal objection.⁴⁵¹

On the other hand, the line between inconsistency and hypocrisy, is crossed when standards applied to foreign producers on the global commons are not applied with respect to identical environmental resources located within the sending state's jurisdiction. In the case of U.S. dolphin-safe policy, this line was clearly crossed by the U.S. practice of simultaneously (1) embargoing imports of tuna from countries which allow their flag-vessels to encirclement any dolphins regardless of whether a mortality is caused, and (2) allowing incidental mortality of 1,200 to 3,000 harbor porpoises per year in the northeast U.S. sink gillnet fishery.⁴⁵² This hypocrisy in itself was sufficient to undermine any hope of legitimacy for the U.S. dolphin-safe policy. Discrepancies of this kind are plausible indicators of "arbitrary and unjustifiable discrimination" in the WTO dispute settlement process.

Eco-imperialism. A common criticism of ETL is that it is a tool for large countries to force their ethical preferences upon small countries.⁴⁵³ The charge has a germ of truth but, again, utterly fails to comprehend that where the global commons is concerned there is no neutral outcome.⁴⁵⁴ If all leverage is banned, and each state is allowed to veto or opt-out of all proposals for cooperation, the end result will not be a consensus-based regime. It will be a regime in which conservation-minded countries and interests are forced to either pay whatever rents exploiters of the commons demand as ransom, or else see the commons despoiled against their will. The eco-imperialism of the conservation-minded will be replaced by the imperialism of commons polluters or depleters. It is

451. There is little evidence that checkerboard application of import standards need be, or has been a problem, in U.S. use of ETL. Hudec has offered the example of the U.S. decision to sanction Taiwan, but not China, for failure to strengthen protection of endangered rhinos and tigers, but his source is the Washington Times, a newspaper known for its anti-Clinton animus. See Hudec, *supra* note 14, at 170 n.137.

In general, the use of ETL is properly understood as a small-scale affair which need not implicate the entire relationship between two countries. (The United States and Europe have been threatening and, at times, imposing trade-policy-based sanctions on each other for decades without noticeable harm to, say, the North American Treaty Organization alliance.) There is no good reason why environmental trade measures should not be applied on a non-discriminatory basis; indeed, the WTO indicates that they must. See General Agreement on Tariffs and Trade, *opened for signature*, Oct. 30, 1947, 61 Stat. A3, 55 U.N.T.S. 194, arts. I, XX. That should be sufficient answer to any country claiming exemption (on foreign policy grounds) from sanctions applied to other similarly situated countries.

452. See MARINE MAMMAL COMMISSION, 1994 ANN. REP., at 87.

453. See, e.g., Bhagwati, *supra* note 18, at 179; ESTY, *supra* note 336, at 185-88.

454. See discussion *supra* Part III.B.1.a.

necessary to find a middle path between the unacceptable extremes of disallowing all environmental trade leverage, and allowing leverage to promote whims and caprices.

While the experience of the tuna-dolphin case may not offer a conclusive means to distinguish acceptable ETL from "arbitrary and unjustifiable" restrictions of trade, the following discussion will briefly review certain proposals put forward by others and then elaborate on the insights gained from my study of the tuna-dolphin experience. Scholars and policy-makers may then test these insights against knowledge and the experience of other cases.

One recommended approach is to allow importing states to impose environmental trade restrictions of their choice provided they pay compensation in the form of offsetting trade concessions elsewhere.⁴⁵⁵ This approach nicely circumvents difficult normative questions, but it also raises serious objections. First, implementation of the Uruguay Round leaves a rapidly shrinking pie of available concessions.⁴⁵⁶ To the extent that concessions remain, a compensation rule will force the environmental community to resist further concessions in later trade negotiating rounds, in order to preserve a compensation "fund." The more fundamental objection, however, is that an across-the-board compensation requirement indiscriminately burdens all conservation efforts, regardless of their merits. In the sending state, it politicizes ETL immensely by pitting environmental groups against "innocent" industries whose interests are to be sacrificed — a battle environmental groups will lose much more often than they win. In the target state, a compensation rule will undermine the symbolic and discursive role of ETL, by sending the signal that all forms of ETL are simply expressions of sending state whims and caprices. Most of all, a compensation rule almost by definition removes any net economic incentive for target states to cooperate. In fact, target governments may, in some cases, prefer compensation. For all these reasons, trade and tariff compensation is not viable as a general requirement for environmental diplomacy.⁴⁵⁷ The question of what constitutes "legitimate" ends cannot be so easily circumvented.

The conventional wisdom in the trade community on the determination of ETL legitimacy is that objectives pursued by trade leverage with respect to global commons conservation must be required (or at least specifically authorized) by a pre-existing multilateral environmental agreement.⁴⁵⁸ However, trade leverage is

455. See Bhagwati, *supra* note 18, at 185-86; ESTY, *supra* note 336, at 125-26.

456. The trade-weighted average U.S. tariff will decline from 5.7% to 2.8% after phase-in of Uruguay Round tariff concessions. J. MICHAEL FINGER ET AL., THE URUGUAY ROUND: STATISTICS ON TARIFF CONCESSIONS GIVEN AND RECEIVED 42 (1996).

457. For a thorough refutation of more general arguments for a "carrots-only" rule, see Chang, *supra* note 417; Chang, *supra* note 9.

458. In fact, most free traders would further require that the use of leverage in support of that objective be specifically authorized, or even required. See WTO, Decision on Trade and Environment, Ministers Decision on Trade and Environment of Apr. 14, 1994, in Ministers Decision on Trade and Environment of 14 April 1994, in

seldom needed simply to maintain the status quo. Rather, it is most needed at the stage of regime formation and growth.⁴⁵⁹ Another approach is to say that any legitimate goal must be grounded on science as opposed to an ethical preference.⁴⁶⁰ But science cannot replace the need for ethical judgments in policy-making.⁴⁶¹ Although science may be able to report whether a species is endangered, and may someday be able to determine the function of the species in the ecosystem, it will never be able to determine whether the species is "worth" preserving. That is an ethical preference, as the degree of precaution to be adopted in the face of scientific uncertainty, the degree of emphasis to be placed on the prolongation of human life, and the general concept of sustainable development. The issue is not one of distinguishing between "science" and "ethical preferences," but of distinguishing between those preferences with claim to general recognition and those without.

While the question of what environmental values the world community should recognize as legitimate is a very large topic that lies well beyond the scope of this article, it seems clear, *prima facie*, at least, that the distinction should begin with the concept of sustainable development, an ethical preference which now figures in the WTO's charter and to which most nations have agreed in principle.⁴⁶² Sustainable development requires efforts to preserve the natural resources of the planet for future generations and impliedly requires doing so with a reasonable margin of precaution. But it disallows demands that pollution be zeroed out and that resources be left untouched. Applied to tuna-dolphin, the concept of sustainable development supports efforts to ensure the conservation of dolphin stocks with a reasonable margin of safety but disallows demands that every individual cetacean be protected against any human predation. The same support and limitations hold for whaling. Bounding trade-backed demands with the concept of sustainable development would not satisfy the most fervent environmental groups, but would ensure that trade leverage is restricted to uses where there is at least the possibility of eventual agreement.

GATT Doc. MTN.TNC/MIN(94)1/Rev/1 (Apr. 11, 1994) (limiting Committee on Trade and Environment discussion to trade measures taken "pursuant to" multilateral environmental agreements).

459. See discussion *supra* Part II.C.

460. This criterion is explicitly adopted in the Clinton Administration's list of four circumstances in which it will consider the use of unilateral trade measures to deter a country from harming the environment: "(4) where the effectiveness of a scientifically-based international environmental or conservation standard is being diminished . . ." *Testimony before the Subcomm. on Foreign Commerce and Tourism of the Senate Comm. on Commerce, Science and Transportation*, 103d Cong. 4 (1994) (statement of the Hon. Timothy E. Wirth, Counselor, Dept. of State).

461. For an insightful account of the interaction of science, politics, and values in environmental decision-making, see SHEILA JASANOFF, *THE FIFTH BRANCH: SCIENCE ADVISERS AS POLICYMAKERS* (1990).

462. See Agreement Establishing the World Trade Organization, pmbl., in *Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations*, Apr. 15, 1994 (Marrakesh), 33 I.L.M. 1125 (1994) (calling for "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 enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of development.").

Of course, the concept of sustainable development, however clear at the boundaries, is murky in the interior. It may disallow a complete ban on dolphin encirclement, but does not tell us very much about the level of annual dolphin mortality that is sustainable. Compounding the problem are major uncertainties in the "science" of dolphin abundance estimation and poor knowledge of dolphin net reproduction rates at various population levels. These uncertainties of risk assessment mirror those that surface in many other areas such as transboundary acid rain, global climate change, and land-based sources of marine pollution. One response to the uncertainties of risk assessment is to do as the tuna-dolphin regime did: focus on achieving the most ambitious technology-based standard of performance that is economically practicable.⁴⁶³

If such approaches prove unworkable and negotiation still cannot break the deadlock, then there are, logically, only three remaining options: (1) unilateral leverage by conservation-minded states, (2) unilateral exploitation of the commons by unconcerned states, or (3) some sort of international decision process which would apply the basic principles of international environmental protection (e.g., sustainable development, precautionary principle, polluter pays, and common-but-differentiated responsibility) to the facts at hand. Though environmentalists have called for the creation of such an adjudicatory body, the community of states has not so far seen fit to create one.⁴⁶⁴ The WTO is certainly not competent to police the boundaries of the "sustainable development" norm, yet someone must if the goal is to have any prospect of achievement in practice. Absent a competent neutral forum, *faut de mieux*, the sending state must establish a bottom line for acceptable levels of protection, below which it declares a default and applies leverage. Obviously, this should only be done after sustained consultation with target states and in the context of a comprehensive program that addresses all those necessary elements of cooperation that comprise the "management" model.

Means-end arbitrariness and displacement. One of the foremost hazards of ETL is the risk that leverage will be used to impose rules and standards of behavior which are irrational even in relation to the stated objectives of the sender. It is a risk that is not prominently mentioned by critics of the instrument, but ought to be, if the tuna-dolphin experience is any guide. This means-end arbitrariness was abundantly illustrated in the 1988 MMPA Amendments elicited both cynicism and the weakening and eventual abandonment of efforts to comply with those amendments. The problem is a general one.⁴⁶⁵

463. See *supra* note 286 and accompanying text for other examples of technology-based regulation supplanting undecidable risk-based regulation.

464. For a proposal for a Global Environmental Organization, see ESTY, *supra* note 14, at 58-59, 239-41.

465. For further examples see ESTY, *supra* note 14, at 188-89 (collecting examples of "backfiring trade restrictions").

Response. Arbitrary standards intended to apply only in default of a negotiation are not necessarily harmful and may even be helpful by adding incentives to conclude an agreement. However, the mixture of specific, arbitrary, and non-negotiable standards is toxic to cooperation. Standards must be negotiable within broad boundaries to ensure, among other things, that the requirements imposed make sense in relation to the goals they ostensibly serve, or at least make sense. The Appellate Body has already highlighted this issue in the shrimp-turtle case.⁴⁶⁶ If Congress and future administrations recognize this issue, this problem is not likely to recur. It occurred in the shrimp-turtle case only because of a legal dispute over the interpretation of a congressional negotiating mandate.

Congress should establish broad but verifiable standards of acceptable performance — in the case of tuna-dolphin, preserving the key target stocks with an ample margin of safety, minimizing dolphin mortality in dolphin sets, or both — while giving the executive direction, discretion, and a *reasonable* deadline to negotiate an agreement that meets the goals. The Agreement that results should be subject either to Senate confirmation, bicameral approval, or judicial review (depending on one's view of the proper relationship between Congress and the Executive on such matters). But the standard of approval and review should be the same in any case: does the Agreement achieve its core goals and requirements, or is it reasonably likely to do so? Unilateral standards should be imposed only in default of an agreement, and only after close consultation with affected producers and governments. These standards should likewise be discretionary, and reviewable.

Unfairness. The "hard cases" discussed earlier raise issues that trade leverage may address, but they also raise problems that the use of trade leverage cannot address and may worsen. These problems arise when lack of technology, know-how, or administrative capacity in some countries, particularly developing countries, renders compliance with ambitious standards or timetables overly burdensome and hence unfair. Such cases will inevitably raise controversies over who should bear the primary burden of adjusting to meet an environmental challenge.

Even greater than the risk of means-end arbitrariness, then, is the danger that perceptions of bargaining power will tempt the sending state to ignore or slight facilitative strategies for building cooperation — capacity building, technical assistance, and technology transfer — in favor of an imposed solution. In the tuna-dolphin case, the IATTC did a very effective job of providing all of these elements, and the result was a remarkable achievement.⁴⁶⁷ But there is no guarantee of such an outcome in other cases.

Response. This is, without question, a valid concern, and one complicated by the fact that countries often strongly disagree about who should bear primary responsibility for controlling global harms, and how much developing countries

466. See Shrimp-Turtle Appellate Body Report, *supra* note 13, at paras. 63-66.

467. See discussion *supra* Part II.C, D.

should be compensated for doing "their share." But critics who regard such concerns as dispositive commit a fundamental error of logic: they assume that the risk of abuse is equal to the guarantee of abuse.⁴⁶⁸ They are not the same. As the tuna-dolphin experience demonstrates, leverage may energize fairness discourse as well as "trump" it. It may be used in tandem or in conflict with management.⁴⁶⁹ Moreover allowing every state to free-ride on the conservation efforts of others is also "unfair."

The breadth and depth of the "management" package in which ETL is embedded should be deemed a key indicator of the justifiability of using ETL in a particular case. The price of coercive hegemony is, or ought to be, benevolent hegemony: great powers that assume the right and responsibility of leadership through leverage must also accept the obligation to ensure that their regime provides the capacity enhancement, technology transfer, and other "management" elements necessary for success. Toward this end, Esty has proposed a global "Green Fund" which would be financed by a "tiny environmental surcharge" on worldwide trade and finance, with proceeds used to assist developing countries in meeting global environmental obligations.⁴⁷⁰ The idea has considerable merit and deserves close attention. It would eliminate, or at least ameliorate, what is by far the greatest incentive for unfair use of trade leverage: lack of appropriated funds to finance capacity building and other "active management" strategies in developing countries.

Meanwhile, the needs and strategies of global environmental management will vary case by case. Therefore, the judgment of management adequacy must be made case by case, according to a rule of reason, preferably by a body with environmental credentials. What is not acceptable is a rule which grants unwilling states *carte blanche* to refuse cooperation with legitimate efforts to protect the global commons unless they are given enough financial "assistance" to persuade them to cooperate. That is a rule of ransom, rather than a rule of reason.

This section has surveyed six major risks of abuse that accompany any mobilization of economic leverage to protect the global commons. While each hazard has its own distinctive source, character, and particularized remedy, the root problem and overall solution is a singular one: the tendency of leverage to displace, rather than energize, good-faith negotiation over ways and means to protect the commons. From this single problem, all other hazards spring. To avoid them, trade leverage must be recognized and used as an instrument of diplomacy, not a substitute for it. It must be used to energize negotiations with foreign states, producers, or both, not to try to trump them.

468. See, e.g., statement of EC to GATT, *supra* note 189.

469. One clear example of this is the Montreal Protocol to Protect the Ozone Layer, which establishes both a Multilateral Fund to help developing countries meet the incremental costs of complying with the Protocol, and potential trade restrictions to deter holdouts. For a discussion of this example and the need, in general, for carrots as well as sticks in international environmental diplomacy, see ESTY, *supra* note 14, at 189-93.

470. See ESTY, *supra* note 14, at 88, 191.

The advice is obvious, but implementing the advice has turned out to be far from easy. The difficulty lies in the divided nature of U.S. government, and the pathology in environmental foreign policy that arises directly from it. The syndrome — evident in the tuna-dolphin case, and repeated in the shrimp-turtle case — is as follows. Congress assigns the executive the task of using leverage to get an agreement that meets broad goals. For years, the executive drags its heels and puts no energy into carrying out the mandate. Congress responds by legislating a tighter mandate that essentially eliminates executive discretion to avoid action. But the specific standards are likely to be irrational because Congress lacks expertise to prescribe sensible, but highly specific, technical standards. In any case, standards thus imposed are by definition non-negotiated and, if specific and binding, non-negotiable in the short-term. This raises all the risks of peremptoriness, arbitrariness, eco-imperialism, and unfairness outlined above.⁴⁷¹ Yet legislating broader standards with certification requirements risks repetition of the phony certifications that occurred in the tuna-dolphin case for nearly twenty years. There are only two ways out of this dilemma. The executive must be more diligent in faithfully carrying out broadly-worded instructions from Congress, recognizing that failure to do so is likely to lead to more draconian legislation down the road. Or, Congress must more deliberately craft standards for international environmental performance that are broad and flexible enough to allow meaningful negotiation, but clear enough to be objectively verifiable.⁴⁷² In the latter case, Congress must also ensure that standards thus promulgated are judicially reviewable.

The ultimate check to risks of abuse will be international review in either the WTO or, preferably, an environmental body created to advise the WTO on the "justifiability" of trade restrictions under the particular circumstances at hand.

F. RISKS OF ENVIRONMENTAL TRADE LEVERAGE FOR THE WORLD TRADING SYSTEM

Members of the trade community tend to view the unilateral use of trade leverage as a dangerous harbinger of lawlessness in the erstwhile community of states, while ignoring the far greater threat to the world trade system, the national

471. Of course, the syndrome is not likely to manifest itself under current Congressional leadership, with its high sensitivity to business concerns, and relative indifference to the global environment. But the "cure" of apathy is hardly an optimal response to situations that may call for intelligent application of leverage to serve some global or transboundary environmental purpose.

472. In the case of tuna-dolphin, for example, the instructions might have been to negotiate an agreement that contains (1) statistically reliable levels of (international) observer coverage, (2) annual aggregate mortality cap equal to the lower of (a) average mortality of, say, the top 10% of the fleet multiplied by the number of dolphin-set-capable vessels in the fishery (benchmarking) or (b) biologically insignificant take of target stocks (a stated percentage of biological "Nmin" estimates), and (3) vessel-specific limits which keep aggregate mortality within the cap. The law might also have required annual reports (with names concealed) to facilitate oversight of compliance with the requirement.

security exception.⁴⁷³ They fear that a rule allowing ETLs will lead to proliferation of ETLs. They also criticize the putative lack of any built-in limit to the degree of trade restriction that may be imposed by a great power on a small one, particularly in cases where import restrictions are extended beyond “like products” of the harmful products.

Response. The specter of proliferating environmental trade restrictions has all the credibility of Chicken Little. Uses of ETL have been relatively few and small-scale, and cases of actual imposition of sanctions even rarer.⁴⁷⁴ The reasons for non-proliferation are apparent. They typically impose costs on the sending state and require very substantial investment of sending state government resources, both diplomatic and economic. Most states have at best a limited political commitment to environmental issues, while perceiving a significant interest in maintaining the friendliest possible relations with other countries. Under these circumstances, there is no strong *a priori* reason to fear that the legitimization of environmental trade leverage will lead to a proliferation of ETLs — particularly if that legitimization is itself contingent on the restrictive requirements outlined above.⁴⁷⁵ Indeed, the strongest argument for legalizing ETL under restrictive conditions flows directly from its vices in the tuna-dolphin case: ETL employed in defiance of GATT doctrine, and in the absence of clear rules to guide national discretion, will be less rational and more destructive to free trade values than ETL circumscribed by sensible rules.

Similarly, there is little reason to panic at the prospect of disproportionate retaliation. To begin with, the past practice of states does not validate the fear.⁴⁷⁶ Also, any propensity to disproportionality is tempered by the fact that sender states and international NGOs must seek the cooperation of target states across a wide range of issues. Senders know that seeking or imposing clearly disproportionate sanctions will trigger nationalist backlash in the target states.⁴⁷⁷ Widely respected canons of international law require that any retaliation be proportional

473. Compare *Tuna I*, *supra* note 12, at 5.27 (“if the broad interpretation of [GATT] Article XX(b) suggested by the United States were accepted, each contracting party could unilaterally determine the life or health protection policies from which other contracting parties could not deviate without jeopardizing their rights under the General Agreement. The General Agreement would then no longer constitute a multilateral framework for trade among all contracting parties) with Hudec, *supra* note 14, at 148 (opposing environmental trade leverage while noting that the GATT system has prospered despite a “gaping hole in GATT legal protection” for trade in which claims of “national security” as a basis for trade restriction have been subject to no greater restraint than “the power of collective laughter.”).

474. See Charnovitz, *supra* note 4 (reviewing 14 episodes spanning the period 1973 to 1993 in which the United States has invoked the Pelly Amendment to the Fisherman’s Protective Act to threaten trade sanctions against a foreign country for undermining an international conservation agreement’ and reporting a “58 percent success rate” despite the fact that the United States never actually applied sanctions in any of the cases.).

475. See Chang, *supra* note 9, at 2162.

476. Tuna-dolphin is by far the largest and longest environmental trade restriction that has been imposed to date, and even it was not sufficient to prevent the emergence of a very lucrative fishery, notwithstanding the embargoes.

477. See Chang, *supra* note 9, at 2162.

to the offense.⁴⁷⁸ There are, moreover, at least two viable benchmarks for determining proportionality in environmental sanctions cases: harm to the environment, and/or benefit to the target state from norm violating activity. These benchmarks are not bright line test, to be sure, but neither is the economic harm arising from a violation of the Trade-Related Intellectual Property Rights Agreement.⁴⁷⁹ Most of all, any risk of over-zealousness in protecting the global environment must be weighed against the demonstrated insufficiency of alternatives to leverage.⁴⁸⁰ The key question is not whether the trading system can afford environmental trade measures, but whether the planet can be managed without them.

V. CONCLUSION

The global commons is no longer infinite. Successful management requires effective agreements. Effective agreements are hard to obtain and hard to uphold, particularly when a large number of countries have physical access to a lucrative resource and the activities of one or a few can effectively destroy the resource. Military force is too strong a response, but jawboning has proven to be too weak. In practical terms, trade leverage is frequently the only means (other than "bribes") to mobilize tangible economic incentives for countries to agree or comply. Under these circumstances, to forbid use of trade leverage is to forbid the preservation of the commons. To require all trade leverage to be authorized or obligated by a pre-existing agreement will have the same effect because recalcitrant countries will know that they can do as they wish by simply refusing to sign the agreement. Therefore, environmental trade leverage must be allowed, in limited circumstances and subject to strict safeguards, if the commons is to be preserved. However, trade leverage, particularly unilateral trade leverage, is subject to abuse, both well-intentioned and protectionist. Its method of use can either empower or undermine management.

Environmental trade leverage cannot be categorically barred, but neither can it be categorically permitted. "Justifiable" environmental trade leverage must be distinguished from unjustifiable coercion. This can only be done by understanding the manners and pathways through which environmental trade leverage has actually worked to form, strengthen, and enforce cooperative global commons conservation regimes, and by understanding why it has sometimes failed.

478. See *id.* at 2162 n.121 (citing Jost Delbruck, *Proportionality*, in 7 *ENCYCLOPEDIA OF PUBLIC INTERNATIONAL LAW* 396, 399 (Rudolph Bernhardt ed., 1984)).

479. See Telephone Interview with David Walters, Chief Economist, Office of the United States Trade Representative (July 14, 1999).

480. As Chang has remarked, "given that countries already labor under severe free rider problems in tackling global environmental problems, the notion that we should worry about excessive environmental protection seems rather fanciful." Chang, *supra* note 9, at 2163. The tuna-dolphin record, with its long track record of misdirected environmental zeal, suggests that the notion may not be entirely fanciful. However, tuna-dolphin gives no comfort to the notion the leverage, though abused, played no essential, constructive role.

LIST OF ACRONYMS

Acronym	Meaning
ANCIT	Italian canners' trade association
CANAINPES	Mexico's fisheries trade association
CPR	Commonly Pooled Resource
CTE	World Trade Organization Committee on Trade and Environment
DML	dolphin mortality limit
EC	European Community
EEZ	Exclusive Economic Zone
EPO	Eastern Pacific Ocean
ETL	environmental trade leverage
ETP	Eastern Tropical Pacific
FUDENA	Venezuelan environmental organization
GATT	General Agreement on Tariffs and Trade
IATTC	Inter-American Tropical Tuna Commission
IISD	International Institute for Sustainable Development
IL	international law
IPR	Protection of Intellectual Property Rights
IR	international relations
IRP	IATTC Implementation Review Panel
IWC	International Whaling Commission
LOS III	Third Convention of the Law of the Sea
Nmin	Minimum Estimated Abundance
MMPA	Marine Mammal Protection Act
NAFTA	North American Free Trade Agreement
NMFS	National Marine Fisheries Service
NRR	Net Reproductive Rate
OSP	optimum sustainable population
SEPESCA	Mexican Fisheries Ministry
WTO	World Trade Organization

