EARTHJUSTICE

June 18, 2021

Ms. Kitty M. Simonds, Executive Director
Western Pacific Fishery Management Council
1164 Bishop Street, Suite 1400
Honolulu, HI 96813

RE: Agenda Item 6.A—Regulatory Amendment to Address Impact on Oceanic Whitetip Shark Stocks by Fisheries in the Western and Central Pacific

Dear Director Simonds and Council Members,

We appreciate your consideration of the following comments on behalf of the Conservation Council for Hawai'i and Kona-based Moana Ohana regarding item 6.A on the agenda for the Western Pacific Regional Fishery Management Council's 186th Meeting. At this meeting, the Council will take final action on a regulatory amendment to the Pelagic Fishery Ecosystem Plan ("FEP") concerning the conservation and management of oceanic whitetip sharks in the Western and Central Pacific Ocean ("WCPO"). These domestic measures are needed to address the relative impact of U.S. fishing vessels on the Western and Central Pacific oceanic whitetip shark population, end overfishing, and rebuild the population, as required under the Magnuson-Stevens Fishery Conservation and Management Act ("MSA"). [1] The regulatory amendment will also be important to meet the requirements of the Endangered Species Act ("ESA"). Because oceanic whitetip sharks are listed as threatened under the ESA, NMFS must ensure that the fisheries the Council manages do not cause jeopardy to the population and must limit and minimize harm to the species.[2]

Given the species' overfished and threatened status, it is critical that the Council minimize catch and mortality of oceanic whitetips to the greatest degree possible by considering a full range of alternatives. As we described more thoroughly in our March 19, 2021 letter to the Council (attached), we support the proposal to transition to monofilament leaders.[3] Out of the alternatives that the Council is considering, we support "Alternative 3" from the draft regulatory amendment—prohibiting wire leaders in all pelagic longline fisheries and requiring removal of trailing gear from oceanic whitetip sharks.[4] Alternative 3 will ensure uniform compliance into the future and will put the U.S. in the best place to advocate for international protections. We also urge the Council to thoroughly analyze an alternative that would include the removal of shallow hooks in addition to the proposed changes. Recent Monte Carlo analysis conducted by

[1] *See* 16 U.S.C. § 1854(i) (requiring Council to develop regulations "to address the relative impact of [US fishing vessels]" on any fish stock deemed "overfished or approaching a condition of being overfished").
[2] *See* 16 U.S.C. § 1536(a)(2) (requiring Federal agencies to insure that any action is not likely to jeopardize the continued existence of a threatened species).
[3] *See* Comment Letter from Moana Ohana and Conservation Council for Hawai'i to the Council re: Pelagic FEP Regulatory Amendment Recommendations (Mar. 19, 2021) (available here).
[4] See Draft Wire Leader Regulatory Amendment, https://www.wpcouncil.org/wp-content/uploads/2021/02/07.C1-Draft-Wire-Leader-Reg-Amendment_186CM.pdf (last accessed June 16, 2021).

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the Pacific Islands Fisheries Science Center demonstrates that removing shallow hooks would double reductions in catch and mortality that can be achieved from just shifting to monofilament leaders alone. As outlined in our previous letter, we urge the Council to consider additional gear and handling training requirements in this amendment. Moreover, the amendment should incorporate a corrodible, circle hook requirement.

I. Background

The oceanic whitetip shark (*Carcharhinus longimanus*) is in serious decline. While believed to have once been among the most abundant sharks in the sea,[5] the population has plummeted over the last few decades.[6] In the Pacific alone, the oceanic whitetip population has declined by as much as 95%.[7]

The current status of the population poses a threat to the long-term health of pelagic fisheries. As apex predators, sharks like the oceanic whitetip regulate the ecological systems that ensure healthy global fish stocks upon which so many coastal and island communities rely. A healthy stock size is essential to keeping mesopredator and prey populations in check, which in turn stabilizes the ecosystem and promotes biodiversity.

The primary driver of the species' continued decline is bycatch. U.S. fisheries in the WCPO cause the incidental catch of over 2,000 oceanic whitetips each year.[8] While that is just a fraction of shark mortality caused by fisheries globally,[9] the oceanic whitetip's mortality rate is double what would be considered sustainable, and the stock's biomass is already about a tenth of the minimum stock size threshold.[10]

In light of the species' critically threatened and overfished status, we urge the Council to include and thoroughly consider a more robust regulatory amendment by supplementing it with the measures described below. Not only will doing so help fulfill the Council and NMFS's legal obligations and align with the best available science, but it will serve to establish best practices for pelagic longline fisheries, which the United States can then work to export through Regional Fishery Management Organizations ("RFMOs") to international and foreign management jurisdictions in order to achieve global gains.

II. Regulatory Amendment to Protect Oceanic Whitetip Sharks (Agenda Item 6.A)

We support the Councils' recommendation for a universal monofilament leader requirement for all deep-set longline fisheries in the WCPO, embodied in the regulatory amendment presently before the Council. With respect to the currently proposed alternatives, the undersigned groups

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[5] *See, e.g.*, https://www.fisheries.noaa.gov/species/oceanic-whitetip-shark
[6] *Id.*
[7] Rigby, C.L., Barreto, R., Carlson, *et al.* 2019. *Carcharhinus longimanus*. The IUCN Red List of Threatened Species 2019: e.T39374A2911619 https://dx.doi.org/10.2305/IUCN.UK.2019-3.RLTS.T39374A2911619.en (last accessed June 16, 2021).
[8] *See* Letter from Michael Tosatto to Archie Soliai re: Change in Oceanic Whitetip Shark Status, (May 1, 2020) http://www.wpcouncil.org/wp-content/uploads/2019/11/13.D3-Tosatto-Memo.pdf.
[9] Worm, et al. (2013), https://www.sciencedirect.com/science/article/abs/pii/S0308597X13000055.
[10] *See* Letter from Michael Tosatto *supra* note 8.

recommend the Council select Alternative 3 in the draft Regulatory Amendment, which would make monofilament leaders mandatory and applied to all longline fleets and require removal of trailing gear. Making monofilament leaders mandatory will standardize the requirement, place the U.S. in a strong position to advocate for similar measures internationally, and is necessary if the measure is to be considered and accounted for under ESA consultation.

Still, more can be done to strengthen this amendment, particularly in light of recent evidence showing the efficacy of monofilament leader requirements in conjunction with other gear requirements and handling practices.

a. Additional Gear Requirements: Elimination of Shallow Hooks and Additional Handling Requirements

We reiterate and emphasize the recommendations in our March 2021 letter where we asked the Council to adopt additional gear requirements, including requiring circle hooks, and non-stainless steel hooks. Because the monofilament leader requirement is more effective in tandem with these other measures than on its own, we urge the Council to consider this more comprehensive approach. In particular, we urge the Council to thoroughly consider an alternative that would include the removal of shallow hooks, given recent evidence demonstrating the effectiveness of such an approach. We also urge the Council to adopt stronger gear handling and training requirements that will ensure sufficient trailing gear is removed whenever sharks are caught to increase their chances of survival upon release.

i. Require Gear Configuration in Hawai'i Deep-Set Longline Fishery that Removes Shallow Hooks

The Council should thoroughly investigate a gear configuration requirement for the Hawai'i deep-set longline fishery to eliminate, reduce, or redistribute shallow hooks. Although the Council briefly considered the removal of shallow hooks in the draft amendment, it rejected the alternative from further analysis because of the potential costs of adopting such a measure.[11] Recent analysis demonstrates, however, that removing shallow hooks combined with a transition to monofilament leaders would be the most effective way to reduce the catch of whitetip sharks. Given the pressing obligations to ensure against jeopardy and end overfishing, it is premature to reject further analysis of this measure.

Shallow hooks are much more likely to catch oceanic whitetip sharks. The shallowest hooks in a longline array are well-understood to preferentially catch sensitive epipelagic species like oceanic whitetip sharks.[12] For this reason, gear configuration requirements have been proposed in some fisheries to ensure the shallowest hooks are at least 100 meters in depth.[13]

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[11] Draft Wire Leader Amendment at p. 27.

[12] *See, e.g.,* Jordan T. Watson & Keith A. Bigelow, Trade-Offs Among Catch, Bycatch, and Landed Value in the American Samoa Longline Fishery, 28 Conserv. Biol. 1012 (2014); Keith Bigelow & Bruno Mourato, PIFSC Working Paper WP-10- 005: Evaluation of Longline Mitigation to Reduce Catches of North Pacific Striped Marlin in the Hawai'i-Based Tuna Fishery (2010).

[13] *See id.*; Steve Beverly et al., Effects of Eliminating Shallow Hooks from Tuna Longline Sets on Target and Non-Target Species in the Hawai'i-Based Pelagic Tuna Fishery, 96 Fish. Res. 281 (2009).

Since the last Council meeting in March, the Pacific Islands Fisheries Science Center (PIFSC), at NMFS's request, completed a Monte Carlo analysis showing that the monofilament leader requirement is most effective in reducing by-catch and post-release mortality when used *in combination with* other measures. For instance, while a switch to monofilament leaders and removal of trailing gear reduced by-catch and post-release mortality by 32% and 30%, respectively, a switch to monofilament leaders *plus* the elimination of shallow hooks adjacent to longline floats nearly *doubled* that decrease.[14]

Substantial questions remain about whether a shift to monofilament leaders alone will be enough to end overfishing and ensure against jeopardy. Because information is lacking about the amount of reductions needed to effectively protect the whitetip population, the Council should act with precaution. At a minimum, the Council should thoroughly evaluate an alternative that includes the removal of shallow hooks because best available evidence demonstrates the effectiveness of such an approach. Both the MSA and the ESA require the Council to prioritize conservation over costs.[15] As a result, the Council can reject a shallow hook alternative because it involves higher costs *only if* the Council can first determine that monofilament leaders alone would be equally protective or will achieve the reductions needed to protect and rebuild the oceanic whitetip population.

The American Samoa longline fishery already has a gear configuration requirement under which float lines must be at least 30 meters and branch lines must be more than 70 meters from any float line, which results in the shallowest hooks being deeper than 100 meters.[16] The Hawai'i-based tuna longline fishery, however, does not have a comparable gear requirement.[17] Although the Council briefly noted that it appears the gear changes in the American Samoa fishery have not affected catch rates of sharks, NMFS has not completed an evaluation of the effectiveness of this approach.

The best available scientific evidence demonstrates that eliminating shallow hooks in conjunction with the switch to monofilament leaders would significantly reduce the amount of bycatch compared to adopting only the monofilament requirement, and is thus more likely to end overfishing under the MSA and protect the population under the ESA. As a result, the Council should thoroughly analyze this alternative as part of its draft regulatory amendment. The undersigned organizations recommend the Council consider a gear configuration requirement for all longline fisheries that would remove shallow hooks. The Council could consider evaluating the effect of the existing template that is available in the American Samoa provisions along with other options, like redistributing or eliminating some hooks. The Council should also evaluate

[14] *See* PIFSC's Report to the WPRFMC (June 2021), https://www.wpcouncil.org/wp-content/uploads/2021/02/05.A.21-140th-SSC-and-186th-CM-PIFSC-Report-to-Council.pdf, ("Median estimates of annual OCS catch were 1,708 for the status quo, 1,153 for monofilament leaders, and 678 with monofilament leaders and no shallow hooks deployed. Median estimates of annual mortality were 362 for the status quo, 255 with monofilament leaders, and 150 with monofilament leaders and no shallow hooks deployed.")
[15] *Natural Res. Def. Council, Inc. v. Daley*, 209 F.3d 747, 753 (D.C. Cir. 2000) ("[NMFS] must give priority to conservation measures. It is only when two different plans achieve similar conservation measures that the Service takes into consideration adverse economic consequences."); *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 185 (1978) (stating that the protection of listed species has priority over all other agency missions).
[16] *See id.* § 665.800 (definition of "deep-set" gear).
[17] *Id.*

whether there are changes that could be made to hook placement that could reduce catch while also minimizing costs.

ii. Better Handling Protocols and Training

A transition to monofilament leaders is expected to result in some modest amount of shark bite-offs, which increases survival for those animals that are able to free themselves. Potentially more important, however, is the ability of crew to cut the leader closer to the hook on monofilament lines, which minimizes trailing gear. Although as currently drafted, Alternatives 2 and 3 include a requirement that vessels remove trailing gear, the draft amendment does not specify how much trailing gear should be allowed. Further, while the amendment endorses outreach and training in the longline fisheries, the amendment does not require that training take place. We encourage the Council to add measures to the alternatives that would ensure that fisheries minimize trailing gear to the greatest extent possible and requires training. In addition, the proposed amendment only requires that fisheries remove trailing gear from oceanic whitetip sharks. We encourage the Council to instead require the removal of trailing gear from all sharks and rays.

Trailing gear is well-understood to be a significant cause of post-release mortality in pelagic sharks.[18] Accordingly, the Council should recognize that the benefits of monofilament leaders are, if anything, underestimated when evaluated solely in terms of avoided catch (bite-offs), as that misses the incidental effects on trailing gear and post-release mortality.

Switching to monofilament leaders is exponentially more effective when combined with better handling and training protocols. The benefits stemming from switching to monofilament leaders is the fact that they are easier to cut so that there is less trailing gear. While monofilament leaders alone have a beneficial effect, those benefits cannot be fully realized without specific requirements to remove sufficient trailing gear and adequate training in place.

In their May meeting, the Pelagic Plan Team recommended that the Council apply the requirement to remove trailing gear to all US longline vessels operating under the Pelagic FEP, citing the fact that this would provide a strong basis for the US to promote similar measures at the RFMOs to address impacts in foreign fleets. Specifically, the Team recommended that the Council consider specifying a target length of trailing gear removal of *less than 1 meter*, while not impeding crew safety. For deep-set fisheries, the Team recommended that the line be cut as safely as possible below the weighted swivel.

This week, the Scientific and Statistical Committee ("SSC") also noted that available scientific information provides support for removing as much trailing gear as possible, including the weighted swivel. The SSC also noted the importance of bringing the shark alongside the vessel to facilitate gear removal and species identification.

We support the Pelagic Plan Team's and SSC's recognition of the role that handling practices play in conservation and implore the Council to implement these recommendations. Ideally no trailing gear is left on a shark. Short of dehooking, crews must be trained to cut lines as close to

[18] *See, e.g.*, Melanie Hutchinson et al., PIFSC Data Report DR-21-001: Quantitative Estimates of Post-Release Survival Rates of Sharks Captured in Pacific Tuna Longline Fisheries (Mar. 10, 2021).

the hook as possible, while keeping the shark in the water alongside the vessel to further decrease post-release mortality.

Finally, we encourage the Council to require the removal of trailing gear from all shark and ray species in order to ensure those species are fully protected. The Council has noted that transitioning to a monofilament leader will reduce mortality of all shark and ray species that are caught, not just oceanic whitetip sharks. However, those benefits cannot be realized unless the crew also removes trailing gear for all shark and ray species. For example, the Pelagic Plan Team and the SSC have both recommended that the Council adopt this regulatory amendment in order to address its 304(i) obligations to end the overfishing of silky sharks. If the Council decides to move forward with those recommendations, it must also require that trailing gear be removed from silky sharks.

* * *

It has been a decade since the oceanic whitetip shark was first designated by the International Union for Conservation of Nature ("IUCN") as a threatened species. Since then, the species has only continued to decline at an accelerating pace and the IUCN now considers it to be critically endangered. We appreciate the Council's efforts thus far to address the bycatch of oceanic whitetip sharks directly in its own fisheries and its recommendations to advance measures in the international community. The successful recovery of the oceanic whitetip shark depends upon the U.S. fully addressing the impacts of its own fisheries and taking a strong leadership role in international management. We urge the Council to carry these efforts forward by thoroughly evaluating all potential options for reducing oceanic whitetip shark take, including the removal of shallow hooks and additional handling requirements.

We look forward to the discussions at the 186th Meeting this month. Thank you for your consideration.

Sincerely,

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ATTACHMENT

EARTHJUSTICE

March 19, 2021

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Dear Director Simonds and Council Members:

We submit the following comments on Agenda Item 7, on behalf of the Conservation Council for Hawai'i and Kona-based Moana Ohana.

At this meeting, the Western Pacific Fishery Management Council must adopt recommendations pursuant to the Magnuson-Stevens Act for domestic regulations to address the relative impact of U.S. fishing vessels on the Western and Central Pacific oceanic whitetip shark stock, as well as recommendations for international actions that will end overfishing and rebuild the stock. *See* 16 U.S.C. § 1854(i)(2).

Domestic management measures also will be important for meeting the requirements of the Endangered Species Act (ESA), as oceanic whitetip shark was declared threatened under the ESA two years ago. *See* 83 Fed. Reg. 4153 (Jan. 30, 2018). The National Marine Fisheries Service (NMFS) currently is developing multiple Biological Opinions to address the impact of U.S.-managed fisheries on oceanic whitetips, and management measures likely will be necessary to mitigate impacts of U.S. longline fleets in the Western and Central Pacific.

Given the species' overfished and threatened status, the domestic management goal must be to minimize oceanic whitetip catch to the greatest degree possible, and to increase survival rates for any individuals caught. Not only will doing so help fulfill the Council and NMFS's management obligations under the Magnuson-Stevens Act and the ESA, but it can serve to establish best practices for pelagic longline fisheries—which the United States can then work to export through Regional Fishery Management Organizations (RFMOs) to international and foreign management jurisdictions.

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For these reasons, the Council should consider all possible options thoroughly and recommend a robust suite of management measures to NMFS. The Council specifically should evaluate and recommend the following management measures:

I. Domestic Measures

A. Require Monofilament Leaders

The undersigned organizations support the Hawaii Longline Association (HLA) proposal to transition to monofilament leaders. This is a good idea from a conservation perspective, and the industry's leadership in this regard should be encouraged.

Wire leaders have been used in the Hawaii deep-set fishery to prevent flyback of weighted swivels, but wire leaders generally prevent sharks from biting through the line and freeing themselves. They also make it difficult for crew to minimize trailing gear on released animals.

In the past few years, flyback prevention devices and similar innovations have been developed to help mitigate the safety concerns associated with mono leaders and weighted branch lines. With these techniques available, mono leaders are a viable option and should be pursued.

A transition to mono leaders is expected to result in some modest amount of shark bite-offs, which increases survival for those animals that are able to free themselves. Potentially more important, however, is the ability of crew to cut the leader close to the hook when mono leaders are used. This allows trailing gear to be minimized, and trailing gear is well-understood as a significant cause of post-release mortality. *See, e.g.*, Melanie Hutchinson et al., PIFSC Data Report DR-21-001: Quantitative Estimates of Post-Release Survival Rates of Sharks Captured in Pacific Tuna Longline Fisheries (Mar. 10, 2021).

Because minimizing trailing gear will require some changes to handling practices, HLA's industry-funded training for crew members is an important component of the transition to mono leaders. The Council should encourage NMFS to support this training as needed. Further, the Council should consider adding a crew training program as a sub-option within the alternatives in the Wire Leader Regulatory Amendment, if NMFS indicates such an addition is possible. It is critical that training reaches all parts of the fleet and is repeated sufficiently.

While we support a change to mono leaders, it is critical to ensure that leaders—as well as branch lines—have a sufficiently high breaking strength to be able to straighten hooks under

the False Killer Whale take reduction measures. We understand there is some concern that current line strength requirements, *see* 50 C.F.R. § 229.37(c), are not sufficient, and that branch lines and/or leaders are breaking before hooks are straightened. The Council should flag this issue for NMFS and consider how it may be addressed going forward.

In terms of structuring a mono leader requirement, the undersigned groups recommend Alternative 3 in the draft Regulatory Amendment, which would make it mandatory and applied to all longline fleets—as well as adding a handling practices training sub-option, as noted above. Making mono leaders mandatory will ensure uniform compliance across the fleet, such that HLA members are not disadvantaged. It also is necessary if the measure is to be considered and accounted for under ESA consultation.

Finally, the largest conservation gains can be made at the international level and setting a uniform requirement for mono leaders in all of our domestic fleets will position the U.S. delegation to the Western and Central Pacific Fisheries Commission (WCPFC) to advocate strongly for an international mono leader requirement.

For these reasons, the Council should take initial action to identify Alternative 3 in the Draft Wire Leader Regulatory Amendment together with a crew training program as the preliminary preferred alternative, and set the matter for final action on a future meeting agenda.

B. Add a Circle Hook Requirement for the American Samoa Fleet

All domestic fleets currently use circle hooks, either as a regulatory requirement or as a matter of practice. The Hawaii shallow-set fishery is required to use circle hooks under Magnuson regulations, *see* 50 C.F.R. § 665.813(f), and the deep-set fishery is required to use circle hooks under false killer whale take reduction regulations, *see id.* § 229.37(c)(1)(i). In the American Samoa longline fishery circle hooks are not required, but as a matter of practice the fleet uses size 13/0 and 14/0 circle hooks. *See, e.g.*, Hutchinson et al., *supra*, at 37.

The Council should establish a circle hook requirement for the American Samoa longline fishery in order to complete the coverage of our domestic longline fleets under circle hook requirements. Given widespread current use of circle hooks in the American Samoa fishery, a regulatory requirement would not involve changes on the water, but rather would situate the United States to advocate for mandatory circle hooks at the international level.

Once all domestic fleets are covered by a circle hook requirement, the U.S. delegations to the Pacific RFMOs can make a stronger case for circle hook requirements internationally. An international circle hook requirement is already being discussed as a striped marlin measure relative to WCPFC. Completing our domestic coverage would give the United States a solid position if it were to pursue an international longline circle hook requirement in the striped marlin context, or in a subsequent shark initiative. And an international circle hook requirement would bring substantial benefits, given that some high-effort foreign fleets currently do not use circle hooks.

The Council should include a circle hook requirement for the American Samoa fleet as a domestic recommendation for oceanic whitetip shark under Section 304(i) of the Magnuson-Stevens Act, and should move forward swiftly with adopting it in the Pelagics Fishery Management Plan so as to facilitate international action on circle hooks.

C. Require Non-Stainless Steel Hooks

Bycatch species like sharks are often released with hooks embedded in their mouths. Embedded hooks can affect sharks directly, and they also serve as anchor points for trailing gear—which is well-established as an energetic drain and source of post-release mortality. *See* Hutchinson et al., *supra*.

When hooks are made from corrodible metals, they rust out and can be shed much more quickly than stainless steel hooks. Research bears this out, showing that non-stainless hooks have a shorter residence time in sharks. *See, e.g.*, Michel Bègue et al., Prevalence, Persistence and Impacts of Residual Fishing Hooks on Tiger Sharks, 224 Fisheries Res. 105462 (2020). Corrodible hooks therefore offer the potential for lower post-release mortality of sharks and other bycatch species. As they break free of the animal, they not only remove the foreign object embedded in that animal's tissue, but they also release any attached trailing gear.

For precisely this reason, a number of other U.S. fisheries have adopted non-stainless hook requirements. *See, e.g.*, 50 C.F.R. § 635.21 (U.S. Atlantic pelagic and bottom longline fisheries); *id.* § 635.22 (U.S. East Coast and Gulf of Mexico recreational shark fisheries); *id.* §§ 622.30, 622.188 (U.S. Southeast reef fish and snapper-grouper fisheries). The Hawaii-based and American Samoa longline fisheries, however, are not currently required to use non-stainless hooks. *See id.* §§ 665.798-819.

A non-stainless hook requirement is an important complement to (1) mono leaders and (2) circle hooks, and would significantly help to minimize post-release mortality of these vulnerable sharks. Mono leaders give crew the opportunity to cut lines close to the shark, while non-stainless hooks allow the hook and any remaining line to shed off from the shark more quickly after the initial line cutting. These measures reinforce each other, and together effectively minimize trailing gear in sharks. Further, because mono leaders will require regular inspection and replacement, crew will already be inspecting the terminal tackle regularly and can replace rusted hooks at the same time. While these inspection and replacement tasks do take crew time, there is efficiency in doing them together.

Circle hooks reinforce and make more effective a non-stainless hook requirement as well. Circle hooks ensure that the vast majority of hooking occurs in sharks' mouths, rather than internally; this location is better for corrodible hooks in that it is less sensitive than internal areas and provides an optimal place from which corrosion-induced weakening can release the hook. *See, e.g.*, Heather M. Patterson & Michael J. Tudman, Australian Fisheries Management Authority, Chondrichthyan Guide for Fisheries Managers, at 69 (2009) (pointing out that "[c]ertain combinations of the mitigation options identified may compliment each other and achieve better results than if working in isolation," and specifically, "changing from non-corrodible J-hooks to corrodible circle hooks at the same time will be more cost efficient and likely more effective than making a single gear change").

A non-stainless hook requirement therefore would have added effectiveness in U.S. Pacific longline fisheries, given current circle hook usage and the anticipated mono leader requirement.

For these reasons, the Council should recommend a non-stainless hook requirement for all U.S. Pacific longline fisheries and move swiftly to adopt the requirement. This approach not only would be consistent with the Council's duties under Section 304(i) of the Magnuson-Stevens Act, but it also could allow the Council to have a more active role in shaping management measures under the current ESA consultations.

Moreover, as with the two measures discussed above, a domestic non-stainless hook requirement would position the United States to push for a similar requirement at the international level—which would have huge conservation implications.

As a final note, like the mono leader requirement, a non-stainless hook requirement could necessitate some analysis of the weak hook measures under the false killer whale take reduction plan. Non-stainless hooks have different tensile strengths than stainless hooks, so it is possible

that current regulations would need to be changed in order for the weak hook and hook-straightening protocols to work successfully. This should not be used as a reason to ignore non-stainless hooks, but rather as an opportunity to ensure that the weak hook measures are working as intended.

D. Consider a Gear Configuration Requirement for the Hawaii Deep-Set Longline Fishery to Eliminate Shallow Hooks

In addition to adopting the measures described above into regulations, the Council should consider is a gear configuration requirement for the Hawaii deep-set longline fishery to eliminate or redistribute shallow hooks.

The shallowest hooks in a longline array are well-understood to preferentially catch sensitive epipelagic species like oceanic whitetip sharks. *See, e.g.*, Jordan T. Watson & Keith A. Bigelow, Trade-Offs Among Catch, Bycatch, and Landed Value in the American Samoa Longline Fishery, 28 Conserv. Biol. 1012 (2014); Keith Bigelow & Bruno Mourato, PIFSC Working Paper WP-10-005: Evaluation of Longline Mitigation to Reduce Catches of North Pacific Striped Marlin in the Hawaii-Based Tuna Fishery (2010).

For this reason, gear configuration requirements have been proposed in some fisheries to ensure the shallowest hooks are at least 100 meters in depth. *See id.*; Steve Beverly et al., Effects of Eliminating Shallow Hooks from Tuna Longline Sets on Target and Non-Target Species in the Hawaii-Based Pelagic Tuna Fishery, 96 Fish. Res. 281 (2009). When shallow hooks are redistributed to lower points on the mainline, studies show that vessels can maintain target species catch rates and ex-vessel values, albeit with some amount of added labor. *Id.* at 286-87.

The American Samoa longline fishery has a gear configuration requirement under which float lines must be at least 30 meters and branch lines must be more than 70 meters from any float line, which results in the shallowest hooks being deeper than 100 meters. *See* 50 C.F.R. § 665.813(k). The Hawaii-based tuna longline fishery, however, does not have a comparable gear requirement. *See id.* § 665.800 (definition of "deep-set" gear).

The undersigned organizations recommend the Council consider a gear configuration requirement for the Hawaii deep-set fishery to ensure all hooks are deeper than 100 meters. An existing template for regulation is available in the American Samoa provisions, and eliminating shallow hooks would be consistent with minimizing U.S. bycatch and restoring protected species under the ESA.

E. Set Annual Catch Limits

Under the Magnuson-Stevens Act, NMFS must set annual catch limits for all managed species. The agency has misinterpreted Congressional language on the deadlines by which it was supposed to establish annual catch limits, *see* 16 U.S.C. 1853 note, to create an exemption for all internationally-managed species, which it applies to oceanic whitetip shark. *See, e.g.*, 82 Fed. Reg. 18,716 (Apr. 21, 2017) (failing to set annual catch limits for pelagic management unit species).

The law requires NMFS to establish annual catch limits for oceanic whitetip sharks. This requirement is all the more urgent given that oceanic whitetips are overfished and subject to overfishing, and have been listed as a threatened species under the ESA. These overlapping legal designations mean that annual catch limits for oceanic whitetip shark must sufficiently reduce and constrain the U.S. contribution to the stocks mortality to facilitate rebuilding and recovery. The Council should urge NMFS to comply with its legal duties under sections 303(a)(15) and 304(i) of the Magnuson-Stevens Act, and establish annual catch limits for oceanic whitetip shark.

II. International Measures

Under the Magnuson-Stevens Act, the overfished declaration for oceanic whitetip shark gives this Council the duty to formally "develop and submit recommendations to the Secretary of State, and to the Congress, for international actions that will end overfishing in the fishery and rebuild the affected stock[]." 16 U.S.C. § 1854(i)(2)(B). We encourage the Council to use this opportunity to advocate for strong, precautionary management of oceanic whitetip sharks at the international level.

Adopting effective conservation measures for the domestic fleet and exporting these measures to international fisheries will help meet the Council's duties to end overfishing and rebuild the oceanic whitetip shark population and will put the United States fleets on a more equal footing with foreign longline fleets. In addition, actions to end overfishing and rebuild oceanic whitetip sharks will, in many cases, have conservation benefits for more than just this species of shark, so we encourage the Council to think broadly in developing its international recommendations.

A. Increase Observer Coverage

Oceanic whitetips are caught primarily in Pacific longline fisheries, which have very low levels of observer coverage basin-wide. Domestic observer coverage levels normally are around 20% in the Hawaii deep-set and American Samoa longline fisheries, and 100% or the Hawaii shallow-set fishery. The Oceanic Whitetip Working Group recommends an increase in observer coverage at the international level to 10%, including compliance via electronic monitoring. *See* OCS-WG Findings Report, at 7 (Mar. 2021). We agree that electronic monitoring could play an important role, and encourage the Council to be more ambitious and recommend an international requirement of 20% observer coverage for longline fisheries. Such a requirement, if adopted by the WCPFC and IATTC, would provide much-needed data from foreign fleets, and would aid in monitoring compliance with international conservation measures.

B. Require Circle Hooks

Circle hooks are not currently required at the WCPFC, and some of the high-effort foreign fleets are understood to use tuna hooks or other non-circle hooks. These hooks are known to have higher catch rates for species like oceanic whitetip sharks, and in some cases can result in damaging gut-hooking of animals. *See generally* Shelley Clarke et al., U.N. FAO Fisheries & Aquaculture Technical Paper No. 588, Bycatch in Longline Fisheries for Tuna and Tuna-Like Species, at 47 (2014). We agree with the Oceanic Whitetip Shark Working Group that "the use of circle hooks in international longline fisheries [would] be [an] important step[] to reduce fishing mortality." OCS-WG Findings Report, at 7.

The Council should recommend that the United States advocate for a conservation and management measure (CMM) that requires circle hooks at the international level. As explained above, circle hook use by all longline fleets would be expected to reduce catch of oceanic whitetip sharks and other species and promote post-release survival. It also can work with other measures (such as non-stainless hooks and mono leaders) in efficient ways to further reduce shark mortality. This should be a high-priority goal at the international level.

C. Ban Shark Lines

At the WCPFC, CMM 2019-04 allows nations to choose between wire leaders and shark lines. This should not be a choice. Shark lines in a deep-set longline fishery have no function other than to catch sharks. Given the international retention bans on oceanic whitetip and silky

sharks, the high discard rates of many other shark species, and the risk of finning in under-monitored fisheries, shark lines should be prohibited.

The United States should press for a complete ban on shark lines in longline fisheries at the WCPFC. This would dramatically reduce mortality on oceanic whitetip sharks and other shark species, and would go a long way toward the goal of ending overfishing and rebuilding the stock. The undersigned organizations urge the Council to recommend such a measure.

D. Require Monofilament Leaders and Handling Protocols

As described above, mono leaders can—when combined with good handling protocols—allow for reduced trailing gear on released sharks. We agree with the Oceanic Whitetip Working Group and urge the Council to build on its domestic action toward mono leaders by recommending a similar requirement at the international level. *See* OCS-WG Findings Report, at 7-8. This would involve revising the other half of WCPFC CMM 2019-04, such that wire leaders are no longer an option. Crew training will be critical in this scenario, so the Council and NMFS should consider how best practices can be spread at the international level. *See id.* at 8 (discussing international handling practices).

E. Require Non-Stainless Hooks

Hundreds of thousands of animals—if not millions—are released from longline fisheries every year in the Pacific basin, with hooks embedded in their mouths or elsewhere in their bodies. The United States' share is likely in the tens of thousands of animals, and we can address this share by requiring non-stainless hooks domestically, as described above.

All the rest of these animals, however, are waiting for a non-stainless hook requirement at the international level. The Council should build on a domestic non-stainless hook requirement by recommending a similar measure internationally. While the precise reduction in post-release mortality may be difficult to quantify, at least immediately, the concepts underlying corrodible hooks are well established and the results have been observed in situ. *See* Bègue et al., *supra*. Non-stainless hooks further complement circle hooks and mono leaders, as noted above. This should be a high-priority measure for the Council and NMFS.

F. Establish an International Rebuilding Plan

Rebuilding plans at the international level provide an important framework for managing overfished stocks that are shared by multiple countries. The undersigned organizations encourage the Council to recommend creation of an international rebuilding plan for oceanic whitetip shark, as one of its recommendations under Section 304(i) of the Magnuson-Stevens Act for "international actions that will . . . rebuild the affected stock[]." An international rebuilding plan with a target biomass and time frame for rebuilding would be helpful, as it would create a focal point for international management of oceanic whitetip shark and would provide leverage for strengthening international management measures for the species.

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Thank you for your consideration, and we look forward to the discussion at the Council's upcoming meeting.

Yours truly,

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