Summary:
In May 2019, the NOSB requested a work agenda to annotate fish oil to address environmental concerns. Specifically, The NOSB request stated:

During the sunset review of Fish Oil at the Spring NOSB 2019 meeting the NOSB asked for comment on how to address environmental and conservation concerns raised about the manufacturing of Fish Oil. Public comment was received validating these concerns as well as suggesting annotative language to address this area of concern. These annotations were proposed by industry and trade associations as well as interest groups. The Handling Subcommittee (HS) would like to request a work agenda item to propose an annotation to Fish Oil to address environmental concerns.

In August 2019, the NOP agreed to add this item to the NOSB work agenda. Specifically, the NOP stated:

You have requested to review the current listing of fish oil and develop recommendations to address the environmental impact of harvesting of fish directly for their oil. Please limit your work to this topic; this work agenda item does not include the organic certification of fish (i.e. aquaculture or wild seafood standards). In your review, please consider how your recommendations would align with other Federal regulations addressing fish harvesting.

Citations:

**OFPA § 6517. National List**
(c) Guidelines for prohibitions or exemptions
(1) Exemption for prohibited substances in organic production and handling operations The National List may provide for the use of substances in an organic farming or handling operation that are otherwise prohibited under this chapter only if—
(A) the Secretary determines, in consultation with the Secretary of Health and Human Services and the Administrator of the Environmental Protection Agency, that the use of such substances—
(i) would not be harmful to human health or the environment;

**OFPA § 6518. National Organic Standards Board**
(l) Requirements
In establishing the proposed National List or proposed amendments to the National List, the Board shall—
(1) review available information from the Environmental Protection Agency, the National Institute of Environmental Health Studies [sic (National Institute of Environmental Health Sciences)], and such other sources as appropriate, concerning the potential for adverse human and environmental effects of substances considered for inclusion in the proposed National List;

**OFPA § 6518. National Organic Standards Board**
(m) Evaluation
In evaluating substances considered for inclusion in the proposed National List or proposed
amendment to the National List, the Board shall consider—

(6) the alternatives to using the substance in terms of practices or other available materials; and
(7) its compatibility with a system of sustainable agriculture.

7 CFR 205.606 Nonorganically produced agricultural products allowed as ingredients in or on processed products labeled as “organic.”

Only the following nonorganically produced agricultural products may be used as ingredients in or on processed products labeled as “organic,” only in accordance with any restrictions specified in this section, and only when the product is not commercially available in organic form.

(e) Fish oil (Fatty acid CAS #’s: 10417-94-4, and 25167-62-8)—stabilized with organic ingredients or only with ingredients on the National List, §§205.605 and 205.606.

Summary of Review:

Fish oil was added to the National List in 2007, based on a petition from a manufacturer. At that time the NOSB did not request a Technical Report (TR) or Technical Advisory Panel Report (TAP). The 2007 NOSB recommendation indicated that the OFPA criteria were met in all categories but provided no scientific rationale or citations to support such findings. However, the final NOSB recommendation from May 9, 2007, stated “pursuant to the judgment in Harvey v. Johanns, the NOSB was instructed to develop criteria for determining commercial availability, an essential tool in evaluating whether or not petitioned materials could be listed at § 205.606.” These criteria were finalized in the NOSB “Recommendation for the Establishment of Commercial Availability Criteria National List § 205.606” of October 19, 2006. “That recommendation allows for pro-active listing on § 205.606 of materials that may currently be available in an organic form, but the supply of which has a history of fragility due to factors such as limited growing regions, weather, or trade-related issues. “... After discussion, the Board decided to add an annotation to the recommendation to list fish oil to the National List. The annotation is “stabilized using only allowed ingredients on the National List.” The Board felt that this annotation was not overly prescriptive since a nonorganic material that falls within the annotation exists on the market.” The NOSB (2007) further noted that “There were no public comments specifically opposing the listing of fish oil on §205.606....”

While the NOSB has submitted several recommendations on organic aquaculture standards, the NOP has not proceeded with rulemaking on these recommendations. At this time organic fish and therefore organic fish oil cannot be produced under the USDA organic regulations. If fish oil is to be used by organic food manufacturers it must remain on the National List.

In subsequent sunset reviews in 2015 and 2019, public comment indicated that the listing as is left room for concern based on how the fish for the fish oil were harvested. Sustainability of fishing is a key environmental concern and the U.S. has been a leader in managing sustainable fishing. The management of U.S. Fisheries is primarily governed by the Magnuson-Stevens Fishery Conservation and Management Act of 1976. This act recognized the need to manage fisheries to ensure fish stocks would be able to continually produce without depletion. Specifically, it sought to prevent overfishing, rebuild overfished stocks, increase long-term economic and social benefits, and ensure a safe and sustainable supply of seafood. NOAA fisheries manages this program for federal waters (extending 200 miles offshore but excluding state managed water within 3 miles of the shoreline) and states “U.S. fisheries are scientifically monitored, regionally managed, and legally enforced under 10 national standards of sustainability. Managing sustainable fisheries is a dynamic process that requires constant and routine attention to new scientific
information that can guide management actions. According to the World Wildlife Fund, “seven of the world’s top ten fisheries (by volume) target forage—also known as low trophic level—fish, 90 percent of which are processed into fishmeal and fish oil.” Fish and shellfish are renewable resources—they can reproduce and replenish their populations naturally. Because of this, we can sustainably harvest fish within certain limits without depleting the resource. Fishery management is the process of using science to determine these limits—some fish are caught while some are left to reproduce and replace the fish that are caught.” As part of its regulatory duties, NOAA maintains a Fish Stock Sustainability Index. In this index fish stocks by region are described as:

- **Maximum sustainable yield (MSY):** The largest long-term average catch that can be taken from a stock under prevailing environmental and fishery conditions.
- **Overfishing:** A stock having a harvest rate higher than the rate that produces its MSY.
- **Overfished:** A stock having a population size that is too low and that jeopardizes the stock’s ability to produce its MSY.
- **Rebuilt:** A stock that was previously overfished and that has increased in abundance to the target population size that supports its MSY.

In the U.S., NOAA data shows a slight decreasing trend in the number of fish stocks that are not overfished or subject to overfishing.

The United Nations Food and Agricultural Organization (FAO) similarly recognizes concerns about over exploitation of fish. In its 2016 report, FAO recognized that worldwide overfished stocks had increased from 10% of total stocks in 1974 to 33.1% in 2015. The FAO classifies fish stocks fisheries around the world in terms of population stability. The FAO categories include:

1. Over-exploited
2. Fully exploited.

**Proposed Annotation Discussion**

Significant U.S. regulation and International regulation exists to address the environmental concerns of overfishing. In addition, there are numerous private standards established to monitor fishing, including, but not limited to, voluntary third-party organizations that certify fishery practices to sustainability standards such as the Marine Stewardship Council (MSC), Friends of the Sea, Global Standard for Responsible Supply (IFFO RS), and Sustainable Fisheries Partnership. In contrast to third-party certifiers, there are groups like Seafood Watch (https://www.seafoodwatch.org/) that grade fish products by environmental criteria (i.e., red, yellow, green) but do not certify products on a fee basis. Thus, fish producers have no choice as to whether their products are assessed against environmental criteria by Seafood Watch.

Previously, the Handling Subcommittee presented a discussion document for the April 2020 NOSB meeting that argued that while private third-party standards may be sufficient to address potential environmental concerns related to fishing, the use of sufficient and recognized U.S. Government national standards and United Nations international standards may be preferred because legal definitions have been defined and are potentially more enforceable compared with third-party private entities.

**Public Comment Summary**

Several dairy and other producers reported using fish oil in milk and other products and projected lost sales

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**Graph Image Description:**

- **Trend Chart:**
  - **X-axis:** Year (2010-2019)
  - **Y-axis:** Percentage of Stocks
  - **Legend:**
    - % stocks not subject to overfishing
    - % stocks not overfished

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**Graph Data:**

- **Yearly Data:**
  - 2010: 60%
  - 2011: 55%
  - 2012: 50%
  - 2013: 45%
  - 2014: 40%
  - 2015: 35%
  - 2016: 30%
  - 2017: 25%
  - 2018: 20%
  - 2019: 15%
if fish oil was not allowed as part of the non-organic 5% of USDA Organic labeled products.

The Handling Subcommittee originally suggested adding three elements to the current fish oil annotation. The first element would state that fish oil should be sourced from fishing industry by-product only. This annotation would prevent the use of fish caught solely for oil production. Note, krill are not recognized as fish. Because the National List specifically identifies “fish oil”, oils derived from krill are not allowed in organic products and are not the subject of this annotation.

In public comment in 2019 and 2020, it was noted by industry and trade associations that fish oil is always a byproduct due to economics, but environmental groups remain concerned that fisheries may be exploited exclusively for fish oil production. Overall, public comment supported restricting fish oil production only as a byproduct.

Earlier discussion documents proposed an annotation limiting fish oil production from fisheries that were harvested such that, when the fisheries were within National Oceanic and Atmospheric Administration (NOAA)’s or Food and Agriculture Organization (FAO)’s jurisdiction, they must not be unsustainably exploited.

These suggested annotations received substantial public comment which raised concerns by some certifiers and fish-oil industry representatives. Certifiers were concerned about their lack of expertise to ensure compliance with either NOAA or FAO standards, and recommended a simple affidavit by processors verifying compliance. Others were concerned that while NOAA and FAO standards were similar in objectives, they were not directly comparable because they used different timeframes and population assessment methods, including different data sources and populations modeling techniques. Thus, application of standards based on NOAA and FAO classifications would likely not be uniform across producers or verifiable by organic certifiers and would introduce regulatory inconsistency, and therefore would not be a practical bar to set for fishery sustainability standards. Other limitations to these governmental standards include:

- There are state managed marine fisheries where NOAA doesn’t have jurisdiction and thus doesn’t assess the populations. In these cases, there may be specific populations that are overfished while the species as a whole may not be;
- Many fisheries in foreign waters are not necessarily tracked by FAO but may, in fact, meet sustainability standards, or be over-exploited;
- Many fisheries in international waters are not tracked by governmental or international agencies but may, in fact, meet sustainability standards, or be over-exploited;
- For some species, some populations may be at risk of over-exploitation, whereas other local populations may be sustainable, without clear market demarcation of fish origin.

In response to these concerns, the HS reached out to scientists at NOAA, Seafood Watch, and MSC. These individuals and groups recommended annotation language consistent with public comments suggesting certification of environmental sustainability “by a third-party certifier” as more likely to achieve OFPA goals.

This suggested reliance on third part certification for National List annotation raises several concerns, including:

1. Organic environmental sustainability standards would be sourced outside USDA and other U.S. government agencies;
2. There is potential for “greenwashing” if an unscrupulous third-party certifier did not meet environmental sustainability standards;
3. Requiring third-party certification could exclude smaller-scale producers that cannot afford third party certification even though their fishery meets sustainability standards.

However, there are also advantages to relying on third-party certification programs for non-agricultural products that derive from natural resources. According to MSC and other scientists consulted, “certification schemes are complex and, within seafood, cover varying issues related to environmental sustainability and social responsibility ... the question on which certifications meet the requirements laid out by the NOSB for fish oil will undoubtedly come up. It would be a challenge for the NOSB to create and maintain a list of acceptable certification schemes for fish oil in organic products and would require constant vetting of the changes of each certification...”

Three examples of a possible annotation were discussed at the April 2021 NOSB meeting (see box). Overall, public comment leaned to Option 2. Fish oil producers generally preferred Option 1 but would accept Option 2. Dairy and other groups producing products containing fish oil leaned toward Option 2 and were not concerned about impacts product availability. Option 3 utilizing the Seafood Watch program was also supported, but concerns were raised about the size and reach of the program.

Option 2 in particular has several advantages according to MSC because the “... International Social and Environmental Accreditation and Labeling (ISEAL) and Global Seafood Sustainability Initiative (GSSI)... [are]... global membership organization for ambitious collaborative, and transparent sustainability systems. One of their core work streams is defining credible practice of programs based on emerging global consensus...” These “…organizations ... are highly respected globally as leaders in science-based sustainability certifications. There are established processes, quality controls and quality assurances already in place for GSSI recognized and ISEAL compliant certification programs. GSSI and ISEAL help to define and ensure programs demonstrate their continual compliance in upholding best practice for seafood sustainability certifications and sustainability systems at a global level. Further information on the rigor and process of becoming Gssi benchmarked or an ISEAL Code Complaint member can be found on the respective organizations’ website” and the requirements would be clear and enforceable.

Based on public comments and consultation with MSC, the Handling Subcommittee modified Option 2 and recommends adoption of the following annotation.

**Fish oil annotation:** §205.606 (e) Fish oil (Fatty acid CAS #'s: 10417-94-4, and 25167-62-8) - stabilized with organic ingredients or only with ingredients on the National List, §§205.605 and 205.606. Sourced from fishing industry by-product only and certified as sustainable against a third-party certification that is International Social and Environmental Accreditation and Labeling (ISEAL) Code Compliant or Global Seafood Sustainability Initiative (GSSI) recognized.

In the future, listing of fish oil at §205.606 and the annotation can be reevaluated when organic aquaculture standards are approved.
**Subcommittee Vote:**
Motion to accept the proposed fish oil annotation
Motion by: Asa Bradman
Seconded by: Kyla Smith
Yes: 6  No: 0  Abstain: 0  Absent: 1  Recuse: 0

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**Citations:**
- Fish oil annotation discussion document, April 2021 NOSB meeting
- [https://www.worldwildlife.org/industries/fishmeal-and-fish-oil](https://www.worldwildlife.org/industries/fishmeal-and-fish-oil)
- 2019 Fall Sunset Review – Fish Oil, NOSB Public Comments Fall 2019 NOSB meeting
  
- [https://www.fishwatch.gov/sustainable-seafood/managing-us-fisheries](https://www.fishwatch.gov/sustainable-seafood/managing-us-fisheries)
- [https://www.fisheries.noaa.gov/national/population-assessments/status-us-fisheries](https://www.fisheries.noaa.gov/national/population-assessments/status-us-fisheries)
- [https://www.msc.org/](https://www.msc.org/)
- [https://friendofthesea.org/](https://friendofthesea.org/)
- [https://www.iffors.com/](https://www.iffors.com/)
- [https://ivopure.org/](https://ivopure.org/)
- [https://www.sustainablefish.org](https://www.sustainablefish.org)

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Approved by Jerry D’Amore, Handling Subcommittee Chair, to transmit to NOP August 14, 2021.