Minimum Size Restrictions Are a Problem for Fisheries—Is Litigation the Solution?

By Judah Leiblich

Fisheries are tightly regulated under the broad Magnuson-Stevens Act, yet fish stocks widely remain either stagnant or in decline. Current management tools are failing to ensure that fish populations maintain the reproductive capacity needed to recover. One of the oldest and most widely used tools is minimum size restrictions. Scientific evidence is mounting that minimum size restrictions are undermining, rather than supporting, the stability and recovery of fish populations. Minimum size restrictions require that undersized fish be discarded, even though many discarded fish subsequently die and do not benefit fish populations. The high mortality of discarded fish means that minimum size restrictions contribute to bycatch. Additionally, encouraging the removal of only the largest individuals is having cascading negative impacts on fish numbers because large fish are the best reproducers. To improve fishery management, the continued use of minimum size restrictions must be questioned.

Acting on this mounting scientific consensus, foreign jurisdictions have begun removing minimum size restrictions. In Norway, the restrictions, which require the discard of undersized fish, have been replaced by a discard ban. Initially introduced to cover the commercial cod fishery, the discard ban faced such overwhelming success that it was expanded to cover all Norwegian fisheries. In Western Australia, a Fisheries Management Paper published in November 2016 notes that minimum size restrictions assume that released fish survive, when in fact, post-release survival is uncertain and often unlikely. The paper notably states that “[t]here is no sustainability benefit for a size limit if released fish have a low rate of post-release survival.” After a species-by-species review, Western Australia has now abolished minimum size restrictions for many popular recreational and commercial fish species.

In the United States, the removal of minimum size restrictions would potentially be attractive to a wide variety of stakeholders, including commercial fishers, recreational fishers, and environmentalists, all of whom seek the sustainable management of fishery resources. In addition to improving fishery management, the removal of minimum size restrictions may be attractive in a political climate where the removal of regulations is encouraged. Nevertheless,

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16 U.S.C. ch. 38 §§1801 et seq.
4Minimum size restrictions restrict the retention of fish caught below a certain specified size. Only fish larger than the minimum size may be kept by fishers.
5Coggins et al., supra note 3; Phillip B. Fenberg & Kaustuv Roy, Ecological and Evolutionary Consequences of Size-Selective Harvesting: How Much Do We Know?, 17 Molecular Ecology 209, 217 (2008); Government of Western Australia Department of Fisheries, supra note 3, at 1.
6Coggins et al., supra note 3.
8Coggins et al., supra note 3.
9Id.
10Peter Gallesstad et al., The “Discard Ban Package”: Experiences in Efforts to Improve the Exploitation Patterns in Norwegian Fisheries, 54 Marine Pol’y 1-9 (2015).
11Id.
12Government of Western Australia Department of Fisheries, supra note 3.
13Id.
minimum size restrictions remain one of the most widely used tools in fisheries management in the United States.

The scientific momentum pushing for the removal of minimum size restrictions, international precedent for successful alternatives to minimum size restrictions, and potential stakeholder support, all provide motivation to remove minimum size restrictions in the United States. This Comment will analyze how litigation can provide the means to do so.

Litigation seeking the removal of minimum size restrictions could assert that such restrictions breach the national standards set out in the Magnuson-Stevens Act. Under National Standard 2 of the Act, it is incumbent on fishery managers to utilize measures based on the best scientific information available, and under National Standard 9, fishery managers must minimize bycatch to the extent practicable. In addition, fishery managers can be challenged under the National Environmental Policy Act (NEPA) for their failure to consider management methods that are viable alternatives to minimum size restrictions.

Part I of the Comment addresses the problems with minimum size restrictions and considers potential alternatives. Part II introduces the Magnuson-Stevens Act and the role of litigation and stakeholder input under the Act. Part III discusses the procedural difficulty of litigation under the Magnuson-Stevens Act, including standing requirements and the obstacle of deference to agency decisionmaking. Part IV addresses pathways for litigation to remove minimum size restrictions under National Standards 2 and 9, and Part V explores the potential for litigation using NEPA. Part VI discusses legal challenges that fishery managers may face after minimum size restrictions have been removed. Part VII concludes.

I. Minimum Size Restrictions

A. The Problem With Minimum Size Restrictions

Minimum size restrictions are possibly the most common regulatory technique for managing recreational and commercial fisheries. Minimum size restrictions allow juvenile fish to be landed by fishers, but prevent them from being taken (kept). Undersized fish caught by fishers must be released under minimum size restrictions, while legally sized, larger fish may be landed. The minimum size is usually set with reference to the size at which the fish species first begins to spawn, generally allowing for at least one spawning event before the fish can legally be taken. Minimum size restrictions also aim to prevent growth overfishing, which occurs when the average size of harvested fish is smaller than the size needed to maximize reproduction. Minimum size restrictions are adopted alongside total catch limits, also called bag limits. Bag limits reduce the total number of individuals taken from a fishery.

Under a minimum size restriction, it remains legal to catch undersized fish, provided they are released. As such, minimum size restrictions are popular amongst recreational fishers and

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19 Stephen, supra note 3.
20 Id.
21 Id.
regulators alike because they in no way limit fishing effort, they merely affect what fish are taken home at the end of the day.

Minimum size restrictions operate on two fundamental assumptions: that most undersized fish caught and released will survive and rejoin the population; and that the removal of larger individuals is preferable to the removal of juvenile fish. Yet contemporary scientific understanding is undermining the foundations of these assumptions. Specifically, it has been shown that large numbers of released fish do not survive, and that the removal of large individuals threatens fish population stability and reproductive potential.

B. Impact on Reproductive Potential and Fish Populations

Minimum size restrictions encourage the taking of larger individuals, yet research indicates these individuals are disproportionately more important to the recruitment, and therefore the recovery, of fish populations. This in turn leads to a reduced reproductive potential in populations, as the mean fish age becomes younger. The importance of large fish to the recovery of fish populations has led scientists to advocate for maximum, rather than minimum, size restrictions. Additionally, when the largest fish in a population are preferentially removed, a practice called size-selective harvesting, fish population dynamics change and the remaining fish begin to mature earlier. Early maturation in response to size-selective harvesting can lead to average fish in a population becoming smaller. As smaller fish are poorer reproducers, size-selective harvesting hampers the ability of fish populations to recover from overfishing. Early maturation and smaller fish also leads to a reduction in the overall weight of fish catches, with corresponding negative economic and social impacts.

C. Fish Mortality

Minimum size restrictions are utilized on the assumption that most undersized fish caught are returned to the water alive and rejoin the population, yet the rate of mortality for caught and released fish—known as discard mortality—is generally unknown. Discard mortality is the hidden cost of minimum size restrictions, and the rate of discard mortality may outweigh any benefit from returning undersized fish to the water. Nevertheless, as fisheries globally are becoming more tightly regulated and fishing effort increases, the number of fish caught and released is also increasing. Barotrauma is a significant cause of discard mortality chiefly affecting reef fish. Barotrauma occurs when a fish’s gas bladder ruptures during capture, rendering it unable to

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22DARYL McPhee, FISHERIES MANAGEMENT IN AUSTRALIA 93-94 (2008).
25Beldade et al., supra note 23, at 2120.
26Susan Lerner-Charlton et al., Assessing Reproductive Resilience: An Example With South Atlantic Red Snapper Lutjanus campechanus, 526 Marine Ecology Progress Series 125, 137 (2015).
27Stephen, supra note 18.
29Coggins et al., supra note 3.
30Id.
31Rudershausen et al., supra note 28.

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return to the bottom.\textsuperscript{32} Other significant factors causing discard mortality include an increased likelihood of death due to stress, predation, damage from landing (gear trauma), or a combination of these factors.\textsuperscript{33}

Minimum size restrictions are often used in combination with bag limits to limit the fish that may be kept by recreational fishers per day. However, there is no limit to the number of undersized fish that can be caught and released, and therefore no limit on discard mortality. The number of legally sized fish retained by a fisher at the end of the day will never accurately reflect the damage to a fishery that a day of catch-and-release fishing has caused.

\textbf{D. Minimum Size Restrictions Cause Bycatch}

Bycatch reduces the economic yield of fisheries due to the discarding of marketable fish, which may in turn force the early closure of fisheries.\textsuperscript{34} There are two main forms of bycatch: regulatory and economic.\textsuperscript{35} Economic bycatch refers to fish caught but thrown back to maximize the value of the retained catch.\textsuperscript{36} Regulatory bycatch refers to fish that would have been retained had retention not been prohibited by regulations.\textsuperscript{37} As regulatory bycatch includes undersized fish that are illegal to retain, regulatory bycatch is almost synonymous with minimum size restrictions.\textsuperscript{38}

Some estimates are that regulatory bycatch accounts for between 60\% and 100\% of discards, although estimate ranges may substantially differ.\textsuperscript{39} Regulatory bycatch has been estimated to cause a yield reduction in the United States of $427.0 million, a loss of $4.2 billion in seafood and related sales, a loss of $1.5 billion in income, and the loss of 64,000 jobs.\textsuperscript{40} Fishery management authorities have recognized the problems posed by regulatory bycatch. In \textit{Conservation Law Foundation v. Evans}, the defendants, fishery managers, recognized the cascading problems posed by bycatch, stating that bycatch substantially increases the uncertainty concerning total fishing-related mortality and complicates efforts to rebuild threatened fish species.\textsuperscript{41}

\textbf{E. An Alternative Framework—Full Retention}

Fishery managers could reduce bycatch by removing minimum size restrictions. This would mean that all fish caught must be retained, and would count toward any bag limits.\textsuperscript{42} The removal or suspension of minimum size restrictions is already practiced in a limited number of U.S. jurisdictions as a method of reducing bycatch, chiefly in commercial fisheries such as the
Alaskan commercial halibut fishery. Internationally, minimum size restrictions have been removed in a number of jurisdictions. In Western Australia, fishery managers are reassessing the efficacy of minimum size restrictions on a species-by-species basis and minimum size restrictions are being removed for species with high release mortality.

In Norway and the European Union, strategies employed to reduce catch-and-release fishing and increase the retention of landed fish have led to a reduction in bycatch. In these jurisdictions, minimum size restrictions are removed as part of a wider framework referred to alternately as no-discard or full retention. These jurisdictions support this framework with a number of ancillary regulations, including an obligation to land all catches, obligations for fishers to move when encountering unwanted bycatch, and allowance for the financial disposal of unwanted bycatch. In a full retention jurisdiction, all fish caught must be kept and counted against applicable quota or bag limits. The removal of minimum size restrictions, when coupled with these ancillary full-retention regulations, creates a framework that allows for very little bycatch and effectively addresses the harm the activity of fishing causes, not just to the targeted species, but to the ecosystem as a whole.

II. Litigation Under the Magnuson-Stevens Act

A. Background on the Act

The Magnuson-Stevens Act provides for the management of fisheries within the 200-mile fisheries zone of the United States. Administered by the National Marine Fisheries Service (NMFS), the Act seeks to balance the use of fisheries as an economic and cultural resource by maximizing yield, and therefore maximizing the economic and social benefits derived from fisheries. The sustainability of the fishing industry, rather than the sustainability of fish species, has been the focus of federal fishery management since the Magnuson-Stevens Act was first developed.

The purposes of the Magnuson-Stevens Act and other guiding principles for fisheries management are codified in 10 actionable national standards at §1851(a)(1)-(10) of the Act. Fisheries are managed by fishery management plans (FMPs), and each FMP must be consistent with these 10 national standards for fishery conservation and management. Under National Standards 1, 2, and 9, FMPs must, respectively, prevent overfishing while achieving optimum yield; set conservation and management measures using the best scientific information available; and conserve and manage fishery resources

45Id.
47KELLEHER, supra note 46.
48Id.
49Id.
50Coggins et al., supra note 3.
52Id. §1851(a).

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and adopt measures that minimize, and reduce the mortality of, bycatch. However, under National Standard 8, FMPs must also consider the importance of fishery “resources to fishing communities” and reduce adverse economic impacts on those communities.

FMPs are developed and regulations are proposed by regional fishery management councils (RFMCs), eight of which have been established to operate in regional fisheries. The FMPs and supporting regulations are then implemented by the supervisory agencies: the U.S. Department of Commerce and National Oceanic and Atmospheric Administration (NOAA) Fisheries. Litigation relating to FMPs is generally conducted against the secretary of the U.S. Department of Commerce, while responsibility for the management and administration of FMPs falls on NMFS.

In 1996, the U.S. Congress strengthened the Magnuson-Stevens Act’s conservation authority by establishing clear requirements for the prevention of overfishing, rebuilding of overfished fisheries, and minimization of bycatch in the Sustainable Fisheries Act. The Sustainable Fisheries Act was an amendment to the Magnuson-Stevens Act, introducing more “ecologically-minded goals” that were intended to facilitate the rebuilding of fish stocks. To rebuild stocks, the Sustainable Fisheries Act focused on the protection of habitat and the reduction of bycatch.

B. Litigation Versus Stakeholder Input

The Magnuson-Stevens Act is unique among environmental statutory schemes because it envisions a management structure that was expected to operate with minimal litigation. Yet there are a number of ambiguities within the Act that have led to litigation, particularly after the introduction of the Sustainable Fisheries Act, which increased the importance of conservation in fishery management. After the Sustainable Fisheries Act was enacted, fisheries litigation became so much more commonplace that NMFS managers became concerned about their ability to continue effectively managing fisheries.

The Magnuson-Stevens Act allows for stakeholders to become involved in the creation of FMPs at the drafting level. Regulatory authorities proposing amendments or new regulations have a corresponding responsibility to consult participants in the fishery to determine whether the proposed amendments or regulations to an FMP would be effective at minimizing bycatch. As stakeholders are generally part of the drafting process, it seems counterintuitive that those...
same stakeholders would then bring litigation against an FMP that was the result of a process in which they were involved.\textsuperscript{68}

Achieving the removal of minimum size restrictions via stakeholder involvement would provide two key benefits. First, if input at the stakeholder involvement level is successful in having minimum size restrictions removed from an FMP, this decision will be difficult to challenge in later litigation. As demonstrated in \textit{Ocean Conservancy v. Evans}, if minimum size restrictions were removed at the amendment stage of an FMP’s development on the basis of reducing bycatch, it would be extremely difficult for an opposing stakeholder to have this removal judicially reviewed under the Magnuson-Stevens Act or NEPA.\textsuperscript{69}

Second, prior stakeholder involvement can play an important role in later litigation. Recent case law suggests that a failure to consult fishery participants about methods for reducing bycatch is a factor in finding breach of National Standard 9.\textsuperscript{70} Courts have shown favor to plaintiffs that have attempted to influence fisheries regulations at the council drafting level. Even if the stakeholder input is unsuccessful, such early involvement may lead to courts being more inclined to consider a plaintiff’s arguments. In \textit{Greenpeace Action v. Franklin}, the court noted Greenpeace’s failure to engage at the council level by making submissions.\textsuperscript{71} Despite the appellate panel stating that they “express no opinion” as to the propriety of choosing to sue rather than submitting comments at an earlier stage, the court nevertheless concluded that it could not characterize the defendant’s actions as arbitrary “for failing to consider views never presented to it.”\textsuperscript{72}

While all stakeholders in fishery management would gain from better management techniques and the removal of minimum size restrictions, the reality is that unanimous or even majority approval of removing minimum size restrictions is unlikely. Recreational fishers generally support minimum size restrictions, as it allows them to continue to fish without any reduction in effort.\textsuperscript{73} Conservationists, viewing minimum size restrictions as a viable management tool, have brought litigation against NMFS for removing minimum size restrictions.\textsuperscript{74} While a greater level of education about the lack of efficacy of minimum size restrictions could change these positions, at present there is an absence of consensus against minimum size restrictions. As such, litigation against fishery managers may be the more viable method of drawing attention to the need to remove minimum size restrictions.

Litigation poses a potentially effective means for removing minimum size restrictions because the inconsistent nature of the national standards provides a ready-made source of conflict—few if any FMPs could hope to meet all the national standards simultaneously.\textsuperscript{75} By handing over the “big unresolved policy questions about how to balance the conflicting goals of fisheries management to administrative oversight,” Congress handed a live grenade to the

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\textsuperscript{69}See \textit{Ocean Conservancy v. Evans}, 17 Fla. L. Weekly Fed. D762, 1, 63 (Fla. 2003) (plaintiffs failed to demonstrate that removal of minimum size restrictions was arbitrary and capricious).

\textsuperscript{70}Flaherty v. Bryson, 850 F. Supp. 2d 1324, 1334, 25 E.L.R. 20639 (9th Cir. 1992).

\textsuperscript{71}Id.


\textsuperscript{73}Ocean Conservancy, 17 Fla. L. Weekly Fed. D762 at 43.

\textsuperscript{74}Ryan, \textit{supra} note 68, at 443.
regional councils, one that can be used effectively by litigants. Despite needing to find balance among a number of competing interests, regional councils are not themselves balanced. Specifically, regional councils have faced criticism for lacking proper representation of all stakeholders, particularly conservationists.

III. Overcoming Procedural Difficulties

A. Deference

Instituting judicial review of an agency’s decision to utilize minimum size restrictions is a daunting task. Overall, NMFS has a winning record in litigation when it comes to its management of federal fisheries. A key factor in this is that the courts generally apply the “arbitrary and capricious” standard to judicial review of an agency’s actions undertaken pursuant to the Magnuson-Stevens Act. This standard looks only at the record that was available to the agency making the decision at the time. The standard is deferential to an agency’s decisionmaking, and will only question an agency’s work when there has been a clear error in judgment. As litigation using the national standards will challenge NMFS’ interpretation of its responsibilities and obligations under the Magnuson-Stevens Act, the deference rule used in Chevron U.S.A., Inc. v. Natural Resources Defense Council will apply.

Courts will generally defer to an agency’s expertise on issues of scientific uncertainty, as courts are not for undertaking comparative evaluations of conflicting scientific evidence. However, the courts will not merely act as a rubber stamp for agency actions, for to do so would be abdicating the judiciary’s role under the Administrative Procedure Act. Even Chevron deference has its limits; courts will not defer to the expertise of an agency when the agency’s interpretation diverges from any realistic meaning of the statute. This limit was reached in Natural Resources Defense Council v. Daley, where the court found that the quota set by the Mid-Atlantic FMC for the summer flounder harvest “so completely diverges from any realistic meaning of the Fishery Act that it cannot survive scrutiny under Chevron Step Two.”

B. Standing

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In an action under the Magnuson-Stevens Act, plaintiffs bear the burden of showing standing at all stages of litigation. Environmental organization litigants have standing when their members would have standing in their own right, the interests the organization is protecting are germane to the organization’s purpose, and the claim does not require participation of individual members. The relevant injury is not injury to the environment as a whole, but injury to the plaintiff specifically. Actual and imminent environmental injury is sufficient to establish standing, provided that pleadings are supported by affidavits from local residents or those who frequent the area and whose recreation and enjoyment of the area is threatened by the subject of the litigation.

There are a number of examples of litigants successfully demonstrating standing in causes of action comparable to a hypothetical challenge seeking the removal of minimum size restrictions. In Center for Biological Diversity v. Blank, the court granted an environmental group standing to challenge the measures adopted for the management of bluefin tuna, even where the quota had not been reduced. In Guindon v. Pritzker, the court granted standing to commercial fishers seeking review of regulations that apply to the recreational sector, as these provisions regulated the amount of catch in the commercial fishery. As minimum size restrictions affect the recreational fishery to a large degree, it is not unforeseeable that commercial fishers may seek, and be granted, review of an FMP containing minimum size restrictions for recreational fishers. Commercial fishers may be motivated to undertake such action as a method of reducing bycatch, which in turn affects the relevant commercial fishery.

IV. Litigation Under the National Standards

The issue of balancing the competing goals of fishery management has been a focal point for litigation under the Magnuson-Stevens Act, providing an opportunity for litigation seeking to remove minimum size restrictions.

A. National Standard

The primary risk of using minimum size restrictions is that by encouraging catch-and-release fishing, minimum size restrictions increase bycatch, which undermines fisheries management. As minimum size restrictions are synonymous with regulatory bycatch, one potential basis for litigation against the use of minimum size restrictions is that they lead to significant regulatory bycatch. Growing concerns about the strain bycatch places on U.S. fisheries led Congress to enact the Sustainable Fisheries Act, which placed more onerous burdens on RFMCs and FMPs to both monitor and reduce bycatch.

93 Id.
95 Craig & Danley, supra note 52, at 402 (citing Bonnie McCay, You Win Some, You Lose Some: The Costs and Benefits of Litigation in Fishery Management, 7 OCEAN & COASTAL L.J. 5, 5 (2001)).
96 NATIONAL MARINE FISHERIES SERVICE, supra note 37.
97 Coggins et al., supra note 3, at 196; 16 U.S.C. §1851(a)(9).
The Sustainable Fisheries Act requires FMPs to rebuild depleted fish populations as soon as possible. Under the Act, FMPs have to establish and maintain monitoring systems for the ongoing assessment of the amount and type of bycatch occurring in each fishery. Additionally, FMPs must, to the extent practicable, minimize bycatch and minimize bycatch mortality where bycatch is unavoidable in all FMPs. The Sustainable Fisheries Act has proven one of the most litigation-generating additions to the Magnuson-Stevens Act and many cases have been brought to enforce the bycatch reduction requirements in the Sustainable Fisheries Act. A number of cases challenging the bycatch reduction provisions of FMPs have been successful, opening the door for future cases to challenge the use of minimum size restrictions, generally on the basis that they do not reduce bycatch to the extent practicable.

Courts have sided with plaintiffs undertaking such litigation where there has been a total absence of consideration of bycatch reduction methods. In Coastal Conservation Ass’n v. Gutierrez, the court found that an FMP failed to reduce red snapper bycatch in breach of National Standard 9. The FMP at issue in Gutierrez was found invalid for failing to address the reduction of red snapper bycatch in the shrimp fishery in any way. The FMP had merely stated that red snapper bycatch would be addressed in a later FMP without any further specifics. Under the Sustainable Fisheries Act, courts have put the onus on management authorities to question the sufficiency of bycatch reduction methods they adopt into FMPs.

In Flaherty v. Bryson, the court rejected an FMP amendment for failure to sufficiently address bycatch reduction. While the amendment contained some bycatch reduction methods, including closing part of the fishery to trawlers for four months and an incidental catch cap on one species, the court determined that these measures failed to sufficiently reduce or consider reduction of bycatch. The court found that the defendants had not produced reasoned analysis of the bycatch issue and, importantly, had not sufficiently reviewed whether the proposed amendment reduced bycatch to the extent practicable.

Reduction of bycatch to the extent practicable means not simply reduction of bycatch for one species, but for the entire FMP. In this way, in contrast with the FMP at issue in Flaherty, an FMP guided by a full-retention policy would meet the requirements of reducing bycatch across an entire FMP as it would necessitate the keeping of all fish caught, regardless of species or whether they are targeted or not. Regulations introduced to support the Magnuson-Stevens Act stress the importance of routinely evaluating measures for bycatch reduction and acting even in the absence of precise estimates of bycatch and bycatch mortality, and these regulations would support reevaluation of the use of minimum size restrictions.

In Pacific Marine Conservation Council, Inc. v. Evans, the court found that the failure to adopt a mandatory bycatch reduction program was in breach of the Sustainable Fisheries Act’s
amendments to the Magnuson-Stevens Act. Importantly, the court found that NMFS breached the Magnuson-Stevens Act by failing to consider potential bycatch reduction methods, one of which was a cap on discards.\textsuperscript{114}

The Sustainable Fisheries Act also introduced more onerous requirements for FMPs to monitor bycatch reduction.\textsuperscript{115} The court in \textit{Pacific Marine Conservation Council, Inc. v. Evans} found that NMFS failed to provide the necessary bycatch monitoring as required by the Sustainable Fisheries Act, and was thus in breach of the Magnuson-Stevens Act.\textsuperscript{116} Critical to its finding was NMFS’ admission that the current level of funding and the proposed observer program were insufficient to monitor the fishery at the required level.\textsuperscript{117}

Litigation to remove minimum size restrictions could argue that minimum size restrictions breach National Standard 9 for a failure to consider the extent to which minimum size restrictions cause bycatch. This could take the form of a failure to monitor the bycatch caused by minimum size restrictions, in line with the arguments made in \textit{Pacific Marine Conservation Council, Inc. v. Evans}. Additionally, litigation advocating the removal of minimum size restrictions from FMPs could argue that potential bycatch reduction methods, including the removal of minimum size restrictions and replacement with a full-retention policy, had not been fully considered, similar to the arguments that were used in \textit{Pacific Marine}.

\textbf{B. National Standard 2}

Alongside National Standard 9, National Standard 2, which states that such measures shall be based on the best scientific information available, could prospectively be used as the basis for litigation challenging the use of minimum size restrictions.\textsuperscript{118} As the damage caused by regulatory bycatch, which is in turn caused by minimum size restrictions, is gradually becoming clearer with better monitoring and scientific data collection, National Standard 2 may increasingly become a valid basis for litigation in this area. Fish stocks are inherently difficult to estimate and methods of determining fish stocks and predicting their growth or decline vary greatly and are consistently difficult to rely on.\textsuperscript{119} The impact of bycatch and discard rate, as well as the mortality of discards, are similarly difficult to determine.\textsuperscript{120}

In recognition of this inherent scientific uncertainty, National Standard 2 calls for FMPs to be written using the best scientific data available, rather than requiring the best possible scientific data.\textsuperscript{121} This unknowability, or scientific uncertainty, means that fulfillment of National Standard 2 frequently requires that best practices be adopted without knowing with certainty that the measures are necessary. Courts have supported this precautionary principle-infused approach to fisheries management that is invoked by National Standard 2.

For example, in \textit{Conservation Law Foundation v. Evans}, the court concluded that once NMFS found a control rule that was preferable based on the best available science, remaining

\begin{itemize}
  \item \textsuperscript{114}16 U.S.C. §1203.
  \item \textsuperscript{115}Id. §1853(a)(11).
  \item \textsuperscript{116}Pacific Marine Conservation Council, 200 F. Supp. 2d at 1201.
  \item \textsuperscript{117}Id.
  \item \textsuperscript{118}16 U.S.C. §1851(a)(1), (2).
  \item \textsuperscript{119}Fenberg & Roy, supra note 5, at 217.
  \item \textsuperscript{120}Steven B. Garner & William F. Patterson, \textit{Direct Observation of Fishing Effort, Catch, and Discard Rates of Charter Boats Targeting Reef Fishes in the Northern Gulf of Mexico}, 113 \textit{FISHERY BULL.} 157 (2015).
  \item \textsuperscript{121}Margret Vellucci, \textit{Fishing for Truth: Achieving the “Best Available Science” by Forging a Middle Ground Between Mainstream Scientists and Fishermen}, 30 \textit{ENVIRONS ENVTL. L. \\& POL'Y J.} 275, 285 (2007).
\end{itemize}

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technical questions as to the rules need not hamper introduction of the new rules. In *Natural Resources Defense Council v. Evans*, the court criticized NMFS for relying on bycatch mortality data that was 15 years old and found that relying on this data, which had almost certainly changed, breached National Standard 2 of the Magnuson-Stevens Act.

National Standard 2 has also been successfully invoked to block regulations that are based on political compromises, rather than available science. In *Hadaja, Inc. v. Evans*, an FMP that proposed a limited access scheme and banned trawl fishing in favor of longline fishing was challenged. The agency admitted that the basis for the new regulations was a compromise reached between two industry groups. The agency argued that the limited access scheme was passed after the corresponding data had been analyzed, and the ban on trawl fishing was appropriate due to the unknown mortality inflicted by trawl fishing.

Nevertheless, the court found that using a compromise as the basis for an FMP rule breached National Standard 2. The court stated that there was a difference between relying on incomplete evidence or deciding between conflicting evidence, and relying on no evidence. The regulations foresee the use of incomplete information as the basis for decisionmaking, but the court’s ruling in *Hadaja* makes it clear that, when questioned, the exact scientific basis for regulations must be identified.

Litigation to remove minimum size restrictions could argue that minimum size restrictions represent a compromise between recreational fishers and fishery managers, as they allow legal high-grading: recreational fishers can bring home fish large enough to be eaten, while authorities can still impose bag limits. By invoking National Standard 2, future litigation could question the weight fishery managers give to compromise-based regulation, and whether managers correctly consider the harm caused by allowing unlimited numbers of undersized fish to be discarded. As in *Hadaja*, litigation could force fishery managers to provide the exact scientific basis for minimum size restrictions, something that current scientific thinking indicates they will be unable to do.

V. Litigation Under NEPA

Actions against NMFS for breach of the Magnuson-Stevens Act are regularly coupled with claims under NEPA. NEPA’s purpose is for government decisionmakers, chiefly agencies, and regulatory authorities to consider the environmental impact of any proposed course of action. Importantly, NEPA also mandates that alternatives to the proposed action be explored prior to approval. NEPA claims are often separated into two parts: adequacy of consideration of the environmental impacts and of the possible alternatives. Agencies have discretion regarding

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124 *Natural Resources Defense Council v. Evans*, 316 F.3d 904 (9th Cir. 2003).
128 *Id. at 354.
129 *Id. at 354, 357.
130 *Id. at 357.
133 *Slater*, 198 F.3d at 866.
which alternatives to include in an environmental impact statement (EIS) or environmental assessment (EA). Breach of NEPA will be found when an EIS or EA omits alternatives that could reasonably be ascertained, the implementation of those alternatives is not remote or speculative, and the alternatives are consistent with policy objectives for management of the area.

In NEPA actions, federal courts have found that injunctive relief is appropriate, provided the remedies balance environmental and societal interests. In considering remedies, consideration is given to the possible long-term environmental effects of failing to award an injunction. In 2006, Congress took steps to reduce the amount of fisheries litigation brought under NEPA with the introduction of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act, by integrating NEPA requirements into the procedure for creating and disseminating FMPs. However, pathways to employ NEPA in fisheries litigation are still available, as illustrated in Flaherty.

A NEPA action would be appropriate to include in litigation seeking the removal of minimum size restrictions, as it would force consideration of alternatives like a full-retention policy. In Flaherty, defendants argued that they took the requisite “hard look” at the environmental impact of an amendment to the FMP. The plaintiffs did not contest this, but argued that the defendants failed to consider the impact of reasonable alternatives. The court agreed with the plaintiffs in Flaherty, finding that the defendants did not provide any reasoned explanation for why they did not discuss reasonable alternatives or the environmental impacts of these alternatives in their EA.

Similarly, in American Oceans Campaign v. Daley, the court found that the agency in its EA inadequately described the impact of fishing practices and failed to consider a broad range of alternatives. In Pacific Marine Conservation, the court found breach of NEPA by the administering agency, finding that it was unreasonable for NMFS to fail to consider alternative bycatch reduction measures. NEPA claims are particularly relevant to actions under the Magnuson-Stevens Act that seek to demonstrate breach of National Standard 9, including any prospective action for the removal of minimum size restrictions, because these actions would focus on the lack of consideration given to the reduction of bycatch by the imposition of a full retention policy.

VI. Surviving Challenges to the Removal of Minimum Size Restrictions

Whether minimum size restrictions are removed by litigation or by stakeholder input, such a change will likely attract opposition from nongovernmental entities, who may seek to undertake litigation themselves to reinstate the current status quo. Commercial and recreational fishers

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often see minimum size restrictions as a legal method of “high-grading,” the process by which less desirable fish, usually smaller individuals of the targeted species, are discarded when larger individuals are caught. As such, it is possible that if an FMP were to introduce a full-retention or similar method of discard management that removes minimum size restrictions, some stakeholders may seek to overturn this management system.

FMPs that remove minimum size restrictions may be vulnerable to litigation, since courts have traditionally favored minimum size restrictions as a method of management that has a less detrimental economic impact on fishers than a simple reduction in allowable catch. This is illustrated by *Southern Offshore Fishing Ass’n v. Daley* (1999), where an FMP that reduced the allowable catch for some shark species was challenged on the basis that NMFS had acted to preserve sharks heedless of the human costs. The court was critical of NMFS for failing to consider minimum size restrictions, noting with favor the plaintiffs’ argument that NMFS should have given greater consideration to alternatives to quota restrictions, including minimum size restrictions.

Interestingly for present purposes, NMFS has been in the position of defending the removal of minimum size restrictions before. In *Ocean Conservancy v. Evans*, an FMP amendment suspended non-quota management mechanisms, including minimum size restrictions and the counting of landings and dead discards against future quotas, pending a stock reassessment. The plaintiff environmental groups challenged the amendment alleging that the suspension of non-quota mechanisms was arbitrary and capricious and violated National Standards 1, 2, and 9.

NMFS argued that the emergency rule suspending use of minimum size restrictions, which was at issue, satisfied National Standard 9 because it suspended the commercial minimum size, implementing separate quotas for ridgeback and non-ridgeback sharks. NMFS argued that suspension of the commercial minimum size, as well as the counting of dead discards against catch quota, would minimize bycatch and incentivize selective harvesting. In defending their decision to suspend the minimum size, NMFS pointed to the fact that a minimum size limit can increase dead discards of sharks that are under the minimum size and lead to increased fishing effort for fishers who are chiefly catching undersized sharks, resulting in overfishing.

These are the same arguments groups seeking the removal of minimum size restrictions could make in favor of removing minimum size restrictions in litigation against NMFS. In *Ocean Conservancy*, it was conservation groups objecting to the removal of minimum size restrictions. In future litigation, it could be conservation groups seeking the removal of minimum size restrictions and recreational fishers objecting to their removal.

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146 Garner & Patterson, supra note 119, at 164.
149 *Southern Offshore Fishing Ass’n*, 55 F. Supp. 2d at 1340.
152 Id. at 46.
VII. Conclusion

Fisheries management is a unique form of natural resource management because all stakeholders, in a way, want the same thing: sustainable fish populations. Yet, differing positions among stakeholders of how fish populations should be divided and managed mean that the odds are against a single effort removing minimum size restrictions. The complicated nature of the Magnuson-Stevens Act’s regulatory framework and the prevalence of species-specific regulations mean thousands of rules would need to be changed. Moreover, litigation in the area has proven difficult for plaintiffs, with scientific rationales successfully changing the status quo only when “clear and convincing.”

Yet, the scientific arguments in favor of removing minimum size restrictions are in fact clear and convincing. The high mortality of released fish and the cascading negative impacts of regulatory bycatch and size-selective harvesting are well-established, and this damage flows to all fishery users, whether conservationist, recreational, or commercial fishers. There are a handful of cases that show that a failure to consider the adequacy of current management techniques, or to consider alternatives, will not be tolerated by the courts.

Full-retention fisheries demonstrate a preferable alternative to minimum size restrictions, but may require a host of additional regulations to be effective. Nevertheless, if the removal of minimum size restrictions can be meaningfully raised at the FMP level and taken to stakeholders, this will not only increase the probability of such regulatory changes being adopted, but will also increase the probability that any future litigation will be successful.