

Profiles Why Participate?

How ODP Works



Thai Union

Thai Union Group PCL is the world's seafood leader bringing high quality, healthy, tasty and innovative seafood products to customers across the world for more than 40 years. Today, Thai Union is regarded as one of the world's leading seafood producers and is one of the largest producers of shelf-stable tuna products with annual sales exceeding THB 126.3 billion (US\$ 4.1 billion) and a global workforce of over 44,000 people who are dedicated to pioneering sustainable, innovative seafood products. As well as its commercial offices, the company owns and maintains production facilities in locations such as the Thailand, Seychelles, Ghana, France, Portugal, Poland, Germany and the U.S. The company's global brand portfolio includes market-leading international brands such as Chicken of the Sea, John West, Petit Navire, Parmentier, Mareblu, King Oscar, and Rügen Fisch and Thai-leading brands SEALECT, Fisho, Qfresh, Monori, Bellotta and Marvo.

2021

Number of fisheries used	Number of certified fisheries	Number of fisheries in a FIP	Number of farmed sources used	Number of certified farmed sources				
167	36	49	44	21				
Production Methods Used								
Midwater trawl	• Purse seine	Hook and line	• Rake / hand gathered	• Farmed				
• Bottom trawl	Associated purse seine	• Longlines	/ hand netted					
	 FAD-free (unassociated) purse 	Handlines and pole- lines	Pots and trapsMiscellaneous					
	seine		· meconariodas					
	• Seine nets							
	 Gillnets and entangling 							
	nets							

Summary

Thai Union (TU) is committed to "Healthy Living, Healthy Oceans" as our company's strategic focus. TU understands that the oceans are the foundation of our business and that healthy oceans are critical for the future of our planet, particularly in combating climate change. The company's mission is to be the seafood industry's leading agent of change, making a real positive difference for seafood consumers, our customers, and the entire seafood industry.

In 2016, Thai Union introduced its SeaChange® sustainability strategy. SeaChange® is conceived as a journey that covers every aspect of the TU's business: from stewardship of the oceans to managing waste; from responsible treatment of workers to building brighter futures for our surrounding communities. The backbone of SeaChange® is the ability to fully trace our products – from catch to consumption. With full traceability

in place, TU is able to identify, investigate and improve performance on key issues in the four work programs of SeaChange®: Safe and Legal Labor, Responsible Sourcing, Responsible Operations and People and Communities.

This can only be achieved through collaboration and shared goals, as highlighted by UN SDG 17 – Partnerships for the Goals. TU is an active member in many pre-competitive collaborative initiatives and has a multitude of relationships and projects underway with NGOs, governments and associations. TU is proud to be a member of the United Nations Global Compact, and a founding member of the International Seafood Sustainability Foundation (ISSF). TU engages with our suppliers on many pilot projects as well as Fishery and Aquaculture Improvement Projects to drive continuous improvement through all levels of the supply chain. TU's ongoing work on sustainability led to the company being listed on the Dow Jones Sustainability Indices for the seventh consecutive year in 2020, and ranked number two in the world on the Food Products Industry Index. TU was also named to the FTSE4Good Emerging Index for the fifth straight year in 2020.

The scope of the profile includes wild-caught and farmed seafood sourced for Thai Union's branded and private labelled products in 2020.

www.seachangesustainability.org

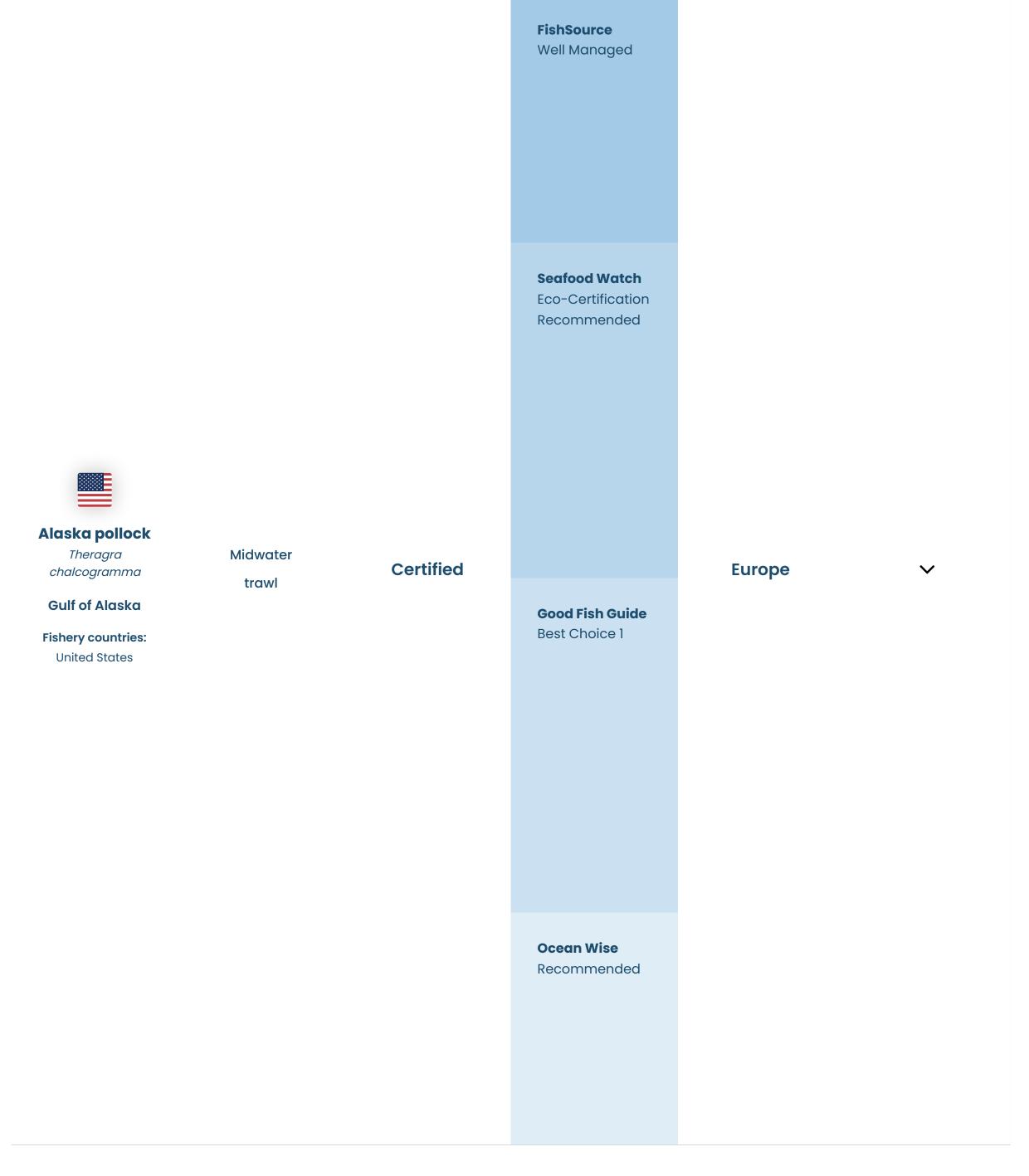
https://www.thaiunion.com/en/sustainability/report

https://www.thaiunion.com/en/sustainability/code-of-conduct

Associated Fisheries



Species and Location	Production Methods	Certification or Improvement Project	Sustainability Ratings	Region of Sale	Notes
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- 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

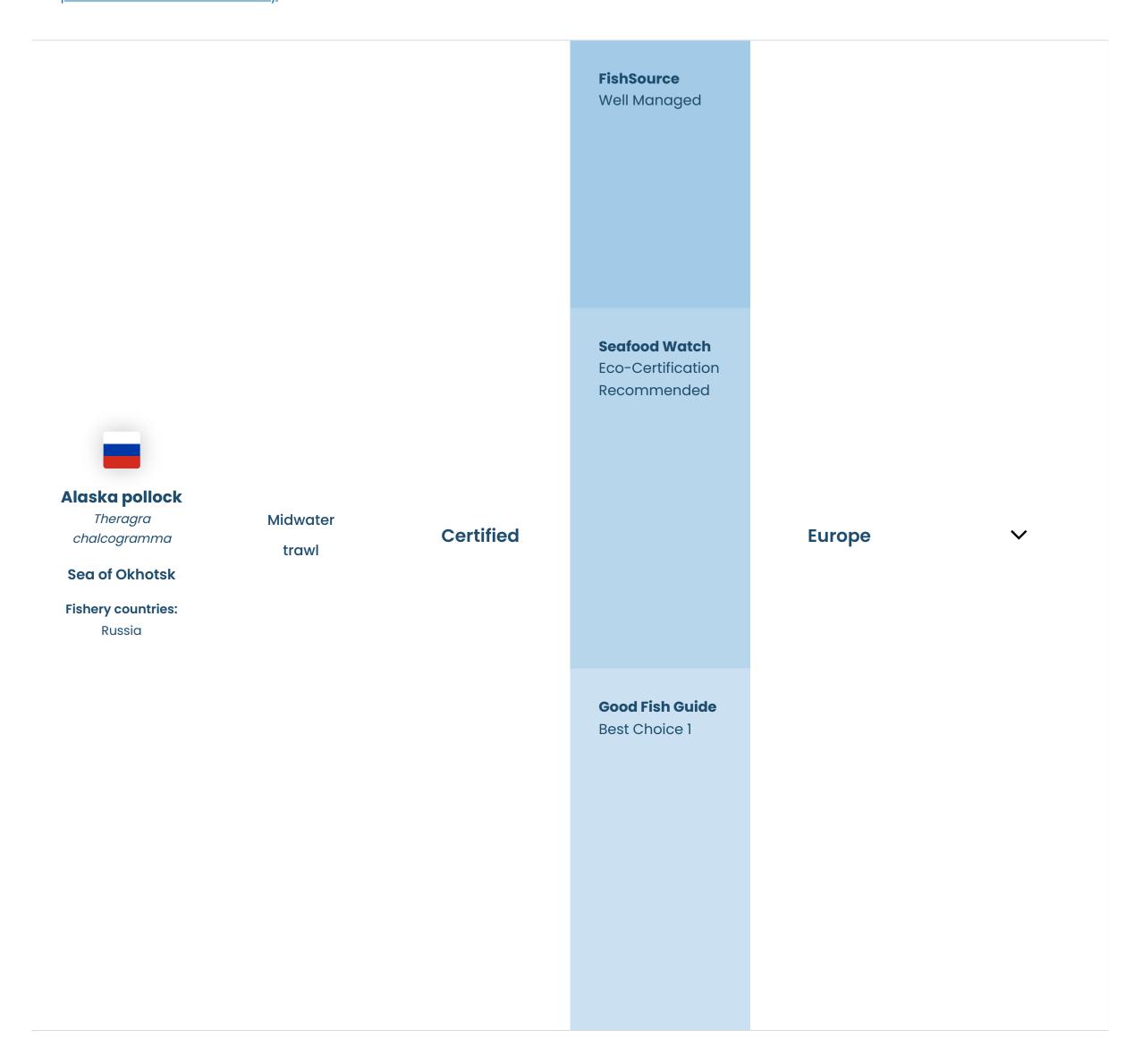
• This fish plays an important role in the marine food web and so potential impacts on the wider marine ecosystem must be monitored.

References

MSC: <u>Alaska pollock - Gulf of Alaska</u>

Good Fish Guide - Pollock, Alaska, Walleye, Pelagic trawl, North East Pacific (FAO 67), Gulf of Alaska, Marine Stewardship Council (MSC)

<u>Seafood Watch Recommendation for Walleye pollock, Northeast Pacific Ocean, Midwater trawls, Marine Stewardship Council Certified Alaska pollock - Gulf of Alaska Fishery</u>



Environmental Notes

- 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

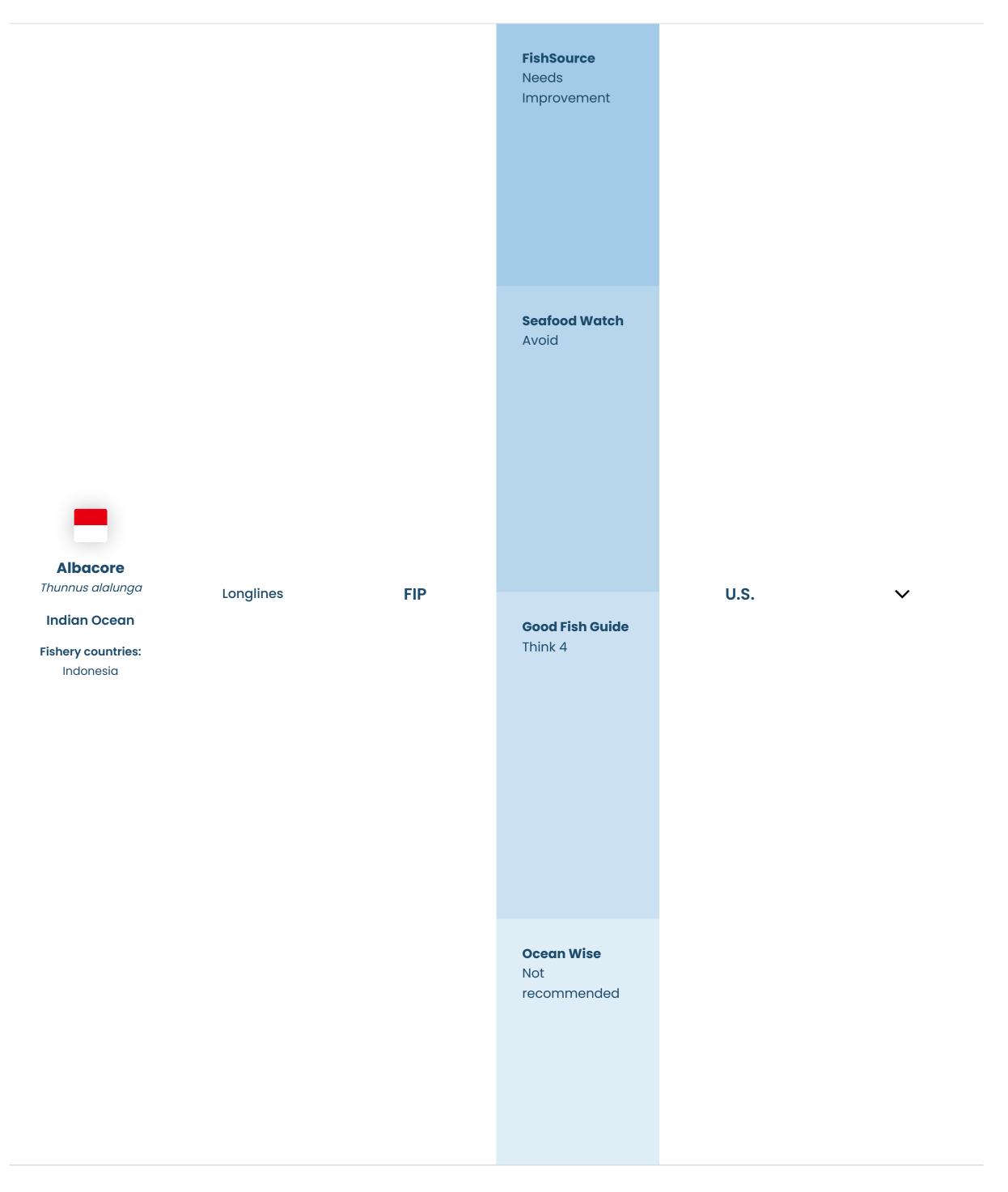
• This fish plays an important role in the marine food web and so potential impacts on the wider marine ecosystem must be monitored.

References

MSC: Russia Sea of Okhotsk pollock

Good Fish Guide - Pollock, Alaska, Walleye, Pelagic trawl, North West Pacific (FAO 61), Sea of Okhotsk, Marine Stewardship Council (MSC).

<u>Seafood Watch Recommendation for Walleye pollock, Northeast Pacific Ocean, Midwater trawls, Marine Stewardship Council Certified Alaska pollock - Gulf of Alaska Fishery</u>



- 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

• Part of this fishery is in the Indonesia Indian Ocean and Western Central Pacific Ocean tuna and large pelagics - longline FIP.

FishSource Needs Improvement **Good Fish Guide** Think 4 **Albacore** Thunnus alalunga Asia, U.S. Longlines **FIP** Indian Ocean **Fishery countries:** Malaysia, Seychelles Ocean Wise Not recommended

Environmental Notes

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

General Notes

• This fishery is part of the <u>Indian Ocean tuna - longline (Thai Union)</u> FIP.

References

<u>Good Fish Guide - Tuna, albacore, Indian Ocean, Longline</u>



China, Indonesia, Taiwan **Seafood Watch** Avoid **Good Fish Guide** Think 4 Ocean Wise Not recommended

Environmental Notes

- 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

• Part of this fishery is in the <u>Indian Ocean albacore tuna - longline (Bumble Bee/FCF) FIP</u>.

References

<u>Good Fish Guide - Tuna, albacore, Indian Ocean, Longline</u>

<u>Seafood Watch Recommendation for Albacore, Longline (deepset), Indian Ocean</u>



Thunnus alalunga

Indian Ocean

Fishery countries: Seychelles

Associated purse seine **Not certified** or in a FIP

Sustainability not rated

Europe

Environmental Notes

• Profile not yet complete.

General Notes

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

Albacore Thunnus alalunga North Atlantic Fishery countries: Spain	Hook and line Handlines and pole- lines	Certified	FishSource Well Managed Seafood Watch Eco-Certification Recommended	Europe	

Environmental Notes

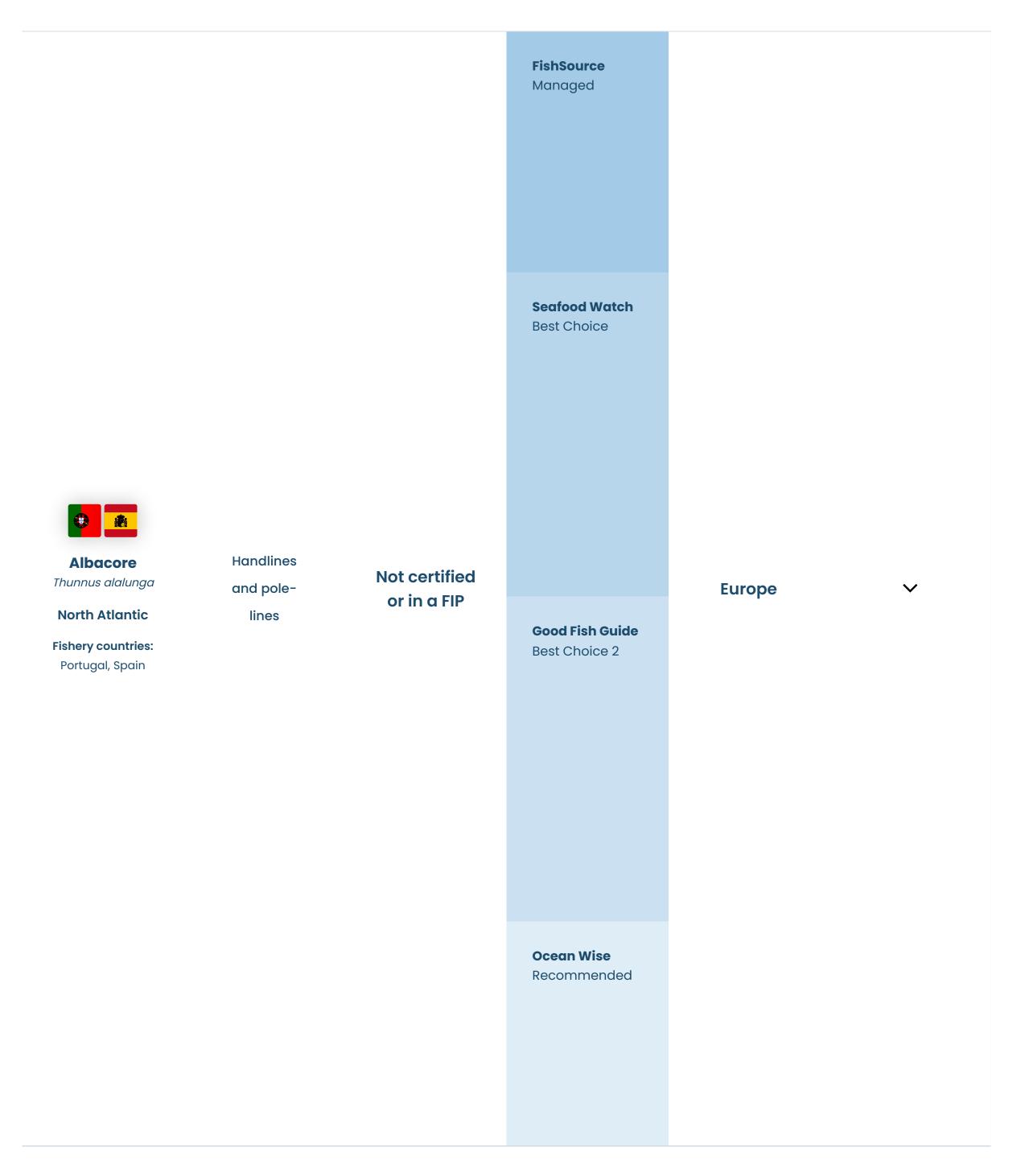
- This fishery is unlikely to impact ETP species; incidental capture by troll and pole-and-line gear is uncommon.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

MSC: North Atlantic albacore artisanal fishery

Bureau Veritas Iberia, June 2016, MSC Public Certification Report for North Atlantic albacore artisanal fishery



- This fishery is unlikely to impact ETP species; incidental capture by pole-and-line gear is uncommon.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

FishSource Managed **Seafood Watch Good Alternative Albacore** Handlines Thunnus alalunga **Not certified Europe** and poleor in a FIP **South Atlantic Good Fish Guide** lines Best Choice 2 **Fishery countries:** Namibia, South Africa **Ocean Wise** Not recommended

Environmental Notes

- This fishery is unlikely to impact ETP species; incidental capture by pole-and-line gear is uncommon.
- Bycatch for this fishery is considered low, but there are concerns about unknown impacts on bait fish used in the fishery.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

FishSource Well Managed **Seafood Watch Eco-Certification** Recommended **Albacore** Hook and Thunnus alalunga Certified Asia, Europe line **North Pacific Good Fish Guide** Fishery countries: Best Choice 2 **United States** Ocean Wise Recommended

Environmental Notes

- This fishery is unlikely to impact ETP species; incidental capture by troll gear is uncommon.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

MSC: AAFA and WFOA North Pacific albacore tuna

Good Fish Guide - Tuna, albacore, Troll, North Pacific

<u>Seafood Watch Recommendation for Albacore, Trolling lines, Marine Stewardship Council Certified AAFA and WFOA North Pacific albacore tuna</u>
<u>Fishery</u>



Environmental Notes

- There are risks to sharks, sea turtles and seabirds 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

• This fishery is part of the Pacific Ocean tuna - longline (Liancheng) FIP.

References

<u>Good Fish Guide - Tuna, albacore, Longline, North Pacific</u>



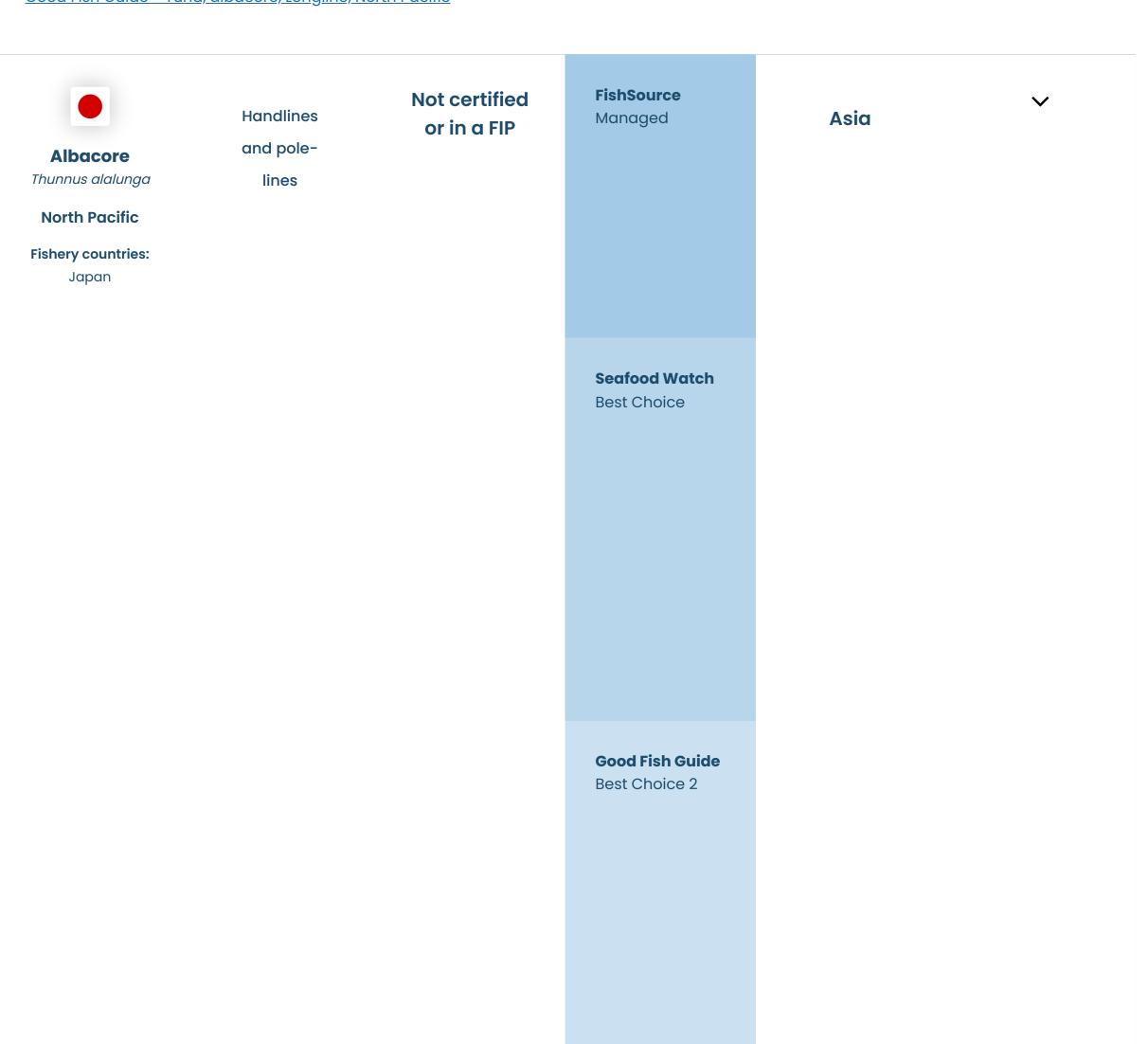
- There are risks to sharks, sea turtles and seabirds with this fishery, but there are mitigation measures in place.
- Bycatch of other tuna, billfishes and sharks is a risk for this fishery, but there are mitigation measures in place.
- This fishery is unlikely to have a significant impact on the sea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

General Notes

• This fishery is part of the <u>Pacific Ocean tuna - longline (Thai Union) FIP</u>.

References

<u>Good Fish Guide - Tuna, albacore, Longline, North Pacific</u>



Ocean Wise
Recommended

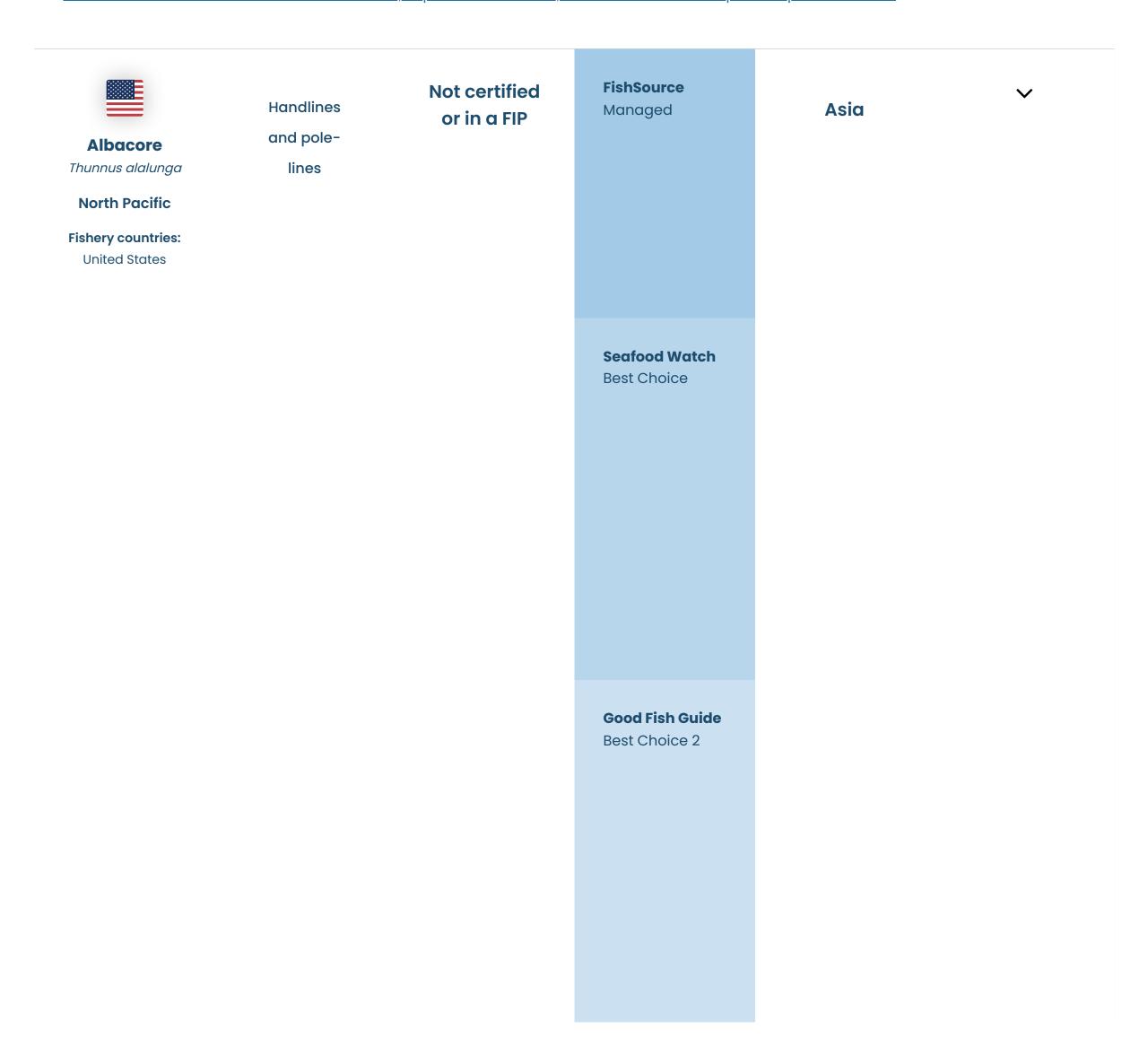
- This fishery is unlikely to impact ETP species.
- Bycatch for this fishery is considered low but the fishery may have impacts on fish populations used for bait.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Good Fish Guide - Tuna, albacore, Pole & Line, North Pacific

<u>Seafood Watch Recommendation for Albacore, Japan - North Pacific, Handlines and hand-operated pole-and-lines</u>



Ocean Wise Recommended

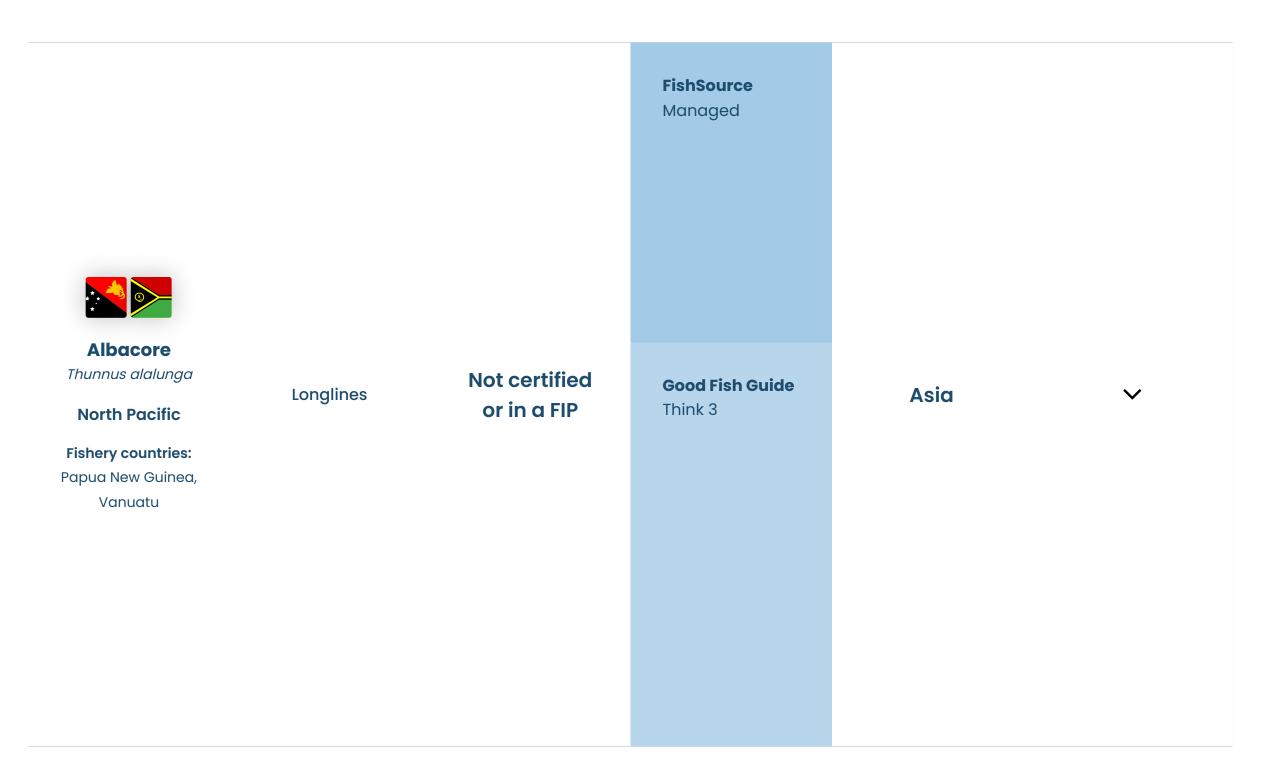
Environmental Notes

- 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

<u>Seafood Watch Recommendation for Albacore, Handlines and hand-operated pole-and-lines, United States - North Pacific</u>



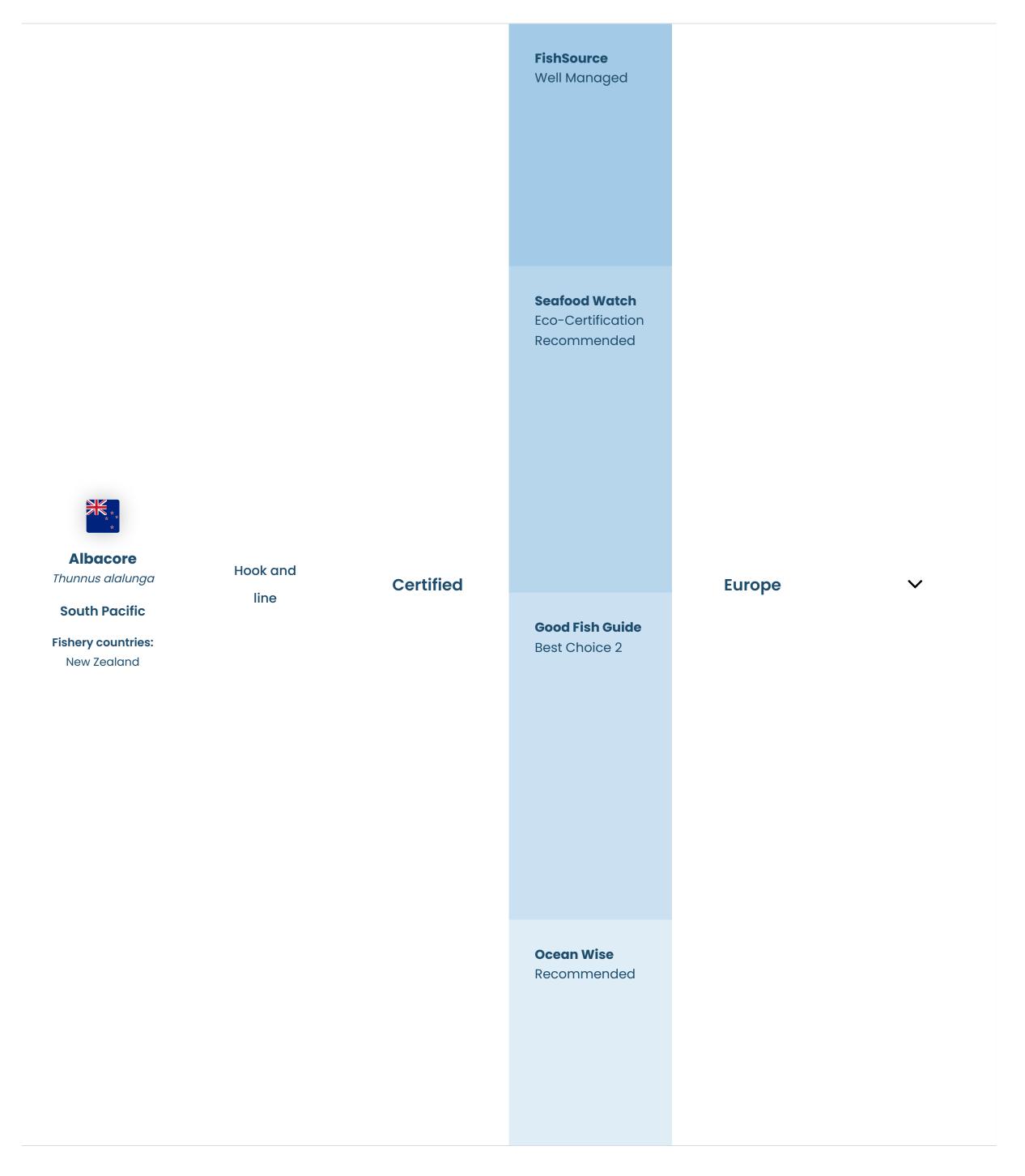
Environmental Notes

- There are risks to sharks, sea turtles and seabirds 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 - Tuna, albacore, Longline, North Pacific

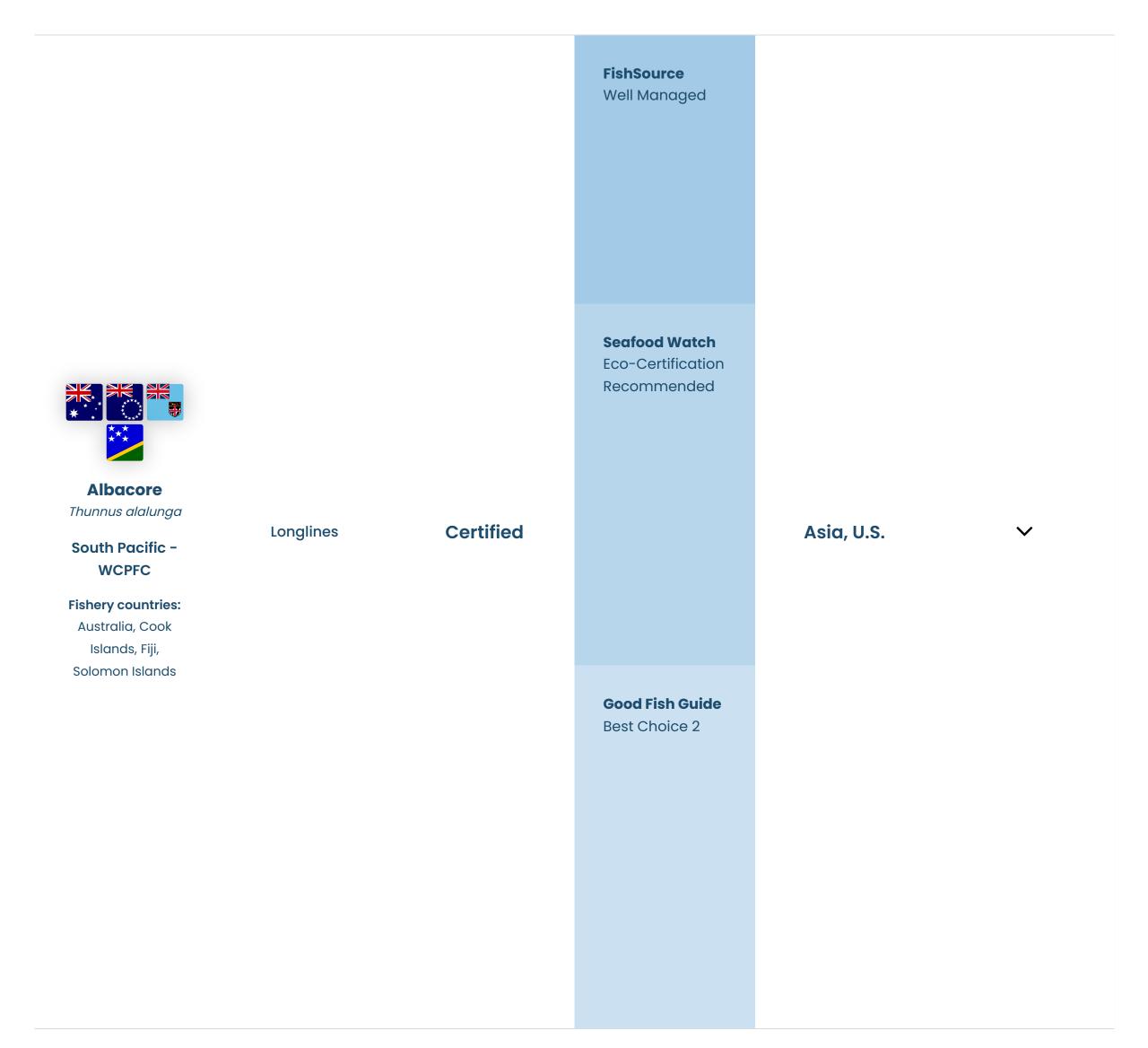


- This fishery is unlikely to impact ETP species; incidental capture by troll gear is uncommon.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

MSC: New Zealand albacore tuna troll



- There are risks to seabirds, sea turtles and marine mammals 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

MSC: <u>Australian Eastern Tuna and Billfish Fishery (albacore tuna, yellowfin tuna, bigeye tuna and swordfish)</u>

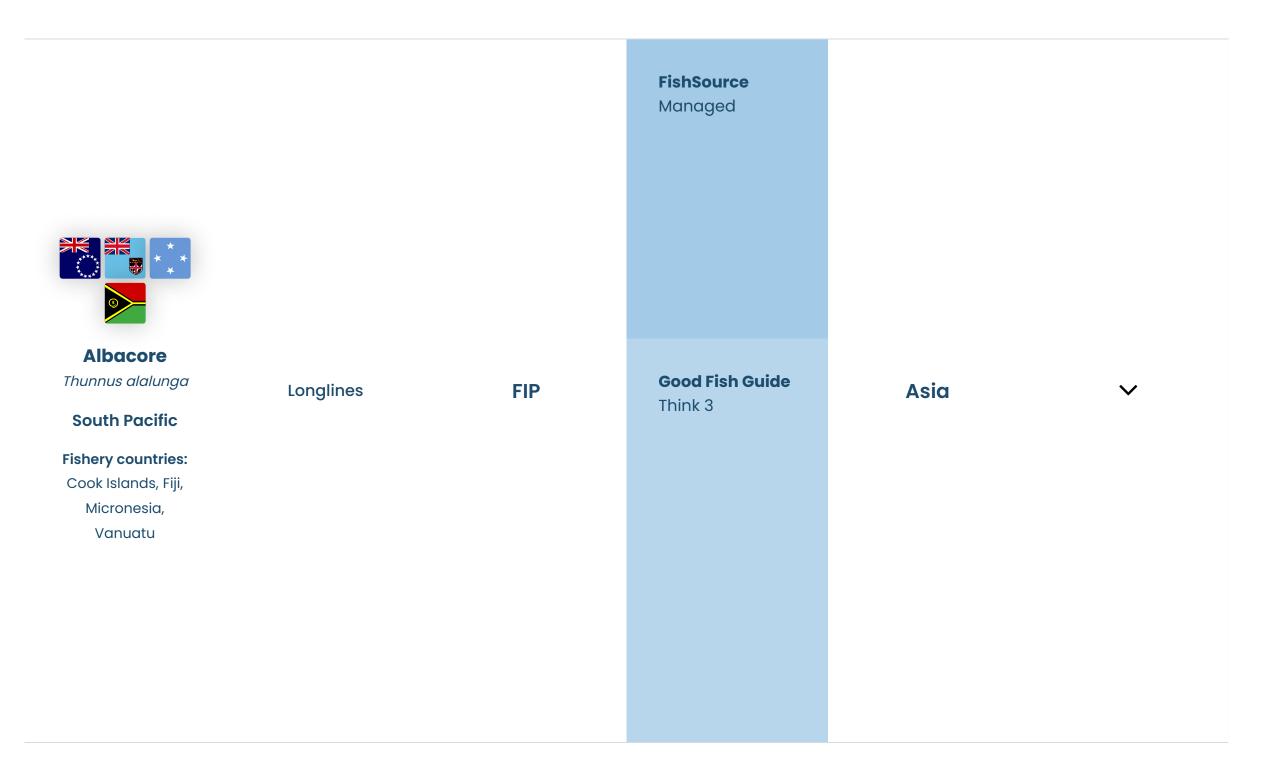
MSC: <u>Fiji Albacore, Yellowfin and Bigeye Tuna longline</u>

MSC: Solomon Islands longline albacore and yellowfin tuna fishery

MSC: <u>SZLC, CSFC & FZLC Cook Islands EEZ South Pacific albacore, yellowfin and bigeye longline</u>

<u>Good Fish Guide - Tuna, albacore, Longline, South Pacific</u>

<u>Seafood Watch Recommendations for Albacore, Longlines, MSC Certified</u>



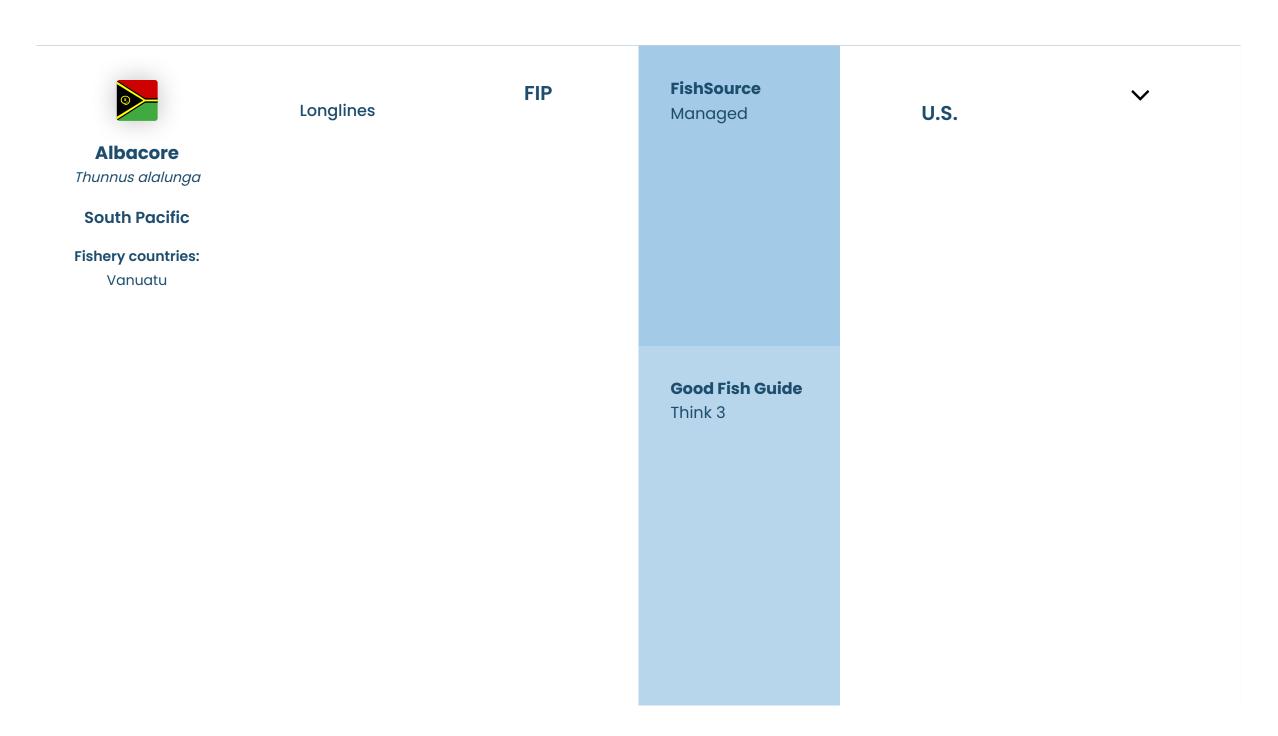
- There are risks to sharks, sea turtles and seabirds with this fishery, but there are mitigation measures in place.
- Bycatch of other tuna, billfishes and sharks is a risk for this fishery, but there are mitigation measures in place.
- This fishery is unlikely to have a significant impact on the sea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

General Notes

• This fishery is part of the Pacific Ocean tuna - longline (Liancheng) FIP.

References

Good Fish Guide - Tuna, albacore, Longline, South Pacific



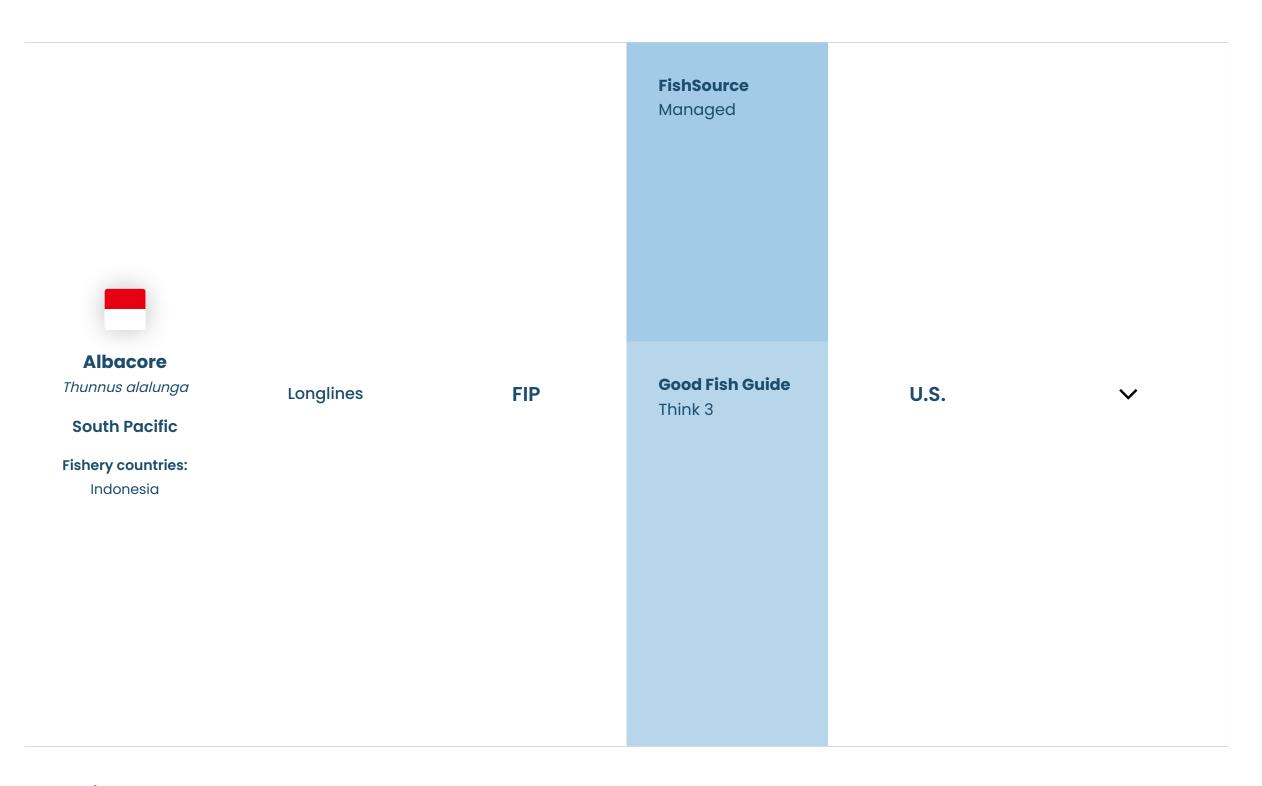
- There are risks to sharks, sea turtles and seabirds with this fishery, but there are mitigation measures in place.
- Bycatch of other tuna, billfishes and sharks is a risk for this fishery, but there are mitigation measures in place.
- This fishery is unlikely to have a significant impact on the sea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

General Notes

• This fishery is part of the Pacific Ocean tuna - longline (Thai Union) FIP.

References

Good Fish Guide - Tuna, albacore, Longline, South Pacific



Environmental Notes

- 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

• Part of this fishery is in the Indonesia Indian Ocean and Western Central Pacific Ocean tuna and large pelagics - longline FIP.

References

<u>Good Fish Guide - Tuna, albacore, South Pacific, Longline</u>



South Pacific Fishery countries: Australia, Micronesia, Nauru, South Korea, Taiwan, Vanuatu Good Fish Guide Think 3

Environmental Notes

- There are risks to sharks, sea turtles and seabirds 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

<u>Good Fish Guide - Tuna, albacore, Longline, South Pacific</u>



Environmental Notes

- There are risks to sharks, sea turtles and seabirds 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 - Tuna, albacore, Longline, South Pacific

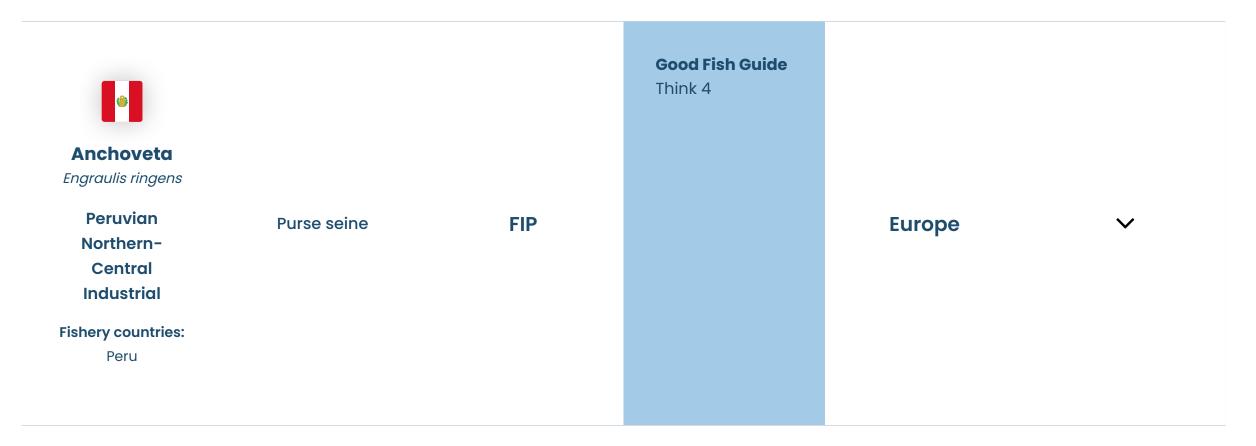


Environmental Notes

- The main risk to ETP species from this fishery is from entanglement of marine mammals, especially the critically endangered North Atlantic Right whale, in lobster gear. Management measures are in place in the Canadian lobster fisheries to reduce the likelihood of interactions occurring.
- Bycatch for this fishery is likely to be low.
- Lobster traps are unlikely to have a significant impact on the sea bed.

General Notes

• No additional notes

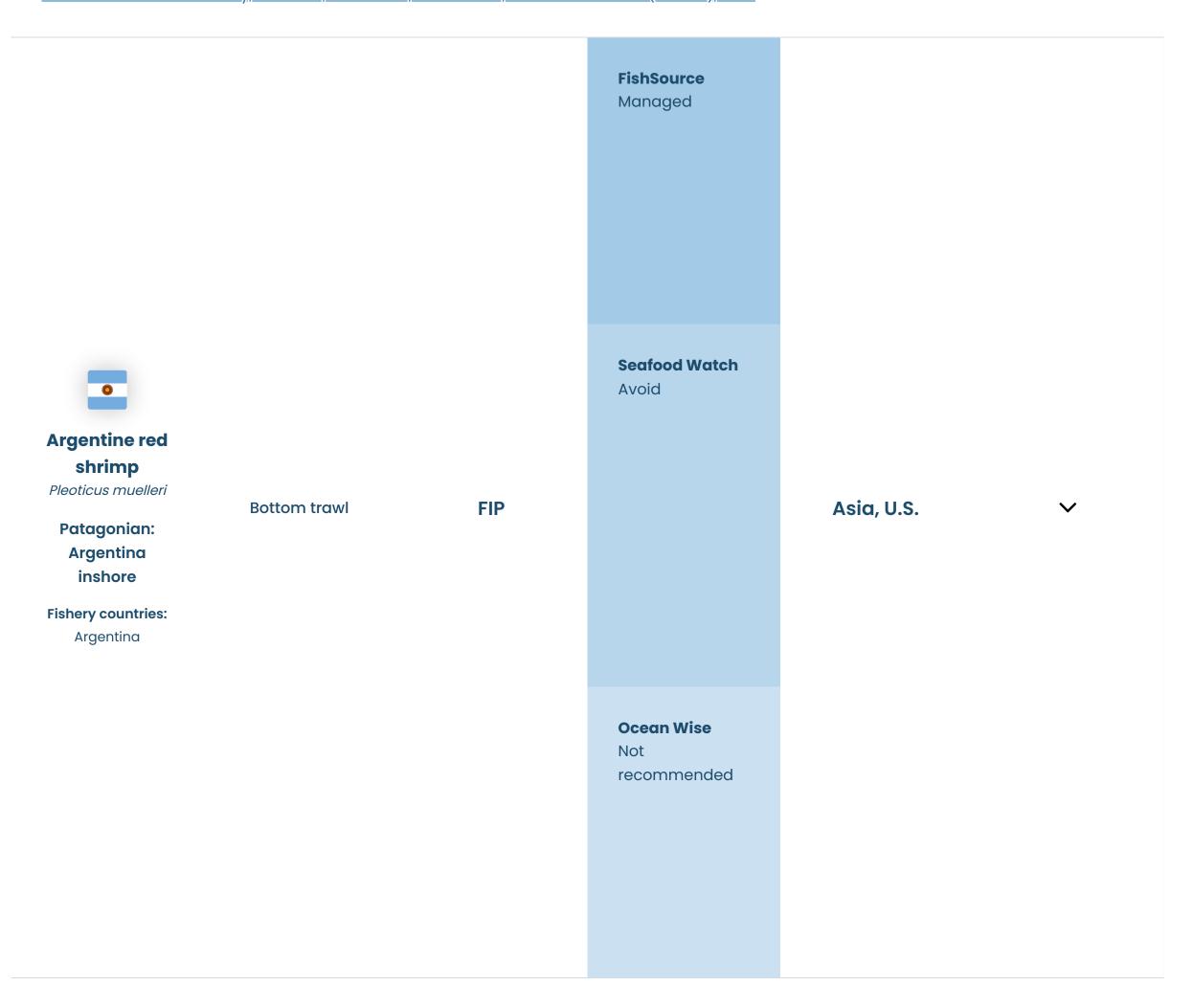


Environmental Notes

- This fishery may impact food availability to ETP species. The FIP aims to better understand the impacts of the fishery on ETP species.
- Bycatch for this fishery is considered low. However, anomalous environmental conditions observed since 2013 have been associated with an increased catch of non-target species.
- This fishery is unlikely to have a significant impact on the sea bed. The FIP aims to better understand the impacts of the fishery on habitats.

General Notes

- This fishery is part of the Peru anchovy industrial purse-seine FIP.
- This fish plays an important role in the marine food web and so potential impacts on the wider marine ecosystem must be monitored.



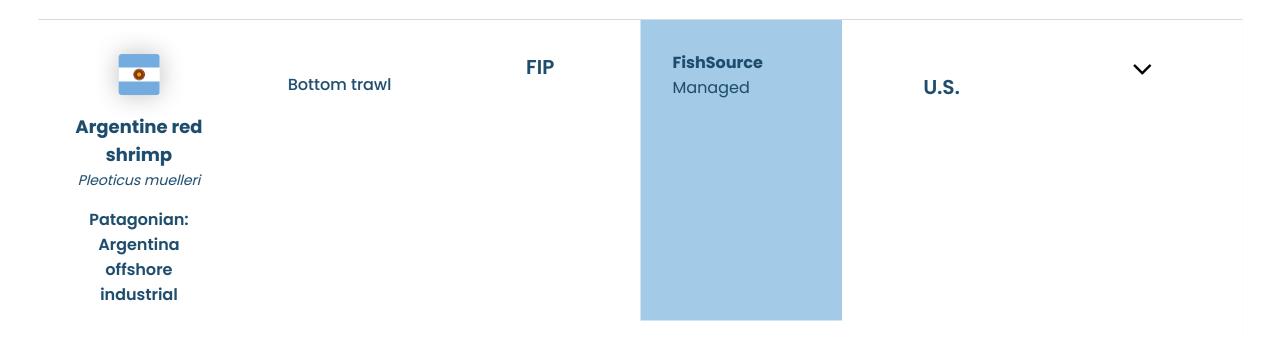
- There is a lack of public information on interactions with ETP for this fishery.
- There is limited information on bycatch in this fishery but bycatch of hake is a risk.
- Bottom trawls will directly impact on the sea bed.

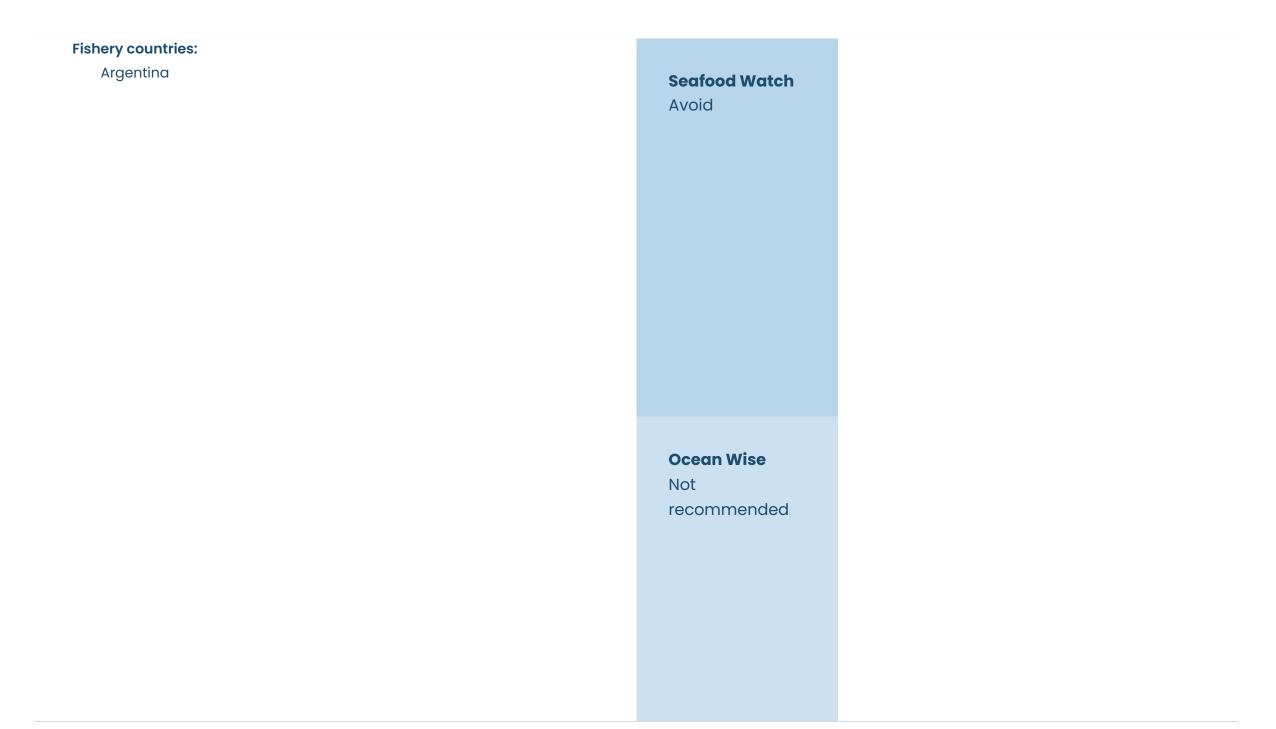
General Notes

• This fishery is part of the <u>Argentina onshore red shrimp - bottom trawl FIP</u>.

References

<u>Seafood Watch Recommendation for Argentine red shrimp, Argentina, Southwest Atlantic Ocean, Bottom trawls, Coastal Fleet</u>





- 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

• This fishery is part of the <u>Argentina offshore red shrimp - bottom trawl FIP</u>.

References

<u>Seafood Watch Recommendation for Argentine red shrimp, Argentina, Southwest Atlantic Ocean, Bottom trawls</u>



Environmental Notes

• Profile not yet complete.

General Notes

No additional notes.



Purse seine

Eastern Central Atlantic Fishery countries: Morocco **Environmental Notes** • Profile not yet complete. **General Notes** • No additional notes. **FishSource** Well Managed **Seafood Watch Eco-Certification** Recommended **Atlantic cod** Gadus morhua Certified **Europe Bottom trawl Barents Sea Fishery countries:** Russia **Good Fish Guide** Best Choice 2

Environmental Notes

Atlantic chub

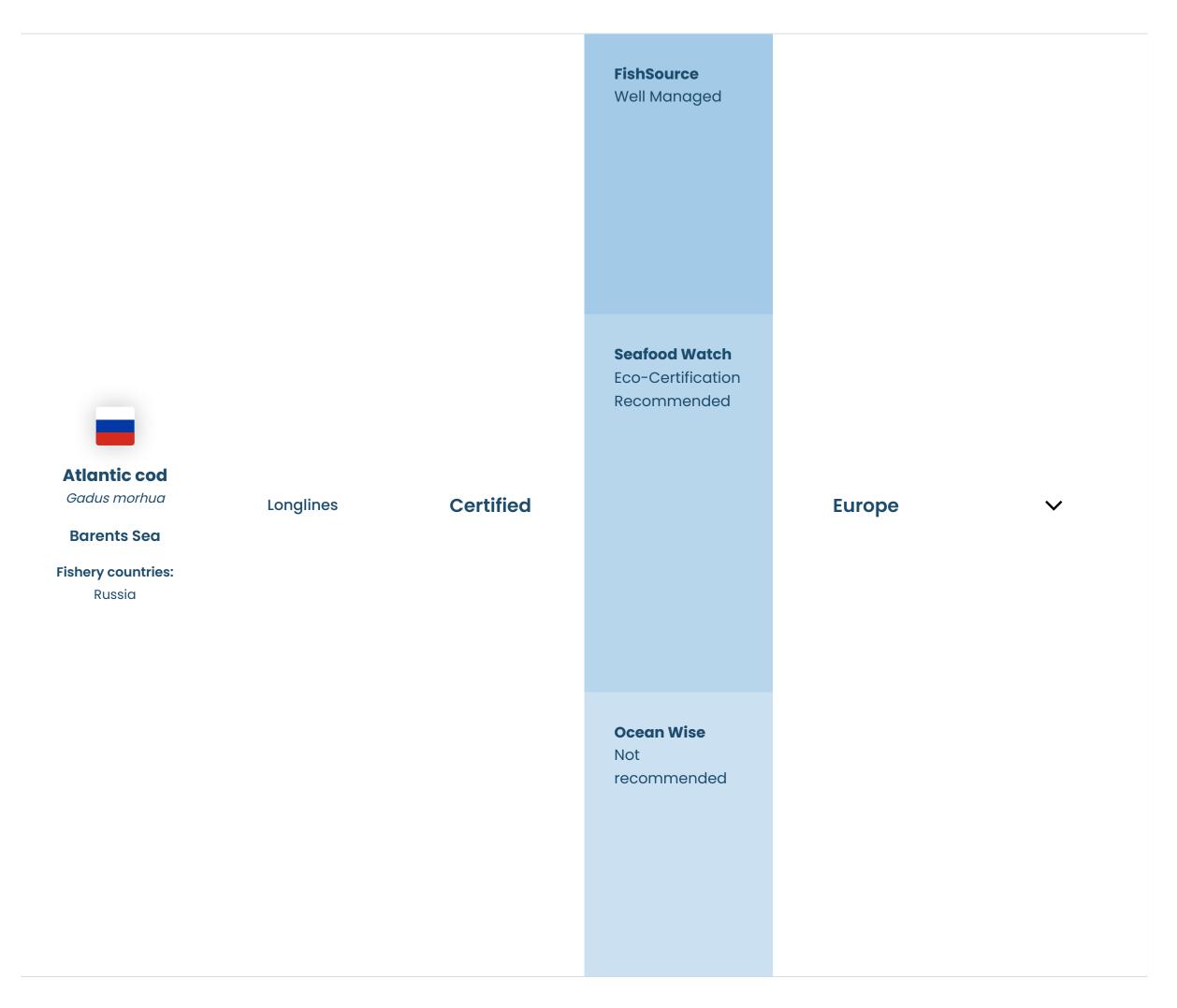
mackerel Scomber colias

• This fishery is unlikely to impact PET species.

- 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. MSC conditions and recommendations are in place to strengthen understanding of fishery interactions with sensitive habitat.

General Notes

• No additional notes.



Environmental Notes

- This fishery is unlikely to impact ETP species.
- There is bycatch for this fishery but bycatch is considered low and the fishery is unlikely to pose a serious risk to bycatch species.
- Longline gear is unlikely to have a significant impact on the sea bed.

General Notes

References

MSC: <u>FIUN Barents & Norwegian Seas cod and haddock</u>

Acoura Marine, August 2018, MSC Public Certification Report for FIUN Barents & Norwegian Seas Cod and Haddock Fishery



- There may be risks to ETP species with this fishery, but there is insufficient data available to assess significance.
- 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.

Atlantic herring Clupea harengus Baltic Sea Gulf of Bothnia Fishery countries: Finland	Midwater trawl	Certified	FishSource Well Managed	Europe	
			Seafood Watch Eco-Certification Recommended		

Ocean Wise
Not
recommended

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

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

References

MSC: Finland Baltic herring & sprat



Environmental Notes

- There may be risks to ETP species with this fishery, but there is insufficient data available to assess significance.
- 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.



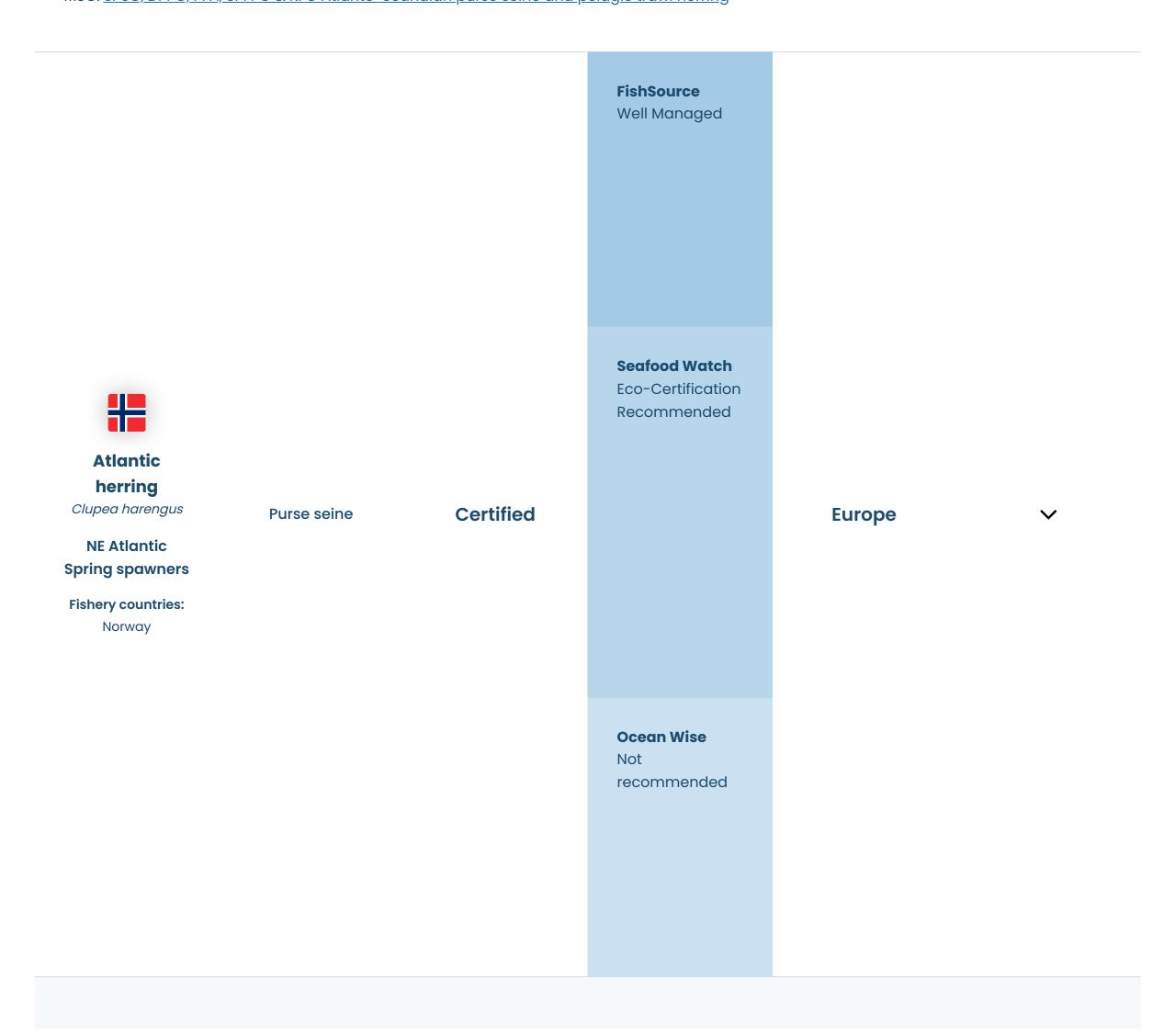
- This fishery is unlikely to impact ETP species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

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

References

MSC: <u>SPSG, DPPO, PFA, SPFPO & KFO Atlanto-Scandian purse seine and pelagic trawl herring</u>



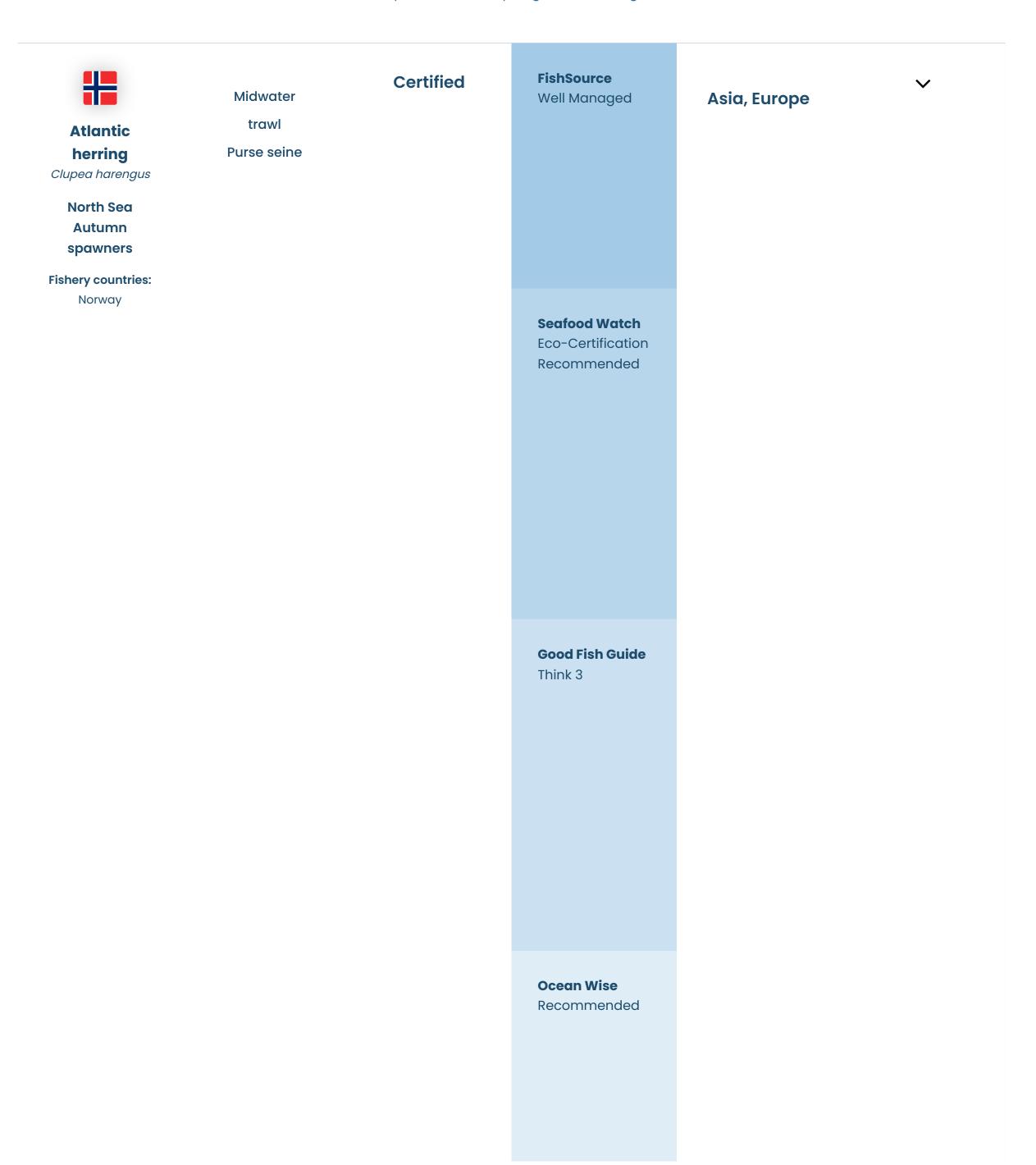
- This fishery is unlikely to impact ETP species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

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

References

MSC: SPSG, DPPO, PFA, SPFPO & KFO Atlanto-Scandian purse seine and pelagic trawl herring



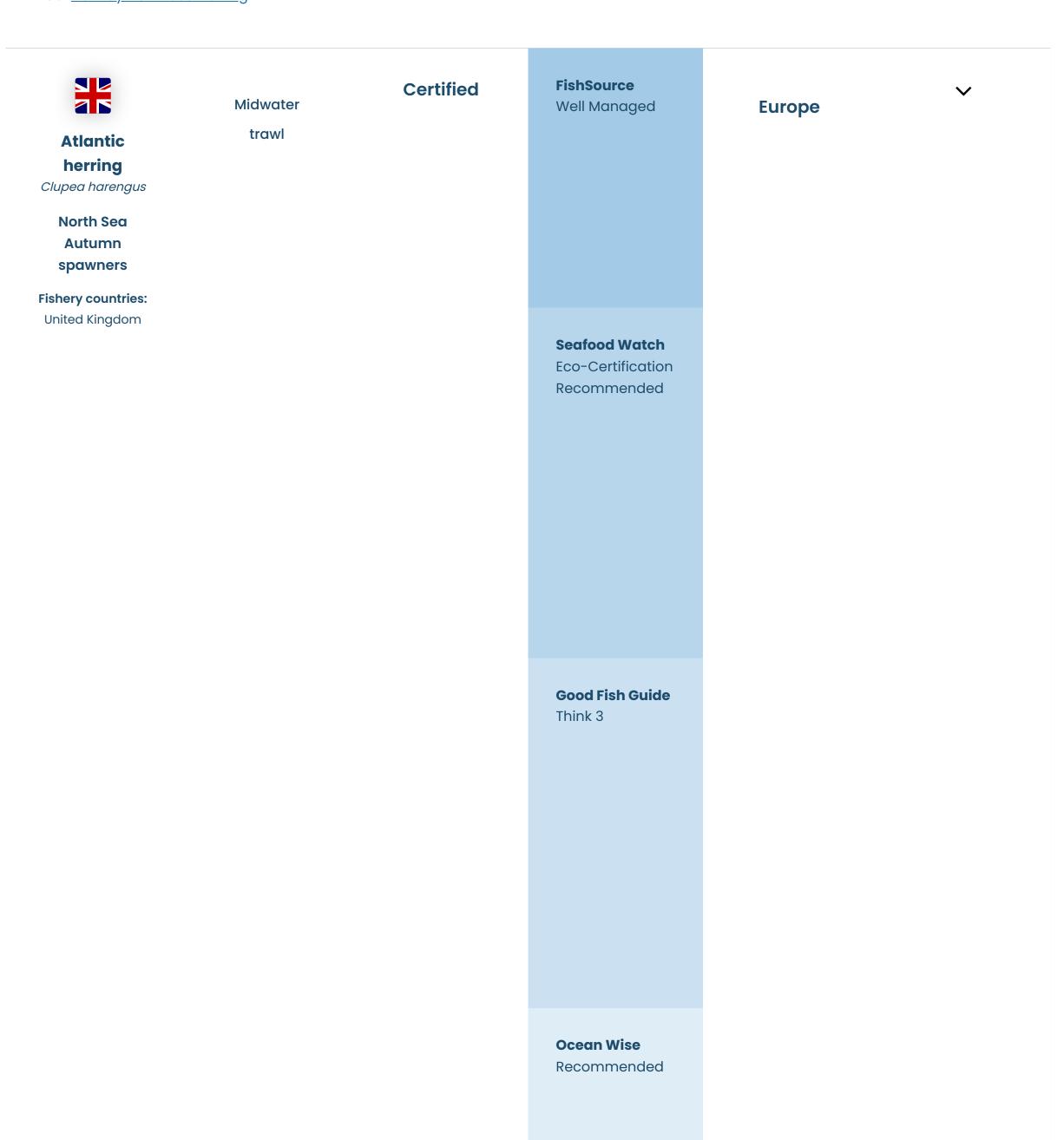
- This fishery is unlikely to impact ETP species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

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

References

MSC: Norway North Sea herring



- 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

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

References

MSC: Northern Ireland Pelagic Sustainability Group(NIPSG) Irish Sea-Atlantic mackerel & North Sea herring



Environmental Notes

- There may be risks to ETP species with this fishery, but there is insufficient data available to assess significance.
- 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.



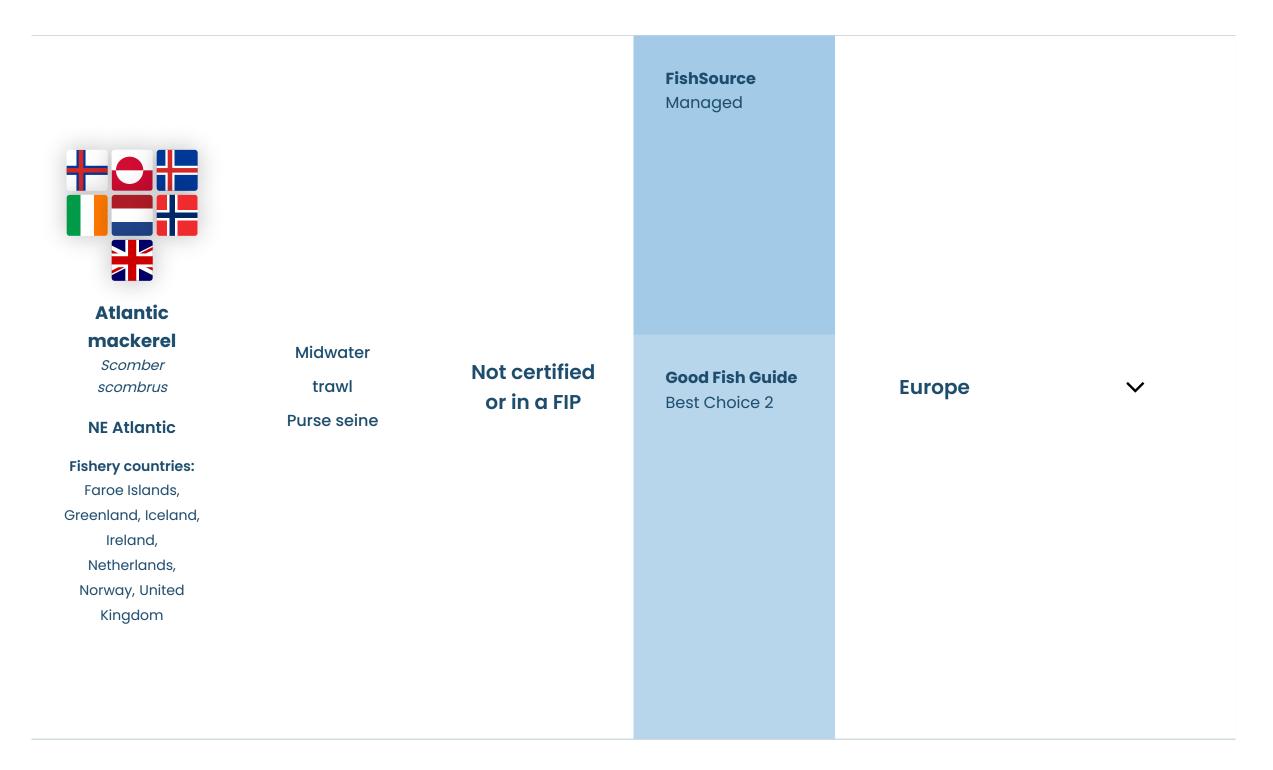
- This fishery is unlikely to impact ETP species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

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

References

Good Fish Guide - Herring or sild, Pelagic trawl, Purse seine, North East Atlantic (FAO 27), Baltic Sea (West), Skagerrak and Kattegat: Western Baltic Spring Spawners, 3a-d (subdivisions 20-24)



Environmental Notes

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

Farmed

General Notes

• In response to the suspension of the MSC certified fishery, a supply chain-led initiative called the North Atlantic Pelagic Advocacy (NAPA) Group was formed by retailers and processors in the UK, and has since expanded to include European retailers and processors. Thai Union has been a formal member of the group since April 2021. NAPA aims to develop a shared solution to sustainability issues in the North East Atlantic fisheries for mackerel, herring and blue whiting, and is seeking a formal agreement on catch limits for North East Atlantic Pelagic fisheries that reflects the scientific advice.





Atlantic
salmon
Salmo salar
Australia
Fishery countries:
Australia

Ocean Wise
Not
recommended

Environmental Notes

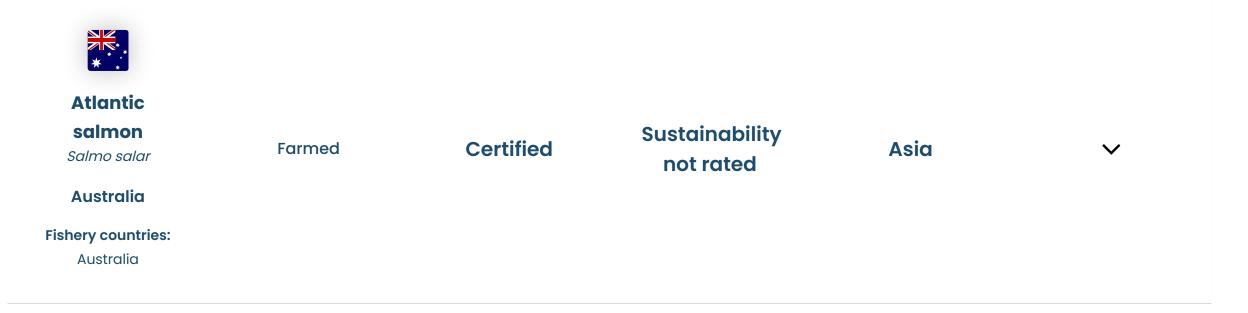
- Salmon rely on wild capture fisheries for feed.
- Atlantic salmon are not native to Australia. Farmed salmon escapes and disease outbreaks may impact on wild salmonids. In addition, impacts on water quality from salmon farms pose a threat to the endangered Maugean skate, found only in Macquarie Harbour on the west coast of Tasmania.
- Impacts on water quality are localized, but there is potential for cumulative impacts in densely farmed areas. Waste from high salmon production has been linked to low oxygen levels and pollution of the seabed in Macquarie Harbour, a sensitive waterway adjacent to a World Heritage Area.

General Notes

References

<u>Seafood Watch, Recommended Eco-Certifications for Atlantic salmon, Aquaculture Stewardship Council (ASC) Certified</u>

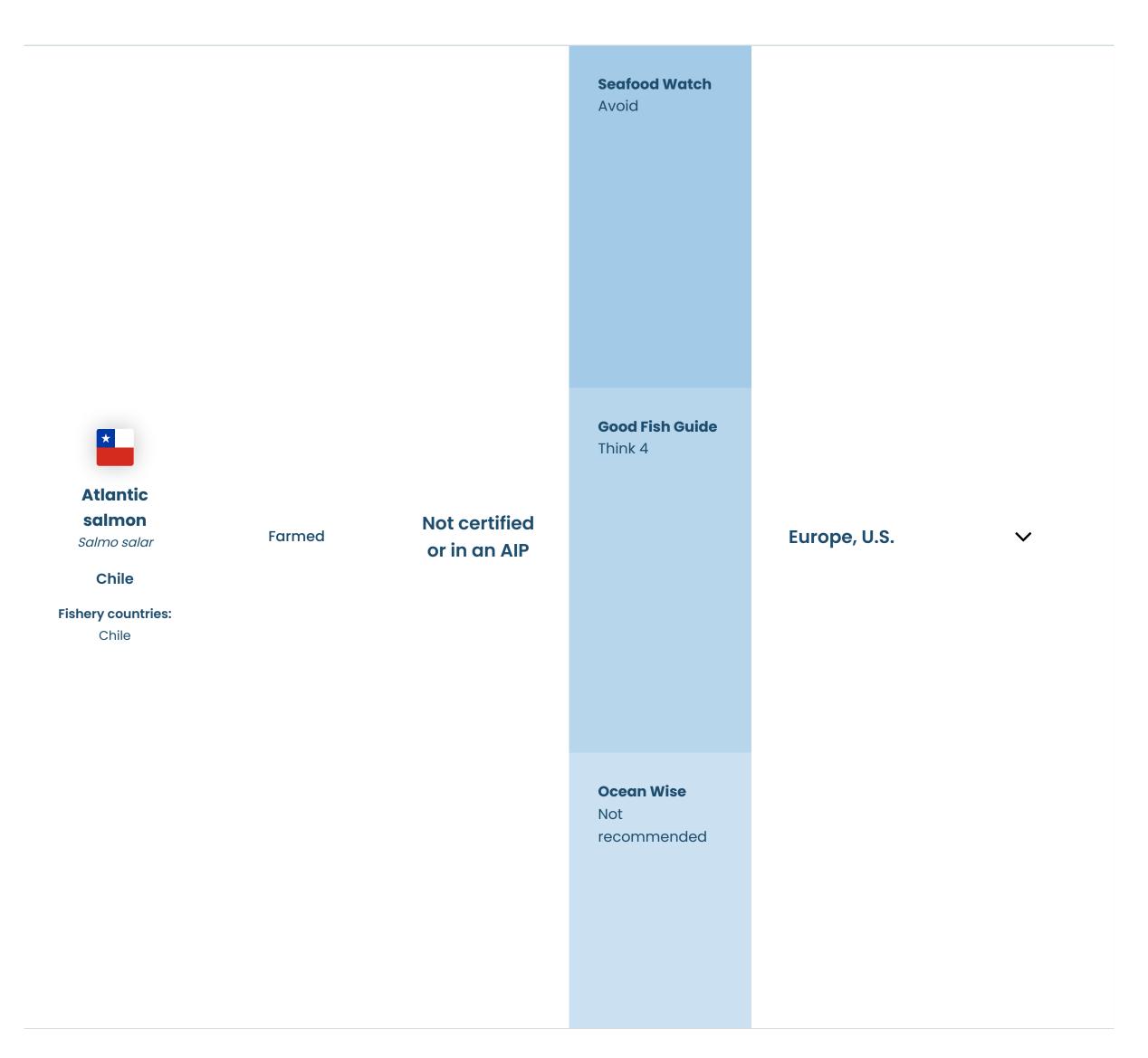
<u>GoodFish Australia - Atlantic Salmon</u>



Environmental Notes

- Salmon rely on wild capture fisheries for feed.
- Atlantic salmon are not native to Australia. Farmed salmon escapes and disease outbreaks may impact on wild salmonids. In addition,
 impacts on water quality from salmon farms pose a threat to the endangered Maugean skate, found only in Macquarie Harbour on the
 west coast of Tasmania.
- Impacts on water quality are localized, but there is potential for cumulative impacts in densely farmed areas. Waste from high salmon production has been linked to low oxygen levels and pollution of the seabed in Macquarie Harbour, a sensitive waterway adjacent to a World Heritage Area.

General 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

<u>FishSource, Salmon - Chile</u>

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

Seafood Watch Recommendation for farmed Atlantic Salmon, Chile



- 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

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

Seafood Watch, Recommended Eco-Certifications for Atlantic salmon, Aquaculture Stewardship Council (ASC) Certified



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

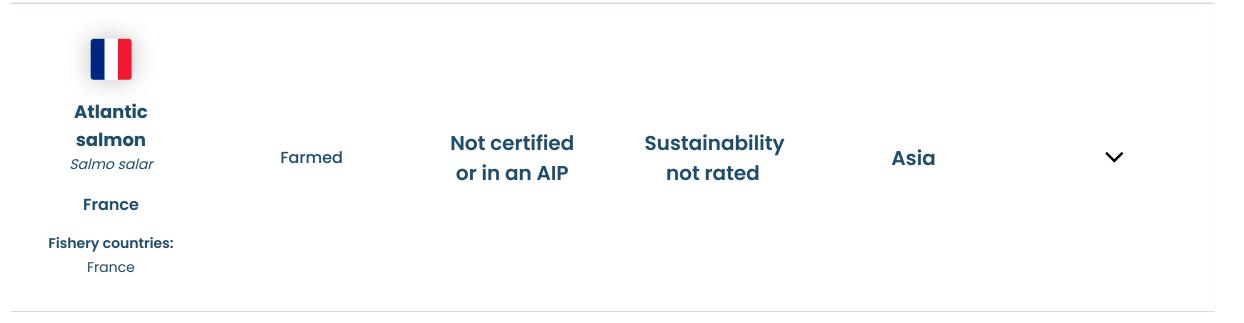
A zonal management approach has been adopted based on licenses (concessions); groups of licenses - Aquaculture Management Areas (AMAs); emergency disease zones - Macro Zones; and Areas Autorizadas para el ejercicio de la Acuicultura - Appropriate Areas for Aquaculture (AAA).

References

FishSource, Salmon - Chile

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

Seafood Watch report for farmed Atlantic Salmon, Chile



Environmental Notes

- Salmon rely on wild capture fisheries for feed.
- Farmed salmon escapes and disease outbreaks may impact on wild salmonids.
- Impacts on water quality are localized, but there is potential for cumulative impacts in densely farmed areas.

General Notes

• No additional notes.



- Salmon rely on wild capture fisheries for feed, but responsible sourcing of inputs is encouraged for certified salmon.
- There are concerns about the impact of farmed salmon escapes and disease outbreaks on wild salmonids. In addition, concerns have been expressed about the impact on wild wrasse populations used as cleaner fish to control sea lice.
- Impacts on water quality are localized, but there is potential for cumulative impacts in densely farmed areas. Chemical inputs of pesticides used to control sea lice are of particular concern for farmed salmon.

General Notes

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

References

Seafood Watch, Recommended Eco-Certifications for Atlantic salmon, Aquaculture Stewardship Council (ASC) Certified



Environmental Notes

- Salmon rely on wild capture fisheries for feed.
- Farmed salmon escapes and disease outbreaks may impact on wild salmonids.
- Impacts on water quality are localized, but there is potential for cumulative impacts in densely farmed areas.

General Notes

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

References

Good Fish Guide - Salmon, Atlantic (Farmed), Europe, Organic certification



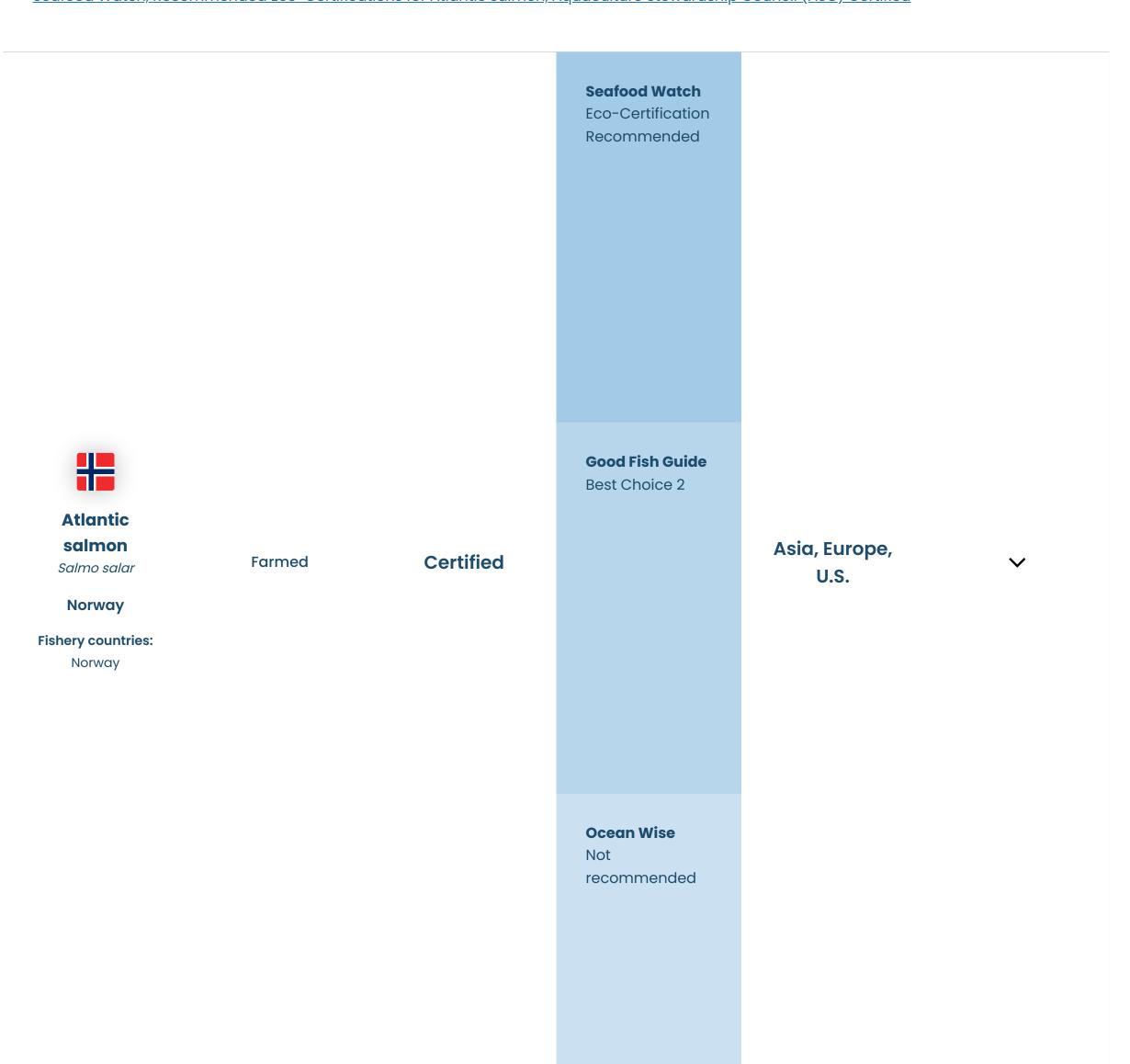
- Salmon rely on wild capture fisheries for feed.
- Farmed salmon escapes and disease outbreaks may impact on wild salmonids.
- Impacts on water quality are localized, but there is potential for cumulative impacts in densely farmed areas.

General Notes

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

References

Seafood Watch, Recommended Eco-Certifications for Atlantic salmon, Aquaculture Stewardship Council (ASC) Certified



- Salmon rely on wild capture fisheries for feed, but responsible sourcing of inputs is encouraged for certified salmon.
- There are concerns about the impact of farmed salmon escapes and disease outbreaks on wild salmonids. In addition, concerns have been expressed about the impact on wild wrasse populations used as cleaner fish to control sea lice.
- Impacts on water quality are localized, but there is potential for cumulative impacts in densely farmed areas. Chemical inputs of pesticides used to control sea lice are of particular concern for farmed Norwegian salmon, but the use of non-chemical treatments for sea lice is increasing.

General Notes

- The environmental impacts described are addressed to some degree by certification.
- The Norwegian salmon industry has adopted a zonal approach to aquaculture management.

References:

<u>FishSource - salmon, Norway</u>

Good Fish Guide - Salmon, Atlantic (Farmed), Scotland and Norway, Aquaculture Stewardship Council (ASC) certification

Seafood Watch, Recommended Eco-Certifications for Atlantic salmon, Aquaculture Stewardship Council (ASC) Certified

Seafood Watch report for farmed salmon, Norway



Environmental Notes

- 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. In addition, concerns have been expressed about the impact on wild wrasse populations used as cleaner fish to control sea lice.
- Impacts on water quality are localized, but there is potential for cumulative impacts in densely farmed areas. Chemical inputs of pesticides used to control sea lice are of particular concern for farmed Norwegian salmon, but the use of non-chemical treatments for sea lice is increasing.

General Notes

- The environmental impacts described are addressed to some degree by certification.
- The Norwegian salmon industry has adopted a zonal approach to aquaculture management.

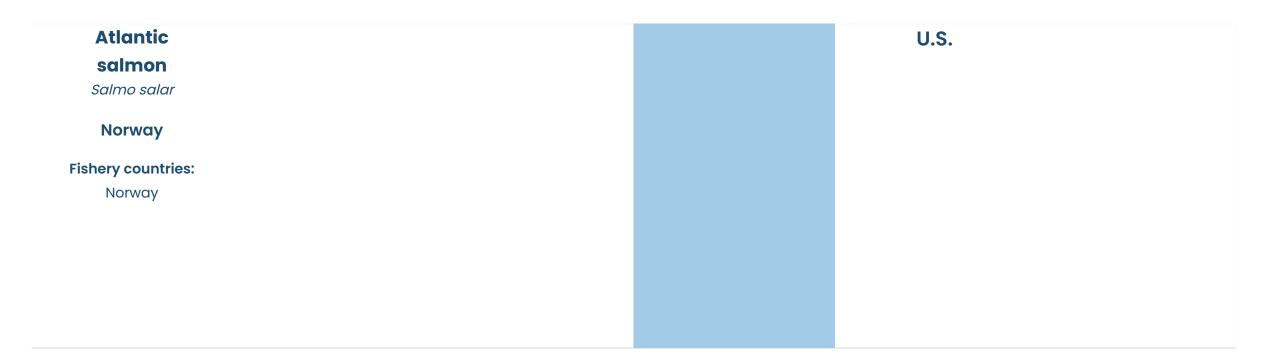
References:

FishSource - salmon, Norway

Good Fish Guide - Salmon, Atlantic (Farmed), Scotland and Norway, Global Aquaculture Alliance Best Aquaculture Practices (GAA BAP) 3* & 4* certified

Seafood Watch report for farmed salmon, Norway





- Salmon rely on wild capture fisheries for feed, but responsible sourcing of inputs is encouraged for certified salmon.
- There are concerns about the impact of farmed salmon escapes and disease outbreaks on wild salmonids. In addition, concerns have been expressed about the impact on wild wrasse populations used as cleaner fish to control sea lice.
- Impacts on water quality are localized, but there is potential for cumulative impacts in densely farmed areas. Chemical inputs of pesticides used to control sea lice are of particular concern for farmed Norwegian salmon, but the use of non-chemical treatments for sea lice is increasing.

General Notes

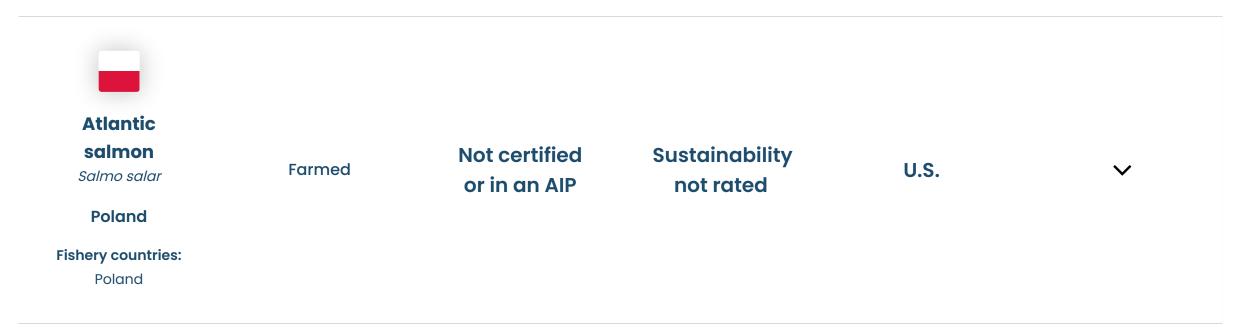
- The environmental impacts described are addressed to some degree by certification.
- The Norwegian salmon industry has adopted a zonal approach to aquaculture management.

References:

FishSource - salmon, Norway

Good Fish Guide - Salmon, Atlantic (Farmed), Scotland, Norway and Faroe Islands, GlobalG.A.P. certification

Seafood Watch report for farmed salmon, Norway



Environmental Notes

- Salmon rely on wild capture fisheries for feed.
- Farmed salmon escapes and disease outbreaks may impact on wild salmonids.
- Impacts on water quality are localized, but there is potential for cumulative impacts in densely farmed areas.

General Notes

• No additional notes.



- Salmon rely on wild capture fisheries for feed, but responsible sourcing of inputs is encouraged for certified salmon.
- There are concerns about the impact of farmed salmon escapes and disease outbreaks on wild salmonids. In addition, concerns have been expressed about the impact on wild wrasse populations used as cleaner fish to control sea lice.
- Impacts on water quality are localized, but there is potential for cumulative impacts in densely farmed areas. Chemical inputs of pesticides used to control sea lice are of particular concern for farmed Scottish salmon.

General Notes

- The environmental impacts described are addressed to some degree by certification.
- The industry follows a zonal approach to aquaculture management with respect to planning, siting, licensing, and operation.

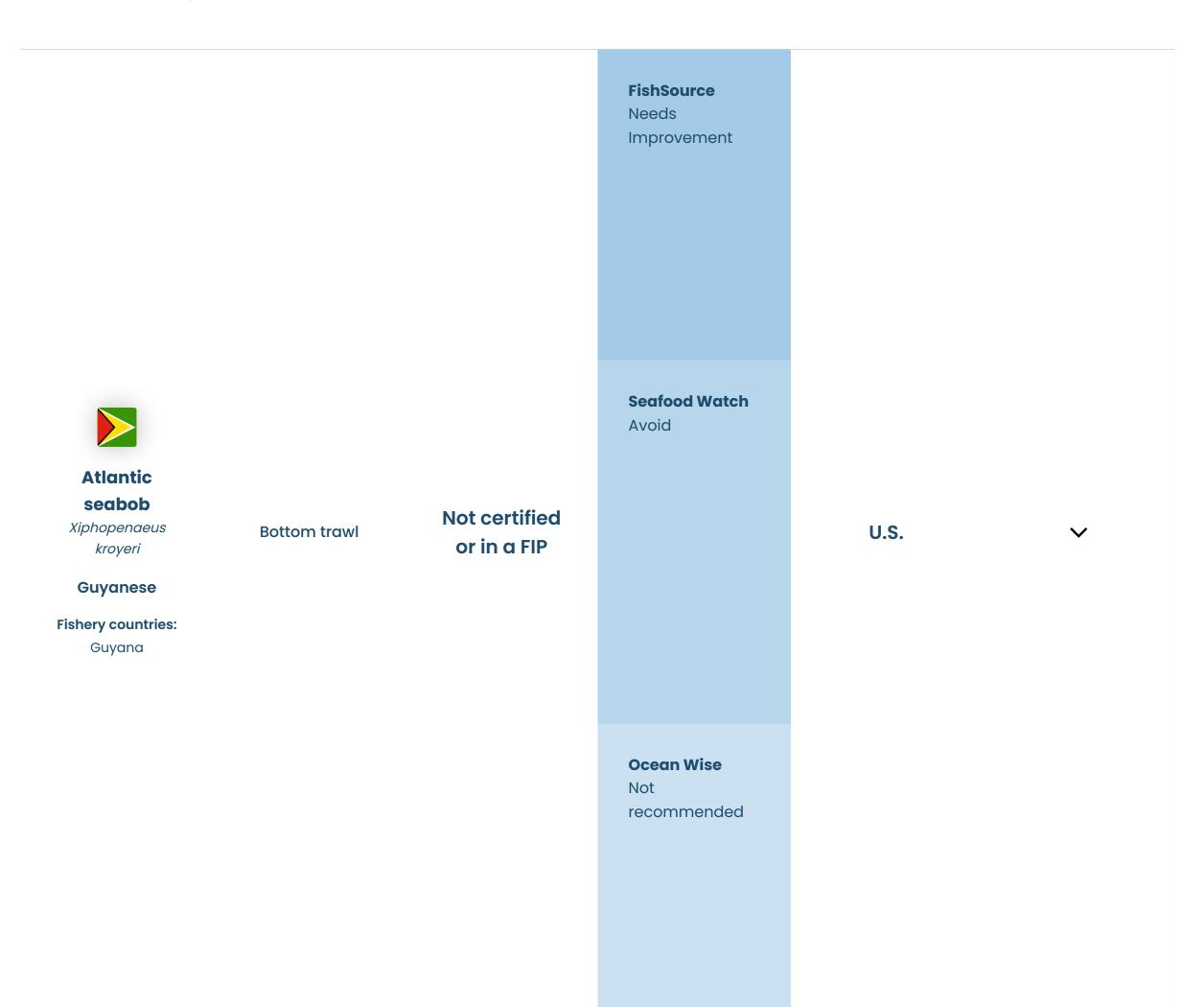
References:

<u>FishSource - salmon, United Kingdom</u>

Good Fish Guide - Salmon, Atlantic (Farmed), Scotland, Norway and Faroe Islands, GLOBALG.A.P. certification

Good Fish Guide - Salmon, Atlantic (Farmed), Europe, Organic certification

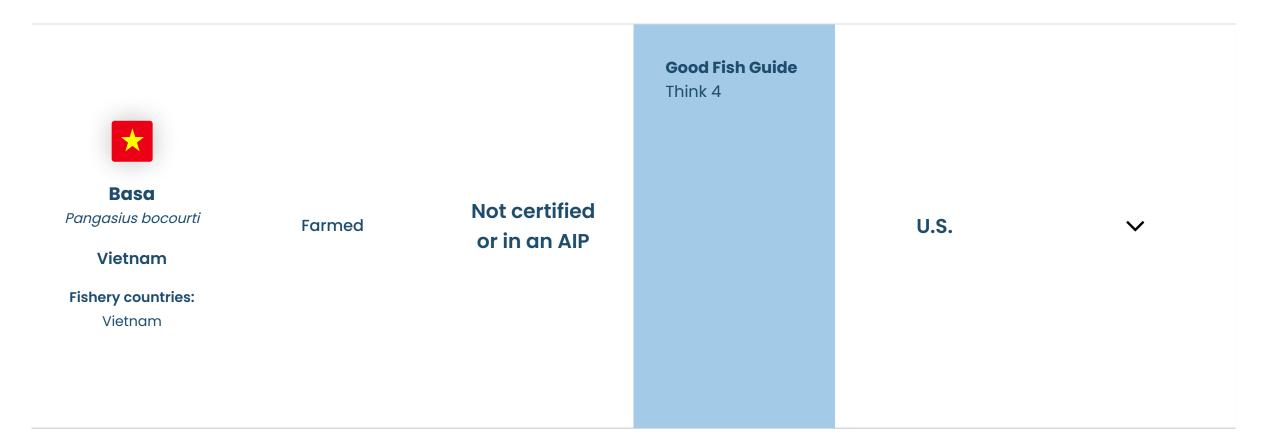
<u>Seafood Watch report for farmed salmon, Scotland</u>



- There is a risk to ETP species with this fishery.
- Bycatch is a risk for this fishery, but there is insufficient data available to assess significance.
- Habitat impacts in this fishery are not well understood.

General Notes

• No additional notes.



Environmental Notes

- Pangasius feed includes low levels of fishmeal and fish oil from marine feed sources but the feed used may not be responsibly sourced.
- A lack of data from uncertified production of pangasius means the extent of environmental impacts are unknown but concerns include a reliance on wild caught broodstock, disease transfer, escapes, and predator control methods.
- Pangasius farming in Vietnam is linked to unregulated disposal of waste into adjoining waterways with cumulative impacts that contribute to water pollution. Other concerns include chemical and antibiotic use, and freshwater depletion.

General Notes

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

References:

Good Fish Guide - Basa, Tra, Catfish or Vietnamese River Cobbler (Farmed), Vietnam

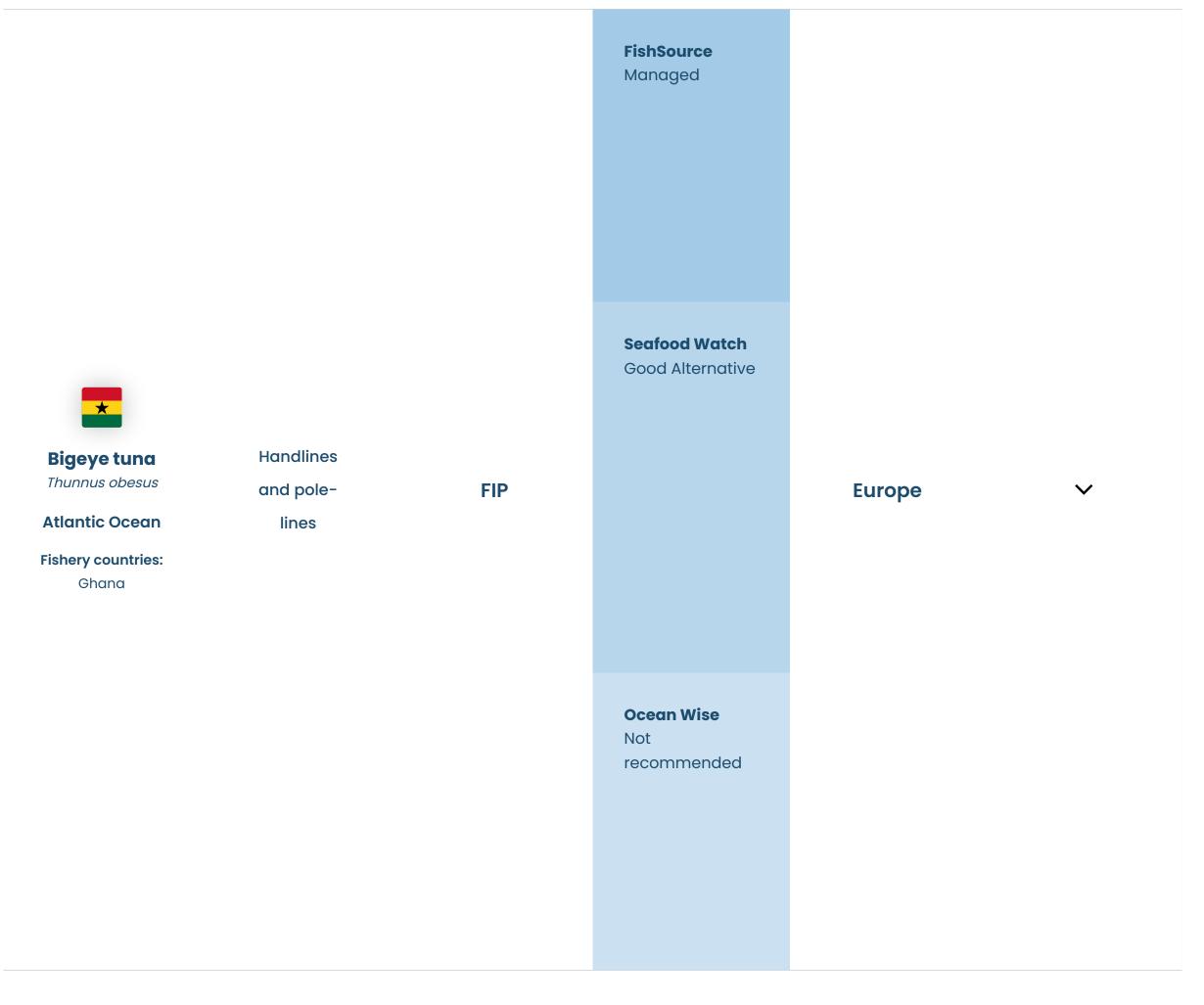


- Farmed scallops are not provided external feed.
- The risk of escapes and spread of disease is considered to be low. The majority of the source of stock for farmed scallops comes from natural or passive settlement.
- Little to no chemicals are used in the culture of scallops and effluents do not present a risk.

General Notes

References

Seafood Watch Recommendations for farmed Bay Scallop

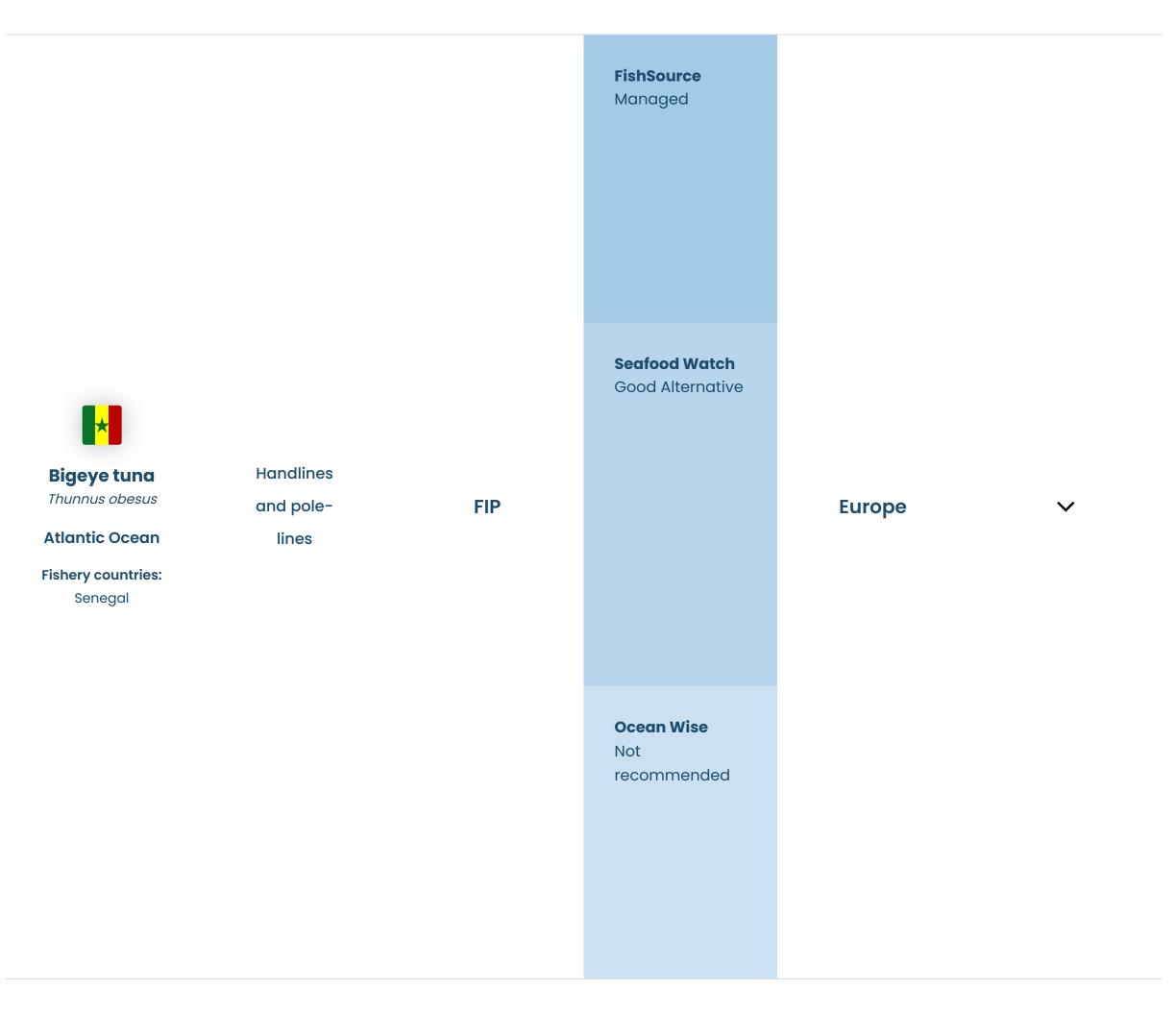


Environmental Notes

- 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

• This fishery is part of the <u>Ghana tuna - pole & line</u> FIP.

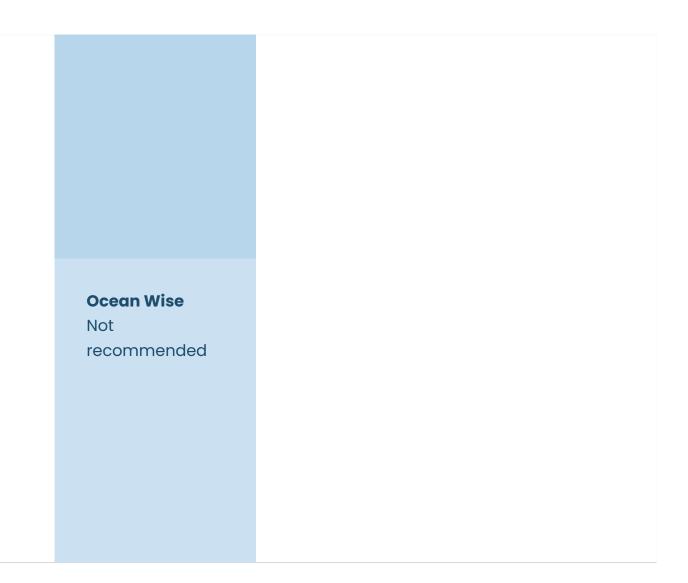


- This fishery is unlikely to impact ETP species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

• This fishery is part of the <u>Eastern Atlantic Ocean tuna - pole & line</u> FIP.





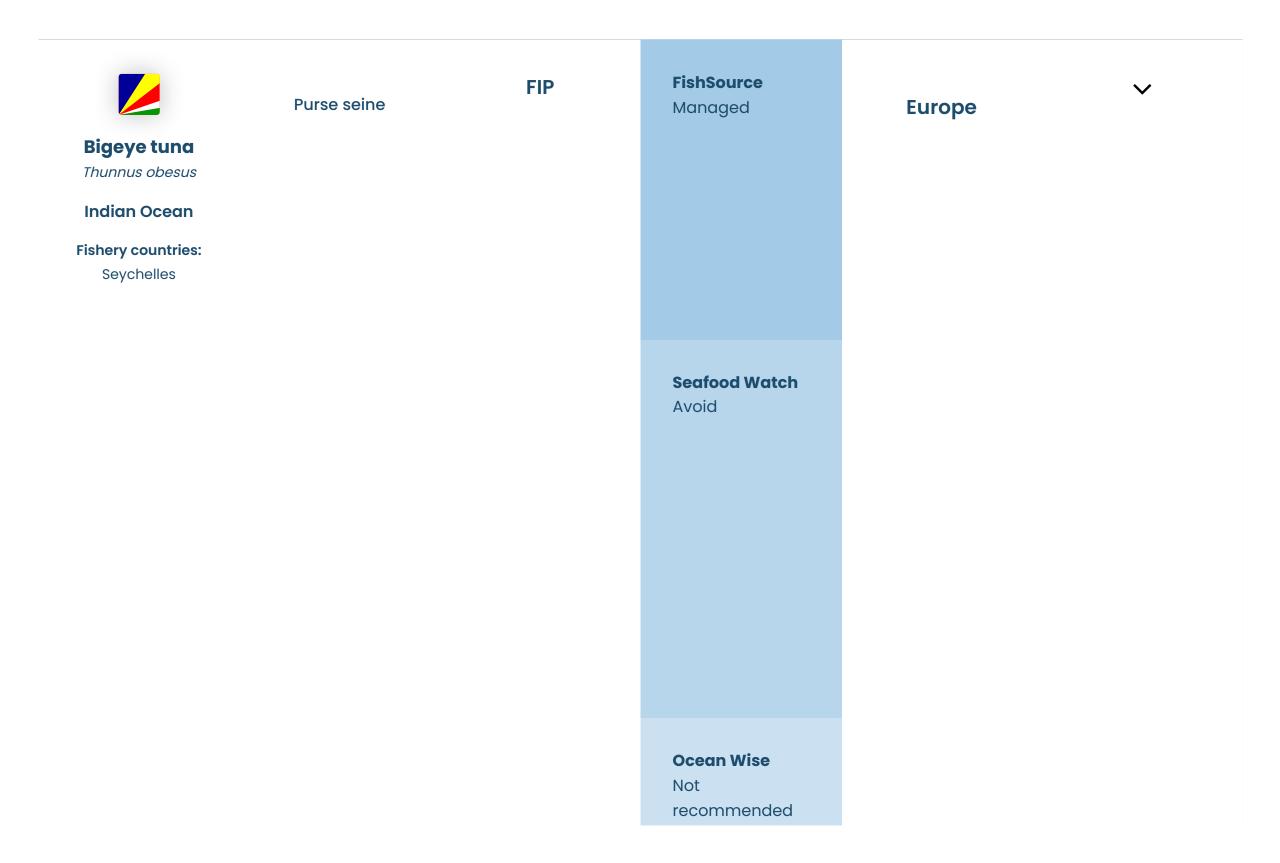
- Catch of the 'vulnerable' blue marlin and sharks is a risk for this fishery.
- There is a higher risk of bycatch in the associated purse seine fishery. Bycatch includes tuna and billfishes.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

- This fishery is part of the <u>Eastern Atlantic tuna purse seine</u> FIP.
- 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

<u>Seafood Watch Recommendation for Bigeye tuna, Atlantic Ocean, Floating object purse seine (FAD)</u>



- Catch of sharks is a risk for this fishery.
- Bycatch varies by gear type. There is a higher risk of bycatch in the associated purse seine fishery. Unassociated purse seine fisheries typically have less bycatch. Bycatch includes billfishes, fin fishes, and sharks and rays.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

- This fishery is part of the Indian Ocean tuna purse seine (SIOTI) FIP.
- 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.



Environmental Notes

- Catch of sharks and marine mammals is a risk for the purse seine fishery.
- Bycatch varies by gear type. There is a higher risk of bycatch in the associated purse seine fishery. Unassociated purse seine fisheries typically have less bycatch. Bycatch includes billfishes, fin fishes, and sharks and 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 (OPAGAC) FIP.
- The FIP entered MSC full assessment in 2020.
- 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

<u>Seafood Watch Recommendation for Bigeye tuna, Eastern Central Pacific Ocean, Floating object purse seine (FAD)</u>



Kiribati, Marshall Islands, Micronesia, Nauru, Palau, Papua New Guinea, Solomon Islands, Tokelau, Tuvalu

Environmental Notes

- Catch of sharks is a risk for this fishery.
- Bycatch varies by gear type. There is a higher risk of bycatch in the associated purse seine fishery. Unassociated purse seine fisheries typically have less bycatch. Bycatch includes billfishes, fin fishes, and sharks and rays.
- 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

MSC: PNA Western and Central Pacific skipjack, yellowfin and bigeye tuna purse seine fishery (FAD and non-FAD sets)



Environmental Notes

- Catch of sharks is a risk for this fishery.
- There is a higher risk of bycatch in the associated purse seine fishery. Bycatch includes billfishes, fin fishes, and sharks and rays.

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

General Notes

- This fishery is part of the Indonesia Southeast Sulawesi yellowfin tuna and skipjack tuna purse seine FIP.
- 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

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

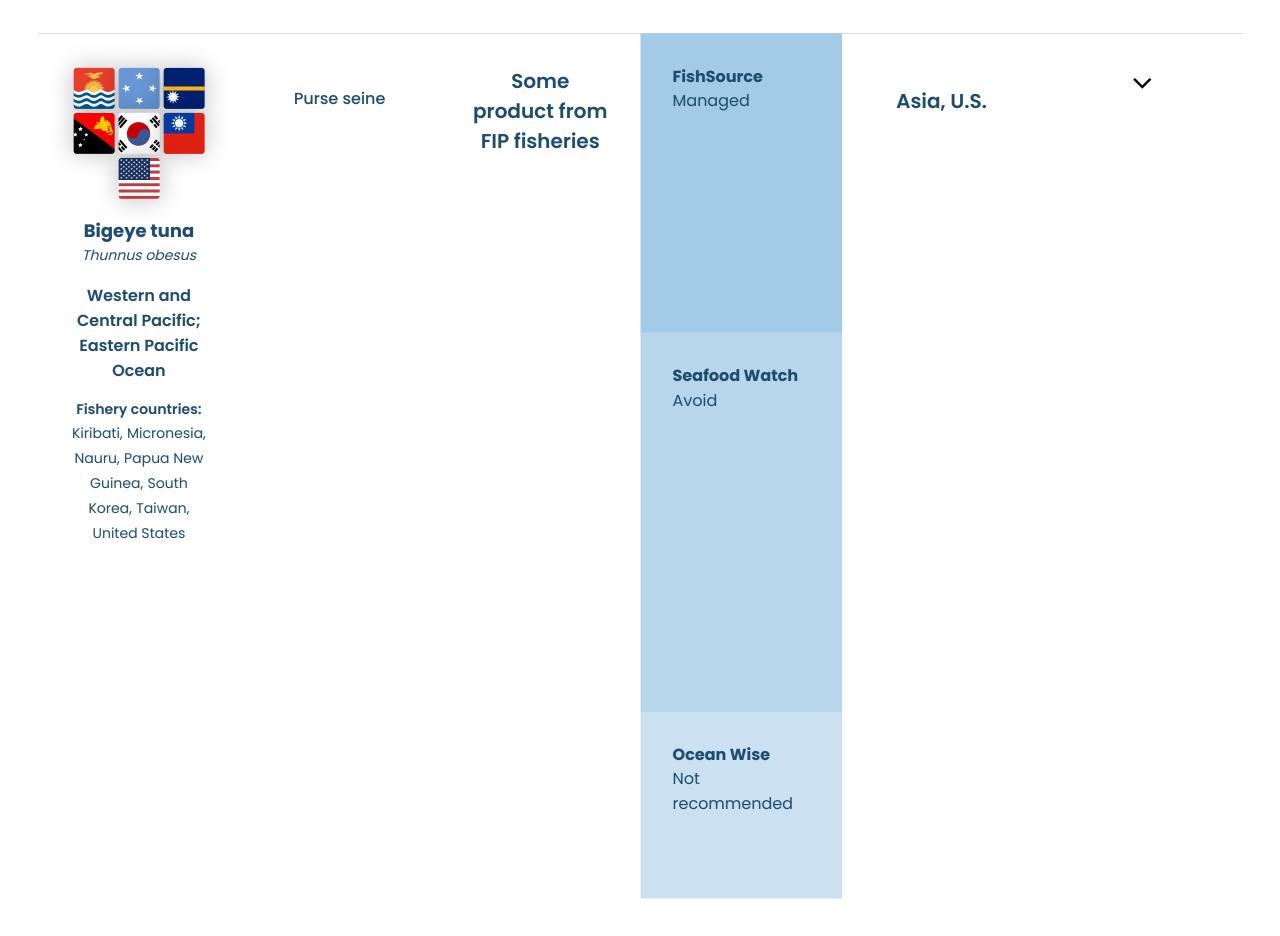


Environmental Notes

- 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.



- Catch of sharks is a risk for this fishery.
- Bycatch varies by gear type. There is a higher risk of bycatch in the associated purse seine fishery. Unassociated purse seine fisheries typically have less bycatch. Bycatch includes billfishes, fin fishes, and sharks and rays.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

- This fishery is part of the Western and Central Pacific Ocean tuna purse seine (Thai Union) FIP.
- 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

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

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



Environmental Notes

• Profile not yet complete.

General Notes

• No additional notes.



Environmental Notes

• Profile not yet complete.

General Notes

FishSource Needs Improvement **Seafood Watch** Avoid **Blue** Gillnets and swimming entangling crab Some Portunus pelagicus product from U.S. nets **FIP fisheries** Java Sea; Tolo Pots and Bay and Banda traps Sea **Fishery countries:** Indonesia Ocean Wise Not recommended

Environmental Notes

- This fishery is unlikely to impact ETP species.
- Bycatch is a risk for this fishery.
- There is a lack of information on habitat impacts in this fishery.

General Notes

• This fishery is part of the <u>Indonesia blue swimming crab - trap & gillnet FIP</u>.

References

<u>Seafood Watch Recommendation, Blue swimming crab, Indonesia</u>



Ocean Wise
Not
recommended

Environmental Notes

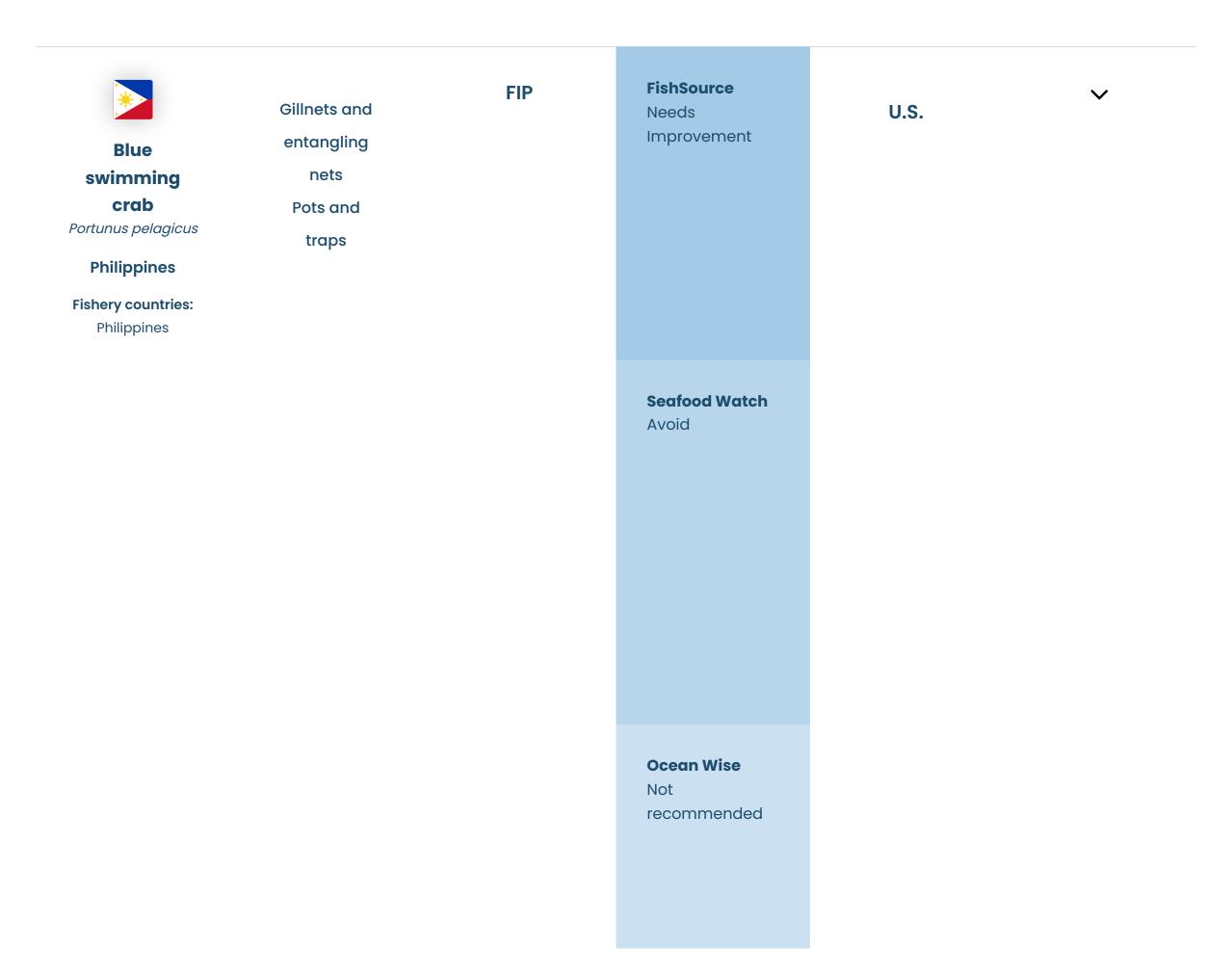
- There is a lack of information on interactions with ETP species in this fishery.
- There is some bycatch of other crabs with this fishery.
- There is a lack of information on habitat impacts in this fishery.

General Notes

• This fishery is part of the <u>India Palk Bay blue swimming crab - gillnet FIP</u>.

References

<u>Seafood Watch Recommendation, Blue swimming crab, set gillnets, India</u>



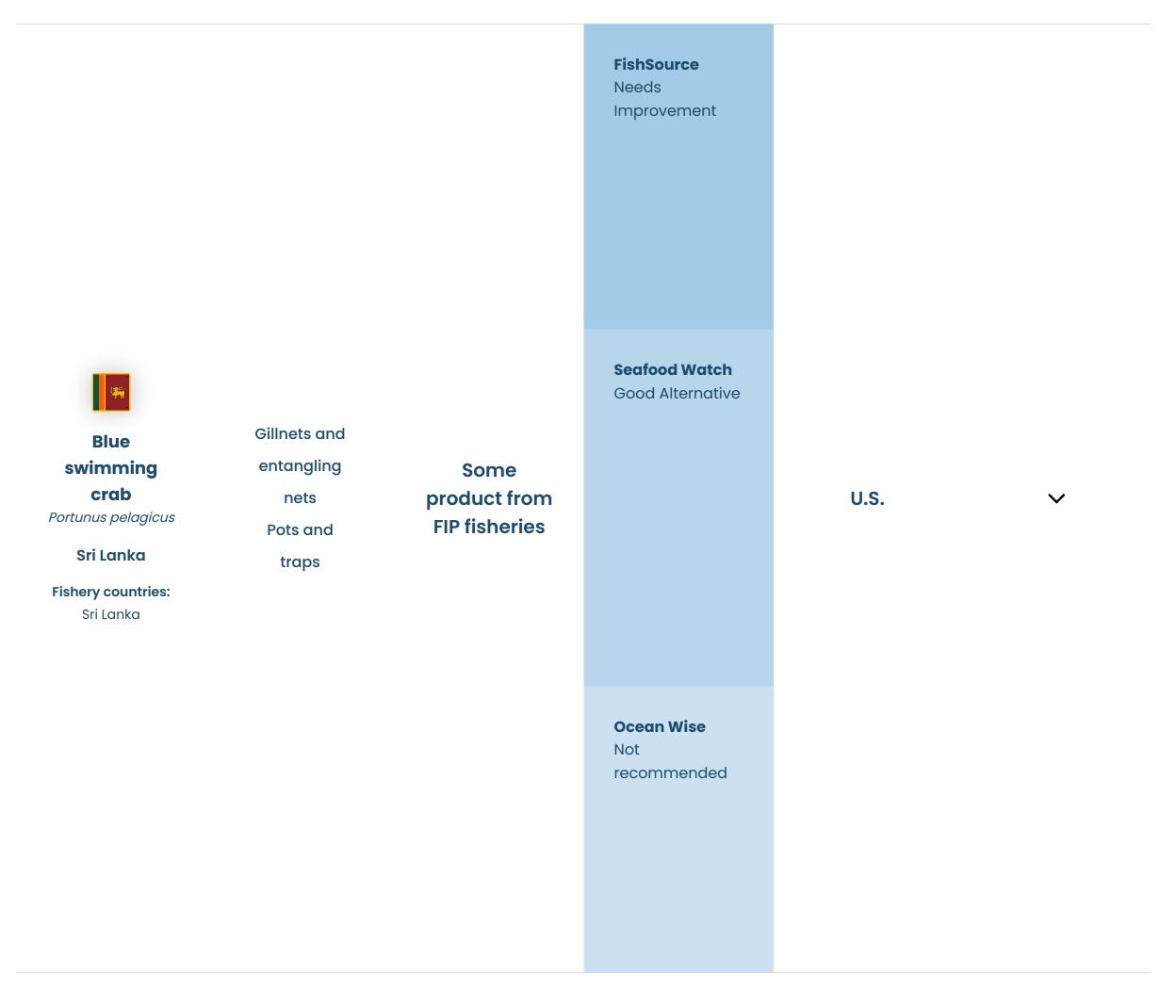
- There are risks to marine mammals and turtles with this fishery.
- Bycatch varies for this fishery depending on gear type and fishing location. Gillnets are associated with the highest risk of bycatch.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

• This fishery is part of the Philippines blue swimming crab - bottom-set gillnet & pot/trap (PACPI) FIP.

References

<u>Seafood Watch Recommendations, Blue swimming crab, Philippines</u>



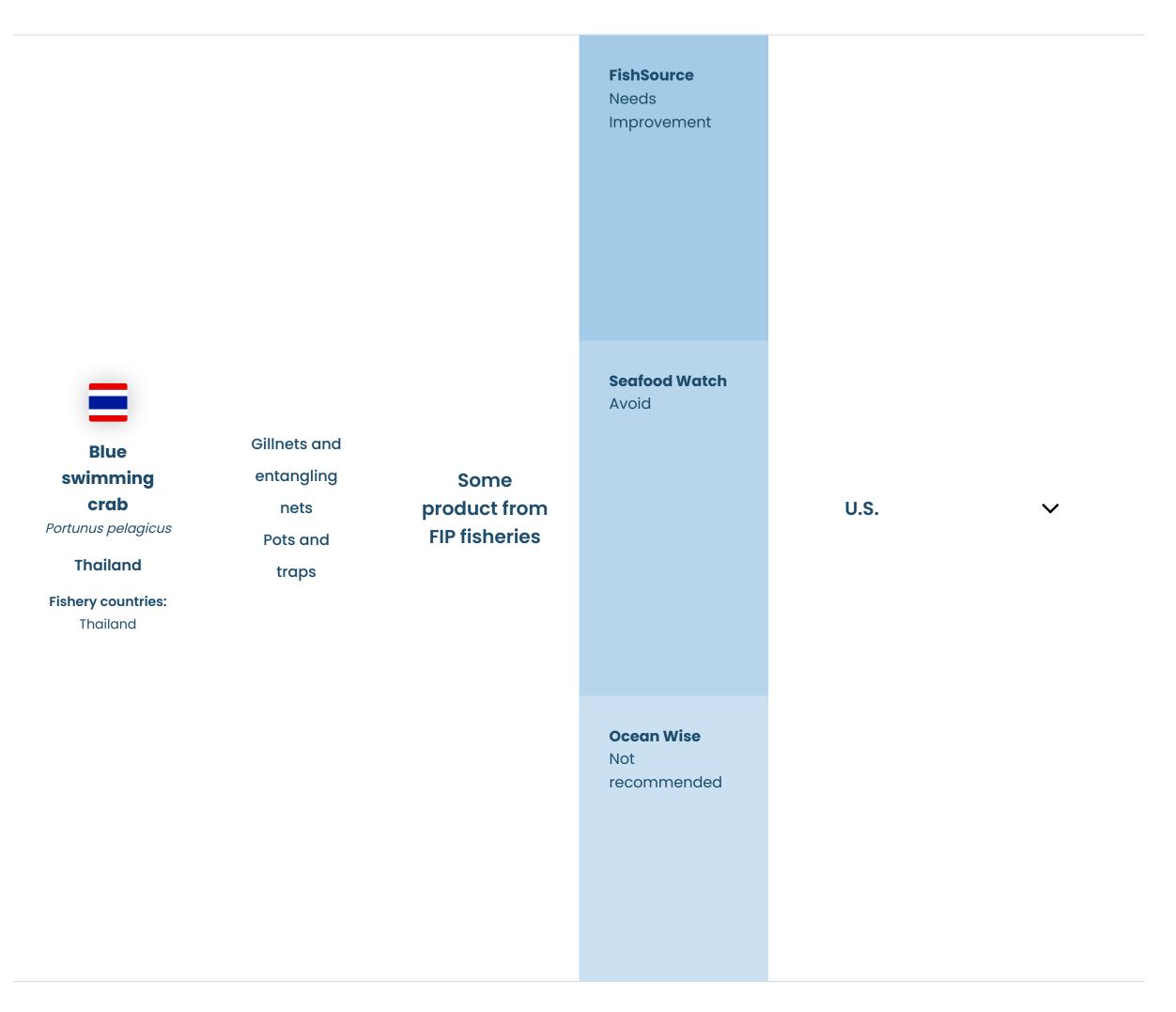
Environmental Notes

- There is a lack of information on interactions with ETP species in this fishery.
- Bycatch is a risk for this fishery.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

• This fishery is part of the <u>Sri Lanka blue swimming crab - bottom gillnet FIP</u>.

Seafood Watch Recommendation, Blue swimming crab, Gillnets and entangling nets, Sri Lanka



Environmental Notes

- There are risks to sea turtles, marine mammals, sharks and rays 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

• This fishery is part of the <u>Thailand blue swimming crab - bottom gillnet/trap FIP</u>.

References

<u>Seafood Watch Recommendations, Blue swimming crab, Thailand</u>



Fishery countries:
Vietnam
Vie

Environmental Notes

- The risks to sharks and sea turtles with this fishery is considered low.
- There is bycatch for this fishery but non-target species are retained.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

• This fishery was part of the now inactive <u>Vietnam blue swimming crab - bottom gillnet/pot/trap FIP</u>.

References

<u>Seafood Watch Recommendations, Blue swimming crab, Vietnam</u>





- 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.

References

MSC: ISF Iceland capelin



Environmental Notes

• Profile not yet complete.

General Notes

No additional notes.



Jamaica,
Nicaragua

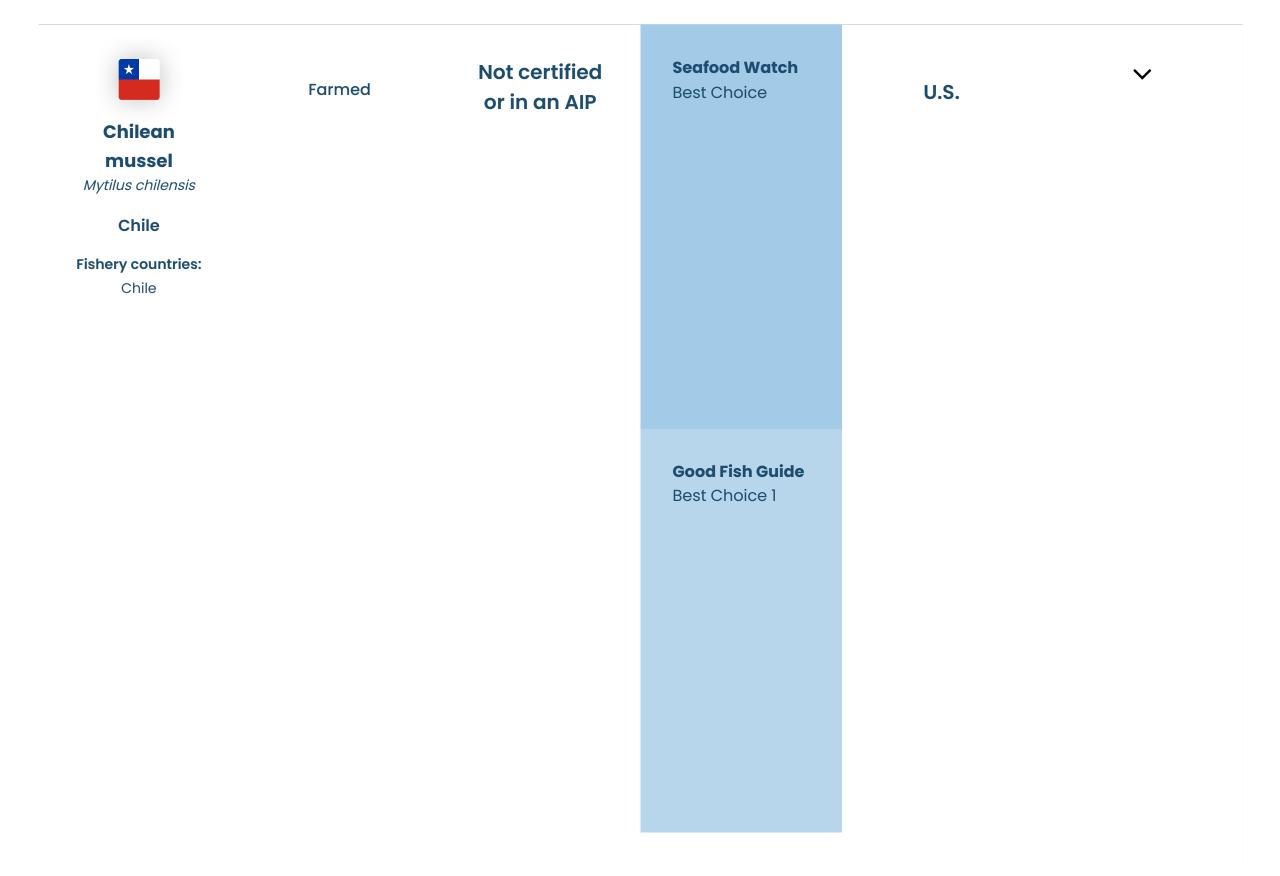
Ocean Wise
Not
recommended

Environmental Notes

- There is a lack of information on interactions with ETP species in this fishery.
- Bycatch for this fishery is likely to be low.
- Divers are unlikely to have a significant impact on the sea bed.

General Notes

• No additional notes.



Ocean Wise
Recommended

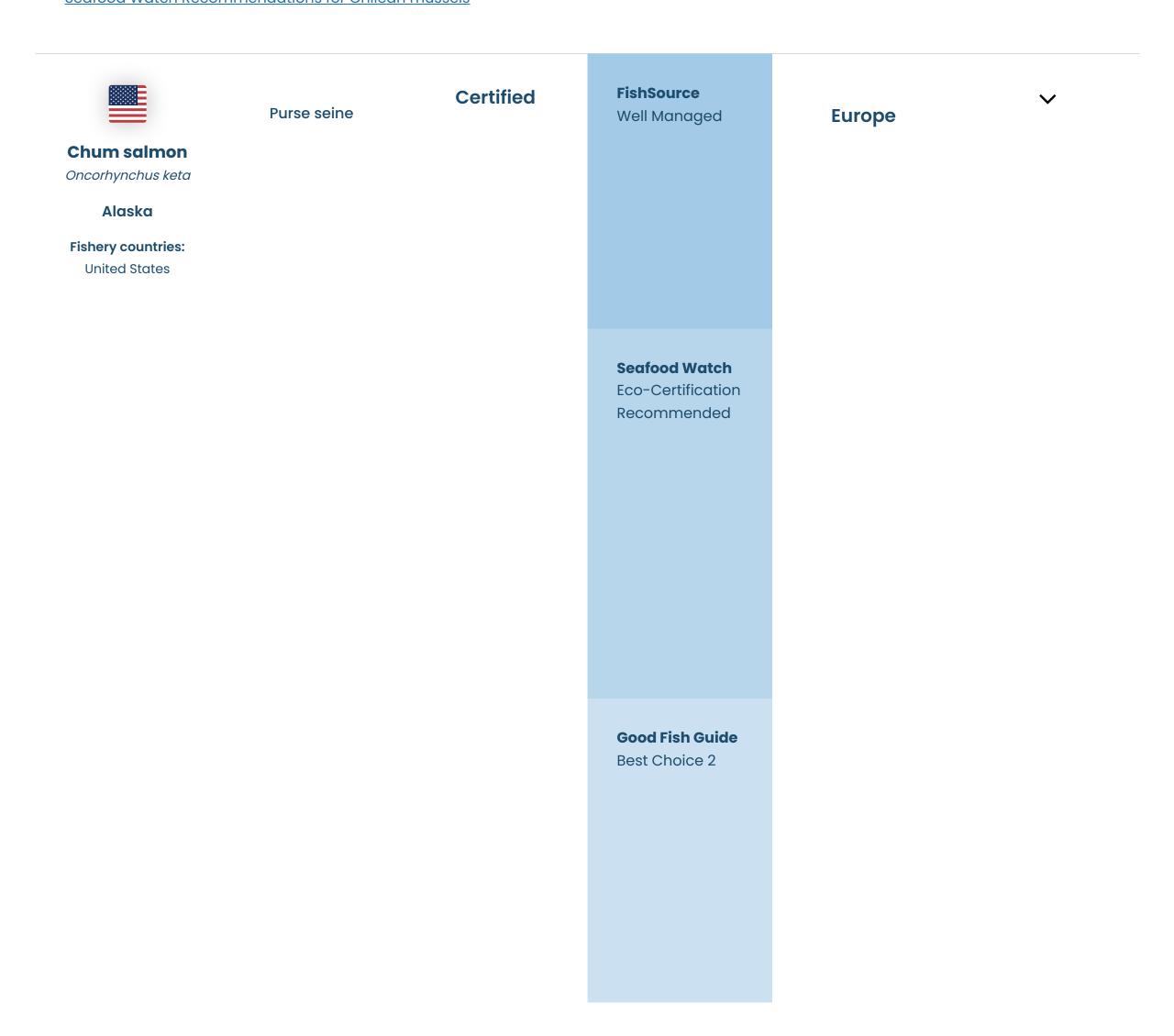
- No feed inputs are used to support farmed mussels.
- Only naturally occurring spat are used to stock the farm so the transportation of the larval phase of mussels away from farm sites is not a concern.
- There is no concern regarding pollution from nutrients or organic matter. No feed or nutrient fertilization 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 - Mussel, Chilean (Farmed)

<u>Seafood Watch Recommendations for Chilean mussels</u>





- This fishery is unlikely to impact ETP species.
- Management measures are in place to minimise bycatch of non-target salmon stocks.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

MSC: Alaska salmon

Good Fish Guide - Salmon, Chum, Keta, Calico or Dog salmon, Purse seine, Alaska

Seafood Watch Recommendation for Chum salmon, Marine Stewardship Council Certified Alaska salmon Fishery, Purse seine



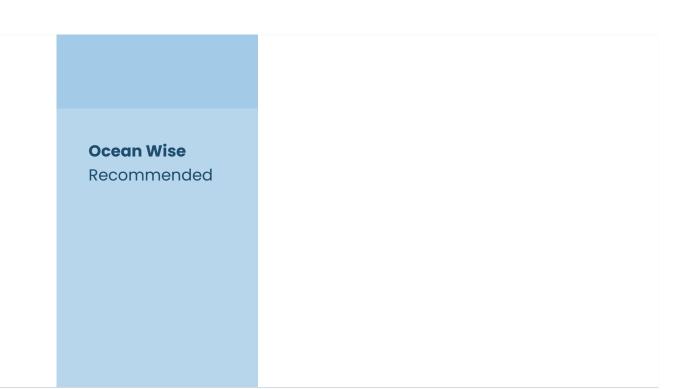
Environmental Notes

• Profile not yet complete.

General Notes

• No additional notes.



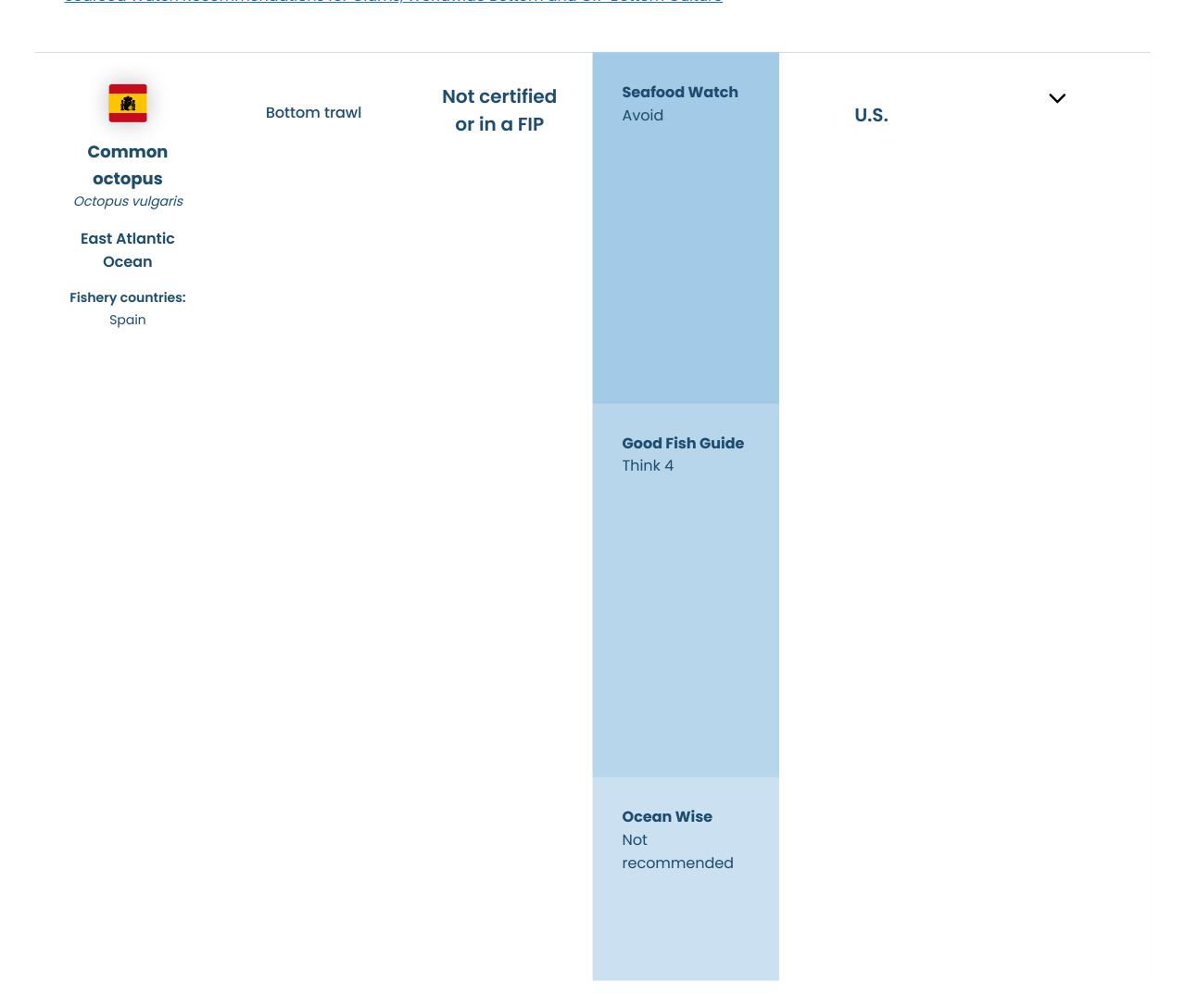


- No feed inputs are used to support farmed clams.
- Direct escapes of farmed clams are low but eggs may be released into surrounding waters during spawning events in the growout phase. However, the risk of impacts on wild populations and ecosystems is considered low.
- There is no concern regarding pollution from nutrients or organic matter. No feed or nutrient fertilization inputs are used to support farmed clams, and water quality has been shown to improve near farm sites. However, there is some evidence of chemical use in China.

General Notes

References

Seafood Watch Recommendations for Clams, Worldwide Bottom and Off-Bottom Culture



- There are risks to sea turtles, marine mammals, and sharks with this fishery.
- Bycatch is a risk for this fishery.
- Bottom trawls will directly impact on the sea bed.

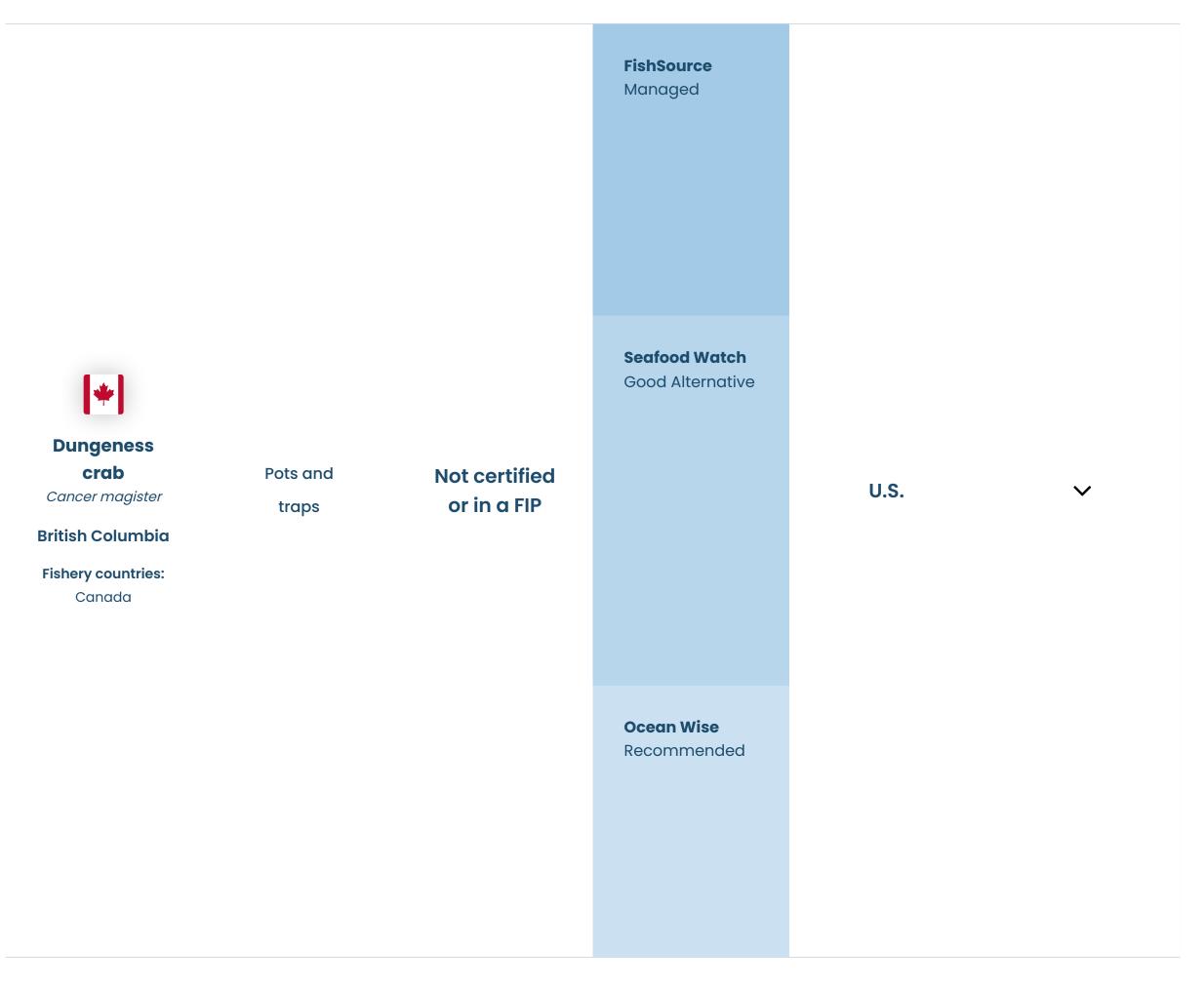
General Notes

References

Good Fish Guide - Octopus, Common, Demersal otter trawl, North East Atlantic (FAO 27), Cantabrian Sea and Atlantic Iberian waters, Demersal otter trawl

Good Fish Guide - Octopus, Common, Demersal otter trawl, North East Atlantic (FAO 27), Cantabrian Sea and Atlantic Iberian waters, Beam trawl

<u>Seafood Watch Recommendation for Common octopus, Northeast Atlantic Ocean, Bottom trawls</u>



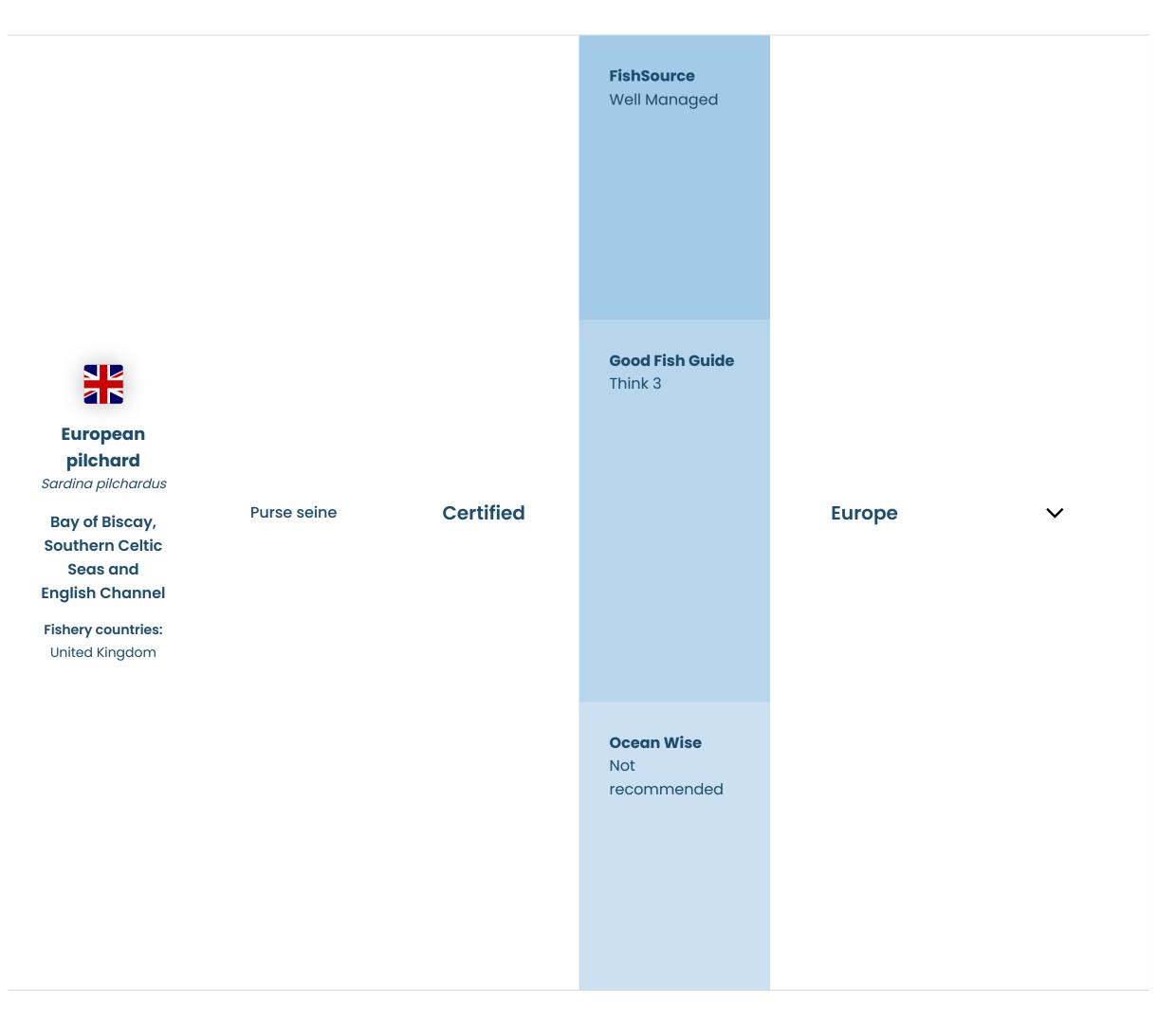
Environmental Notes

- This fishery is unlikely to impact ETP species.
- There is a low risk of bycatch in this fishery.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

<u>Seafood Watch Recommendations for Dungeness crab, Northeast Pacific Ocean, Pots</u>



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

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

References

MSC: Cornwall sardine, UK



Seas and
English Channel
Fishery countries:
France, Spain

Cood Fish Guide
Think 3

Ocean Wise
Not
recommended

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

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



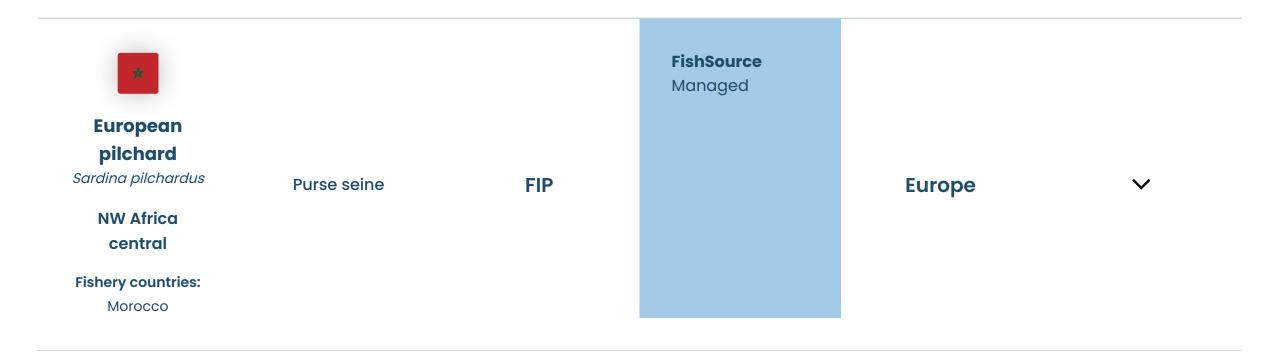
- This fishery is unlikely to have direct impacts on ETP species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

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.

References

Good Fish Guide - Sardine, European pilchard, sardines, Purse seine, Cantabrian Sea and Atlantic Iberian waters



Environmental Notes

- Available data is still limited, but work is underway in the Moroccan FIP to determine fishery interactions with PET species.
- Bycatch in this fishery is considered low, but available data is still limited. Work is in progress in the Moroccan FIP to identify and quantify discards.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

- This fishery is covered by the Morocco sardine pelagic trawl and seine FIP.
- This fish plays an important role in the marine food web and so potential impacts on the wider marine ecosystem must be monitored.

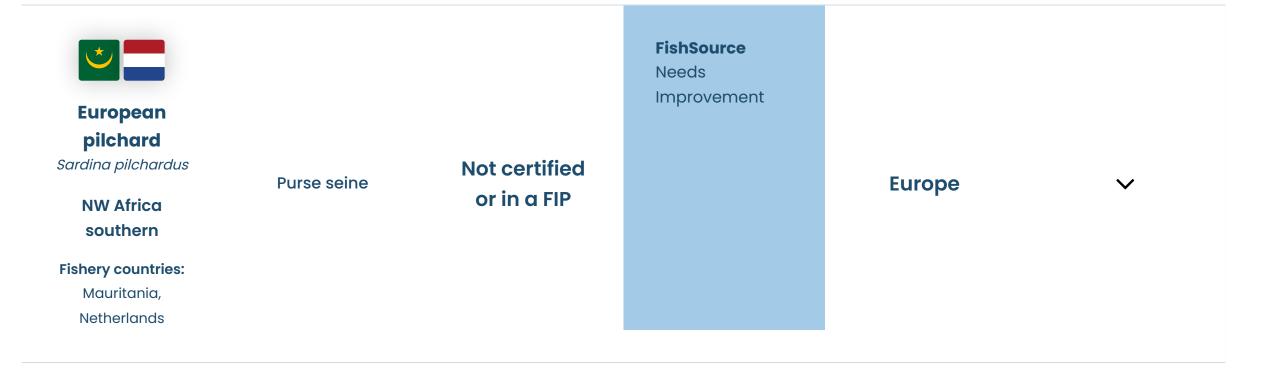


Environmental Notes

- Available data is still limited, but work is underway in the Moroccan FIP to determine fishery interactions with PET species.
- Bycatch in this fishery is considered low, but available data is still limited. Work is in progress in the Moroccan FIP to identify and quantify discards.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

- This fishery is covered by the Morocco sardine pelagic trawl and seine FIP.
- This fish plays an important role in the marine food web and so potential impacts on the wider marine ecosystem must be monitored.



- Available data on fishery interactions with ETP species is still limited.
- Bycatch in this fishery is considered low, but available data is still limited.
- 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

- There has been no reported bycatch of ETP species in recent years.
- Bycatch of Baltic herring 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

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

References



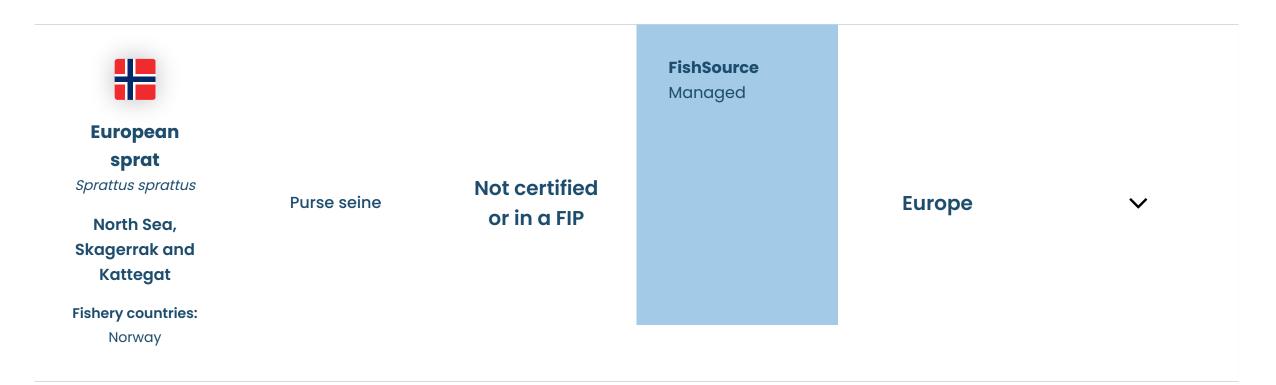
- This fishery may have indirect impacts on food availability to ETP species.
- Bycatch of herring is a risk for this fishery but there are mitigation measures in place.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

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

References

MSC: Norway sandeel, pout and North Sea sprat



Environmental Notes

- This fishery may have indirect impacts on food availability to ETP species.
- Bycatch of herring 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

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



Fishery countries: Faroe Islands, Ireland, Netherlands, Norway, Sweden, United Kingdom Good Fish Guide Think 4

Environmental Notes

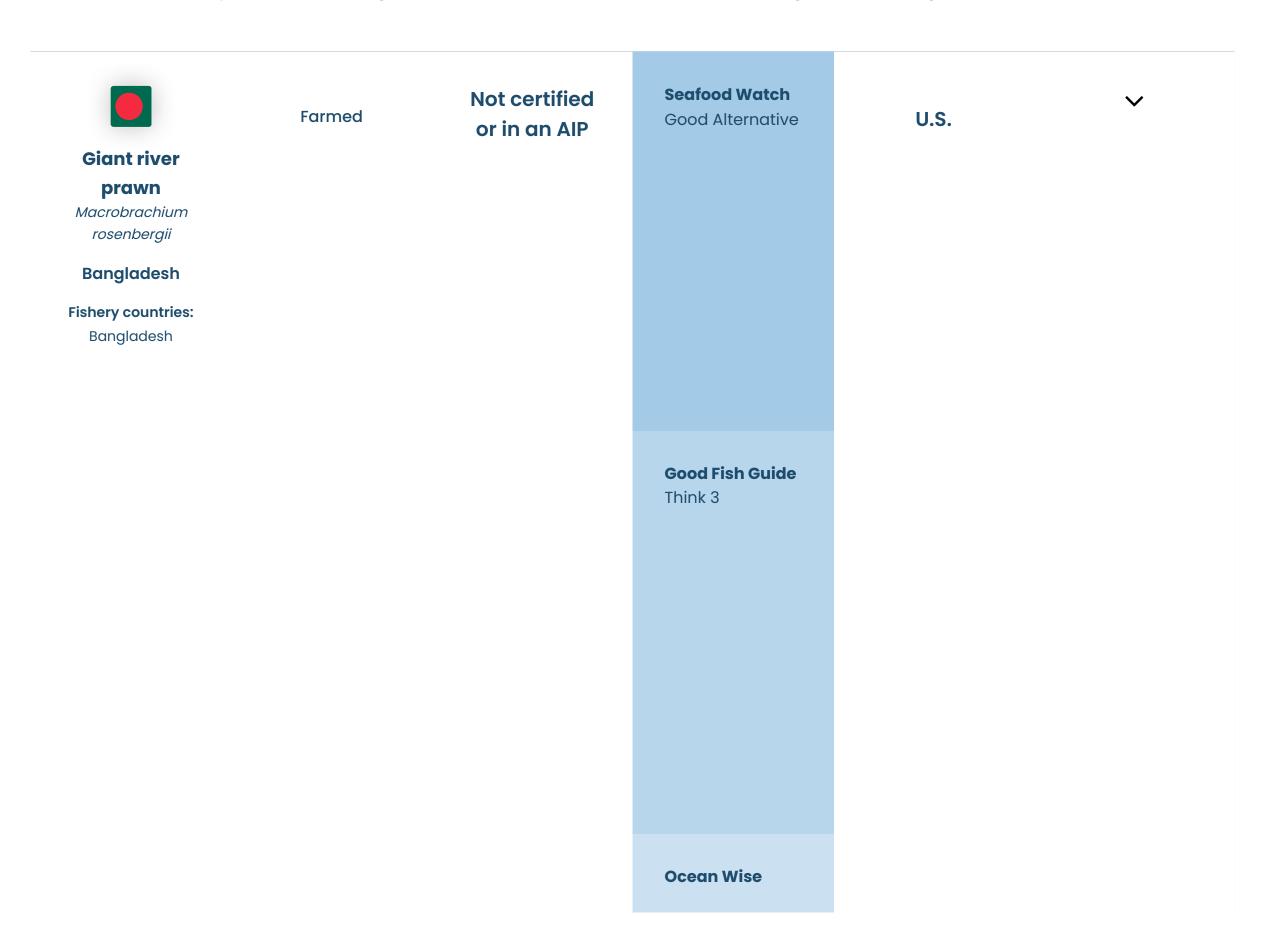
- This fishery may have indirect impacts on food availability to ETP species.
- Bycatch of herring is a risk for this fishery but there are mitigation measures in place.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

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

References

Good Fish Guide - Sprat, whitebait, Pelagic trawl, North East Atlantic (FAO 27), North Sea, Skagerrak and Kattegat, 4, 3a



Not
recommended

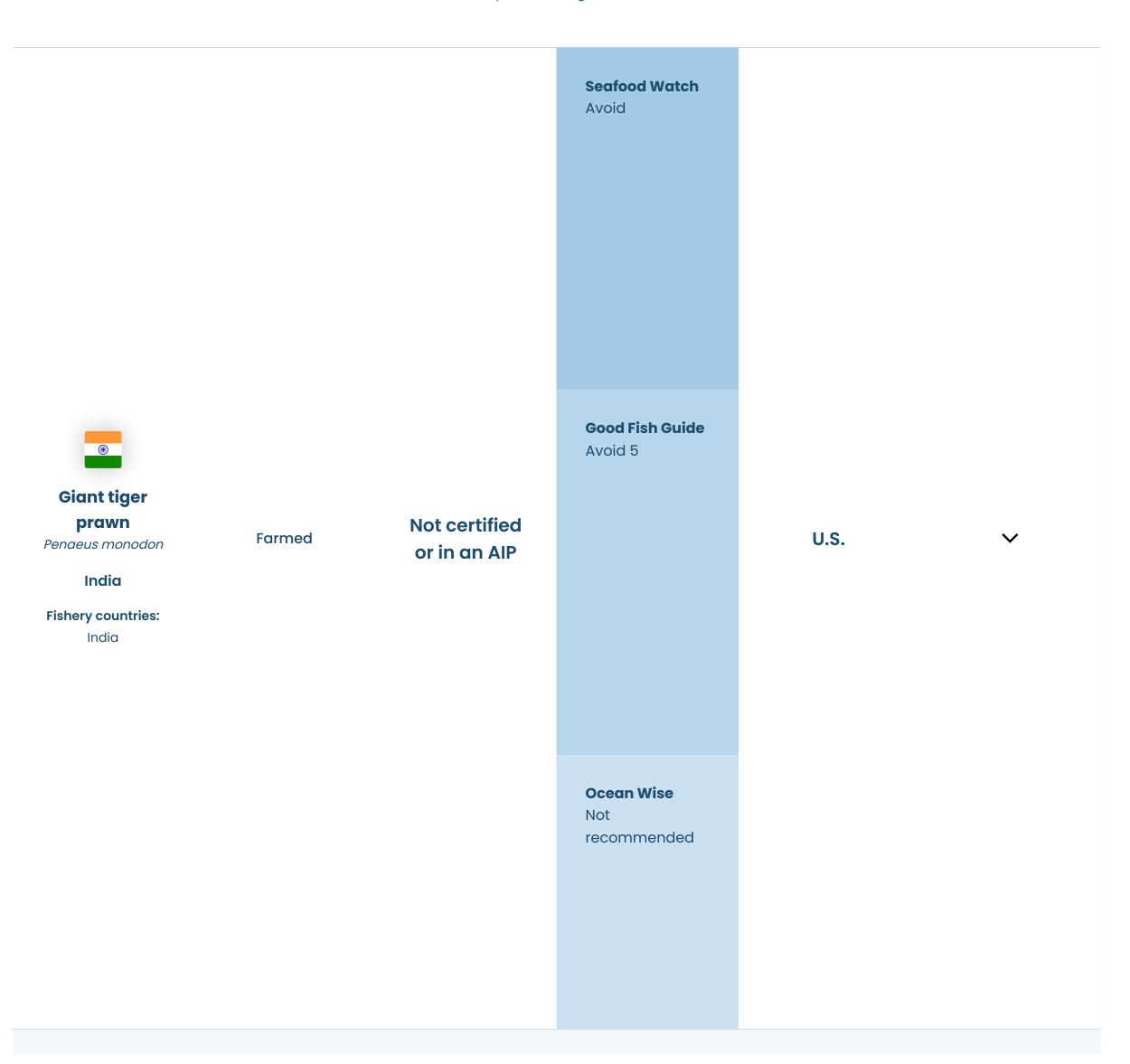
- Production of farmed giant river prawns requires little to no feed inputs of wild fish for feed.
- Production relies heavily on wild-caught juveniles, including in the hatchery production stage, which mainly uses wild-caught broodstock.
- Chemical inputs are low and there is little risk from effluent discharge.

General Notes

References

<u>Good Fish Guide - Prawn, Giant River, prawns (Farmed), Bangladesh</u>

<u>Seafood Watch Recommendation for farmed Giant freshwater prawn, Bangladesh</u>



- Fishmeal and fishoil from marine feed sources are used. The sustainability of feed inputs is unknown.
- Frequent water exchange increases the likelihood of escapes, but the risk from escapes is low as Giant tiger prawn are native to India.

 Disease transfer between farmed and wild prawns is a concern. Production is reliant on wild-caught broodstock.
- Pollution from nutrients and organic matter, as well as chemical inputs, may affect local water quality. There is a lack of data on the quantity of chemical inputs, but evidence suggests that illegal antibiotics are sometimes used on shrimp farms in India.

General Notes

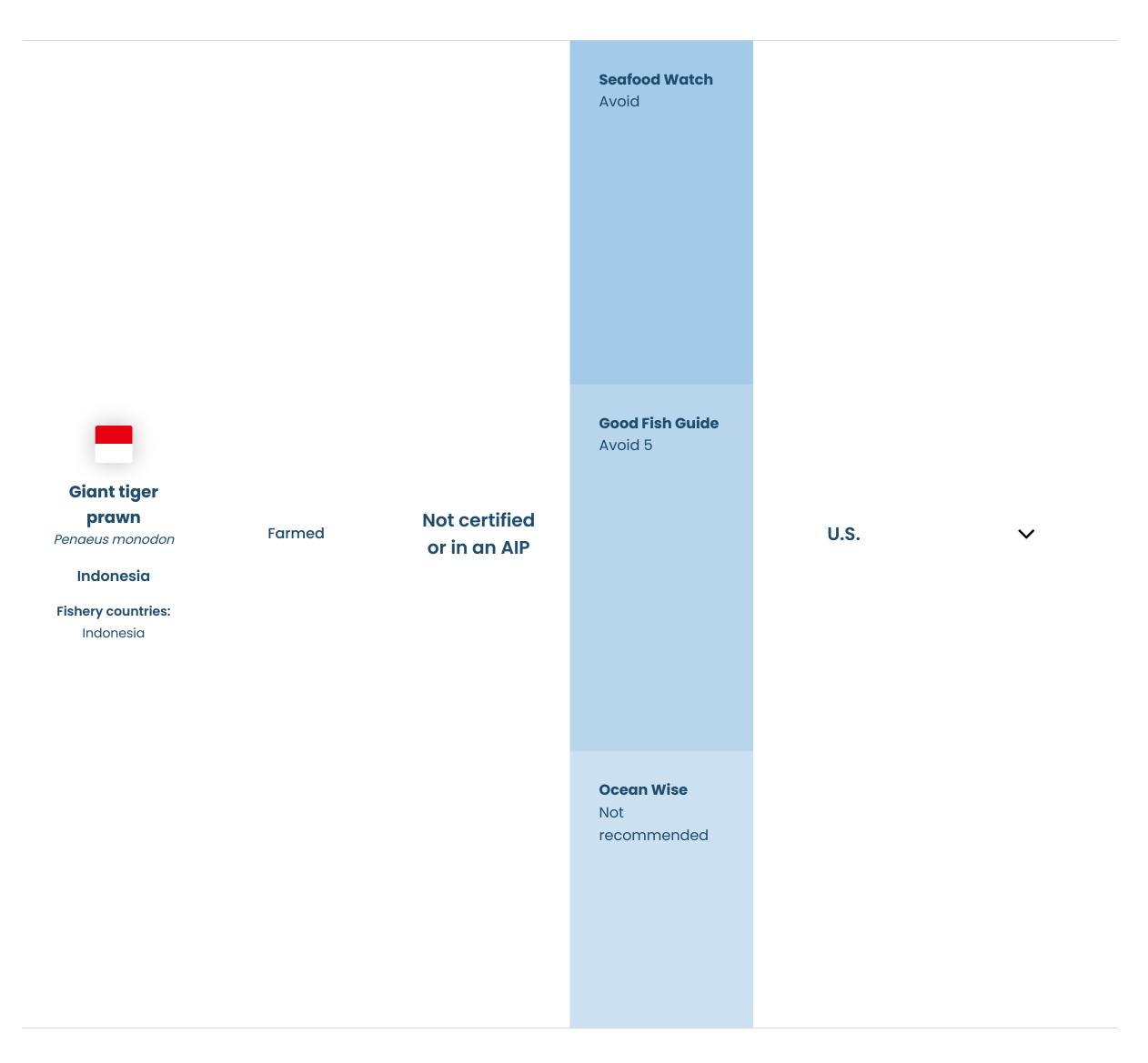
The Coastal Aquaculture Act 2005 regulates shrimp farm planning and production. The Act adopts a zonal approach to aquaculture.

References:

FishSource - shrimp, India

Good Fish Guide - Prawn, Tiger Prawn (Farmed), India, Vietnam and Indonesia, Semi-intensive and improved extensive

<u>Seafood Watch Recommendation for farmed Giant Tiger Prawn, India</u>



Environmental Notes

- Fishmeal and fishoil from marine feed sources are used. The sustainability of feed inputs is unknown.
- Disease transfer between farmed and wild prawns is a concern.

• Pollution from nutrients and organic matter, as well as chemical inputs, may affect local water quality.

General Notes

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>FishSource - shrimp, Indonesia</u>

Good Fish Guide - Prawn, Tiger Prawn (Farmed), India, Vietnam and Indonesia, Semi-intensive and improved extensive

<u>Seafood Watch Recommendation for farmed Giant Tiger Prawn, Indonesia</u>



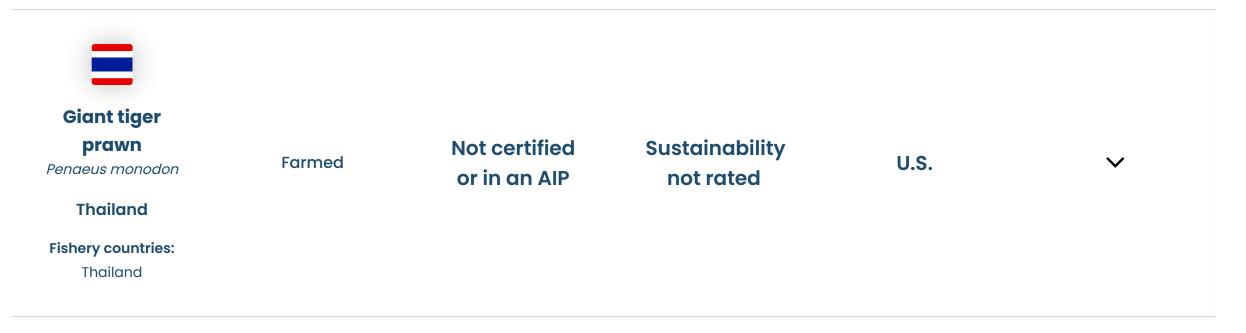
Environmental Notes

- No feed inputs are required in extensive production systems used in Myanmar.
- The likelihood of escapes is high due to frequent flooding, but the risk from escapes is low as Giant tiger prawns are native to the region. Disease transfer between farmed and wild prawns is a concern.
- No feed inputs and minimal chemical and fertilizer inputs are used so the risk of impacts on water quality are low.

General Notes

References:

<u>Seafood Watch Recommendation for farmed Giant Tiger Prawn, Myanmar</u>



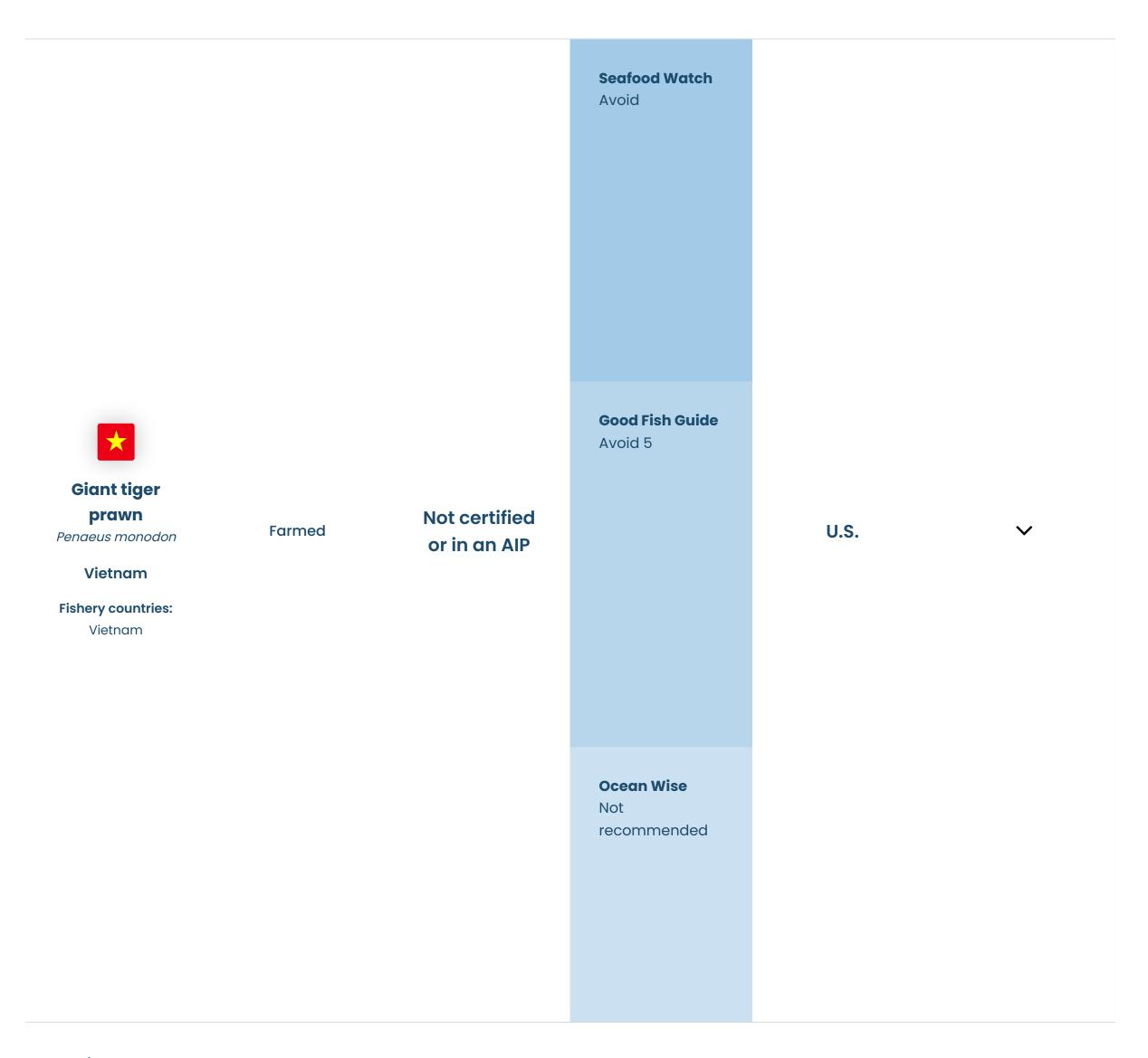
- Fishmeal and fishoil from marine feed sources are used. The sustainability of feed inputs is unknown...
- Escape and disease transfer between farmed and wild prawns is a high concern.
- Pollution from nutrients and organic matter, as well as chemical inputs, may affect local water quality.

General Notes

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

References

FishSource - shrimp, Thailand



Environmental Notes

- No feed inputs are required in extensive production systems used in Vietnam.
- Frequent water exchange increases the likelihood of escapes, but the risk from escapes is low as Giant tiger prawn are native to the region.

 Disease transfer between farmed and wild prawns is a concern.
- No feed inputs and minimal fertilizer inputs are used so effluent is not a concern. 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 aquaculture industry is currently managed under a farm-based approach.

References

Good Fish Guide - Prawn, Tiger Prawn (Farmed), India, Vietnam and Indonesia, Semi-intensive and improved extensive

Seafood Watch Recommendation for farmed Giant Tiger Prawn, Vietnam



Environmental Notes

• Profile not yet complete.

General Notes

• No additional notes.



Environmental Notes

• Profile not yet complete.

General Notes

• No additional notes.





- Gear specific information on interactions with ETP species is limited, but an MSC condition is in place to address this.
- MSC conditions are in place to assess the impact of the fishery on bycatch species.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

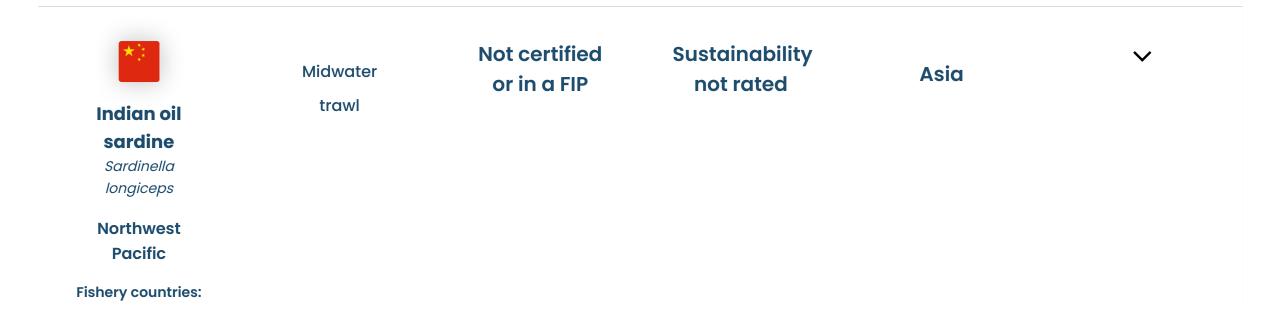
References

MSC: Norway North East Arctic haddock offshore (>12nm)

MSC: Norway North Sea demersal

Good Fish Guide - Haddock, Longline, North East Atlantic (FAO 27), Northeast Arctic, Marine Stewardship Council (MSC)

<u>Seafood Watch Recommendations for Haddock, Northeast Atlantic Ocean, Norway</u>



• Profile not yet complete.

General Notes

• No additional notes.



Sardinella longiceps

Western Indian Ocean

Fishery countries: Oman, Pakistan

Midwater trawl Not certified or in a FIP

Sustainability not rated

Asia

~

• Profile not yet complete.

Environmental Notes

General Notes

• No additional notes.



Indian squid

Loligo duvauceli

Western Indian
Ocean

Fishery countries: India

Hook and line Not certified or in a FIP

Sustainability not rated

Asia

V

Environmental Notes

- The impact of the squid fishery on ETP species is unknown.
- There is a lack of information about impacts on bycatch species.
- This fishery is unlikely to have a significant impact on 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.



Ocean, Western

Midwater trawl Not certified or in a FIP

Sustainability not rated

Asia

Central Pacific
Ocean
Fishery countries:

Environmental Notes

- The impact of the squid fishery on ETP species is unknown.
- There is a lack of information about impacts on bycatch species.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

Thailand

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



Environmental Notes

- There is a lack of information on interactions with ETP species in this fishery.
- This fishery targets multiple species.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

• No additional notes



- There is a risk to marine mammals of entanglement in the fishing gear.
- There is a lack of information about bycatch in this fishery, but it is likely to be low.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Seafood Watch Recommendations for Jonah crab, Northwest Atlantic Ocean, U.S., Pots



Environmental Notes

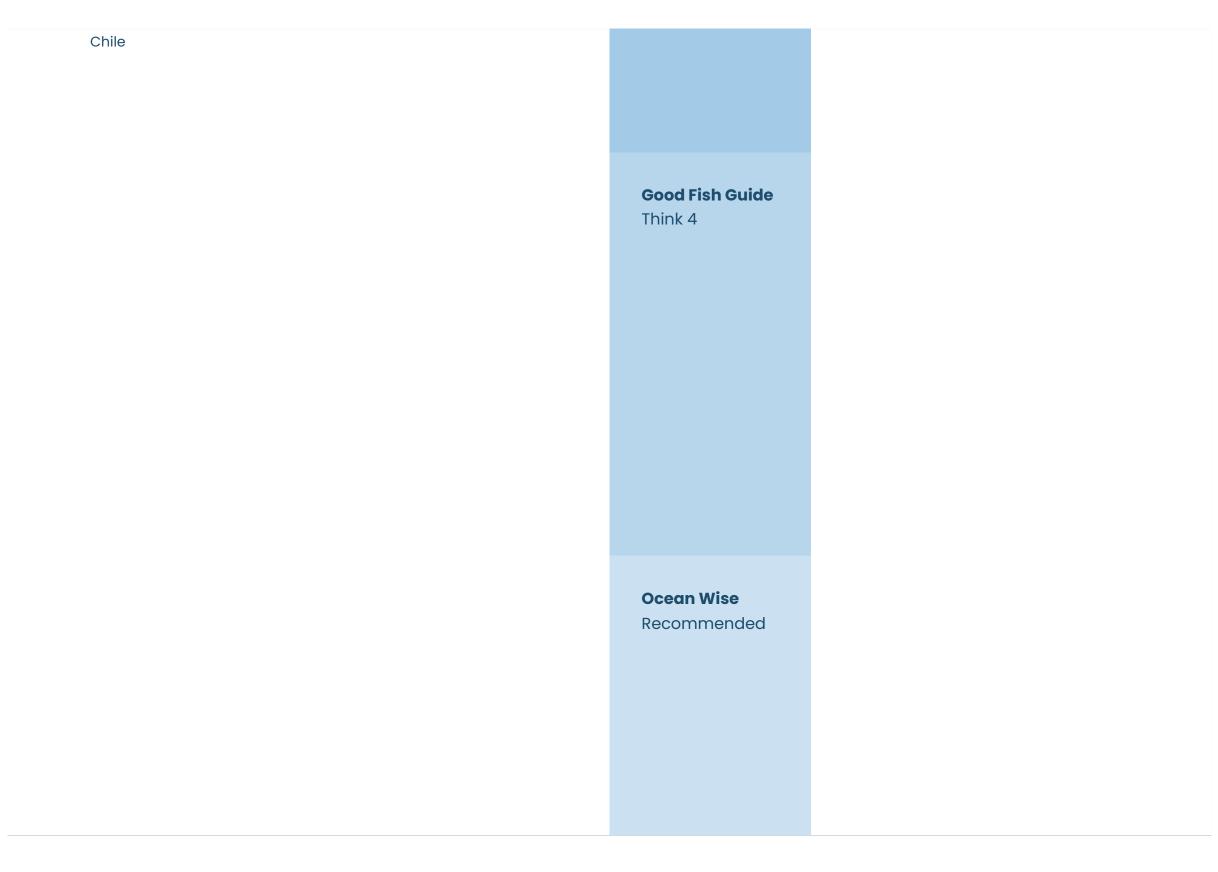
- There is a risk to marine mammals of entanglement in the fishing gear.
- There is a lack of information about bycatch in this fishery, but it is likely to be low.
- Although pots and traps are unlikely to have a significant impact on the sea bed, there may be a cumulative impact from the large number of traps set in the fishery.

General Notes

References

<u>Seafood Watch Recommendations for Jonah crab, Northwest Atlantic Ocean, Canada, Pots</u>





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

General Notes

References

Seafood Watch Recommendation for Jumbo flying squid, Southeast Pacific Ocean, Chile, Jig



Ocean Wise Recommended

Environmental Notes

- This fishery is unlikely to impact ETP 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>Seafood Watch Recommendation for Jumbo flying squid, Southeast Pacific Ocean, Peru, Jig</u>



Environmental Notes

• Profile not yet complete.

General Notes

• No additional notes.



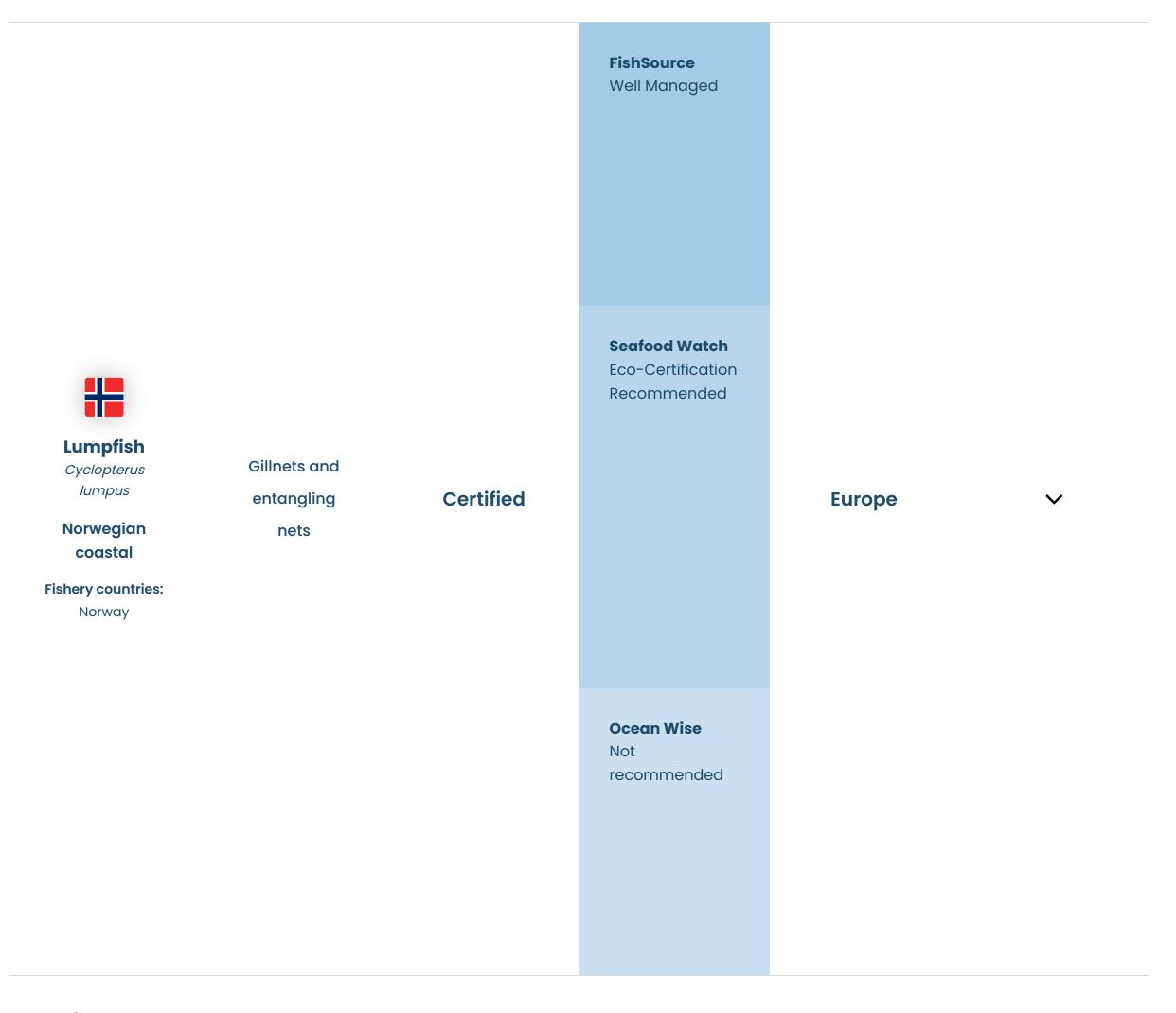
- This fishery is unlikely to impact ETP species.
- Other species caught in the fishery include wolffishes and Atlantic halibut. All fish must be landed, except Atlantic halibut, which must be discarded alive where possible.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

MSC: <u>Greenland lumpfish</u>

DNV GL, February 2021, MSC Public Certification Report for the Reassessment of the Greenland lumpfish fishery



Environmental Notes

- This fishery is unlikely to impact ETP species.
- Bycatch in this fishery is considered low.

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

General Notes

References

MSC: NFA Norway ling & tusk and NFA Norway lumpfish

DNV GL, February 2021, MSC Public Certification Report for NFA Norwegian Ling & Tusk fishery and NFA Norwegian Lumpfish fishery



Environmental Notes

- There are risks to sea turtles, sharks and seabirds with this fishery.
- The fishery also catches swordfish, tuna, and sharks.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

• This fishery is part of the Costa Rica large pelagics - longline and green stick FIP.

References

<u>Seafood Watch Recommendation for Dolphinfish, Eastern Central Pacific Ocean, Costa Rica, Drifting Longlines.</u>



Not
recommended

Environmental Notes

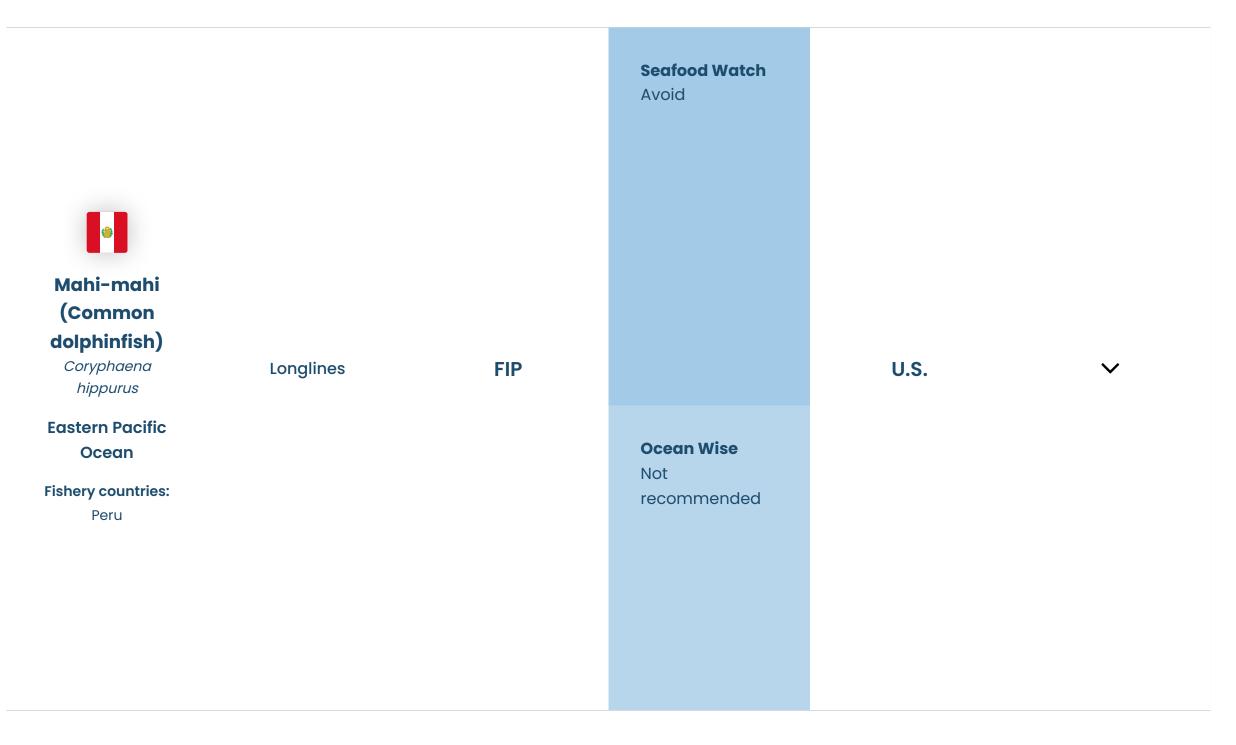
- There are risks to sea turtles, sharks and seabirds with this fishery.
- The fishery also catches swordfish, tuna, and sharks.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

• This fishery was part of the now completed <u>Ecuador mahi-mahi - longline FIP</u>.

References

Seafood Watch Recommendation for Dolphinfish, Southeast Pacific Ocean, Ecuador, Drifting Longlines.



Environmental Notes

- There are risks to sea 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

This fishery is part of the Peru mahi-mahi - longline (WWF) FIP.

References

Seafood Watch Recommendation for Dolphinfish, Southeast Pacific Ocean, Peru, Drifting Longlines.

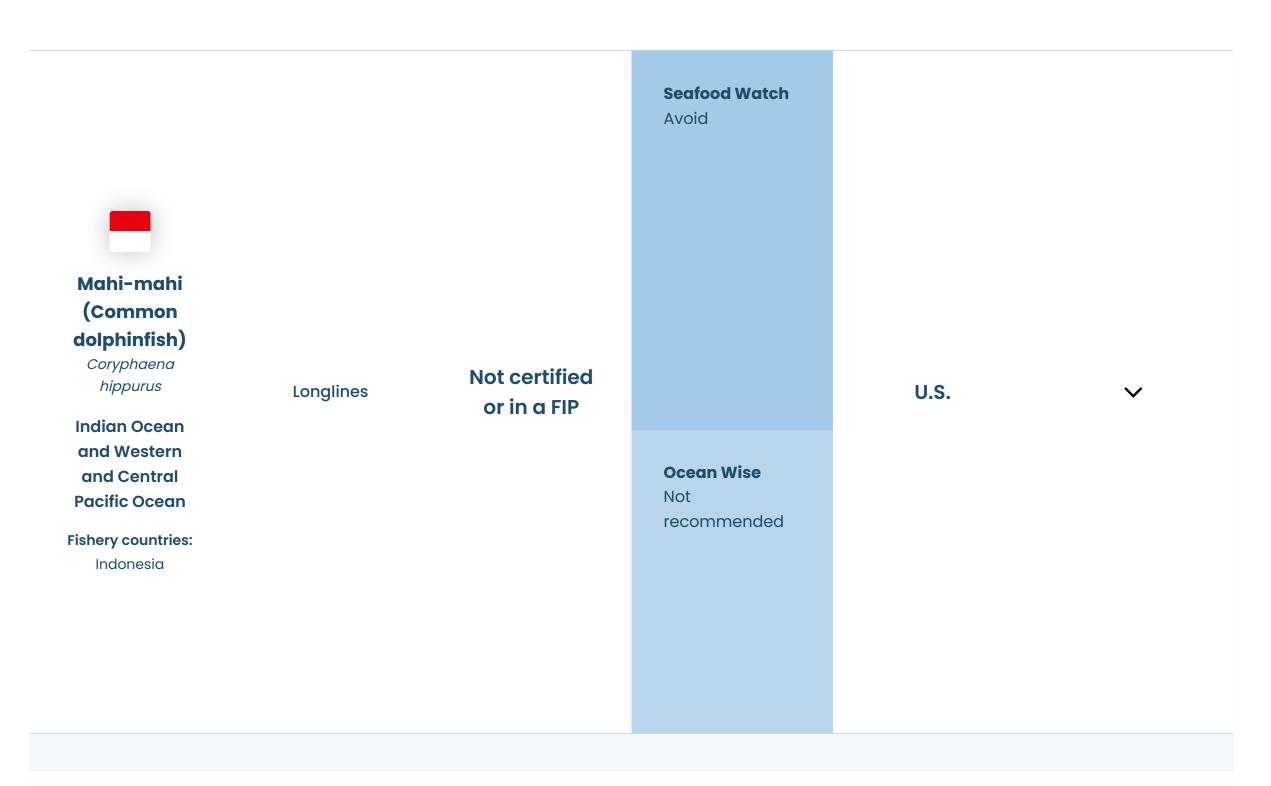


- There are risks to sea turtles, sharks and seabirds with this fishery.
- Bycatch is a significant risk for this fishery.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

<u>Seafood Watch Recommendation for Dolphinfish, Eastern Central Pacific Ocean, Southeast Pacific Ocean, Drifting Longlines.</u>



- There are risks to sea 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>Seafood Watch Recommendation for Dolphinfish, Eastern Indian Ocean, Indonesia, Drifting Longlines</u>

<u>Seafood Watch Recommendation for Dolphinfish, Western Central Pacific Ocean, Indonesia, Drifting Longlines</u>



Environmental Notes

- There are risks to sea 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

No additional notes.



- No feed inputs are used to support farmed mussels.
- As a native species found across New Zealand, the transportation of mussels away from farm sites is not likely to be a 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

<u>Seafood Watch Recommendation for farmed mussels, worldwide</u>

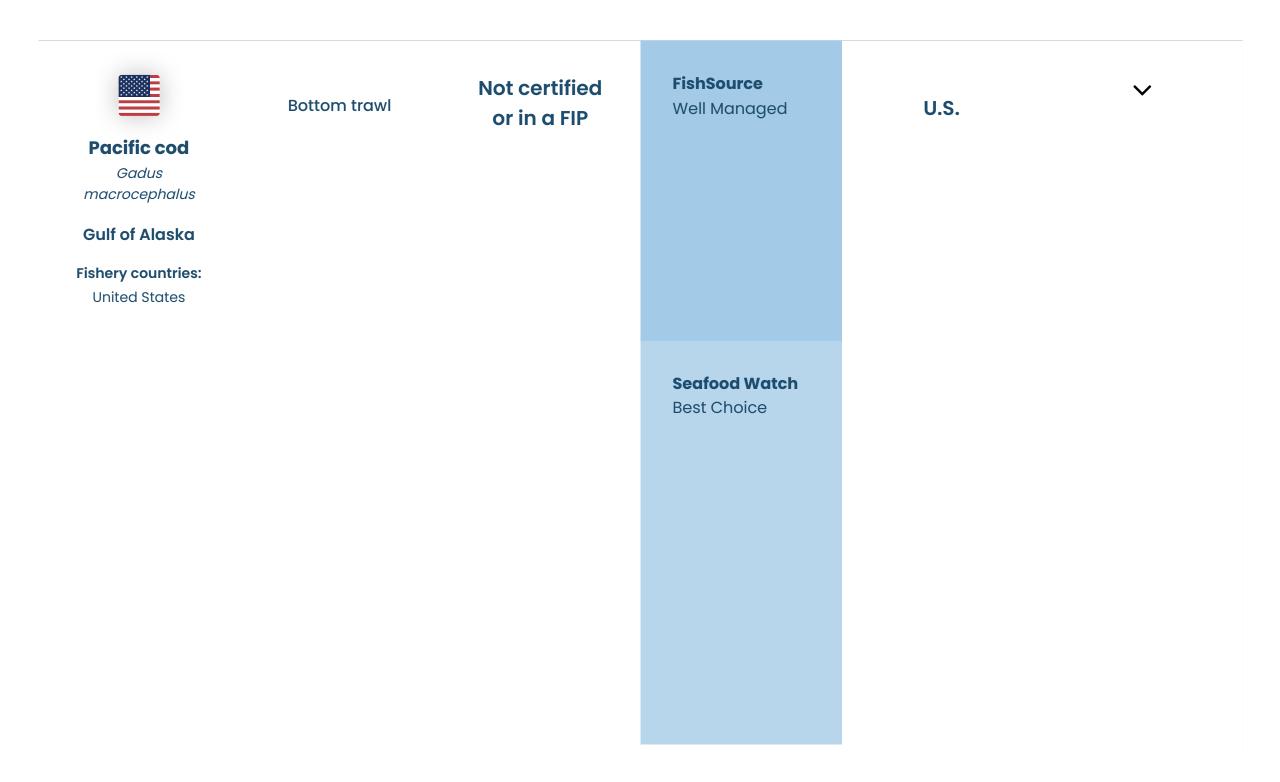


Environmental Notes

Profile not yet complete

General Notes

No additional notes.



Good Fish Guide Think 4 **Ocean Wise** Recommended **NOAA FSSI** 3

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.

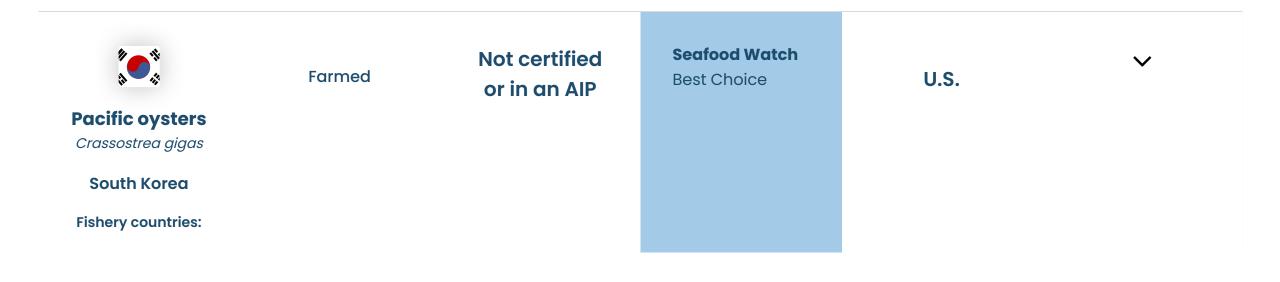
General Notes

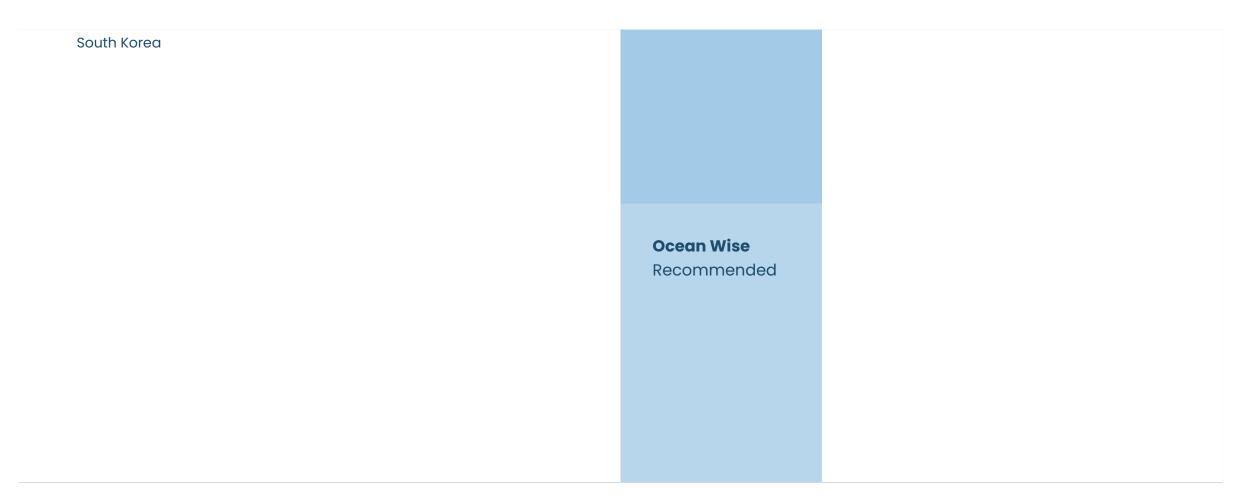
• Concerns about low stock led to the closure of the Alaskan Pacific cod fishery for 2020 (after the reporting period).

References

Good Fish Guide - Cod, Pacific Cod, Demersal otter trawl, North East Pacific (FAO 67), Gulf of Alaska, Marine Stewardship Council (MSC) - Suspended

<u>Seafood Watch Recommendation for Pacific cod, Gulf of Alaska, Bottom trawls</u>



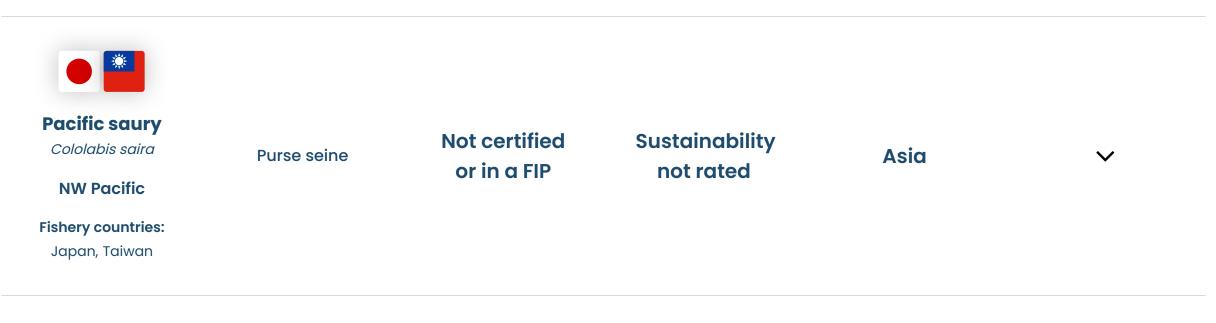


- No feed inputs are used to support farmed oysters.
- As a native species, the risk to wild populations is low.
- There is no concern regarding pollution from nutrients or organic matter. Typically, no feed or chemical inputs are used to support farmed oysters.

General Notes

References:

<u>Seafood Watch Recommendations for Oysters, Crassostrea spp., Ostrea spp., Saccostrea spp., Worldwide, Bottom culture</u>
<u>Seafood Watch Recommendations for Oysters, Crassostrea spp., Ostrea spp., Saccostrea spp., Worldwide, Off-Bottom culture</u>



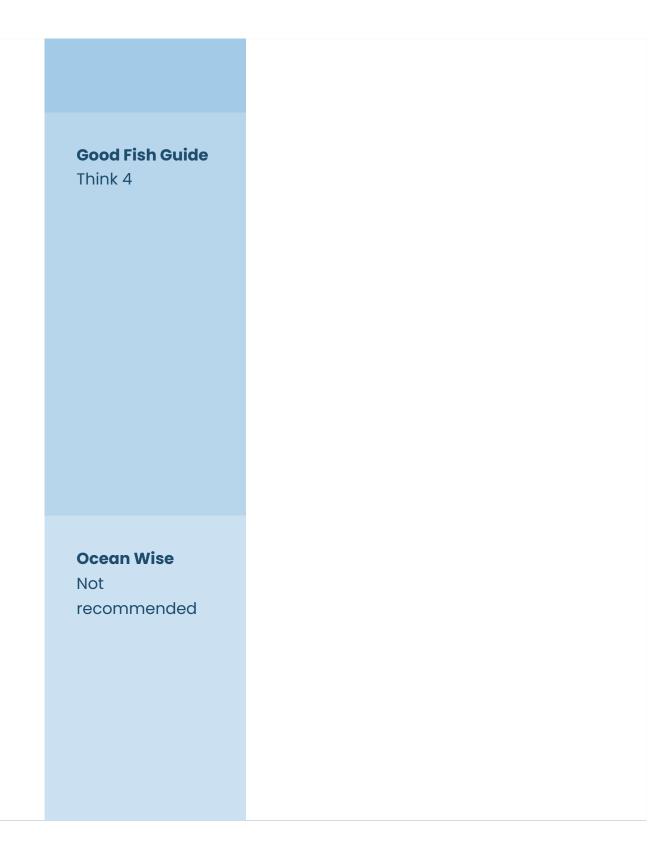
Environmental Notes

• Profile not yet complete.

General Notes

No additional 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.
- Pangasius 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.

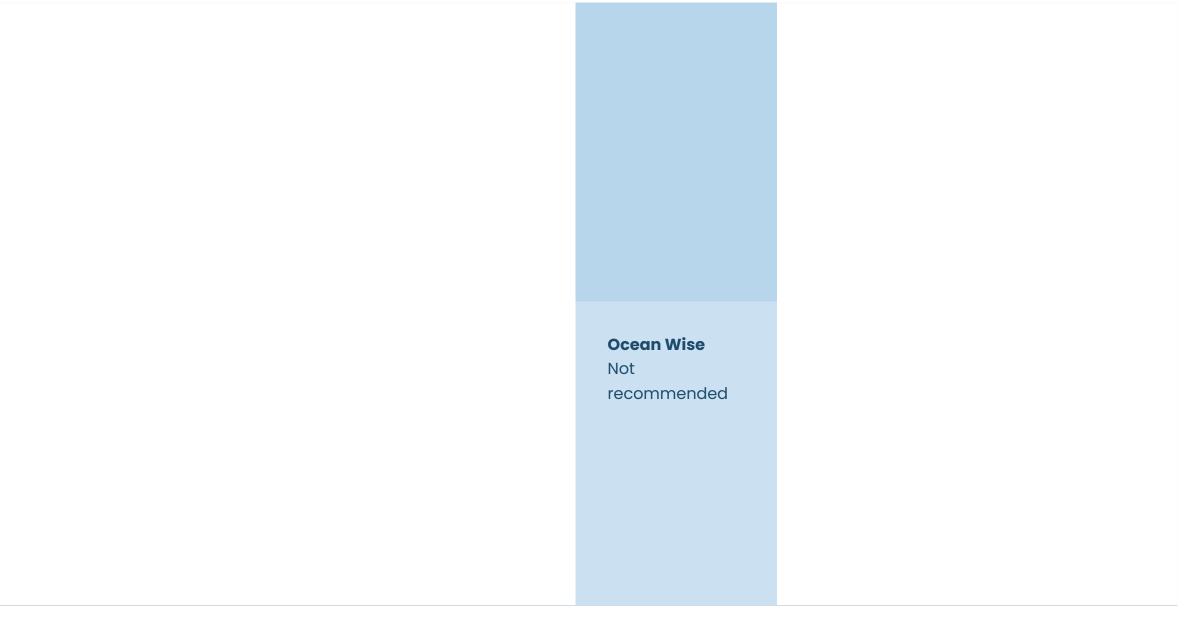
References:

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

Good Fish Guide - Basa, Tra, Catfish or Vietnamese River Cobbler (Farmed), Vietnam

Seafood Watch Recommendation for Sutchi Catfish (Pangasius), Vietnam





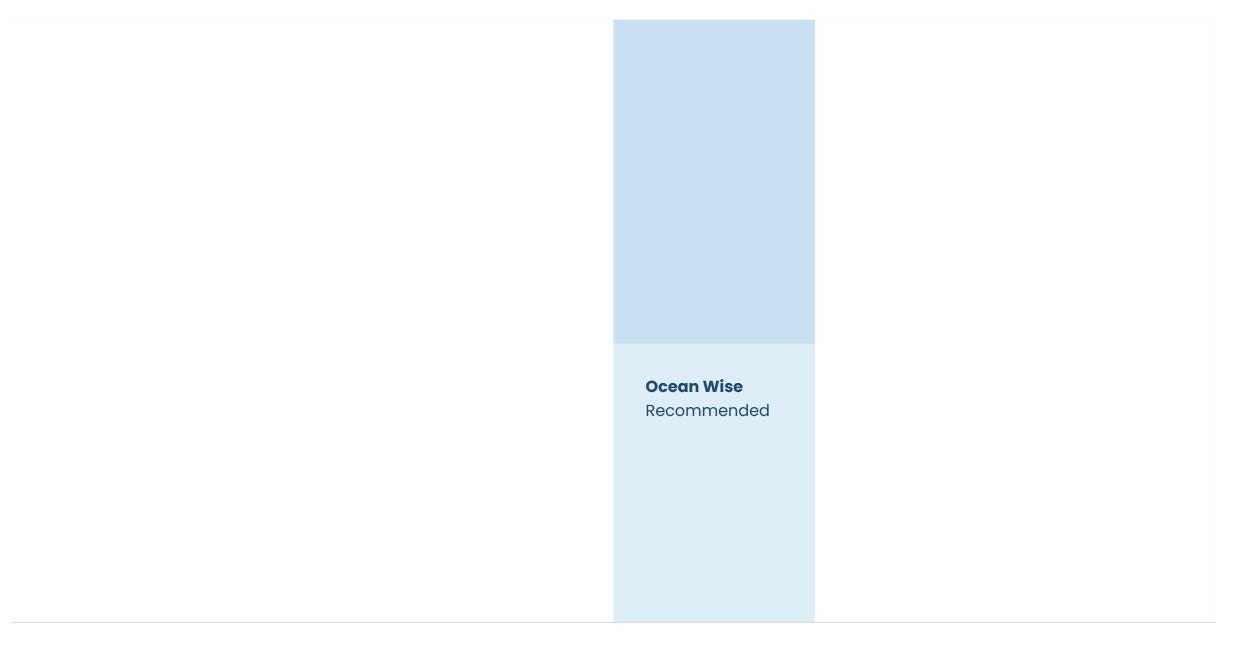
- There are risks to seabirds and marine mammals with this fishery, but there are mitigation measures in place.
- Bycatch for this fishery is a risk, but there is insufficient data available to assess significance.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

<u>Seafood Watch Recommendation for Patagonian toothfish, Southeast Pacific Ocean, Longline (deepset)</u>





- 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

MRAG Americas, April 2019, MSC 3rd Reassessment Report for Alaska Salmon Fishery.



• Profile not yet complete.

General Notes

References

MSC: Narody Severa Bolsheretsk salmon

MSC: Olyutorskiy Bay salmon

MSC: <u>Tymlat Karaginsky Bay salmon fishery</u>

Seafood Watch Recommendations for Pink salmon, Russia, Certified



Environmental Notes

• Profile not yet complete.

General Notes

References

MSC: Kolkhoz im. Bekereva-Ukinskij Liman & Belorechensk-Vyvenskoe Karaginsky Bay salmon fisheries

MSC: Ozernovsky RKZ No 55 West Kamchatka salmon fishery

MSC: <u>Vostochny Bereg-Maksimovsky, Koryakmoreprodukt-Nachikinskoe & Severo-Vostochnaya Company Karaginsky Bay salmon fisheries</u>

MSC: <u>Zarya-Kolpakovsky Sobolevo Salmon Fisheries</u>



Environmental Notes

• Profile not yet complete.

General Notes

• No additional notes.



Russia Fishery countries: Russia

Environmental Notes

• Profile not yet complete.

General Notes

• No additional notes.



Environmental Notes

- This fishery is unlikely to impact ETP species.
- Bycatch is not a risk for this fishery.
- This fishery is conducted by divers. Direct impacts on the sea bed are unlikely boat anchors may have indirect impacts.

General Notes

References

<u>Seafood Watch Recommendation, Queen conch, Honduras, Diving</u>



Ocean Wise
Not
recommended

Environmental Notes

- This fishery is unlikely to impact ETP species.
- Spiny lobster is caught with queen conch in Nicaragua.
- This fishery is conducted by divers. Direct impacts on the sea bed are unlikely boat anchors may have indirect impacts.

General Notes

References

<u>Seafood Watch Recommendation, Queen conch, Nicaragua, Diving</u>



Environmental Notes

• Profile not yet complete.

General Notes

• No additional notes.



Ocean Wise Not recommended

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, Recommended Eco-Certifications for Rainbow trout, Aquaculture Stewardship Council (ASC) Certified

Seafood Watch report for farmed Rainbow trout, Chile



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

<u>Seafood Watch report for farmed Rainbow trout, Chile</u>

Seafood Watch Eco-Certification Recommended Rainbow Trout, Steelhead Certified Asia **Trout** Farmed Oncorhynchus mykiss **Norway Ocean Wise** Not **Fishery countries:** recommended Norway

Environmental Notes

- Trout have a high requirement for fish in their diet.
- Rainbow trout are not native to Norway. There are concerns about the impact of farmed salmonid escapes and disease outbreaks on wild fish populations. On average, 44,000 rainbow trout were registered escaped from Norwegian fish farms per year from 2010 to 2018. The most common cause of escapes are holes in the net. Fish farmers in Norway are legally obliged to report escapes.
- Impacts on water quality depend on the farming method used. 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

<u>FishSource - salmon, Norway</u>

Føre, H.M. and Thorvaldsen, T., 2021, Causal analysis of escape of Atlantic salmon and rainbow trout from Norwegian fish farms during 2010–2018 - Aquaculture, Vol. 532, https://doi.org/10.1016/j.aquaculture.2020.736002

<u>Seafood Watch, Recommended Eco-Certifications for Rainbow trout, Aquaculture Stewardship Council (ASC) Certified</u>



- Trout have a high requirement for fish in their diet.
- Rainbow trout are not native to Norway. There are concerns about the impact of farmed salmonid escapes and disease outbreaks on wild fish populations. On average, 44,000 rainbow trout were registered escaped from Norwegian fish farms per year from 2010 to 2018. The most common cause of escapes are holes in the net. Fish farmers in Norway are legally obliged to report escapes.
- Impacts on water quality depend on the farming method used. 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

<u>FishSource - salmon, Norway</u>

Føre, H.M. and Thorvaldsen, T., 2021, Causal analysis of escape of Atlantic salmon and rainbow trout from Norwegian fish farms during 2010–2018 - Aquaculture, Vol. 532, https://doi.org/10.1016/j.aquaculture.2020.736002



Environmental Notes

• Profile not yet complete

General Notes

No additional notes.



Environmental Notes

• Profile not yet complete.

General Notes

• The red swamp crawfish was introduced to Egypt in the 1980s and is considered an invasive species.



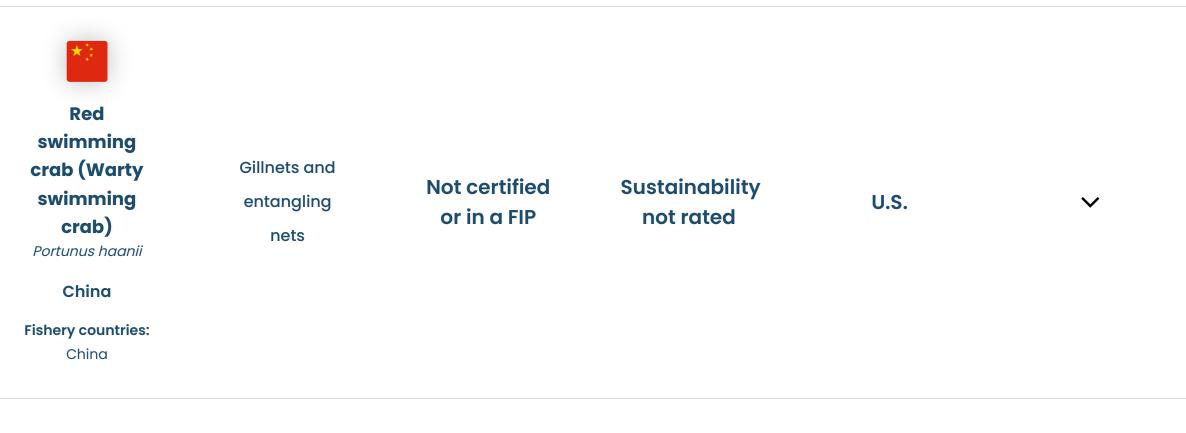
- There is a lack of information on interactions with ETP species in this fishery.
- Bycatch is likely to be low for the pot fishery.
- Pots are unlikely to have a significant impact on the sea bed.

General Notes

• This fishery is part of the China Fujian Zhangzhou red swimming crab - bottom trawl & pot/trap FIP.

References

<u>Seafood Watch Recommendation, Warty swimming crab, China, Northwest Pacific Ocean, Pots</u>

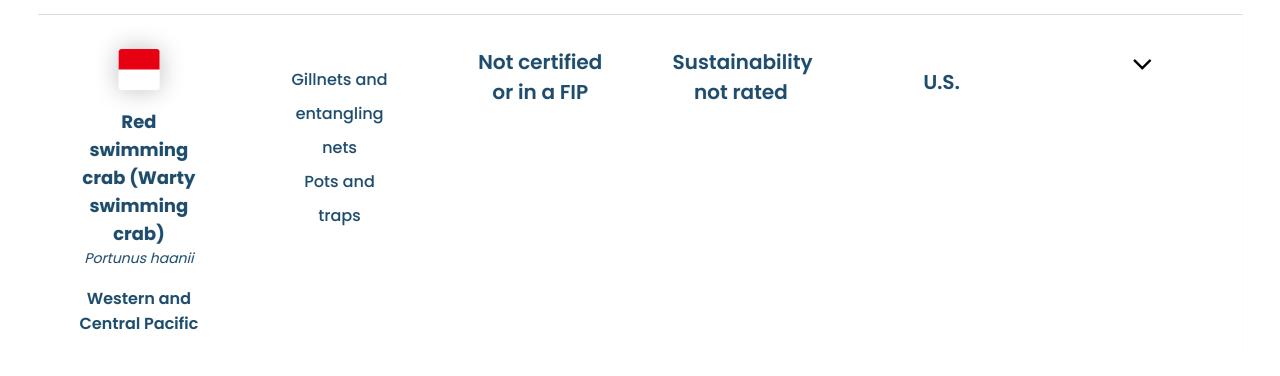


Environmental Notes

• Profile not yet complete.

General Notes

No additional notes.



Ocean

Fishery countries:

Indonesia

Environmental Notes

• Profile not yet complete.

General Notes

• No additional notes.



Red
swimming
crab (Warty
swimming
crab)

Portunus haanii

Vietnam

Fishery countries: Vietnam

Pots and traps

Not certified or in a FIP

Sustainability not rated

Asia, U.S.

~

Environmental Notes

• Profile not yet complete.

General Notes

No additional notes.



Associated purse seine

FIP

FishSourceManaged

Asia, Europe

Seafood Watch
Avoid

Good Fish Guide

Ocean Wise
Not
recommended

Environmental Notes

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

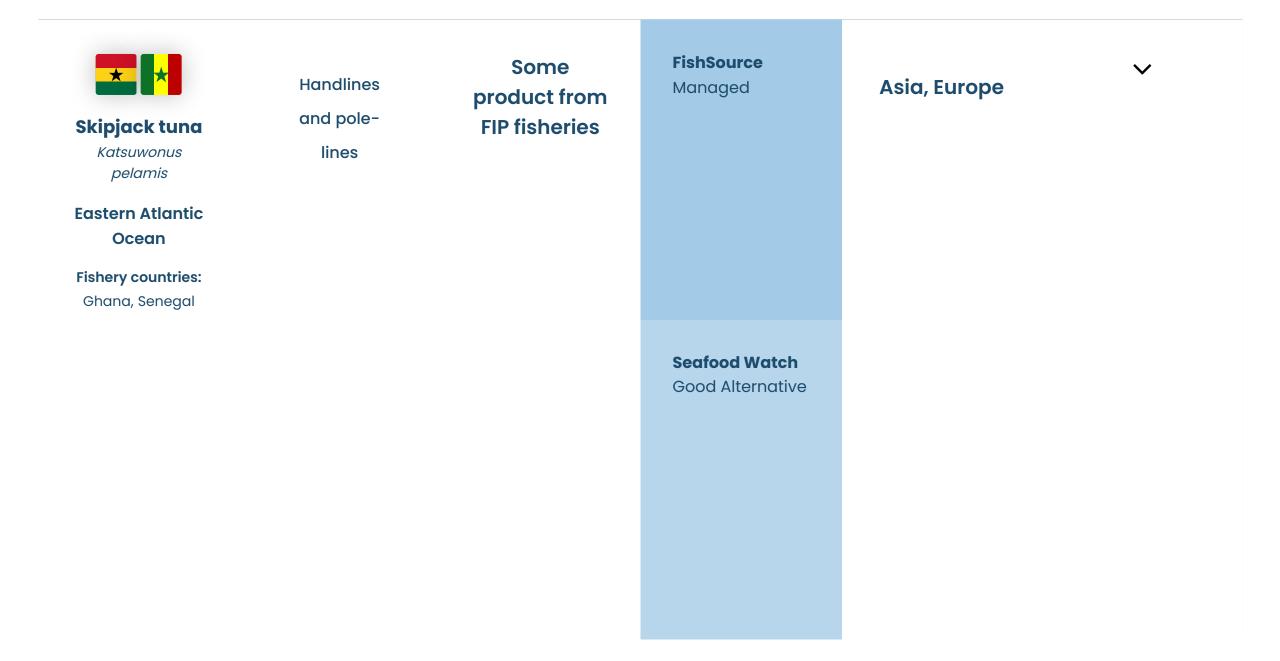
General Notes

- This fishery is part of the <u>Eastern Atlantic tuna purse seine FIP</u>.
- 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

Good Fish Guide - Tuna, skipjack, Purse seine (FAD & Free School), East Atlantic

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



Good Fish Guide
Think 3

Ocean Wise
Not
recommended

Environmental Notes

- This fishery is unlikely to impact ETP species; incidental capture by pole-and-line gear is uncommon.
- Bycatch for this fishery is considered low, but there are concerns about unknown impacts on bait fish used in the fishery.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

• This fishery is part of the <u>Eastern Atlantic Ocean tuna - pole & line FIP</u> and the <u>Ghana tuna - pole & line FIP</u>.

References

Good Fish Guide - Tuna, skipjack, Pole & line; Troll, East Atlantic

<u>Seafood Watch Recommendation for Skipjack tuna, Eastern Atlantic, Handlines and hand-operated pole-and-lines</u>





- This fishery is unlikely to impact RTP species; incidental capture by pole-and-line gear is uncommon.
- Bycatch for this fishery is considered low, but there are concerns about unknown impacts on bait fish used in the fishery.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

<u>Good Fish Guide - Tuna, skipjack, Pole & line; Troll, East Atlantic</u>

<u>Seafood Watch Recommendation for Skipjack tuna, Eastern Atlantic, Handlines and hand-operated pole-and-lines</u>



Good Fish Guide
Think 4

Ocean Wise
Not
recommended

Environmental Notes

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

General Notes

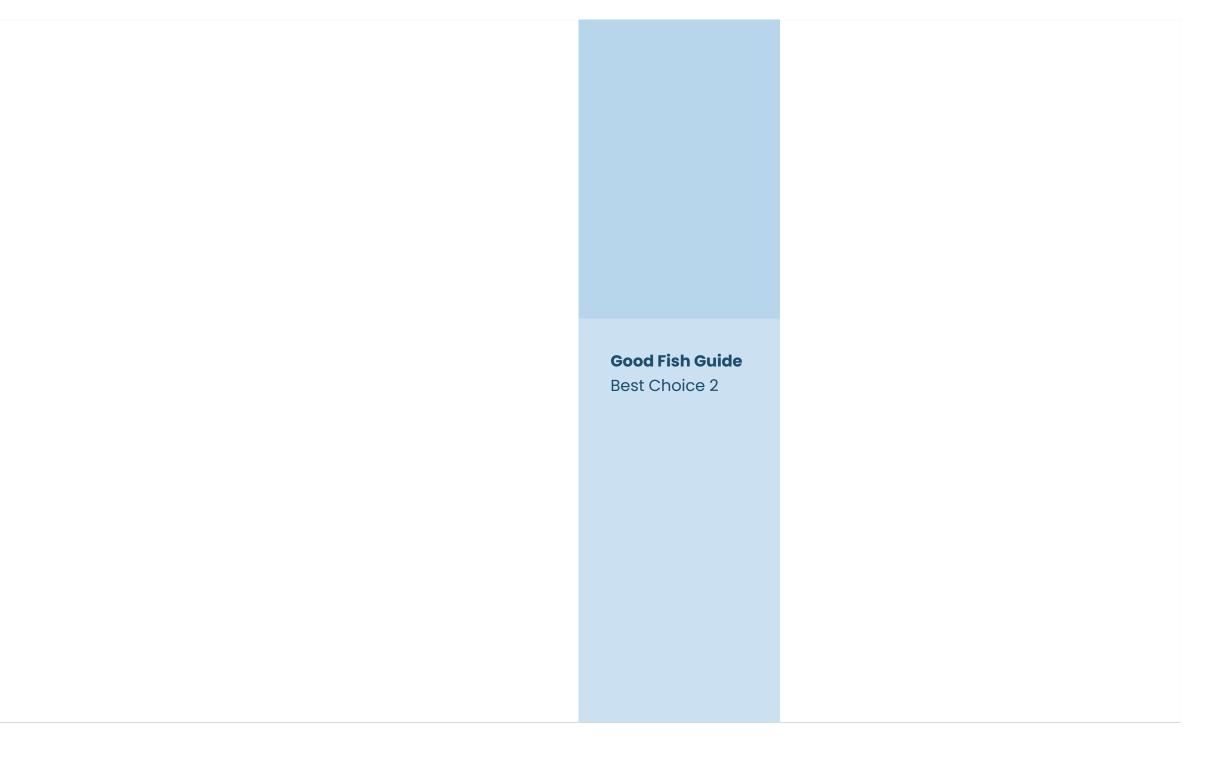
• All purse seine fishing vessels are listed on the International Seafood Sustainability Foundation (ISSF)'s <u>ProActive Vessel Register (PVR)</u> and are audited against ISSF conservation measures.

References

<u>Good Fish Guide - Tuna, skipjack, Purse seine (FAD & Free School), East Atlantic</u>

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





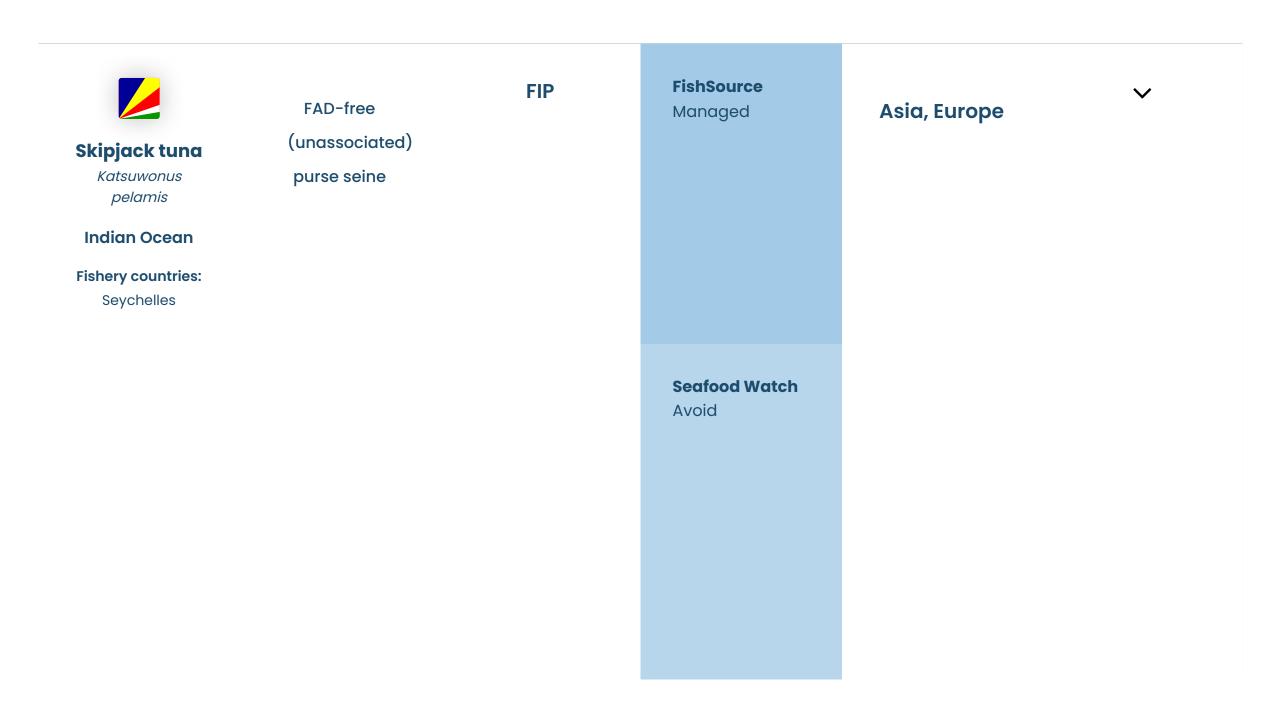
- This fishery is unlikely to impact ETP species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

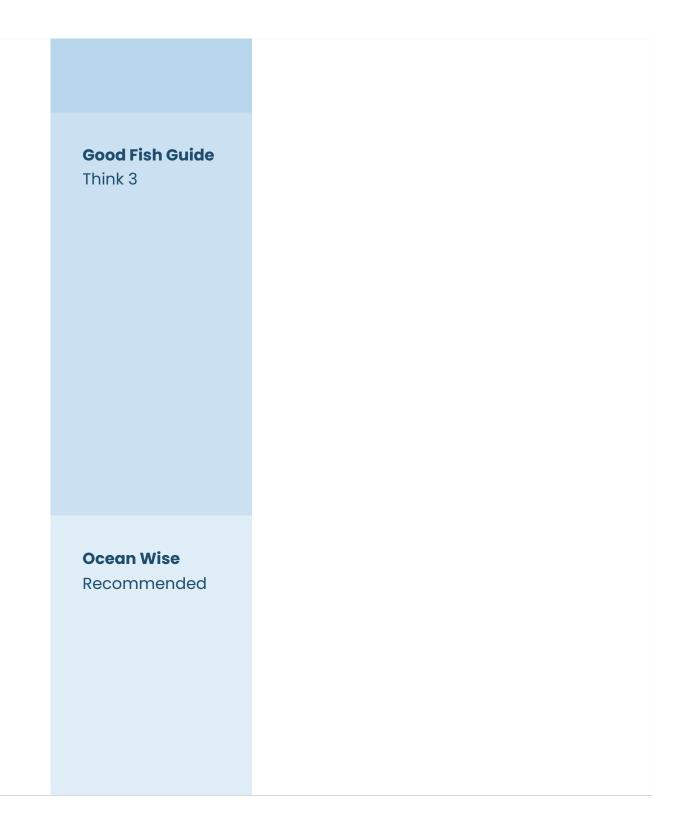
General Notes

References

MSC: Maldives pole & line skipjack tuna

<u>Seafood Watch Recommendation for Skipjack tuna, Western Indian Ocean, Marine Stewardship Council Certified Maldives pole & line skipjack tuna Fishery</u>





- There are risks to sea turtles, sharks, and marine mammals with this fishery.
- Bycatch varies by gear type. Unassociated purse seine fisheries typically have less bycatch. Bycatch for this fishery includes other tuna, fin fishes, sharks and rays.
- This fishery is unlikely to have a significant impact on the sea bed.

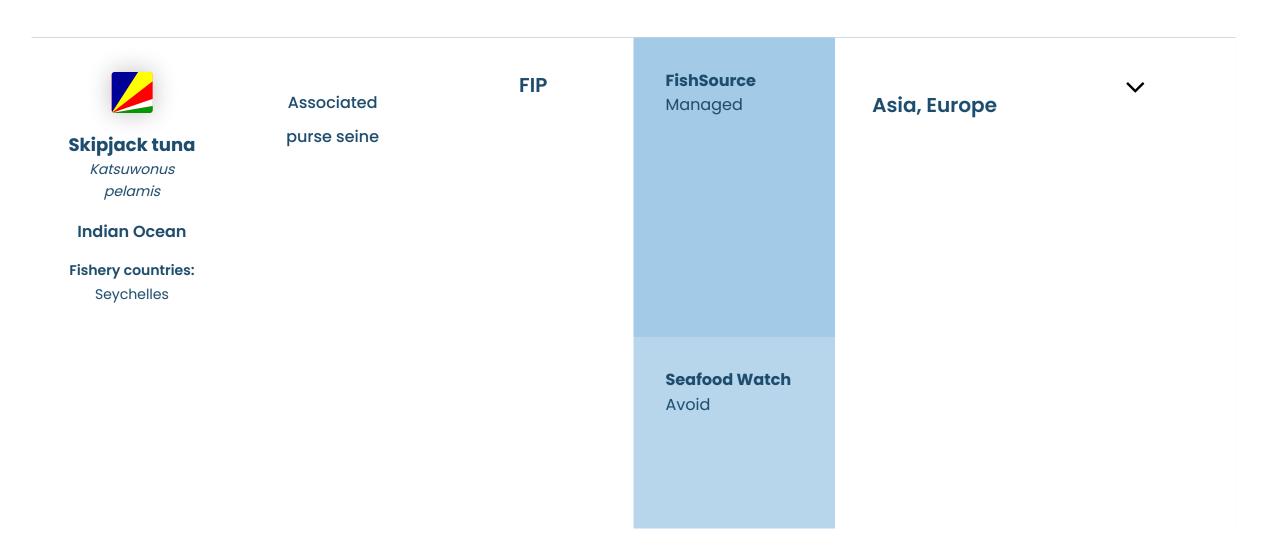
General Notes

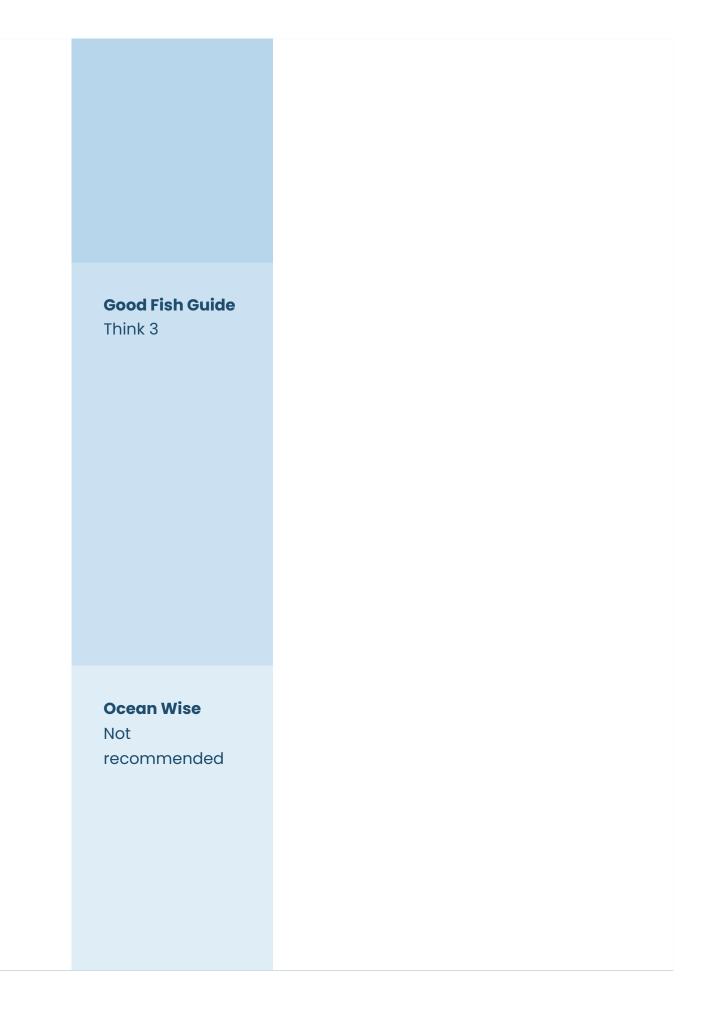
- This fishery is part of the Indian Ocean tuna purse seine (SIOTI) FIP.
- All purse seine fishing vessels are listed on the International Seafood Sustainability Foundation (ISSF)'s <u>ProActive Vessel Register (PVR)</u> and are audited against ISSF conservation measures.

References

Good Fish Guide - Tuna, skipjack, Purse seine (FAD & Free School), Indian Ocean: Western (FAO 51), Eastern (FAO 57)

Seafood Watch Recommendation for Skipjack tuna, Indian Ocean, Unassociated purse seine (non-FAD)





- 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. Bycatch for this fishery includes other tuna, fin fishes, sharks and rays.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

- This fishery is part of the <u>Indian Ocean tuna purse seine (SIOTI) FIP</u>.
- 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

Good Fish Guide - Tuna, skipjack, Purse seine (FAD & Free School), Indian Ocean: Western (FAO 51), Eastern (FAO 57)

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



Seafood Watch
Eco-Certification
Recommended

Environmental 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. Unassociated purse seine fisheries typically have less bycatch. Bycatch for this fishery includes other tuna, fin fishes, sharks and rays.
- This fishery is unlikely to have a significant impact on the sea bed.

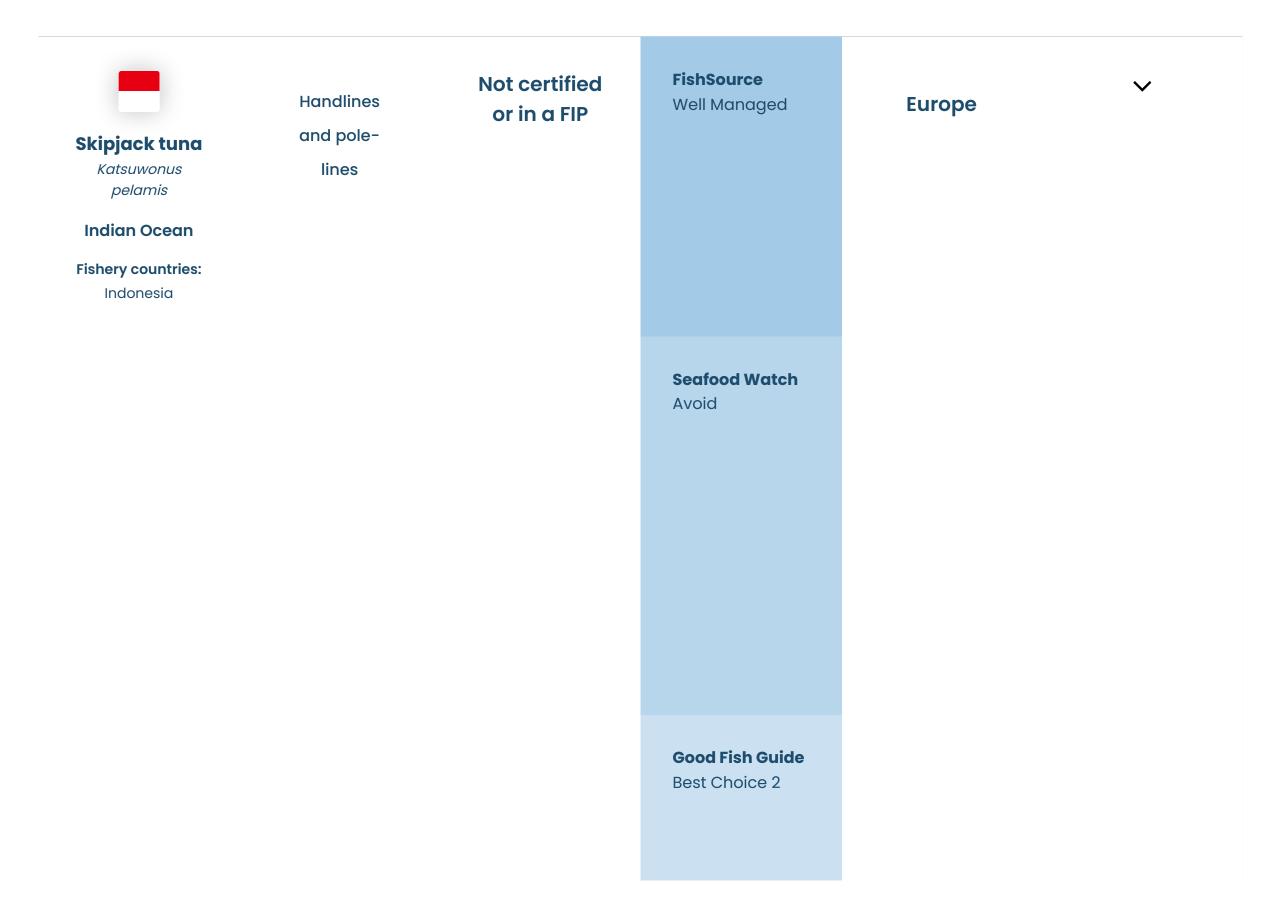
General Notes

• 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

MSC: <u>Echebastar Indian Ocean purse seine skipjack tuna</u>

<u>Seafood Watch Recommendation for Skipjack tuna, Western Indian Ocean, Eastern Indian Ocean, Marine Stewardship Council Certified Echebastar Indian Ocean purse seine skipjack tuna Fishery</u>



Ocean Wise
Recommended

Environmental Notes

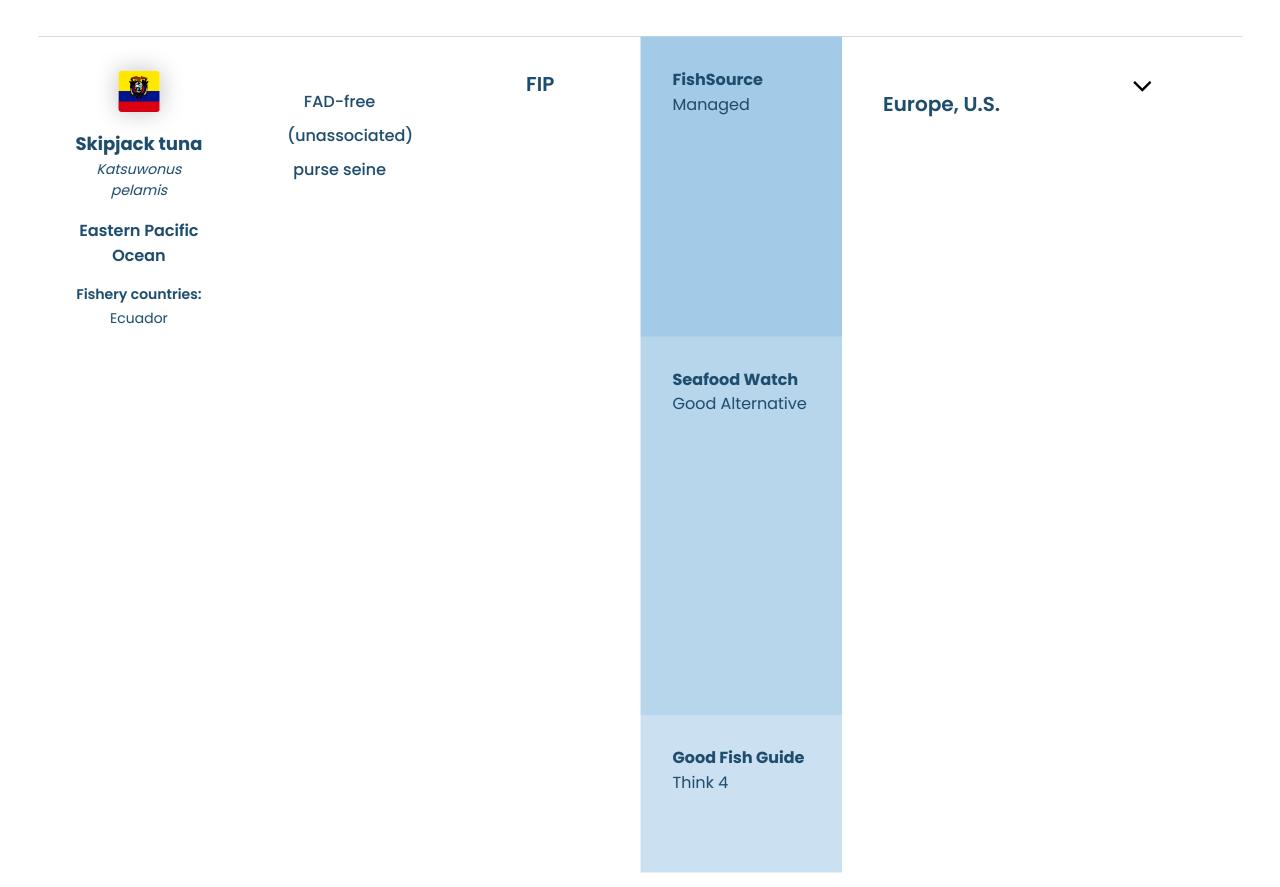
- This fishery is unlikely to impact PET species.
- Bycatch in pole and line fisheries is generally considered low. However, catch of overfished yellowfin tuna is a concern for this fishery.
- This fishery is unlikely to have a significant impact on the sea bed.

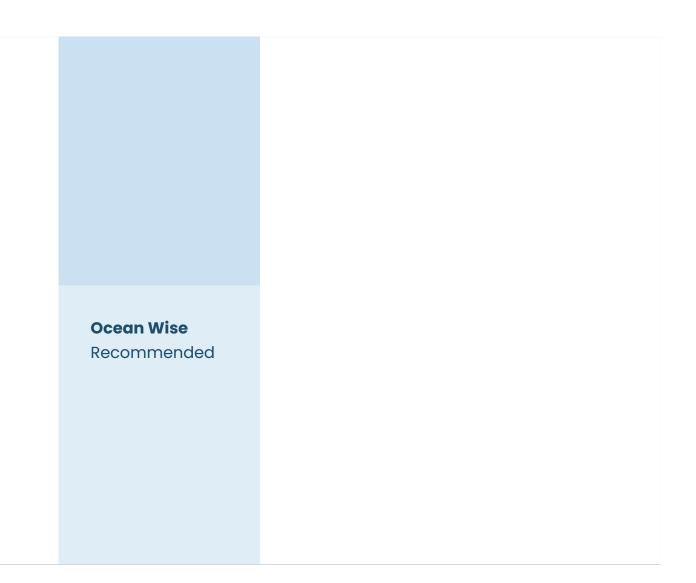
General Notes

References

<u>Good Fish Guide - Tuna, skipjack, Pole & line, Indian Ocean</u>

<u>Seafood Watch Recommendation for Skipjack tuna, Indian Ocean, Handlines and hand-operated pole-and-lines</u>





- There are risks to sea turtles, sharks and rays, and marine mammals with this fishery.
- Bycatch varies by gear type. Unassociated purse seine fisheries typically have less bycatch.
- This fishery is unlikely to have a significant impact on the sea bed.

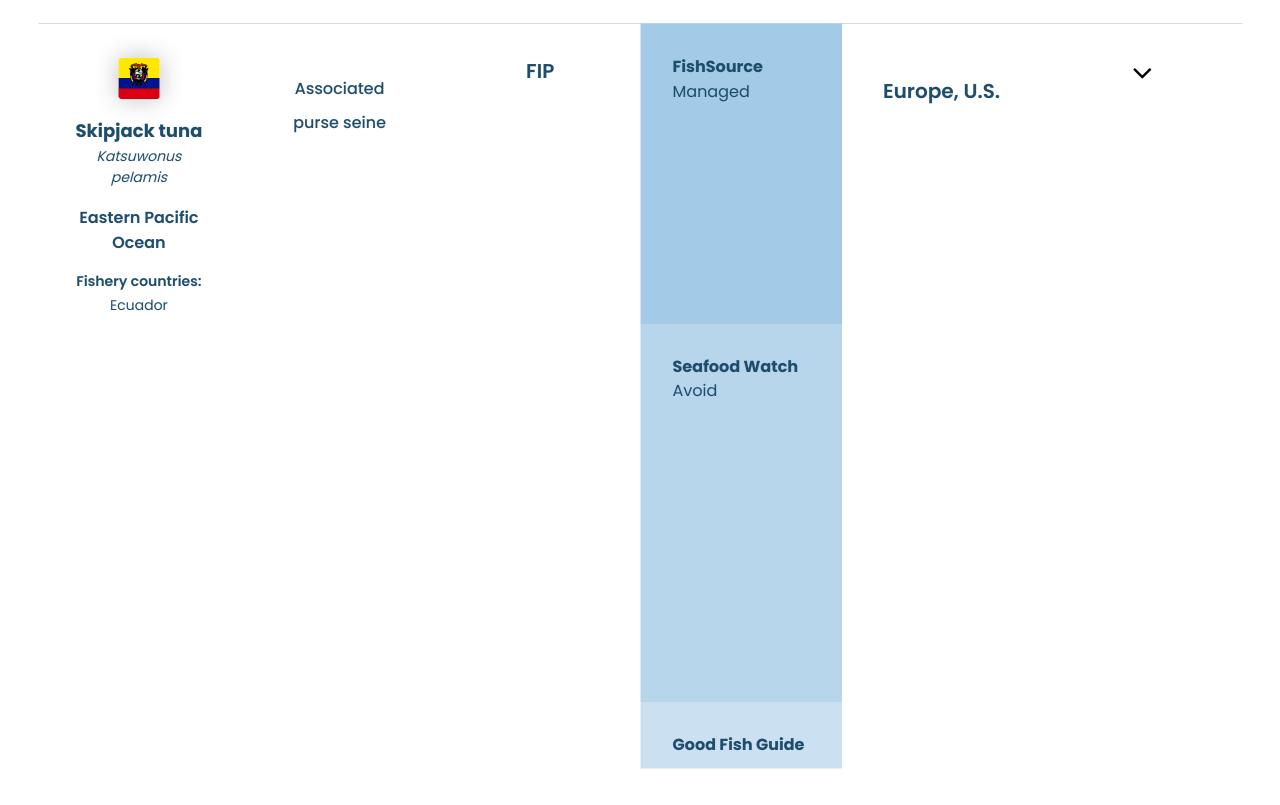
General Notes

- This fishery was part of the now completed <u>Eastern Pacific Ocean tropical tuna purse seine (TUNACONS) FIP.</u>
- 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

Good Fish Guide - Tuna, skipjack, Purse seine (FAD & Free School), Eastern Pacific

Seafood Watch Recommendations for Skipjack tuna, Eastern Central Pacific Ocean, Unassociated purse seine (non-FAD)



Ocean Wise
Not
recommended

Environmental Notes

- There are risks to sea turtles, sharks and rays, 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.

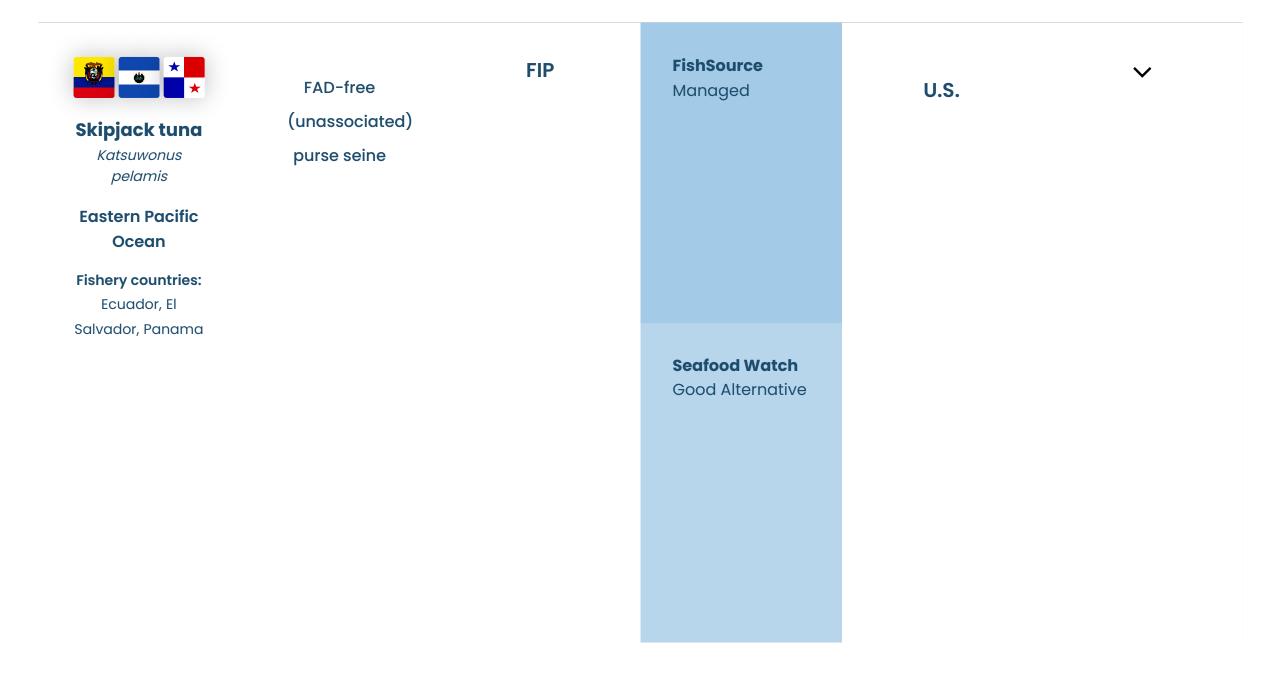
General Notes

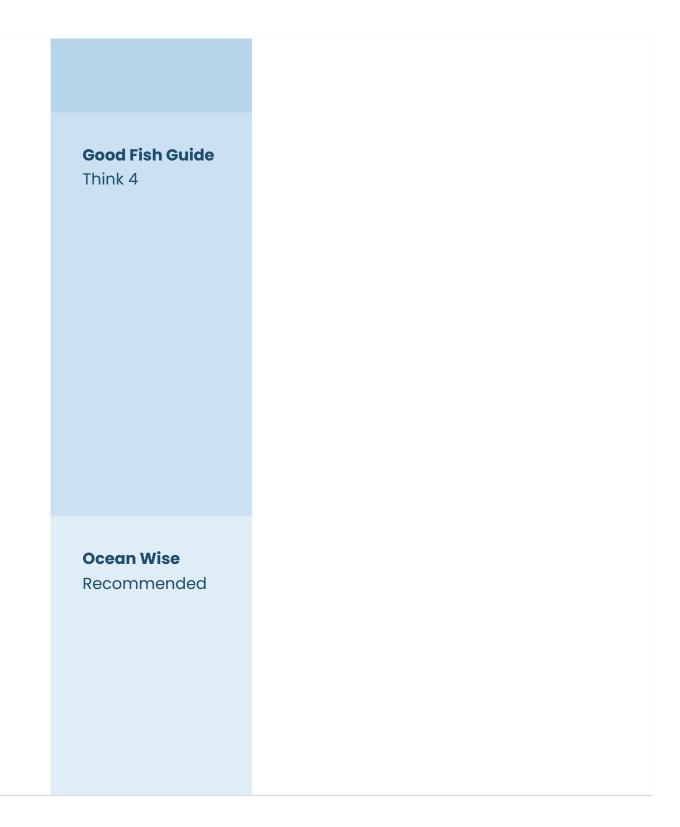
- This fishery was part of the now completed <u>Eastern Pacific Ocean tropical tuna purse seine (TUNACONS) FIP.</u>
- All purse seine fishing vessels are listed on the International Seafood Sustainability Foundation (ISSF)'s <u>ProActive Vessel Register (PVR)</u> and are audited against ISSF conservation measures.

References

<u>Good Fish Guide - Tuna, skipjack, Purse seine (FAD & Free School), Eastern Pacific</u>

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





- There are risks to sea turtles, sharks and rays, and marine mammals with this fishery.
- Bycatch varies by gear type. Unassociated purse seine fisheries typically have less bycatch.
- This fishery is unlikely to have a significant impact on the sea bed.

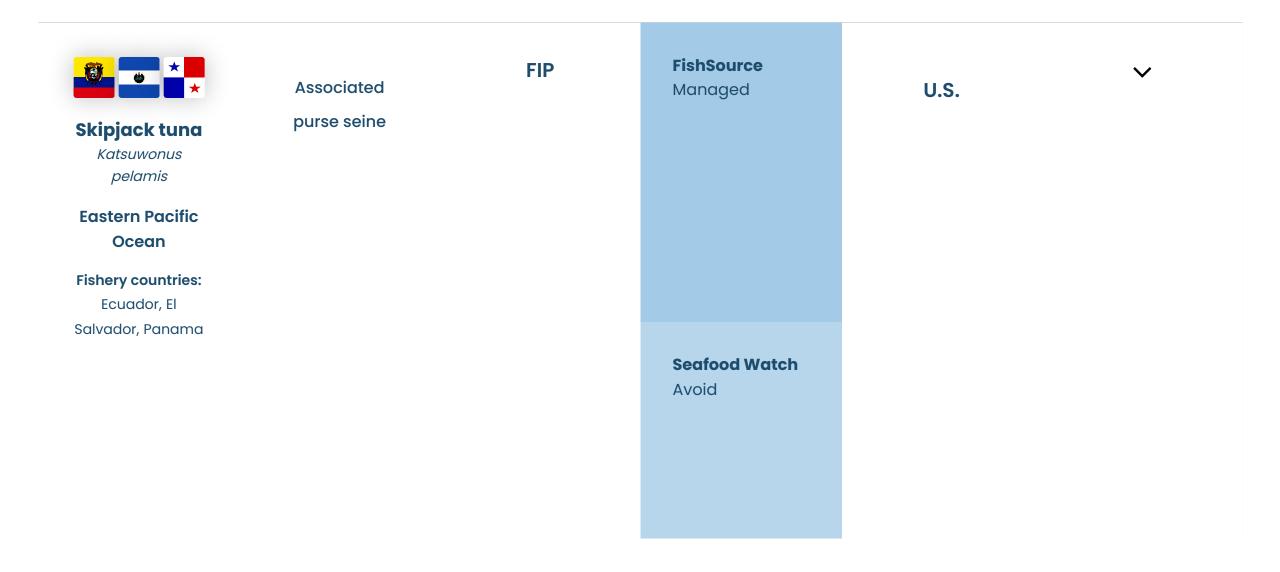
General Notes

- This fishery was part of the now completed <u>Eastern Pacific Ocean tropical tuna purse seine (OPAGAC) FIP.</u>
- 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

Good Fish Guide - Tuna, skipjack, Purse seine (FAD & Free School), Eastern Pacific

Seafood Watch Recommendations for Skipjack tuna, Eastern Central Pacific Ocean, Unassociated purse seine (non-FAD)



Good Fish Guide
Think 4

Ocean Wise
Not
recommended

Environmental Notes

- There are risks to sea turtles, sharks and rays, 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

- This fishery was part of the now completed <u>Eastern Pacific Ocean tropical tuna purse seine (OPAGAC) FIP.</u>
- 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

Good Fish Guide - Tuna, skipjack, Purse seine (FAD & Free School), Eastern Pacific

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



Fishery countries: China, Micronesia,	mmended
China, Micronesia,	
Kiribati, Marshall	
Islands, Nauru,	
Palau, Papua New	
Guinea, Solomon	
Islands, Taiwan,	
Tuvalu, United	
States	

- 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

• 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.

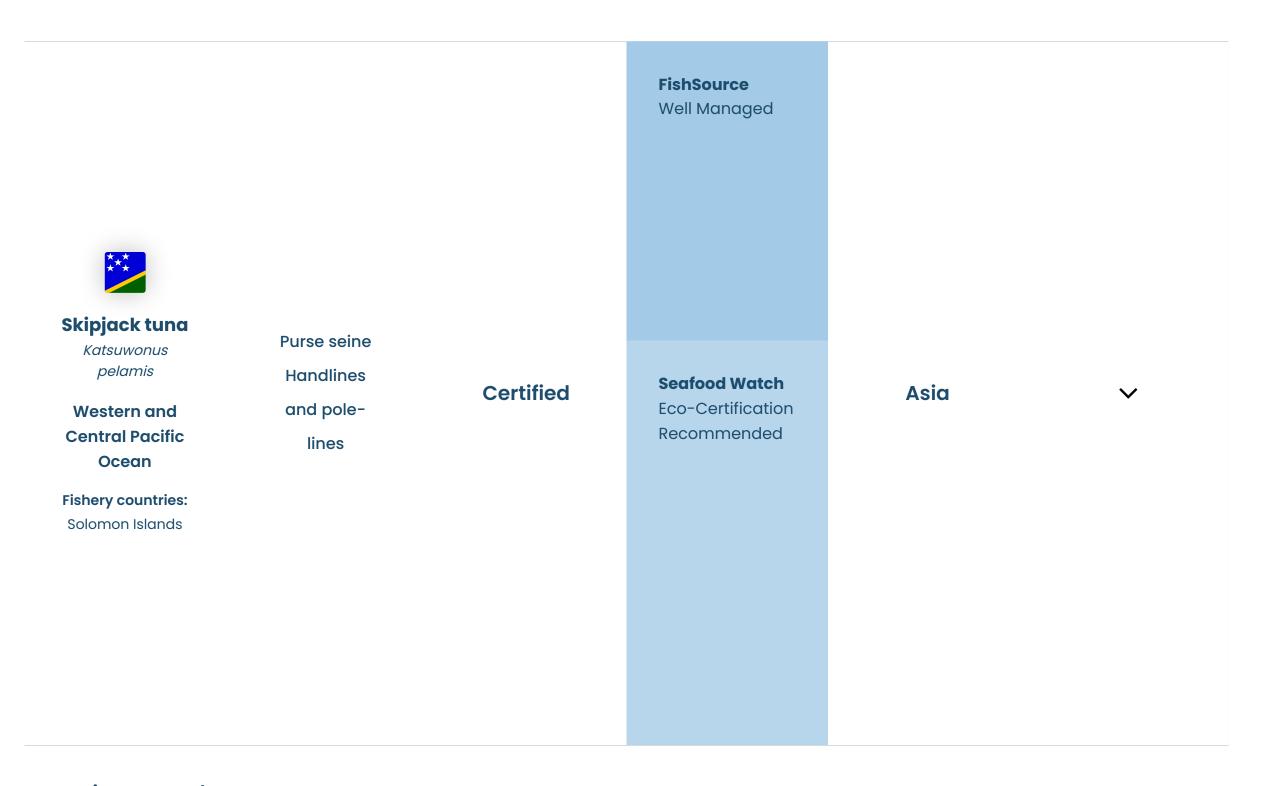
References

MSC: PNA Western and Central Pacific skipjack, yellowfin and bigeye tuna purse seine fishery (FAD and non-FAD sets)

MSC: Tri Marine Western and Central Pacific Skipjack and Yellowfin Tuna

MSC: WPSTA Western and Central Pacific skipjack and yellowfin free school purse seine

Seafood Watch Recommendation for Skipjack tuna, Western Central Pacific Ocean, Certified



Environmental 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 with purse seine gear.
- 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

MSC: Solomon Islands skipjack and yellowfin tuna purse seine and pole and line

Seafood Watch Recommendation for Skipjack tuna, Western Central Pacific Ocean, Certified



Environmental 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

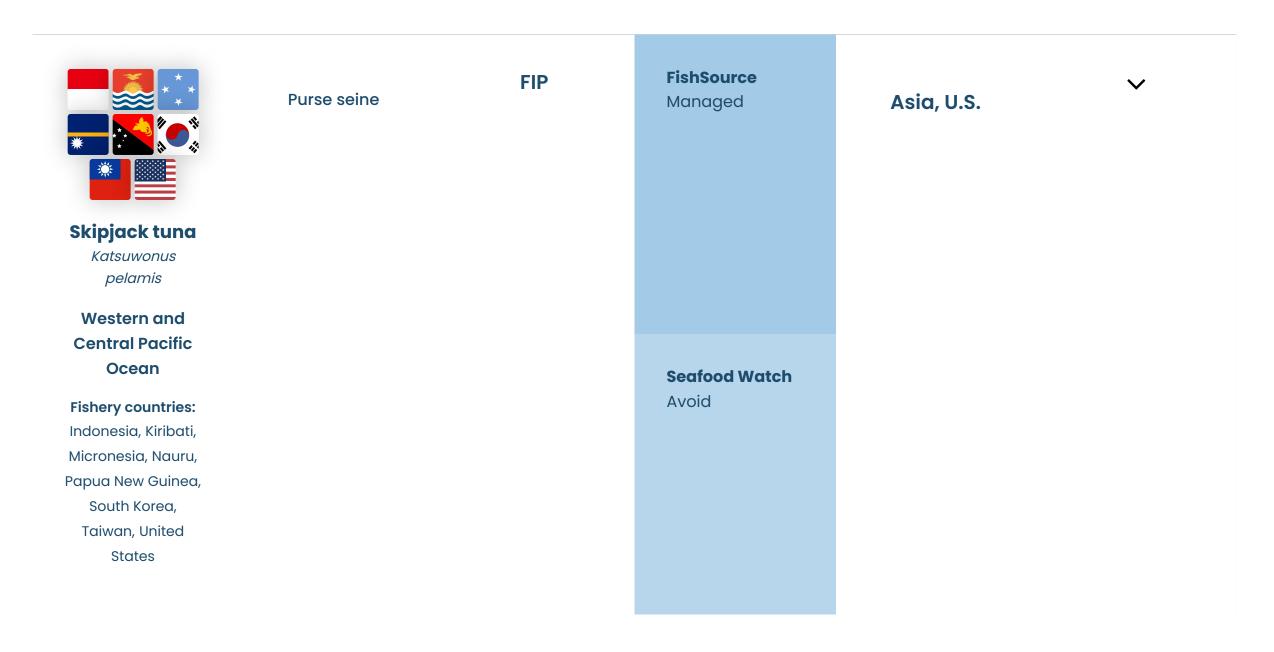
• All purse seine fishing vessels are listed on the International Seafood Sustainability Foundation (ISSF)'s <u>ProActive Vessel Register (PVR)</u> and are audited against ISSF conservation measures.

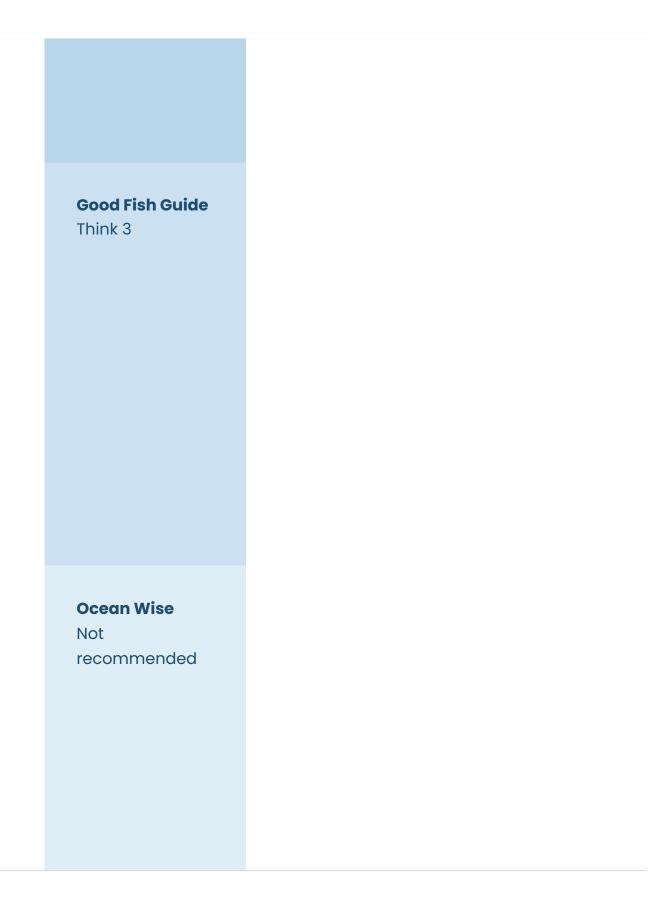
References

MSC: <u>PNG Fishing Industry Association's purse seine Skipjack & Yellowfin Tuna Fishery</u>

MSC: Talleys New Zealand Skipjack Tuna Purse Seine

MSC: Tropical Pacific yellowfin and skipjack free-school purse seine fishery





- 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

- This fishery is part of the <u>Indonesia Southeast Sulawesi yellowfin tuna and skipjack tuna purse seine FIP</u> and the <u>Western and Central Pacific Ocean tuna purse seine (Thai Union) FIP</u>.
- 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

Good Fish Guide - Tuna, skipjack, Purse seine (FAD & Free School), Western and Central Pacific

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

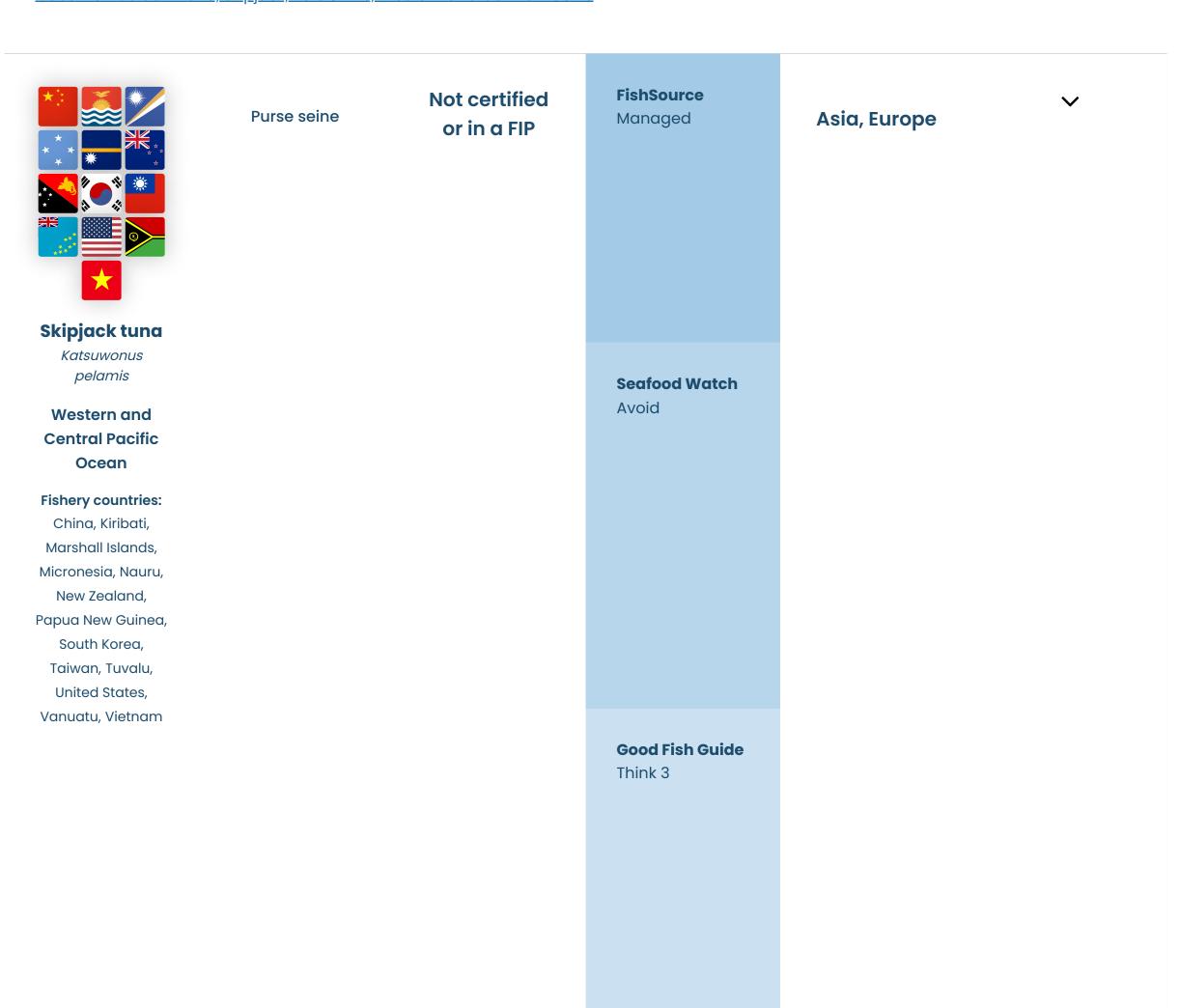


- This fishery is unlikely to impact ETP species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

<u>Good Fish Guide - Tuna, skipjack, Pole & line, Western and Central Pacific</u>



Environmental 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.

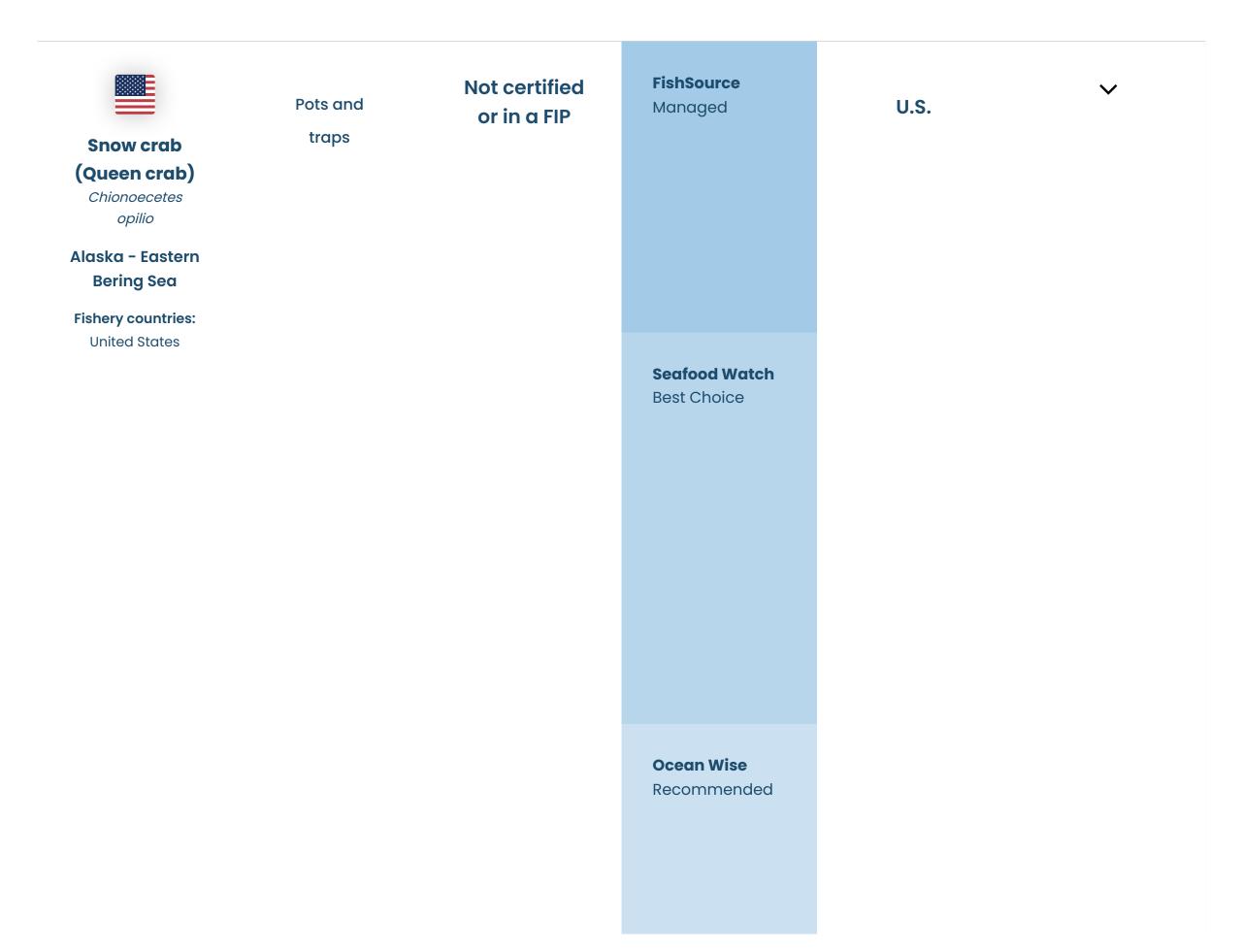
General Notes

• 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

Good Fish Guide - Tuna, skipjack, Purse seine (FAD & Free School), Western and Central Pacific

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



NOAA FSSI 4

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

<u>Seafood Watch Recommendation for Snow crab, United States (Alaska), Bering Sea, Pots</u>



Environmental Notes

• Profile not yet complete.

General Notes

• No additional notes.



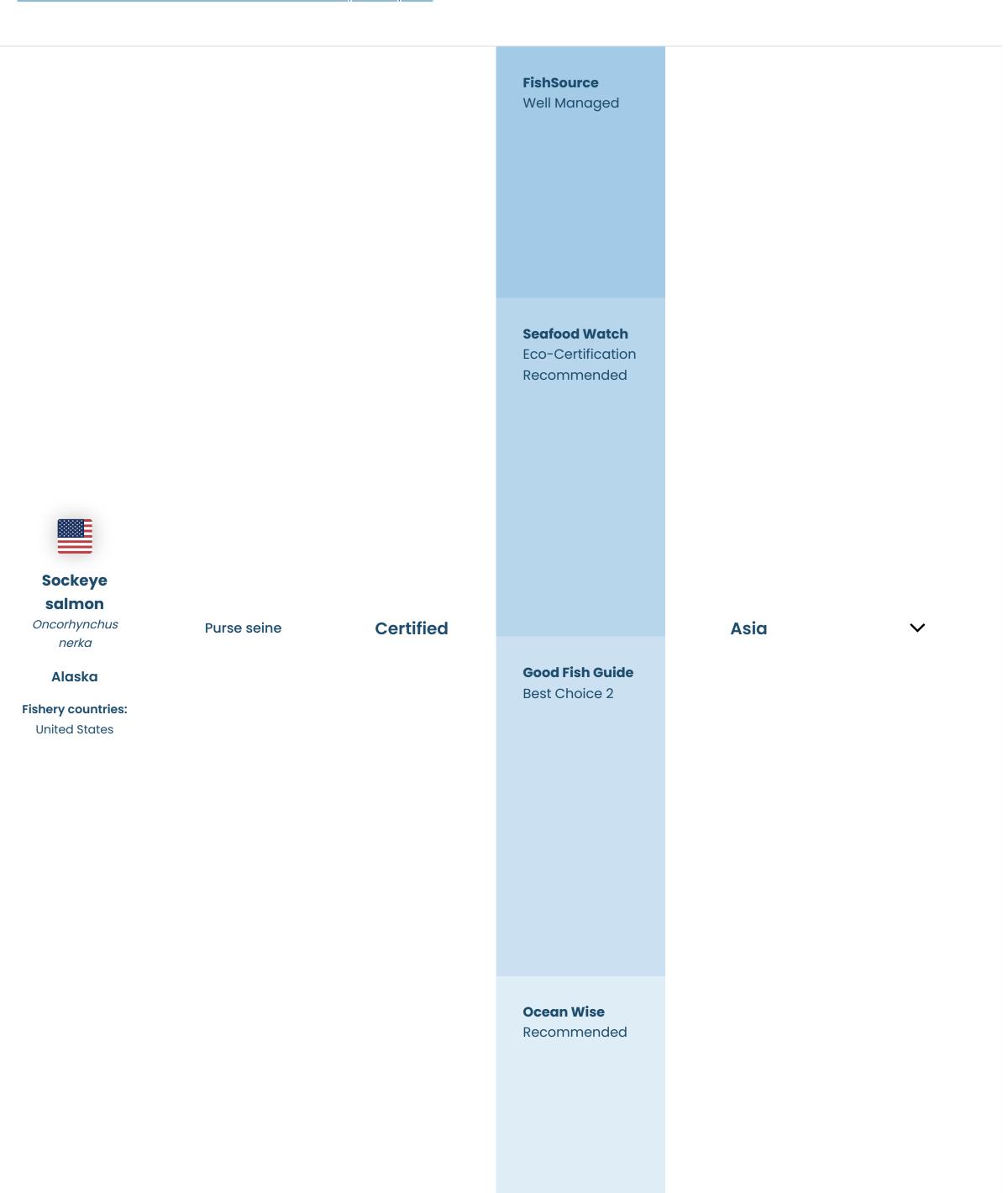
• Profile not yet complete.

General Notes

• The Seafood Watch Recommendation for snow crab fisheries operating in the Russian Far East (Bering Sea, Sea of Japan, and Sea of Okhotsk) is 'Avoid'.

References

<u>Seafood Watch Recommendations for Snow crab, Russia, Pots</u>



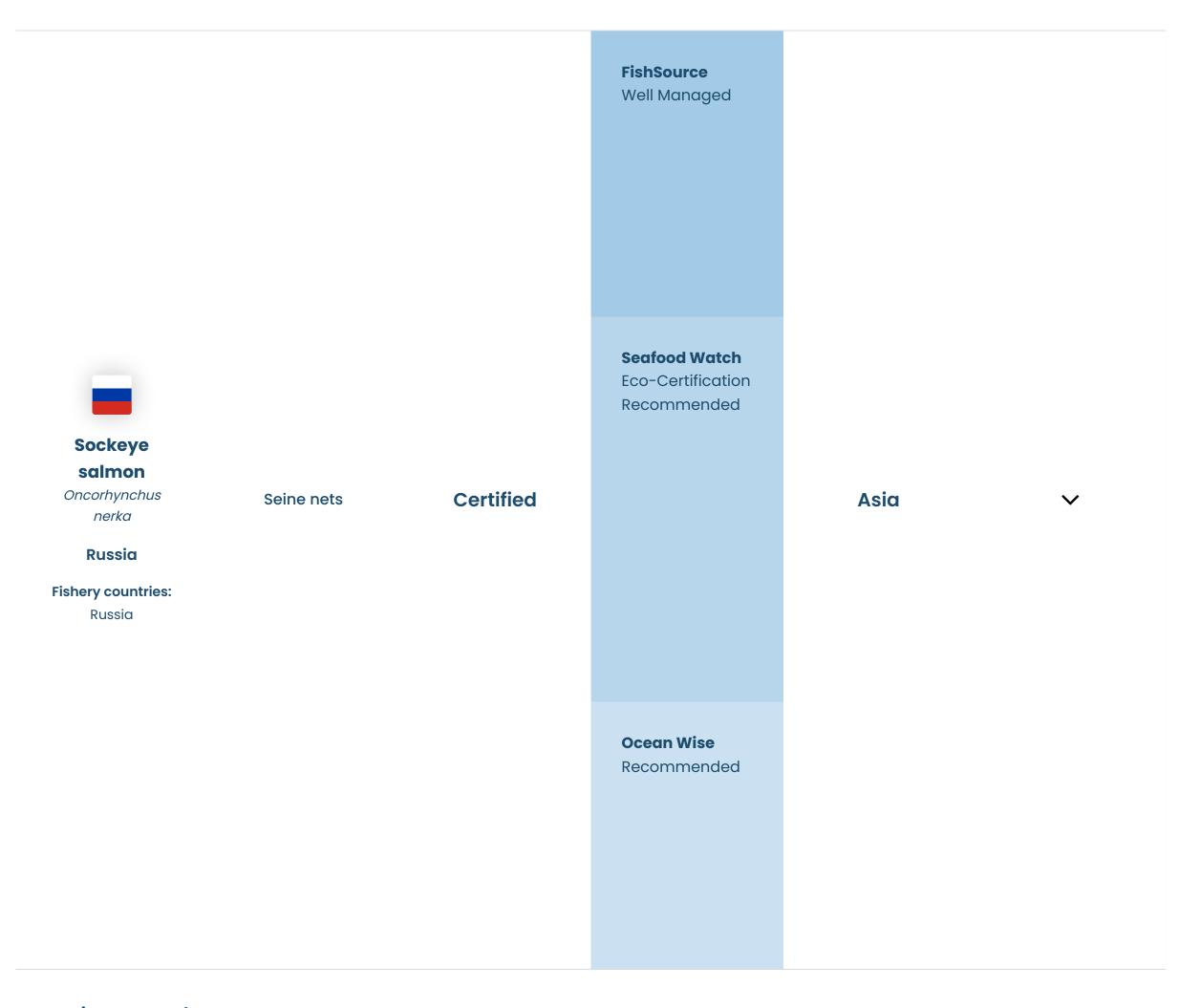
- This fishery is unlikely to impact ETP species.
- Bycatch for this fishery is considered low.
- This fishery is unlikely to have a significant impact on the benthic habitat.

General Notes

References

MSC: Alaska salmon

MRAG Americas, April 2019, MSC Public Certification Report for the Alaska Salmon Fishery



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 benthic habitat.

General Notes

References

MSC: <u>Kolkhoz im. Bekereva-Ukinskij Liman & Belorechensk-Vyvenskoe Karaginsky Bay salmon fisheries</u>

MSC: <u>Olyutorskiy Bay salmon</u>

MSC: Ozernovsky RKZ No 55 West Kamchatka salmon fishery

MRAG Americas, June 2018, MSC Public Certification Report for Olyutorskiy Bay Salmon Fisheries

MRAG Americas, October 2020, MSC Public Certification Report for Karaginsky Bay Salmon Fisheries Kolkhoz im Bekereva, Ukinskij Liman, Belorechensk & Vyvenskoe

MRAG Americas, July 2020, MSC Public Certification Report for West Kamchatka Salmon Fishery Ozernovsky RKZ No 55

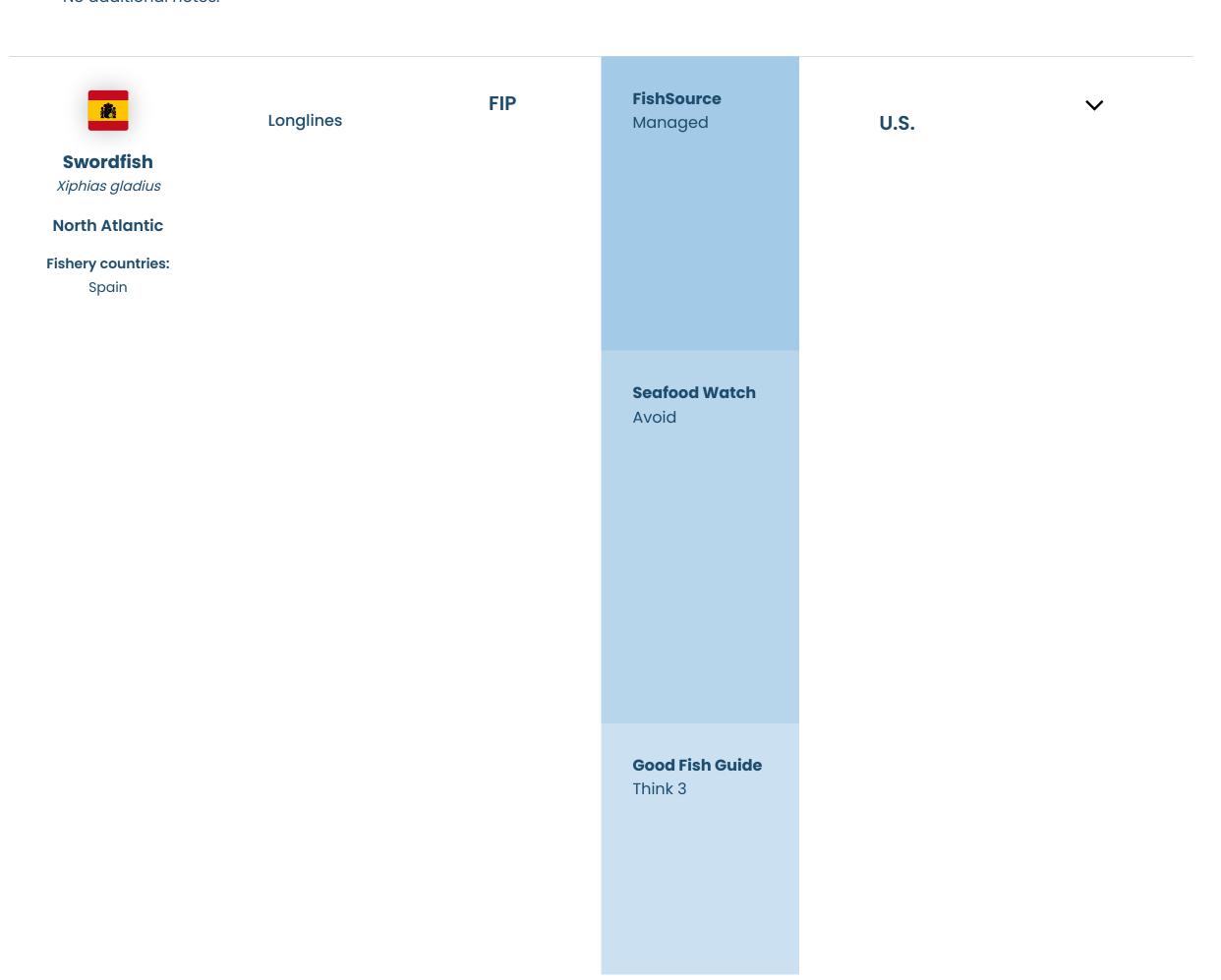


Environmental Notes

• Profile not yet complete.

General Notes

• No additional notes.



Environmental Notes

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

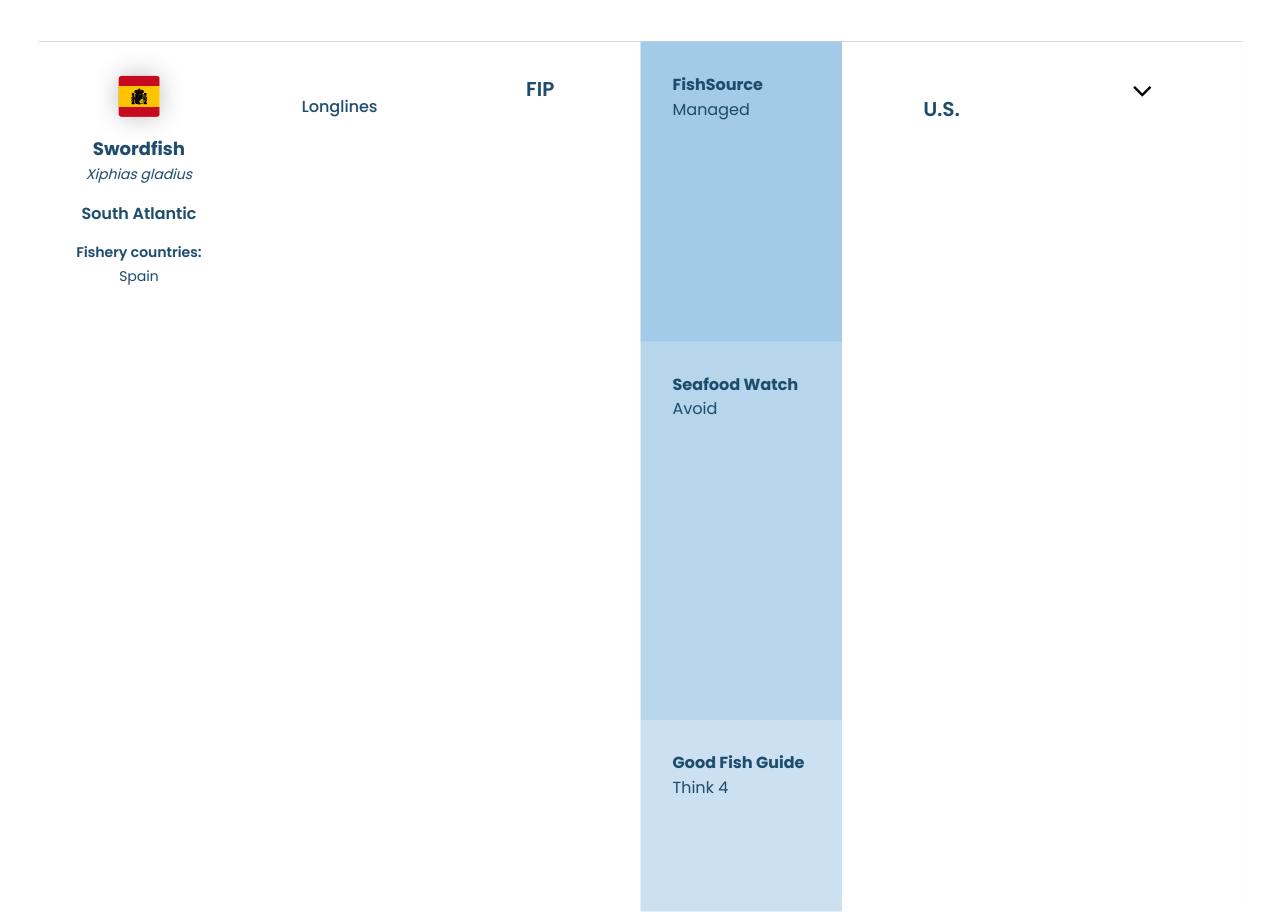
General Notes

• This fishery is part of the <u>Atlantic Ocean blue shark and swordfish - surface longline (FIP-BLUES)</u> FIP.

References

<u>Good Fish Guide - Swordfish, Longline, North Atlantic</u>

<u>Seafood Watch Recommendation, Swordfish, North Atlantic, Drifting Longlines</u>





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

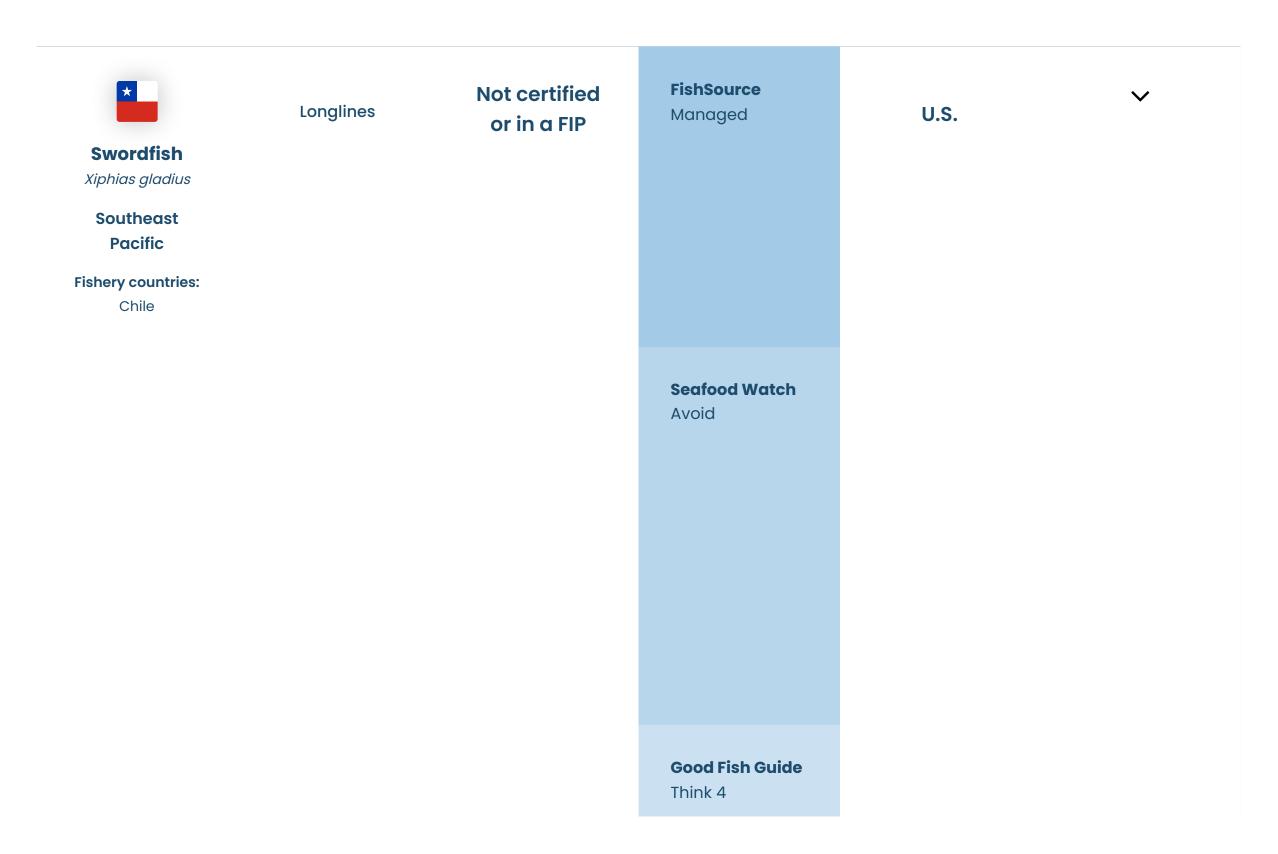
General Notes

• This fishery is part of the <u>Atlantic Ocean blue shark and swordfish - surface longline (FIP-BLUES)</u> FIP.

References

<u>Good Fish Guide - Swordfish, Longline, South Atlantic</u>

<u>Seafood Watch Recommendation, Swordfish, South Atlantic, Drifting Longlines</u>



Environmental Notes

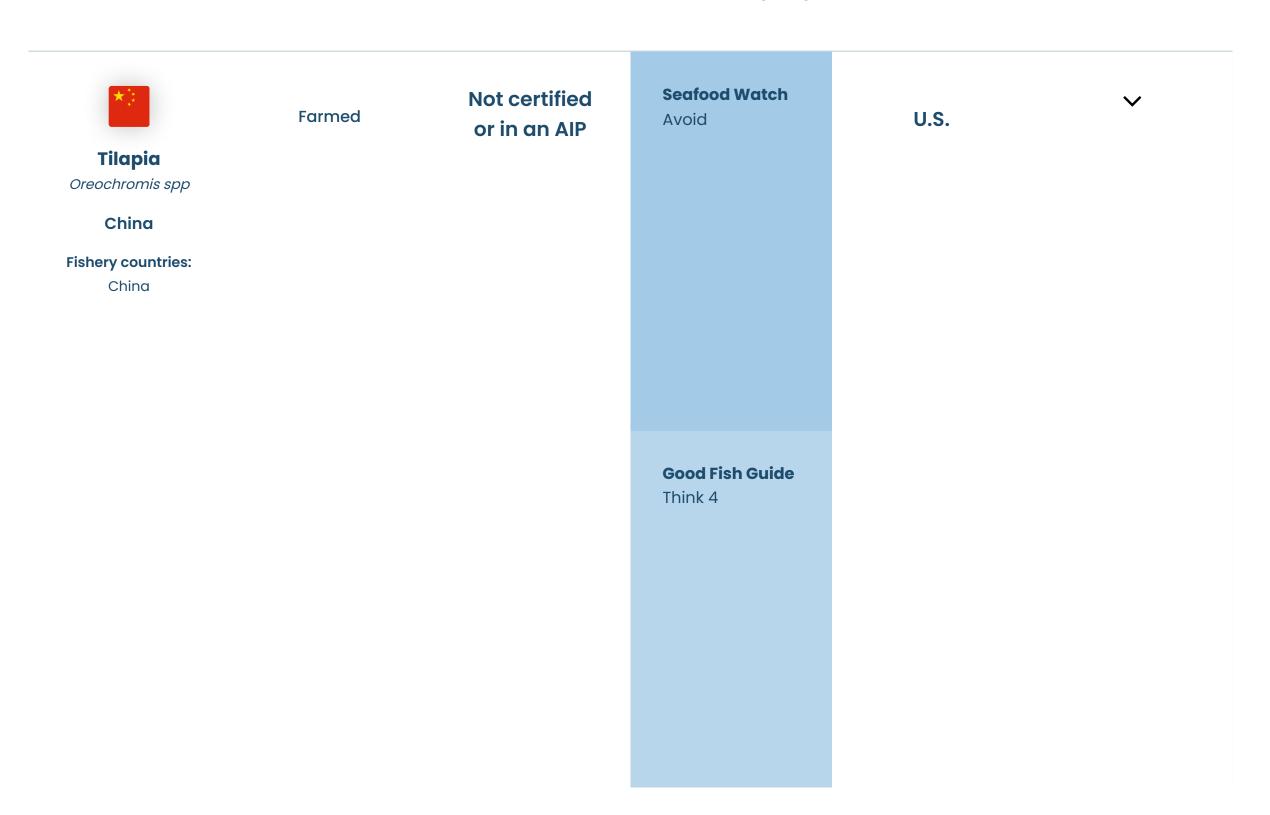
- There are risks to sharks, sea turtles, and seabirds with this fishery.
- Bycatch of other tuna, billfishes and sharks is a risk for this fishery, but there are mitigation measures in place
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

References

Good Fish Guide - Swordfish, Longline, Pacific: North East (FAO 67), Eastern Central (FAO 77), South East (FAO 87)

<u>Seafood Watch Recommendation, Swordfish, Southeastern Pacific Ocean (SEPO), Drifting Longlines</u>



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 information available regarding impacts of Chinese tilapia production on wild species, including 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.

References:

FishSource - tilapia, China

Seafood Watch recommendations for farmed tilapia, 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.
- Disease transfer between farmed and wild prawns is a concern but infrequent water exchange on whiteleg shrimp farms moderates the risk. Information on escapes is limited. Shrimp farmed in Ecuador are raised from hatchery-raised native broodstock, therefore lowering the risk to wild shrimp populations if interbreeding does occur, however, interbreeding may still result in reduced genetic fitness.
- Pollution from nutrients and organic matter, as well as chemical inputs, may affect local water quality. Impacts on water quality vary depending on farm practices including the frequency of waste discharge from ponds.

General Notes

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

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

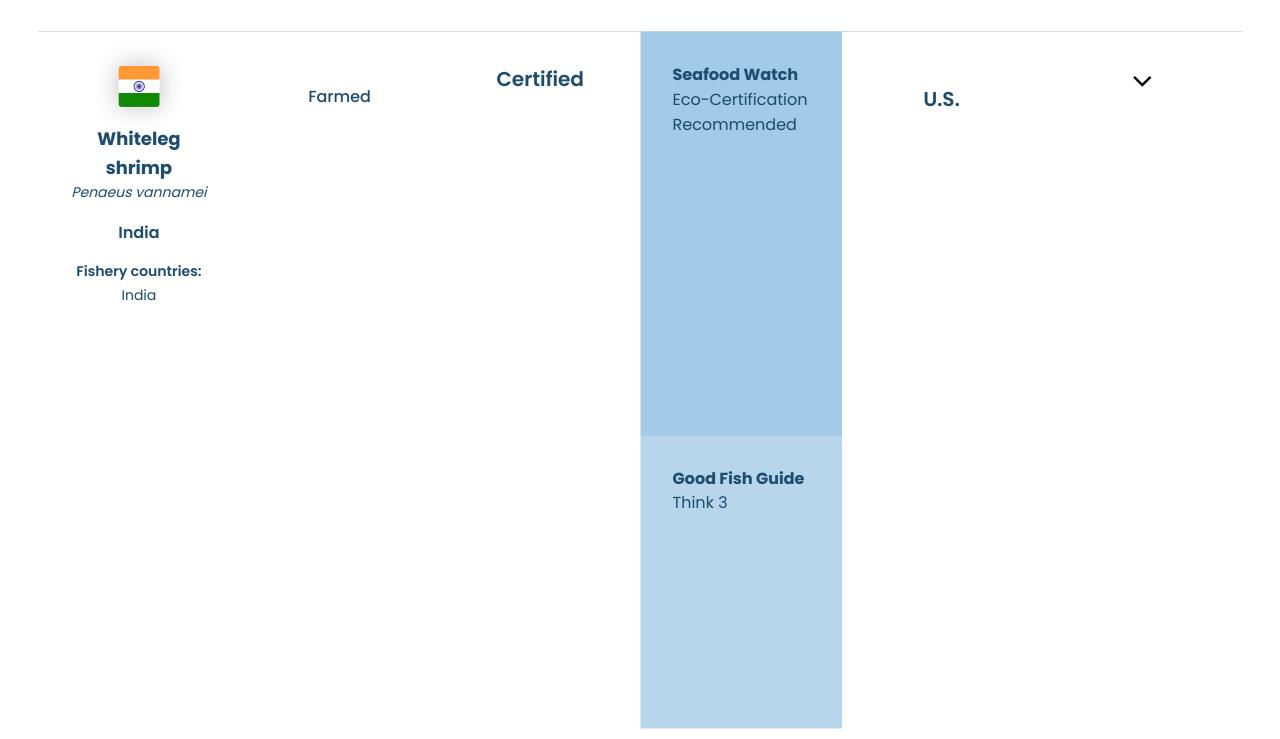
References:

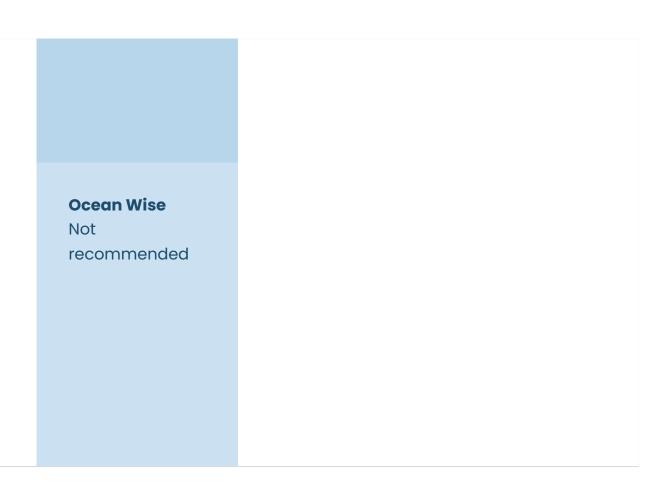
<u>FishSource - shrimp, Ecuador</u>

Good Fish Guide - Prawns, King (whiteleg), prawns, Global Aquaculture Alliance Best Aquaculture Practices (GAA BAP) 2 & 3* certified

Good Fish Guide - Prawn, King (whiteleg), prawns, Global Aquaculture Alliance Best Aquaculture Practices (GAA BAP) 4* certified

Seafood Watch Recommended Eco-Certifications for Whiteleg shrimp





- 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.

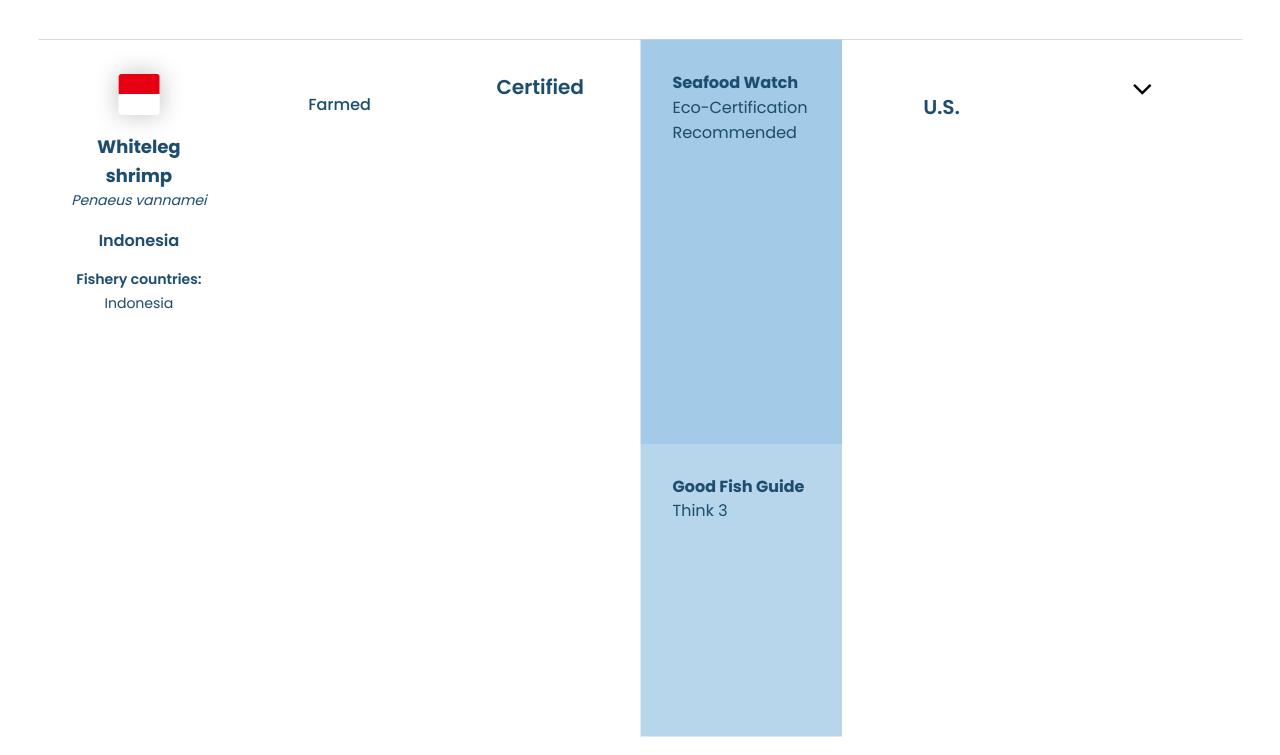
References:

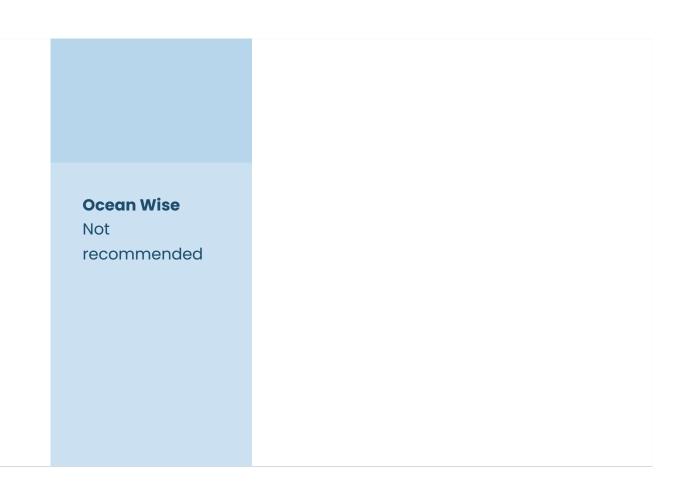
<u>FishSource - shrimp, India</u>

Good Fish Guide - Prawns, King (whiteleg), prawns, Global Aquaculture Alliance Best Aquaculture Practices (GAA BAP) 2 & 3* certified

Good Fish Guide - Prawn, King (whiteleg), prawns, Global Aquaculture Alliance Best Aquaculture Practices (GAA BAP) 4* certified

Seafood Watch Recommended Eco-Certifications for Whiteleg shrimp





- 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:

<u>FishSource - shrimp, Indonesia</u>

Good Fish Guide - Prawns, King (whiteleg), prawns, Global Aquaculture Alliance Best Aquaculture Practices (GAA BAP) 2 & 3* certified

Good Fish Guide - Prawn, King (whiteleg), prawns, Global Aquaculture Alliance Best Aquaculture Practices (GAA BAP) 4* certified

<u>Seafood Watch Recommended Eco-Certification, Whiteleg shrimp, Global Aquaculture Alliance Certified BAP Standard: Finfish and Crustacean Farms (2, 3, 4-star)</u>

Seafood Watch report for farmed shrimp, Indonesia



- Fishmeal and fish oil 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 the risk.
- 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. There is limited information regarding on-farm chemical use or shrimp farm effluent in Malaysia. But evidence suggests that antimicrobials important to human health are used in production.

General Notes

References

Seafood Watch Report for farmed Whiteleg shrimp, Malaysia



Environmental Notes

- Fishmeal and fish oil 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 the risk.
- 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. There is limited information regarding on-farm chemical use or shrimp farm effluent, but evidence suggests that antibiotics important to human health are used in production.

General Notes

References

Seafood Watch Report for farmed Whiteleg shrimp, Mexico





Whiteleg shrimp Litopeneaus

vannamei

Sri Lanka

Fishery countries:

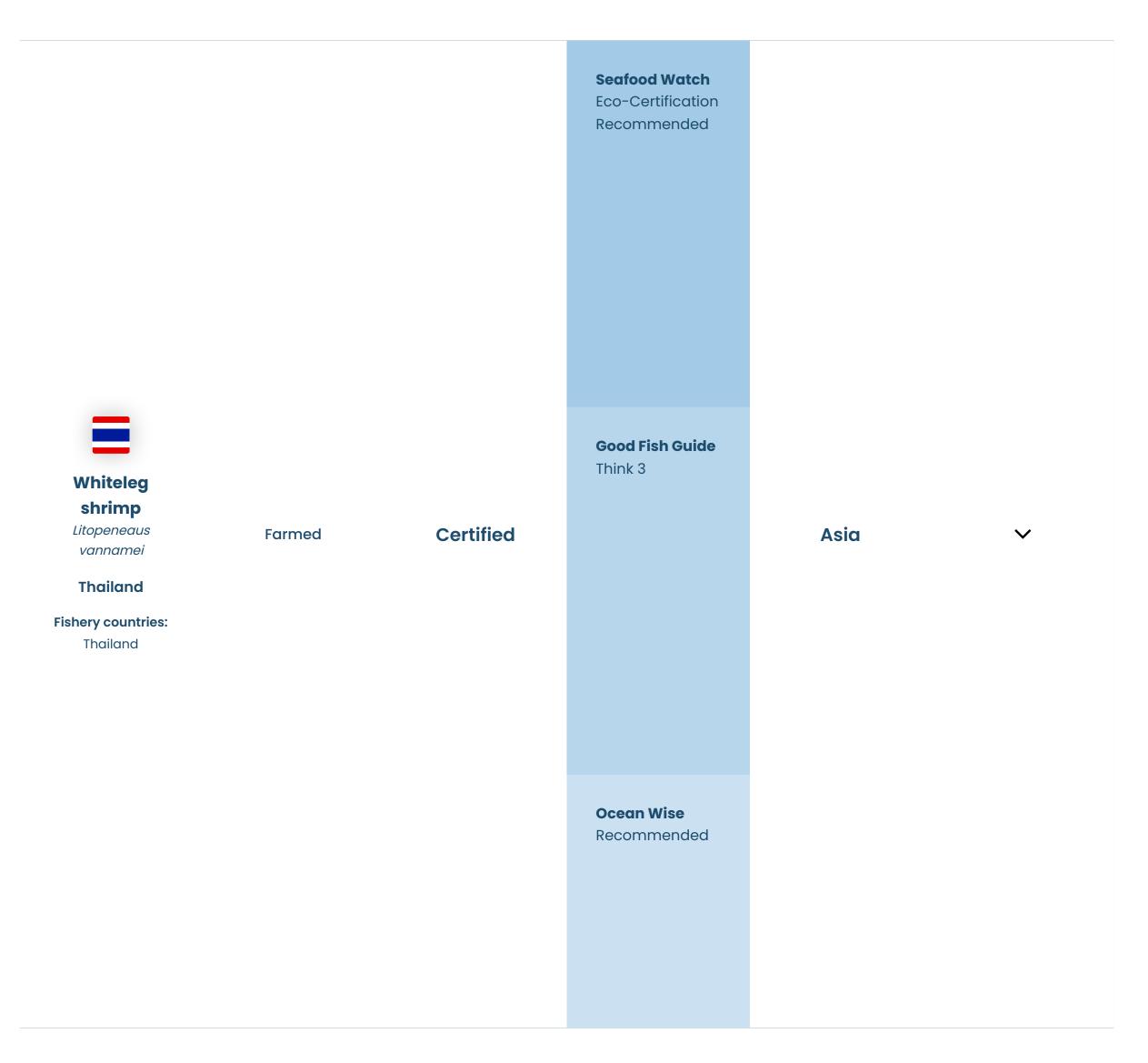
Sri Lanka

Environmental Notes

- Fishmeal and fish oil 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 the risk.
- 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

• No additional notes.



- 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 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.

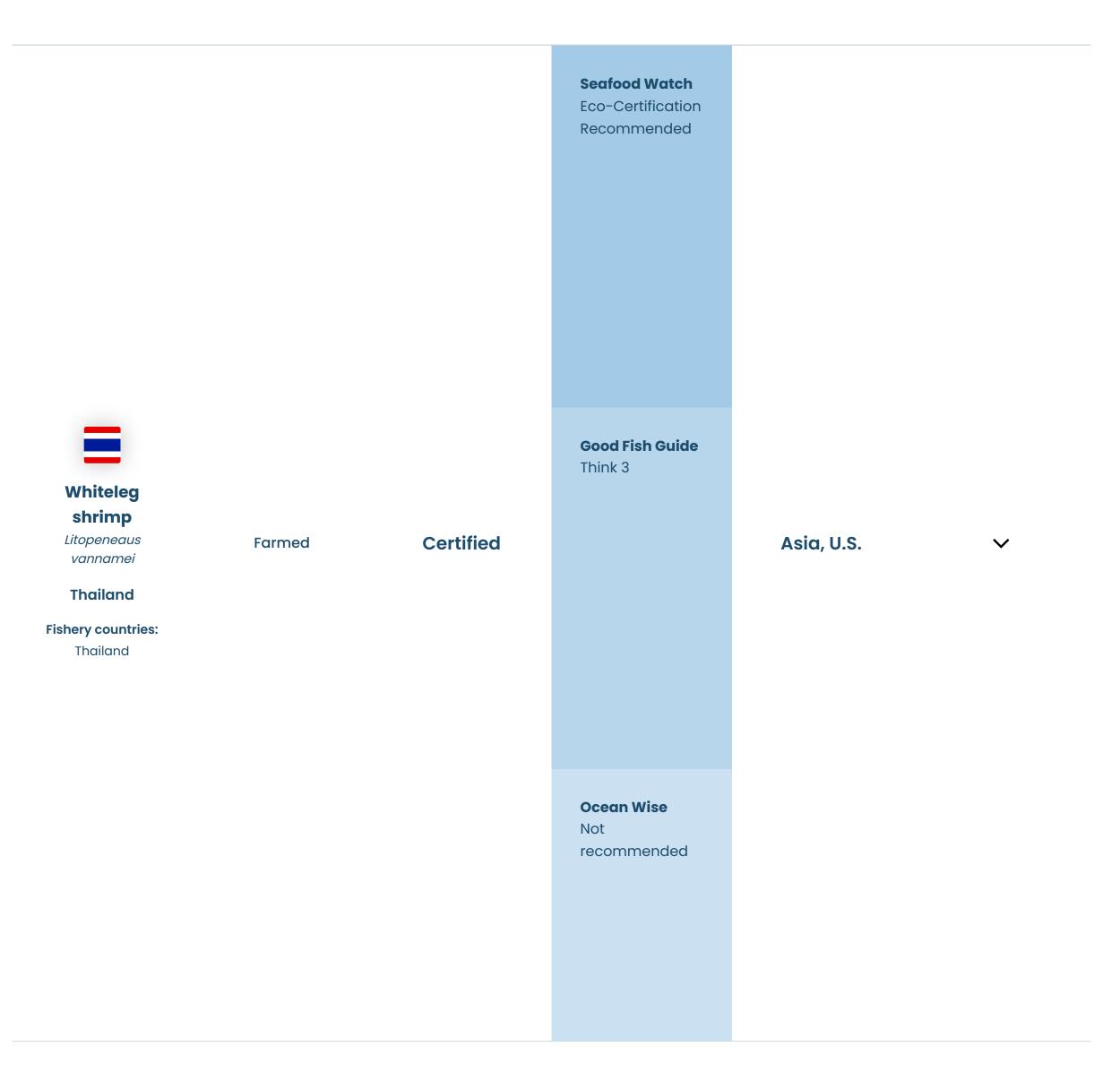
Public information on zonal approaches to planning and production of shrimp farming in Thailand is limited.

References:

FishSource - Shrimp, Thailand

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

Seafood Watch Recommended Eco-Certifications for Whiteleg shrimp, Farmed



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:

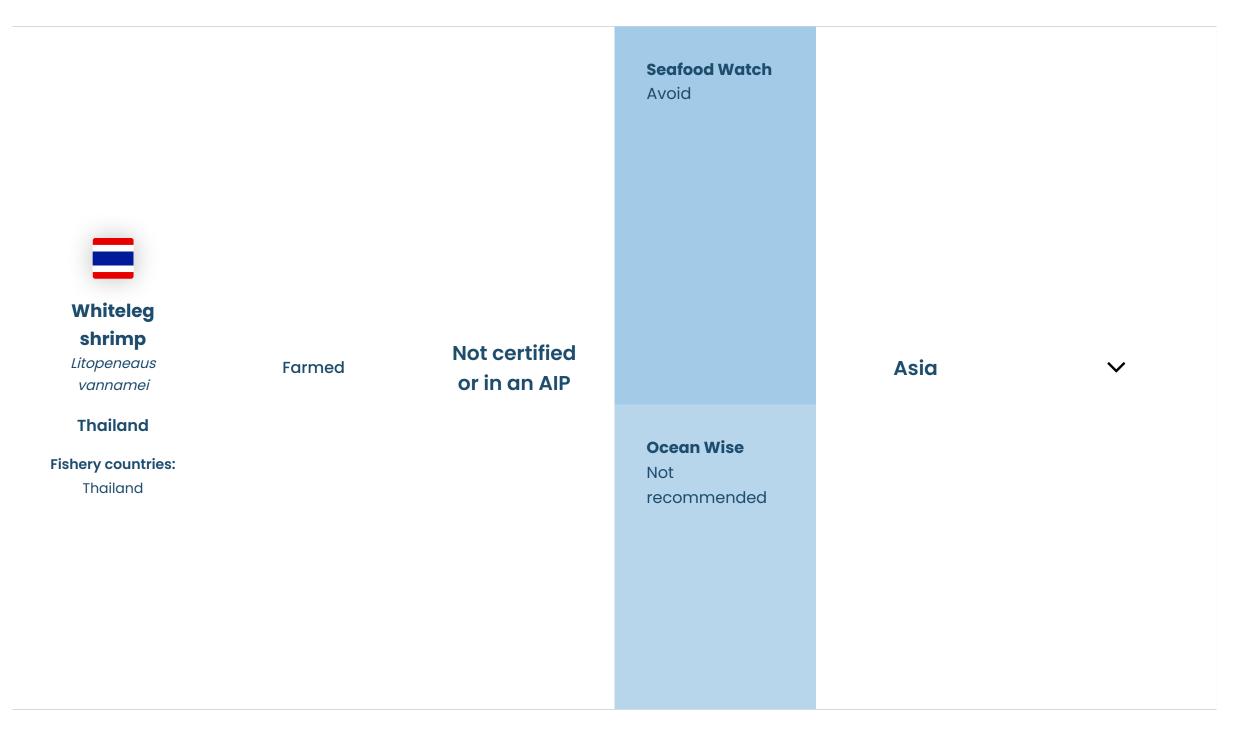
FishSource - Shrimp, Thailand

Good Fish Guide - Prawns, King (whiteleg), prawns, Global Aquaculture Alliance Best Aquaculture Practices (GAA BAP) 2 & 3* certified

Good Fish Guide - Prawn, King (whiteleg), prawns, Global Aquaculture Alliance Best Aquaculture Practices (GAA BAP) 4* certified

Seafood Watch, Recommended Eco-Certifications for Whiteleg shrimp, Farmed

<u>Seafood Watch report for farmed Whiteleg shrimp, Thailand</u>



Environmental Notes

- Fishmeal and fish oil 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 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.

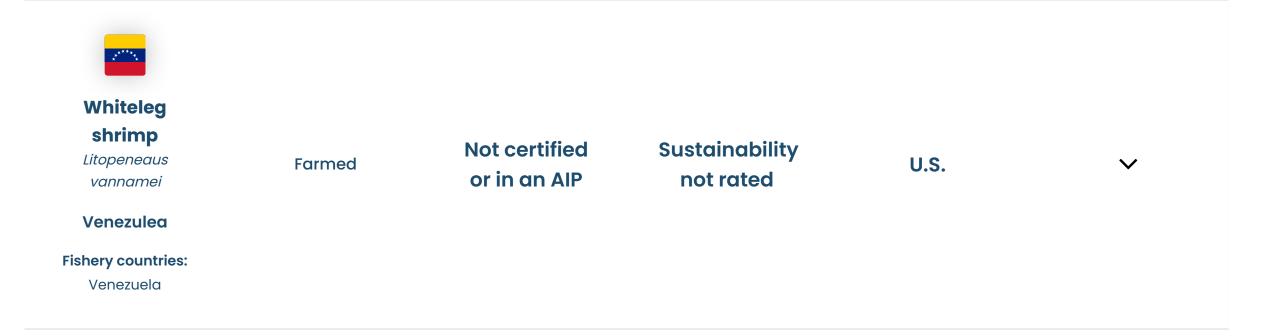
General Notes

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

References:

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

Seafood Watch report for farmed Whiteleg shrimp, Thailand



- Fishmeal and fish oil 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 the risk.
- 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

• No additional notes.



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 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:

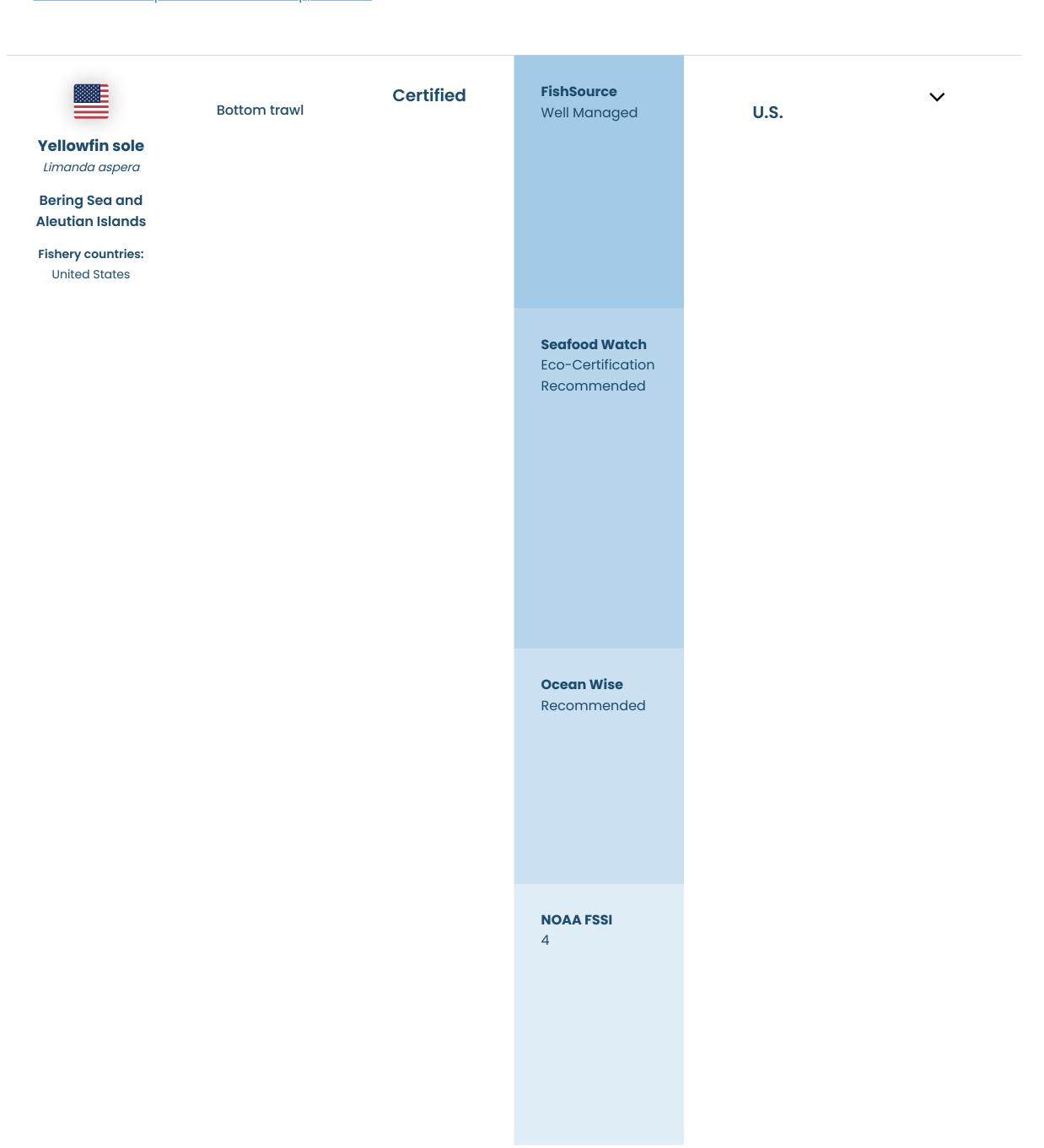
<u>FishSource - shrimp, Vietnam</u>

Good Fish Guide - Prawns, King (whiteleg), prawns, Global Aquaculture Alliance Best Aquaculture Practices (GAA BAP) 2 & 3* certified

Good Fish Guide - Prawn, King (whiteleg), prawns, Global Aquaculture Alliance Best Aquaculture Practices (GAA BAP) 4* certified

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

<u>Seafood Watch report for farmed shrimp, Vietnam</u>



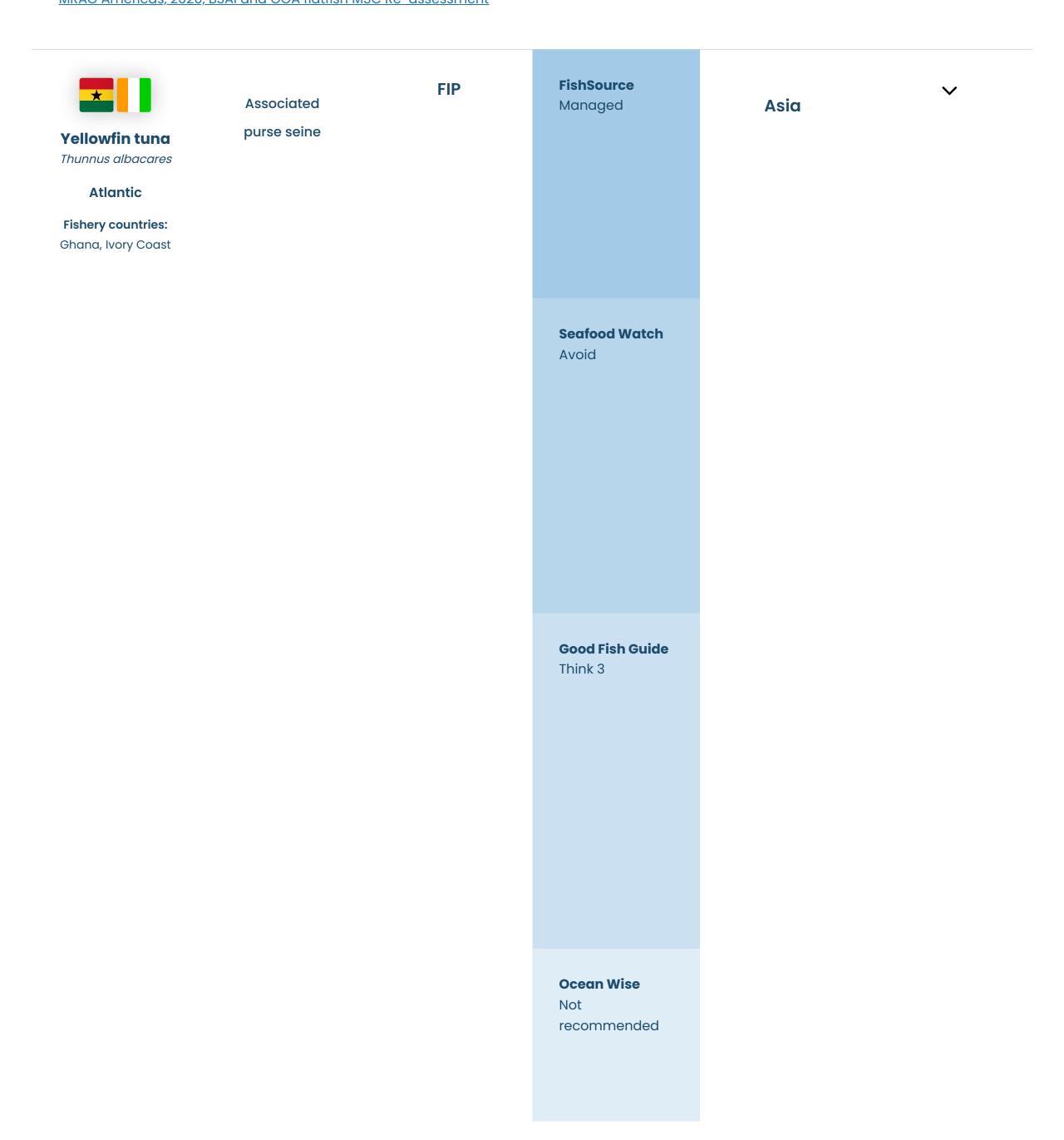
- This fishery is unlikely to impact ETP species.
- Bycatch for this fishery is considered low.
- Bottom trawls will directly impact on the sea bed.

General Notes

References

MSC: <u>Alaska flatfish - Bering Sea and Aleutian Islands</u>

MRAG Americas, 2020, BSAI and GOA flatfish MSC Re-assessment



- 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.

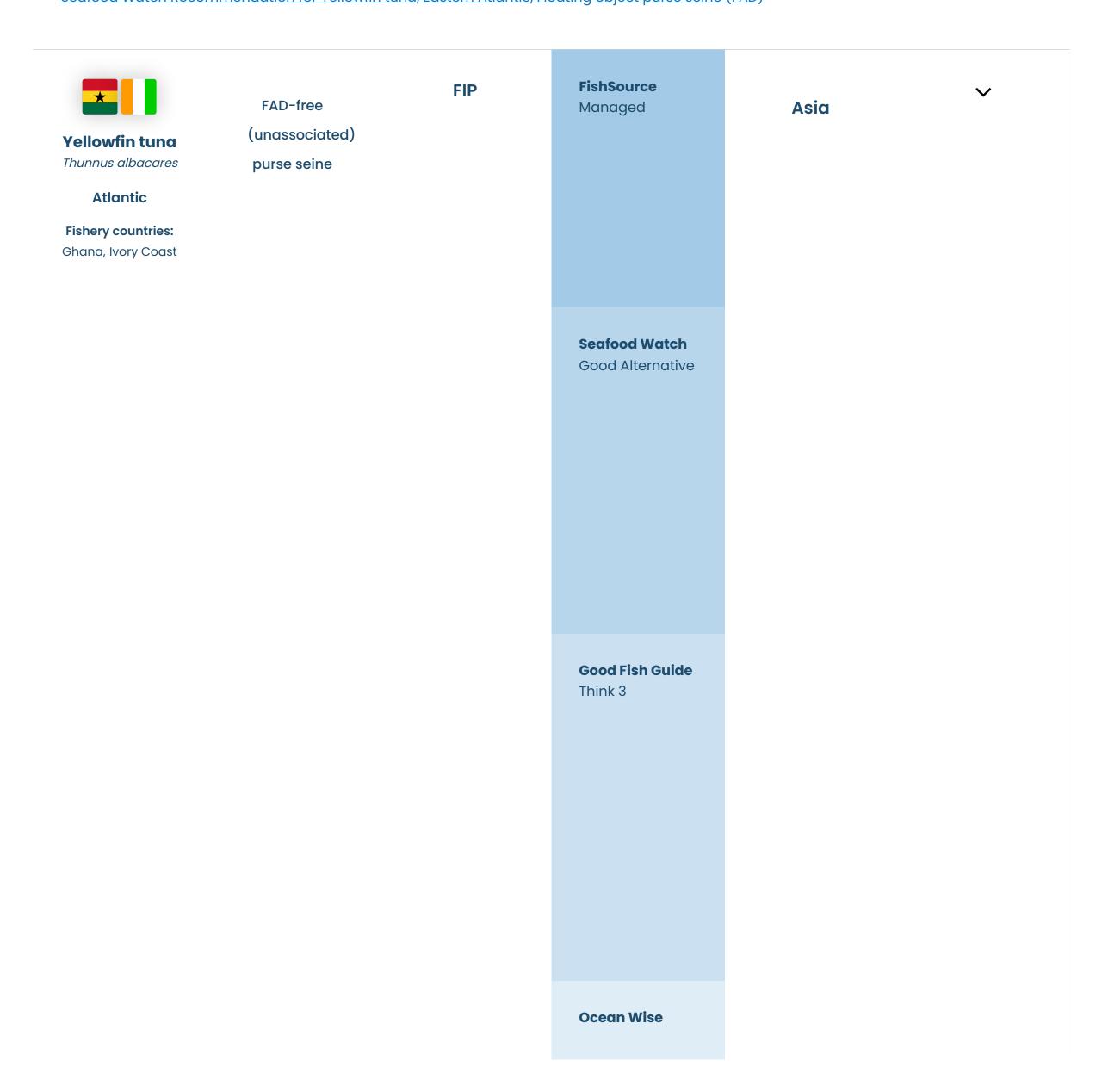
General Notes

- This fishery is part of the <u>Eastern Atlantic tuna purse seine FIP</u>.
- 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

Good Fish Guide - Tuna, yellowfin, Purse seine (FAD & Free School), Atlantic

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



Not recommended

Environmental Notes

- There are risks to sea turtles, sharks, and marine mammals with this fishery.
- Bycatch varies by gear type. Unassociated purse seine fisheries typically have less bycatch.
- This fishery is unlikely to have a significant impact on the sea bed.

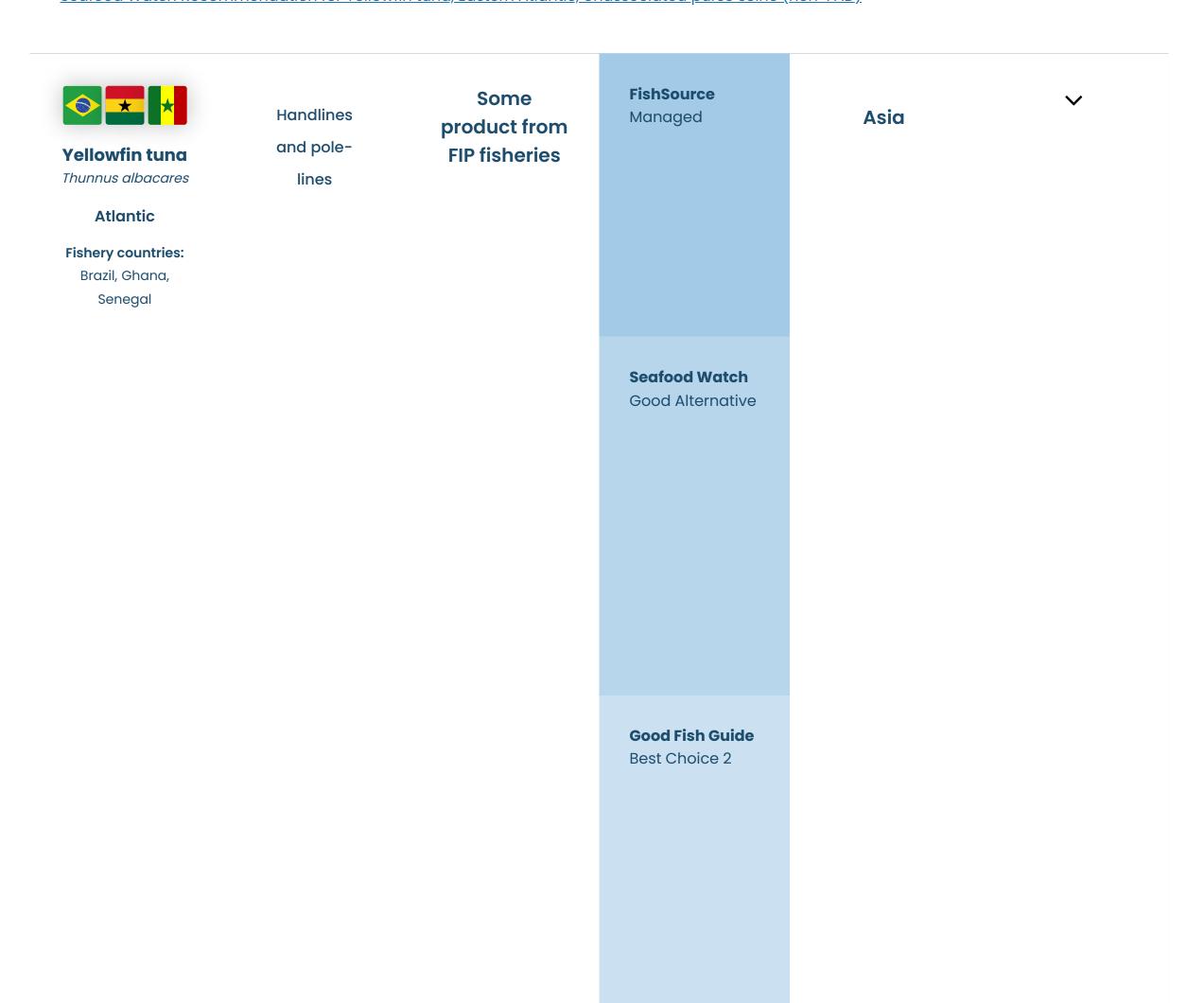
General Notes

- This fishery is part of the <u>Eastern Atlantic tuna purse seine FIP</u>.
- 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

Good Fish Guide - Tuna, yellowfin, Purse seine (FAD & Free School), Atlantic

Seafood Watch Recommendation for Yellowfin tuna, Eastern Atlantic, Unassociated purse seine (non-FAD)



Environmental Notes

- This fishery is unlikely to impact ETP species; incidental capture by pole-and-line gear is uncommon.
- Bycatch for this fishery is considered low, but there are concerns about unknown impacts on bait fish used in the fishery.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

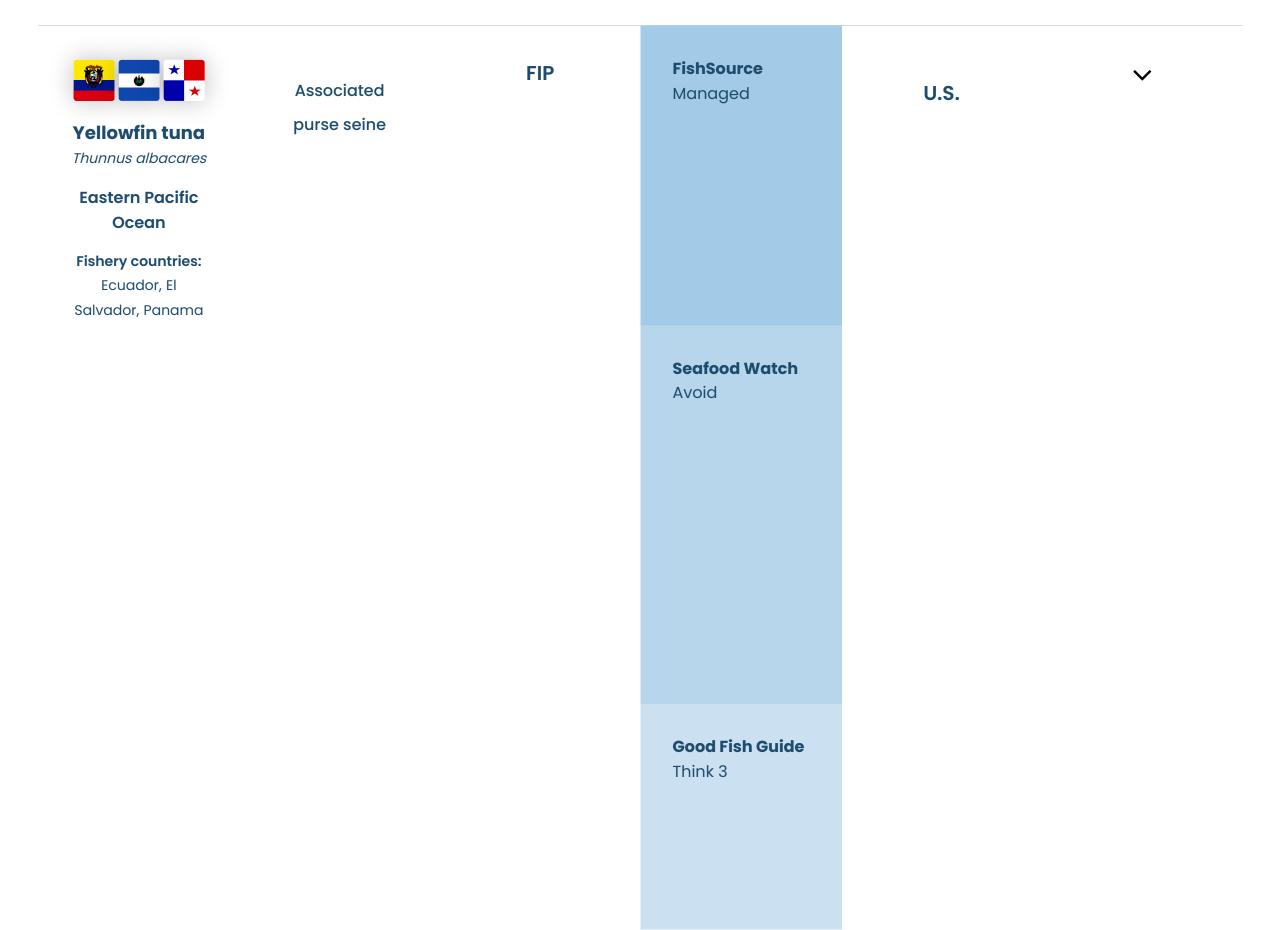
• This fishery is part of the <u>Eastern Atlantic Ocean tuna - pole & line FIP</u> and the <u>Ghana tuna - pole & line FIP</u>.

References

Good Fish Guide - Tuna, yellowfin, Pole & line; troll; handline, Atlantic

<u>Seafood Watch Recommendation for Yellowfin tuna, Eastern Atlantic, Handlines and hand-operated pole-and-lines</u>

<u>Seafood Watch Recommendation for Yellowfin tuna, Western Atlantic, Handlines and hand-operated pole-and-lines</u>



Environmental Notes

- There are risks to sea turtles, sharks and rays, 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.

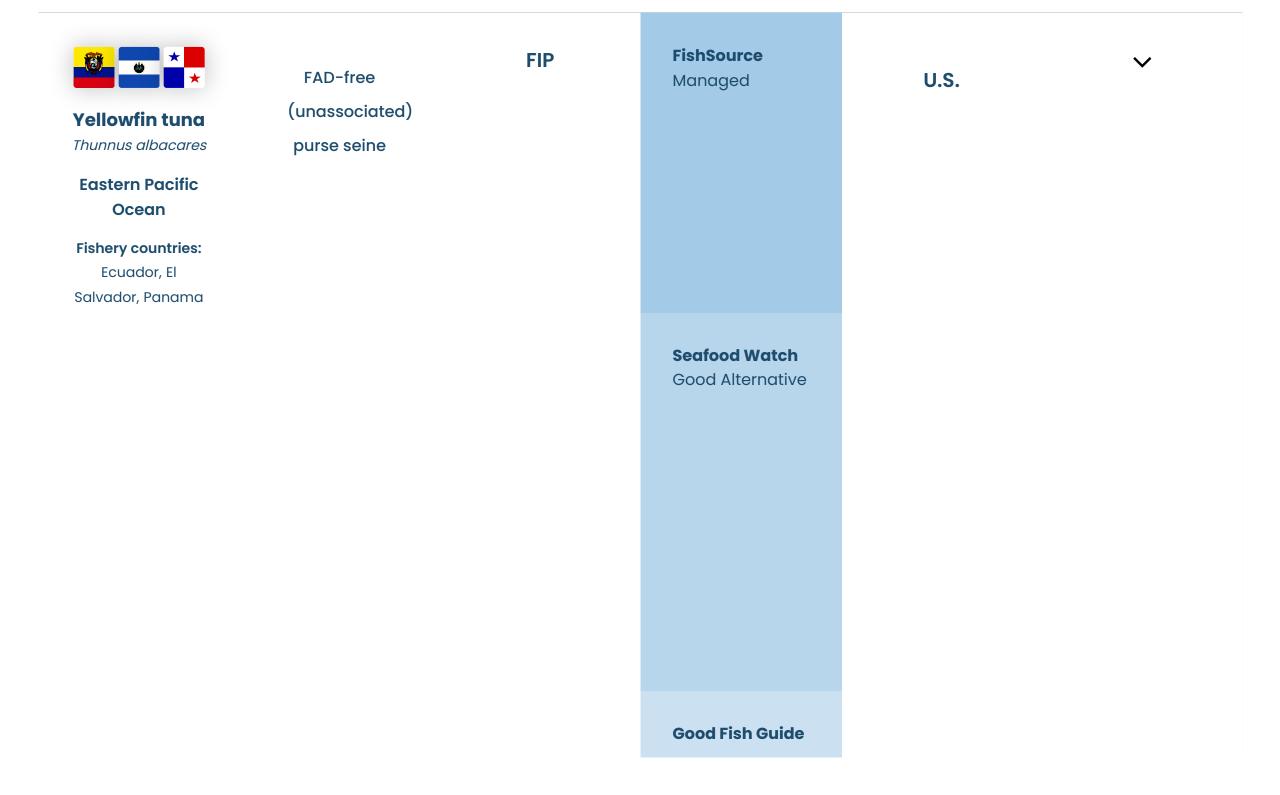
General Notes

- This fishery was part of the now completed <u>Eastern Pacific Ocean tropical tuna purse seine (OPAGAC) FIP</u> and the <u>Eastern Pacific Ocean tropical tuna purse seine (TUNACONS) FIP</u>.
- 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

Good Fish Guide - Tuna, yellowfin, Purse seine (FAD & Free School), Eastern Pacific

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



Environmental Notes

- There are risks to sea turtles, sharks and rays, and marine mammals with this fishery.
- Bycatch varies by gear type. Unassociated purse seine fisheries typically have less bycatch.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

- This fishery was part of the now completed <u>Eastern Pacific Ocean tropical tuna purse seine (OPAGAC) FIP</u> and the <u>Eastern Pacific Ocean tropical tuna purse seine (TUNACONS) FIP</u>.
- 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

Good Fish Guide - Tuna, yellowfin, Purse seine (FAD & Free School), Eastern Pacific

<u>Seafood Watch Recommendations for Yellowfin tuna, Eastern Central Pacific Ocean, Unassociated purse seine (non-FAD)</u>



Good Fish Guide
Think 3

Ocean Wise
Not
recommended

Environmental Notes

- There are risks to sea turtles, sharks and rays, 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

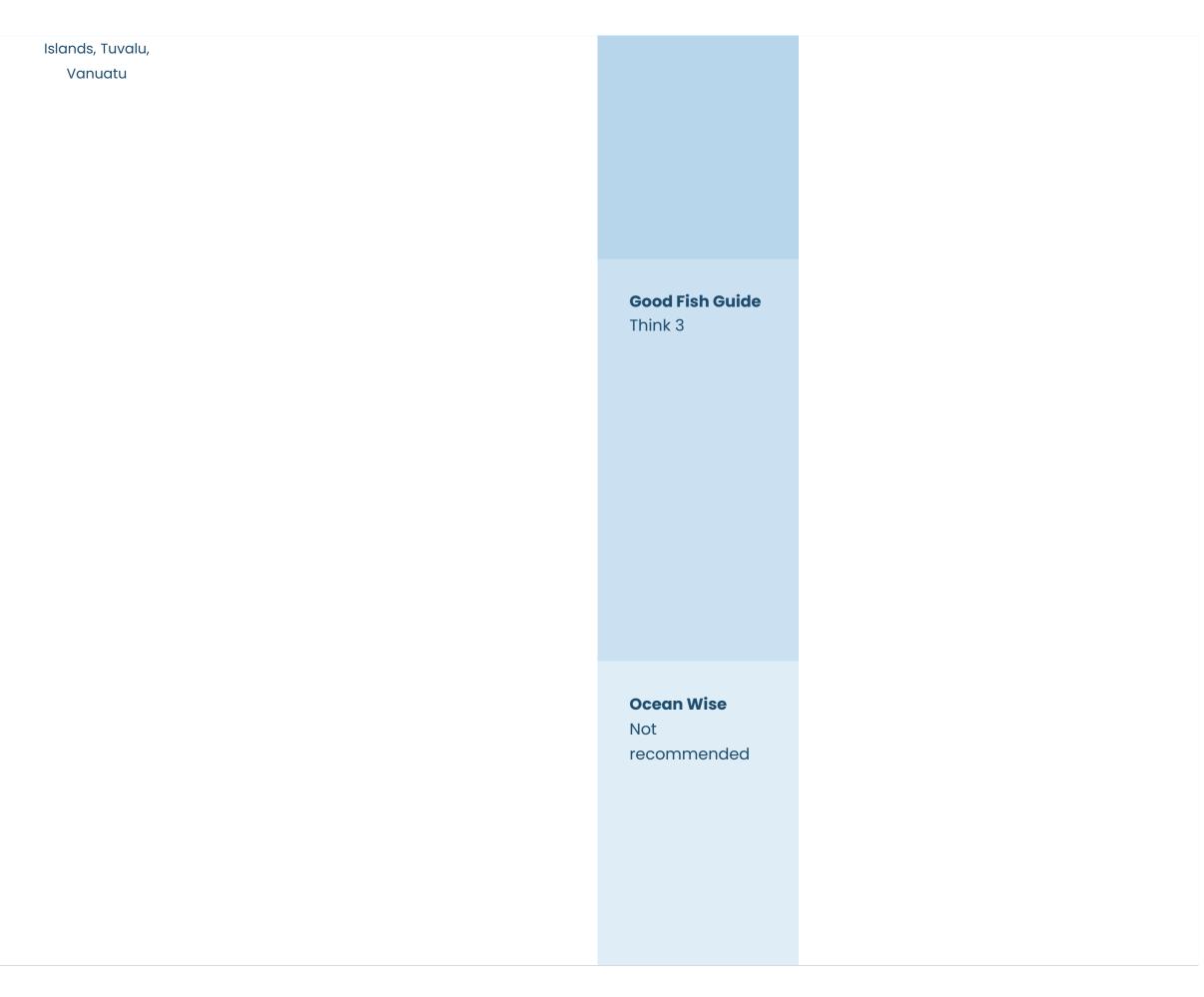
• All purse seine fishing vessels are listed on the International Seafood Sustainability Foundation (ISSF)'s <u>ProActive Vessel Register (PVR)</u> and are audited against ISSF conservation measures.

References

Good Fish Guide - Tuna, yellowfin, Purse seine (FAD & Free School), Eastern Pacific

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





- There are risks to sea turtles, sharks and rays, and marine mammals with this fishery.
- Bycatch varies by gear type. Unassociated purse seine fisheries typically have less bycatch.
- This fishery is unlikely to have a significant impact on the sea bed.

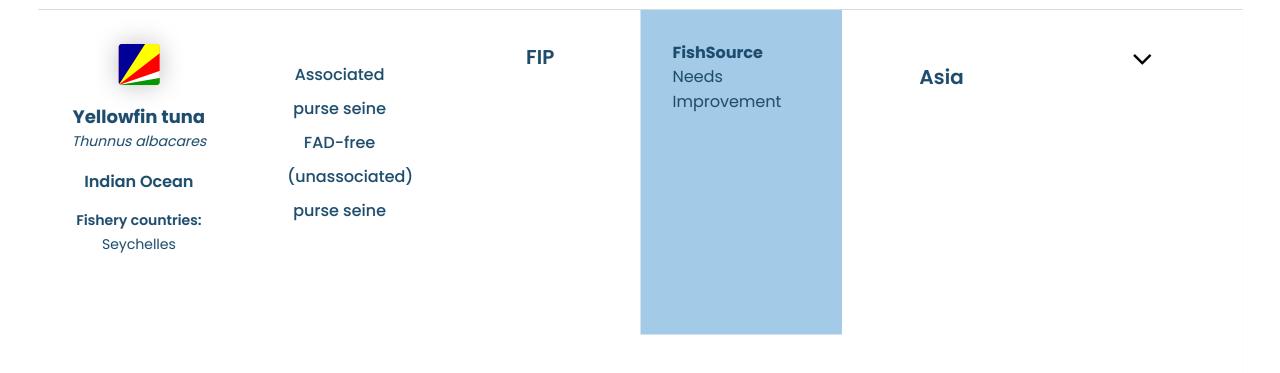
General Notes

• 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

Good Fish Guide - Tuna, yellowfin, Purse seine (FAD & Free School), Eastern Pacific

Seafood Watch Recommendations for Yellowfin tuna, Eastern Central Pacific Ocean, Unassociated purse seine (non-FAD)



Seafood Watch Avoid **Good Fish Guide** Improver 5 **Ocean Wise** Not recommended

Environmental 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

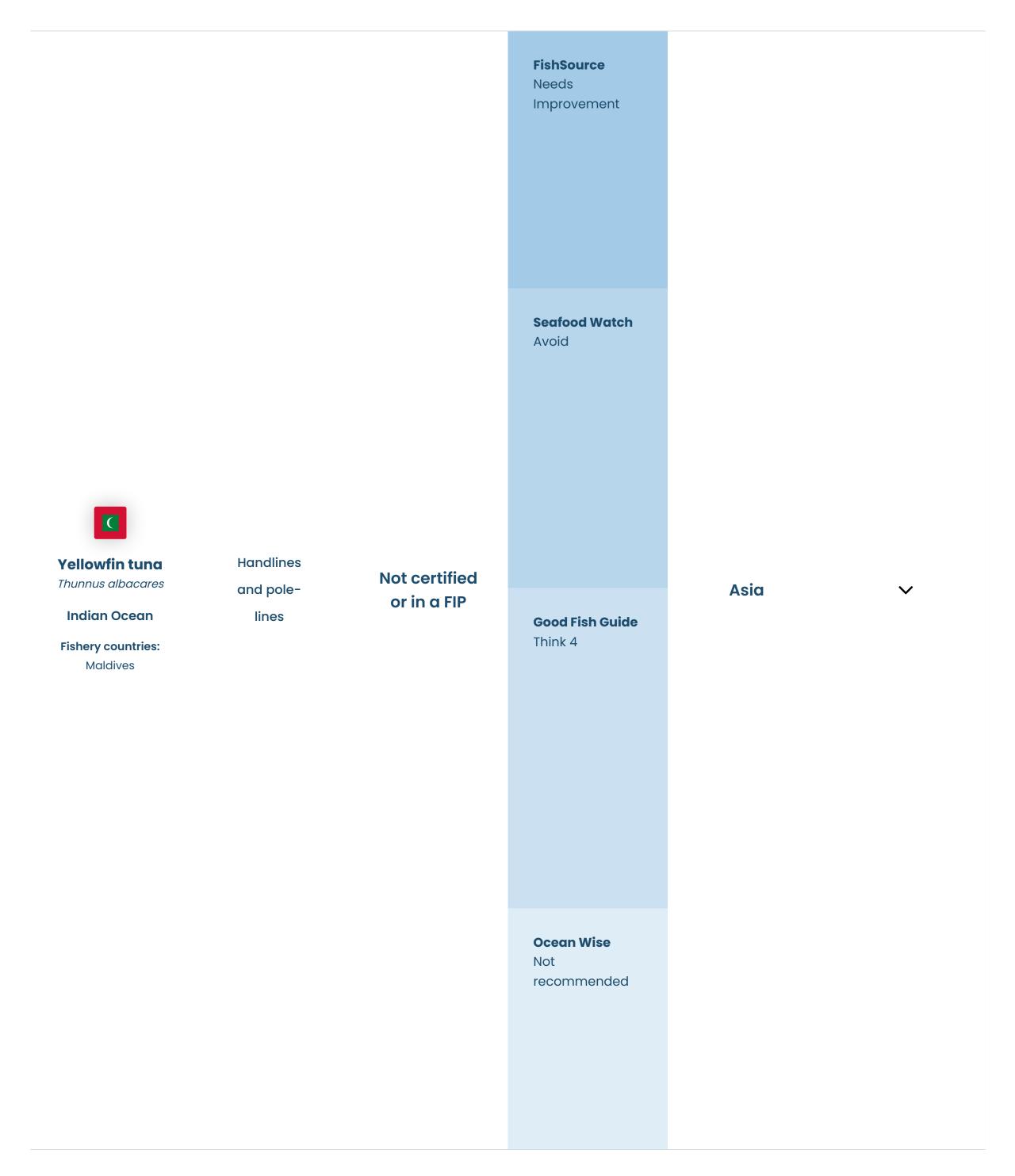
- This fishery is part of the <u>Indian Ocean tuna purse seine (SIOTI) FIP</u>.
- All purse seine fishing vessels are listed on the International Seafood Sustainability Foundation (ISSF)'s <u>ProActive Vessel Register (PVR)</u> and are audited against ISSF conservation measures.

References

Good Fish Guide - Tuna, yellowfin, Purse seine (FAD & Free School), Indian Ocean

Seafood Watch Recommendation for Yellowfin tuna, Indian Ocean, Floating object purse seine (FAD)

<u>Seafood Watch Recommendation for Yellowfin tuna, Indian Ocean, Unassociated purse seine (non-FAD)</u>



- 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

FishSource
Well Managed

Yellowfin tuna
Thunnus albacares
Western and
Central Pacific
Ocean
Fishery countries:
Australia

FishSource
Well Managed

Good Fish Guide
Best Choice 2

Asia ✓

Asia

Environmental Notes

- There are risks to sea turtles, sharks, and sea birds 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

MSC: <u>Australian Eastern Tuna and Billfish Fishery (albacore tuna, yellowfin tuna, bigeye tuna and swordfish)</u>

Good Fish Guide - Tuna, yellowfin, Longline, Western and Central Pacific, Marine Stewardship Council (MSC)



South Korea,
Tuvalu, Vanuatu

Good Fish Guide
Think 3

Environmental 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

• 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

MSC: PNA Western and Central Pacific skipjack, yellowfin and bigeye tuna purse seine fishery (FAD and non-FAD sets)

MSC: PNG Fishing Industry Association's purse seine Skipjack & Yellowfin Tuna Fishery

MSC: Solomon Islands skipjack and yellowfin tuna purse seine and pole and line

MSC: <u>Tri Marine Western and Central Pacific Skipjack and Yellowfin Tuna</u>

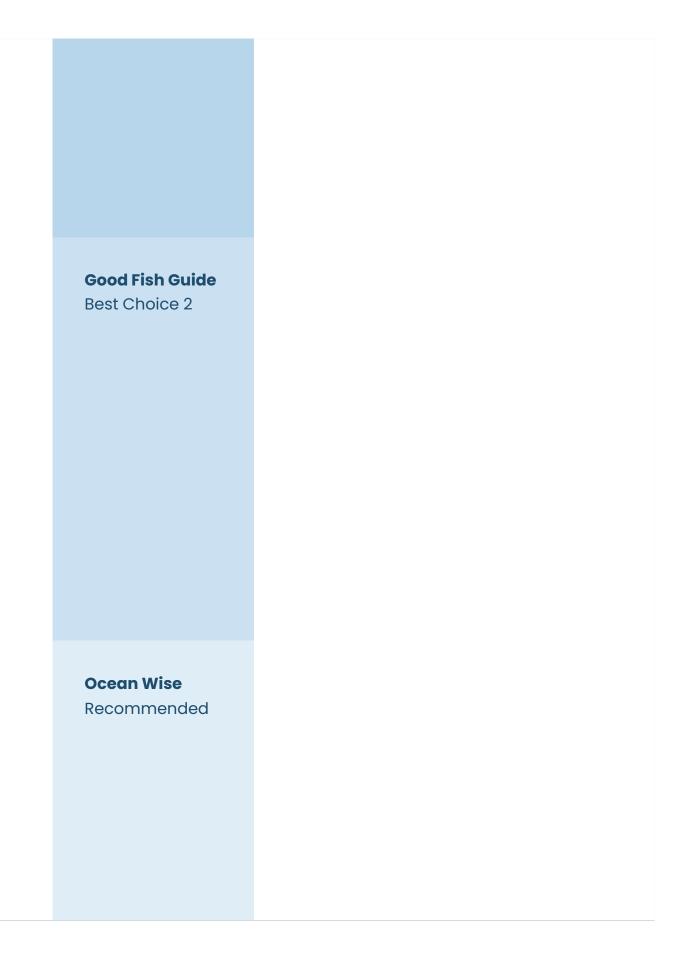
MSC: <u>Tropical Pacific yellowfin and skipjack free-school purse seine fishery</u>

MSC: WPSTA Western and Central Pacific skipjack and yellowfin free school purse seine

Good Fish Guide - Tuna, yellowfin, Purse seine (FAD & Free School), Western and Central Pacific

Seafood Watch Recommendation for Yellowfin tuna, Western Central Pacific Ocean, Certified





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

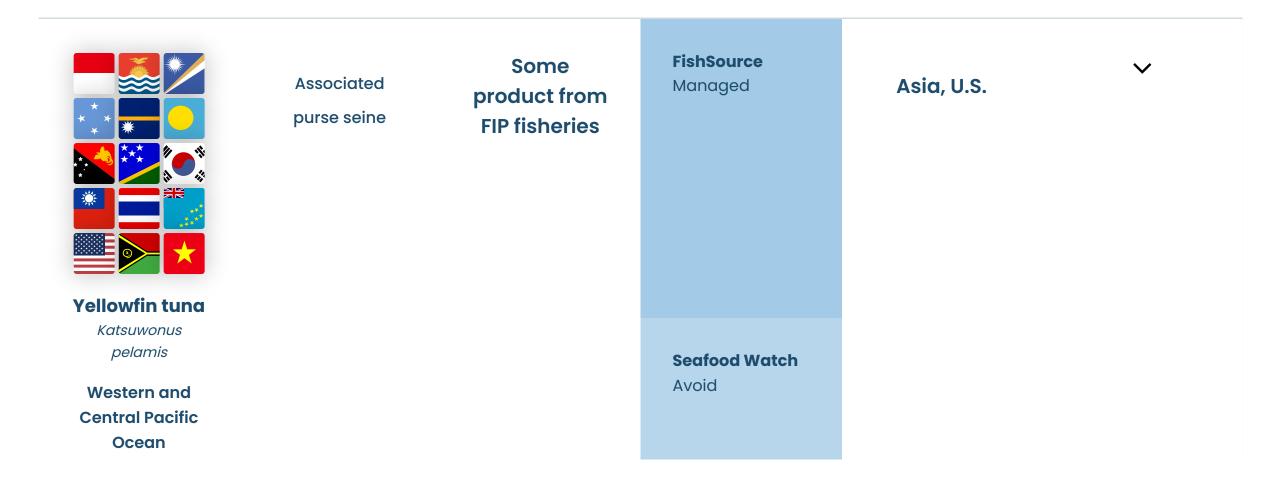
General Notes

• This fishery is part of the <u>Indonesia Western and Central Pacific Ocean yellowfin tuna - pole & line FIP</u>.

References

Good Fish Guide - Tuna, yellowfin, Pole & line; Handline, Western and Central Pacific

<u>Seafood Watch Recommendation for Yellowfin tuna, Western Central Pacific Ocean, Handlines and hand-operated pole-and-lines</u>



Flishery countries:
Indonesia, Kiribati,
Marshall Islands,
Micronesia, Nauru,
Palau, Papua New
Guinea, Solomon
Islands, South
Korea, Talwan,
Thailand, Tuvalu,
United States,
Vanuatu, Vietnam

Good Fish Guide
Think 3

Ocean Wise
Not

Environmental 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

- This fishery is part of the <u>Indonesia Southeast Sulawesi yellowfin tuna and skipjack tuna purse seine FIP</u> and the <u>Western and Central Pacific Ocean tuna purse seine (Thai Union) FIP</u>.
- 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

Good Fish Guide - Tuna, yellowfin, Purse seine (FAD & Free School), Western and Central Pacific

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



FAD-free (unassociated) purse seine Some product from FIP fisheries **FishSource** Managed

recommended

Asia, U.S.





Yellowfin tuna

Katsuwonus pelamis

Western and Central Pacific Ocean

Fishery countries:

Indonesia, Kiribati, Marshall Islands, Micronesia, Nauru, Palau, Papua New

Guinea, Solomon Islands, South

Korea, Taiwan,

Thailand, Tuvalu,

United States,

Vanuatu, Vietnam

Seafood WatchGood Alternative

Good Fish Guide

Think 3

Ocean Wise

Not recommended

Environmental Notes

- There are risks to sea turtles, sharks, and marine mammals with this fishery.
- Bycatch varies by gear type. Unassociated purse seine fisheries typically have less bycatch.
- This fishery is unlikely to have a significant impact on the sea bed.

General Notes

- This fishery is partly sourced from the Western and Central Pacific Ocean tuna purse seine (Thai Union) FIP.
- 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

Good Fish Guide - Tuna, yellowfin, Purse seine (FAD & Free School), Western and Central Pacific

Seafood Watch Recommendation for Yellowfin tuna, Western Central Pacific Ocean, Unassociated purse seine (non-FAD)

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