COMMENT

MAXIMIZING SCIENTIFIC INTEGRITY IN ENVIRONMENTAL REGULATIONS: THE NEED FOR CONGRESS TO PROVIDE GUIDANCE WHEN SCIENTIFIC METHODS ARE INADEQUATE OR WHEN DATA IS INCONCLUSIVE

By
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A "best science available" directive appears in a variety of environmental law statutes. Although seemingly clear, this directive has created an abundance of litigation with various plaintiffs challenging agency decisions under the Administrative Procedure Act's (APA) arbitrary and capricious standard of review. The courts' review of the agency decisions based on such science largely depends on the various ways in which the "best science available" directive is written in the particular statute. That is, the more specific the congressional mandate, the less latitude the agency has in implementing congressional will; the broader the statutory language, the more breathing space the agency enjoys. This in turn relates directly to the plaintiffs' ability to bring about successful challenges to agency regulations. The less specific the statutory language defining what constitutes best science available, the more leeway is available to the agency, and the less likely the plaintiffs are to prevail on a challenge that agency actions are arbitrary and capricious under section 706 of the APA. Since agencies are given broad discretion in their decisions—even those based on science—this Comment argues for clear congressional guidelines in best science available directives, because only such guidelines would ensure greater agency compliance with congressional intent, give courts more direction in reviewing agency decisions under the APA, and, in the long run, maximize the scientific integrity of agency rules

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and decisions. In the environmental and wildlife protection contexts, this will ensure that agencies achieve Congress's objectives, resulting in greater species protection.

I. INTRODUCTION

Many environmental and wildlife protection statutes contain a variation of the "best science available" language whereby administrative agencies are directed to use the best[1] scientific[2] data available to

[1] Because "best" is a comparative word not defined in the statutory language, "best" science available is a difficult standard to apply. Richard W. Pombo, U.S. House of Representatives Committee on Resources, *The ESA at 30: Time for Congress to Update & Strengthen the Law*, http://www.sledcity.com/states/colorado/news_show_story.cfm?id=678 (Jan. 6, 2005). Because best is a comparative word, the science that the agency uses need not be "verified, reliable . . . accurate, or even good." *Id*.

[2] Science includes both substantive and procedural elements. Holly Doremus, *Listing Decisions Under the Endangered Species Act: Why Better Science Isn't Always Better Policy*, 75 Wash. U. L.Q. 1029, 1057 (1997). Procedurally, science is defined as a "formalized system for gathering and evaluating information about the world . . . . Substantively, science is the body of knowledge produced by that process." *Id*. *See also Daubert v. Merrell Dow Pharm.*, 509 U.S. 579, 590 (1993) ("The adjective 'scientific' implies a grounding in the methods and procedures of science."); *Gen. Elec. Co. v. Joiner*, 522 U.S.

the agency at the time of its decision-making process.[3] When the available scientific principles and methodology result in a conclusive finding and where science is the only consideration, the agency is statutorily directed to make its decision based on such scientific data.[4] However, when the scientific principles fail to yield a definitive answer,[5] as is often the case,[6] the agency is faced with making a policy decision by considering non-scientific factors in promulgating a regulation or creating a final rule.[7] Because Congress is the governmental branch vested with law-making powers,[8] it should provide the appropriate guidance to agencies when science is uncertain to ensure that scientific integrity is maximized.

Yet most statutes do not define the term "best science available," leaving it ambiguous and subject to differing interpretations.[9] In the

136, 146 (1997) (scientific conclusions and the methodology they are based on are closely interrelated).

[3] *E.g. Magnuson-Stevens Fishery Conservation and Management Act*, 16 U.S.C. §§ 1801–1883 (2000); *International Dolphin Conservation Program Act*, 16 U.S.C. §§ 1411–1418 (1997); *Marine Mammal Protection Act of 1972*, 16 U.S.C. §§ 1361–1421(h) (2000); *Endangered Species Act of 1973*, 16 U.S.C. §§ 1531–1544 (2000).

[4] *See e.g.* Doremus, *supra* n. 2, at 1056 (discussing how Congress directed agencies to use the "best available" scientific information—and no other information—to make listing decisions under the ESA).

[5] *See* Doremus, *supra* n. 2, at 1065–69 (arguing that scientific data is often unreliable, and that such unreliability should be incorporated into the decision-making process under the Endangered Species Act); Michael J. Brennan et al., *The Endangered Species Act: Thirty Years of Politics, Money, and Science*, 16 Tul. Envtl. L.J. 387, 410 (2003) (arguing that "as a practical matter, not only is scientific data often unclear, but the interpretation of raw 'data' can itself be a highly subjective process allowing differing scientists to draw dramatically different conclusions from the same data set").

[6] Many commentators have argued that scientific evidence will very rarely be clear and will rarely provide a definitive answer. *See* Doremus, *supra* n. 2 at 1065–69 (discussing how some questions require subjective analysis and yield judgments governed by social conventions of the scientific community); Brennan, *supra* n. 5, at 410 (noting that "pressing environmental concerns . . . evade definitive scientific answers"); Wendy E. Wagner, *Congress, Science, and Environmental Policy*, 1999 U. Ill. L. Rev. 181, 188–89 (1999) (footnotes omitted) ("Science will rarely be able to answer all questions put to it . . . . Values inform decisions about how to extrapolate study results, yet little effort is made to make these value choices explicit."); Pombo, *supra* n. 1 (arguing that in the context of the Endangered Species Act, the scientific data is by its nature "often vague, ambiguous, and frequently subject to best professional judgment rather than objectively quantifiable").

[7] Brennan, *supra* n. 5, at 411 (stating subjective policy choices play an important part in scientific decision-making by administrative agencies).

[8] U.S. Const. art. I, § 1.

[9] *See* Pombo, *supra* n. 1 (discussing the problem of the ESA lacking a definition of best available science); Brennan, *supra* n. 5, at 416 (describing how courts presented with deeply flawed data still found no violation of the "best science available" standard). The broad use of best science available without a clear definition leaves the plaintiffs with two possible ways to challenge agency decisions: (1) directly attacking the science selected by the agency as not the best available, or (2) indirectly attacking the science by pointing out other errors, such as "failure to consider relevant aspects of the problem, failure to rely upon complete studies, [and] bias." Brennan, *supra* n. 5, at 412.

Magnuson-Stevens Fishery Conservation and Management Act (MSA),[10] for example, Congress directed the Secretary of Commerce (Secretary) to use the best science available in preparing Fishery Management Plans and promulgating regulations.[11] Under this statute, the best science available constitutes the scientific findings available at the time the National Oceanic and Atmospheric Administration (NOAA),[12] on behalf of the Secretary,[13] considers a problem; the agency is not required to go out and collect new scientific data in order to make its decision.[14]

While making a decision based on the science already available may seem simple under the circumstances where the scientific methods are flawless and the scientific conclusions produce a definitive answer,[15] neither the MSA itself nor the regulations promulgated by the agency provide much guidance. The MSA has two equal and competing[16] objectives: (1) conserving the fisheries[17] and (2) promoting domestic and commercial fishing.[18] By providing conflicting objectives,[19] Congress left the agency with no direction as to which side to favor if the scientific conservation data is inconclusive. Therefore, if there are competing scientific methods or the scientific conclusions are not definitive, the agency cannot base its decision on science alone—it is then essentially faced with a policy decision of weighing competing objectives and promulgating a regulation based on factors other than science, including political and economic[20] considerations.[21]

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10 16 U.S.C. §§ 1801–1883.

11 *Id.* at § 1851(a)(2).

12 NOAA's National Marine Fisheries Service will be referred to as "NOAA Fisheries" throughout this Comment.

13 16 U.S.C § 1852(h).

14 *See Mass. v. Daley*, 10 F. Supp. 2d 74, 77 (D. Mass. 1998) [hereinafter *Mass. I*] ("National Standard # 2 seems to imply that it does not mandate any affirmative obligation on the agency's part.") (citing *Wash. Crab Producers v. Mosbacher*, 732 F. Supp. 210, 225 (9th Cir. 1990)); *Recreational Fishing Alliance v. Evans*, 172 F. Supp. 2d 35, 44 (D.C. Cir. 2001) (noting an agency is not required to collect additional evidence under the MSA).

15 Arguably, science will never be able to provide a definitive answer because of the inherent subjectivity of interpreting scientific data. *Supra* nn. 5–7.

16 *But see Nat. Resources Def. Council v. Daley*, 209 F.3d 747, 753 (D.C. Cir. 2000) (rejecting the suggestion that there is a conflict between MSA's commitments to both fisheries conservation and to minimizing economic impacts on the fishing communities).

17 16 U.S.C. § 1851(a)(1) (directing agency to prevent "overfishing" and ensure "optimum yield for each fishery").

18 *Id*. at § 1851(a)(8) (directing agency to "minimize adverse economic impacts" on fishing communities).

19 *Daley*, 209 F.3d at 753.

20 While economics is a social science, and arguably economic decisions can also be based on best scientific evidence, in the scope of this Comment, science refers to either biological or physical science.

21 *See Organized Fishermen of Fla. v. Franklin*, 846 F. Supp. 1569, 1577 (S.D. Fla. 1994) ("It is the prerogative of [the Secretary and NOAA Fisheries] to weigh . . . opinions and make a policy judgment based on the scientific data."); *but see J.H. Miles & Co. v. Brown*, 910 F. Supp. 1138, 1149 (E.D. Va. 1995) ("Reviewing courts have been reluc-

This Comment argues that such unscientific, policy-based decisions are best left for Congress, allowing it to exercise its legislative powers under the U.S. Constitution.[22] This approach would allow the government to maintain the intricate system of checks and balances upon which the Constitution is premised.[23]

Congress took an affirmative and unusual step when it passed the International Dolphin Conservation Program Act (IDCPA).[24] The IDCPA is unique because its scientific directives are specific and proscriptive.[25] Congress required the agency to conduct scientific studies

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tant to find that the best scientific information available was not utilized.") (citations omitted). *See also* Kevin C. McMunigal, *A Statutory Approach to Criminal Law*, 48 St. Louis U. L.J. 1285, 1294 (2004) ("[W]hen [the] legislature enacts a vague statute, it functions as an implicit grant of power to both the executive branch officials and judges."); *Whitman v. Am. Trucking Assns.* 531 U.S. 457, 475 (2001) ("It is true enough that the degree of agency discretion that is acceptable varies according to the scope of the power congressionally conferred.").

[22] U.S. Const. art. I. This Comment assumes that Congressional delegation of power under the MSA is constitutional, if not desirable, because the Supreme Court has held that Congressional delegation of authority to an agency is constitutional if it is limited by an intelligible principle to direct the agency. *Whitman*, 531 U.S. at 472 (affirming, by a majority, the Court's use of the intelligible principle requirement); *Panama Refining Co. v. Ryan*, 293 U.S. 388 (1935) (the first of two statutes overturned because the Supreme Court found the requisite "intelligible principle" lacking); *A.L.A. Schechter Poultry Corp. v. U.S.*, 295 U.S. 495 (1935) (the second statute found unconstitutional for lack of an "intelligible principle" to direct agency action).

[23] U.S. Const. arts. I–III (dividing the legislative, executive, and judicial powers between the three governmental branches). Allowing an administrative agency to have both executive powers under a statute and policy-making powers allows it to infringe on the basic power of the legislature to make such decisions and upsets the balance of powers between the branches of the government. *See generally* James Madison, *The Structure of the Government Must Furnish the Proper Checks and Balances Between the Different Departments, The Federalist No. 51* (1788) ("[T]he great security against a gradual concentration of several powers in the same department, consists in giving to those who administer each department the necessary constitutional means and personal motives to resist encroachments of the others . . . . Ambition must be made to counteract ambition."). For a more thorough discussion of the separation of powers doctrine in the context of administrative agencies, *see generally* Peter L. Strauss, *The Place of Agencies in Government: Separation of Powers and the Fourth Branch*, 84 Colum. L. Rev. 573 (1984). *See also* Martin H. Redish & Elizabeth J. Cisar, *If Angels Were to Govern: The Need for Pragmatic Formalism in Separation of Powers Theory*, 41 Duke L.J. 449, 463 (1991) (emphasizing the importance of separation of powers in order to give each governmental branch the tools to limit the excessive power of the other branches); Abner S. Greene, *Checks and Balances in an Era of Presidential Lawmaking*, 61 U. Chi. L. Rev. 123, 126, 156 (1994) (defending separation of powers as "checking" the power of the president); Daryl J. Levinson, *Empire Building Government in Constitutional Law*, 118 Harv. L. Rev. 915, 951 (2005) ("[A]t least working agreement exists on the need for maintaining a balance of power between the branches by encouraging the interbranch rivalry and competition for power that is supposed to be a natural outgrowth of the constitutional design.").

[24] 16 U.S.C. §§ 1411–1418.

[25] *Compare with Marine Mammal Protection Act of 1972*, 16 U.S.C. § 1371(3)(A) (directing the Secretary to use the best science available to allow taking of marine mammals, without specifying the definition of best science); 16 U.S.C. § 1533 (directing the use of best science available without defining what that means).

specified in the IDCPA and to use this new evidence in conjunction with the best science already available to determine whether intentional encirclement of dolphins has a significant adverse impact on dolphin stocks.[26] Congressional intent in the IDCPA is clear—dolphin protection.[27] If the studies found such significant adverse impact on the mammals due to the fisheries, stricter tuna labeling standards would remain in effect; if no such impact was discovered, a more lenient definition of "dolphin-safe" would come into effect.[28] By making a policy choice in favor of the dolphins[29] despite great political debate,[30] Congress left nothing for the agency to do but to conduct the studies that the statute mandates. Equally as important, the courts have been upholding the intent of Congress and refusing to uphold agency deci-

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[26] 16 U.S.C. § 1414a.

[27] *Id*. at § 1411(b).

[28] *Brower v. Daley*, 93 F. Supp. 2d 1071, 1074 (N.D. Cal. 2000) [hereinafter *Brower I*]. Tuna labeling standards are governed by the Federal Trade Commission Act (FTCA). 15 U.S.C. §§ 41–77 (2000). The specific labeling standard is set out in section 45 of the Act. *Id*. at § 45. Such standards are also listed in the MMPA. 16 U.S.C. § 1385(d). Congress first enacted the MMPA in 1972 in response to the "public outcry" over the high dolphin mortality levels. *Earth Island Inst. v. Evans*, 2004 WL 1774221 at *1 (N.D. Cal. 2004) [hereinafter *Evans II*]. In addition, Congress enacted the Dolphin Protection Consumer Information Act (DPCIA), under which "tuna for sale in the United States could not display the label 'dolphin safe' if the tuna was harvested using purse seine nets intentionally deployed on or to encircle dolphins." 16 U.S.C. § 1385; *Brower I*, 93 F. Supp. 2d at 1074. Then in 1992, the United States and various nations in Central and South America signed the International Dolphin Conservation Program, known as the "La Jolla Agreement," in which nations using purse seine nets to catch yellowfin tuna agreed to "work toward reducing dolphin mortality rates to levels approaching zero" and to "maintain dolphin kill levels at or below a 'dolphin mortality limit' assigned to each vessel." *Id*. In October 1995, this agreement was formalized as the Declaration of Panama, and signed by the United States, Belize, Columbia, Costa Rica, Ecuador, Honduras, Mexico, Panama, Vanuatu, and Venezuela. *Id*. Although both houses of Congress had an extensive debate over the issue of tuna labeling, the final version of the IDCPA varied significantly from the Panama Declaration. The main difference was that that in the IDCPA, Congress retained the stricter definition of "dolphin safe" tuna labeling until and unless the mandated studies affirmatively showed that intentional encirclement of dolphins has no significant adverse impact on the species. *Id.*

[29] Congress was "considerabl[y] concern[ed] that . . . the use of purse seine nets to repeatedly chase and encircle dolphins may have significant, physiological *stress effects* that impede[ ] the ability of depleted dolphin populations to recover *even if no dolphins are observed to be killed or seriously injured during the set.*" *Brower I*, 93 F. Supp. 2d at 1075 (emphasis in original). Additionally, the court noted that "importantly, Congress rejected language that would have immediately changed the label to allow tuna caught with purse seine nets to be labeled dolphin safe, and instead kept the purse seine net restriction in place precisely so that the stress effects could be investigated and considered before any change in the label standard." *Id*. at 1083 (citing H.R. Rep. No. 105-74 (Part 1) (Apr. 24, 1997) (reprinted in 1997 U.S.S.C.A.N. 1628)).

[30] 142 Cong. Rec. H9424 (daily ed. July 31, 1996) (statement of Rep. Miller) (arguing the Panama Declaration promoted the tuna industry at the expense of dolphin protection); 142 Cong. Rec. H9424 (daily ed. July 31, 1996) (statement of Rep. Saxton) (endorsing the Panama Declaration).

sions that fail to conform to the science-gathering requirement spelled out in the IDCPA.[31]

In order to maintain scientific integrity under the MSA, as well as other environmental regulations, Congress should follow the model it set out in the IDCPA and make policy choices for itself.[32] To do so, Congress needs to modify existing statutes in two ways. First, Congress needs to direct agencies to conduct additional scientific studies[33] where the best science available is insufficient or ambiguous, or where the agency's methodology is problematic. When an agency's methodology is problematic, Congress should make an informed and unbiased decision or regulation.[34] Second, Congress should address the possibility that science by itself may nevertheless be unable to provide a defin-

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[31] Plaintiffs have consistently prevailed in IDCPA cases challenging the Secretary's findings of no significant adverse impact in tuna labeling cases. *See Earth Island Inst. v. Mosbacher*, 746 F. Supp. 964, 969 (N.D. Cal. 1990) (granting plaintiff's motion for a preliminary injunction to enforce the MMPA's provision that the Secretary of Commerce must make a finding that the average rate of incidental taking by vessels of the harvesting nation was no more than twice that of the U.S. vessels during the same period); *Brower I*, 93 F. Supp. 2d at 1089 (granting plaintiff's motion for summary judgment and setting aside the Secretary of Commerce's initial finding that chasing and encirclement of dolphins is not having a significant adverse impact on the dolphins); *Brower v. Evans*, 257 F.3d 1058, 1060 (9th Cir. 2001) [hereinafter *Brower II*] (affirming the District Court's ruling in *Brower I*); *Earth Island Inst. v. Evans*, 256 F. Supp. 2d 1064, 1066 (N.D. Cal. 2003) [hereinafter *Evans I*] (granting plaintiffs' motion for a preliminary injunction because plaintiffs demonstrated reasonable likelihood of success on the merits in that the Secretary of Commerce failed to use the best scientific evidence available in making the final finding that purse seine fishing was not having a significant adverse impact on the dolphins); *Evans II*, 2004 WL 177421 at *1 (granting plaintiff's motion for summary judgment and setting aside Secretary of Commerce's final finding that purse seine fishing was not having a significant adverse impact on dolphin stocks).

[32] *But see* Doremus, *supra* n. 2, at 1036 (arguing that the agencies must continue to rely on uncertain information as long as this reliance is incorporated into a broader public review process); Brennan, *supra* n. 5, at 411 ("[W]hen agencies make scientific decisions, they also must make subjective decisions, rather than purely objective determinations."); Derek Dickinson, *Is "Diligent Prosecution of an Action in a Court" Required to Preempt Citizen Suits Under the Major Federal Environmental Statutes?* 38 Wm. & Mary L. Rev. 1545, 1573–74 (1997) (arguing against limited agency discretion).

[33] *But see* Richard J. Pierce, Jr., *Judicial Review of Agency Actions in a Period of Diminished Agency Resources*, 49 Admin. L. Rev. 61, 66, 68–69 (1997) (proposing that Congress "reduce the scope of the missions it assigns agencies in any of the several ways: by eliminating some agencies, by eliminating some missions of other agencies, and by redefining other missions to render statutory mandates available at lower cost, [while noting, however, that] Congress is unlikely to amend regulatory statutes to the extent necessary to keep the agencies' workloads in line with the dramatically reduced resources they will have to implement those statutes"); *see also Daley*, 209 F.3d at 753 (arguing that in the context of the MSA, NOAA Fisheries is required to give priority to conservation measures).

[34] *But see* Doremus, *supra* n. 2, at 1076 (arguing that science has inherent limitations and that "by mandating reliance on science, Congress implicitly sanctioned some uncertainty").

itive answer.[35] In such a situation, the agency is unable to make a purely scientific decision or regulation; likewise, in statutes such as the MSA where both biological and economic factors are to be considered, science itself is not enough. Congress should provide agencies with clear policy guidelines directing agencies as to which side the agencies should favor in the case of unclear science or competing objectives.[36]

Making such changes in environmental and wildlife protection statutes will ensure that agencies will achieve Congress's objectives without exceeding the scope of their executive authority. In this context, more specific, well-directed legislation by Congress will provide for greater species protection.

This Comment examines the best science available directives under both the MSA and the IDCPA. Part I proposes greater congressional involvement in defining "science" in environmental statutes in order to maximize the integrity of both the science itself and the decision-making process. Part II provides a brief overview of the best science available, as this phrase is used in the MSA, as well as the deferential standard the courts use to review agency decisions based on science. Part III discusses the best science available directive in the MSA. In doing so, Part III explains the competing goals of fishery conservation and promotion of fishing activities under the MSA. Part IV provides an alternative to the MSA's vague best science available standard, as exemplified in the IDCPA. Part V explains why the IDCPA model is preferable to the general best science available standard utilized in the MSA and other environmental statutes. Part VI concludes that greater congressional action is necessary to ensure the scientific integrity of agency decisions and to maintain checks and balances under our system of government.

II. THE MSA'S BEST SCIENCE AVAILABLE MANDATE AND REVIEW UNDER THE ADMINISTRATIVE PROCEDURE ACT

The MSA[37] contains a "best science available" requirement.[38] Because the statute fails to define best science available, the meaning of this directive is often litigated. Plaintiffs either attack the science directly,[39] challenge the methodology the agency used in conducting its

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[35] *Supra* nn. 5–7 (discussing the intrinsic problem of reaching "conclusive" results in science).

[36] See *supra* n. 31 (outlining the success of the IDCPA's specific directives).

[37] 16 U.S.C. §§ 1801–1883.

[38] *Id.* at § 1852(a)(2). For a detailed discussion on the best science requirement in the context of the Endangered Species Act, *see* Holly Doremus, *The Purposes, Effects, and Future of the Endangered Species Act's Best Available Science Mandate*, 34 Envtl. L. 397, 405 (2004).

[39] Brennan, *supra* n. 5, at 411.

scientific inquiry,[40] or claim that the agency improperly considered non-scientific factors.[41] Because the best science available standard is unnecessarily ambiguous[42] and the judicial standard of review is deferential to agency actions,[43] this Comment recommends that Congress models the MSA's science standard on the one used in the IDCPA, as discussed *infra*.

In the absence of a different statutory standard, the Administrative Procedure Act (APA) governs judicial review of agency rulings or decisions.[44] Under the APA, the courts review agency decisions under an "arbitrary and capricious" standard.[45] The courts have applied this standard narrowly[46] and are unwilling to substitute their own judgment for that of the agency.[47] An agency rule is considered arbitrary and capricious if:

> [T]he agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem,

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[40] Brennan, *supra* n. 5, at 411; *see also Mass. I*, 10 F. Supp. 2d at 77 (plaintiffs claiming that defendants failed to collect landing data for the scup fish before setting the scup fishing quota in the context of the MSA).

[41] *See e.g. Midwater Trawlers Coop. v. Dept. of Com.*, 282 F.3d 710, 720 (9th Cir. 2002) ("[B]est available politics does not equate with best available science as required by the [Magnuson] Act."); *Hall v. Evans*, 165 F. Supp. 2d 114, 134 (D.R.I. 2001) (explicitly agreeing with plaintiffs that the Secretary reached a compromise decision without producing "even one scintilla of scientific information that supports the regulations").

[42] *See Gottschalk v. Alaska*, 575 P.2d 289, 294 (Alaska 1978) ("One evil of a vague statute is that it creates the potential for arbitrary, uneven, and selective enforcement."); Alona R. Crosteau, Student Author, *Voices in the Dark: Second Parent Adoptions When Law is Silent*, 50 Loy. L. Rev. 675, 707 (2004) ("[J]udicial interpretation of vague statutes . . . may lead to inconsistency among the courts.") (citation omitted).

[43] *Infra* nn. 45–54 and accompanying text. In addition, agency rulemaking is accorded deference by *Chevron v. Nat. Resources Def. Council*, 467 U.S. 837, 838 (1984). Under *Chevron*, the courts first look to see if Congress "has directly spoken to the precise question at issue." *Id*. at 842–43. If Congress has not spoken on the issue, the courts consider whether the agency has permissibly construed the statute. *Id.* at 843. *Chevron* results in broad agency discretion regarding policy disputes within the scope of authority Congress has delegated to an agency. *Id*. at 844.

[44] 5 U.S.C. §§ 551–559, 701–706 (2000).

[45] *Id.* at § 706(2)(A)–(D).

[46] *E.g. Holy Land Found. for Relief and Dev. v. Ashcroft*, 219 F. Supp. 2d 57, 74 (D.C. Cir. 2002) [hereinafter *Holy Land*] ("[T]he scope of judicial review under the APA 'arbitrary and capricious' standard is deferential . . . ."); *Stewart v. Potts*, 126 F. Supp. 2d 428, 434 (S.D. Tex. 2000) ("The APA's 'arbitrary and capricious' standard of review is very narrow, and mandates judicial deference to conclusions and actions of the agency.").

[47] *Motor Veh. Mfs. Assn. of U.S. v. State Farm Auto. Ins. Co.*, 463 U.S. 29, 63 (1983) [hereinafter *State Farm*]; *Envtl. Def. Ctr. Inc., v. EPA*, 344 F.3d 832, 858 n. 36 (9th Cir. 2003) (citing *Marsh v. Or. Nat. Resources Council*, 490 U.S. 360, 378 (1989)); *Stewart*, 126 F.Supp. 2d at 434 ("While the reviewing Court must make a careful and searching inquiry into the facts, the Court may not substitute its own judgment for that of the agency."); *Holy Land*, 219 F. Supp. 2d at 67 ("If the 'agency's reasons and policy choices . . . conform to "certain minimal standards of rationality" . . . the rule is reasonable and must be upheld,' . . . even though the Court itself might have made different choices.") (quoting *Small Refiner Lead Phase-Down Task Force*, 705 F.2d 506, 521 (D.C. Cir. 1983)) (citation omitted).

> offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.[48]

Under this standard, the courts review the administrative record[49] and uphold an agency decision as long as there is a rational relationship between the facts found and the choice the agency made.[50] The courts are especially deferential to an agency's scientific decisions because of the agency's presumed expertise in the subject area.[51] This presumption, however, is rebuttable, and the courts may overturn agency decisions that are unreasonable or contrary to congressional intent.[52]

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[48] *State Farm*, 463 U.S. at 43.

[49] The court's review is limited to the consideration of the evidence contained in the administrative record; a *de novo* review is inappropriate. *Stewart*, 126 F. Supp. 2d at 434. Rarely, a court may exercise its discretion at the request of a plaintiff and "conduct an 'extra record investigation.'" *Id*. Such additional review, however, is only appropriate if the plaintiff can make a "strong showing" that the "agency decision makers engaged in bad faith or improper behavior." *Id*.

[50] *E.g. Midwater Trawlers Coop.*, 282 F.3d at 716 ("[The Court's] only task is to determine whether the Secretary has considered the relevant factors and articulated a rational connection between the facts found and the choices made."); *Holy Land*, 219 F. Supp. 2d at 74 ("[T]he Court must affirm the agency's decision as long as it is supported by a rational basis."); *Stewart*, 126 F. Supp. 2d at 434 ("Under this standard, administrative action is upheld if the agency has considered the relevant factors and articulated a rational connection between the facts found and the choice made.") (quoting *Sierra Club v. Glickman*, 156 F.3d 606 (5th Cir. 1998)). While the court's review is narrow, its inquiry must be searching and careful, *Fund for Animals, Inc. v. Rice*, 85 F.3d 535, 541 (11th Cir. 1996), and it must assure that the agency's decision was based on consideration of relevant factors, is in line with legislative intent, and that the agency did not abuse its discretion in its decision-making process. *Envtl. Def. Fund, Inc. v. Costle*, 657 F.2d 275, 283 (D.C. Cir. 1981).

[51] *E.g. Marsh*, 490 U.S. at 375 ("[When] analysis of the relevant documents 'requires a high level of technical expertise,' we must defer to 'the informed discretion of the responsible federal agencies.'" (quoting *Kleppe v. Sierra Club*, 472 U.S. 390, 412 (1976))); *Balt. Gas & Elec. Co. v. Nat. Resources Def. Council, Inc.*, 462 U.S. 87, 103 (1983) ("When examining this kind of scientific determination, as opposed to simple findings of fact, a reviewing court must generally be at its most deferential."); *Am. Fisheries Socy. v. Verity*, 1989 WL 644255 at *5 (E.D. Cal. 1989) ("Congress has given expertise to federal agencies and they are expected to possess and exercise this considerable expertise. Courts do not possess, nor should they try to exercise, expert judgment on these matters of technical expertise. Deferral is the general rule."); *Blue Water Fisherman's Assn. v. Natl. Marine Fisheries Serv.*, 226 F. Supp. 2d 330, 338 (D. Mass. 2002) (stating that the Court should not "pretend to have an expertise in scientific matters greater than the challenged agency's"); *Bays' Leg. Fund v. Browner*, 828 F. Supp. 102, 107 (D. Mass. 1993) (finding that "where there is a factual dispute involving issues of science, which implicates substantial agency expertise, deference is owed to the informed decision of the responsible agency"); *Stewart*, 126 F. Supp. 2d at 434 (finding that the court must "look at the decision not as a chemist, biologist, or statistician that we are qualified neither by training nor experience to be, but as a reviewing court exercising our narrowly defined duty of holding agencies to certain minimal standards of rationality"); *Save Our Springs Alliance v. Cooke*, 2002 WL 31757473 at *3 (W.D. Tex. 2002) (stating that the court "gives even more discretion to an agency's factual determination when they are based on the agency's scientific or technical expertise").

[52] *Brower I*, 93 F. Supp. 2d at 1083.

The APA's deferential standard of review creates a very heavy burden for the plaintiffs to overcome in challenging agency actions.[53] Thus, practically any Secretary's decision or regulation will be upheld unless there is absolutely no rational relation between the decision and the scientific evidence the Secretary considered.[54]

III. THE VAGUENESS PROBLEM: BEST SCIENCE AVAILABLE UNDER THE MSA

A. Background of the Magnuson-Stevens Act

Congress enacted the MSA in 1976 to regulate domestic fishery resources.[55] The MSA's dual and competing objectives are to promote domestic commercial and recreational fishing while ensuring sound conservation and management principles.[56] To accomplish these objectives, Congress set out ten National Standards.[57] National Standard Two requires the use of best science available in creating Fishery Management Plans (FMPs) and in promulgating regulations.[58]

B. MSA's Competing Objectives and the Resulting Tension of the Best Science Available Definition in the Agency's Regulations

The MSA states that "[c]onservation and management measures shall be based upon the best scientific information available."[59] Acting under the power granted to it by the MSA,[60] NOAA Fisheries defined best scientific information as "information of a biological, ecological,

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[53] *See* Lawrence Michael Bogert, *That's My Story and I'm Stickin' to It: Is the "Best Available" Science Any Available Science under the Endangered Species Act?* 31 Idaho L. Rev. 85, 131 (1994) (stating that "overcoming the APA and *Chevron* in a challenge to an ESA listing has been . . . the litigation equivalent of a Hail-Mary touchdown pass on the last play of the game").

[54] *Id.* at 128. Courts have upheld agency decisions under the arbitrary and capricious standard of review, even when scientists in the field disagreed about the results or when the agency could have reasonably concluded otherwise. *Marsh*, 490 U.S. at 378; *Selkirk Conservation Alliance v. Forsgren*, 336 F.3d 944, 956 (9th Cir 2003); *U.S. v. Guthrie*, 50 F.3d 936, 946 (11th Cir. 1995); *Carlton v. Babbitt*, 903 F. Supp. 96, 110 (D.C. Cir. 1995).

[55] 16 U.S.C. §§ 1801–1883.

[56] *Id.* at § 1801(b)(3).

[57] *Id.* at § 1851(a). In 1996, Congress amended the MSA and added National Standard Eight, which mandated NOAA Fisheries to take into account the possible economic implications of its decision to the fishing communities and to minimize this impact to the extent practicable. *Id.* at § 1851(a)(1)(8).

[58] *Id.* at § 1851(a)(2).

[59] *Id.*

[60] The MSA vests the Secretary of Commerce with authority to regulate fisheries. 16 U.S.C. §§ 1852–1853. The MSA establishes eight regional fishery management councils, which submit FMPs for Secretary's approval. *Id*. The Secretary evaluates the FMPs based on the ten National Standards of the MSA. *Id.* at § 1851(a)(1)–(10). NOAA Fisheries acts on the Secretary's behalf in implementing MSA's objectives. *Id.* at § 1851(a)(2).

economic, or social nature."[61] The regulations further suggest that NOAA Fisheries is permitted to make decisions and implement FMPs even if the information on which it is relying is imperfect or incomplete.[62]

The regulatory definition of best science available exemplifies the competing objectives of the MSA between promoting conservation and protecting the fishing industry.[63] These two objectives, taken to their logical extremes, are in direct competition with one another.[64] The fishermen, on one hand, have the incentive to harvest as many fish as they can as quickly as possible,[65] while the conservation groups would prefer conservation over economical incentives of fishing. Again, these would be the positions of two interested parties taking the MSA's objectives to their logical extreme and assuming that the ocean is an unmanaged common property.[66]

When faced with implementing FMPs and promulgating regulations, NOAA Fisheries must use the best science available; if science is unavailable or uncertain, or when faced with competing scientific con-

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[61] 50 C.F.R. § 600.315(b)(1) (2004). No regulations provide further guidance. Neither the National Standards nor the regulation provides which information is best, what information is scientific, or how the regional council should develop FMPs when the scientific information is unavailable or inconclusive. Lindsay J. Nichols, Student Author, *The NMFS's National Standard Guidelines: Why Judicial Deference May be Inevitable*, 91 Cal. L. Rev. 1375, 1389 (2003).

[62] 50 C.F.R. § 600.315(b). Moreover, if particular facts or opinions are conflicting, the regional council may choose among them as long as it justifies the final choice. *Id.* at § 600.315(b)(1).

[63] *See Nat. Resources Def. Council v. Natl. Marine Fisheries Serv.*, 421 F.3d 872, 878–79 (9th Cir. 2005) (unwilling to conclude that the MSA clearly and perfectly aligns fishing community needs with environmental goals); *but see Daley*, 209 F.3d at 753 (rejecting the proposition that there is a conflict between the MSA's commitments to conservation and fisheries' preservation).

[64] *See* Paul R. Bagley, Student Author, *Don't Forget about the Fishermen: In the Battle over Fisheries Conservation and Management a Conservation Ethic Has Trumped Economic Concerns—Or Has It?* 36 Suffolk U. L. Rev. 765, 781–83 (2003) (relating the conflicting interests of conservation groups and fishing communities even without those interests taken to their extremes) (citing *Conservation L. Found. v. Evans*, 209 F. Supp. 2d 1 (D.D.C. 2001)).

[65] This tendency is usually referred to as overfishing, or harvesting, at a rate too great to maintain a sustainable level of fish from year to year. *Id.* at 769; *see also* Suzanne Iudicello et al., *Fish, Markets, and Fishermen: The Economics of Overfishing* 8–9 (Island Press 1999) (examining fisheries from an economic perspective). Overfishing has been referred to as one of the "tragedies of the common." Bagley, *supra* n. 64, at 769 ("This theory asserts that a herdsman will add more cattle to his herd in order to maximize his own gain. Such a conclusion, however, is reached by every rational herdsman, locking each into a system that compels individuals to increase their production without limit in pursuit of a limited resource.") (citing Garrett Hardin, *The Tragedy of the Commons*, 162 Sci. 1243, 1243–45 (1968)).

[66] *See* Bagley, s*upra* n. 64, at 769 (where incentives driving the fishing industry depleted the fish population); *see also* Iudicello et al., *supra* n. 65, at 8–9 (examining fisheries from an economic perspective).

clusions, Congress left the final decision to NOAA Fisheries.[67] Such broad delegation has led to NOAA Fisheries making decisions based on compromise, and, while courts have been willing to reverse agency decisions based on pure political compromise,[68] they have been just as quick to say that compromise is not *per se* improper.[69] Instead of allowing NOAA Fisheries to make such policy decisions, Congress should implement unambiguous guidelines directing the agency to favor one goal over the other: either conservation or the effects on the fisheries.

C. The Problem with Uncertain Science

NOAA Fisheries promulgates regulations under the MSA. In doing so, it considers both the need for fishery conservation and effects on the fishing communities.[70] While balancing such interests is difficult even if the science provides a definitive answer,[71] when the science is unavailable or ambiguous, NOAA Fisheries is not under an affirmative duty to gather new data[72] and is thus allowed to promulgate regulations based on incomplete[73] or uncertain data.[74] The courts have been uniform in holding that *absent a congressional mandate*, they are unwilling to impose an affirmative science gathering require-

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[67] *See generally* Nichols, *supra* n. 61, at 1389 (noting a lack of guidance for what information is "best," what is "scientific," and what to do when information is not available).

[68] *Midwater Trawlers Coop.*, 282 F.3d at 720–21 ("[T]he best available politics does not equate to the best available science as required by the [Magnuson] Act."). The Ninth Circuit reversed a whiting fish allocating decision, holding that it was the result of "pure political compromise, not reasoned scientific endeavor." *Id*.

[69] *Parravano v. Babbitt*, 837 F. Supp. 1034, 1047 (N.D. Cal. 1993) ("There is nothing improper with compromise *per se*. Indeed, much of the Magnuson Act process is designed to facilitate compromise between various competing interests. However, the purpose of the MSA is to ensure that such compromise decisions are adequately explained and based on the best scientific evidence available—and not simply a matter of political compromise.") (citation omitted); *Hall*, 165 F. Supp. 2d at 133 (quoting *Parravano*, 837 F. Supp. at 1034).

[70] 16 U.S.C. § 1851(a)(8).

[71] Some commentators have argued that, by its very nature, science will never provide a completely definitive answer. *Supra* nn. 5–6.

[72] 50 C.F.R. § 600.315(b), (b)(1).

[73] *J.H. Miles & Co. v. Brown*, 910 F. Supp. 1138, 1149, 1152 (E.D. Va. 1995) ("Reviewing courts have been reluctant to find that the best scientific information available was not utilized.") (citations omitted); Bogert, *supra* n. 53, at 134.

[74] *Mass. I*, 10 F. Supp. 2d at 77 ("In the absence of any express statutory language imposing an affirmative duty on an agency, courts have been reluctant to impose one."); *Mass. v. Daley*, 170 F.3d 23, 30 (1st Cir. 1999) [hereinafter *Mass. II*] (Massachusetts' claim forfeited because it had not asserted a more accurate method of obtaining data); *A.M.L. Intl., Inc. v. Daley*, 107 F. Supp. 2d 90, 101–02 (D. Mass. 2000) ("Even if the Secretary had been faced with conflicting scientific evidence, his decision cannot be termed arbitrary or capricious."); *Natl. Fisheries Inst., Inc. v. Mosbacher*, 732 F. Supp. 210, 220 (D.D.C. 1990) ("However, the Magnuson Act does not force the Secretary and Councils to sit idly by, powerless to conserve and manage a fishery resource, simply because they are somewhat uncertain about the accuracy of relevant information.").

ment on the agency,[75] although the science gathered through additional studies may maximize the scientific integrity of the regulation.[76] In response to the unwillingness of the courts to legislate, Congress should create an affirmative science-gathering requirement on NOAA Fisheries similar to the requirements imposed by the IDCPA.[77] Such a requirement would help alleviate the current problems of compromise decisions,[78] as well as decisions based on incomplete, vague, or outdated science.[79]

1. National Coalition for Marine Conservation v. Evans[80]

The National Coalition for Marine Conservation (NCMC), among others, brought suit against the Secretary of Commerce challenging the NOAA Fisheries' regulations implementing the final 1999 Highly Migratory Species Fishery Management Plan.[81] One plaintiff claimed that the agency's regulations, which permanently prevent long-line fishing in Florida, were arbitrary and capricious and not based on the best science available as required by National Standard Two.[82] The Secretary of Commerce claimed that NOAA Fisheries used pelagic logbook data, which constituted the best and most complete data available at the time of decision-making.[83]

In holding that the agency's actions were not arbitrary and capricious, the court noted that even if the logbooks were incorrect because of underreported catch and bycatch data, NOAA Fisheries' "conservation measures will result only in *greater* conservation benefits,"[84] thus explicitly allowing the agency to make a policy decision the agency con-

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[75] *Mass. II*, 170 F.3d at 30; *Natl. Fisheries Inst., Inc.*, 732 F. Supp. at 220; *A.M.L. Intl., Inc.*, 107 F. Supp. 2d at 101–02; *Mass. I*, 10 F. Supp. 2d at 77; *J.H. Miles & Co.*, 910 F. Supp. at 1149, 1152; Bogert, *supra* n. 53, at 134.

[76] *Infra* pts. IV–V (discussing the more specific science gathering requirements under the IDCPA that Congress decided were necessary to ensure that tuna labeling decision would be scientifically based).

[77] *Infra* pts. IV–V; *infra* n. 214 (discussing possible scientific requirements under the Data Quality Act).

[78] *See Midwater Trawlers Coop.*, 282 F.3d at 720–21 (concluding compromise, rather than "best available science," led to the action at issue); *Parravano*, 837 F. Supp. at 1046–47 (noting the action at issue resulted from compromise and lacked adequate scientific support in the record); *Hall*, 165 F. Supp. 2d at 134 (noting copious evidence of compromise and a lack of scientific support in the record).

[79] *Infra* pt. III(C)(1).

[80] 231 F. Supp. 2d 119 (D.D.C. 2002).

[81] *Id*. at 123.

[82] *Id*. at 128–29.

[83] *Id*. at 129–30. NOAA Fisheries used pelagic logbook entries, together with the biologists' analysis of this data in making its regulations. *Id*. NOAA Fisheries claimed that this was the best science available because the logbooks reflect data from the entire universe of the pelagic fishers and not merely from a sample, thus providing more reliable data. *Id*. NCMC argued that logbook data was incorrect due to underreporting by the fishermen. *Id.*

[84] *Id.* at 130 (emphasis in original).

sidered proper.[85] The court noted that because the MSA places no affirmative obligation on the agency to collect additional scientific data, NOAA Fisheries was justified in implementing the FMP based on the best available science.[86]

This case demonstrates the problem of both the MSA's vague definition of best science available and the NOAA Fisheries' regulations defining such science. While the *National Coalition* court conceded that the pelagic logbook data may have been "underreported,"[87] it nevertheless determined that incomplete information does not prevent the implementation of a FMP or other regulation.[88] Not only did the court uphold the agency ruling based on possibly incorrect science, but it further noted without any difficulty, that even if the data was wrong, the agency favored conservation.[89] This conclusion poses problems because it effectively reads "best" and "science" out of the statute,[90] by allowing decisions based on policy choices[91] and incomplete information.[92] The solution lies with congressional action, which could require additional scientific inquiries when data is ambiguous, and which could make the policy choices in cases where even the "best" data provides no clear answer.[93]

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[85] *Supra* nn. 21–23 and 42 (discussing the implications of vague statutes on separation of powers doctrine).

[86] *Natl. Coalition for Marine Conservation*, 231 F. Supp. 2d at 130 (citing 50 C.F.R. § 600.315(b)); *see also Recreational Fishing Alliance*, 172 F. Supp. 2d at 44 (holding that defendants did not violate National Standard Two because determination was based on information available at the time); *Natl. Fisheries Inst., Inc.*, 732 F. Supp. at 220 (The court will not construe the MSA "to tie the Secretary's hands and prevent him from conserving a given species of fish whenever its very nature prevents the collection of complete scientific information.").

[87] *Natl. Coalition for Marine Conservation*, 231 F. Supp. 2d at 130.

[88] *Id.* (internal citations omitted).

[89] *Id*. While it is arguable that agency error in favor of conservation is not problematic, in and of itself, the real problem lies in the lack of scientific integrity of the logbook data. Whether in favoring conservation or in opposing it, NOAA Fisheries, in this case, has not simply looked at the best science available; it has effectively added policy to the mix.

[90] *But see Blue Water Fishermen's Ass'n.*, 226 F. Supp. 2d at 338 ("[I]mperfections in the available data do not doom any agency conclusion: 'the Service must utilize the "best scientific data *available*," not the best scientific data *possible.*'") (citing *Bldg. Indus. Assoc. of Super. Cal. v. Norton*, 247 F.3d 1241, 1246 (D.C. Cir. 2001) (emphasis in original). While that is the law as it stands, this Comment proposes a change in the drafting of environmental statutes, whereby if the best science available is inconclusive, the Secretary of Commerce should be required to collect additional science, in order to make agency decisions on the best science that is possible. *Infra* pts. IV–V.

[91] *But see Organized Fishermen of Fla.*, 846 F. Supp. at 1577 ("It is the prerogative of the [agency board] to weigh those opinions and make a policy judgment based on the scientific data.").

[92] *Supra* n. 86.

[93] *Infra* pt. V.

2. Southern Offshore Fishing Association v. Daley[94]

Shark fishermen and shark fishing organizations challenged the NOAA Fisheries' 1997 harvest quotas for the capture of Atlantic sharks,[95] claiming that NOAA Fisheries had acted arbitrarily due to the insufficiency of scientific data on which the agency based its harvest quotas.[96] The challenged FMP set out a comprehensive permitting system "[t]o prevent overfishing[97] and [to] stimulate rebuilding of stocks . . . ."[98] The FMP also required that all permitted vessel owners or operators collect certain data, such as the species and weight of all catch sold.[99]

In setting the challenged quotas, NOAA Fisheries employed the "catch per unit of effort"[100] index, a demographic model,[101] a production model,[102] and a maximum likelihood model to assess large coastal shark population levels.[103] The Shark Evaluation Workshop Report, on which the NOAA Fisheries relies for guidance,[104] explicitly acknowledged that each statistical method utilized contained both "commendable strengths and regrettable weaknesses."[105] While the court agreed that "[i]n many respects, the data and methods used by the [agency] in assessing stocks [failed] to yield definitive conclusions,"[106] it nevertheless concluded that the agency's quotas were not arbitrary and capricious.[107] The court's decision was partially based on the broad deference it accorded NOAA Fisheries.[108] The court stated that

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94 995 F. Supp. 1411 (M.D. Fla. 1998).

95 *Id.* at 1415.

96 *Id.* at 1429, 1432.

96 *See* 15 U.S.C. § 1802(29) (defining "overfishing").

98 *S. Offshore Fishing Assn.*, 995 F. Supp. at 1418.

99 *Id.*

100 "[NOAA Fisheries] and shark scientists [have] historically [used the] 'catch per unit of effort' [or CPUE index] to detect the decline and growth of stocks." *Id*. at 1418.

101 "The demographic model uses life history patterns. . . of various shark species to estimate the inherent capability of shark populations to propagate." *Id*. at 1420. While this model omits historical data on exploitation levels, it could still be useful by providing "a framework for determining the likely degree of resilience of shark stocks to fishing." *Id.* at 1421. The problems with this model are compounded by its failure to account for potential stock fluctuation due to migration of both fish and fishermen. *Id.* at 1420–21.

102 "The production model uses the history of shark catches and historical trends in catch rates to assess population size, mortality levels," and certain benchmarks. *Id.* at 1421. The disadvantage of this model is the assumption that all important factors affecting the population have been accounted for. *Id.* Similarly to the demographic model, this model also assumes "closed" fish populations despite evidence of shark migration and foreign fisheries harvesting the species. *Id.* at 1422.

103 *Id.* at 1420.

104 *Id.* at 1419.

105 *S. Offshore Fishing Assn.*, 995 F. Supp. at 1420. The report stated in part, "our measures of stock abundance are uncertain, sufficient observational data are not yet available." *Id.* at 1423.

106 *Id.* at 1432.

107 *Id.* at 1433.

108 *Id*.

its judicial review was "limited to determining whether the [agency] intelligently and knowingly decided on *a rational policy*, given the scientific and *judgmental* tools available to [it]."[109]

Southern Offshore Fishing Association exemplifies the problem of vagueness in the MSA, as well as other environmental statutes.[110] NOAA Fisheries defined such science in its regulations because Congress's definition of best science available was ambiguous at best.[111] In *Southern Offshore Fishing Association*, while both the agency and the court acknowledged that the science was unclear and that the final decision promulgated by NOAA Fisheries was essentially policy-based, the court upheld the challenged quotas.[112] The court did not find a problem with the agency basing its decision on policy rather than science, because under the court's deferential standard of review it found that the agency's decision had a rational relation to its record.[113]

In addition, the court approvingly quoted *Associated Fisheries of Maine v. Daley*,[114] which illuminated the problem of policy-based decisions in the context of the MSA. That is, the MSA's lack of clear statutory language to define best science available, either in terms of necessary scientific methodology or conclusions, results in giving the agency discretion to make policy decisions.

> Administrative decision-making is not an exact science, and judicial review must recognize that some arbitrariness is inherent in the exercise of discretion amid uncertainty. Accordingly, courts reviewing this type of administrative decision must leave room for a certain amount of play in the joints.[115]

Congress, in the MSA and other environmental statutes, explicitly requires that agencies utilize the best science available to remove arbitrariness from the decision-making process.[116] However, in light of the agencies' broad interpretation of their mandate and the courts' deferential review of agency decisions, Congress should follow the alternative statutory scheme, as exemplified by the IDCPA, to reclaim its

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109 *Id.* (emphasis added). The court also quoted *Organized Fishermen of Florida, Inc. v. Franklin* for the proposition that "[i]t is the prerogative of the agency board to weigh those opinions and make a policy judgment based on the scientific data." 846 F. Supp. at 1577.

110 *See* Brennan, *supra* n. 5, at 412 (discussing the ambiguity of the best science available language in the context of the ESA).

111 16 U.S.C. §§ 1852–1853 (delegating regulation-making authority to the Secretary); 50 C.F.R. § 600.315(b)(1) (defining best science available).

112 *S. Offshore Fishing Assn.*, 995 F. Supp. at 1429, 1432–33.

113 *Id.* at 1433.

114 127 F.3d 104, 111 (1st Cir. 1997).

115 *S. Offshore Fishing Assn.*, 995 F.Supp. at 1432 (quoting *Assoc. Fisheries of Me.*, 127 F.3d at 111).

116 *See Hall*, 165 F. Supp. 2d at 136 (stating that the Secretary has a duty to accomplish his legitimate objectives based on best science available).

legislative powers and provide more guidelines for the agencies to follow.[117]

3. Possible Solutions to the Problem

When the agency's scientific methods are questionable, when its scientific conclusions are ambiguous, or when science provides an answer but the agency faces competing objectives, Congress should act affirmatively and make those decisions on its own.[118] On one hand, Congress should include a directive to conduct additional research studies if the available science is outdated or inconclusive. On the other hand, even if the new science is inconclusive, Congress should provide the agency with guidelines on how to proceed. Thus, in the context of the MSA, where the science truly does not provide an answer,[119] Congress should direct NOAA Fisheries to favor conservation or the fishing industry.

Of course, for Congress to provide clear directives, it must be active in making a policy decision one way or the other—which is often difficult in light of the political pressures from various interests groups.[120] However, because it is the responsibility of Congress to legislate,[121] it should retain its policy-making function, and thus either more narrowly define best science available, or go a step further and specify the science for NOAA Fisheries to consider. The IDCPA[122] provides a model for such congressional action.

IV. A MODEL FOR A SOLUTION: SPECIFIC SCIENTIFIC DIRECTIVES UNDER THE IDCPA

A. Background of the IDCPA

The IDCPA[123] arose out of the Marine Mammal Protection Act (MMPA)[124] in combination with the International Dolphin Conserva-

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[117] *Supra* nn. 21–23 (discussing the importance of separation of powers in the federal government); *infra* pts. IV–V (discussing the IDCPA's statutory model).

[118] *See* Gail J. Robinson, *Interpreting the Citizen Suit Provision of the Clean Water Act*, 37 Case W. Res. L. Rev. 515, 530–34 (1987) (discussing causes of ineffective agency enforcement).

[119] *Supra* nn. 5–6 (discussing the intrinsic problem of reaching "conclusive" results in science).

[120] Absent such affirmative congressional action, the courts have been willing to uphold the administrative agency policy-making decisions. *Nat'l Fisheries Inst., Inc.*, 732 F. Supp. at 226–27 (where the court upheld the Secretary of Commerce's regulations because Congress had not itself resolved the competing interests).

[121] U.S. Const. art. I, § 1; *supra* nn. 21–23.

[122] 16 U.S.C. §§ 1411–1418.

[123] 16 U.S.C. §§ 1411–1418.

[124] 16 U.S.C. §§ 1361–1421(h). Congress passed the MMPA in 1972, reacting to the public outcry over the high dolphin mortality levels. H.R. Rep. 92-707, 4145 (1971). One of the stated purposes of the MMPA was to protect the dolphins in the Eastern Tropical Pacific Ocean. *Id. at* § 1361 (discussing purposes and findings of Pub.L. 105-42, § 2). Congress subsequently amended the MMPA in 1984, 1988, and 1992, strengthening its directives "to ban importation of tuna that failed to meet certain conditions regarding

tion Program, otherwise known as the La Jolla Agreement.[125] Its stated purpose is working toward the reduction of dolphin mortality rates associated with purse seine fishing in the Eastern Tropical Pacific Ocean (ETP).[126] In compliance with the International Dolphin Conservation Program, Congress enacted the IDCPA on August 15, 1997.[127]

Although Congress found that observed dolphin mortality rates were in fact declining,[128] it was still concerned with whether chasing and encirclement of dolphins had "significant, psychological *stress effects* that impede[ ] the ability of depleted dolphin populations to recover *even if no dolphins are observed to be killed or seriously injured during the set.*"[129] Because of these concerns, Congress's version of the IDCPA retained stricter tuna labeling standards until and unless the scientific studies showed that chasing and encirclement were not having significant adverse impact on the dolphin stocks.[130] In this regard, the IDCPA differed from the Panama Declaration.[131]

B. Science-Gathering Requirement under the IDCPA

The IDCPA contains uncommonly specific directives, going beyond the generic best science available requirement and placing an affirmative duty on the agency to conduct specific research studies within designated timeframes.[132] Section 304(a) of the IDCPA states:

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dolphin mortality." *Brower II*, 257 F.3d at 1060. In addition, in 1990 Congress enacted the Dolphin Protection Consumer Information Act under which tuna sold in the United States could not be labeled "dolphin safe" if purse seine nets were intentionally used on dolphins. 16 U.S.C. § 1385; *Brower II*, 257 F.3d. at 1061. Tuna labeling standards are governed by the *Federal Trade Commission Act*, 15 U.S.C. § 45, and the *Dolphin Protection Consumer Information Act*, 16 U.S.C. § 1385(d). The International Dolphin Conservation Program Act falls within the statutory scheme of the MMPA; many of the sections apply to both the IDCPA and the MMPA. For this reason, this Comment cites to each statute, as appropriate.

125 16 U.S.C. § 1411(b).

126 *Id.* at § 1411.

127 *Id*.

128 "[D]olphin mortality in this fishery has declined dramatically from 423,678 in 1972 to 4,095 in 1994." Ltr. from Ken Norris et al., *Letter from Concerned Scientists on the Tuna/Dolphin Problem*, 142 Cong. Rec. H9430 (daily ed. July 31, 1996).

129 *Brower I*, 93 F. Supp. 2d at 1074–75; *see generally* Andrew Dizon et al., *Stress in Spotted Dolphins (Stenella Attenuata) Associated with Purse-Seine Tuna Fishing in the Eastern Tropical Pacific* (S.W. Fisheries Sci. Ctr., Natl. Marine Fisheries Serv., NOAA June 2002) (available at http://swfsc.ucsd.edu/IDCPA/TunaDol_rep/LJ_02_26.pdf) (Fishing activities may cause adverse impacts to the dolphins by resulting in dolphin mortality, cow-calf separation, or in heightening stress levels in dolphin populations.).

130 16 U.S.C. § 1414a.

131 *See Brower I*, 93 F. Supp. 2d at 1074. (Although both houses of Congress had an extensive debate over the issue of tuna labeling, the final version of the IDCPA varied significantly from the Panama Declaration. The main difference was that in the IDCPA, Congress retained the stricter definition of "dolphin safe" tuna labeling until and unless the mandated studies affirmatively showed that intentional encirclement of dolphins has no significant adverse impact on the species.).

132 16 U.S.C. § 1414a.

> The Secretary *shall* in consultation with the Marine Mammal Commission and the Inter-American Tropical Tuna Commission, conduct a study of the effect of intentional encirclement (including chase) of dolphins and dolphin stocks incidentally taken in the course of purse seine fishing for yellowfin tuna in the eastern tropical Pacific Ocean. The study, which *shall* commence on October 1, 1997, *shall* consist of abundance surveys . . . and stress studies . . . and *shall* address the question of whether such encirclement is having a significant adverse impact on any depleted dolphin stock in the eastern tropical Pacific Ocean.[133]

Not only was Congress exceptionally specific in both listing the type of research it required NOAA Fisheries to complete and in specifying the necessary components of such research,[134] but it also set up timeframes for the agency to follow.[135] NOAA Fisheries had to complete the initial study before March 1, 1999, and it had to publish the study by March 31, 1999.[136] It was required to base its findings on the population abundance survey and the required stress studies. After publishing the initial finding, NOAA Fisheries had over three years to complete the final finding; Congress set the deadline for the finalized findings as December 31, 2002.[137] NOAA Fisheries completed the Initial Finding on April 29, 1999,[138] and the Final Finding on December 31, 2002.[139]

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[133] *Id*. (emphasis added). The Act further states that if the Secretary determines based on "the best scientific information available," including research under section 304, "that the incidental mortality and serious injury of marine mammals . . . is having, or is likely to have, a significant adverse impact" on the mammals, the Secretary has to take action to reduce the injury to mammals (after consultation with other agencies) and "prescribe emergency regulations." *Id.* at §§ 1413(c)(1), (c)(1)(B).

[134] The first type of study the Secretary was required to complete was a population abundance survey each year from 1998 to 2000. *Id*. at § 1414a(2). In addition, the Secretary was required to complete stress studies on the dolphins; Congress was extremely specific in this directive, stating that the "Stress studies under this subsection shall include:

> (A) a review of relevant stress-related research and a 3-year series of necropsy samples from dolphins obtained by commercial vessels;
>
> (B) a 1-year review of relevant historical demographic and biological data related to dolphins and dolphin stocks . . . ; and
>
> (C) an experiment involving the repeated chasing and capturing of dolphins by means of intentional encirclement."

Id. at § 1414a(3)(A)–(C).

[135] Section 1385 provides the Secretary of Commerce with a specific time frame to complete these studies. *Id*. at § 1385(g). While Congress may establish time frames in the statutes, agencies often fail to meet those deadlines. Wagner, *supra* n. 6, at 182.

[136] 16 U.S.C. § 1414a.

[137] *Id*.

[138] *Taking of Marine Mammals Incidental to Commercial Fishing Operations; Tuna Purse Seine Vessels in Eastern Tropical Pacific Ocean (ETP); Initial Finding*, 64 Fed. Reg. 24590 (May 7, 1999).

[139] *Taking and Importing of Marine Mammals, Decision Regarding the Impact of Purse Seine Fishing on Depleted Dolphin Stocks*, 68 Fed. Reg. 2010 (Jan. 15, 2003).

While NOAA Fisheries was completing the required research, the existing tuna labeling standards remained in force.[140] Under those standards, the tuna would only be labeled dolphin safe if it was harvested with purse seine nets not intentionally deployed on or encircling dolphins.[141] If, after completing the required research, NOAA Fisheries found that the intentional chasing and encirclement of dolphins was having a significant adverse impact on the dolphin stocks, then the stricter tuna labeling standards would remain in force.[142] If, on the other hand, the agency did not find such an adverse impact, then the dolphin safe label would default to a new standard, under which the tuna would be labeled dolphin safe as long as no dolphins were observed to have been killed or seriously injured during the set.[143]

In directing NOAA Fisheries to conduct the aforementioned studies, Congress was unusually specific and proscriptive, leaving little to the agency's discretion.[144] Because the courts have been willing to find the agency's findings arbitrary and capricious when the agency did not complete the required studies, this statutory scheme should serve as a model for other environmental and wildlife statutes.

By providing a clear mandate to the administrative agencies and by setting out its policy objectives, Congress will reassert its legislative powers and provide the necessary *check* on administrative actions. And, moreover, clear congressional guidelines will enable the courts to provide a more thorough review of agency actions and ensure greater agency compliance with environmental and wildlife conservation statutes.

C. The Courts Have Consistently Enforced the Science Gathering Requirements of the IDCPA

Plaintiffs have consistently prevailed in IDCPA cases where they have challenged NOAA Fisheries' findings of no significant adverse impact on the dolphins.[145]

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[140] *Brower I*, 93 F. Supp. at 1076.

[141] *Id*.

[142] 16 U.S.C. §§ 1385(h)(2)(A)–(B).

[143] *Id*. at § 1385(d)(2)(B).

[144] *Id*. at § 1414a.

[145] *See Brower I*, 93 F. Supp. 2d at 1089 (granting the plaintiff's motion for summary judgment and setting aside the Secretary of Commerce's initial finding that chasing and encirclement of dolphins is not having a significant adverse impact on the dolphins); *Brower II*, 257 F. 3d at 1060 (affirming the district court's ruling in *Brower I*); *Evans I*, 256 F. Supp. 2d at 1066, 1069 (granting plaintiff's motion for a preliminary injunction because plaintiffs demonstrated reasonable likelihood of success on the merits in that the Secretary of Commerce failed to use the best scientific evidence available in making the final finding that purse seine fishing was not having a significant adverse impact on the dolphins); *Evans II*, 2004 WL 1774221 at *32 (granting plaintiff's motion for summary judgment and setting aside Secretary of Commerce's final finding that purse seine fishing was not having a significant adverse impact on dolphin stocks).

Earth Island Institute v. Evans (*Evans II*)[146] is the latest IDCPA case where the courts have reprimanded the Secretary and NOAA Fisheries for failing to follow the IDCPA's science gathering requirements. Similar to the previous IDCPA cases,[147] the plaintiffs in *Evans II* brought suit challenging NOAA Fisheries' finding that intentional encirclement of dolphins results in no significant adverse impact to the dolphin stocks.[148] The court granted Earth Island Institute's motion for summary judgment, holding that the agency's findings were arbitrary and capricious because the agency had failed to conduct all of the studies required by Congress in the IDCPA and then defaulted to a finding of no adverse impact based on a lack of sufficient evidence.[149] This is a vastly different outcome than in most cases decided under the MSA, where the courts are usually unwilling to find that NOAA Fisheries acted arbitrarily, even if the science considered was incomplete or inconclusive.[150]

1. NOAA Fisheries' Initial Finding

As required by the IDCPA, NOAA Fisheries, in consultation with the Marine Mammal Commission[151] and the Inter-American Tropical Tuna Commission, conducted dolphin studies[152] on population abundance, a review of stress-related research, necropsy[153] of dolphins killed in the fishery, and a review of the historical, biological, and demographic data from the affected dolphin stocks, as well as the chase and capture experiment.[154] Upon completion of these required studies, NOAA Fisheries concluded that the intentional chasing and encirclement of dolphins had no significant adverse impact on the dolphin stocks.[155] Even after the initial round of litigation[156] challenging the agency's Initial Finding and the alteration of the decision-making pro-

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146 *Evans II*, 2004 WL 1774221.

147 *Supra* n. 145 (discussing various cases brought under the IDCPA).

148 *Evans II*, 2004 WL 1774221 at **31–32.

149 *Id*.

150 *Supra* pt. III (discussing cases under the MSA).

151 The Marine Mammal Commission was authorized by the MMPA. 16 U.S.C. § 1401.

152 NOAA Fisheries' Southwest Fisheries Science Center, in consultation with the U.S. Marine Mammal Commission, Inter-American Tuna Association, and others, designed the dolphin research program. NOAA, *Report of the Scientific Research Program under the International Dolphin Conservation Program Act* (S.W. Fisheries Sci. Ctr., NOAA Fisheries Sept. 17, 2002) (available at http://www.nmfs.noaa.gov/pr/readingrm/tunadolphin/idcpa_final_science_report.pdf) [hereinafter *Dolphin Report*].

153 "A necropsy or postmortem examination is generally equivalent to an autopsy in human medicine." *Dolphin Report*, *supra* n. 152, at 6 n. 4.

154 The Chase Encirclement Stress Studies, referred to by NOAA as CHESS, consisted of repeated chase and encirclement of dolphins. *Dolphin Report*, *supra* n. 152, at 73. The goal was to provide scientific data on physiological indicators of stress in captured dolphins and, if possible, to estimate a range of consequences for the individual dolphin survival and reproduction. *Id.*

155 64 Fed. Reg. at 24590.

156 *Supra* n. 145 (discussing IDCPA litigation).

cess,[157] the agency's Final Finding remained identical to its initial one.[158]

2. NOAA Fisheries' Final Decision

Based on the abundance studies,[159] the ecosystem studies,[160] the stress and other fishery effects studies,[161] and stock assessments,[162] NOAA Fisheries made a final finding of no significant adverse impact to the dolphin stocks.[163] The *Report of the Scientific Research Program under the International Dolphin Conservation Program Act* (*Dolphin Report*) concluded that, based on the completed studies, dolphins are

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[157] The new process, called the Organized Decision Process (ODP), provided a new framework for analysis of research data by taking "into account different levels of uncertainty inherent in research" which allowed "the Secretary to consider many different types of information in light of the uncertainty and appropriately weigh the information based on the level of confidence that exists for the information." 68 Fed. Reg. at 2012. "The ODP is also distinct from NOAA Fisheries' earlier decision framework in that it includes a mechanism for weighing information based on high standards" for considering the information available. *Id.* at 2012.

[158] *Id.*

[159] The information on population size was derived from research vessel surveys conducted in the ETP during 1998, 1999, and 2000. *Dolphin Report*, *supra* n. 152, at 4. The Report found that dolphin stocks in the ETP were depleted, and they were not recovering at expected rates. *Id.* at 3–5.

[160] NOAA addressed the question of whether there has been a substantial ecosystem change since the dolphin stocks were depleted. *Dolphin Report*, *supra* n. 152, at 5. To answer this question NOAA considered "historical evidence [relating] to long-term patterns [including] a time series of sea surface temperature data beginning 1901." *Id.* Although some scientists concluded that there was insufficient information to answer the question whether a large scale ecosystem change was responsible for the depletion of dolphins, most found this hypothesis improbable. *Id.* at 6.

[161] NOAA also considered the question of whether chase and encirclement adversely affect dolphins. *Id.* Its research in this regard was divided into four projects: a stress literature review, a necropsy study, a review of historical data, and a field study involving the repeated chasing and capturing of the dolphins. *Id.* The report stated that the review of scientific literature indicated that purse seine operations involved "well-recognized stressors in other wild mammals, and that it is plausible that stress resulting from chase and capture could compromise the health of at least some of the dolphins involved." *Id.* Based on the literature and the field studies, the *Dolphin Report* concluded that "the findings support the possibility that purse seine fishing involving dolphins may have a negative impact on the health of some individuals. Several lines of research suggested potential physiological mechanisms of stress effects . . . ." *Id.* at 6–7. However, the *Dolphin Report* cautioned that sample sizes are necessary to fully interpret the findings. *Id.* at 7. The *Dolphin Report* also noted that a high rate of mother-calf separation during the "chase portion of the fishing operation" could lead to large "unobserved calf mortality [that could be] continuing at the present time" because the mortality would occur after the chasing operations were completed. *Id.*

[162] The *Dolphin Report* found that for both the northeastern offshore spotted dolphins and the eastern spinner dolphins, the population growth rates were very low. *Id.* at 8. The *Dolphin Report* concluded that "the results are not consistent with recovery from depletion for either stock." *Id.* "Northeastern offshore spotted dolphins are currently estimated to be at 20% of their pre-fishery abundance," and the "eastern spinner dolphins are currently estimated to be at 35% of their pre-fishery abundance." *Id.* at 8–9.

[163] 68 Fed. Reg. at 2011.

not recovering at a rate consistent with the levels of depletion and the reported kills.[164] Therefore, the *Dolphin Report* suggested three hypotheses for the lack of recovery: (1) a dramatic change in the environment causing the dolphin stocks to be at or near their carrying capacities,[165] (2) the presence of a lag period before recovery from the harmful fishery effects,[166] or (3) effects of the purse seine fishery on the dolphin populations beyond the reported catch.[167]

While the *Dolphin Report* found the first two scenarios unlikely, because the physical and biological data did not support a large-scale environmental change[168] and there was no data supporting the second hypothesis,[169] it found the third hypothesis most plausible.[170]

In addition, the *Dolphin Report* noted that the fishery may have other possible negative effects on the dolphins, finding that fishery effects on even a few dolphins per set could lead to a lack of recovery for the entire stock.[171] Contrary to the *Dolphin Report*'s findings,[172]

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164 *Dolphin Report*, *supra* n. 152, at 10.

165 *Id.* at 11.

166 This hypothesis claims that after the bycatch has been reduced or eliminated due to the fishery, a lag period begins. *Id.*

167 *Id.*

168 *See* Richard T. Barber, *Assessment*, http://www.nmfs.noaa.gov/pr/readingrm/tunadolphin/Barber.htm (Sept. 12, 2002) (although not ruling out the possibility of a substantial change to the "ecological structure of the ETP," the assessment concluded that "[t]here is little evidence that the ecological structure of food webs in the ETP has changed substantially."); Andrew J. Read, *Ecosystem Expert Panel*, http://www.nmfs.noaa.gov/pr/readingrm/tunadolphin/Read.htm (accessed Oct. 11, 2005) (concluding that "it is unlikely that the ecological structure of the ETP has changed substantially in a way that could significantly impede or promote the population growth of depleted dolphin stocks," although stating that there was insufficient information to make a conclusive finding) (emphasis deleted); Brent S. Stewart, *Secretary of Commerce's Ecosystem Expert Panel*, http://www.nmfs.noaa.gov/pr/readingrm/tunadolphin/Stewart.htm (accessed Oct. 11, 2005) (finding insufficient data to answer the question); *see also* Robert J. Hofman, *IDCPA Expert Effects Panel*, http://www.nmfs.noaa.gov/pr/readingrm/tunadolphin/Hofman.htm (accessed Oct. 11, 2005) (finding that the dolphins below their productivity level are not growing at expected levels, and that "there is good reason to believe that the level of unobserved and unreported mortality has been and is sufficient to appreciably delay, if not prevent, recovery of the three depleted stocks," thus rejecting the possibility that either dolphin carrying capacities or a substantial environmental change are to blame for the dolphin's failure to recover); *but see* Michael R. Landry, *NMFS Expert Panel: Ecosystem Effects*, http://www.nmfs.noaa.gov/pr/readingrm/tunadolphin/Landry.htm (accessed Oct. 11, 2005) ("Physical changes have occurred in the . . . [ETP] over the time period of tuna purse seining fishery . . . . [S]uch changes provide a credible explanation for at least part of the observed slow recovery of dolphin stocks from the tuna fishery's impact.").

169 *Dolphin Report*, *supra* n. 152, at 11.

170 *Id.* at 10 ("There are several reasons to think that the actual bycatch could be larger than the reported kill: (a) some mortality is not observed, simply because the fishery observer cannot see all of the net at all times on all sets; (b) dolphin sets made by boats smaller than Class 6 are not observed; and (c) some mortality is observed but not reported by the fishery observers.").

171 *Id.* at 25.

172 All of the courts reviewing both the Initial and Final Decisions in IDCPA cases found that NOAA Fisheries' findings were arbitrary and capricious. *Supra* n. 145 (dis-

NOAA Fisheries made a Final Finding on December 31, 2002, which concluded that chase and "intentional deployment on or encirclement of dolphins with purse seine nets is not having a significant adverse impact on depleted dolphin stocks in the ETP."[173] The agency then proceeded with the organized decision process[174] to amend the dolphin-safe labeling standard so that tuna from the ETP purse seine fishery caught in sets in which no dolphins were killed or seriously injured may be labeled "dolphin-safe."[175] After both the Initial and the Final Findings, environmental groups brought suits, alleging that the agency's findings were arbitrary and capricious under the APA.[176] In all four resulting lawsuits, the plaintiffs have been successful.[177]

3. History of IDCPA Litigation

NOAA Fisheries' Initial Finding claimed that there was insufficient evidence to determine whether the intentional chase and encirclement of dolphins had a significant adverse impact on the dolphin stocks.[178] Following this finding, environmental groups filed suit seeking to set aside the NOAA Fisheries' decision, claiming that it was arbitrary and capricious.[179] These lawsuits resulted in the first round of tuna labeling cases, where the District Court for the Northern District of California set aside the agency's determination that encirclement had no adverse impact on the dolphins,[180] and the Ninth Circuit affirmed.[181] The effect of the courts' rulings was that the stricter labeling standard under the IDCPA remained in place. Both the district and the appellate courts considered the specificity of the congressional scheme in mandating the studies, the agency's failure to follow congressional directives, conduct the appropriate research, and follow its own procedures, and the agency's unauthorized consideration of political factors.[182]

After NOAA Fisheries made its Final Finding, which was identical to the Initial Finding in that NOAA found no significant adverse affects on the dolphin stocks, environmental groups again brought suit.[183] In the first lawsuit, the plaintiffs filed a motion requesting an injunction to prevent the more lenient tuna labeling standards from taking effect.[184] The court granted the plaintiffs' motion, finding merit

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cussing IDCPA litigation). The courts all cited the *Dolphin Report* in support of their conclusions. *Supra* n. 145.

173 68 Fed. Reg. at 2011.

174 *Id.* at 2012.

175 *Id.* at 2011.

176 *Supra* n. 145 (discussing IDCPA litigation).

177 *Supra* n. 145 (discussing IDCPA litigation).

178 *Dolphin Report*, *supra* n. 152, at 11.

179 *Brower I*, 93 F. Supp. 2d at 1071.

180 *Id*. at 1089.

181 *Brower II*, 257 F. 3d at 1060.

182 *Infra* pt. IV(C)(3).

183 *Evans I*, 256 F. Supp. 2d at 1066.

184 *Id.*

in the underlying lawsuit.[185] Finally, in *Evans II*,[186] the court reviewed NOAA Fisheries' Final Finding under the APA arbitrary and capricious standard.[187] The court held that the NOAA Fisheries' finding of no adverse impact was arbitrary and capricious, because the finding was not based on best science available, that NOAA Fisheries had disregarded clear congressional intent and its own regulations, and that the agency had again improperly considered political and trade implications.[188]

Evans II was the final link in the chain of tuna labeling litigation under the IDCPA, and it highlights the courts' unwillingness to defer to an agency decision where the congressional mandate is clear and unambiguous.

Both *Brower I*[189] and *Brower II*[190] highlight NOAA Fisheries' continued failure to comply with Congress's mandate under the IDCPA. The District Court, applying the arbitrary and capricious standard of review in *Brower I*, set aside the agency's initial finding that the intentional chasing and encirclement of dolphins did not have an adverse impact on them.[191] The Ninth Circuit affirmed in *Brower II*.[192] In both *Brower I* and *II*, the courts were primarily concerned with NOAA Fisheries' failure to complete the mandated research in a timely manner and the agency's subsequent claim that it had insufficient evidence that dolphin stocks were harmed by chase and encirclement.[193] Under the IDCPA, if the agency did not find significant adverse impact in dolphin stocks, the dolphin safe label would automatically default to a new, lower standard.[194] The court thus found that NOAA Fisheries' failure to complete the required studies and subsequent use of incomplete data as an excuse for claiming it had insufficient evidence of harm would result in going directly against the will of Congress by immediately lowering the tuna standards.[195]

In *Brower I*, the court found that NOAA Fisheries had abused its discretion by failing to obtain and consider preliminary data from the congressionally mandated stress research projects and by failing to apply the proper legal standard to the scientific information available.[196] The court found that Congress had deliberately failed to immediately

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185 *Id.*

186 *Evans II*, 2004 WL 1774221.

187 *Id*. at *31.

188 *Id.*

189 93 F. Supp. 2d 1071.

190 257 F.3d 1058.

191 93 F. Supp. 2d at 1089.

192 257 F.3d at 1060.

193 *Brower I*, 93 F. Supp. 2d at 1089; *Brower II*, 257 F.3d at 1060.

194 16 U.S.C. §§ 1385(h)(2)(A)–(B); *Brower I*, 93 F. Supp. 2d at 1076.

195 *Brower I*, 93 F. Supp. 2d at 1086–87. For a discussion of the IDCPA's legislative history, see *supra* n. 28.

196 *Brower I*, 93 F. Supp. 2d at 1089.

change the tuna labels out of a desire to protect dolphins.[197] Instead, Congress chose to direct NOAA Fisheries to commence the mandated studies promptly and without delay, in order to use the data collected in the research to make its initial finding.[198] However, contrary to congressional intent, NOAA Fisheries "did not consider the preliminary data from *any* of the three mandated stress research projects prior to the time of the initial finding."[199] Nothing in the record provided a justification for why the studies were not completed.[200] In addition, the research that NOAA Fisheries did start was not done in a timely manner.[201] NOAA Fisheries was not planning to initiate the research planning phase of the encirclement study until mid-1999, with the experiment being conducted between February and April of 2001.[202]

The court in *Brower I* found that NOAA Fisheries had determined that "a finding of significant adverse impact is not dependent on conclusive evidence, proof, or certainty, but rather requires some unspecified amount of additional, verifiable scientific evidence."[203] The court held that:

> [I]t would flout the statutory scheme to permit [an agency] to fail to conduct mandated research, and then invoke a lack of evidence as a justification for removing a form of protection for a depleted species, particularly given that the evidence presently available to [NOAA Fisheries] is all suggestive of a significant adverse impact.[204]

In reviewing the district court's findings in *Brower II*, the Ninth Circuit analyzed the statutory scheme to determine whether the IDCPA was clear and unambiguous on its face.[205] After considering the statutory language, the overall congressional scheme, and legislative history,[206] the court found that NOAA Fisheries had ignored the will of Congress by failing to affirmatively find whether the fisheries in

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197 *Id*. at 1075. Congress was "considerabl[y] concern[ed] that . . . the use of purse seine nets to repeatedly chase and encircle dolphins may have significant, physiological *stress effects* that impede[ ] the ability of depleted dolphin populations to recover *even if no dolphins are observed to be killed or seriously injured during the set.*" *Id.* (emphasis in original). Additionally the court noted that "[i]mportantly, Congress rejected language that would have immediately changed the label to allow tuna caught with purse seine nets to be labeled dolphin safe, and instead kept the purse seine net restriction in place precisely so that the stress effects could be investigated and considered before any change in the label standard." *Id*. at 1083 (citing H.R. Rpt. 105-74 pt. 1 (reprinted in 1997 U.S.C.C.A.N. 1628)).

198 *Id.* at 1084 ("[W]hile Congress did not require or expect that any of the three stress research projects would be completed by the time of the initial finding, it clearly intended that the initial finding would be informed by at least some preliminary data from these projects.").

199 *Id.* at 1084.

200 *Id.* at 1085.

201 *Id.*

202 *Brower I*, 93 F. Supp. 2d at 1085.

203 *Id*. at 1088.

204 *Id*. at 1089; also quoted in *Brower II*, 257 F.3d at 1065.

205 257 F.3d at 1065–66.

206 *Id*. at 1066–67.

the Eastern Tropical Pacific Ocean were having a significant adverse impact on the dolphins.[207]

After reviewing the Secretary's failure to complete the research and the consequent lack of findings under the TRAC factors,[208] the court held that NOAA Fisheries "was required by law to conduct stress research as a *prerequisite* to its decision making. By failing to obtain and consider preliminary data from *any* of the mandated stress research projects before the Initial Finding, [NOAA Fisheries] unreasonably delayed action."[209] Lastly, in *Evans II*, the court again found that NOAA Fisheries continually failed to implement congressional intent.[210]

Even after the *Brower I* and *II* decisions, where the courts made it clear that NOAA Fisheries must not continue its unreasonable delay in meeting the statutory directives, the agency again failed to complete the research in a timely manner and then tried to discount the studies as incomplete in order to bring down the tuna labeling standards.[211] In addition, the agency again considered the factors it was not meant to consider and failed to use the best science available in reaching its decision.[212]

V. IDCPA IS THE BETTER STATUTORY MODEL

The IDCPA should serve as a model for drafting science requirements in other environmental statutes, because it requires NOAA Fisheries to collect additional scientific data, rather than allowing the agency to merely rely on the science already available.[213] Moreover, the IDCPA explicitly provides the exact scientific studies for the

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[207] *Id*. at 1067.

[208] *Id*. at 1068–70. The court quoted *Indep. Mining Co. v. Babbitt*'s use of the TRAC balancing test:

> In determining whether [NOAA Fisheries] unreasonably delayed the stress studies, 5 U.S.C. § 706(1), we balance the following "TRAC" factors: (1) the time agencies take to make decisions must be governed by "rule of reason"[;] (2) where Congress has provided a timetable or other indication of the speed with which it expects the agency to proceed in the enabling statute, that statutory scheme may supply content for this rule of reason[;] (3) delays that might be reasonable in the sphere of economic regulation are less tolerable when human health and welfare are at stake[;] (4) the court should consider the effect of expediting delayed action on agency activities of a higher or competing priority[;] (5) the court should also take into account the nature and extent of the interests prejudiced by the delay[;] and (6) the court need not "find any impropriety lurking behind agency lassitude in order to hold that agency action is unreasonably delayed."

Id. at 1068 (quoting *Indep. Mining Co. v. Babbitt*, 105 F.3d at 507 n. 7 (quoting *Telecomm. Research & Action Ctr. v. F.C.C.*, 750 F.2d at 80)).

[209] *Id.* at 1070.

[210] *Evans II*, 2004 WL 1774221 at *31.

[211] *Id.* at *30.

[212] *Id*. at **30–31.

[213] 16 U.S.C. §§ 1385(g), 1414(2).

agency to complete.[214] Congress should use the IDCPA as a model for providing agencies with clear guidelines and requiring agencies to consider specific scientific findings rather than using the generic best science available language.[215] The clear benefit of a detailed statute such as the IDCPA is that it maintains the balance of power between the various branches of the United States government.[216] Under a statute that clearly delineates the responsibilities of the administrative agency, Congress retains its legislative and policy-making power, while the administrative agency, as an arm of the executive, enforces it; and the judiciary is provided with a clear set of guidelines to assist it in its interpretation of the statute.[217]

The IDCPA provides a clear roadmap for NOAA Fisheries to follow.[218] The agency is required to conduct specifically delineated stud-

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[214] *Supra* n. 134 and accompanying text (describing science gathering requirements under the IDCPA).

[215] For commentators' arguments that ambiguity in science is common and should be incorporated into the decision making process, review *supra* nn. 1, 5, 6. Congress took another affirmative step in 2000 when it passed the Data Quality Act (DQA) to "strengthen decisionmaking, accountability, and openness in Government," by "ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies." 44 U.S.C. §§ 3501(4), 3516 "Policy and Procedural Guidelines" § (a) (2000). Thus, the DQA requires federal agencies to ensure that information it disseminates meets certain quality standards. *See generally Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies; Republication*, 67 Fed. Reg. 8452–53 (Feb. 22, 2002) (the Office of Management and Budget's implementing guidelines). Critics argue that DQA can essentially bring the government to a standstill by making data quality "a goal in and of itself, rather than a means to ensure the most effective protection of individuals and the environment under the circumstances." Ctr. for Progressive Reform, *The Data Quality Appropriations Rider: New Procedures and Information Disclosure, What People are Fighting About*, http://www.progressiveregulation.org/perspectives/dataQuality.cfm (accessed Oct. 11, 2005). Others do not read such sweeping language into the statute. *Id*. The commentators point out that incomplete data does not always equate with poor quality data, and that even incomplete data based on the best science available is a useful tool in agency decision-making. *Id*. Because the DQA leans essentially the same way as the IDCPA, by requiring better quality information (which may not necessarily mean the information already in existence), it should be given some consideration. The DQA may provide an alternative basis for restructuring vague statutes like the MSA by requiring that the scientific information upon which NOAA Fisheries bases its FMPs meets the prescribed standards of quality, objectivity, utility, and integrity. Such a discussion, however, is outside of the scope of this Comment. For more discussion on the DQA, *see generally* Susan M. Bisong, *Federal Agencies Subject to Data Quality Act*, http://library.findlaw.com/2003/Jan/14/132464.html (accessed Nov. 13, 2005) (providing background information and analysis of the DQA); Ctr. for Reg. Effectiveness, *Data Quality: OMB to Begin Implementing New Data Quality Law*, http://thecre.com/quality/OMB_Implements_New_DataQualityLaw.html (accessed Oct. 11, 2005).

[216] *Supra* nn. 21–23 (discussing the importance of a U.S. system of checks and balances).

[217] *Supra* nn. 21–23 (discussing the issues of power in relation to vague statutory language).

[218] *See* 16 U.S.C. §§ 1385(g), 1414(2) (providing clear instructions to NOAA Fisheries by mandating specific studies and by setting timelines).

ies within a specified time frame.[219] The agency's decision is predetermined by Congress, conditional upon the results of the required studies: if X then Y, if not X then not Y. The policy-making and weighing of interests ultimately rests with Congress.[220] Thus, as evidenced in the *Earth Island Institute* line of cases, where NOAA Fisheries fails to follow the clear congressional directive of collecting science, the courts have been willing to overturn agency decisions despite the great amount of deference inherent in the arbitrary and capricious standard of review.[221] Compared with the MSA decisions, many of which have been based on out-of-date and incomplete science,[222] the *Earth Island Institute* line of cases[223] seems to be a hands-down victory for scientific integrity.[224] Not only was the congressional mandate specific and clear, but the courts have not hesitated to overturn agency decisions based on the agency's failure to comply with statutory directives.[225]

Unlike in the MSA, where the vague scientific directive leads to policy-making by NOAA Fisheries,[226] under the IDCPA the ultimate policy decisions are left to Congress.[227] The agency's only job is to collect available scientific evidence and to properly synthesize it.[228] By requiring the collection of additional data, Congress took away the agency's ability to side-step the science issue and forced the agency to base its decision directly on science. While the IDCPA's science-gathering requirement still has the potential to result in inconclusive data,[229] the agency is nevertheless required to put forward optimal effort to ensure that a decision is based on the required science.

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[219] *Id*.

[220] In creating the IDCPA, Congress was clearly concerned with preserving the dolphins; that policy choice was evident in both the statutory language and legislative history of the IDCPA. *Supra* n. 28; *supra* pt. IV (discussing the IDCPA's scientific data collection requirements and legislative history).

[221] *Supra* n. 145 (summarizing IDCPA cases); *supra* pt. IV(C)(3) (discussing IDCPA litigation in more detail).

[222] *Supra* pt. III(C) (discussing MSA litigation).

[223] *Supra* n. 145 (summarizing IDCPA cases).

[224] *Supra* n. 145; *supra* pt. IV(C)(3) (discussing IDCPA litigation in more detail). Such a conclusion, of course, makes the assumption that additional science gathering requirements result in decisions that are more scientifically based than those involving the use of the best science already available. In addition, this argument also assumes that scientifically based decisions are, in turn, superior to policy-based decisions, or to decisions involving some policy considerations. For opinions to the contrary, review *supra* nn. 5–7 (discussing ambiguity in science and the appropriateness of policy considerations).

[225] For commentators' arguments that ambiguity in science is common and should be incorporated into the decision making process, review *supra* nn. 5–6.

[226] *Supra* pt. III.

[227] *Supra* pt. IV.

[228] *Supra* pt. IV; *but see Organized Fishermen of Fla.*, 846 F. Supp. at 1577 ("It is the prerogative of [the Secretary and NOAA Fisheries] to weigh . . . opinions and make a policy judgment based on the scientific data.").

[229] *See supra* nn. 5–6 (discussing the intrinsic problem of reaching "conclusive" results in science).

In addition, under the IDCPA, the courts are provided with sufficient guidance to evaluate whether the Secretary's decision is arbitrary and capricious.[230] In creating the IDCPA, Congress did not create another vague best science available standard; instead it spelled out what particular science the Secretary was to consider. Congress went even further than that, requiring the Secretary to conduct additional studies to ensure full and accurate scientific data.[231]

The use of clear language in the statute has allowed the courts in IDCPA cases to provide a more thorough and probing review of agency decisions.[232] Armed with the specific language of the statutes, the courts are better equipped to decide whether the agency collected scientific data as it was required to do, and whether its decision rested on the available data.[233] The clear and specific directive under the IDCPA clearly results in better agency decision making.[234] Under the IDCPA, the agency cannot ignore scientific data, cannot refuse to gather additional data and then blame the lack of data for failure to make a scientifically based decision, and cannot make compromised decisions. The agency has to take the back seat because Congress told it to do so, and because the courts have been willing to enforce such congressional mandate.[235]

A. If Science Is Conclusive

Even if the science is one hundred percent conclusive (as it almost never is),[236] a more specific statute like the IDCPA is still more desirable than the MSA's vaguer best science available mandate. The specificity in the IDCPA is preferable, because it leaves the policy making to the policymaker—Congress.[237] Thus, under the IDCPA, if the science that was available stated that dolphins were being harmed as a result of the fishery, the statute clearly stated that such fishing would be prohibited.[238] Under the MSA, however, even if the scientific evidence points to a harmful result to the fisheries, the agency is still faced with weighing conservation risks with the economic impact on the fishing communities.[239] Because the MSA does not provide whether one goal

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230 *Supra* pt. IV(C)(3).

231 16 U.S.C. §§ 1385(g), 1414(2).

232 *Supra* n. 145 (discussing IDCPA litigation). More specific statutory language provides better guidance to both the agency and the courts, thus making the statute easier to administer. *See Gottschalk*, 575 P.2d at 294 (showing the administrative difficulty of vague legislation).

233 *Supra* n. 42 (discussing problems with vague statutory language).

234 As previously stated, this assumes that agency decisions based on science are preferable over policy-based decisions. *See supra* nn. 22–23 and accompanying text (explaining why it is preferable to leave policy-based decisions to Congress).

235 *Supra* pt. IV(C).

236 *Supra* nn. 5–6 (discussing the intrinsic problem of reaching "conclusive" results in science).

237 *Supra* nn. 21–23 (discussing the separation of powers doctrine).

238 16 U.S.C. § 1414a.

239 *Supra* pt. III(C).

is preferable over another, or what to do if the best scientific evidence is inconclusive, NOAA Fisheries is faced with making policy decisions when it promulgates regulations.[240] Such policy choices are not ones the agency should make; they are best left for Congress.[241]

B. If Science Is Inconclusive

The concerns raised in this Comment apply with even more force when science is inconclusive. Under the MSA as it stands, NOAA Fisheries would look at the scientific data available and make a fishery management plan or some other decision under the plan.[242] Even if additional science would be helpful, the agency is not required to go out and collect it; the agency can choose to base its decision on the data already in existence.[243] Once the agency makes a decision, any plaintiff who wishes to challenge that decision will face a tough burden of proving that the agency action is arbitrary and capricious.[244] Even if the agency's decision ignores certain aspects of the science[245] or the evidence could have pointed to different results, the courts will most likely refuse to find the agency decision arbitrary.[246] Thus, the agency decision, unless especially egregious,[247] will most likely withstand the "light" judicial scrutiny as long as it is somehow supported by some science that the agency considered to be the best available at the time of the decision-making.[248]

In this context, too, the IDCPA model would provide greater guidance to the agencies and thereby insure the maximum compliance with congressional intent.[249] First, clear statutory mandates with respect to science will minimize agency discretion in considering any non-scientific factors.[250] Second, the agency would be affirmatively required to collect additional data instead of merely relying on incomplete or unclear information.[251] Third, if the scientific data is inconclusive after additional data gathering, the agency will have a

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[240] *Supra* pts. III(B)–(C).

[241] *Supra* nn. 22–24 (discussing separation of powers doctrine).

[242] *Supra* pt. III.

[243] *Supra* pt. III(C).

[244] *Supra* pts. III(B)–(C) (discussing the best science available requirement under the MSA).

[245] *Supra* pts. III(B)–(C) (discussing the best science available requirement under the MSA).

[246] *Supra* pts. III(B)–(C) (discussing the best science available requirement under the MSA).

[247] *Supra* n. 54 and accompanying text (discussing the difficulties plaintiffs face in showing that agency actions are arbitrary and capricious).

[248] *Supra* pt. II.

[249] *See supra* nn. 213–235 and accompanying text (describing the IDCPA's mandates and detailing why it is a superior model).

[250] *See supra* nn. 217–220 and accompanying text (explaining how the IDCPA minimizes agency policy-making).

[251] *See supra* n. 134 and accompanying text (describing science gathering requirement under the IDCPA).

clear understanding of which side it needs to favor, thereby strictly following the legislative mandate, instead of legislating for itself.[252] Fourth, the courts will have greater ability to overturn arbitrary and capricious agency decisions due to the specificity of mandates enumerated in the statute.[253]

C. *Lessons Learned and Applied*

Based on the foregoing, the IDCPA provides a better model of statutory writing. Had the best science available mandate under the MSA been anywhere nearly as specific as the statutory mandate under the IDCPA, the agency's decisions would have been more scientifically based and not the result of pure policy decisions.

In *Southern Offshore Fishing Association v. Daley*,[254] for example, once NOAA Fisheries assessed that the best science available was insufficient, the MSA should have provided that the agency was required to collect additional science before creating a FMP.[255] In addition, even if the newest and best science was still ambiguous, the MSA should have provided which side the agency was to favor.[256] If the MSA were written more to resemble the IDCPA, the agency's duties would be limited to assessing the scientific data to determine whether additional research is necessary and, if so, to conducting that additional research.[257] In the end, however, Congress would retain its policy-making powers in deciding which party the statute is to favor.[258] If, in *Southern Offshore Fishing Association*, NOAA Fisheries had decided that the best science possible was inconclusive, the agency would have followed congressional mandate and given priority to either environmental conservation goals or the economic interests of fishing communities. In either case, however, the choice would have been for Congress to make.

VI. CONCLUSION

In order to maintain scientific integrity in promulgating environmental statutes and various rules and regulations under such statutes, Congress must remain active. Instead of simply directing the appropriate agency to make its decisions based on best science availa-

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[252] *See* 16 U.S.C. §§ 1385(g), 1414(2) (providing clear instructions to NOAA Fisheries).

[253] *Supra* nn. 230–233 and accompanying text.

[254] 995 F. Supp. at 1411. For a discussion of this case, review *supra* pt. III(C)(2).

[255] This would be similar to the requirements now imposed under the IDCPA's sections 1385 and 1414a. 16 U.S.C. §§ 1385(g), 1414a. For a more thorough discussion of these sections, review *supra* nn. 134–135.

[256] Congress made such a choice in the context of the IDCPA by maintaining the stricter tuna labeling standards unless and until NOAA Fisheries determined that purse seine fishing was not having a significant adverse impact on the dolphin stocks. 16 U.S.C. §§ 1385(g), 1414a.

[257] *Supra* pt. IV(B).

[258] *Supra* pt. IV(B).

ble, Congress should utilize the IDCPA's model and be much more precise in its directives. Specifically, Congress should: (1) require the agency to conduct additional scientific studies and collect additional data when the available science is unclear or outdated, and (2) provide clear guidelines to the agency on which side or goal it should favor, even if the best new science is inconclusive. The more specific guidelines would not only provide the agency with better tools to implement the statute, but would result in better agency compliance and a more informed scrutiny by the courts. In addition, on a greater level, congressional action would result in ensuring that the balance of power between the various governmental branches remains constitutionally sound. In the context of environmental and wildlife protection statutes, clear authority residing with Congress is all the more important.