

Giant Eagle

Giant Eagle, Inc. is among the top 40 largest private companies as ranked by Forbes magazine. Founded in 1931, the company is one of the nation's largest food retailers and distributors, and the leading supermarket retailer in its region with more than 470 stores throughout Pennsylvania, Ohio, West Virginia, Maryland and Indiana.

2022 Number of Number of Wild-Number of Number of Wild-Number of Certified Wild-**Caught Species in Certified Farmed Caught Species** Farmed Species **Caught Species** a FIP Species 53 **Production Methods Used** • Hook and line • Rake / hand gathered Midwater trawl Associated purse seine Farmed / hand netted • FAD-free Longlines Bottom trawl (unassociated) purse • Dredge Handlines and pole- Pots and traps Miccollar

	361116	
•	Gillnets and entangling	
	nets	

Summary

Giant Eagle is committed to ensuring that all seafood products sold in its stores are harvested sustainably. We're proud to work with the nonprofit Sustainable Fisheries Partnership (SFP) to create a sustainable sourcing strategy for our wild and farmed seafood. This includes limiting stock depletion by sourcing a broad variety of species, choosing species based on responsible fishery practices in addition to customer demand, forging partnerships that allow direct access to fishermen, and actively supporting many Fishery Improvement Projects (FIPs). Giant Eagle commits to sell only seafood from fisheries that are managed by competent authorities and have a management plan in place that incorporates a sciencebased approach to ensure sustainability. We require full traceability to the point of landing or farm pond of all seafood sold fresh, frozen, or in value-added products.

Giant Eagle commits to educating its staff, suppliers and customers on seafood sustainability issues. Giant Eagle will make information available to customers in publications, in-store and online that empowers them to make responsible and informed purchasing decisions based on their own values regarding community, the environment and their health.

This profile covers all wild-caught and farmed seafood sourced in 2021.

Associated Fisheries



Oops! Something went wrong.

This page didn't load Google Maps correctly. See the JavaScript console for technical details.

Species and Location Production Methods Certification or Improvement Project

Sustainability Ratings

Notes

		Project		
*	Bottom trawl	Certified	FishSource Well Managed	\checkmark
Acadian redfish Sebastes fasciatus				
North and southeastern Grand Bank				
Fishery countries: Canada			Seafood Watch Eco-Certification Recommended	



- This fishery is not believed to be an issue for ETP species.
- Bycatch for this fishery is a risk.
- Bottom trawls will directly impact on the sea bed.

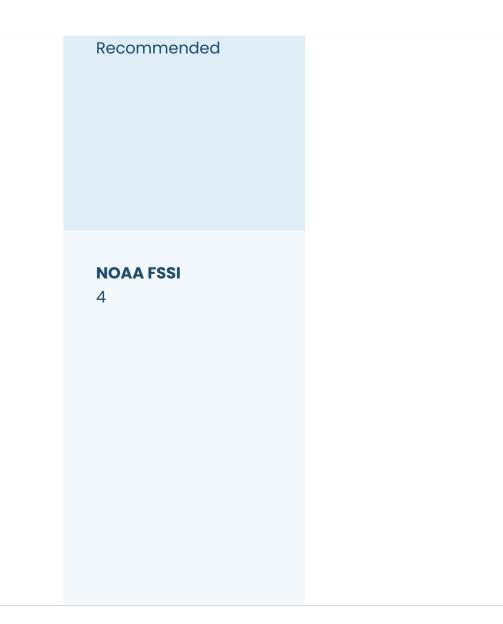
General Notes

• No additional notes

	Midwater trawl	Certified	FishSource Well Managed	~
Alaska pollock				
Theragra				
chalcogramma				
E Bering Sea				
Fishery countries:				
United States				
			Seafood Watch	
			Eco-Certification	
			Recommended	

Good Fish Guide Best Choice 1

Ocean Wise



- This fishery is unlikely to have direct impacts on ETP 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.



Seafood Watch Eco-Certification Recommended

Good Fish Guide Best Choice 1



- This fishery is unlikely to have direct impacts on ETP 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.



Albacore

Thunnus alalunga

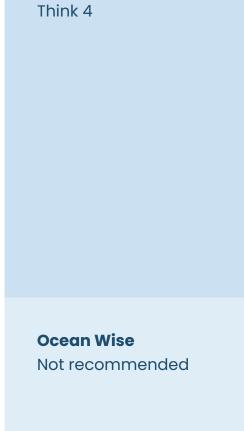
Indian Ocean

Fishery countries:

China, Indonesia

Seafood Watch Avoid

Good Fish Guide



- There are risks to seabirds, sea turtles, and sharks with this fishery, but there are mitigation measures in place.
- Bycatch of other tuna and billfishes 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

References

Good Fish Guide, Albacore, Indian Ocean: All areas, Hook & line (longline)

Seafood Watch, Albacore, Indian Ocean, Drifting longlines



Saint Vincent and the

Grenadines, Taiwan

Seafood Watch Avoid

Good Fish Guide Think 3



- There are risks to seabirds, sea turtles, marine mammals and sharks with this fishery, but there are mitigation measures in place.
- Bycatch of other tuna, billfishes and sharks 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

References

Good Fish Guide, Albacore, North Atlantic: All areas, Hook & line (longline)

Seafood Watch, Albacore, North Atlantic, Drifting longlines

North Pacific	Longlines	Not certified or in a FIP	FishSource Managed	
Fishery countries: Cook Islands, Japan, South Korea, Panama			Seafood Watch Avoid	

Good Fish Guide Think 3

- There are potential risks to sea turtles, seabirds and marine mammals with this fishery, but management measures are in place.
- Bycatch for this fishery includes several species of tunas, sharks, billfish and other fish species, but management measures are in place.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Good Fish Guide, Albacore, North Pacific: All areas, Hook & line (longline)

Seafood Watch, Albacore, North Pacific, Drifting longlines



Good Fish Guide Think 3

Ocean Wise Not recommended

- This fishery catches species that play an essential role in the food web, and ecosystem impacts are a significant concern due to inadequate management.
- Bycatch can include highly vulnerable species such as sharks, turtles, and seabirds.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Good Fish Guide, Albacore, South Atlantic: All areas, Hook & line (longline)

Seafood Watch, Albacore, South Atlantic, Drifting longlines

			Seafood Watch Avoid	
Albacore Thunnus alalunga	Longlines	Not certified or in	Good Fish Guide Think 3	~
South Pacific - IATTC Fishery countries: China, Taiwan		a FIP		

Ocean Wise Not recommended

Environmental Notes

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

General Notes

References

Good Fish Guide, Albacore, South Pacific: All areas, Hook & line (longline)

FishSource

Managed

Seafood Watch Avoid



Albacore Thunnus alalunga

South Pacific -WCPFC

Fishery countries: China, Fiji, Vanuatu Longlines

Not certified or in a FIP

> **Good Fish Guide** Think 3

 \checkmark

Ocean Wise Not recommended

Environmental Notes

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

General Notes

References

Good Fish Guide, Albacore, South Pacific: All areas, Hook & line (longline)

Seafood Watch, Albacore, South Pacific, Drifting longlines

FishSource Well Managed

Seafood Watch Good Alternative



American angler Lophius americanus

US North Atlantic South

Fishery countries: United States Bottom trawl

Not certified or in a FIP

Ocean Wise Not recommended \checkmark

NOAA FSSI 4

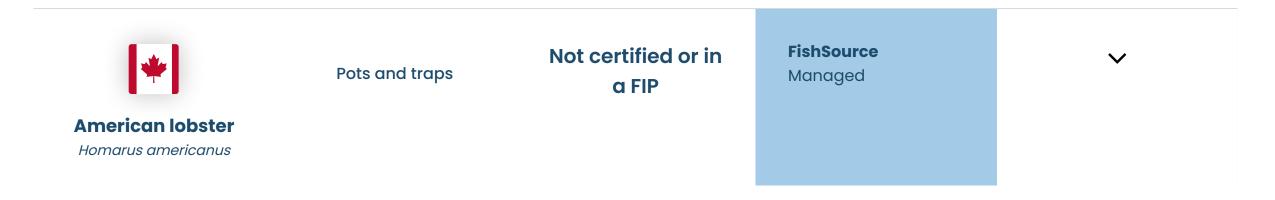
Environmental Notes

- Bycatch includes at-risk Atlantic cod and flounders and long-finned pilot whales. Work to minimize bycatch is ongoing.
- Bottom trawls will impact the seafloor habitat.

General Notes

References

Seafood Watch, Goosefish, United States, Northwest Atlantic Ocean, Bottom trawls



Georges Bank and Off-Shore Nova Scotia

Fishery countries:

Canada

Seafood Watch Good Alternative

Good Fish Guide Avoid 5

Ocean Wise Not recommended

Environmental Notes

• The largest risk to ETP species posed by this fishery is through the entanglement of the critically endangered North Atlantic right whale. New

- management measures were introduced in 2019.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Good Fish Guide, American lobster, Canada, FAO 21: Atlantic, Northwest; Pot, trap or creel

Seafood Watch, American lobster, Canada (Nova Scotia), Southwest Nova Scotia and Bay of Fundy, Pots



Seafood Watch Good Alternative

Good Fish Guide Think 4

Ocean Wise Not recommended

Environmental Notes

- The largest risk to ETP species posed by this fishery is through the entanglement of the critically endangered North Atlantic right whale. New management measures were introduced in 2019. This fishery has recently had its MSC certification suspended due to this issue.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Good Fish Guide, American lobster, USA: Gulf of Maine and Georges Bank: All areas; Pot, trap or creel

Seafood Watch, American lobster, United States, Georges Bank, Traps

Seafood Watch, American lobster, United States, Gulf of Maine, Traps



Eco-Certification Recommended

Ocean Wise Recommended

NOAA FSSI 4

Environmental Notes

- This fishery is unlikely to impact endangered, threatened and protected (ETP) species.
- This fishery is unlikely to have significant impacts on bycatch species.
- Dredges will directly impact on the sea bed, but the fishery is considered highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.

General Notes

References

Seafood Watch, Sea scallop, United States, Northwest Atlantic Ocean, Boat dredges, Marine Stewardship Council Certified



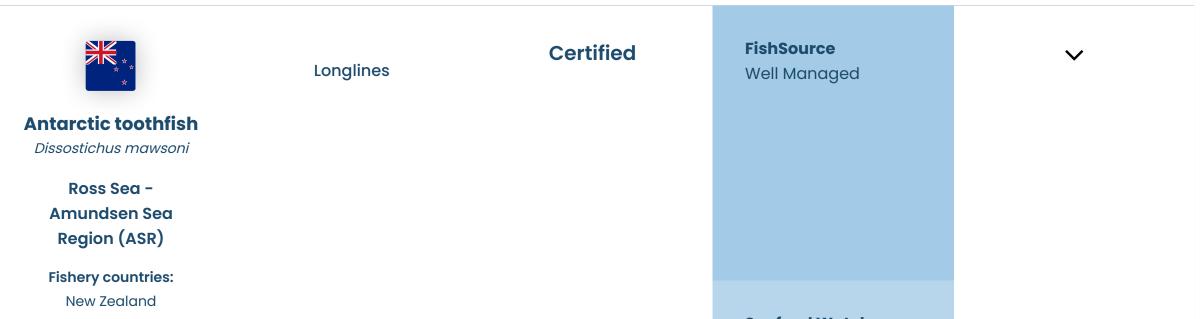


- There are risks to ETP species with this fishery, but there is insufficient data available to assess significance.
- There is a lack of information on bycatch in this fishery.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Seafood Watch, Yellow perch, Canada, Lake Erie, GllInets, Marine Stewardship Council Certified



Seafood Watch Eco-Certification Recommended

Ocean Wise Recommended

• Profile not yet complete.

General Notes

References

Seafood Watch, Antarctic toothfish, New Zealand, Marine Stewardship Council Certified, Ross Sea toothfish longline Fishery



Environmental Notes

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

General Notes

References

Fishery Progress, Argentina offshore red shrimp - bottom trawl



Not certified or in a FIP

FishSource Needs Improvement

V

Atlantic cod

Gadus morhua

Gulf of Maine

Fishery countries:

United States

Seafood Watch Avoid



- There are risks to marine mammals with this fishery, but there are mitigation measures in place.
- There is bycatch for this fishery but non-target species are retained. Management measures are in place to reduce impacts on retained species.
- Bottom trawls will directly impact on the sea bed. However, management measures are in place.

General Notes

References

Seafood Watch, Atlantic cod, United States, Gulf of Maine, Bottom trawls



Icelandic

Fishery countries:

Iceland

Seafood Watch Eco-Certification Recommended

Good Fish Guide Best Choice 1



- This fishery is unlikely to have direct impacts on ETP species.
- There is bycatch for this fishery but non-target species are retained. Management measures are in place to reduce impacts on retained species.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Seafood Watch, Atlantic cod, Iceland, Marine Stewardship Council Certified



Seafood Watch Eco-Certification Recommended

Ocean Wise Recommended

- This fishery is unlikely to impact ETP species.
- There is bycatch for this fishery but non-target species are retained. Management measures are in place to reduce impacts on retained species.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Seafood Watch, Atlantic cod, Norway, Marine Stewardship Council Certified



Environmental Notes

- There are risks to protected, endangered and threatened (PET) species with this fishery, but there is insufficient data available to assess significance.
- Bycatch in this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

• The MSC certificate for this fishery was publicly suspended in March 2019 due to concerns regarding overfishing.

References

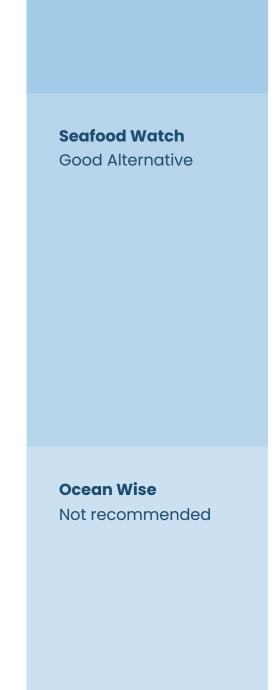
Good Fish Guide, Mackerel, Northeast Atlantic, Net (purse seine or ring), Net (pelagic trawl)

Marine Stewardship Council, MINSA North East Atlantic mackerel



Fishery countries:

Canada



Environmental Notes

- Salmon rely on wild capture fisheries for feed. Marine ingredients (herring, menhaden, anchovy) are sourced from fisheries that currently have no serious conservation concerns.
- There is an ongoing risk of impact that fish escaping from Canadian-sited farms may have on their wild counterparts (as evidenced by the higher numbers of escapees in Canadian rivers).
- The use of antibiotics was markedly high. The limited availability of registered pesticide therapeutants for the control of sea lice has resulted, at least twice, in the development of resistance to the few products permitted. There is potential for larger-scale, cumulative ecological impacts from effluents.

General Notes

References

Seafood Watch, Atlantic Salmon, Farmed, Canada



Farmed

Atlantic salmon

Salmo salar

Chile

Fishery countries:

Chile

Certified

FishSource Managed

Seafood Watch Good Alternative $\mathbf{\vee}$



- Salmon rely on wild capture fisheries for feed. At least 50% of the feed used in certified production is required to be responsibly or sustainably sourced.
- 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, Atlantic salmon, Chile

Seafood Watch, Farmed Atlantic Salmon, Chile



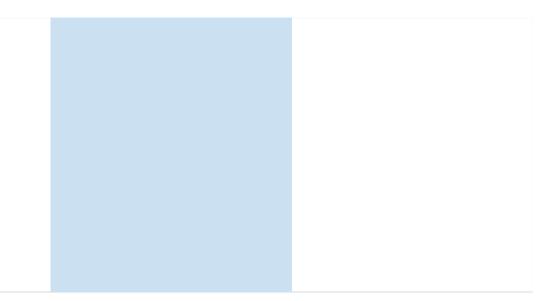
Chile

Fishery countries:

Chile

Seafood Watch Good Alternative

Good Fish Guide Think 4



- 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).

Certified

References

FishSource, Salmon - Chile

Good Fish Guide, Atlantic Salmon, Farmed

Seafood Watch, Farmed Atlantic Salmon, Chile

FishSource Managed Seafood Watch



Atlantic salmon

Salmo salar

Farmed

Faroe Islands

Fishery countries:

Faroe Islands

Eco-Certification Recommended

 \checkmark

Ocean Wise Not recommended

- Salmon rely on wild capture fisheries for feed. Feed inputs are required to be responsibly sourced where possible.
- There is a high risk of escape and a lower risk of competitive and genetic impact on wild species.
- Antibiotics have not been administered on Faroese salmon farms for more than ten years, but pesticide use for the treatment of sea lice is substantial, with several different treatment types being used in recent years. Regarding seabed habitat impacts of settling particulate wastes, two-thirds of sites operated with minimal or minor pollution levels and one-third of sites were "polluted" or "very polluted."

General Notes

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

References

Seafood Watch, Atlantic Salmon, Farmed, Aquaculture Stewardship Council Certified



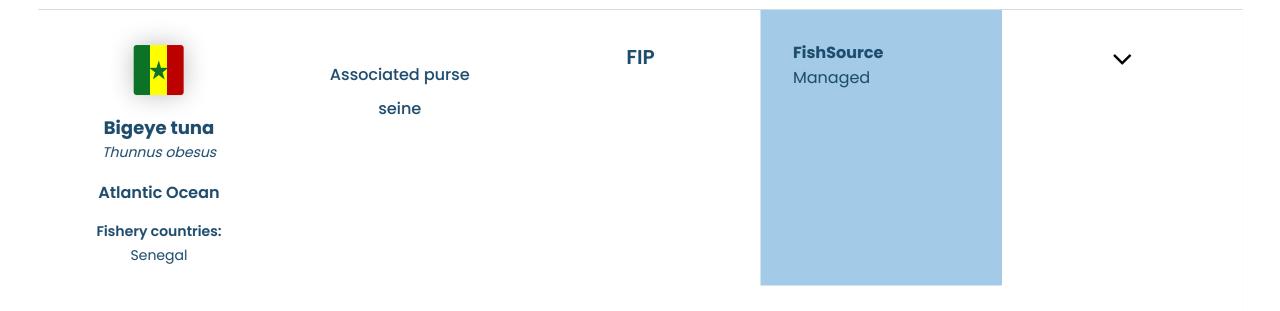
Environmental Notes

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

General Notes

References

Seafood Watch, Atlantic surfclam, United States, Northwest Atlantic Ocean, Boat dredges, Marine Stewardship Council Certified





- The catch of overfished bigeye tuna, blue marlin, and at-risk sharks is a major concern. Bycatch management is rated ineffective because there are some conservation measures for at-risk species like sharks and turtles, but their effectiveness is unknown.
- In addition, other bycatch species of concern have no protections. This fishery catches species that play an essential role in the food web, and stronger ecosystem management is needed.
- Purses seines have minimal habitat impacts.

General Notes

References

Fishery Progress, Atlantic Ocean tuna - purse seine (Capsen & Grand Bleu S.A.)

Seafood Watch, Bigeye tuna, Atlantic Ocean, Floating object purse seine (FAD)



Associated purse

seine

FIP

FishSource Needs Improvement

 \checkmark

Bigeye tuna Thunnus obesus

Western and Central

Pacific

Fishery countries:

United States

Seafood Watch Avoid

Ocean Wise

Not recommended

- The catch of at-risk silky and whitetip sharks is a major concern. Management is rated ineffective because this fishery lacks adequate measures to reduce bycatch and prevent overfishing of target species, especially juveniles.
- This fishery catches species that play an essential role in the food web, and more robust measures may be needed to protect the ecosystem. When floating objects called "FADs" are used to catch apex predator fish like tuna and sharks, the impacts on the food web can be significant.
- Purses seines have minimal habitat impacts.

General Notes

References

Fishery Progress, Pacific Ocean tropical tuna - purse seine (US Pacific Tuna Group)

Seafood Watch, Bigeye tuna, Western Central Pacific Ocean, Floating object purse seine (FAD)



Ocean Wise Not recommended

NOAA FSSI

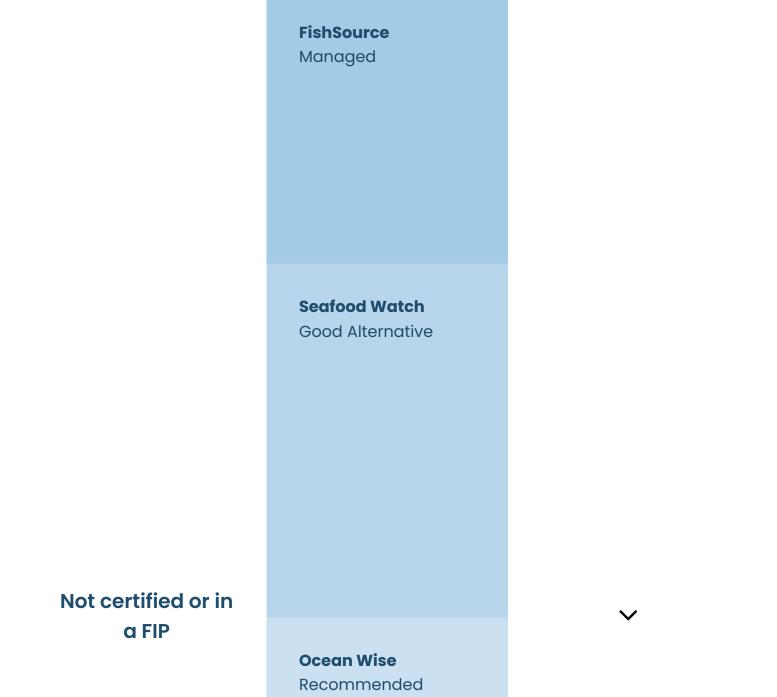
4

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

General Notes

References

Seafood Watch, Black grouper, United States, Gulf of Mexico, Set longlines



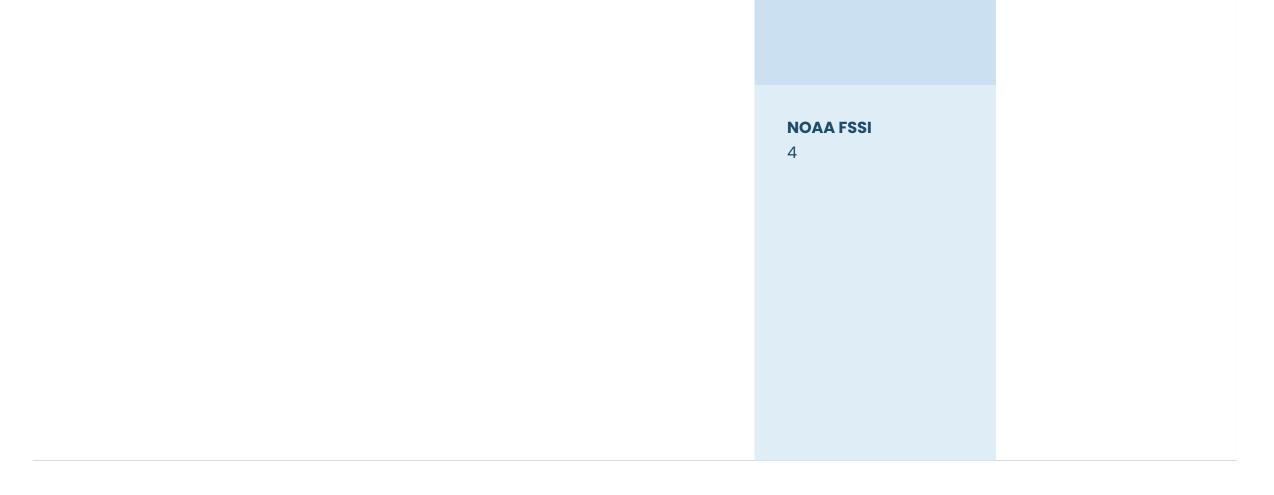


Black seabass Centropristis striata

NW Atlantic northern stock

> **Fishery countries: United States**

Bottom trawl



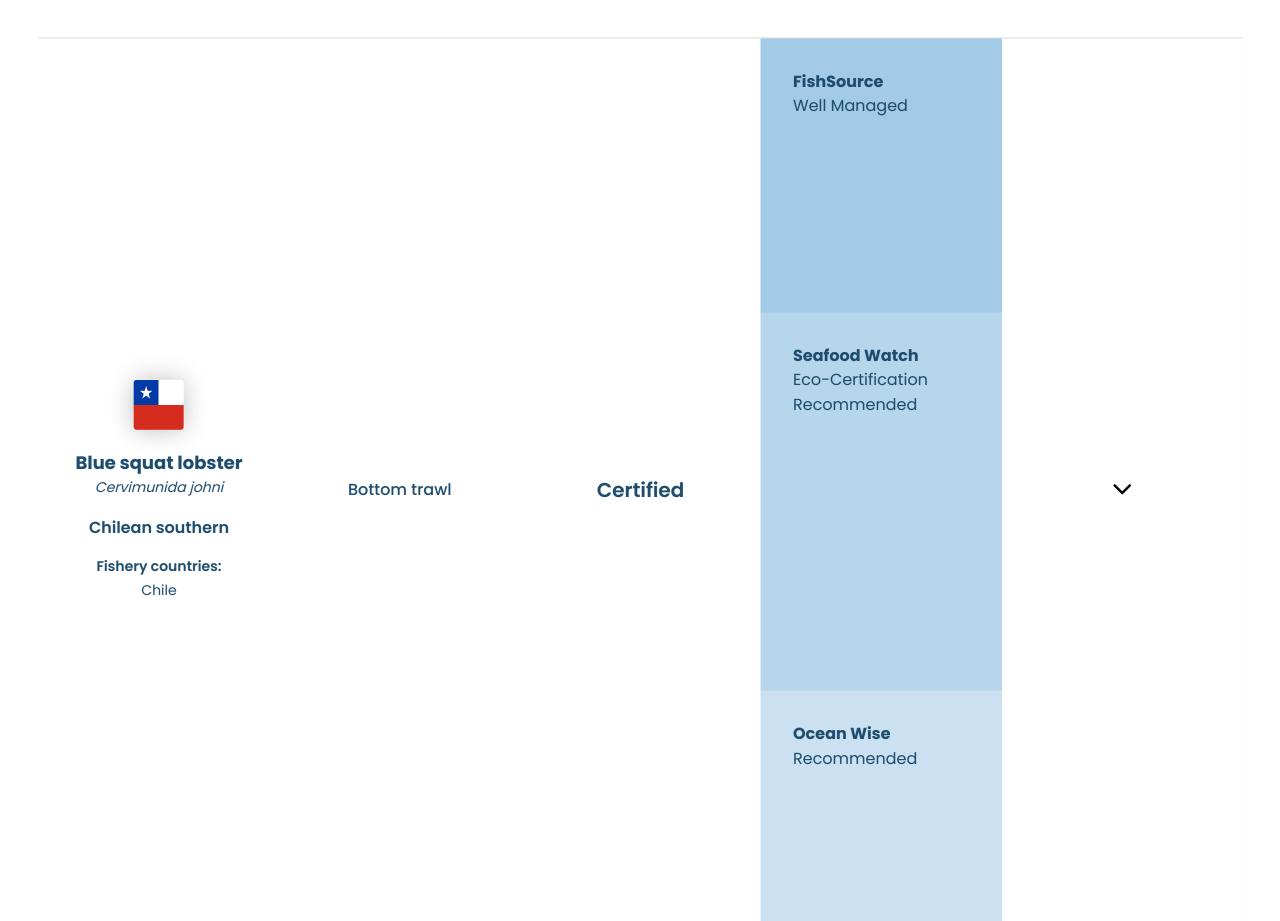
Environmental Notes

- Bycatch of marine mammals and many other species occurs, but none of the species are considered depleted or experiencing overfishing.
- The trawl fishery impacts offshore habitats where black sea bass burrows in the winter, but there are some measures that help to reduce these effects.

General Notes

References

Seafood Watch, Black sea bass, United States, Northwest Atlantic Ocean, Bottom trawls

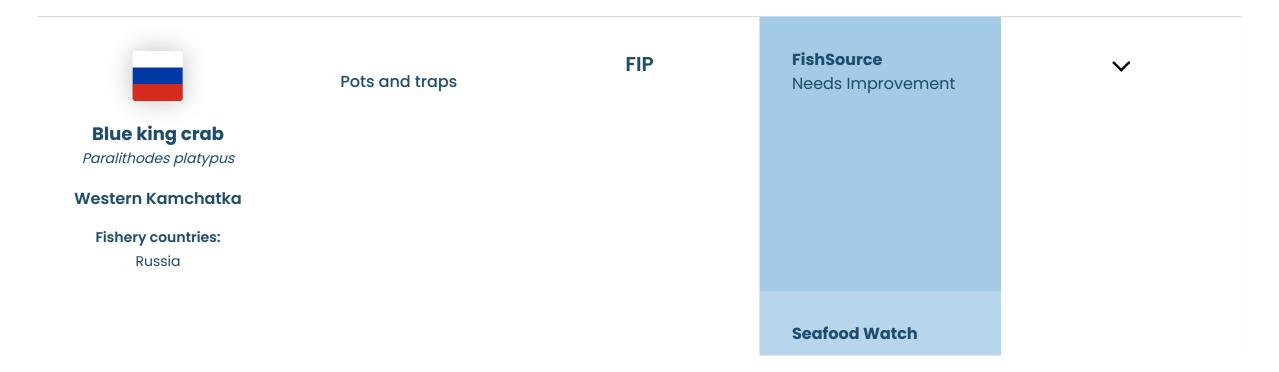


Environmental Notes

• Profile not yet complete.

General Notes

• No additional notes.





• Illegal, unregulated, and unreported fishing is a critical problem. It's impossible to know when any species of crab is caught legally because the supply chain information isn't reliable.

General Notes

References

Crab Catchers Association, Russia Far East Crab FIP

Seafood Watch, Blue king crab, Russia, Sea of Okhotsk, Pots

FishSource Well Managed



Paralithodes platypus	Pots and traps	FIP	Seafood Watch	\checkmark
W Bering Sea			Avoid	
Fishery countries:				
Russia				

Environmental Notes

• Profile not yet complete.

General Notes

References

Crab Catchers Association, Russia Far East Crab FIP



- There is potential for interaction of bottom gillnets with turtles, sharks and dolphins. Bycatch of T. gigas was reported under non-target species data for gillnets and traps.
- Bycatch is a risk for this fishery.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Fishery Progress, Indonesian blue swimming crab - gillnet/trap



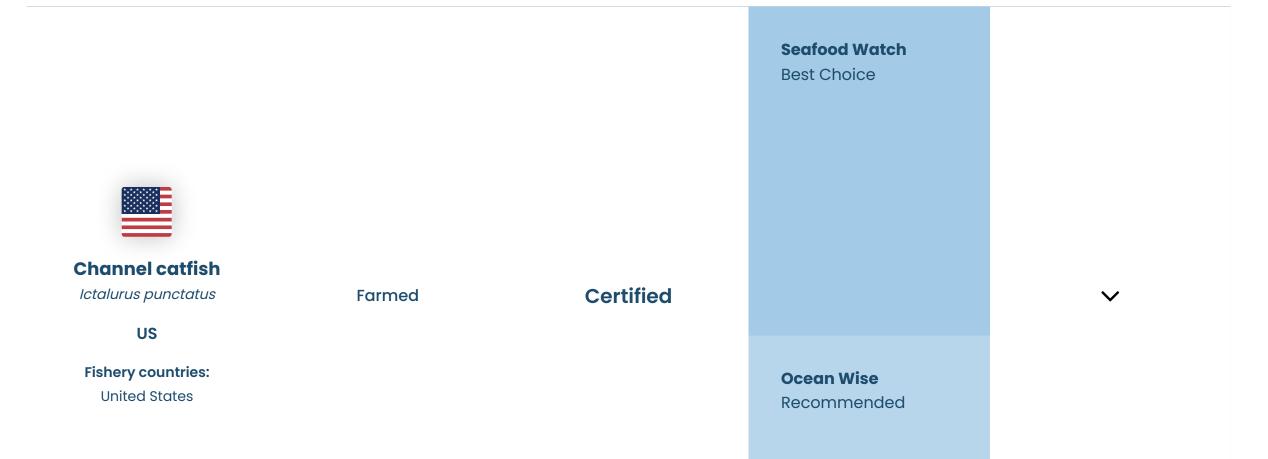
Ocean Wise Recommended

Environmental Notes

• Profile not yet complete.

General Notes

• No additional notes



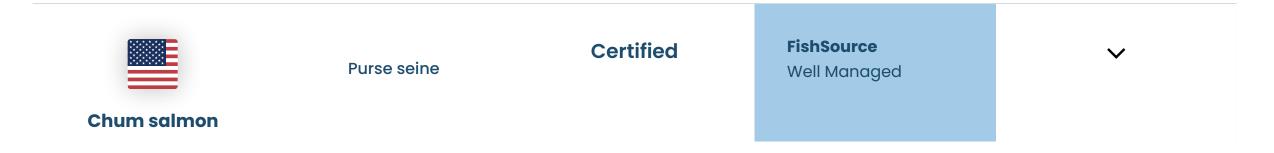
Environmental Notes

- 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, Channel Catfish, Farmed



Alaska - Southeast Alaska

Fishery countries:

United States

Seafood Watch Eco-Certification Recommended

Good Fish Guide Best Choice 2

Ocean Wise Recommended

Environmental Notes

- This fishery is unlikely to impact ETP species.
- Bycatch levels are generally very low and mostly include other salmon species.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Good Fish Guide, Keta salmon, Alaska, Net (purse seine or ring), Marine Stewardship Council (MSC)

Seafood Watch, Chum salmon, United States (Alaska), Northeast Pacific Ocean, Marine Stewardship Council Certified

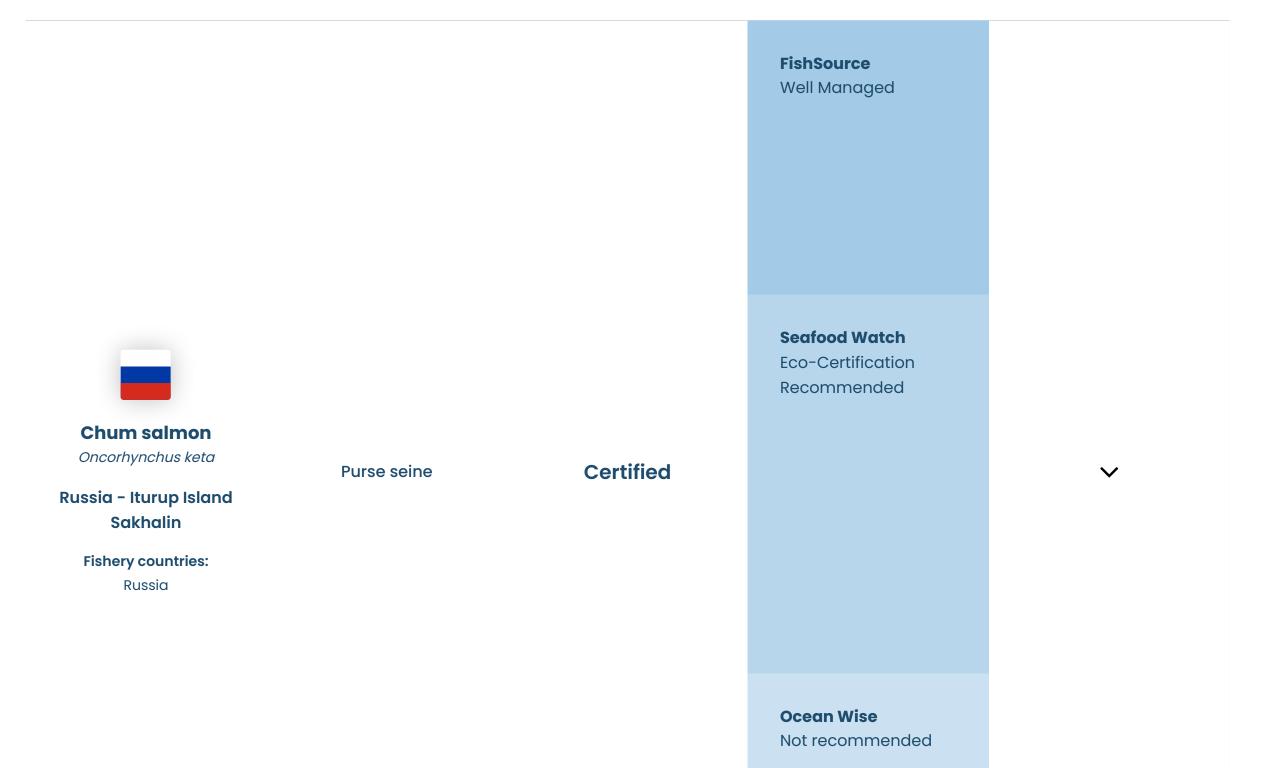


- This fishery is unlikely to impact ETP species.
- Bycatch for this fishery is considered low and non-target species are released alive.
- This fishery is unlikely to have a significant impact on the benthic habitat.

General Notes

References

SCS Global Services, 2015, MSC Public Certification Report for Iturup Pink & Chum Salmon Fisheries



Environmental Notes

- This fishery is unlikely to impact ETP species.
- Bycatch for this fishery is considered low and non-target species are released alive.
- This fishery is unlikely to have a significant impact on the benthic habitat.

General Notes

References

SCS Global Services, 2015, MSC Public Certification Report for Iturup Pink & Chum Salmon Fisheries

Seafood Watch, Russia, Northwest Pacific Ocean, Purse seines, Traps, Marine Stewardship Council Certified, Iturup Island pink & chum salmon Fishery

Cuttlefishes nei Sepia pharaonis Thailand Gulf of Thailand Fishery countries:	Bottom trawl	Not certified or in a FIP	Sustainability not rated	\checkmark
Fishery countries:				
Thailand				

• Profile not yet complete.

General Notes

• No additional notes.





Flathead sole Hippoglossoides elassodon

Bottom trawl

Fishery countries:

Gulf of Alaska

United States

NOAA FSSI 4

Environmental Notes

- Profile not yet complete.
- Bottom trawls will impact the seabed.

General Notes

References

<u>Seafood Watch, United States (Alaska), Northwest Pacific Ocean, Northeast Pacific Ocean, Bottom trawls, Marine Stewardship Council Certified,</u> <u>BSAI and GOA flatfish</u>



Environmental Notes

• Illegal, unregulated, and unreported fishing is a critical problem. It's impossible to know when any species of crab is caught legally because the supply chain information isn't reliable. Russia doesn't acknowledge that it exports crab to the United States, only to Korea and Japan.

General Notes

References

Seafood Watch, Golden king crab, Russia, Sea of Okhotsk, Pots



Certified

FishSource Well Managed

 \checkmark

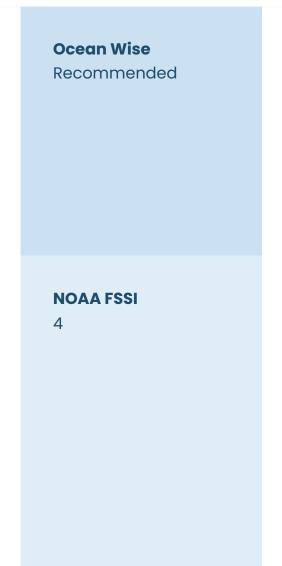
Haddock

Melanogrammus aeglefinus

Georges Bank

Fishery countries: United States

> **Seafood Watch** Eco-Certification Recommended

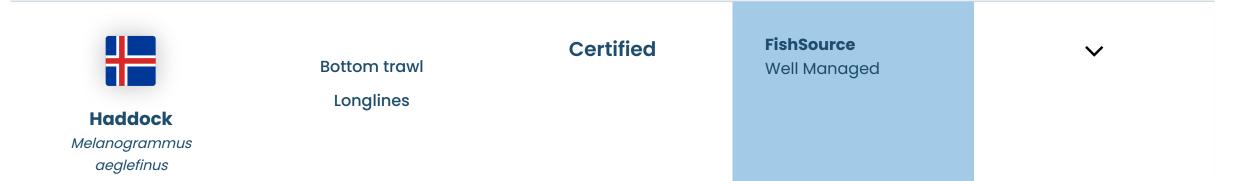


- There are risks to ETP species with this fishery, but there are mitigation measures in place.
- There is bycatch for this fishery but non-target species are retained. Management measures are in place to reduce impacts on retained species.
- Bottom trawls will directly impact the sea bed. However, management measures are in place.

General Notes

References

Seafood Watch, Haddock, United States, Gulf of Maine, Georges Bank, Otter trawls, Marine Stewardship Council Certified



Icelandic

Fishery countries:

Iceland

Seafood Watch Eco-Certification Recommended

Good Fish Guide Best Choice 2



- This fishery is unlikely to impact ETP species.
- Bycatch for this fishery is considered low. There are a number of measures in place to mitigate impacts of the fishery on non-target species, juveniles, and habitats.
- Bottom trawls will directly impact on the sea bed.

General Notes

References

Good Fish Guide, Haddock, Iceland, Bottom trawl (otter), Marine Stewardship Council (MSC)

Good Fish Guide, Haddock, Iceland, Hook & line (longline), Marine Stewardship Council (MSC)

Seafood Watch, Haddock, Iceland, Northeast Atlantic Ocean, Marine Stewardship Council Certified



United States

Fishery countries: United States

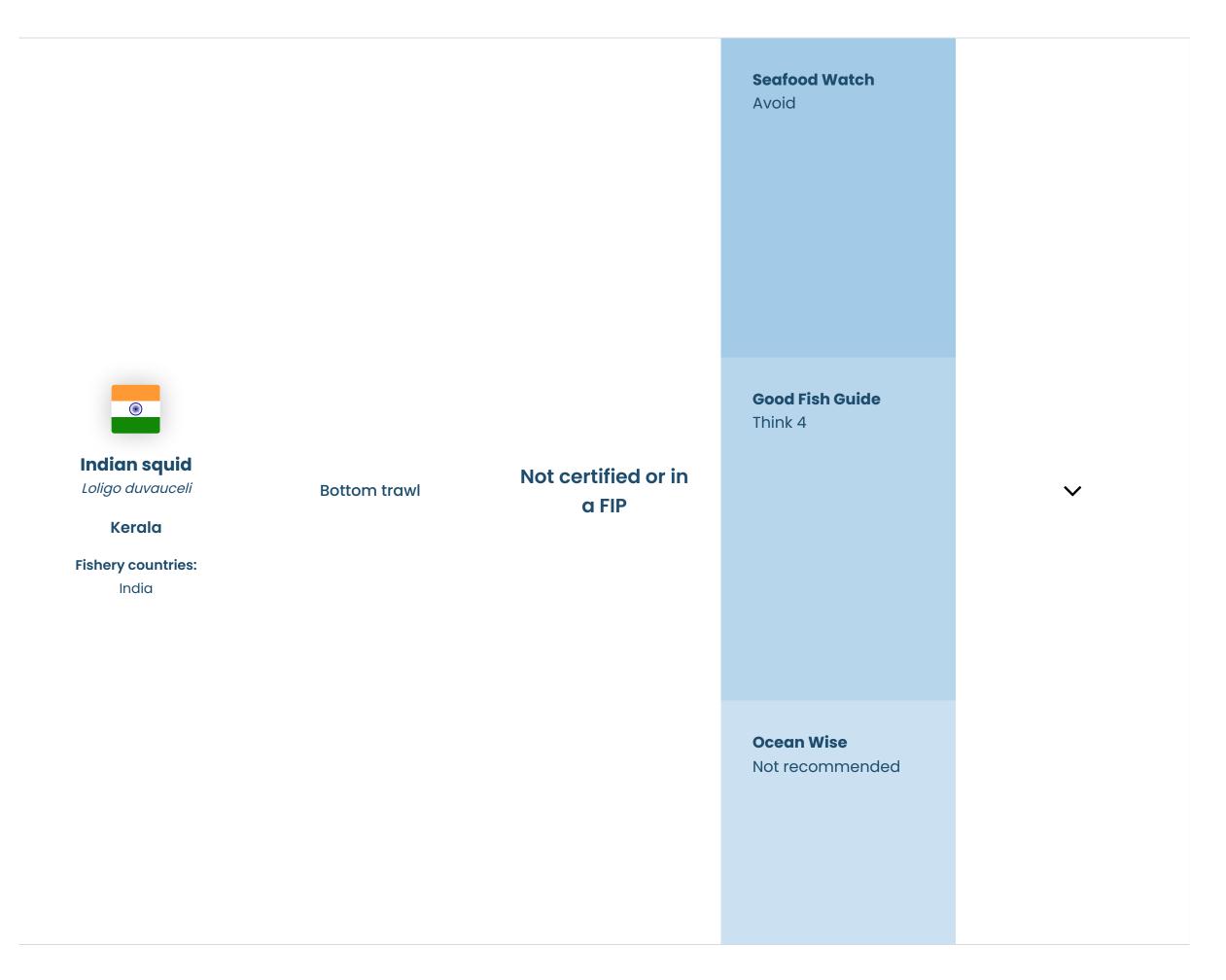
Environmental Notes

- External feed is not provided to farmed clams.
- There is little evidence available to support negative effects of escaped clams on ecosystems or wild populations.
- Effluent may be released from the hatchery or nursery phases, but this is not considered to have any negative effects on the environment, and filter-feeding of clams during grow-out is often cited as improving water quality and/or nutrient cycling in the vicinity near farms. No chemicals are known to be used during the grow-out phase of clam culture in North America.

General Notes

References

Seafood Watch, Clams, Farmed



- There's very little data on what's caught, but it's likely to include other at-risk species of squid as well as corals, forage fish, turtles and sharks.
- Bottom trawls will directly impact the sea bed.

General Notes

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

References

Seafood Watch, Indian squid, India, Eastern Indian Ocean, Western Indian Ocean, Bottom trawls



Recommended	

- Lake whitefish is caught with other species that are recovering.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Seafood Watch, Lake whitefish, Canada, Lake Huron, Set gillnets



Environmental Notes

- Bycatch data is not yet available, but an observer program and management measures are in place.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Seafood Watch, Dolphinfish, Taiwan, Western Central Pacific Ocean, Drifting longlines





- 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

References

Good Fish Guide, Chilean mussel

Seafood Watch, Mussels, Farmed



FIP

FishSource Well Managed

 \checkmark

Northern brown

shrimp

Penaeus aztecus

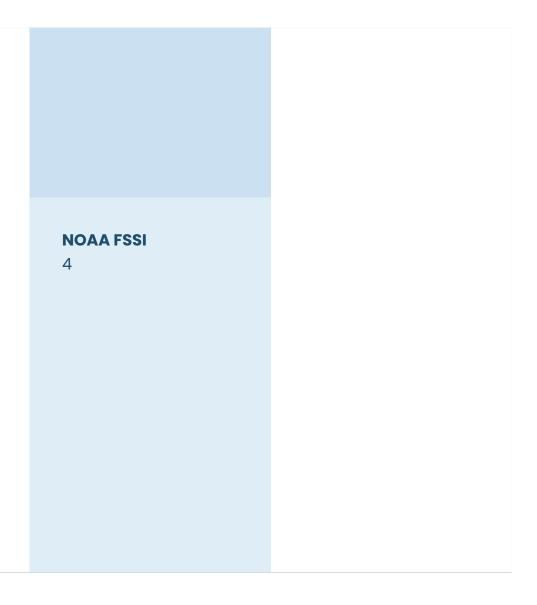
Northern Gulf of Mexico - Mississippi

Fishery countries:

United States

Seafood Watch Good Alternative

Ocean Wise Not recommended



- There is potential for turtle interactions with this fishery, but turtle excluder devices (TEDs) 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 the sea bed.

General Notes

References

Audubon G.U.L.F., Mississippi Shrimp FIP

Seafood Watch, Brown shrimp, United States, Gulf of Mexico, Bottom trawls

Seafood Watch Best Choice



Northern quahog Mercenaria mercenaria	Miscellaneous	Not certified or in		\checkmark	
Canada Saint Mary's Bay		a FIP			
Fishery countries: Canada			Ocean Wise Recommended		

Environmental Notes

- Whether caught by dredge or hand-harvesting, bycatch is very low in these clam fisheries.
- The use of hydraulic dredges is the major concern, as these have impacts on the seafloor, even when used in sandy habitat. The impacts of hand-held rakes, shovels, and picks are unlikely to be significant, but more information is needed.

General Notes

References

Seafood Watch, Northern quahog, Canada, Gulf of St. Lawrence (Southern), Hand implements



Environmental Notes

- Whether caught by dredge or hand-harvesting, bycatch is very low in these clam fisheries.
- The use of hydraulic dredges is the major concern, as these have impacts on the seafloor, even when used in sandy habitat. The impacts of hand-held rakes, shovels, and picks are unlikely to be significant, but more information is needed.

General Notes

References

Seafood Watch, Northern quahog, United States, Hand implements



Handlines and

pole-lines

Not certified or in a FIP FishSource Needs Improvement

 \checkmark

Northern red

snapper Lutjanus campechanus

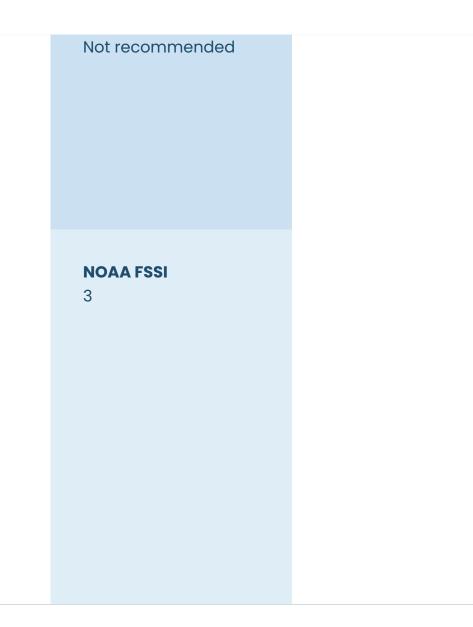
Northern Gulf of Mexico

Fishery countries:

United States

Seafood Watch Good Alternative

Ocean Wise

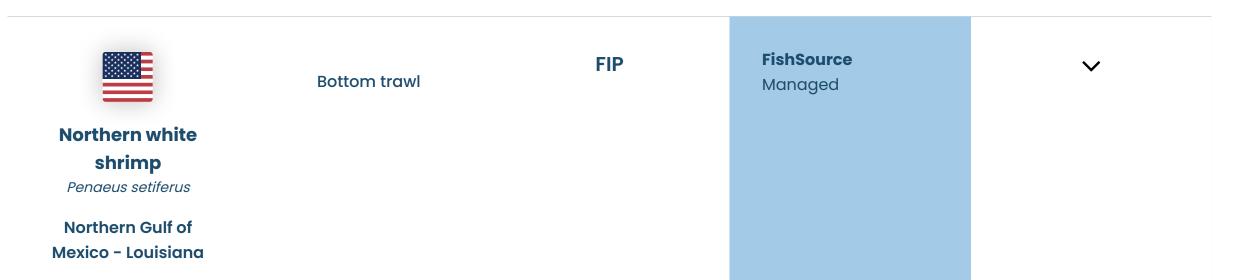


- This fishery is unlikely to impact ETP species.
- Bycatch is a risk for this fishery, but there is insufficient data available to assess significance.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Seafood Watch, Red Snapper, United States, Gulf of Mexico, Vertical lines



Fishery countries:

United States

Seafood Watch Good Alternative

NOAA FSSI 4



- There is potential for turtle interactions with this fishery, but turtle excluder devices (TEDs) 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

• <u>NOAA FSSI 4</u>: 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.

References

<u>Fishery Progress, Louisiana shrimp - otter/skimmer trawl FIP</u>

Seafood Watch, White shrimp, United States, Gulf of Mexico, Bottom trawls



Environmental Notes

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

General Notes

• No additional notes.

Pacific cod Gadus macrocephalus Aleutian Islands Fishery countries: United States	Bottom trawl Longlines	Certified	FishSource Well Managed	~
			Seafood Watch Eco-Certification Recommended	

Good Fish Guide Best Choice 2

Ocean Wise Recommended

NOAA FSSI 1.5

- There is a well-developed strategy for managing impacts on bycatch, ETP species, habitats and the ecosystem.
- In the trawl fishery, there is remote likelihood of or no known incidental mortality and serious injury of marine mammals. Bycatch of seabirds is thought to be low. Bottom trawls will directly impact the sea bed.
- In the longline fishery, there is occasional incidental mortality and serious injury of marine mammals in this fishery. Bycatch of seabirds is a risk. Longlines have low habitat impact.

General Notes

References

Good Fish Guide, Pacific cod, Aleutian Islands: Certified fleets only, Hook & line (longline), Marine Stewardship Council (MSC)

Good Fish Guide, Pacific cod, Aleutian Islands: Certified fleets only, Net (pelagic trawl), Marine Stewardship Council (MSC)

Seafood Watch, Pacific cod, United States (Alaska), Northwest & Northeast Pacific Ocean; Longlines, Pots, Bottom trawls; Marine Stewardship Council Certified BSAI and GOA Pacific cod

	Bottom trawl	Certified	FishSource Well Managed	\checkmark
Pacific cod				

Gadus macrocephalus

Longlines

Eastern Bering Sea

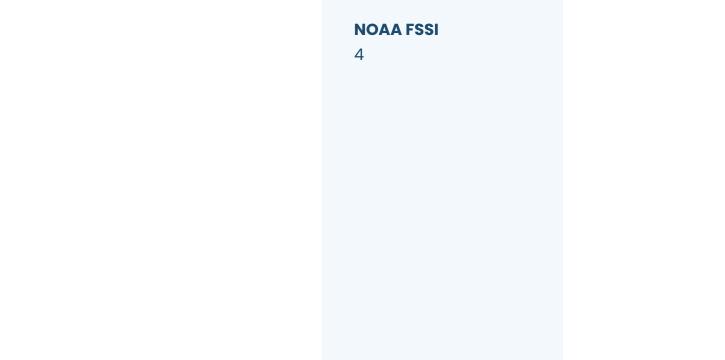
Fishery countries:

United States

Seafood Watch Eco-Certification Recommended

Good Fish Guide Best Choice 1

Ocean Wise Recommended



- There is a well-developed strategy for managing impacts on bycatch, ETP species, habitats and the ecosystem.
- In the trawl fishery, there is remote likelihood of or no known incidental mortality and serious injury of marine mammals. Bycatch of seabirds is thought to be low. Bottom trawls will directly impact the sea bed.
- In the longline fishery, there is occasional incidental mortality and serious injury of marine mammals in this fishery. Bycatch of seabirds is a risk. Longlines have low habitat impact.

General Notes

References

Good Fish Guide, Pacific cod, Bering Sea: Certified fleets only, Hook & line (longline), Marine Stewardship Council (MSC)

Good Fish Guide, Pacific cod, Bering Sea: Certified fleets only, Bottom trawl (otter), Marine Stewardship Council (MSC)

<u>Seafood Watch, Pacific cod, United States (Alaska), Northwest & Northeast Pacific Ocean; Longlines, Pots, Bottom trawls; Marine Stewardship</u> <u>Council Certified BSAI and GOA Pacific cod</u>

Pacific cod	Longlines	Certified	FishSource Well Managed	\checkmark
Gadus macrocephalus				
Gulf of Alaska				
Fishery countries: United States				
			Seafood Watch Eco-Certification Recommended	
			Good Fish Guide Think 3	

Ocean Wise Recommended

NOAA FSSI

3

- There is a well-developed strategy in place for managing impacts on bycatch Endangered, Threatened and Protected (ETP) species. There is occasional incidental mortality and serious injury of marine mammals with the Stellar sea lion as the main marine mammal at risk.
- Bycatch of seabirds is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Good Fish Guide, Pacific cod, Gulf of Alaska: Certified fleets only, Hook & line (longline), Marine Stewardship Council (MSC)

<u>Seafood Watch, Pacific cod, United States (Alaska), Northwest & Northeast Pacific Ocean; Longlines, Pots, Bottom trawls; Marine Stewardship</u> <u>Council Certified BSAI and GOA Pacific cod</u>

			FishSource Well Managed	
Pacific halibut			Seafood Watch Eco-Certification Recommended	
Hippoglossus stenolepis	Longlines	Certified		\sim
NE Pacific - Alaska				
Fishery countries: United States				

Ocean Wise Recommended

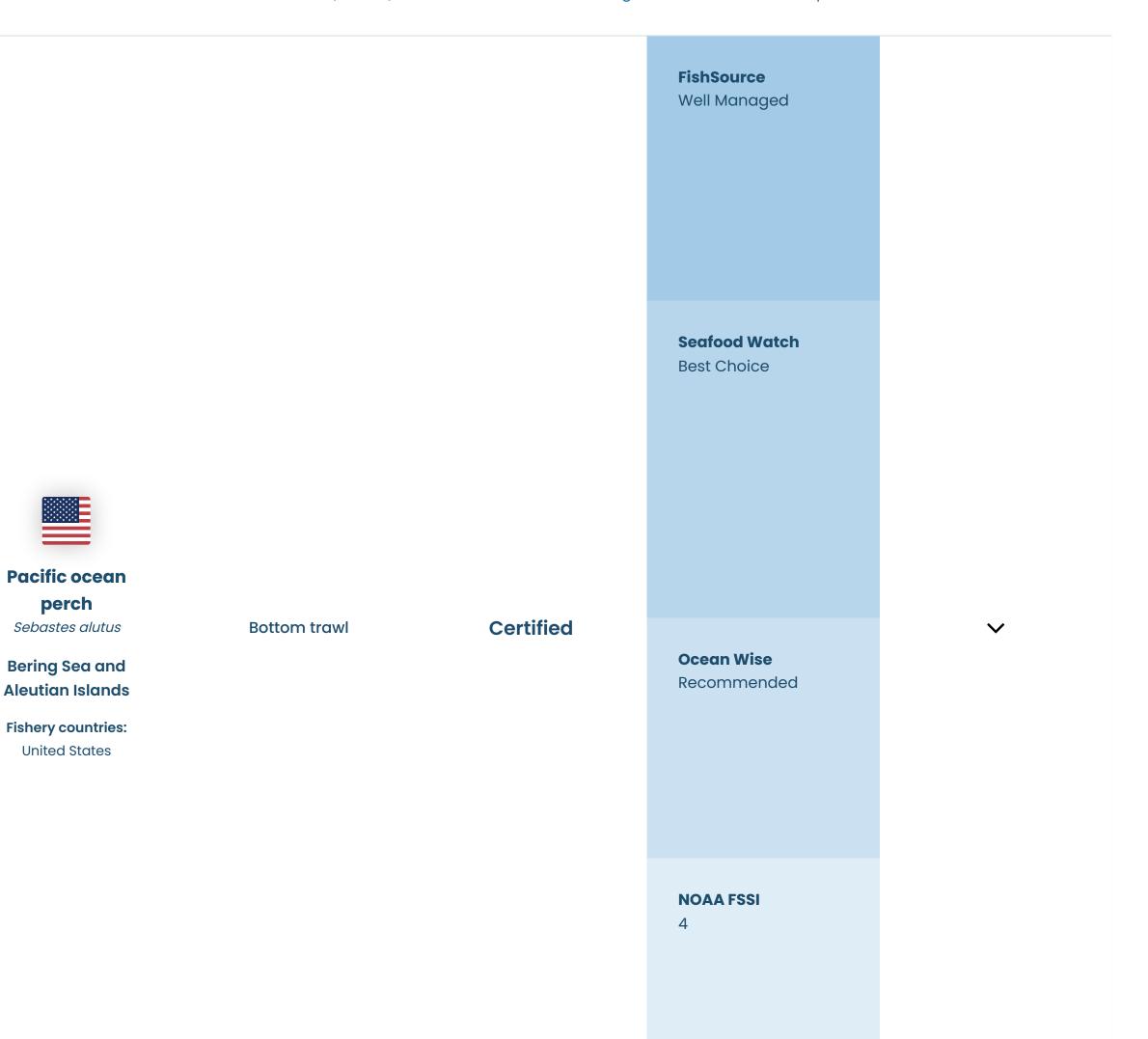
Environmental Notes

- 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

References

Seafood Watch, Pacific halibut, United States (Alaska), Northeast Pacific Ocean, Longlines, Marine Stewardship Council Certified



Environmental Notes

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

General Notes

• No additional notes

Seafood Watch Avoid

FishSource

Needs Improvement



Pangasius Pangasius spp.

Vietnam

Fishery countries:

Vietnam

Not certified or in a FIP

> **Good Fish Guide** Think 4

 \checkmark

Ocean Wise Not recommended

Environmental Notes

- Pangasius feed includes low levels of fishmeal and fish oil from marine feed sources. Feed inputs are not required to be responsibly sourced.
- As a native species, the risk to wild populations from escapes is low. Juveniles used in pangasius farming come from Vietnamese hatcheries and the trade of wild-caught broodstock is limited.
- Panagsius farming in Vietnam is linked to illegal disposal of waste into adjoining waterways with cumulative impacts that contribute to water pollution. However, certified farms are assumed to dispose of waste properly.

General Notes

• The government requires pangasius farms to be managed under a zonal approach.

Farmed

References

Good Fish Guide, Basa, Asia, Vietnam, Mekong Delta

Ocean Wise, Catfish

Seafood Watch, Sutchi Catfish, Vietnam

			FishSource Managed	
Patagonian squid				
Doryteuthis (amerigo)				
gahi		Not certified or in		
	Bottom trawl	a FIP		\checkmark
Falkland Islands -		G T H		
Spring-spawning				
cohort				
Fishery countries:				
Finland				

- Seabirds and seals interact with this fishery. Measures are in place to mitigate impacts.
- Bycatch for this fishery is considered low.
- Bottom trawls will directly impact on the sea bed.

General Notes

• This fishery is under the work of the <u>Global Squid Supply Chain Roundtable</u>.

			FishSource Well Managed	
			Seafood Watch Eco-Certification	
Patagonian			Recommended	
toothfish				
Dissostichus eleginoides	Longlines	Certified		\checkmark
Southern Indian	•			

Ocean - Kerguelen Islands

Fishery countries:

France

Ocean Wise Recommended

Environmental Notes

• Profile not yet complete.

General Notes

References

Seafood Watch, Patagonian toothfish, France, Antarctic Indian Ocean, Set longlines, Marine Stewardship Council Certified SARPC Toothfish Fishery



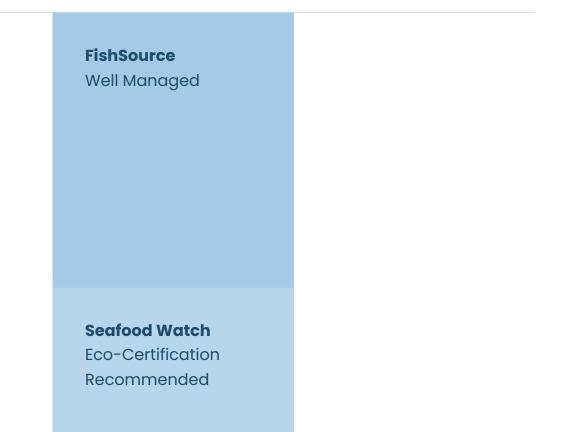
Certified

Environmental Notes

- This fishery is unlikely to impact ETP 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.



 \checkmark



Queen crab

Chionoecetes	0	pilio
--------------	---	-------

Pots and traps

Barents Sea

Fishery countries:

Russia

Ocean Wise Recommended

• Profile not yet complete.

General Notes

References

Seafood Watch, Snow crab, Russia, Northeast Atlantic Ocean, Pots, Marine Stewardship Council Certified Russia Barents Sea Opilio Trap



Environmental Notes

- There are potential risks to ETP 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.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Seafood Watch, Snow crab, Russia, Sea of Okhotsk, Pots



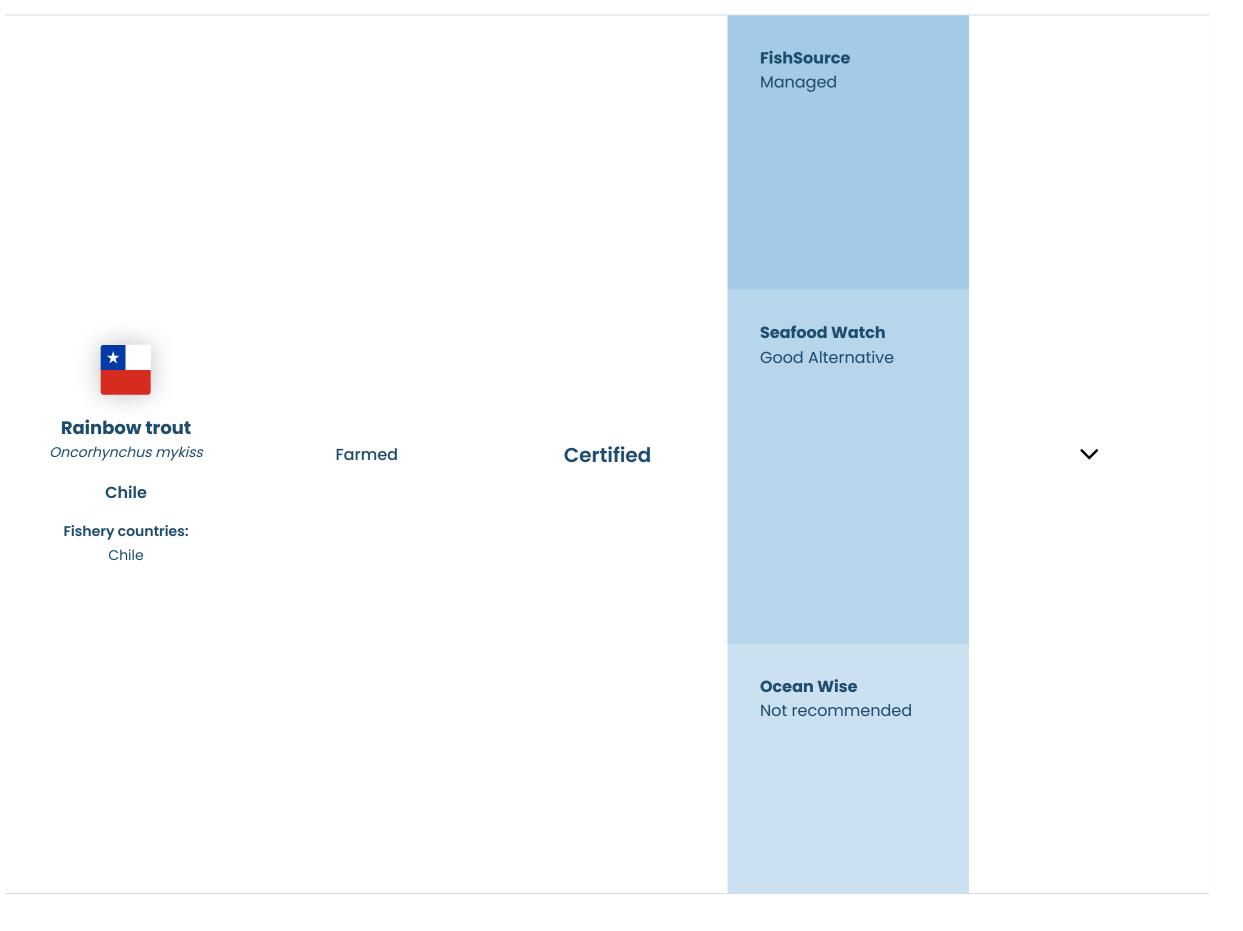
Environmental Notes

- There are risks to leather back turtles, several species of whales and wolfish with this fishery.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Seafood Watch, Snow crab, Canada, Northwest Atlantic Ocean, Pots, Marine Stewardship Council Certified Newfoundland & Labrador snow crab Fishery



Environmental Notes

- Trout have a high requirement for fish in their diet.
- Rainbow trout are not native to Chile but have become established in the wild due to intentional stocking. However, there are still concerns about the impact of farmed salmonid escapes and disease outbreaks on wild fish populations. Available data indicates that large numbers of farmed trout have escaped each year since the early 1990s.
- Production using open net cages and ponds results in the discharge of waste and nutrients directly into the surrounding water.

General Notes

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

References

FishSource - salmon, Chile

Seafood Watch, Rainbow trout, Chile, Farmed





- Data on the feed ingredients and sources are limited. Typical feed conversion ratios (FCR) of 1.35 for trout in raceways and 1.50 for net pens are used. Average fishmeal and fish oil inclusion levels in trout feeds are estimated to be 20.0% and 6.3% respectively. Information regarding the sustainability of the fishery sources of marine ingredients is very limited.
- The risk of escapes from raceway systems in Colombia is considered low and net pen is considered moderate. Regulations in Colombia regarding interactions with wildlife at aquaculture facilities are minimal, and there is no clear enforcement. There is limited disease reporting in Colombia; raceways and net pens are open systems that have an inherent risk of disease transmission and amplification.
- There is a lack of data on water quality, use of chemicals and effluent monitoring. While chemical use appears to be low, the legal system doesn't adequately manage its use. Due to the openness of the net pens, there is a greater risk of affecting non‐ target organisms.

General Notes

References

Seafood Watch, Farmed Rainbow Trout, Colombia



Certified

FishSource Managed

 \checkmark

Rainbow trout

Oncorhynchus mykiss

US

Fishery countries:

United States

Seafood Watch Best Choice

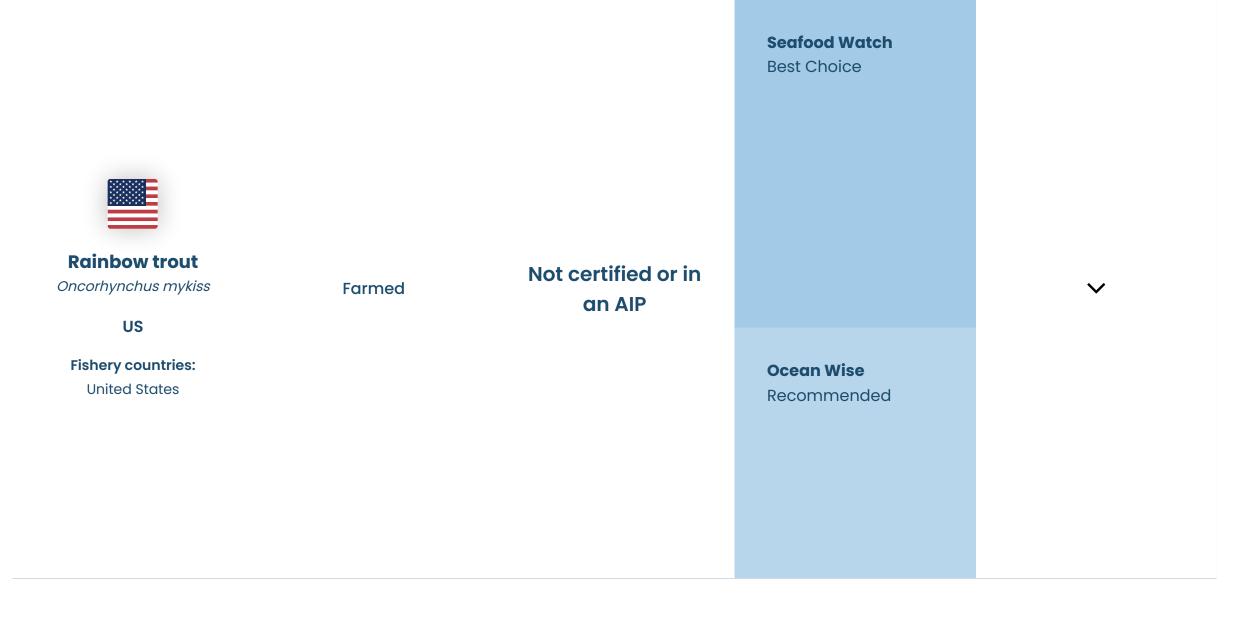
Ocean Wise Recommended

- Rainbow trout is fed a high energy diet with moderate amounts of fishmeal and fish oil (approximately 20% and 6%, respectively).
- Potential escapes pose no significant risk of additional ecological impacts.
- Regulatory oversight of effluent and chemical use in U.S. ponds and outdoor flowthrough raceways are strong, and the industry follows best practices to minimize disease.

General Notes

References

Seafood Watch, Farmed Rainbow Trout, U.S.



Environmental Notes

- Rainbow trout is fed a high energy diet with moderate amounts of fishmeal and fish oil (approximately 20% and 6%, respectively).
- Potential escapes pose no significant risk of additional ecological impacts.
- Regulatory oversight of effluent and chemical use in U.S. ponds and outdoor flowthrough raceways are strong, and the industry follows best practices to minimize disease.

General Notes

References

Seafood Watch, Farmed Rainbow Trout, U.S.

	Pots and traps	Not certified or in a FIP	Seafood Watch Good Alternative	\checkmark
Red swamp crawfish Procambarus clarkii				
Louisiana territorial sea				

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

General Notes

References

Seafood Watch, Red swamp crayfish, United States (Louisiana), Atchafalaya Basin, Traps





Skipjack tuna Katsuwonus pelamis

Eastern Atlantic Ocean

Fishery countries: Senegal Associated purse

seine

Some product from FIP fisheries

 \checkmark

Ocean Wise Not recommended

Think 4

- There are risks to sea turtles and sharks with this fishery.
- Bycatch for this fishery includes billfish, bony fish, other tuna species and sharks. Some management measures are in place.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

• All purse seine fishing vessels are listed on the International Seafood Sustainability Foundation (ISSF)'s <u>ProActive Vessel Register (PVR)</u> and are audited against ISSF conservation measures.

References

Fishery Progress, Atlantic Ocean tuna - purse seine (Capsen & Grand Bleu S.A.)

Good Fish Guide, Skipjack tuna, East Atlantic, Net (purse seine on aggregating devices or free-schooling fish)

Seafood Watch, Skipjack tuna, Eastern Atlantic, Floating object purse seine (FAD)

			FishSource Managed	
			Seafood Watch Avoid	
Skipjack tuna Katsuwonus pelamis	Associated purse	FIP		~
Eastern Pacific Ocean Fishery countries: Ecuador, Panama, United States	seine		Good Fish Guide Think 4	



- There are risks to sea turtles with this fishery, but management measures are in place.
- Bycatch includes yellowtail, mahimahi, rainbow runner, silky and oceanic white tips sharks, and manta rays.

• This fishery is unlikely to have a significant impact on the sea bed.

General Notes

• This fishery was part of the Eastern Pacific Ocean tropical tuna - purse seine (TUNACONS) FIP, which entered MSC Full Assessment in October 2020 and received MSC certification in July 2022.

References

Fishery Progress, Eastern Pacific Ocean tropical tuna - purse seine (TUNACONS)

Good Fish Guide, Skipjack tuna, Eastern Pacific, Purse seine (FAD & Free School)

Seafood Watch Recommendations for Skipjack tuna, Eastern Central Pacific Ocean, Floating object purse seine (FAD)



Ocean Wise Not recommended

- There are risks to sea turtles with this fishery.
- Bycatch for this fishery includes other tuna, fin fishes, sharks and rays. Management measures are in place.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Good Fish Guide, Skipjack tuna, Indian Ocean, Net (purse seine on aggregating devices or free-schooling fish)

Seafood Watch, Skipjack tuna, Indian Ocean, Floating object purse seine (FAD)



Environmental Notes

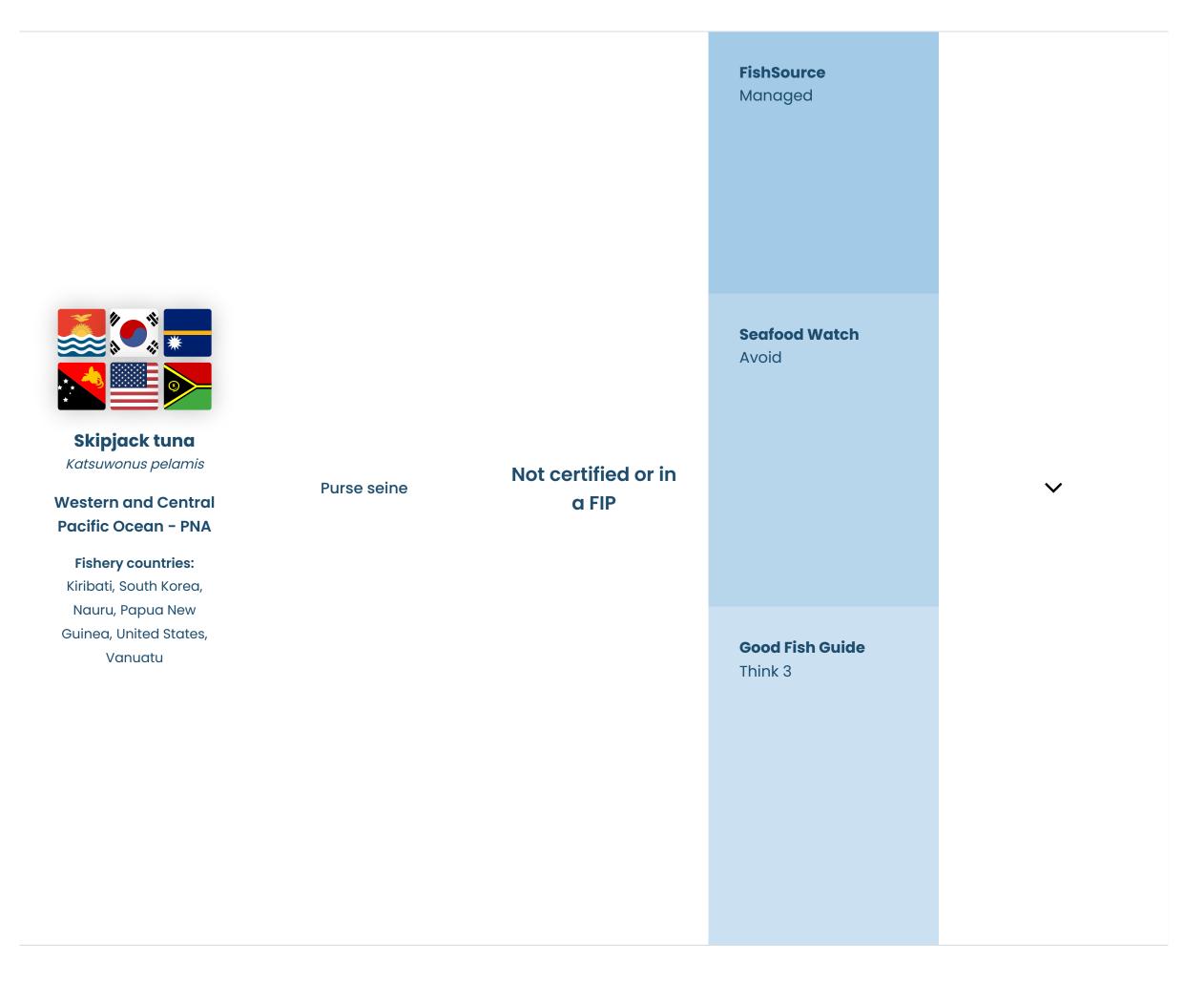
- This fishery uses FAD-free (unassociated) purse seine gear, which results in less bycatch than associated fisheries and management measures are in place.
- Purse seine gear still present a hazard to sea turtles, marine mammals and sharks, but management measures are in place.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

<u>Good Fish Guide, Skipjack tuna, Western and Central Pacific, Net (purse seine on aggregating devices or free-schooling fish), Marine</u> <u>Stewardship Council (MSC)</u>

<u>Seafood Watch, Skipjack tuna, Western Central Pacific Ocean, Unassociated purse seine (non-FAD), Marine Stewardship Council Certified PNA</u> <u>Western and Central Pacific skipjack, yellowfin and bigeye tuna purse seine fishery (FAD and non-FAD sets)</u>



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

General Notes

References

Good Fish Guide, Skipjack tuna, Western and Central Pacific, Net (purse seine on aggregating devices or free-schooling fish)

Seafood Watch, Skipjack tuna, Western Central Pacific Ocean, Floating object purse seine (FAD)





- This fishery uses FAD-free (unassociated) purse seine gear, which results in less bycatch than associated fisheries and management measures are in place.
- Purse seine gear still present a hazard to sea turtles, marine mammals and sharks, but management measures are in place.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Good Fish Guide, Skipjack tuna, Western and Central Pacific, Net (purse seine on aggregating devices or free-schooling fish), Marine Stewardship Council (MSC)

<u>Seafood Watch, Skipjack tuna, Western Central Pacific Ocean, Unassociated purse seine (non-FAD), Marine Stewardship Council Certified PNA</u> <u>Western and Central Pacific skipjack, yellowfin and bigeye tuna purse seine fishery (FAD and non-FAD sets)</u>



FIP

FishSource Managed

 $\mathbf{\vee}$

Skipjack tuna Katsuwonus pelamis

Western and Central Pacific Ocean -WCPFC

Fishery countries: South Korea, Tuvalu, United States

Seafood Watch Avoid

Good Fish Guide



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

General Notes

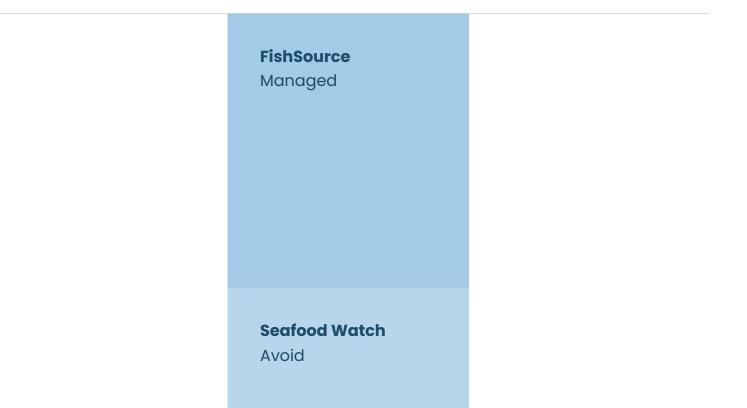
References

Fishery Progress, Pacific Ocean tropical tuna - purse seine (US Pacific Tuna Group)

Fishery Progress, Western and Central Pacific Ocean tuna - purse seine (Dongwon Industries)

Good Fish Guide, Skipjack tuna, Western and Central Pacific, Net (purse seine on aggregating devices or free-schooling fish)

Seafood Watch, Skipjack tuna, Western Central Pacific Ocean, Floating object purse seine (FAD)





Skipjack tuna *Katsuwonus pelamis*

Western and Central Pacific Ocean -WCPFC

Fishery countries:

Cook Islands, Japan, Kiribati, South Korea, Micronesia, New Zealand, Solomon Islands, Spain, Taiwan, United States Purse seine

Not certified or in a FIP

Good Fish Guide Think 3 $\mathbf{\vee}$

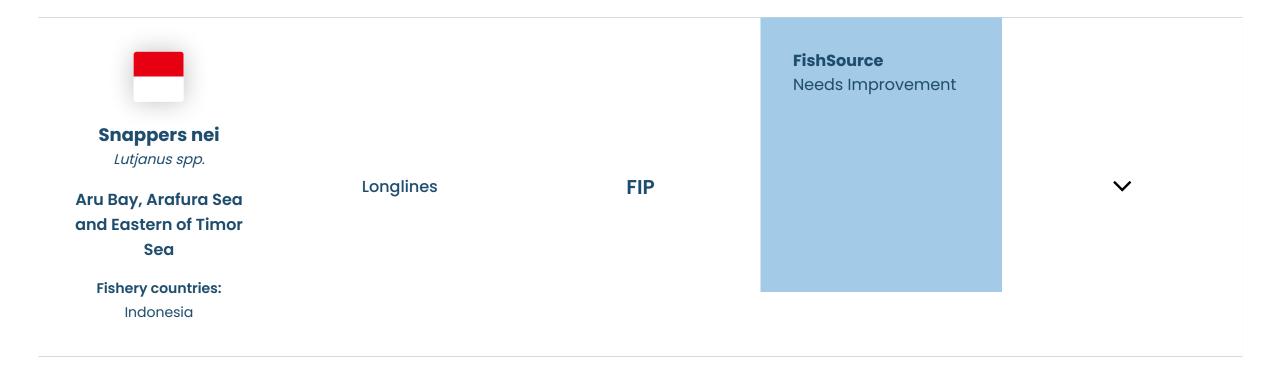
- There are risks to sea turtles, sharks, and marine mammals with this fishery, but management measures are in place.
- Bycatch includes other tuna, but management measures are in place.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Good Fish Guide, Skipjack tuna, Western and Central Pacific, Net (purse seine on aggregating devices or free-schooling fish)

Seafood Watch, Skipjack tuna, Western Central Pacific Ocean, Floating object purse seine (FAD)



Environmental Notes

- This fishery is a risk to sharks and rays, but further studies are needed.
- The snapper and grouper fishery is multi-species, which several other species are caught: emperors, sweetlips, and jobfishes species. Bycatch species in the longline fisheries also include species like sharks, cobia and trevallies.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Fishery Progress, Indonesia snapper and grouper - bottom longline, dropline, trap, and gillnet (ADI)



Gillnets and

Certified

FishSource Well Managed

 \checkmark

Sockeye salmon Oncorhynchus nerka

Alaska - Bristol Bay, Westward Alaska

Fishery countries:

United States

entangling nets

Seafood Watch Eco-Certification Recommended

Good Fish Guide Best Choice 2

Ocean Wise Recommended

Environmental Notes

- There is some interaction on endangered, threatened and protected species but this is generally very low.
- Bycatch levels are generally very low and mostly include other salmon species.
- This fishery is unlikely to have a significant impact on the benthic habitat.

General Notes

References

Good Fish Guide, Red salmon, Alaska, Net (gill or fixed; beach seine), Marine Stewardship Council (MSC)

Seafood Watch, Sockeye salmon, United States (Alaska), Northeast Pacific Ocean, Marine Stewardship Council Certified Alaska salmon Fishery



Alaska - Southeast

Alaska

Fishery countries:

United States

Seafood Watch Eco-Certification Recommended

Good Fish Guide

Best Choice 2



- There is some interaction on endangered, threatened and protected species but this is generally very low, occurring in the gillnet fisheries.
- Bycatch levels are generally very low and mostly include other salmon species.
- This fishery is unlikely to have a significant impact on the benthic habitat.

General Notes

References

Good Fish Guide, Red salmon, Alaska, Net (purse seine or ring), Marine Stewardship Council (MSC)

Seafood Watch, Sockeye salmon, United States (Alaska), Northeast Pacific Ocean, Marine Stewardship Council Certified Alaska salmon Fishery



Environmental Notes

- ETP species, including fishes, seabirds and the South American sea lion, can be caught in very low proportions in the industrial fleet, as reported by the bycatch monitoring program.
- This fishery is part of a bycatch reduction program. The target species represents over 98% of the total catch proportion while bycatch species include jumbo flying squid, bigeye flounder and grenadier.
- This fishery is unlikely to have a significant impact on the benthic habitat.

General Notes

• No additional notes



Fishery countries:

Canada

Good Fish Guide Think 3

Environmental Notes

- This fishery can have a bycatch of highly vulnerable species such as other sharks, turtles, and seabirds. There are some uncertainties in the catch data, and monitoring and enforcement needs to be improved
- This fishery is unlikely to have a significant impact on the benthic habitat.

General Notes

References

Good Fish Guide, Swordfish, North Atlantic, Hook & line (longline)



Good Fish Guide Think 4

- The catch of at-risk or overfished turtles, seabirds, tuna, sharks, and other species is a major concern. Management is rated ineffective overall.
- There are some measures to reduce bycatch impacts, but they don't follow best practices, and their effectiveness is unknown. This fishery catches species that play an essential role in the food web, and more robust measures may be needed to protect the ecosystem.
- Drifting longlines have minimal habitat impacts.

General Notes

References

Good Fish Guide, Swordfish, North East Pacific, Hook & line (longline)

Seafood Watch, Swordfish, Eastern Central / Northeast Pacific Ocean, Drifting longlines

	Longlines	Not certified or in a FIP	FishSource Needs Improvement	\checkmark
Swordfish Xiphias gladius				
Northeast Pacific				
Fishery countries: Ecuador				
			Seafood Watch Avoid	

Good Fish Guide Think 4

- The catch of at-risk or overfished turtles, seabirds, tuna, sharks, and other species is a major concern. Management is rated ineffective overall.
- There are some measures to reduce bycatch impacts, but they don't follow best practices, and their effectiveness is unknown. This fishery catches species that play an essential role in the food web, and more robust measures may be needed to protect the ecosystem.
- Drifting longlines have minimal habitat impacts.

General Notes

References

Good Fish Guide, Swordfish, North East Pacific, Hook & line (longline)

Seafood Watch, Swordfish, Eastern Central / Northeast Pacific Ocean, Drifting longlines

			FishSource Managed	
			Seafood Watch Best Choice	
Swordfish Xiphias gladius	Handlines and pole-lines	FIP		\checkmark

Fishery countries:

Northwest Pacific

Vietnam



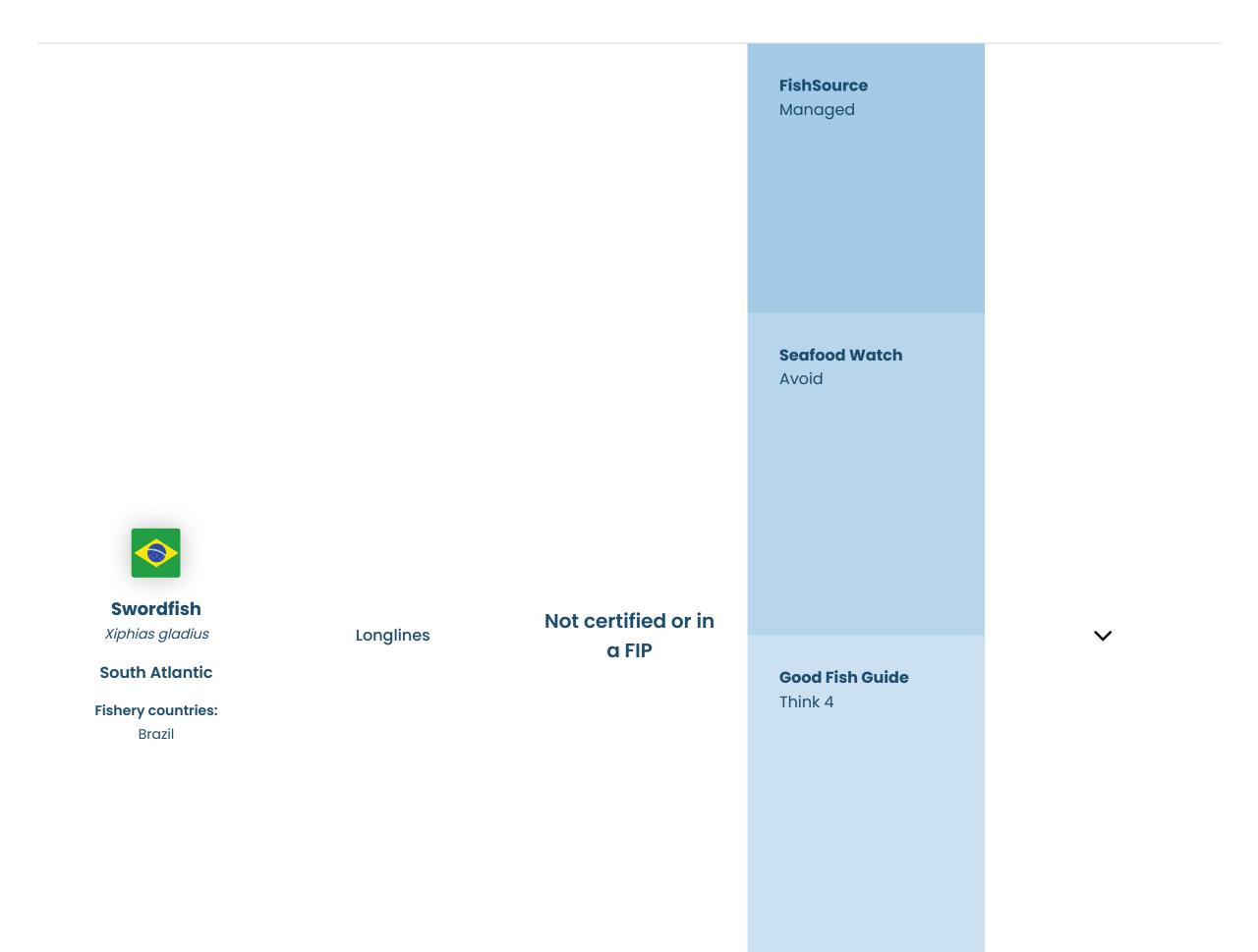
- There are risks to sea birds as well as green, hawksbill and leatherback sea turtles with this fishery, but there are mitigation measures in place.
- Common bycatch species in the longline fisheries include blue, shortfin mako, silky and oceanic whitetip sharks, opah, and blue, striped and black marlin, and bigeye and yellowfin tuna.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Fishery Progress, Vietnam swordfish - handline

Seafood Watch, Swordfish, Northwestern and Central Pacific Ocean, Handlines and hand-operated pole-and-lines





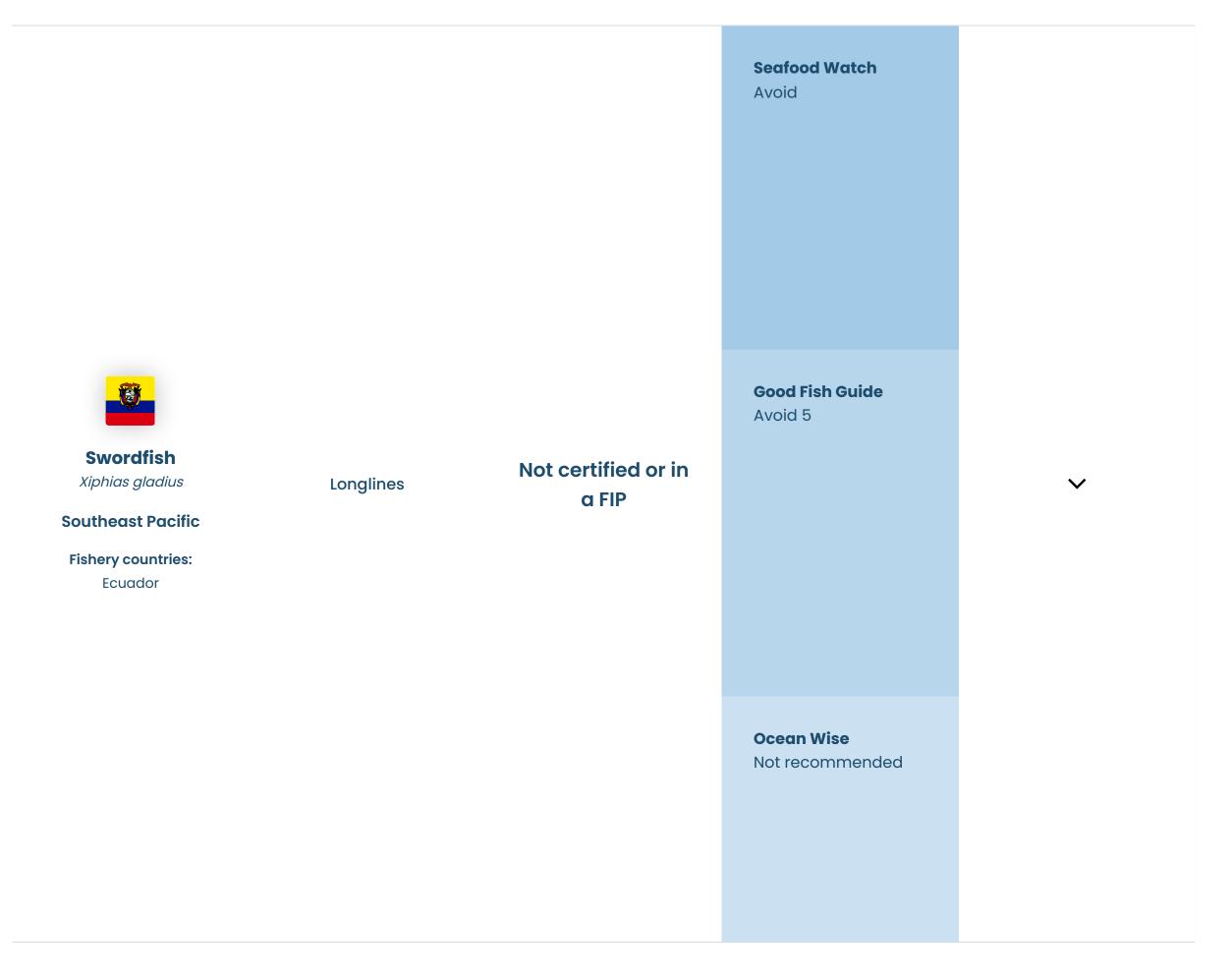
Environmental Notes

- The catch of at-risk or overfished turtles, seabirds, tuna, sharks, and other species is a major concern. Management is rated ineffective overall.
- There are some measures to reduce bycatch impacts, but they don't follow best practices, and their effectiveness is unknown. This fishery catches species that play an essential role in the food web, and more robust measures may be needed to protect the ecosystem.
- Drifting longlines have minimal habitat impacts.

General Notes

References

Seafood Watch, Swordfish, South Atlantic Ocean, Drifting longlines



Environmental Notes

- The catch of at-risk or overfished turtles, seabirds, tuna, sharks, and other species is a major concern. Management is rated ineffective overall.
- There are some measures to reduce bycatch impacts, but they don't follow best practices, and their effectiveness is unknown. This fishery catches species that play an essential role in the food web, and more robust measures may be needed to protect the ecosystem.
- Drifting longlines have minimal habitat impacts.

General Notes

References

Good Fish Guide, Swordfish, South East Pacific, Hook & line (longline)

Seafood Watch, Swordfish, Southeast Pacific Ocean, Drifting longlines



Seafood Watch Eco-Certification Recommended

Good Fish Guide Think 4

Ocean Wise Not recommended

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.

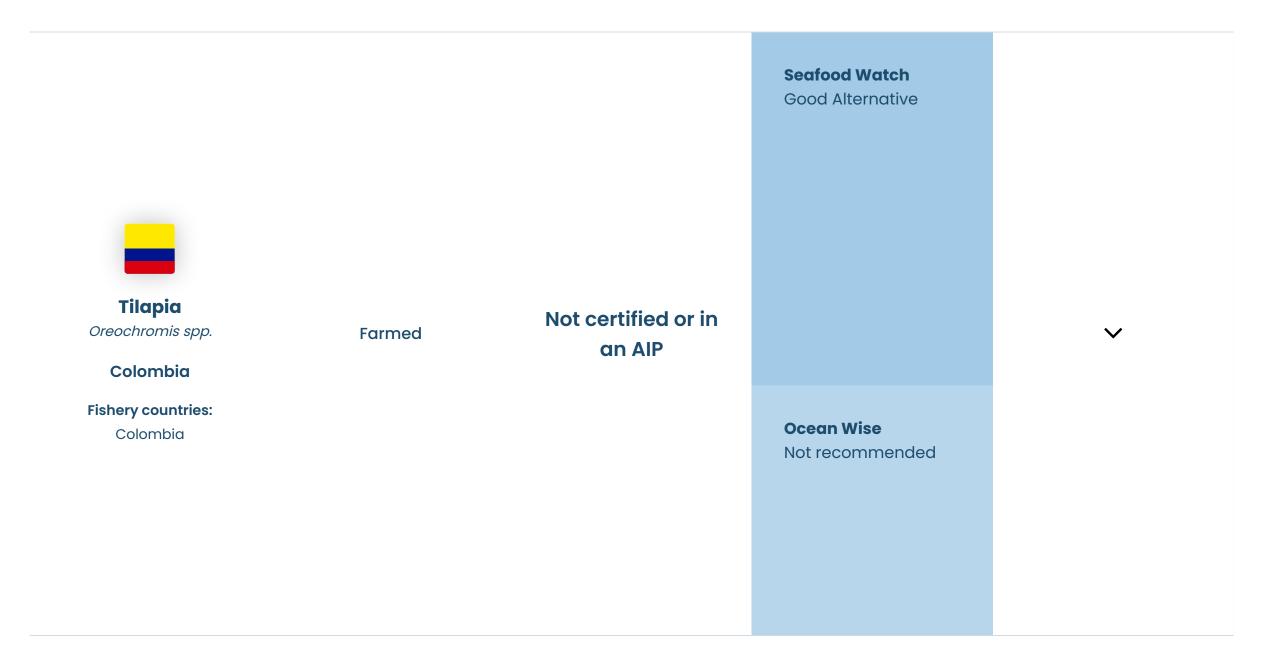
References

Good Fish Guide, Tilapia

FishSource, Tilapia, China

<u>Ocean Wise, Tilapia</u>

Seafood Watch, Farmed Tilapia, BAP Standard: Tilapia Farms (2, 3, 4-star)

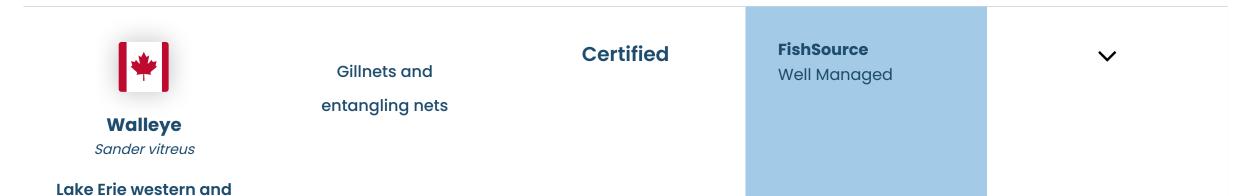


- Tilapia typically does not require large inputs of fishmeal and fish oil in commercial feeds.
- The potential impacts on wild species are limited because tilapia has been historically introduced and actively stocked into the environment.
- The chemical use and the impact of effluent from farm operations have the potential to affect the waterbody.

General Notes

References

Seafood Watch, Farmed Tilapia, Colombia



central

Fishery countries:

Canada

Seafood Watch Eco-Certification Recommended

Ocean Wise Recommended



- There are risks to ETP 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

References

<u>Ocean Wise, Walleye</u>

Seafood Watch, Walleye, Canada, Lake Erie, Gillnets, Marine Stewardship Council Certified Lake Erie Multi-species Commercial Fishery

			FishSource Well Managed	
Sander vitreus	Gillnets and ntangling nets	Certified	Seafood Watch Eco-Certification Recommended	

Canada



Environmental Notes

• Profile not yet complete.

General Notes

References

<u>Ocean Wise, Walleye</u>

Seafood Watch, Walleye, Canada, Waterhen Lake, Gillnets, Marine Stewardship Council Certified Waterhen Lake walleye and northern pike commercial gillnet fishery

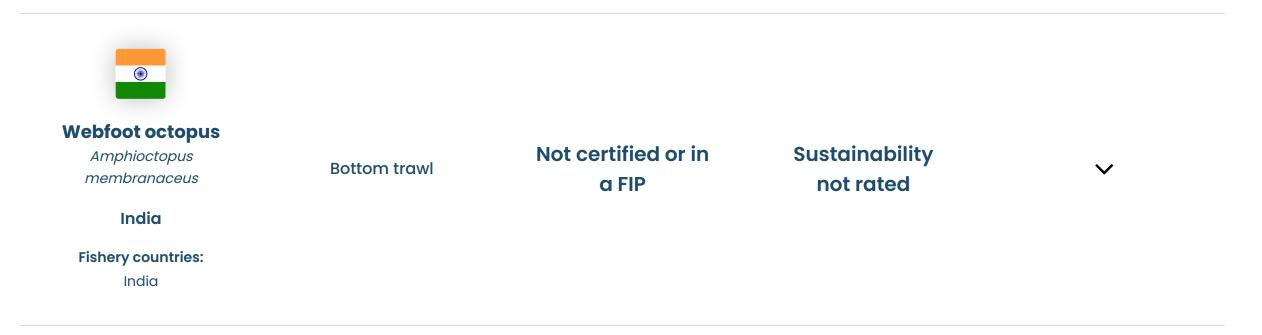


Environmental Notes

• Profile not yet complete.

General Notes

• No additional notes



Environmental Notes

• Bottom trawls will directly impact on the sea bed.

General Notes

• No additional notes

White bass Morone chrysops	Gillnets and	Not certified or in	Sustainability	~
Lake Erie, Lake Winnipeg	entangling nets	a FIP	not rated	
Fishery countries: Canada				

Environmental Notes

• Profile not yet complete.

General Notes



- There are risks to ETP 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

• No additional notes





Whiteleg shrimp Penaeus vannamei

Farmed

Certified

China

Fishery countries:

China



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.
- Biosecurity measures minimise disease outbreaks and escapes.
- Chemical usage and effluent are monitored and limited.

General Notes

• The government has adopted a farm-based approach to aquaculture regulations and licensing.

References

FishSource - Shrimp, China

<u>Good Fish Guide - Prawn, King (whiteleg), prawns, Global, GAA BAP 4*</u>

<u>Good Fish Guide - Prawn, King (whiteleg), prawns, Global, GAA BAP 2 and 3*</u>

Seafood Watch, Whiteleg shrimp, Farmed, Global Aquaculture Alliance Certified BAP Standard: Finfish and Crustacean Farms (2, 3, 4-star)





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 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:

FishSource - shrimp, India

<u>Good Fish Guide - Prawn, King (whiteleg), prawns, Global, GAA BAP 4*</u>

Good Fish Guide - Prawn, King (whiteleg), prawns, Global, GAA BAP 2 and 3*

Seafood Watch, Whiteleg shrimp, Farmed, Global Aquaculture Alliance Certified BAP Standard: Finfish and Crustacean Farms (2, 3, 4-star)





Environmental Notes

- Fishmeal and fish oil from marine feed sources are used. The feed inputs used are generally not traceable to species level and are not certified sustainable.
- 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

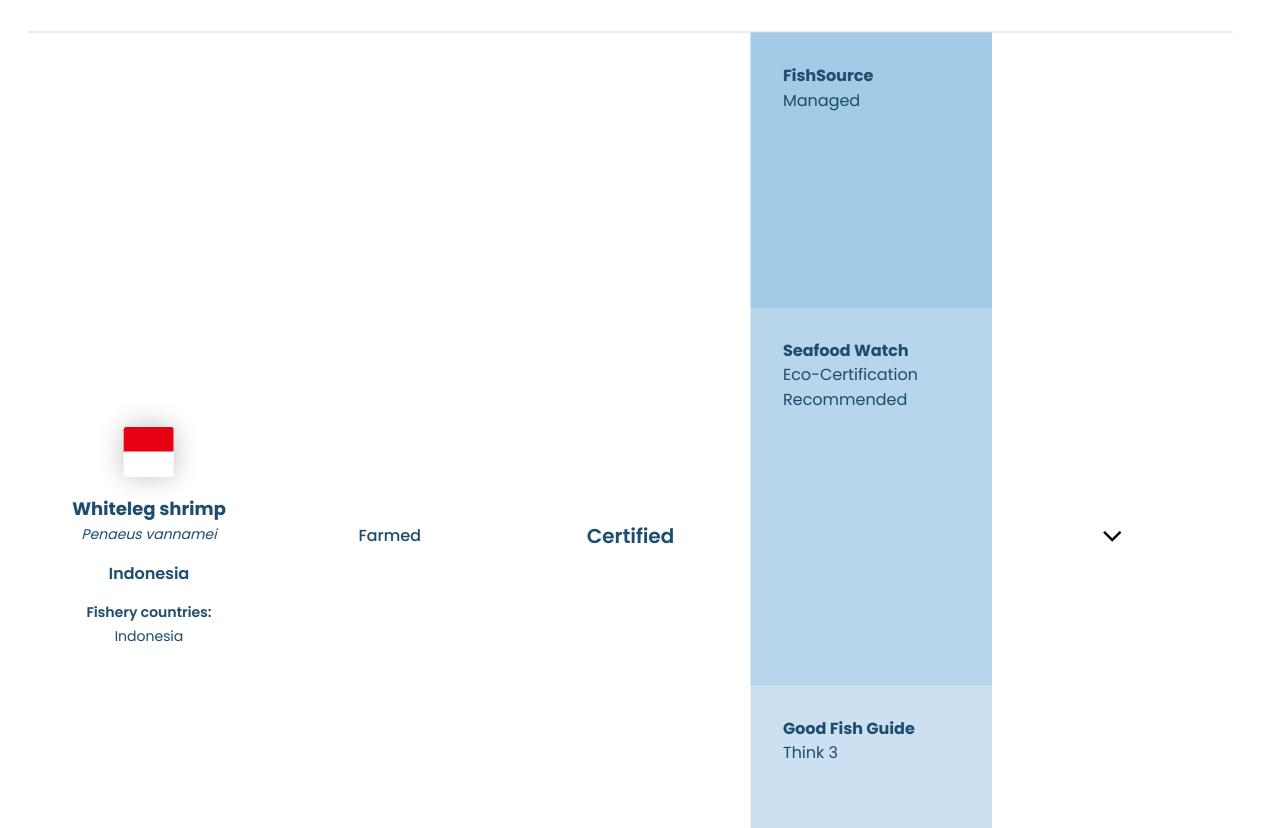
- The aquaculture industry is currently managed under a farm-based approach.
- Shrimp farms are managed by the Coastal Aquaculture Authority through the Coastal Aquaculture Authority CAA Act and Guidelines, which acknowledge the importance of zonal management.

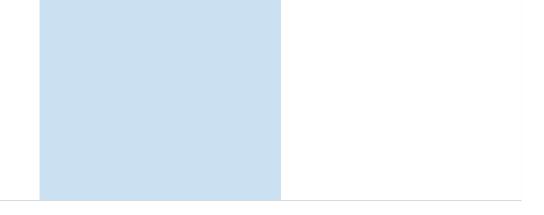
References:

FishSource - Shrimp, India

<u>Good Fish Guide, King prawn (farmed), Asia: India, Vietnam and Indonesia</u>

Seafood Watch, Farmed shrimp, India





Environmental Notes

- Fishmeal and fish oil from marine feed sources are used. Certification criteria encourage the use of responsibly sourced marine products in feed.
- 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

<u>Good Fish Guide - Prawn, King (whiteleg), prawns, Global, GAA BAP 4*</u>

<u>Good Fish Guide - Prawn, King (whiteleg), prawns, Global, GAA BAP 2 and 3*</u>

Seafood Watch, Whiteleg shrimp, Farmed, Global Aquaculture Alliance Certified BAP Standard: Finfish and Crustacean Farms (2, 3, 4-star)



Environmental Notes

- There are risks to seabirds, sea turtles and marine mammals with this fishery.
- 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

Seafood Watch, Whiteleg shrimp, Mexico (Sinaloa), Gulf of California, Bottom trawls



Farmed

Whiteleg shrimp

Penaeus vannamei

Thailand

Fishery countries:

Thailand

Certified

FishSource Managed

 \checkmark

Seafood Watch Eco-Certification Recommended

- 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

<u>Good Fish Guide - Prawn, King (whiteleg), prawns, Global, GAA BAP 4*</u>

<u>Good Fish Guide - Prawn, King (whiteleg), prawns, Global, GAA BAP 2 and 3*</u>

Seafood Watch, Whiteleg shrimp, Farmed, Global Aquaculture Alliance Certified BAP Standard: Finfish and Crustacean Farms (2, 3, 4-star)





Whiteleg shrimp

Penaeus vannamei

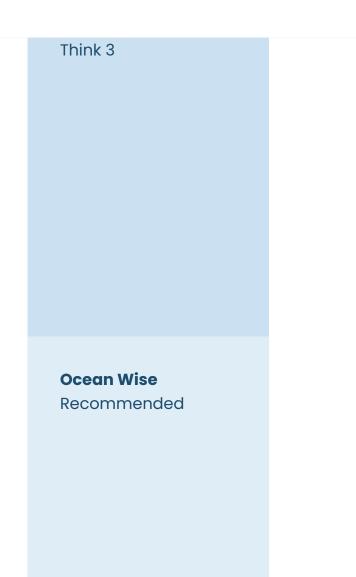
United States

Fishery countries:

United States

Seafood Watch Eco-Certification Recommended

Good Fish Guide



- 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 outbreaks are uncommon in U.S. shrimp aquaculture and as such the need for chemical use is demonstrably low. Risk of escape is considered low-moderate. Juvenile shrimp for stocking are sourced exclusively from domestic hatcheries in the U.S.
- There is no concern regarding pollution from nutrients or organic matter.

General Notes

The government has adopted a farm-based approach to aquaculture regulations and licensing.

References

<u>Good Fish Guide - Prawn, King (whiteleg), prawns, Global, GAA BAP 4*</u>

<u>Good Fish Guide - Prawn, King (whiteleg), prawns, Global, GAA BAP 2 and 3*</u>

Seafood Watch, Whiteleg shrimp, Farmed, Global Aquaculture Alliance Certified BAP Standard: Finfish and Crustacean Farms (2, 3, 4-star)



Certified

FishSource Managed

 \checkmark

Whiteleg shrimp

Penaeus vannamei

Vietnam

Fishery countries:

Vietnam

Seafood Watch Eco-Certification Recommended

- Fishmeal and fishoil from marine feed sources are used. Certification criteria encourage the use of responsibly sourced marine products in feed.
- 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.

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

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

<u>Good Fish Guide - Prawn, King (whiteleg), prawns, Global, GAA BAP 4*</u>

<u>Good Fish Guide - Prawn, King (whiteleg), prawns, Global, GAA BAP 2 and 3*</u>

Seafood Watch, Whiteleg shrimp, Farmed, Global Aquaculture Alliance Certified BAP Standard: Finfish and Crustacean Farms (2, 3, 4-star)





Not certified or in an AIP FishSource Needs Improvement

 \checkmark

Whiteleg shrimp Penaeus vannamei

Vietnam

Fishery countries:

Vietnam

Seafood Watch Avoid

Good Fish Guide Avoid 5

- 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.

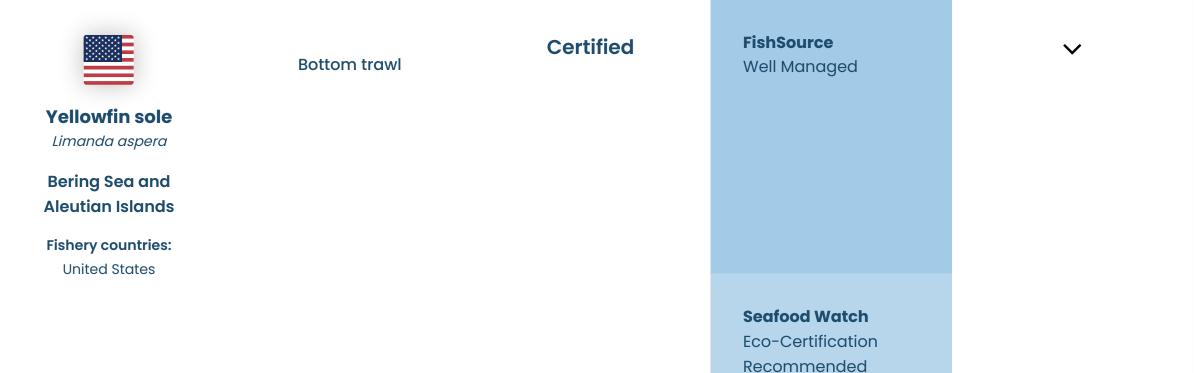
References:

FishSource - Shrimp, Vietnam

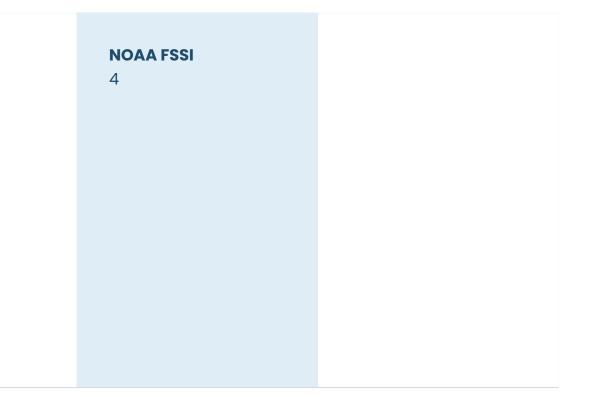
Good Fish Guide - King Prawn, Asia: India, Vietnam and Indonesia

Ocean Wise, ShrimpOcean Wise, Shrimp

Seafood Watch, Farmed Whiteleg shrimp, Vietnam



Ocean Wise Recommended



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

General Notes

References

Seafood Watch, Yellowfin sole, United States (Alaska), Northwest / Northeast Pacific Ocean, Bottom trawls, Marine Stewardship Council Certified BSAI and GOA flatfish



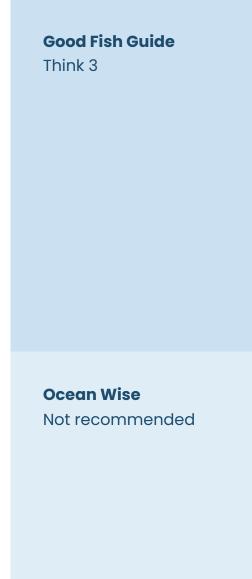
Environmental Notes

- There is a risk to ETP species with this fishery. Longlines present a hazard 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

• No additional notes.





- There are risks to sea turtles, sharks, and marine mammals with this fishery.
- Bycatch varies by gear type. There is a higher risk of bycatch in the associated purse seine fishery.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

<u>Good Fish Guide, Yellowfin tuna, Atlantic</u>, Net (purse seine on aggregating devices or free-schooling fish)

Fishery Progress, Atlantic Ocean tuna - purse seine (Capsen & Grand Bleu S.A.)

Seafood Watch, Yellowfin tuna, Eastern Atlantic, Floating object purse seine (FAD)





- Voluntary measures to reduce impacts on sea turtles are being implemented. The Ecuadorian longline fishery also interacts with sharks but information is limited.
- Bycatch for this fishery includes billfish and other tuna species.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Good Fish Guide, Yellowfin tuna, Eastern Pacific, Net (purse seine on aggregating devices or free-schooling fish)

Fishery Progress, Eastern Pacific Ocean tropical tuna - purse seine (TUNACONS)

Seafood Watch, Eastern Central Pacific Ocean, Floating object purse seine (FAD)

	Longlines	Not certified or in a FIP	FishSource Managed
Yellowfin tuna Thunnus albacares			
Western and Central Pacific Ocean			
Fishery countries: Vietnam			Seafood Watch
			Avoid



- There is a risk to ETP species with this fishery. Longlines present a hazard 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

Good Fish Guide, Yellowfin tuna, Western and Central Pacific, Hook & line (longline)

Seafood Watch, Yellowfin tuna, Western Central Pacific Ocean, Drifting longlines



FIP

FishSource

 \checkmark



Yellowfin tuna Thunnus albacares

Western and Central Pacific Ocean -WCPFC

Fishery countries:

Indonesia

Handlines and

pole-lines

Managed

Seafood Watch **Best Choice**

- This fishery is unlikely to impact endangered, protected, and threatened (ETP) species.
- Bycatch is considered low for this fishery.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Fishery Progress, Indonesia Western and Central Pacific Ocean yellowfin tuna - handline (AP2HI, IPNLF, MDPI)

Seafood Watch, Yellowfin tuna, Western Central Pacific Ocean, Handlines and hand-operated pole-and-lines



Good Fish Guide Think 3

Ocean Wise

Recommended

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

General Notes

References

Good Fish Guide, Yellowfin tuna, Western and Central Pacific, Hook & line (longline)

Seafood Watch, Yellowfin tuna, United States (Hawaii), Western Central Pacific Ocean, Longline (deep-set)

FishSource Managed Seafood Watch Avoid



Yellowfin tuna Thunnus albacares

Western and Central Pacific Ocean -WCPFC

Purse seine

FIP

Good Fish Guide

Fishery countries:

United States

Think 3

Ocean Wise Not recommended

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

General Notes

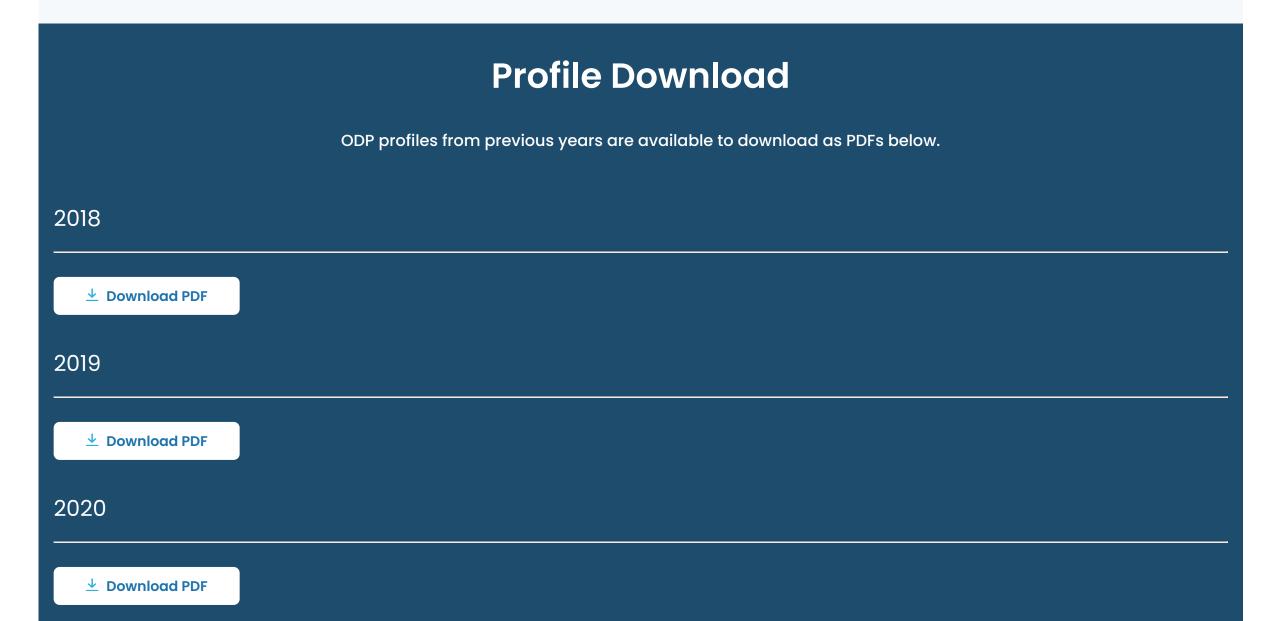
References

Good Fish Guide, Yellowfin tuna, Western and Central Pacific, Net (purse seine on aggregating devices or free-schooling fish).

Fishery Progress, Pacific Ocean tropical tuna - purse seine (US Pacific Tuna Group)

Seafood Watch, Yellowfin tuna, Western Central Pacific Ocean, Floating object purse seine (FAD)







Why Participate? What's Included? Contact Us LinkedIn Twitter Privacy policy Terms of use



© Sustainable Fisheries Partnership

