ARTICLE

IS THERE HOPE FOR THE FISH?: THE POST-ARBITRATION EFFECTIVENESS OF THE CONVENTION FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA

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INTRODUCTION

Mention southern bluefin tuna (SBT) to an international lawyer and she is likely to cite a pair of arbitration decisions from the late 1990s. Those decisions, the SBT Order[1] and SBT Award,[2] relate to a dispute that arose between the three founding members of the Convention for the Conservation of Southern Bluefin Tuna (CCSBT): Australia, New Zealand, and Japan. Australia and New Zealand took Japan to arbitration over its decision to proceed with an experimental fishing plan (EFP), in what they considered to be violation of the CCSBT. The ensuing decisions have been thoroughly analyzed regarding their implications for international dispute settlement.[3]

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[1] Southern Bluefin Tuna Cases (N.Z. v. Japan; Austl. v. Japan), 117 I.L.R. 148, 149 (Int'l Trib. L. of the Sea 1999).

[2] Southern Bluefin Tuna Case (Austl. & N.Z. v. Japan), 119 I.L.R. 508, 509–10 (Int'l Trib. L. of the Sea 2000).

[3] *See, e.g.*, Leah Sturtz, Southern Bluefin Tuna Case: *Australia and New Zealand v. Japan*, 28 ECOLOGY L.Q. 455 (2001); Barbara Kwiatkowska, *The Australia and New Zealand v Japan Southern Bluefin Tuna (Jurisdiction and Admissibility) Award of the First Law of the Sea Convention Annex VII Arbitral Tribunal*, 16 INT'L J. MARINE & COASTAL L. 239 (2001); Deborah Horowitz, Case Note, Southern Bluefin Tuna Case (Australia and New Zealand v Japan) (Jurisdiction and Admissibilty): *The Catch of Poseidon's Trident: The Fate of the High Seas Fisheries in the* Southern Bluefin Tuna Case, 25 MELB. U. L. REV. 810 (2001); Cesare Romano, *The* Southern Bluefin Tuna *Dispute: Hints of a World to Come . . . Like It or Not*, 32 OCEAN DEV. & INT'L L. 313 (2001); Tim Stephens, *A Paper Umbrella Which Dissolves in the Rain? Implications of the* Southern Bluefin Tuna Case *for the Compulsory Resolution of Disputes Concerning the Marine Environment Under the 1982 LOS Convention*, 6 ASIA PAC. J. ENVTL. L. 297 (2001); Barbara Kwiatkowska, *The* Southern Bluefin Tuna (New Zealand v Japan; Australia v Japan) *Cases*, 15 INT'L J. MARINE & COASTAL L. 1 (2000); Moritaka Hayashi, The Southern Bluefin Tuna Cases: *Prescription of Provisional Measures by the International Tribunal for the Law*

This Article is not concerned with the arbitration decisions themselves, but rather the story that has unfolded since. Focusing solely on the arbitration implications of the decisions misses a vital part of this story, namely their impact on the regime itself. As one author has stated, they had a significant impact on the body established under the CCSBT, the Commission for the Conservation for Southern Bluefin Tuna (the Commission), facilitating the eventual conclusion of the EFP dispute, and assisting the Commission's move towards an agreed scientific basis for its work.[4] It is generally accepted that the arbitration decisions "played a major role in the achievement of an expanded and revitalized Commission."[5] Yet these conclusions were still drawn within a discussion of the implications of the arbitration decisions, something with which this Article is not primarily concerned. Rather, the goal of this Article is to assess more directly the post-arbitration effectiveness of the regime as revitalized following the arbitration decisions.

In assessing the CCSBT's effectiveness, the Article distinguishes between outputs, outcomes, and impacts. Outputs are the norms, principles, and rules constituting the regime itself. Outcomes are the changes in human behavior induced by the outputs, and impacts are the changes to the state of the biophysical environment. In essence, the regime's effectiveness will be judged in terms of whether it implements a successful range of appropriate management functions that contribute to the regime achieving its aim, namely the conservation and maximum utilization of the fishery.

The Article examines the CCSBT's outputs following the arbitration decisions and reveals a sophisticated regime that largely induces the desired outcomes in members' behavior. While this should in turn lead the regime to meet its conservation and management objectives, the fishery is in a worse state now than

of the Sea, 13 TUL. ENVTL. L.J. 361 (2000); Simon Marr, The Southern Bluefin Tuna *Cases: The Precautionary Approach and Conservation and Management of Fish Resources*, 11 EUR. J. INT'L L. 815 (2000).

[4] Tim Stephens, *The Limits of International Adjudication in International Environmental Law: Another Perspective on the* Southern Bluefin Tuna *Case*, 19 INT'L J. MARINE & COASTAL L. 177, 183 (2004).

[5] Bill Mansfield, *Compulsory Dispute Settlement after the Southern Bluefin Tuna Award*, *in* OCEANS MANAGEMENT IN THE 21ST CENTURY: INSTITUTIONAL FRAMEWORKS AND RESPONSES 255, 263 (Alex G. Oude Elferink & Donald R. Rothwell eds., 2004).

ever. The regime is not having its desired impact, and evidence shows a rapid and continuing decline of spawning stock biomass and a strong possibility that maintaining current catch levels will lead to the complete disappearance of spawning stock by 2030.

This failure is surprising given the small number of parties to the Convention, their relative wealth and technical competence, and the fact that they have been cooperating together for twenty years. The central inquiry of this Article, therefore, is why in spite of improved cooperation to produce outputs and tangible outcomes, the regime has failed to positively impact the sustainability of the fishery.

Part I briefly describes the regime and outlines its history of decision-making prior to and following the arbitration decisions. Part II defines the analytical framework used to evaluate the regime's effectiveness—primarily an assessment of its outputs, outcomes, and impacts—which it then proceeds to analyze before drawing an overall conclusion about its (in)effectiveness. Part III posits the reasons for the CCSBT regime's failure to ensure the successful conservation of the SBT fishery. The Article concludes by considering possible reforms to improve the regime's effectiveness.

This case study is timely in two respects. First, the CCSBT is not the only regional fishery body having to consider ways of improving its effectiveness in light of dwindling fish stocks; many others face similar problems. As a result, considerable international attention is currently focused on international fisheries management, including how to improve the management outcomes of regional fishery bodies.[6] Second, within the CCSBT

[6] *See e.g.*, *Summary of the UN Fish Stocks Agreement Review Conference: 22–26 May 2006*, EARTH NEGOTIATIONS BULL. (Int'l Inst. for Sustainable Dev., New York, N.Y.), May 29, 2006, at 1, 3, *available at* http://www.iisd.ca/download/pdf/enb0761e.pdf (reviewing a number of recommendations made by the Conference regarding the role and function of regional fishery bodies in its final report, including a recommendation for improving the effectiveness of regional fishery bodies in dealing with a range of international fisheries management issues); *Summary of the Seventh Meeting of the Open-Ended Informal Consultative Process on Oceans and the Law of the Sea: 12–16 June 2006*, EARTH NEGOTIATIONS BULL. (Int'l Inst. for Sustainable Dev., New York, N.Y.), June 19, 2006, at 1, *available at* http://www.iisd.ca/download/pdf/enb2531e.pdf (reporting that the Consultative Process involved discussions about the need to strengthen regional fishery bodies and ways of doing so); UN FOOD & AGRIC. ORG. (FAO), FAO FISHERIES REPORT NO. 778: REPORT OF THE FOURTH MEETING OF REGIONAL FISHERY BODIES 4–5 (2005) [hereinafter FAO FISHERIES

itself, a particularly large-scale problem with illegal, unregulated, and unreported fishing has recently come to light, threatening to split the regime intractably.

Thus the CCSBT finds itself at a crucial junction. Its actions in response will not only determine the viability of the SBT fishery and the fish stocks themselves, but will provide valuable lessons for other regional fishery bodies facing similar issues in the future.

I. BACKGROUND TO THE CCSBT

SBT are large, fast swimming, pelagic fish found throughout the southern hemisphere, migrating through various nations' exclusive economic zones and the high seas. They can live for up to forty years, reach a weight of over 200 kilograms, and measure more than 2 meters in length. Their size, weight, and status as a premium eating fish makes them highly valuable. They are sold almost exclusively in the Japanese sashimi market, with the total value of the SBT fishery estimated at approximately US$780 million.[7]

Once very abundant, SBT were heavily fished in the past, with annual catches reaching 80,000 tons in the early 1960s. Stock numbers fell dramatically from that point onwards, with parental stock declining to less than 30% of its 1960 level by the early 1980s.[8] SBT has been listed as critically endangered on the World Conservation Union's Red List of Threatened Species since 1996.[9]

In 1985, Australia, New Zealand, and Japan began applying strict quotas to their fishing fleets as a management and conservation measure to enable the SBT stocks to rebuild. The three countries formalized this voluntary agreement in 1993 by signing the CCSBT, which came into effect on May 20, 1994. The

REPORT NO. 778]; JUDITH SWAN, FAO, FAO FISHERIES CIRCULAR NO. 995: DECISION-MAKING IN REGIONAL FISHERIES BODIES OR ARRANGEMENTS: THE EVOLVING ROLE OF RFBS AND INTERNATIONAL AGREEMENT ON DECISION-MAKING PROCESSES (2004) (circular prepared as part of the ongoing activities of the FAO International Institutions and Liaison Service, aimed at providing information on activities of regional fishery bodies).

[7] *See* CCSBT, About Southern Bluefin Tuna, http://www.ccsbt.org/docs/about_s.html (last visited Jan. 12, 2007).

[8] Southern Bluefin Tuna Case (Austl. & N.Z. v. Japan), 119 I.L.R. 508, 515 (Int'l Trib. L. of the Sea 2000).

[9] The IUCN Red List of Threatened Species, Species Information: *Thunnus maccoyi*, http://www.iucnredlist.org/search/details.php/21858/all (last visited Apr. 12, 2007).

Republic of Korea became a party in October 2001, and the Fishing Entity of Taiwan in August 2002. The Philippines became a cooperating non-member in August 2004, requiring it to adhere to the conservation objectives of the CCSBT and agreed catch limits.[10] Likewise, the Commission admitted South Africa and the European Community as cooperating non-members in October 2006.[11] In total, the CCSBT covers eight of the nine states responsible for almost all the global SBT catch. The only country remaining outside the Convention is Indonesia.

The objective of the CCSBT is to ensure, though appropriate management, the conservation and optimum utilization of SBT.[12] The objective therefore embodies the typical goal of most regional fisheries management regimes, namely to use scientific evidence to maximize the take in the fishery while ensuring its ongoing viability.[13] The CCSBT commits the parties to collecting and exchanging information[14] and establishes a Scientific Committee as an advisory body to the Commission,[15] which is itself established under article 6.

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[10] "Cooperating Non-Members participate fully in the business of the CCSBT but cannot vote. Acceptance as a Cooperating Non-Member requires adherence to the management and conservation objectives of the CCSBT and agreed catch limits [and] . . . is regarded as a transitional measure to full membership and accession to the Convention." CCSBT, About the Commission, http://www.ccsbt.org/docs/about.html (last visited Jan. 12, 2007).

[11] COMM'N FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA, REPORT OF THE THIRTEENTH ANNUAL MEETING OF THE COMMISSION app. 4, paras. 87–92 (2006), *available at* http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_13/report_of_CCSBT13.pdf [hereinafter THIRTEENTH ANNUAL COMMISSION REPORT] (approving the decision of the Extended Commission to admit South Africa and the European Community as cooperating non-members).

[12] Convention for the Conservation of Southern Bluefin Tuna, Austl.-Japan-N.Z., art. 3, *opened for signature* May 10, 1993, 1819 U.N.T.S. 359 (entered into force on May 20, 1994), *available at* http://www.ccsbt.org/docs/pdf/about_the_commission/convention.pdf [hereinafter Bluefin Tuna Convention].

[13] *See* PATRICIA W. BIRNIE & ALAN E. BOYLE, INTERNATIONAL LAW AND THE ENVIRONMENT 653–54 (2d ed. 2002).

[14] Bluefin Tuna Convention, *supra* note 12, art. 5.

[15] *Id.* art. 9. The Scientific Committee's role is to (a) assess and analyze the status and trends of the population of SBT; (b) coordinate research and studies of SBT; (c) report to the Commission its findings or conclusions, including consensus, majority and minority views, on the status of the SBT stock and, where appropriate, of ecologically related species; (d) make recommendations, as appropriate, to the Commission by consensus on matters concerning the conservation, management and optimum utilization of SBT; and (e) consider any matter referred to it by the Commission. The Scientific Committee is required to meet prior to the Commission's annual meeting. *Id.*

Each party is represented on the Commission,[16] the decisions of which must be unanimous.[17] The Commission's main responsibility is to collect and accumulate information about the SBT fishery, and to decide upon a total allowable catch (TAC) and its allocation among the parties.[18] The Commission is serviced by a small secretariat based at its headquarters in Canberra, Australia.

The parties set an initial TAC in 1989 of 11,750 tons per annum, with 6065 tons allocated to Japan, 5265 tons to Australia, and 420 tons to New Zealand.[19] The first meeting of the Commission in 1994 retained the 1989 TAC and national allocations, although Japan sought an increase, claiming that fish stocks were beginning to recover. New Zealand and Australia opposed Japan's proposal for an increased TAC, as well as its request to begin an experimental fishing program.[20] In the absence of any agreement about catch levels, the parties retained the 1994 levels; it was not until 2001, following the outcomes of the arbitration proceedings, that they reached an agreement about a provisional global catch of 14,925 tons, although they did not agree on the national allocations of that catch until 2003.[21]

[16] *Id.* art. 6(2).

[17] *Id.* art. 7.

[18] *Id.* arts. 8(1), 8(3).

[19] Southern Bluefin Tuna Case (Austl. & N.Z. v. Japan), 119 I.L.R. 508, 515. (Int'l Trib. L. of the Sea 2000).

[20] *Id.* at 519.

[21] Stephens, *supra* note 4, at 181, 185.

The TAC and national allocations were again reviewed at the Commission's 2006 Annual Meeting and stand as follows:[22]

Party	Allocated Catch	% of TAC
Australia	5265 tons	44.58%
Japan	3000 tons	25.40%
Republic of Korea	1140 tons	9.65%
Fishing Entity of Taiwan	1140 tons	9.65%
New Zealand	420 tons	3.56%
Indonesia	750 tons	6.35%
Philippines	45 tons	0.38%
South Africa	40 tons	0.34%
European Community	10 tons	0.08%
TOTAL:	**11,810 tons**	

The catch limit for Indonesia will only apply if it becomes a cooperating non-member.

Once the Commission decides upon a TAC and makes national allocations, it is up to members to implement the decisions at the national level. Members are also responsible for implementing any other conservation and management measures instituted by the Commission, and for ensuring the compliance of their fishers. The Commission collects a large amount of data, which it uses to monitor member compliance and to support the scientific assessment of stock levels.

The Commission's existence and activities take place within a wider international law context, particularly members' obligations under the United Nations Convention on the Law of the Sea

[22] *See* CCSBT, Management of SBT, http://www.ccsbt.org/docs/management.html (last visited Jan. 12, 2007).

(UNCLOS)[23] and the 1995 Agreement on Straddling and Highly Migratory Fish Stocks (Fish Stocks Agreement).[24] Other than Taiwan, all CCSBT members, as well as Indonesia, have ratified UNCLOS. At present, only Japan, New Zealand, Australia, South Africa, and the European Community have acceded to the Fish Stocks Agreement. As it was negotiated and adopted by consensus, however, the Fish Stocks Agreement can be read as providing guidance about the specific substance of members' general UNCLOS obligations.[25]

Under UNCLOS, all Commission members are obliged to take measures to conserve the SBT fishery, although the obligations are stronger for coastal states.[26] The Fish Stocks Agreement modifies these obligations significantly, introducing new obligations of sustainable use and requiring a precautionary approach.[27] It also obliges states to cooperate through the formation of regional fisheries management organizations (RFMOs), and describes the functions those RFMOs must undertake.[28]

Furthermore, the Rio Earth Summit of 1992 treated UNCLOS as a codification of the existing law relating to the marine environment,[29] suggesting that parties have customary international law obligations to manage and conserve SBT. Of course, the summit went further regarding the marine environment, placing new emphasis on the precautionary principle and

[23] United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397 [hereinafter UNCLOS].

[24] Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, Dec. 4, 1995, S. TREATY DOC. NO. 104-24, 2167 U.N.T.S. 88 [hereinafter Fish Stocks Agreement].

[25] BIRNIE & BOYLE, *supra* note 13, at 673.

[26] The coastal states in the CCSBT regime are New Zealand, Australia, South Africa and Indonesia, through whose Exclusive Economic Zones SBT migrates. Under article 61 of the UNCLOS, they are obliged, through proper conservation and management measures, and taking into account the best scientific evidence available, to ensure that SBT is not endangered by over-exploitation. UNCLOS, *supra* note 23, at 420. Article 117 of the UNCLOS requires all members fishing for SBT in the high seas to take, and cooperate with others in taking, measures that may be necessary to conserve high seas living resources. UNCLOS, *supra* note 23, at 441.

[27] Fish Stocks Agreement, *supra* note 24, arts. 5–6.

[28] *Id.* arts. 8–15.

[29] BIRNIE & BOYLE, *supra* note 13, at 670.

sustainable use of marine living resources.[30]

This background illustrates that in spite of member obligations under the CCSBT itself, UNCLOS, the Fish Stocks Agreement, and perhaps customary international law, the regime has had variable management success. After setting an initial TAC in 1989, the parties failed to reach consensus about new allocations, only breaking the impasse in 2001 following the completion of the arbitration proceedings.

The next Part illustrates the extent to which the Commission has been revitalized since that time, but also how despite its revitalization, it has failed to achieve its objectives.

II. MEASURING EFFECTIVENESS: OUTPUTS, OUTCOMES, AND IMPACTS

There are many ways of defining effectiveness, but this Article adopts a definition from a 2002 study by Arild Underdal.[31] In what Underdal describes as a common sense understanding of effectiveness, "a regime can be considered effective to the extent it successfully performs a certain (set of) function(s) or solves the problem(s) that motivated its establishment."[32]

Accordingly, in assessing the CCSBT's effectiveness, this Article distinguishes between outputs and the outcomes and impacts that flow from those outputs. Outputs are the norms, principles, and rules constituting the regime itself, such as the establishment of a total allowable catch for a particular fish stock. A regime can be seen as effective if its outputs indicate it is successfully performing a certain set of functions. Outcomes are the changes in human behavior induced by the outputs, and impacts are the changes to the state of the biophysical environment induced by the outputs.[33] The standard of effectiveness

[30] *See* United Nations Conference on Environment and Development: Rio Declaration on Environment and Development, *adopted* June 14, 1992, U.N. Doc. A/CONF.151/5/Rev.1, *reprinted in* 31 I.L.M. 874 (1992) [hereinafter the Rio Declaration]; *Report of the United Nations Conference on Environment and Development*, Annex II, Agenda Item 21, U.N. Doc. A/CONF.151/26 (Vol. III) (1992), http://www.un.org/esa/sustdev/agenda21text.htm [hereinafter Agenda 21].

[31] Arild Underdal, *One Question, Two Answers*, *in* EDWARD L. MILES ET AL., ENVIRONMENTAL REGIME EFFECTIVENESS: CONFRONTING THEORY WITH EVIDENCE 1, 4 (2002).

[32] *Id.* at 4.

[33] *Id.* at 5–6.

encompassed by these factors is whether the regime actually solves the problem that motivated its establishment. In other words, success will be judged by determining whether the regime carries out a successful range of appropriate management functions and whether it has resulted in the conservation and maximum utilization of the fishery.

A. *Outputs and Outcomes*

The articles of the CCSBT itself produce certain outputs, with the establishment of the Commission as the key output. Although essentially a creature of the parties themselves, the Commission is an RFMO with its own legal personality and headquarters,[34] staff and budget,[35] and explicit mandate to collaborate with other RFMOs to further the attainment of the CCSBT's objective.[36]

The Commission's most important function is to set a TAC and allocate it amongst the members, because only by limiting the SBT catch will the Commission achieve its objective of conserving the fishery. To limit the SBT catch effectively, the Commission needs robust scientific information, which it either has to generate itself or collect from its members. It needs to ensure that members comply with their obligations to limit their catch to agreed allocations. Ultimately, it also has to secure the participation of all SBT fishing nations if it is to achieve its conservation goals.

Thus in an effort to meet its objective by changing the behavior of SBT fishing states, the regime's outputs consist mostly of the rules and procedures developed and implemented by the Commission. This Part briefly outlines the Commission's four main areas of output and their associated outcomes:

a. gathering information about the state of the fishery;
b. ensuring the availability of scientific advice on which to base decisions;
c. expanding the coverage of the CCSBT; and
d. preventing illegal, unregulated, and unreported fishing.

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[34] Bluefin Tuna Convention, *supra* note 12, art. 6(9)–(10).

[35] *Id.* arts. 10–11. Thirty percent of the Commission's annual budget is divided equally between the parties. The remaining 70% is divided in proportion to the parties' nominal SBT catches. Parties that fail to pay their contributions for two consecutive years lose the right to participate in the Commission's decision-making process until they fulfill their obligations. *Id.*

[36] *Id.* art. 12.

1. *Gathering Information About the State of the Fishery*

The Commission has implemented a number of programs in recent years to improve the amount and usefulness of the information it collects about the state of the SBT fishery. Good information is crucial for making decisions based on sound scientific advice about matters such as the required TAC, and also for checking members' compliance with their regime obligations.

Regarding information to aid scientific decision-making, the regime initiated a Scientific Research Program (SRP) in April 2001. The different SRP components have led to better characterization of the SBT catch through improved age determination methods and an SBT tagging program, yielding more information on which to base SBT stock estimates.

The SRP also resulted in the commencement of a Scientific Observer Program, the aim of which is to increase the quality of the scientific data upon which the Scientific Committee bases its stock assessments, and to help provide direction for further research.[37] Members commenced their observer programs in 2003–2004. Although every party has dispatched observers throughout their fleets, not all are meeting the 10% coverage target.[38]

Another important measure for providing accurate and comprehensive data on SBT fishing is the Commission's Trade Information Scheme (TIS).[39] Under the TIS, all members and cooperating non-members require all SBT imports to be accompanied by a completed CCSBT statistical document containing extensive catch information. These documents are lodged with the Commission Secretariat and reconciled against electronic lists of exports also submitted by members and

[37] COMM'N FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA, REPORT OF THE EIGHTH ANNUAL MEETING OF THE COMMISSION 8 (2001), *available at* http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_8/report_of_ccsbt8.pdf [hereinafter EIGHTH ANNUAL COMMISSION REPORT].

[38] *See* COMM'N FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA, REPORT OF THE TWELFTH ANNUAL MEETING OF THE COMMISSION app. 3, paras. 28–29 (2005), *available at* http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_12/report_of_ccsbt12.pdf [hereinafter TWELFTH ANNUAL COMMISSION REPORT]. For example, while New Zealand achieved nearly 100% of its charter catch in 2003–04, Taiwan achieved only 4% in 2004. *Id.* at attachments 8-2, 8-4.

[39] *See* CCSBT, Management of SBT, http://www.ccsbt.org/docs/management.html (last visited Jan. 12, 2007).

cooperating non-members. In addition to providing catch data, the TIS helps the regime to assess its members' compliance with their obligations by enabling a comparison of the members' quota levels with the amount of SBT caught and landed by vessels flying their flag. This highlights when members have exceeded their quotas while also helping to detect illegal, unregulated, and unreported fishing.

Members and cooperating non-members supply the Commission with certain information, which is collated by the Secretariat, including the following: (1) estimated total global catch by flag, gear, month, and ocean; (2) catch and effort data for both longline and surface (purse seine, pole, and line) fisheries; (3) the SBT size frequency data by flag, gear, month, and ocean; and (4) trade information scheme data.[40]

While members generally comply with their obligations to generate information and provide it to the Commission, there are continuing gaps. At the 2005 meeting of the Extended Commission,[41] Australia noted that failure by some members to meet the Scientific Observer target was compromising SRP outcomes.[42] In addition, members agreed on the need to

[40] *See* CCSBT, Data, http://www.ccsbt.org/docs/data.html (last visited Jan. 12, 2007). The Commission operates a TIS, under which all members and cooperating non-members must require all imports of SBT to be accompanied by a completed CCSBT statistical document, which are then lodged with the Commission Secretariat and reconciled against electronic lists of exports also submitted by members and cooperating non-members. *See* CCSBT, Management of SBT, http://www.ccsbt.org/docs/management.html (last visited Jan. 12, 2007).

[41] The Extended Commission performs the same functions of the Commission, including setting a TAC and allocation among members, although its decisions must be formally ratified by the Commission before taking effect. All Commission members are members of the Extended Commission, but in addition, non-member SBT fishing nations are eligible to join, enabling the Extended Commission (and ultimately the Commission) to decide upon an allocation of the TAC for non-members. Members of the Extended Commission, who are not members of the Commission, are not bound by the Commission's decisions. Nonetheless, membership of the Extended Commission is a way of bringing non-members into the regime and is a possible precursor to full membership. The Extended Scientific Committee works the same way. *See* COMM'N FOR THE CONSERVATION OF THE SOUTHERN BLUEFIN TUNA, RESOLUTION TO ESTABLISH AN EXTENDED COMMISSION AND AN EXTENDED SCIENTIFIC COMMITTEE AND RULES OF PROCEDURE OF THE EXTENDED COMMISSION FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA (rev. 2003), *available at* http://www.ccsbt.org/docs/pdf/about_the_commission/the_Extended_commission.pdf.

[42] TWELFTH ANNUAL COMMISSION REPORT, *supra* note 38, para. 29.

strengthen the catch monitoring systems, and established a technical working group to consider the way forward.[43] Furthermore, while members agreed to provide monthly catch reporting information from January 1, 2006, which they believed would improve the management and compliance regimes for the fishery, this information will include only the total monthly catch and the cumulative catch for the year to date. Some members sought more fine scale information, but this was rejected because other members were not in position to provide such information.[44]

Even when members generate and provide information to the Commission, some problems remain in the Commission's securing transparently accurate information. Nonetheless, members are aware of these problems and are seeking ways to address them.

2. *The Availability of Scientific Advice on Which to Base Decisions*

As noted above, gathering adequate information is a prerequisite for decisions based on sound scientific advice. Be that as it may, adequate information will not automatically lead to robust scientific advice on which to base decisions in the absence of procedures requiring an independent scientific assessment of that information.

In its early years the Commission failed to receive clear advice from the Scientific Committee established under article 9 of the CCSBT. The Scientific Committee's composition and consensus decision-rules prevented the Commission from agreeing on a TAC between 1994 and 2001 because the various national representatives on the Scientific Committee disagreed about the status of the SBT stocks, and thus could not reach consensus to make specific management recommendations to the Commission. Japan believed the stocks were recovering, justifying an increased TAC, whereas Australia and New Zealand held the view that the stocks remained threatened, thereby prohibiting any increase.[45] In response to this impasse, and following the arbitration decisions, the Commission identified and implemented a number of reforms to improve the objectivity of the scientific information it received,

[43] *Id.* para. 90.

[44] *Id.* para. 97.

[45] Southern Bluefin Tuna Case (Austl. & N.Z. v. Japan), 119 I.L.R. 508, 515 (Int'l Trib. L. of the Sea 2000).

including the appointment of outside advisory bodies to conduct scientific stock assessments and technical evaluation of the data from the SBT fishery, and independent chairs for these outside bodies and the Scientific Committee itself.

Most recently, the Commission agreed at its 2005 meeting on a Management Procedure, which is a set of rules agreed in advance to dictate how a TAC for the SBT fishery would be adjusted as data becomes available.[46] Described by the Scientific Committee as an "autopilot set to a specific course,"[47] the Management Procedure is designed to use available data on the level of SBT stock to calculate the TAC necessary to reach a particular goal. The expectation is that in normal circumstances, the Commission will set a target for SBT biomass level that it believes will result in the conservation and optimum utilization of the fishery. It will then tune the Management Procedure to specify the TAC required to meet this target on the basis of up-to-date information about the state of the fishery.[48] In 2005, the Commission adopted a Management Procedure tuned to determine TACs to ensure a 50% probability that the 2014 biomass levels will be above 2004 levels.[49] Subsequent information about the poor state of the fishery led the Scientific Committee to conclude that a different Management Procedure was required to ensure a high probability of the stock rebuilding.[50] As a result, the Commission has decided to reevaluate the Management Procedure.[51]

These outputs have led to the Commission receiving independent scientific advice on the state of the fish stock, and based on this information, making decisions regarding an appropriate TAC and national allocation.[52] Although its precise

[46] TWELFTH ANNUAL COMMISSION REPORT, *supra* note 38, para. 69.

[47] COMM'N FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA, REPORT OF THE SPECIAL MEETING OF THE COMMISSION attachment 5 (2004), *available at* http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_11/report_of_special_meeting.pdf.

[48] COMM'N FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA, REPORT OF THE SIXTH MEETING OF THE SCIENTIFIC COMMITTEE paras. 48–54 (2001), *available at* http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_8/report_of_sc6.pdf.

[49] TWELFTH ANNUAL COMMISSION REPORT, *supra* note 38, para. 40.

[50] *See* CCSBT, Recent News, http://www.ccsbt.org/docs/news.html (last visited Jan. 27, 2007); THIRTEENTH ANNUAL COMMISSION REPORT, *supra* note 11, para. 46.

[51] CCSBT, Recent News, *supra* note 50.

[52] *See* Stephens, *supra* note 4, at 185 (noting that the Commission used

application is still being evaluated, the adoption of the new Management Procedure as a means of setting the TAC can be seen as a major step forward for the Commission as it provides a degree of automaticity in terms of setting a TAC based on the available scientific information. On the other hand, the ultimate decision still remains with the Commission, so the potential remains for TAC setting on non-scientific grounds.

3. *Coverage of the CCSBT*

In terms of CCSBT coverage, the Commission has worked to bring eight of the nine states responsible for virtually all the total reported SBT catch within the regime. Indonesia is the only major SBT catching nation that continues to decline non-cooperating membership, although it has been engaged with the Commission for a number of years and cooperating on a range of measures, especially data provision.[53] Its representative told the latest meeting of the Extended Commission that Indonesia expected to lodge an application for cooperating non-member status "in the near future".[54] This comes after a period where CCSBT members took active steps to facilitate Indonesian membership: Australia and Japan are funding catch monitoring in Indonesia as part of an overall Indonesian effort to improve its catch monitoring capacity.[55]

In addition to its efforts to engage SBT fishing nations, the Commission adopted an Action Plan, under which it committed to identifying non-member SBT fishing nations and requesting that they cooperate with the Commission to manage their fisheries so as not to undermine the Commission's SBT conservation and management measures.[56] If the identified non-members refuse to cooperate, the Commission will consider imposing trade-restrictions.[57] In accordance with the Action Plan, the Commission

scientific guidance as a background to agreements on TAC and national allocations in 2003, the first such agreements since 1997).

[53] TWELFTH ANNUAL COMMISSION REPORT, *supra* note 38, para. 24.

[54] THIRTEENTH ANNUAL COMMISSION REPORT, *supra* note 11, para. 97.

[55] *Id.* para. 78.

[56] COMM'N FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA, REPORT OF THE SIXTH ANNUAL MEETING OF THE COMMISSION: SECOND PART attachment I (2000), *available at* http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_6/report_of_ccsbt6_Part2.pdf.

[57] *See* COMM'N FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA, ACTION PLAN (2000), *available at* http://www.ccsbt.org/docs/pdf/

has sought the cooperation of various non-member SBT fishing nations. It has never formally imposed trade restrictions under the Action Plan, although this is in part because some nations either stopped their SBT catches (Belize, Cambodia, Equatorial Guinea, Honduras, and the Seychelles), or chose to cooperate with the Commission (Philippines and Indonesia).[58]

Thus the combination of coercive and collaborative efforts by the Commission to bring all SBT fishing nations into the regime has been very successful, and efforts continue to ensure the cooperation of Indonesia.

4. *Prevention of Illegal, Unregulated, and Unreported Fishing*

The fourth area of Commission output is the prevention of illegal, unregulated, and unreported fishing (IUU fishing), and in particular, to reduce the level of IUU fishing by vessels flying flags of convenience.[59] In 1999, the Commission estimated that IUU fishing by vessels flying flags of convenience made up 15% of the catch and later estimates put it at nearly one third.[60] Recent information suggests it may be up to 11,300 tons worth, which amounts to over 40% of the total catch (2005 TAC + illegal catch), thereby representing a massive over-catch.

In response to ongoing IUU fishing, the Commission passed a strict resolution at its 2004 meeting under which every member of the Extended Commission agreed to provide the Commission Secretariat with a list of all vessels flying their flags authorized to fish for SBT. They further agreed to ensure their vessels fished in

about_the_commission/action_plan.pdf.

[58] COMM'N FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA, REPORT OF THE TENTH ANNUAL MEETING OF THE COMMISSION paras. 27–29 (2003), *available at* http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_10/report_of_ccsbt10.pdf [hereinafter TENTH ANNUAL COMMISSION REPORT].

[59] *See* Elizabeth R. DeSombre, *Fishing Under Flags of Convenience: Using Market Power to Increase Participation in International Regulation*, 5:4 GLOBAL ENVTL. POL. 73, 73 (2005). Under Flags of Convenience, also called open registration, some states have opened up their ship registration process to ships belonging to people who are not citizens or residents of the state. Historically, only nationals of a given state were eligible to register vessels. States offer ship registration to raise income from registration fees and taxes. These states remain outside international regulation, including regional conservation regimes, in order to induce ship owners to register in that state, for in doing so, those ship owners can fish without having to comply with the regulations. In other words, they can legally harvest as much of the resource as they can manage. This clearly makes conservation more difficult, if not impossible. *Id.*

[60] *Id.* at 83.

accordance with the Commission's conservation and management measures, and to prohibit through legislation the fishing for, retaining on board, transshipment, and landing of SBT by fishing vessels not entered into the Secretariat's record.[61]

The measures contained within the 2004 resolution mirror similar actions taken by other RFMOs, all of which are part of a worldwide effort to combat IUU fishing.[62] They are designed to reduce the viability of IUU fishing by denying access to markets, thereby encouraging non-members to join RFMOs and cease IUU fishing. Evidence suggests they reduced the IUU catch of Atlantic tuna by roughly two-thirds between 1998 and 2001.[63]

Trade restrictions in particular are proving to be one of the most effective measures for reducing IUU fishing,[64] and the Commission has proved willing to impose them to achieve its objectives. For instance, the 2005 meeting of the Extended Commission noted that it had effectively imposed trade restriction measures on Indonesia equivalent to those authorized under the Action Plan. It resolved that Indonesia will continue to be excluded from markets because of its refusal to become a cooperating non-member of the Extended Commission.[65]

Commission members are ostensibly complying with the measures contained in the 2004 resolution. Japanese law, for instance, requires Japanese nationals to obtain permission from Japanese authorities before working on non-Japanese flagged vessels fishing for SBT. The law is also intended to prohibit Japanese nationals from fishing in any fishery on vessels flagged in states that are not party to the relevant regional fishery conservation measures.[66] Also, import statistics provided by Japan

[61] COMM'N FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA, REPORT OF THE ELEVENTH ANNUAL MEETING OF THE COMMISSION attachment 12 (2004), *available at* http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_11/report_of_ccsbt11.pdf.

[62] Fish Stocks Agreement, *supra* note 24, arts. 8, 17. The FAO is spearheading a number of initiatives to prevent, deter and eliminate IUU fishing, such as a Code of Conduct for Responsible Fisheries, an Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, and the International Plan of Action on Illegal, Unregulated and Unreported Fishing. *See* FAO Fisheries Dep't, http://www.fao.org/fi/default.asp (last visited Apr. 11, 2007).

[63] DeSombre, *supra* note 59, at 82.

[64] *Id.* at 77.

[65] TWELFTH ANNUAL COMMISSION REPORT, *supra* note 38, para. 118.

[66] DeSombre, *supra* note 59, at 75.

show that since 2000 it has not imported SBT from countries who are not members or cooperating non-members of the Extended Commission, other than modest amounts from the Seychelles (stopped after 2002), Indonesia, South Africa, and China.[67] This is significant because the Japanese sashimi market is virtually the only market for SBT, so the product of any IUU fishing is likely to head there.

As foreshadowed above, however, recent information indicates that IUU fishing may be a much greater problem than previously thought. Discrepancies arising from a comparison between CCSBT catch data with Japanese market data suggest sales of between 8500–11,300 tons of IUU fished SBT in the Japanese market in 2002, 2003, and 2004; discrepancies also suggest that similar sales may have been occurring since the early 1990s.[68] Independent reviews of Japanese SBT market data and Australian SBT farming operations were conducted to determine whether the over-catch is occurring, and if so, to pinpoint its source and understand its history.[69] The Commission met to discuss the results of these reviews in July 2006, failing to reach any conclusions and reporting that matters remained under consideration.[70]

In spite of a statement from the Commission following its July 2006 meeting that reporting on conclusions from the reviews would be premature and that discussions around them would remain confidential until considered at the Commission's next meeting in October 2006, the issue entered the public arena in August 2006 when comments by Richard McLoughlin, chief executive of the Australian Fisheries Management Authority, were posted on the internet. Speaking in a private forum, McLoughlin accused Japan of hiding a catch of between 12,000 and 20,000 tons of SBT—in spite of its then quota of 6000 tons—possibly masking

[67] *See* TWELFTH ANNUAL COMMISSION REPORT, s*upra* note 38, at attachment 8-3 (Appendix 2 of Japan's review of its SBT fishery).

[68] *Id.* para. 129. The discrepancies were identified by Australian officials and first presented to the Scientific Committee in a tabled paper at its meeting from August 29 to September 8, 2005. They were later presented to the Twelfth Meeting of the Commission in October 2005 in a document authored by the Australian Government and entitled "Comparison of CCSBT Catch Data with Japanese Auction Sales of Frozen SBT." This document is not publicly available but can be obtained from the Commission Secretariat upon request.

[69] *Id.*

[70] THIRTEENTH ANNUAL COMMISSION REPORT, *supra* note 11, at 19.

it as bigeye or northern bluefin. He further accused Japan of "stealing" AUS $2 billion worth of international fish.[71]

The Commission's Annual Meeting in October 2006 further discussed this issue. Japan admitted to exceeding its quota in recent years. The Commission came to a number of conclusions in response, which are discussed below. The key point for the purposes of this part is that the Commission's strong measures to reduce the level of IUU fishing can at best be said to have met with only limited success. It is not explicit in the report of the last meeting, but this concern probably led the Commission to activate the Compliance Committee, which will now meet annually to coincide with the Commission's meetings.[72] The Compliance Committee has no ability to enforce compliance by imposing formal penalties or sanctions, but is instead established to review the SBT fishing activities of members, including compliance with national quota allocations and associated fishery management arrangements. It also is charged with developing *cooperative* systems related to monitoring and compliance for SBT fishing activities.[73]

B. *Impacts*

The latest advice to the Commission shows a rapid and continuing decline of spawning SBT stock biomass. The decline was first noted in 2001, and in 2003 led the Commission to abandon its initial management objective of rebuilding spawning stock biomass to 1980 levels by 2020.[74] By 2005, evidence suggested a 50% probability that spawning stock will decline to zero tons by 2030 at current catch levels.[75] In response, the Scientific Committee recommended to the twelfth annual meeting of the Commission in October 2005 that it cut the global SBT

[71] *See* Andrew Darby & Penelope Debelle, *Bluefin Tuna Scandal: Japan's Back Door Revealed*, SYDNEY MORNING HERALD, Aug. 21, 2006, *available at* http://www.smh.com.au/news/world/bluefin-tuna-scandal-japans-back-door-revealed/2006/08/20/1156012411103.html.

[72] TWELFTH ANNUAL COMMISSION REPORT, *supra* note 38, para. 105.

[73] *See* COMM'N FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA, REPORT OF THE FOURTH ANNUAL MEETING OF THE COMMISSION: FIRST PART attachment K (1997), *available at* http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_4/report_of_ccsbt4_part1.pdf.

[74] TENTH ANNUAL COMMISSION REPORT, *supra* note 58, para. 47.

[75] TWELFTH ANNUAL COMMISSION REPORT, *supra* note 38, para. 31.

catch by either 5000 tons in 2006, or by 7160 tons in 2007.[76]

In spite of the new Management Procedure enabling the further downward adjustment of the TAC in light of this new information, the Commission failed to reach consensus about the level of the 2006 TAC, meaning that it remained at 2005 levels. The parties agreed to convene a special meeting in July 2006 to work towards a consensus on reduction of the SBT catch for 2007.[77] No conclusions were reached at that meeting with a further meeting set down for October 2006.[78] At that meeting, the Commission agreed to cut the TAC by 3000 tons.[79]

Clearly the CCSBT regime is not solving the problem that motivated its establishment. Thus in terms of its impact on the biophysical environment, the regime is ineffective.

C. *Overall Assessment of Effectiveness*

The regime appears very *effective* when assessing its outputs and outcomes. There are problems, but at its core, the regime is generating the necessary information and advice that enable it to set an appropriate TAC and to make national allocations. The Commission's efforts to ensure cooperation by non-members and to combat IUU fishing, together with significant member compliance, would suggest that the Commission is achieving its objective of ensuring the conservation and maximum utilization of the SBT fishery. As described above, however, the regime is not having its desired impact on the biophysical environment, and in this sense is wholly *ineffective*.

This failure is surprising at first glance, since the regime has characteristics that indicate it should be successful. It has a small number of parties whose interests appear to align around the need to secure the long-term sustainability of the fishery. Most parties are wealthy and have considerable technical and political

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[76] COMM'N FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA, REPORT OF THE TENTH MEETING OF THE SCIENTIFIC COMMITTEE para. 42 (2005), *available at* http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_12/report_of_SC10.pdf [hereinafter TENTH MEETING OF THE SCIENTIFIC COMMITTEE].

[77] *Id.* para. 67.

[78] COMM'N FOR THE CONVENTION OF SOUTHERN BLUEFRIN TUNA, STATEMENT OF POSITION (2006), *available at* http://www.ccsbt.org/docs/pdf/news/Statement_of_Position.pdf.

[79] THIRTEENTH ANNUAL COMMISSION REPORT, *supra* note 11, paras. 60–65.

competence to manage the SBT fishery, both at the domestic and international level. This has led to a technically competent Commission providing a forum for what should be effective collective action.

Of course, the CCSBT is not alone in failing to meet its objective. RFMOs frequently have difficulty meeting their conservation and management objectives. The Report of the Fourth Meeting of Regional Fisheries Bodies noted that many RFMOs have not yet implemented conservation and management measures, with delays diluting the effectiveness of RFMO measures. Moreover, many RFMOs face common constraints in identifying and assessing the impact of IUU fishing, and in taking measures to combat it. RFMOs also face a range of external factors with the potential to diminish their effectiveness, including profit motives and lack of political will.[80]

To illustrate, the latest assessment reports of fish stocks covered by the International Commission for the Conservation of Atlantic Tunas (ICCAT) indicate a common trend of declining stocks in spite of that regime's conservation efforts.[81] For example, stocks of Atlantic bluefin tuna declined to 19% below 1975 levels in 2004,[82] and projections indicate that maintaining the current catch levels of Atlantic bigeye tuna will result in their continuing decline.[83]

III. REASONS FOR INEFFECTIVENESS

This Part considers why the CCSBT is also failing to meet its management objectives in spite of producing a range of successful outputs and tangible outcomes directed towards the conservation and management of SBT. It begins by returning briefly to general regime effectiveness theory in search of reasons for the CCSBT regime's failure to achieve its objectives.

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[80] FAO FISHERIES REPORT NO. 778, *supra* note 6, at 5.

[81] *See* Int'l Comm'n for the Conservation of Atlantic Tunas, Assessment Reports, http://www.iccat.es/downloads.htm#detrep (last visited Mar. 20, 2007) (providing a full range of stock assessment reports).

[82] INT'L COMM'N FOR THE CONSERVATION OF ATLANTIC TUNAS, ATLANTIC BLUEFIN TUNA ASSESSMENT REPORT 51 (2006), http://www.iccat.es/Documents/SCRS/ExecSum/BFT%20EN.pdf.

[83] INT'L COMM'N FOR THE CONSERVATION OF ATLANTIC TUNAS, ATLANTIC BIGEYE TUNA ASSESSMENT REPORT 23 (2006), http://www.iccat.es/Documents/SCRS/ExecSum/BET%20EN.pdf.

Birnie and Boyle identify a number of traditional problems with regional fisheries management organizations. These include: (1) reliance on inadequate scientific knowledge about the state of the stock and inadequate theories about how to manage it; (2) failure to follow advice given by scientists; (3) little attempt to limit effort and the number of vessels with access to the fishery; and (4) a lack of fully international inspection and enforcement.[84]

Many of the issues identified by Birnie and Boyle appear in the typology developed by Underdal and others, which includes factors bearing on the effectiveness of a regime's outputs, outcomes, and impacts. They theorize that regime effectiveness is a function of two principal factors: (1) the character of the problem and (2) problem-solving capacity.[85]

Regarding the character of the problem, the more intellectually difficult and politically misaligned a problem, the less effective any management regime will be.[86] Intellectual difficulty is conceived of in terms of the amount of uncertainty pertaining to the knowledge base. Political misalignment depends on the configuration of actor interests and whether or not preferences align. Intellectual difficulty and political misalignment interrelate in that, for example, descriptive or theoretical uncertainty about the impact of human activities on the environment may fuel political controversy, which in turn may contaminate the process of knowledge production and dissemination, and thereby serve to obstruct the development of consensual knowledge.[87]

Problem-solving capacity is a function of the institutional setting, the power distribution between the actors involved, and the skill and energy available for producing cooperative solutions. Generally speaking, the presence of institutions assists cooperative decision-making over time. Consensus and unanimity requirements lead to less effective regimes; institutions that can act autonomously of their members enhance regime effectiveness.[88]

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[84] BIRNIE & BOYLE, *supra* note 13, at 654.

[85] Underdal, *supra* note 31, at 13.

[86] Underdal's typology actually classifies problems as politically "malign" rather than politically "misaligned." This Article will use the term "misaligned" to avoid any suggestion of bad faith on the part of the CCSBT members, which could be conveyed by the term "malign." *Id.* at 15.

[87] *Id.* at 15–16.

[88] *Id.* at 26–27.

Power in the hands of laggards will reduce a regime's effectiveness.[89] Skill and energy represented by instrumental leadership within the regime contributes to effectiveness, as does the presence of epistemic communities—especially networks of experts—which over time strengthen the base of consensual knowledge on which the regime operates.[90]

This theory sheds some light on the problems faced by the CCSBT, but also indicates some hope for the future.

A. *The Problem of Scientific Uncertainty*

RFMOs across the board face problems gathering the necessary scientific information on which to base TACs, and the CCSBT is no exception.[91] A TAC was set in the 1980s, and readjusted in 1994, with the management objective of rebuilding SBT biomass to 1980 levels by 2020. The TAC was based on estimates about stock productivity and the impact of catch levels on spawning stock biomass. The Scientific Committee began noting in 2001, on the basis of updated information about SBT biomass levels, that at the prescribed catch levels there was little chance that the Commission would meet its management objective. This advice ultimately led the Commission to abandon its initial objective in 2003.[92]

During a discussion about the state of the SBT fishery at the last meeting of the Extended Commission, the chair of the Scientific Committee was asked why the stock had not rebuilt in spite of the imposition of a TAC since the late 1980s. In response, he referred to information showing low recruitment in the years since 1999, which indicated the stock is subject to periods of low

[89] *Id.* at 31–32.

[90] *Id.* at 36–37.

[91] The difficulty of gathering quality fisheries information has been recognized by the FAO, which in 2003 released the Strategy for Improving Information on Status and Trends of Capture Fisheries (Strategy-STF). The Strategy-STF is a voluntary instrument that applies to all States and entities with the overall objective of providing a framework, strategy, and plan for the improvement of knowledge and understanding of fishery status and trends as a basis for fisheries policy-making and management for the conservation and sustainable use of fishery resources within ecosystems. It assigns particular roles to RFMOs to improve their own and global knowledge about the state of fish stocks. *See* FAO, STRATEGY FOR IMPROVING INFORMATION ON STATUS AND TRENDS OF CAPTURE FISHERIES (2003), *available at* http://www.fao.org/DOCREP/006/Y4859T/Y4859T00.HTM.

[92] Stephens, *supra* note 4, at 184–85.

productivity. Although the Scientific Committee could not definitively explain the lack of stock re-building, it is likely that stock productivity was lower than estimated, or hoped, in 1989.[93]

In other words, TACs were set without a clear understanding of SBT productivity, resulting in uncertainty about the impact of catch levels on the long-term status of the fish stocks. When levels of productivity turned out to be lower than initially expected, it became apparent that the management objective was unrealistic.

Drawing from Underdal and others' typology, sustainably managing the SBT fishery is a problem of intellectual difficulty due to the scientific uncertainty about the nature of the fish stock and the impact of catch levels. Thus the nature of the problem was likely to limit the regime's effectiveness from the outset.

B. *Politicization of the Science: Disagreement About Risk and Inability to Reach Consensus*

Another major stumbling block the Commission has faced is the frequent inability of the parties to agree on the implications of the science, or to come from the same viewpoint about the level of risk the regime should accept. This is an illustration of the parties having different management preferences.

From the beginning of the Commission's formal existence, New Zealand and Australia took a different view from Japan about the meaning of the science and its implications for TAC levels. The Scientific Committee, on which each member was represented, could not reach any consensus on the necessary management measures.[94] Even after the Commission began to move to a more independent scientific process following the SBT Order and Award, fundamental disagreement on core stock management issues remained and the parties could not agree on a TAC or national allocations.[95]

At this point (2001), the Scientific Committee advised that there was a 50% chance of stocks increasing or decreasing at current catch levels.[96] Nonetheless, Japan sought an increased

[93] TWELFTH ANNUAL COMMISSION REPORT, *supra* note 38, para. 36. "Recruitment" refers to the number of fish added to the exploitable stock each year due to growth and/or migration into the fishing area.

[94] *See supra* Part I.

[95] Stephens, *supra* note 4, at 183.

[96] EIGHTH ANNUAL COMMISSION REPORT, *supra* note 37, para. 43.

allocation, saying that in setting the TAC, account needed to be taken of both the Scientific Committee's recommendations and socio-economic issues. New Zealand and Australia objected to any suggestion of an increased TAC, saying the stocks remained under threat. New Zealand argued that decisions about the TAC should be based on the evidence of the Scientific Committee alone.[97] This illustrates a fundamental difference between the parties about the level of risk the regime should permit and about whether the TAC should be determined on the basis of scientific information alone or also with reference to socio-economic issues.

Given the different interests at stake, the emergence of this disagreement is not wholly surprising. As SBT exporters, Australia's and New Zealand's economic interests lay more centrally in ensuring the ongoing viability of the SBT stocks with a possible TAC increase over time as stocks recover. Both countries also have strong marine conservation lobbies urging precaution in the face of information suggesting declining stocks.[98] Japan, conversely, is an SBT importer consuming not only the SBT caught by its own fleet, but also the vast majority of all other SBT. There is, therefore, a large and lucrative domestic market for SBT consistently demanding a stable if not increased supply of product. As such, Japan's economic interest arguably lay in accessing as much SBT as possible.

If the Commission had embraced the precautionary principle, it would presumably have cut the TAC in the face of uncertainty about the stocks' future.[99] But there is no express obligation in the CCSBT for the Commission to do this. Stephens points out that the CCSBT itself has no clear objective or purpose—only the maximum utilization of the fishery—meaning that the regime's

[97] COMM'N FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA, REPORT OF THE NINTH ANNUAL MEETING OF THE COMMISSION para. 79 (2002), *available at* http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_9/report_of_ccsbt9.pdf.

[98] S*ee generally*, *e.g.*, Royal Forest and Bird Protection Society of New Zealand, http://www.forestandbird.org.nz (last visited Apr. 11, 2007); WWF-New Zealand, Sustainable Fishing http://www.wwf.org.nz/fishing/index.cfm (last visited Apr. 11, 2007); Australian Marine Conservation Society, http://www.amcs.org.au (last visited Apr. 11, 2007); WWF-Australia, Oceans, http://wwf.org.au/ourwork/oceans (last visited Apr. 11, 2007).

[99] *See generally* Marr, *supra* note 3 (arguing that the Law of the Sea Tribunal that handed down the SBT Order did in fact apply the precautionary principle in holding that Japan's unilateral implementation of an environmental fishing program violated the CCSBT).

procedures merely cordialize relations between the parties to make political decisions about a TAC and national allocations based on what they perceive to be their respective national interests.[100]

But this is not to say that the parties were not at all obliged to act with precaution and scientific guidance. They did have such obligations as parties to UNCLOS, and possibly under customary international law.[101] Although the Fish Stocks Agreement did not enter into force until December 2001, the parties had participated in its negotiation and agreed on it by consensus, indicating some level of consent. Within the CCSBT at the time, however, these wider obligations were insufficient to align the parties' management preferences around a more science-based, precautionary approach. The consensus decision required by the Convention enabled one party to block the precautionary preferences of any other. In this way, the consensus-decision rule in particular served to politicize the science, making the regime less effective.

The problem faced by the SBT regime is not only one of intellectual difficulty but also political misalignment, because the actors' management preferences diverge. As Underdal and others predict, in the face of uncertainty about the impact of human activities on SBT levels, political controversy arose in the Commission, serving to obstruct the parties' ability to develop consensus based on the knowledge they had accumulated.

The Commission's deliberations regarding an appropriate TAC at its most recent series of meetings exemplifies this problem. Beginning at the Commission's Annual Meeting in 2005, the parties were unable to reach consensus about the level of the 2006 TAC and maintained the 2004–2005 level, even in light of clear scientific evidence about the need for a cut. Nor could they agree on a cut for 2007, although they convened a special meeting in July 2006 to begin developing a consensus about a TAC for 2007.[102]

New Zealand pushed hard for cuts in 2006, supported to some degree by Korea. Nevertheless, Australia, Taiwan, and Japan took the view that cuts should start from 2007. Australia committed to the Scientific Committee's recommended 2007 cut, whereas Japan

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[100] Stephens, *supra* note 4, at 189.

[101] *See supra* Part I.

[102] TWELFTH ANNUAL COMMISSION REPORT, *supra* note 38, para. 67.

merely committed to putting domestic procedures in place (consultation with domestic fishers) to consider a substantial TAC reduction in 2007.[103]

The Commission met in July 2006 and again failed to settle on a TAC for 2007. Finally, at its October 2006 meeting, the Commission set the current TAC of 11,530 tons, and agreed that it would remain at this level for at least a three-year period.[104] Although this decision represents a significant cut of the TAC (over 3000 tons), it falls well short of the Scientific Committee's 2005 recommendation to cut the TAC by 7160 tons.[105] Furthermore, the TAC was not set by reference to the Management Procedure. Instead, the Commission retained its practice of setting a TAC by compromise. Due to its demonstrated history of overfishing, Japan was compelled to accept a 3065 ton reduction of its quota, and the fixing of its quota at 3000 tons for a minimum of five years (whereas other parties' quota will be reviewed after three years).[106] No other party accepted a quota cut, although Taiwan and the Republic of Korea agreed to keep their catch below 1000 tons to help rebuild the SBT stock.[107] Australia undertook to review its allocation level if further deterioration of the SBT stock called for such a review.[108]

While this outcome does not bode well for the future effectiveness of the regime, the parties have taken some steps toward adopting a more explicit scientific basis for their decisions. In spite of their initial inability to reach consensus about TAC reductions in 2006 and 2007, all parties acknowledged the poor status of the stock, and recognized the need for catch reductions. As explained above, in 2005 they adopted the Management Procedure providing for an automatic, science-based decision about the level of the TAC, and asked that it be tuned to achieve a specific management objective, taking into account no TAC reduction in 2006. Later events surrounding Japan's overfishing

[103] *Id.* paras. 52, 59.

[104] THIRTEENTH ANNUAL COMMISSION REPORT, *supra* note 11, paras. 60–65. In fact, subject to any ongoing IUU catch, the actual catch level will be below 11,530 tons for a three year period because Taiwan and the Republic of Korea undertook to maintain their actual catch below 1000 tons for a minimum of three years to contribute to the recovery of the SBT stock. *Id.* para. 68.

[105] TENTH MEETING OF THE SCIENTIFIC COMMITTEE, *supra* note 76.

[106] THIRTEENTH ANNUAL COMMISSION REPORT, *supra* note 11, para. 66.

[107] *Id.* para. 68.

[108] *Id.* para. 70.

led to the abandonment of this particular Management Procedure and the setting of a TAC without reference to it. Nonetheless, the parties maintained their desire to reevaluate and implement a Management Procedure in the future.[109] Once in place, the Management Procedure might help to remove some of the politics from the science, and steer the regime towards a greater level of effectiveness.

This desire among members for more science-based decision-making is perhaps an illustration of the regime's problem-solving capacity increasing over time, through the increased activities of the Commission itself, and greater presence and reach of epistemic communities. Scientific experts have more data at their fingertips on which to base their advice, and the independence to provide that advice on a consistent basis.

But this trend, and in particular the adoption of the Management Procedure, does contain some potential pitfalls for the regime, given the different interests of the members. If the science shows a clear need for large cuts in the TAC, the Management Procedure essentially concentrates power in the hands of those members seeking a more precautionary approach (traditionally New Zealand and Australia). As Underdal and others point out, where politically misaligned problems arise and parties' interests diverge, concentrating power in the hands of pushers (New Zealand and Australia) generates fear among the laggards (Japan and maybe others) that their interests cannot be accommodated within the regime. This could lead those laggards to obstruct, or worse, to leave the regime, clearly diminishing its effectiveness.[110]

Nonetheless, Japan and others understood this when they agreed to the concept of a Management Procedure, and certainly knew at the time that scientific advice about the state of the stock clearly pointed to the need for cuts. For the sake of the regime's effectiveness, it can only be hoped that adoption of the Management Procedure represents a genuine alignment of the

[109] *See* CCSBT, Recent News, http://www.ccsbt.org/docs/news.html (last visited Jan. 27, 2007); THIRTEENTH ANNUAL COMMISSION REPORT, *supra* note 11, para. 46.

[110] Underdal, *supra* note 31, at 31.

parties' management interests around the need for science-based cuts in the TAC.

C. *Lack of Catch Data and Enforcement Measures*

As described above in relation to information gathering, while the members of the Extended Commission generally provide a great deal of specific information to the Commission, there is still a need for better information to ensure TAC decisions are based on more robust stock assessments. One way to achieve this is for members to increase the number of scientific observers on their vessels, which in many cases is falling below the target.

This highlights a wider problem with the regime, which is its lack of enforcement measures. The CCSBT itself contains no specific enforcement mechanism that gives either the Commission or individual members any powers to force others to comply with the various management measures. Article 16 is a dispute resolution clause, requiring the parties to resolve any dispute about the implementation of the CCSBT by negotiation, inquiry, mediation, conciliation, arbitration, judicial settlement or other means of their choice. While this would provide an avenue for enforcement, using this article potentially involves lengthy and costly procedures and risks causing unhelpful long-term division within the Commission.

So while the Commission can extol members to increase the number of scientific observers on their vessels, and to provide other necessary information, there is little it or any individual members can do to enforce compliance.

D. *Lack of Coverage and Continuing IUU Fishing*

Although the regime covers the vast bulk of the fishery, Indonesia remains outside and not subject to either its conservation and management measures or its data provision requirements. This hinders the Commission's ability to gather total global catch data with which to make accurate stock assessments.

As described above, the Commission is implementing a number of measures to facilitate cooperation with non-members, and is considering new data collection mechanisms to provide more accurate information on the total global catch. It is also implementing strong measures to limit the amount of IUU fishing, which is a key problem facing the fishery.

In discussing the effects of low stock recruitment on the overall level of the SBT stocks at the last meeting of the Commission, the Chair stated that it is difficult to disentangle that problem from any possible effects of unreported catch, as the stock assessments were based on the level of reported catch. Previous scientific analyses indicated that low levels of unreported catch (around 5%) presented little risk to stock recovery, but higher levels (around 30%) would be of concern.[111] Recent estimates that over-catch exceeds 40% of the total catch suggest that *the* major failing of the Commission has been its inability to detect and deter such a large amount of IUU fishing.

CONCLUSION: PROSPECTS FOR GREATER EFFECTIVENESS

Having considered the CCSBT regime's outputs, outcomes, and impacts, two conclusions emerge. First, the regime comprises a range of management measures that have generally induced changes in members' behavior that should, over time, lead to the regime achieving its core objective of conservation and maximum utilization of the SBT fishery. In this sense, the regime is effective. Second, changes in members' behavior (outcomes) have not been sufficient to produce the Commission's desired impact on the biophysical environment, meaning that the regime has not achieved its core objective. In this sense, it was been wholly ineffective.

As a result, the key question currently facing the Commission is how to improve the impact of the regime, or more specifically, how to prevent further decline of SBT stocks. This is a matter of refining existing outputs or designing new ones to induce further outcomes that contribute to the conservation and maximum utilization of the SBT fishery. The Commission has been wrestling with how to do this, and has already identified a range of outputs that may improve its overall effectiveness.

The commitment to adopt a Management Procedure is a step forward on the whole, and will hopefully prevent any return to the Commission's dysfunctional days when it was unable to make TAC decisions. It helps overcome the problem associated with a misalignment of management preferences among the parties, namely politicization of the scientific information available and,

[111] TWELFTH ANNUAL COMMISSION REPORT, *supra* note 38, para. 39.

under a consensus decision-making rule, delay and obstruction.

While the Management Procedure is designed to specify a TAC based on scientific information about the fish stocks, a consensus decision of the Commission is still required to confirm a TAC level. Meetings of the Commission in 2005 and July 2006 failed to confirm TAC levels, even in the face of clear information requiring a significant cut. When the Commission finally set a new TAC level, it did so by negotiation and at a level well above that recommended by the Scientific Committee. The consensus decision-making rule, it seems, is still preventing the Commission from adopting appropriate conservation and management measures. As a consequence, one possible option for the Commission is to move away from its consensus rule, at least for some decisions.

Majority rather than consensus decision-making within international bodies is controversial because it arguably derogates from the well-established principle of state consent. Nonetheless, precedent exists within other RFMOs for non-consensus decision-making. The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC) uses consensus as the "general rule," but decisions are taken by a three-fourths majority if consensus cannot be reached. Regarding allocation decisions, however, consensus must be used.[112] Similarly, the nascent Southeast Pacific Fisheries Organization (Galapagos) specifies a two-thirds majority rule when consensus is not available, although the agreement of a particular coastal state is required if management measures "may affect" fish stocks within their waters.[113]

Majority decision-making enables more timely decision-making because it removes the ability of one party, or a minority of parties, to prevent decision when a majority exists for the decision, but not a consensus. At the same time, however, it potentially puts power in the hands of pushers, which could lead laggards simply not to comply with decisions, or even to leave the regime. Given its potential to empower decision-making, the CCSBT should consider adopting majority-voting, although it

[112] Ted L. McDorman, *Implementing Existing Tools: Turning Words Into Actions—Decision-Making Processes of Regional Fisheries Management Organisations (RFMOs)*, 20 INT'L J. MARINE & COASTAL L. 423, 429 (2000).

[113] *Id.*

should be careful to design the rules to engender maximum member acceptability. For instance, highly-sensitive decisions, such as allocations, may still require consensus, whereas less sensitive decisions, such as the implementation of a Catch Documentation Scheme (CDS), could be taken by majority. The system could also involve opt-out procedures for members that disagree with certain majority decisions, although these would have to balance the need for maximum compliance to ensure an acceptable level of effectiveness.[114]

Other mechanisms also exist to induce CCSBT members to make timely decisions based on the scientific information available. Sanctions can be built into the consequences of non-decision. For each year the Commission fails to make an express decision on a TAC level, for instance, each member might suffer a 20% cut in its quota.[115]

Another possibility is for the Executive Director of the Secretariat to become an independent player in the decision-making process, with the ability to appoint outside experts and conciliators to facilitate decisions.[116] The CCSBT Secretariat is relatively well-resourced and sophisticated, and thus in a position to take advantage of the epistemic communities within the international fisheries management community to provide this resource.

Regardless of the particular decision-making rules within the Commission, the decisions will only be as good as the information upon which they are based. This is particularly the case with the Management Procedure, which requires accurate scientific information to generate the appropriate TAC level. Therefore, it is of vital importance that the Commission continues to seek ways of gathering greater amounts of accurate data about the fishery, including scientific information about SBT themselves and data about the extent of the catch. Obtaining this information would help to alleviate uncertainty about the fish stocks, which currently limits the regime's effectiveness. In this respect, it is heartening to see members' willingness to consider new measures to improve the quality of the information available, including a CDS[117] to

[114] *Id.* at 430–32.

[115] *Id.* at 439–40.

[116] *Id.* at 441.

[117] TWELFTH ANNUAL COMMISSION REPORT, *supra* note 38, para. 90. Members agreed on the need to strengthen the catch monitoring systems, with

replace the current TIS, and an International Observer Program (IOP).[118]

Both the CDS and IOP proposals reflect the need for international cooperation to generate better information about the state of international fisheries. The need for global monitoring of fish stocks and harmonization of catch data is well recognized internationally, with various measures to achieve this under discussion.[119] In particular, proposals for joint meetings between tuna RFMO secretariats and their members to discuss catch documentation harmonization have met with approval.[120] As the CCSBT turns its mind to new mechanisms for generating better fish stock and catch data, it is crucially important to remain engaged with other RFMOs and bodies such as the FAO to take advantage of the international cooperation underway.

In addition to considering proposals to generate better information upon which to base its decisions, the Commission is also continuing its efforts to bring Indonesia into the regime. Hard measures in combination with existing softer measures, such as helping improve Indonesia's fishing-management capacity, may prove the optimal approach.

Perhaps the greatest risk to the regime's long-term effectiveness is ongoing IUU fishing, whether done by members or non-members. The Commission clearly recognizes this and has implemented strong measures to prevent and deter such fishing. Although this problem is at a very difficult stage, there are positive signs for the future. Japan admitted to overfishing and in response

Australia proposing to replace the TIS with a CDS that would record all catches of SBT, regardless of whether it was traded. The Commission agreed to set-up a technical working group to consider principles that would underlie a CDS, including a means of identifying and quantifying the catches of non-cooperating states, and the provision of tools to restrict the trade of non-cooperating non-members. THIRTEENTH ANNUAL COMMISSION REPORT, *supra* note 11, para. 37. Members agreed to implement a CDS. *Id.*

[118] *Id.* para. 95. Members discussed the introduction of an IOP to provide greater transparency and demonstrate that the information collected is accurate and a true reflection of what is happening in the fishery. They directed the Secretariat to prepare a discussion paper on issues relevant to the establishment of an IOP for the CCSBT, including the necessity of an IOP, an analysis of other RFMO IOPs, and the logistics of implementing one. THIRTEENTH ANNUAL COMMISSION REPORT, *supra* note 11, para. 38. Members did not agree to the implementation of an IOP, but agreed that further work on such a measure be undertaken. *Id.*

[119] *See* FAO FISHERIES REPORT NO. 778, *supra* note 6, at 7–9.

[120] *Id.* at 2, 8.

implemented a new SBT management scheme including allocation to individual fishing vessels and tagging individually caught SBT.[121] These measures combine with Japan's previous agreements not to allow its vessels to fish for IUU SBT, or to allow its landing in, or transshipment through, Japanese ports.[122] The CCSBT obliges Japan to implement these measures by regulating its own fishing fleet and market. If implemented adequately, these measures will almost eliminate IUU fishing. Not only will they prevent continued IUU fishing by Japanese vessels, but they will also eliminate any market for SBT fished illegally by any other nation.

Furthermore, the Commission did activate its Compliance Committee in light of information about the level of IUU fishing. The first meeting of the Compliance Committee in October 2006 considered a range of possible Monitoring, Control, and Surveillance (MCS) measures that would help overcome the problem of IUU fishing.[123] It ultimately decided to focus on three measures, including the CDS outlined above. It further decided to advance proposals regarding a Vessel Monitoring System (VMS) (a satellite-based system enabling states to monitor a vessel's location and activity), and regulating the transshipment of SBT.[124]

The proposed CDS is very like the scheme operated by the Commission on the Conservation of Antarctic Marine Living Resources (CCAMLR), which in that context has enabled member states to detect IUU fishing vessels more successfully and to deny them port entry, which in turn has lowered the levels of IUU fishing.[125] One limitation of the CDS is that it does not contain any verification device, meaning that IUU fishers can falsify catch documentation. In response to this problem, CCAMLR has

[121] THIRTEENTH ANNUAL COMMISSION REPORT, *supra* note 11, at app. 1.

[122] DeSombre, *supra* note 59, at 75.

[123] COMM'N FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA, REPORT OF THE FIRST MEETING OF THE COMPLIANCE COMMITTEE paras. 27–59 (2006), *available at* http://www.ccsbt.org/docs/pdf/meeting_reports/ccsbt_13/report_of_CC1.pdf.

[124] THIRTEENTH ANNUAL COMMISSION REPORT, *supra* note 11, para. 32.

[125] *See* Rachel Baird, *CCAMLR Initiatives to Counter Flag State Non-Enforcement in Southern Ocean Fisheries*, 36 VICTORIA U. WELLINGTON L. REV. 733, 743–51 (2005) (describing the CCAMLR CDS and its successes and limitations).

provided that states participating in the CDS may, on a voluntary basis, operate a VMS.[126] This allows real-time comparison of catch documentation with vessel location.

The combined CDS and VMS measures adopted by the Commission at its last meeting will help the CCSBT to overcome its IUU fishing problem. If any vessels attempt to catch SBT but mask it as bigeye or northern bluefin, VMS information will reveal that those vessels were fishing in SBT waters rather than bigeye and northern bluefin waters, thereby revealing their documentation to be false.

Another mechanism available to the CCSBT, which would work well in combination with the CDS including VMS capacity, is to maintain a register of IUU vessels in addition to its current list of registered vessels. Identified IUU vessels, either by verified reports of registered fishing vessels, or through CDS/VMS information, are placed on a register. Members are then obliged to deny the right to land or transship catches, and ban imports, from such vessels (all catches, not just IUU catches). If members are the flag state of the vessel, they are obliged to take steps to withdraw vessel registration or licenses. If the flag states of the IUU vessels are not members, the Commission should encourage all the above measures and implement trade measures similar to those already outlined if compliance is not forthcoming. Again, this system is operated by CCAMLR with some success,[127] and is one the CCSBT should consider.

These new MCS measures are an important step toward overcoming CCSBT's IUU problem, but further bold measures may be required. Practice in accordance with the enforcement provisions of the Fish Stocks Agreement and under the FAO Action Plan may provide some guidance. For instance, ICCAT's compliance mechanism enables TAC allocation reductions for members who fail to comply with their anti-IUU fishing obligations.[128] ICCAT also imposes trade-restrictive measures on the legitimately regulated fishing products of non-members who

[126] *Id.* at 748.

[127] *See id.* at 751–54.

[128] INT'L COMM'N FOR THE CONSERVATION OF ATLANTIC TUNAS, RESOLUTION BY ICCAT CONCERNING TRADE MEASURES para. 6 (2003), *available at* http://www.iccat.es/Documents/Recs/compendiopdf-e/2003-15-e.pdf.

persistently engage in IUU fishing, one step further than merely restricting trade in the IUU fish themselves.[129] Given the potential of IUU fishing to undermine the CCSBT's effectiveness, further meetings of the Compliance Committee should give serious consideration to adopting similar enforcement measures.

An increasingly prominent indirect management strategy is the use of consumer information to influence market choices.[130] For example, in response to public concern about the high number of dolphins killed through yellow-fin tuna fishing in the eastern tropical Pacific Ocean, the main United States canneries stopped purchasing tuna caught in association with dolphins, and labeled their cans "dolphin safe." Only months after the first cannery adopted such a policy, 84% of tuna sold in the United States was labeled "dolphin safe."[131] A number of marine organizations also publish wallet-sized guides containing information that enables consumers to make "ocean-friendly" seafood choices.[132] Several of these guides note that southern bluefin tuna are particularly vulnerable to over-fishing and are currently seriously depleted.

It is possible that a consumer-oriented management mechanism could help provide some deterrence against IUU fishing, if, for example, tuna caught in accordance with the regime was labeled as such, and there were widespread publication about the need to purchase fish taken only in accordance with the regime. One drawback, however, is that Japan is the only major market for SBT, and IUU SBT should not be sold there anyway. Thus, such a mechanism may only prove useful if Japan stops any sales of IUU SBT occurring within its jurisdiction, but the fish are then diverted to the market of a non-CCSBT member who is not bound by the regime's anti-IUU obligations. Its success still relies, however, on labeling and consumer information within that country, which seems like an implausible outcome. Still, given its potential usefulness, the Commission may want to turn its collective mind to

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[129] DeSombre, *supra* note 59, at 79.

[130] JAMES RASBAND ET AL., NATURAL RESOURCES LAW AND POLICY 460 (2004).

[131] *Id.* at 544.

[132] *See, e.g.*, National Audubon Society, Seafood Lover's Guide: Seafood Cards, *available at* http://seafood.audubon.org/seafood_wallet.pdf; Monterey Bay Aquarium Found., Seafood Watch Pocket Guide, *available at* http://www.mbayaq.org/cr/cr_seafoodwatch/download.asp.

whether some kind of consumer-driven conservation measure could be helpful.

The CCSBT regime must overcome some difficult challenges to become truly effective. Although reasonably sophisticated, it must improve its information gathering mechanisms and decision-making procedures. Of immediate importance is the need to take bold measures to address the problem of IUU fishing. Although difficult, there are encouraging signs that members are willing to take the necessary steps.