



# Meijer

Meijer is a family-owned, privately-held retailer based in Grand Rapids, Michigan that proudly employs nearly 70,000 team members and operates 247 supercenters in Michigan, Ohio, Indiana, Illinois, Kentucky and Wisconsin. Since 1934, Meijer is driven by the mission to be a good neighbor and actively supports local communities.

2020

**Number of Wild-Caught Species** 

Number of **Certified Wild-Caught Species** 

**Number of Wild-**Caught Species in a FIP

Number of Farmed Species

Number of **Certified Farmed Species** 

Pots and traps

# Fishing Methods Used in Associated Fisheries

- Midwater trawl
- Bottom trawl
- Dredge
- · Purse seine
- Seine nets
- · Gillnets and entangling nets
- Hook and line
- Longlines
- · Handlines and pole-lines

Farmed

# Summary

Our customers desire to know that the seafood they purchase from Meijer comes from high-quality, sustainable sources. This requires us to keep an unwavering focus on governance, supplier partnerships, and support for continuous improvement efforts to provide the best quality seafood. Meijer works with the Global Aquaculture Alliance (GAA) to help its farmed seafood suppliers achieve the GAA's strict Best Aquaculture Practices (BAP) certification. The Company encourages all of its wild-caught seafood suppliers to become certified by the Marine Stewardship Council (MSC) or the Global Sustainable Seafood Initiative, and also sources from international fisheries involved with Fishery Improvement Projects (FIP).

This profile covers wild-caught seafood sourced by Meijer in 2019.



http://meijercommunity.com/sustainability/better-products/sustainable-seafood/

# **Associated Fisheries**



| Species and<br>Location                                  | Production<br>Methods | Certification or<br>Improvement<br>Project | Sustainability<br>Ratings                   | Notes |
|--|-----------------------|--|---|-------|
|  | Bottom trawl          | Certified                                  | <b>FishSource</b> Well Managed              |       |
| Acadian redfish  Sebastes fasciatus                      |                       |  | Seafood Watch Eco-Certification Recommended |       |
| Gulf of Maine and Georges Bank  Fishery countries:  U.S. |                       |  | Ocean Wise<br>Recommended                   |       |
|  |                       |  | NOAA FSSI<br>4                              |       |

# **Environmental Notes**

- This fishery is unlikely to have unacceptable impacts on PET species. PET species that may interact with the fishery include marine mammals, sea turtles and Atlantic sturgeon, but recorded interactions are low.
- This fishery does not pose a risk of serious harm to bycatch species. Major bycatch species include dogfish and skate, of which, thorny skate is overfished. There is a partial strategy in place to ensure the fishery does not hinder the recovery of thorny skate.

• Bottom trawls will directly impact on the sea bed. However, management measures are in place.

#### **General Notes**

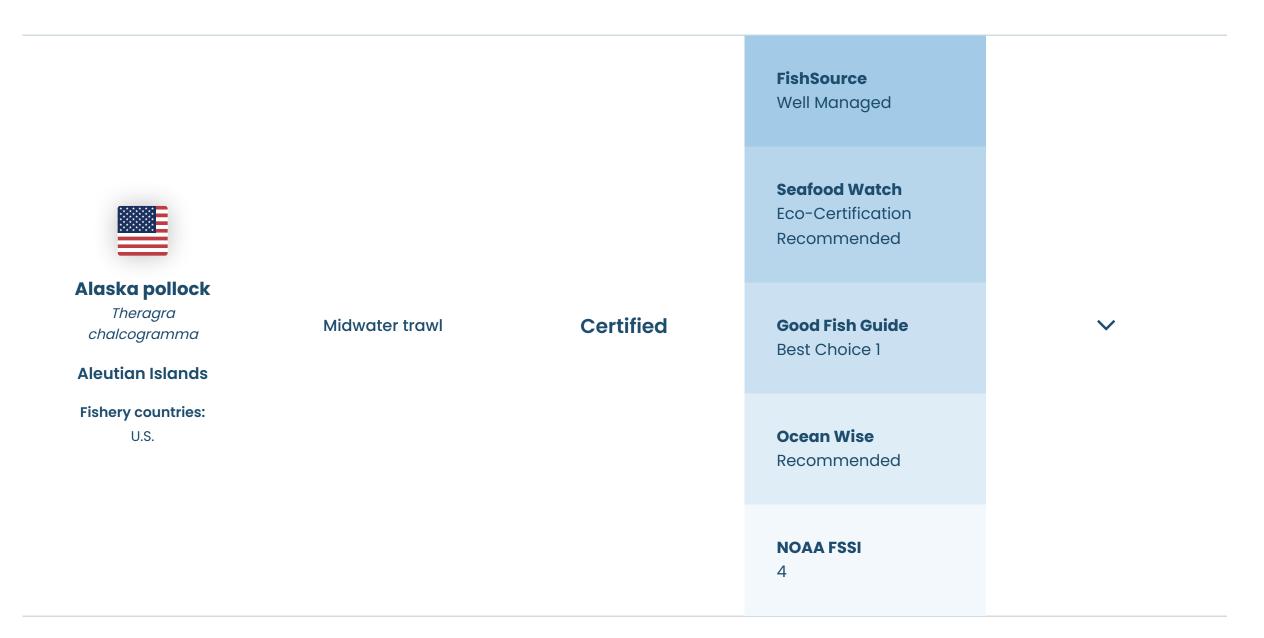
• NOAA FSSI 4: The fishery is not overfished and overfishing is not occurring and the stock biomass is at or above 80% of the biomass that produces maximum sustainable yield.

#### Caveat

The environmental notes for this fishery are based on a provisional assessment and are not derived from the FishSource profile.

#### Reference

SAI Global, 2016, MSC Assessment Final Report and Determination for US Acadian Redfish, Pollock and Haddock Otter Trawl Fishery.

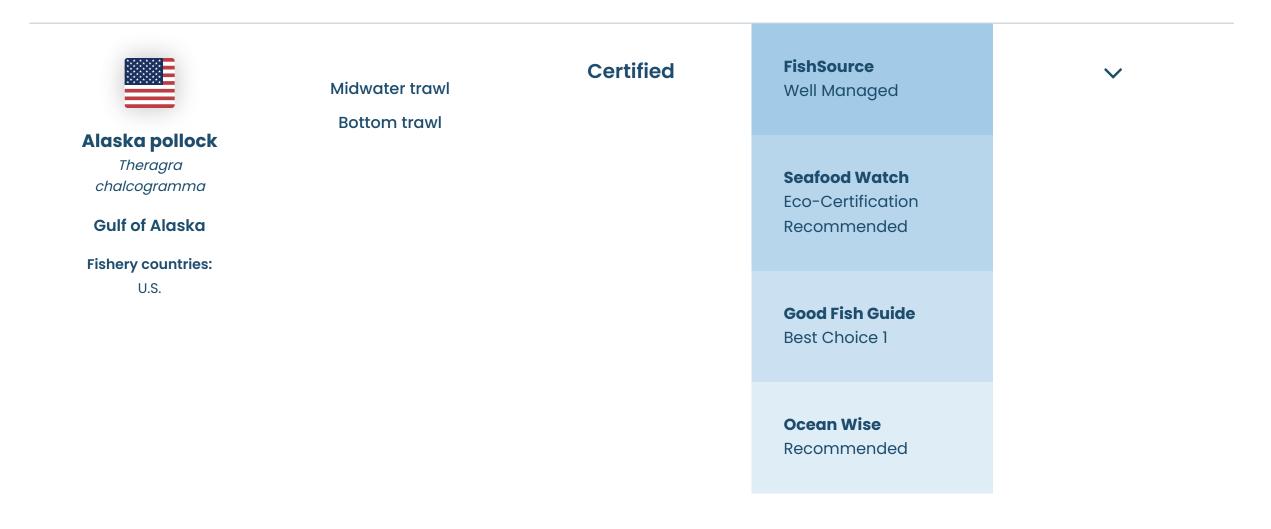


# **Environmental Notes**

- This fishery is unlikely to impact PET species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed, but occasional impacts may occur.

#### **General Notes**

• This fish plays an important role in the marine food web and so potential impacts on the wider marine ecosystem must be monitored.



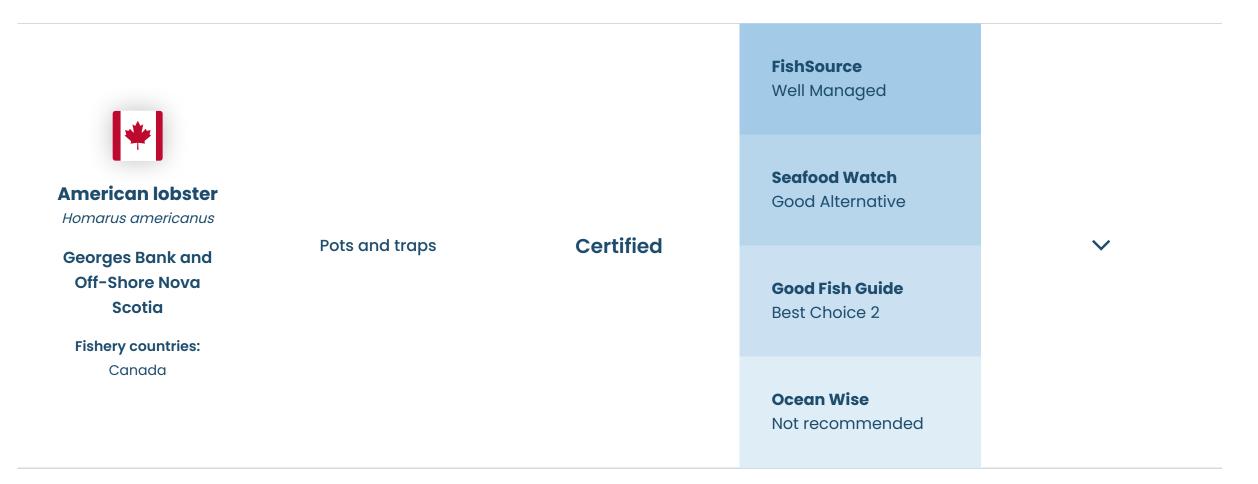
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# **Environmental Notes**

- This fishery is unlikely to have direct impacts on PET species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

#### **General Notes**

• This fish plays an important role in the marine food web and so potential impacts on the wider marine ecosystem must be monitored.



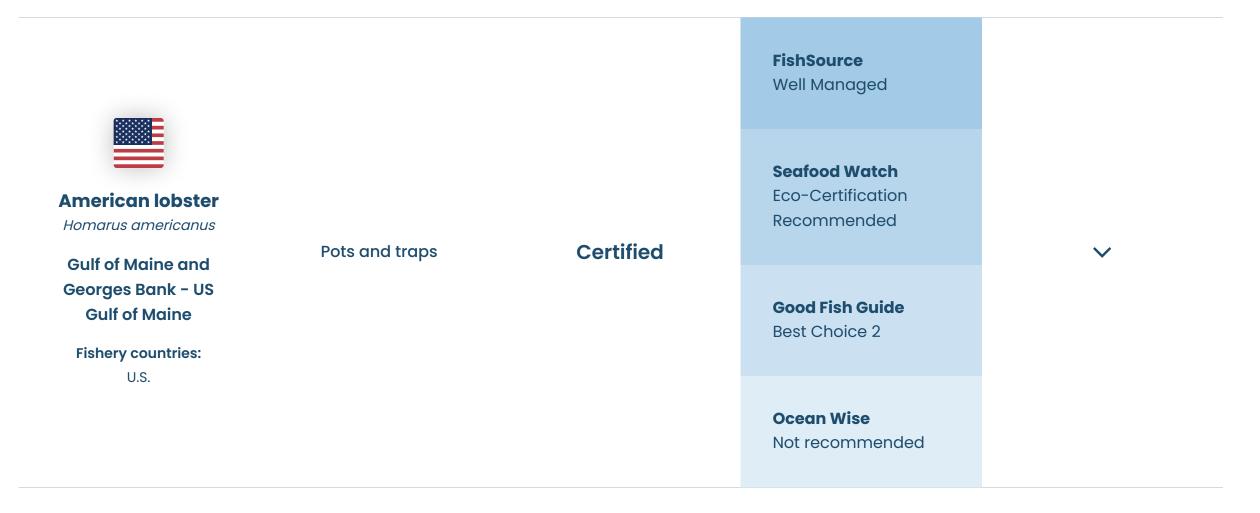
# **Environmental Notes**

- Direct effects of the fishery on PET species are thought likely to be low. While entanglement in lobster gear presents a risk to marine mammals, especially North Atlantic right whales, no entanglements of right whales were reported in the MSC public certification report.
- Measures are in place to prevent fishing from hindering the recovery and rebuilding of the main bycatch species.
- This fishery is unlikely to have a significant impact on the sea bed.

# **General Notes**

#### References

Intertek, 2015, MSC Public Certification Report for Eastern Canada Offshore Lobster Fishery



- There are potential risks to PET species with this fishery, but mitigation actions are underway.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

#### **General Notes**

• No additional notes.

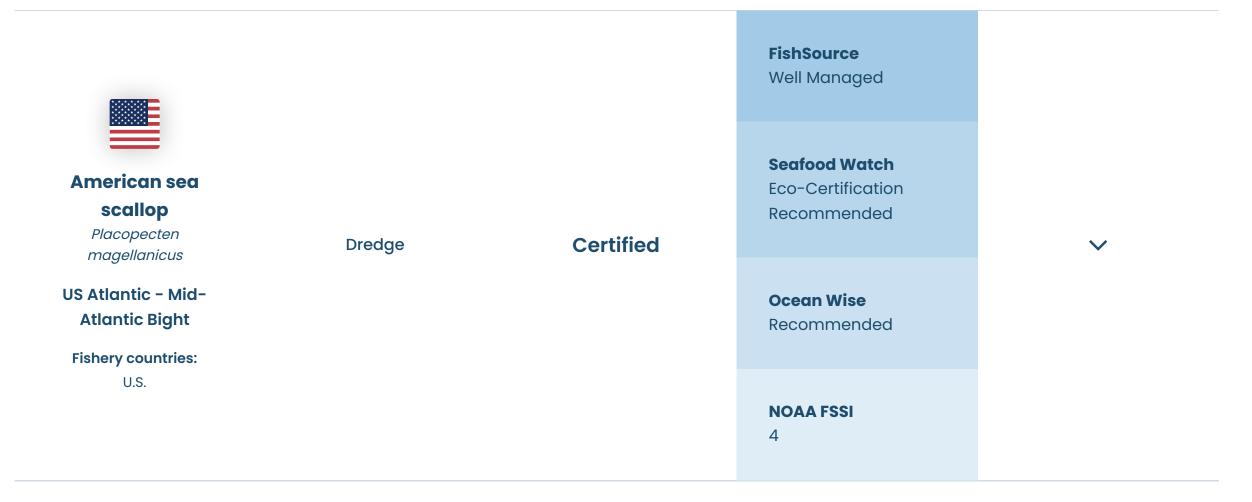


# **Environmental Notes**

- This fishery is unlikely to impact PET species. The risk to marine mammals of entanglement in lobster gear is considered low.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

#### **General Notes**

• No additional notes



# **Environmental Notes**

- There are risks to sea turtles with this fishery, but there are mitigation measures in place.
- Bycatch is a risk in this fishery.
- Dredges will directly impact on the sea bed.

# **General Notes**

• No additional notes.



**Fishery countries:** 

Canada

Gillnets and entangling nets

Certified

**FishSource**Well Managed

Seafood Watch

Eco-Certification Recommended

Ocean Wise

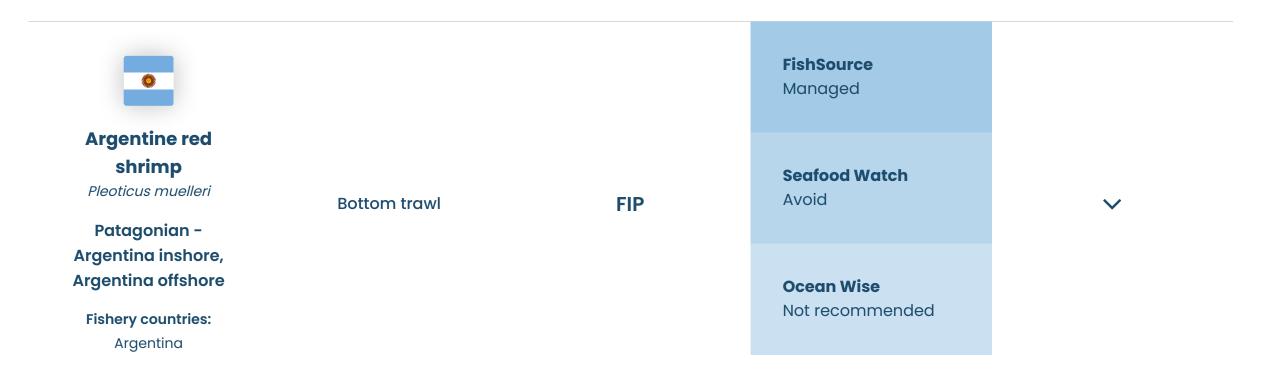
Recommended

#### **Environmental Notes**

- There are risks to PET species with this fishery, but there is insufficient data available to assess significance.
- There is a lack of information on bycatch in this fishery.
- This fishery is unlikely to have a significant impact on the sea bed.

#### **General Notes**

• No additional notes



#### **Environmental Notes**

- There are risks to sharks and rays with this fishery.
- Bycatch of hake is a risk with this fishery.
- Bottom trawls will directly impact on the sea bed.

# **General Notes**

# References

<u>Fishery Progress, Argentina onshore red shrimp - bottom trawl FIP</u>

Fishery Progress, Argentina offshore red shrimp - bottom trawl FIP



• Profile not yet complete

#### **General Notes**

• No additional notes



#### **Environmental Notes**

- There are risks to marine mammals with this fishery, but there are mitigation measures in place.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

#### **General Notes**

• No additional notes



#### **Environmental Notes**

- Salmon rely on wild capture fisheries for feed. Feed inputs are required to be responsibly sourced where possible.
- There are concerns about the impact of farmed salmon escapes and disease outbreaks on wild salmonids. Overall, the Chilean industry continues to struggle with the control of bacterial diseases and sea lice parasites as indicated by the very high levels of treatment.
- Direct impacts on water quality at the site are unlikely, but there is potential for cumulative impacts in densely farmed areas. The use of antibiotic and pesticides in Chile is high; studies on impact are limited.

# **General Notes**

A zonal management approach has been adopted based on licenses (concessions); groups of licenses - Aquaculture Management Areas (AMAs); emergency disease zones - Macro Zones; and Areas Autorizadas para el ejercicio de la Acuicultura - Appropriate Areas for Aquaculture (AAA).

# References

FishSource, Salmon - Chile

Seafood Watch, Chile Farmed Atlantic and Coho Salmon Report

Farmed



Not certified or in an AIP

**Seafood Watch**Avoid



# Atlantic salmon Salmo salar

Chile

**Fishery countries:** 

Chile

**Good Fish Guide** 

Think 4

**Ocean Wise** 

Not recommended

# **Environmental Notes**

- Salmon rely on wild capture fisheries for feed.
- There are concerns about the impact of farmed salmon escapes and disease outbreaks on wild salmonids. Overall, the Chilean industry continues to struggle with the control of bacterial diseases and sea lice parasites as indicated by the very high levels of treatment.
- Direct impacts on water quality at the site are unlikely, but there is potential for cumulative impacts in densely farmed areas. The use of antibiotic and pesticides in Chile is high; studies on impact are limited.

# **General Notes**

A zonal management approach has been adopted based on licenses (concessions); groups of licenses - Aquaculture Management Areas (AMAs); emergency disease zones - Macro Zones; and Areas Autorizadas para el ejercicio de la Acuicultura - Appropriate Areas for Aquaculture (AAA).

#### **References**

FishSource, Salmon - Chile

Good Fish Guide, Salmon, Atlantic (Farmed), Chile

<u>Seafood Watch report for Salmon - Chile</u>



# **Environmental Notes**

- This fishery is unlikely to impact PET species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

# **General Notes**

• No additional notes



- There are risks to seabirds and sea turtles with this fishery, but there are mitigation measures in place.
- Bycatch for this fishery includes other fish, tuna and sharks, but there are mitigation measures in place.
- This fishery is unlikely to have a significant impact on the sea bed.

#### **General Notes**

• No additional notes

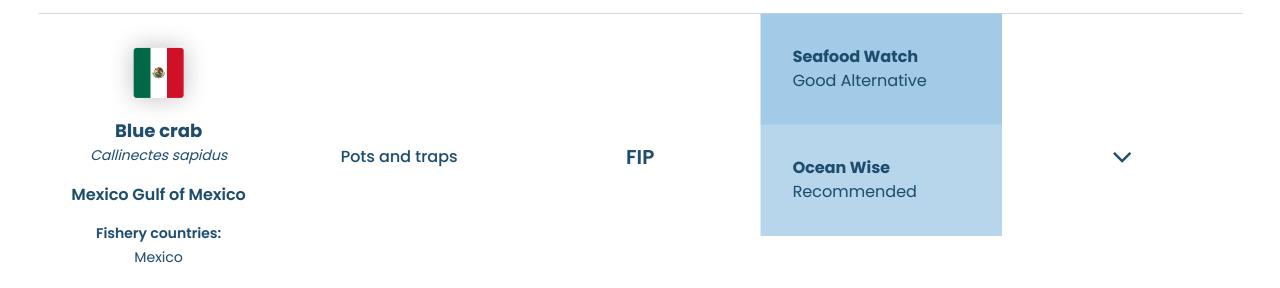


#### **Environmental Notes**

- This fishery is unlikely to impact PET species, but available data is still limited.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

#### **General Notes**

No additional notes



# **Environmental Notes**

• Profile not yet complete.

#### **General Notes**

#### References

<u>Fishery Progress, Campeche blue crab - pot/trap & ring nets</u>



Russia

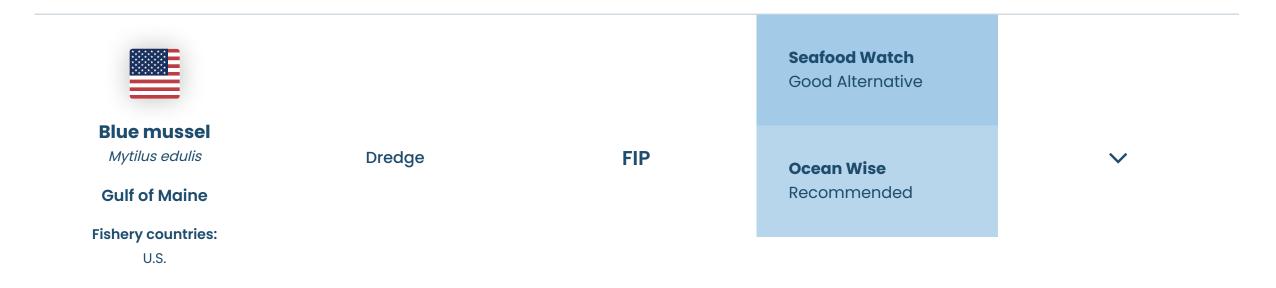
#### **Environmental Notes**

• Profile not yet complete.

#### **General Notes**

#### References

Crab Catchers Association, Russia Far East Crab FIP



# **Environmental Notes**

- This fishery is unlikely to impact PET species.
- Bycatch for this fishery is considered low.
- Dredges will directly impact on the sea bed.

# **General Notes**

#### **References**

<u>Fishery Progress, US Maine blue mussel - dredge/rake</u>



# **Environmental Notes**

- This fishery is unlikely to impact PET species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

Farmed

# **General Notes**

No additional notes



US

**Fishery countries:** 

U.S.

Ocean Wise Recommended

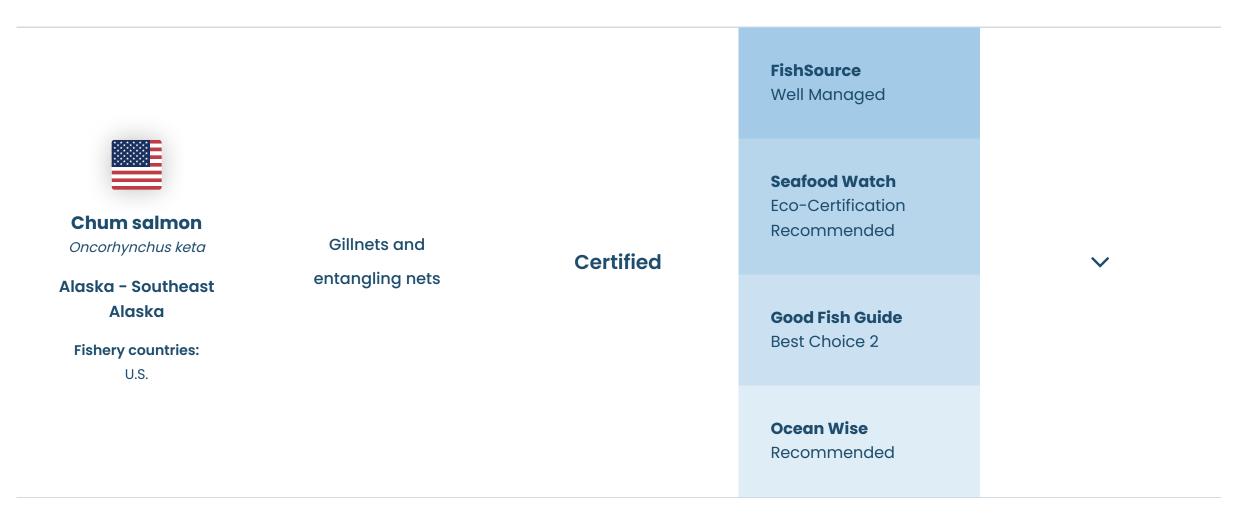
# **Environmental Notes**

- Very low amounts of fishmeal and fish oil are used in the catfish feed, which is made primarily from agricultural crop-derived ingredients.
- Risks of escapes, competition with, and disease outbreaks to wild catfish are low.
- Environmental impacts from effulents and chemical use are minimal and well-regulated.

#### **General Notes**

#### References

Seafood Watch, U.S. Farmed Channel Catfish Seafood Watch Report



#### **Environmental Notes**

- This fishery is unlikely to impact PET species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

# **General Notes**

#### Caveat

The environmental notes for this fishery are based on a provisional assessment and are not derived from the FishSource profile.

#### References

<u>Intertek Moody Marine, 2013, Alaska Salmon Fishery MSC Public Certification Report</u>



- This fishery is unlikely to impact PET species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

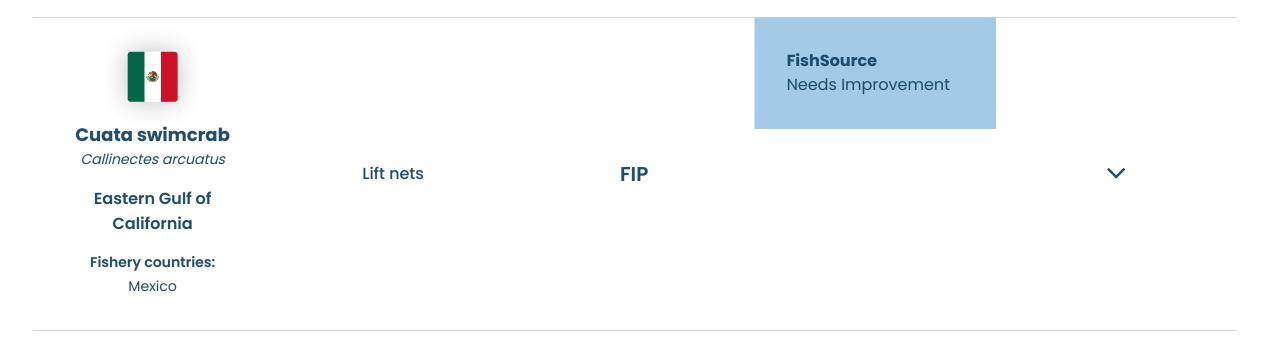
#### **General Notes**

#### Caveat

The environmental notes for this fishery are based on a provisional assessment and are not derived from the FishSource profile.

#### References

Intertek Moody Marine, 2013, Alaska Salmon Fishery MSC Public Certification Report



#### **Environmental Notes**

- This fishery is unlikely to impact PET species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

#### **General Notes**

#### References

Fishery Progress, Mexico Gulf of California swimming crab - pot/trap/ring net



#### **Environmental Notes**

• Profile not yet complete.

# **General Notes**

• This Indonesian multispecies fishery captures Snappers nei, Groupers nei and other reef fishes. There is as yet no consensus as to the stock structure of these species. This profile may undergo restructuring in the future as new information comes to light.

#### References

<u>Future of Indonesian Fisheries, Aru, Arafura and Timor Seas snapper and grouper - handlines, bottom set longline</u>



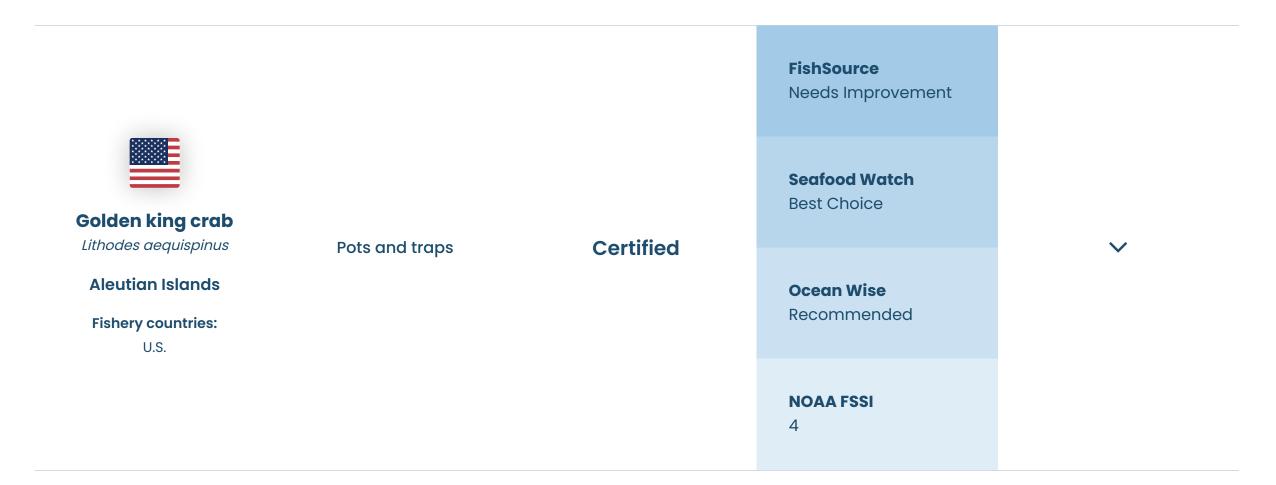
- Seabass require fishmeal and fishoil from marine feed sources in their diet. Concerns about the sustainability of feed inputs are relatively minor though they are not necessarily certified sustainable.
- Escapes are a concern and little is known about the risk of disease transfer to wild species.
- Impacts on water quality are localized and have not been shown to have cumulative impacts beyond the immediate farm site. Chemical inputs are only used for health management and are applied in a controlled manner. Reports indicate responsible use, but there is a lack of data on the quantity of chemical inputs.

#### **General Notes**

#### **References**

Good Fish Guide - Bass, seabass (Farmed), Europe

Seafood Watch report for farmed European sea bass and Gilthead sea bream, Mediterranean Sea



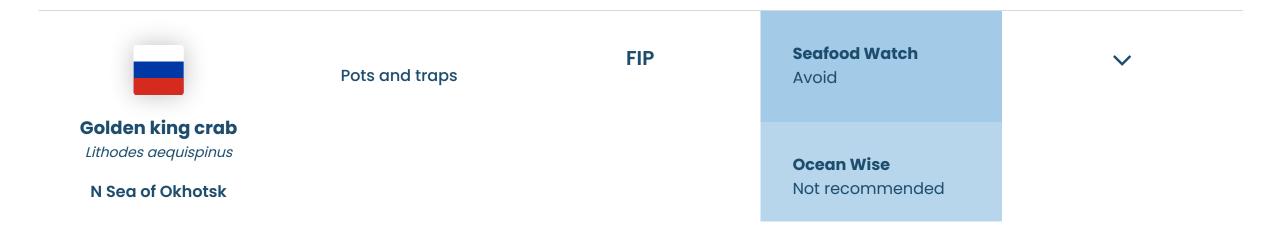
# **Environmental Notes**

- Information on interactions with PET species is not available.
- Bycatch is a significant risk for this fishery.
- Bottom trawls will directly impact on the sea bed. However, management measures are in place.

#### **General Notes**

#### References

<u>Alaska Seafood Marketing Institute, RFM Certification - Alaska Crab</u>



Russia

#### **Environmental Notes**

• Profile not yet complete.

#### **General Notes**

#### References

Crab Catchers Association, Russian Far East Crab FIP



# **Environmental Notes**

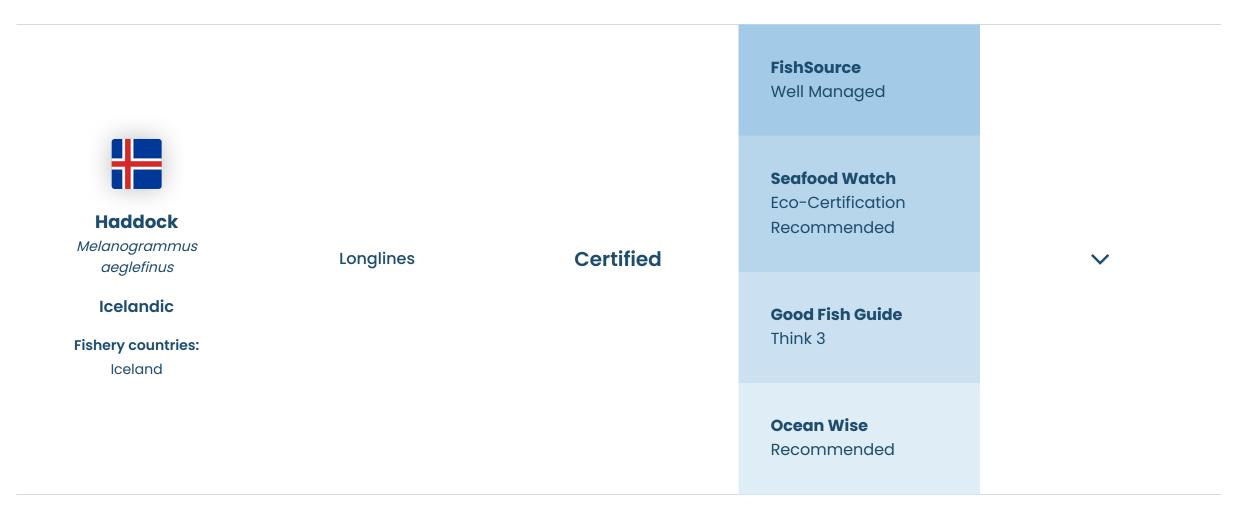
• Profile not yet complete.

#### **General Notes**

• This Indonesian multispecies fishery captures Snappers nei, Groupers nei and other reef fishes. There is as yet no consensus as to the stock structure of these species. This profile may undergo restructuring in the future as new information comes to light.

#### References

<u>Fishery Progress, Aru, Arafura and Timor Seas snapper and grouper - handlines, bottom set longline</u>



#### **Environmental Notes**

- This fishery is unlikely to impact PET species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

#### **General Notes**

• No additional notes.



**SE Pacific** 

**Fishery countries:** Peru

Hook and line

FIP

**Seafood Watch**Good Alternative

**Good Fish Guide** 

Think 4

**V** 

**Environmental Notes** 

- This fishery is unlikely to impact PET species.
- Bycatch in this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

#### **General Notes**

#### References

<u>FisheryProgress - Peru jumbo flying squid - jig</u>



# Lake whitefish

Coregonus clupeaformis

Lake Erie

**Fishery countries:** 

Canada

Gillnets and entangling nets

Not certified or in a FIP

Sustainability not rated

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# **Environmental Notes**

• Profile not yet complete.

# **General Notes**

No additional notes.



#### Lake whitefish

Coregonus clupeaformis

**Lake Huron** 

Fishery countries:

Canada

Gillnets and entangling nets

Not certified or in a FIP

**Seafood Watch**Good Alternative

Ocean Wise
Recommended

**V** 

# **Environmental Notes**

• Profile not yet complete.

# **General Notes**

No additional notes



Fishery countries:
Canada

Gillnets and entangling nets

Not certified or in a FIP

**Seafood Watch**Avoid

Ocean Wise

Not recommended

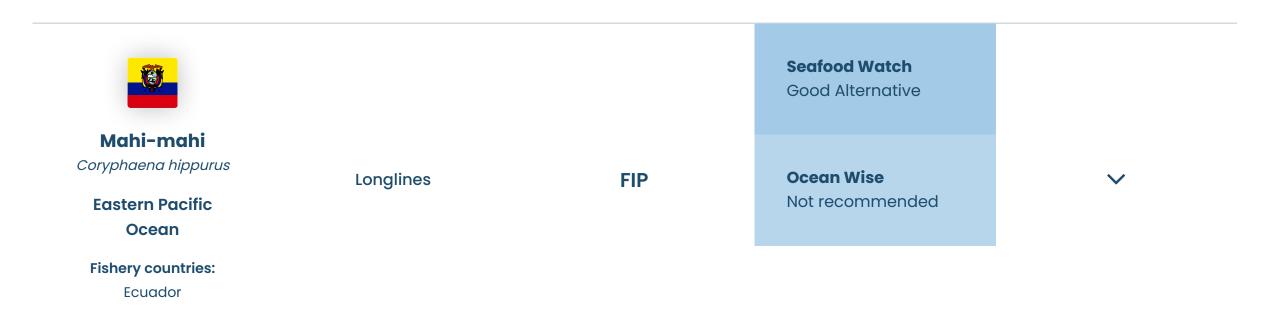
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# **Environmental Notes**

• Profile not yet complete.

#### **General Notes**

• No additional notes



# **Environmental Notes**

- There are risks to turtles, sharks and seabirds with this fishery.
- Bycatch is a significant risk for this fishery.
- This fishery is unlikely to have a significant impact on the sea bed.

# **General Notes**

#### **References**

<u>Fishery Progress, Ecuador mahi-mahi - longline</u>



# **Environmental Notes**

- This fishery is unlikely to impact PET species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

# **General Notes**

• No additional notes.



#### **Environmental Notes**

- No feed inputs are used to support farmed mussels.
- The larval phase of mussels may be transported away from farm sites. The spread of non-native musels and unintentionally introduced species beyond their natural range may be a cause for concern.
- There is no concern regarding pollution from nutrients or organic matter. No feed or nutrient fertilization inputs are used to support farmed mussels, and water quality has been shown to improve at farmed mussel sites.

#### **General Notes**

The environmental impacts described are addressed to some degree by certification.

#### References

<u>Seafood Watch Recommended Eco-Certifications for Chilean Mussels</u>

Ocean Wise ratings for mussels

Good Fish Guide - Mussels, Chilean (Farmed)



# **Environmental Notes**

- Tilapia require relatively low inputs of fishmeal and fishoil from marine feed sources in their diet.
- Impacts from escapes, disease outbreaks, and interactions with predators and other wildlife are considered low.
- There is a lack of any chemical used in farming operations as verified by the ASC audits. There are moderate impacts from effluents beyond the farm boundaries but there is farm-level effluent management along with the increased monitoring required for ASC certification.

# **General Notes**

Area-based approaches to aquaculture are included in the national and provincial legislation, but it is unclear whether zonal approaches to siting and production are used.

The environmental impacts described are addressed to some degree by certification.

# References

Seafood Watch report for farmed tilapia, Mexico

Good Fish Guide, Tilapia (Farmed), ASC



- All fishmeal and fish oil is sourced from by-products.
- Although the possibility for escape is considered high, the invasiveness factor is considered low given the prior establishment of the species.
   There is no current data or evidence indicating that tilapia cultured by Regal Springs, Honduras at their floating cage culture sites in Lake
   Yojoa and Lake Cajon are causing population declines in wild fish through the amplification and retransmission of pathogens or parasites.
   There is evidence that tilapia cage culture operations in Lake Yojoa and Lake Cajon attract or interact with predators or other wildlife, but the concern for wildlife and predator mortalities due to these operations is low.
- There are moderate impacts from effluents beyond the farm boundaries. The government management system addresses the effluent water quality; however, there have been records of eutrophication and harmful phytoplankton blooms, which indicate that monitoring measures are not effective.

#### **General Notes**

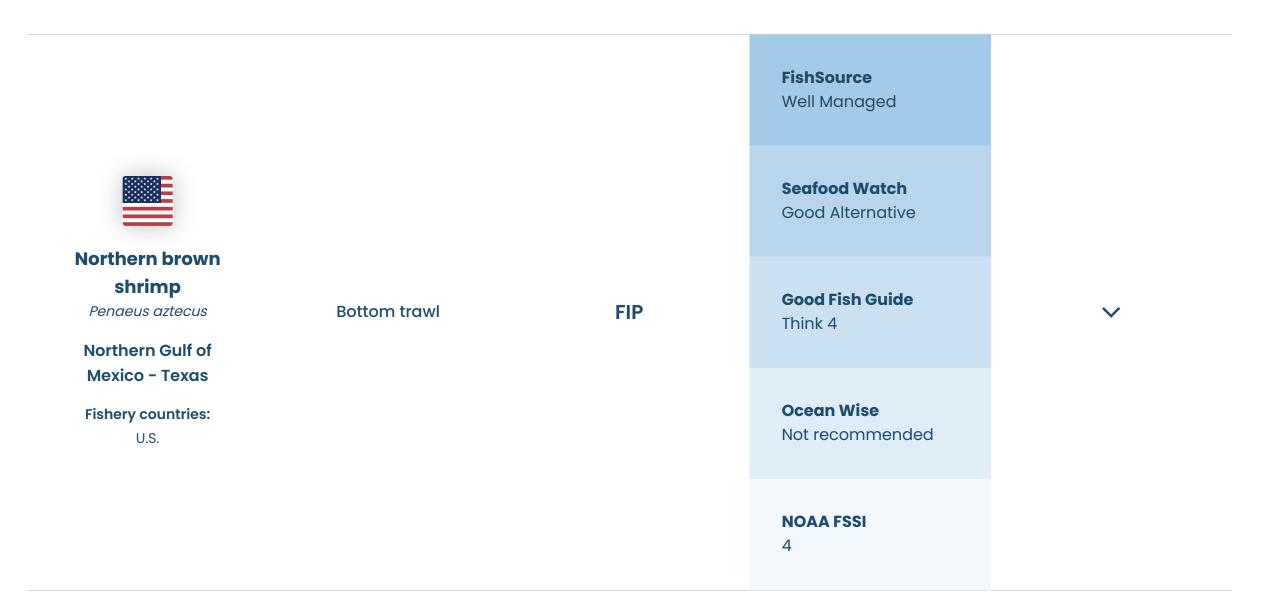
Area-based approaches to aquaculture are included in the national and provincial legislation, but it is unclear whether zonal approaches to siting and production are used.

The environmental impacts described are addressed to some degree by certification.

#### **References**

<u>Seafood Watch report for farmed tilapia, Honduras</u>

Good Fish Guide, Tilapia (Farmed), ASC



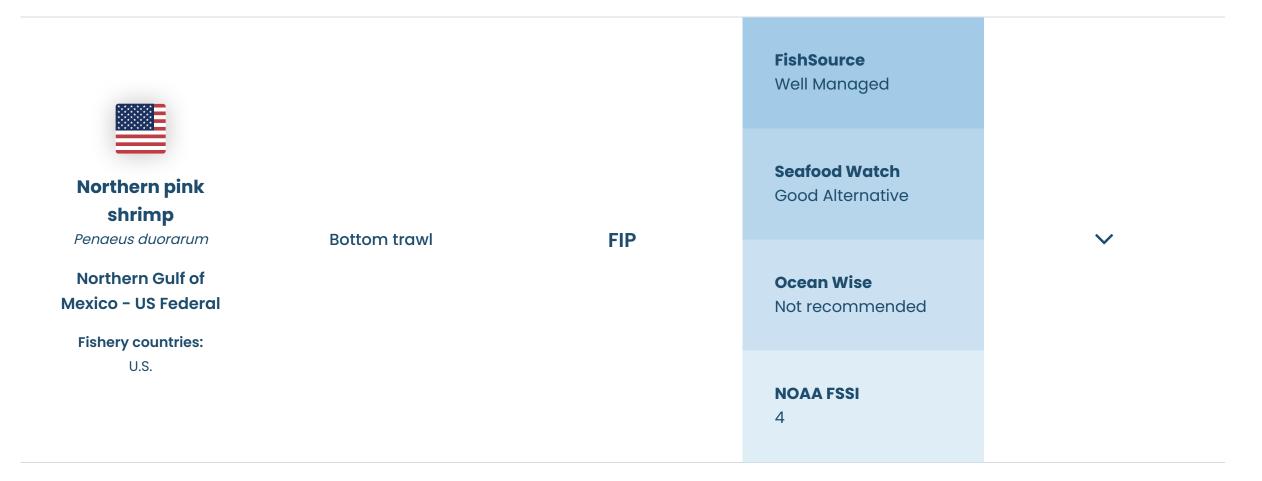
#### **Environmental Notes**

- There is potential for turtle interactions with this fishery, but excluder devices are fitted to nets for protection.
- Bycatch is a risk for this fishery, but there are mitigation measures in place.
- Bottom trawls will directly impact on the sea bed.

#### **General Notes**

#### **References**

<u>Fishery Progress, US Texas shrimp - otter trawl</u>



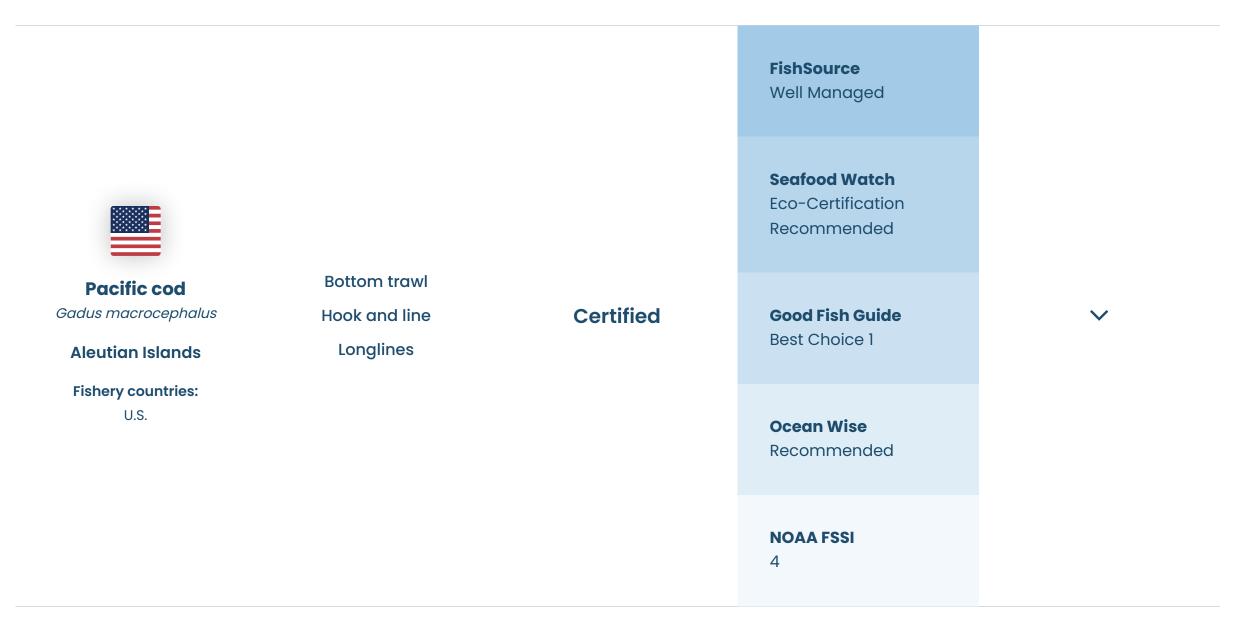
# **Environmental Notes**

- There is potential for turtle interactions with this fishery, but excluder devices are fitted to nets for protection.
- Bycatch is a significant risk for this fishery.
- Bottom trawls will directly impact on the sea bed.

#### **General Notes**

#### **References**

Fishery Progress, Gulf of Mexico northern pink shrimp - otter trawl



# **Environmental Notes**

- There are risks to seabirds and marine mammals with this fishery, but there are mitigation measures in place.
- Bycatch for this fishery includes other fish, skates and sea birds, but there is insufficient data available to assess significance.
- The impact depends on the gear type. Bottom trawls will directly impact on the sea bed.

# **General Notes**

• No additional notes.

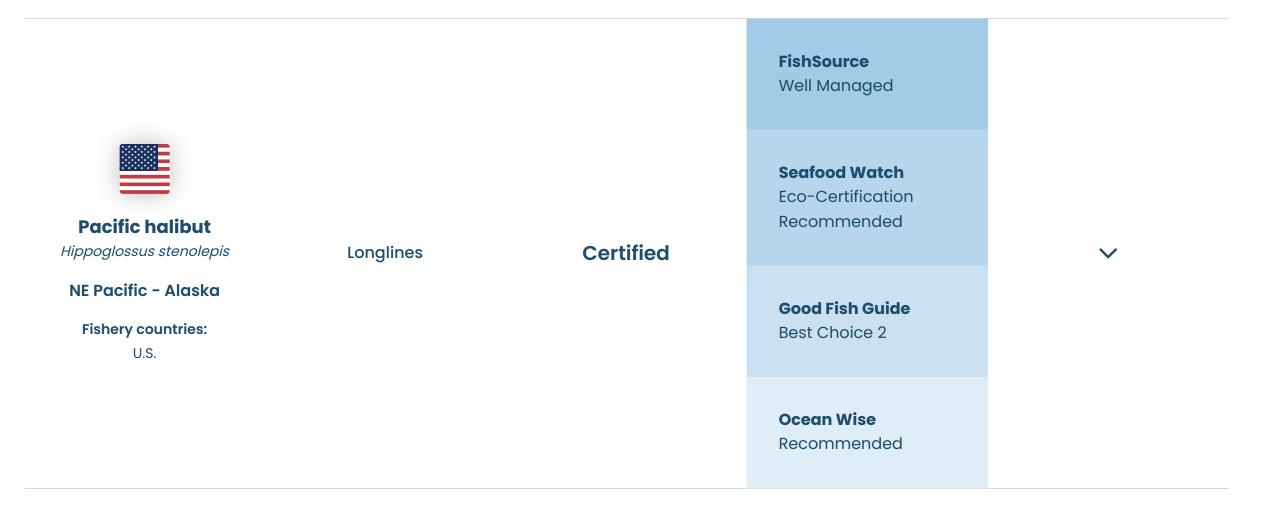
**FishSource** Well Managed **Seafood Watch Eco-Certification** Recommended Pacific cod Gadus macrocephalus Certified **Good Fish Guide Bottom trawl Best Choice 1 Gulf of Alaska Fishery countries:** U.S. **Ocean Wise** Recommended **NOAA FSSI** 4

# **Environmental Notes**

- There are risks to seabirds and marine mammals with this fishery, but there are mitigation measures in place.
- Bycatch for this fishery is considered low.
- Bottom trawls will directly impact on the sea bed. However, management measures are in place.

#### **General Notes**

• No additional notes



#### **Environmental Notes**

- There are risks to seabirds with this fishery, but mitigation actions are underway.
- Bycatch is a risk for this fishery, but there is insufficient data available to assess significance.
- This fishery is unlikely to have a significant impact on the sea bed.

# **General Notes**

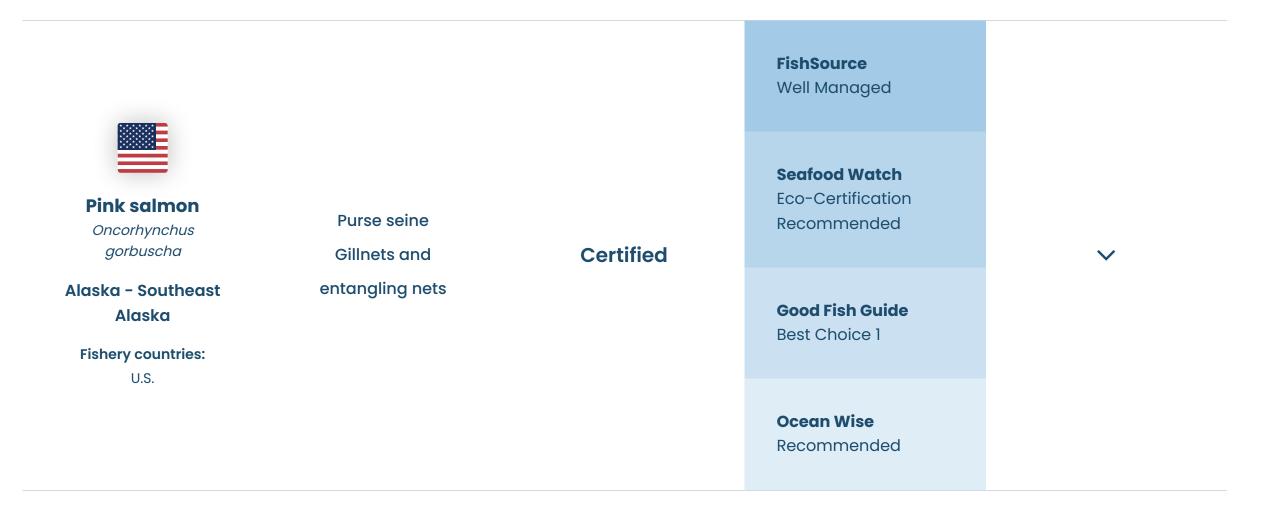
• No additional notes



- This fishery is unlikely to impact PET species.
- Bycatch for this fishery is considered low.
- Bottom trawls will directly impact on the sea bed.

#### **General Notes**

• No additional notes



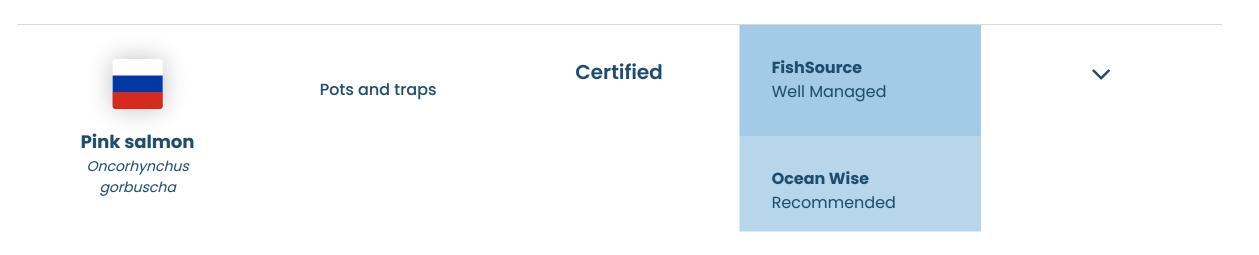
# **Environmental Notes**

- While encounters with marine mammals and birds have been documented in this fishery, the impact on PET species is not thought to be significant.
- There is no risk of bycatch for this fishery. Catches of other salmon species are accounted for in the pink salmon management.
- This fishery is unlikely to have a significant impact on the benthic habitat.

# **General Notes**

#### References

Intertek Moody Marine, 2013, MSC Public Certification Report for Alaska Salmon Fishery



Russia - West Kamchatka

**Fishery countries:** 

Russia

#### **Environmental Notes**

- This fishery is unlikely to impact PET species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the benthic habitat.

#### **General Notes**

#### References

MRAG Americas, September 2016, MSC Public Certification Report for VA-Delta Kamchatka Salmon Fisheries



#### **Environmental Notes**

• Profile not yet complete.

#### **General Notes**

• This fishery was in the <u>Barents Sea king crab - pot/trap (Odyssey Seafood) FIP</u> in 2018. It entered MSC Full Assessment in March 2019.

#### References

Fishery Progress, Barents Sea king crab - pot/trap (Odyssey Seafood) FIP

<u>Marine Stewardship Council, Russia Barents Sea Opilio Trap</u>



#### **Environmental Notes**

- There are risks to right whales with this fishery. Please see the MSC link below.
- This fishery is unlikely to have a significant impact on the sea bed.

#### **General Notes**

• The MSC certificate was suspended for the Southern Gulf of St. Lawrence snow crab fishery on March 20, 2018.

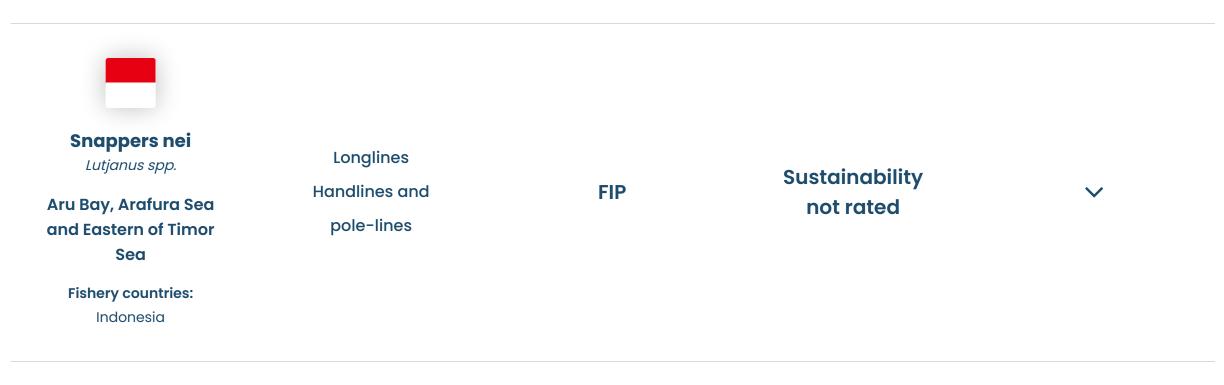
#### **References**



- There are risks to sea turtles and marine mammals with this fishery, but there is insufficient data available to assess significance.
- Bycatch is a risk for this fishery.
- Habitat impacts in this fishery are not well understood.

#### **General Notes**

• No additional notes



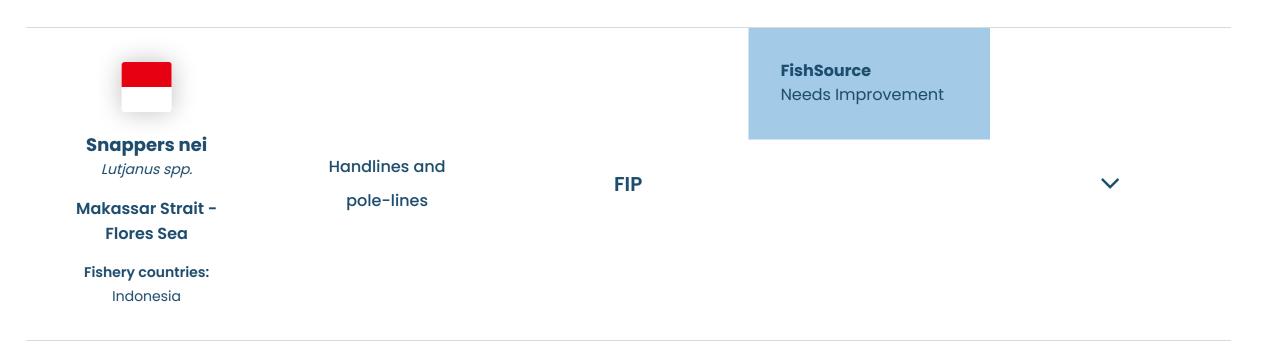
# **Environmental Notes**

- This fishery is unlikely to have a significant impact on the sea bed.
- Profile not yet complete.

#### **General Notes**

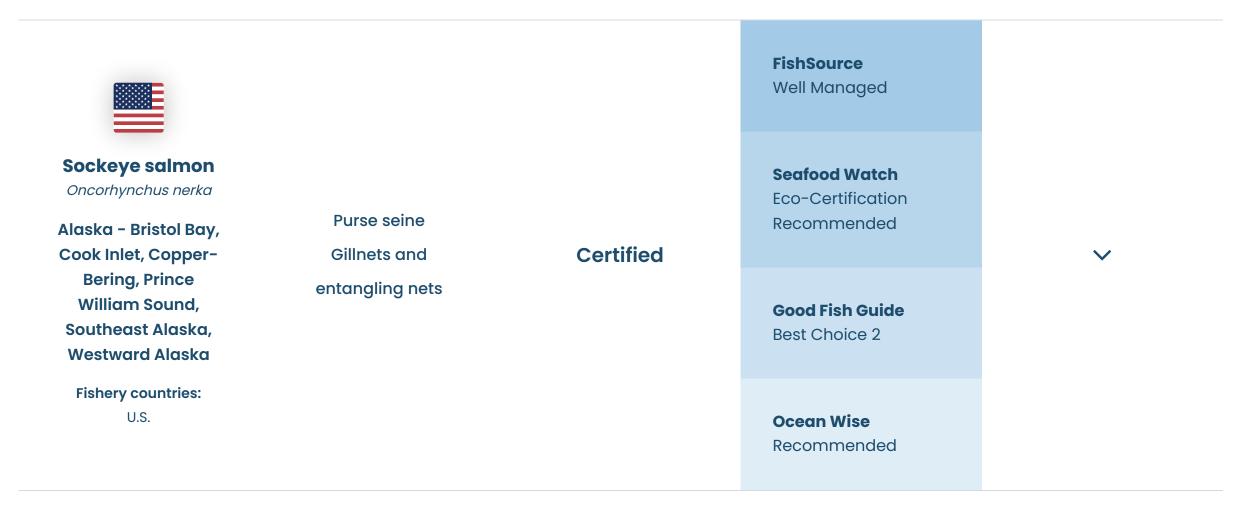
# References

<u>Fishery Progress, Indonesian Longline Demersal Fish</u>



- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.
- Profile not yet complete.

#### **General Notes**



#### **Environmental Notes**

- This fishery is unlikely to impact PET species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the benthic habitat.

# **General Notes**

#### Caveat

The environmental notes for this fishery are based on a provisional assessment and are not derived from the FishSource profile.

#### **References**

Intertek Moody Marine, 2013, MSC Public Certification Report for the Alaska Salmon Fishery



# **Environmental Notes**

- There are risks to seabirds, sea turtles and marine mammals with this fishery, but there are mitigation measures in place.
- Bycatch is a risk for this fishery, but there are mitigation measures in place.
- This fishery is unlikely to have a significant impact on the sea bed.

#### **General Notes**

No additional notes



# **Environmental Notes**

- Tilapia require relatively low inputs of fishmeal and fishoil from marine feed sources in their diet. However, there are significant concerns about the sustainability of feed inputs from domestic sources, which are produced from fisheries that are fully exploited overexploited, or depleted.
- There is little infomation available regarding impacts of Chinese tilapia production on wild species, includings impacts from escapes, disease outbreaks, and interactions with predators and other wildlife. Nile tilapia are considered highly invasive and there are documented examples of tilapia populations outcompeting local fish species for resources in Chinese waterways. Despite this, there is no information on tilapia escapes at a farm level. In addition, there is little information about on-farm diseases in Chinese tilapia production and disease outbreaks pose a risk to wild fish populations. There is no information regarding interactions with wildlife which may include migrating birds.
- Pollution from nutrients and organic matter, as well as chemical inputs, may affect local water quality. There is limited information regarding on-farm chemical use and the impact of effluent released by tilapia pond‐ based farms in China. But there is evidence of the use of illegal chemicals and of antibiotics important to human health in Chinese tilapia production.

#### **General Notes**

Area-based approaches to aquaculture are included in the national and provincial legislation, but it is unclear whether zonal approaches to siting and production are used.

The environmental impacts described are addressed to some degree by certification.

# References:

<u>FishSource - Tilapia, China</u>

Seafood Watch, Global Aquaculture Alliance BAP Benchmarking Report (2-, 3-, 4-star Tilapia Farms BAP Standards)

Seafood Watch report for farmed tilapia, China



#### **Environmental Notes**

- There are risks to PET species with this fishery, but there is insufficient data available to assess significance.
- There is a lack of information on bycatch in this fishery.
- Profile not yet complete.

# **General Notes**



- This fishery is unlikely to impact PET species.
- There is bycatch for this fishery but non-target species are retained.
- This fishery is unlikely to have a significant impact on the benthic habitat.

#### **General Notes**

• No additional notes



# **Environmental Notes**

• Profile not yet complete.

# **General Notes**

No additional notes



# **Environmental Notes**

- There are risks to PET species with this fishery, but there is insufficient data available to assess significance.
- Bycatch is a risk for this fishery, but there is insufficient data available to assess significance.
- Profile not yet complete.

#### **General Notes**



- Fishmeal and fish oil from marine feed sources are used. At least 50% of the feed used in certified production is required to be responsibly or sustainably sourced.
- Disease transfer between farmed and wild prawns is a concern but infrequent water exchange on whiteleg shrimp farms moderates the risk. Whiteleg shrimp are not native to India and there is potential for ecological impacts from escapes.
- Pollution from nutrients and organic matter, as well as chemical inputs, may affect local water quality. Waste discharge from whiteleg shrimp ponds is typically limited to once per production cycle.

#### **General Notes**

The environmental impacts described are addressed to some degree by certification.

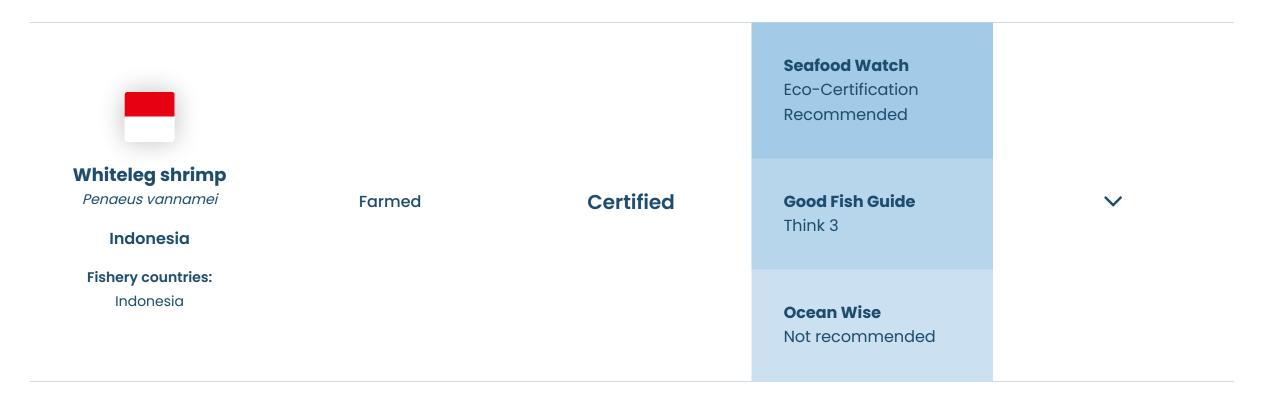
The aquaculture industry is currently managed under a farm-based approach.

#### **References:**

Seafood Watch report for farmed shrimp, India

<u>FishSource - Shrimp, India</u>

Good Fish Guide - Prawn, King (whiteleg), prawns, Global, GAA BAP certification (4\*)



# **Environmental Notes**

- Fishmeal and fish oil from marine feed sources are used. At least 50% of the feed used in certified production is required to be responsibly or sustainably sourced.
- Disease transfer between farmed and wild prawns is a concern. Whiteleg shrimp are not native to Indonesia and there is potential for ecological impacts from escapes.
- Pollution from nutrients and organic matter, as well as chemical inputs, may affect local water quality and cumulative impacts across a region may occur.

# **General Notes**

The environmental impacts described are addressed to some degree by certification.

Legislation on zonal planning that is relevant to aquaculture does exist. A zonal approach to aquaculture is being introduced via an Aquaculture Improvement Project (AIP) in Muncar, Banyuwangi district, East Java.

#### **References:**

Good Fish Guide - Prawn, King (whiteleg), prawns, Global, GAA BAP certification (4\*)

Seafood Watch Recommended Eco-Certifications for Whiteleg shrimp, Farmed

FishSource - Shrimp, Indonesia



#### **Environmental Notes**

- Fishmeal and fish oil from marine feed sources are used. At least 50% of the feed used in certified production is required to be responsibly or sustainably sourced.
- Disease transfer between farmed and wild prawns is a concern but infrequent water exchange on whiteleg shrimp farms moderates the risk. Whiteleg shrimp are not native to Thailand and there is potential for ecological impacts from escapes.
- Pollution from nutrients and organic matter, as well as chemical inputs, may affect local water quality. Impacts on water quality vary depending on the frequency of waste discharge from ponds.

#### **General Notes**

The environmental impacts described are addressed to some degree by certification.

Public information on zonal approaches to planning and production of shrimp farming in Thailand is limited.

# References:

FishSource - Shrimp, Thailand

Good Fish Guide - Prawn, King (whiteleg), prawns, Global, GAA BAP 4\*

Seafood Watch Recommended Eco-Certifications for Whiteleg shrimp



# **Environmental Notes**

- Fishmeal and fishoil from marine feed sources are used.
- Disease transfer between farmed and wild prawns is a concern but infrequent water exchange on whiteleg shrimp farms moderates this risk. Whiteleg shrimp are not native to Vietnam and there is potential for ecological impacts from escapes.
- Pollution from nutrients and organic matter, as well as chemical inputs, may affect local water quality. Waste discharge from whiteleg shrimp ponds is typically limited to once per production cycle, moderating the impact of effluents on water quality. There is a lack of data on the quantity of chemical inputs, but evidence suggests that illegal antibiotics are sometimes used on Vietnamese shrimp farms.
   Environmental issues are mitigated by the certification standards.

# **General Notes**

The aquaculture industry is currently managed under a farm-based approach.

#### **References:**

<u>Good Fish Guide - Prawn, King (whiteleg), prawns</u>

<u>Seafood Watch, Vietnam Giant Tiger Prawn and Whiteleg Shrimp Report</u>

<u>FishSource - Shrimp, Vietnam</u>

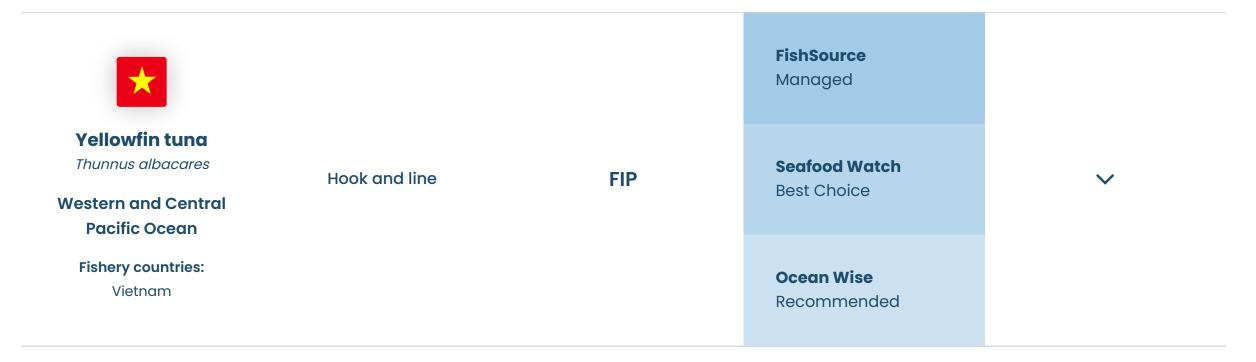


#### **Environmental Notes**

- This fishery is unlikely to impact PET species.
- This fish is caught as a bycatch species.
- Bottom trawls will directly impact on the sea bed.

#### **General Notes**

• No additional notes.



# **Environmental Notes**

- There are risks to turtles, seabirds and sharks, but these risks can be reduced through proper management of fishing gear.
- There is bycatch for this fishery but the scale of the issue is not established.
- This fishery is unlikely to have a significant impact on the sea bed.

# **General Notes**

#### References

Fishery Progress, Vietnam yellowfin tuna - longline/handline FIP



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