Monterey Bay Aquarium
Seafood Watch®

New and Updated Ratings

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Note: The changes below will only be visible in the dataset after the release date

Finalization Session: November 3, 2021, Release Date: December 6, 2021

Updated Ratings

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Dolphinfish	*Coryphaena hippurus*	Costa Rica - Eastern Central Pacific Ocean	Drifting longlines	Good Alternative	Avoid	Dolphinfish caught by Costa Rican fleets in the Eastern Central Pacific with drifting longlines has been downgraded to an Avoid due to red **Other Species** and **Management** ratings. A limited, exploratory stock assessment suggests overfishing is unlikely, but more information is needed about fishing levels north of the equator. In addition, the catch of at-risk species of seabirds, turtles, and sharks is a serious concern. Bycatch management is rated ineffective because the existing measures are inadequate given the potential impacts of the fishery. Longlines have minimal seafloor impacts, and some ecosystem-based management is in place.
Dolphinfish	*Coryphaena hippurus*	Eastern Central Pacific Ocean	Floating object purse seine (FAD)	Avoid	Avoid	Dolphinfish caught in the Eastern Central Pacific with floating object purse seines (FAD) remains an Avoid due to red **Other Species** and **Management** ratings. A limited, exploratory stock assessment suggests overfishing is unlikely, but more information is needed about fishing levels north of the equator. However, the catch of overfished Pacific bluefin and at-risk sharks is a major concern. Management is rated ineffective because the measures to reduce the catch of juvenile tuna and vulnerable bycatch species haven't been adopted. In addition, there are no measures to control or reduce fishing effort, meaning the amount of FAD purse seines used during a period of time. When floating objects called "FADs" are used to catch apex predator fish like tuna and sharks, the impacts on the food web can be significant. Purses seines have minimal habitat impacts.
Dolphinfish	*Coryphaena hippurus*	Eastern Central Pacific Ocean	Unassociated purse seine (non-FAD)	Good Alternative	Good Alternative	Dolphinfish caught in the Eastern Central Pacific with unassociated purse seines (non-FAD) remains a Good Alternative due to a red **Other Species** rating and yellow **Target Species** and **Management** ratings. A limited, exploratory stock assessment suggests overfishing is unlikely, but more information is needed about fishing levels north of the equator. However, this fishery catches at-risk manta rays and silky sharks. Management is rated moderately effective overall because stronger measures are needed to prevent the overfishing of tuna. This fishery catches species that play an essential role in the food web, and more robust measures may be needed to protect the ecosystem. Purses seines have minimal habitat impacts.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Dolphinfish	*Coryphaena hippurus*	Eastern Central Pacific Ocean | Northeast Pacific Ocean	Drifting longlines	**Avoid**	**Avoid**	Dolphinfish caught in the Eastern Central or Northeast Pacific with drifting longlines remains an Avoid due to red **Other Species** and **Management** ratings. A limited, exploratory stock assessment suggests overfishing is unlikely, but more information is needed about fishing levels north of the equator. However, the catch of turtles, seabirds, tuna, sharks, and other species is a major concern. Management is rated ineffective overall. Some measures reduce bycatch impacts, but they don't follow best practices, and their effectiveness is unknown. This fishery catches species that play an essential role in the food web, and more robust measures may be needed to protect the ecosystem. Longlines have minimal habitat impacts.
Dolphinfish	*Coryphaena hippurus*	Eastern Central Pacific Ocean | Southeast Pacific Ocean	Drifting longlines	**Avoid**	**Avoid**	Dolphinfish caught in the Eastern Central or Southeast Pacific with drifting longlines remains an Avoid due to red **Other Species** and **Management** ratings. A limited, exploratory stock assessment suggests overfishing in these regions. In addition, the catch of turtles, seabirds, tuna, sharks, and other species is a major concern. Management is rated ineffective overall. Some measures reduce bycatch impacts, but they don't follow best practices, and their effectiveness is unknown. This fishery catches species that play an essential role in the food web, and more robust measures may be needed to protect the ecosystem. Longlines have minimal habitat impacts.
Dolphinfish	*Coryphaena hippurus*	Ecuador - Southeast Pacific Ocean	Drifting longlines	**Good Alternative**	**Avoid**	Dolphinfish caught by Ecuadorian fleets in the Southeast Pacific with drifting longlines has been downgraded to an Avoid due to red **Other Species** and **Management** ratings. A limited, exploratory stock assessment suggests overfishing in these regions. Information about bycatch is limited, but there are indications that endangered or vulnerable turtles and sharks are caught. This fishery also catches yellowfin tuna, which are experiencing overfishing. Bycatch management is rated ineffective because the existing measures are inadequate given the potential impacts of the fishery. Drifting longlines don't contact the seafloor, and the Inter-American Tropical Tuna Commission has implemented some ecosystem-based measures that Ecuador must follow.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Dolphinfish	*Coryphaena hippurus*	Guatemala - Eastern Central Pacific Ocean	Drifting longlines	**Avoid**	**Avoid**	Dolphinfish caught by Guatemalan fleets in the Eastern Central Pacific with drifting longlines remains an Avoid due to red **Other Species** and **Management** ratings. A limited, exploratory stock assessment suggests overfishing is unlikely, but more information is needed about fishing levels north of the equator. Information about bycatch is lacking, but there are indications that endangered or vulnerable turtles and sharks are caught. While there are some protections for vulnerable bycatch species, management is rated ineffective overall, mainly because there are no conservation measures for dolphinfish. Drifting longlines don't contact the seafloor, and some ecosystem-based measures have been implemented by the Guatemalan government and the Inter-American Tropical Tuna Commission.
Dolphinfish	*Coryphaena hippurus*	Panama - Eastern Central Pacific Ocean	Drifting longlines	**Good Alternative**	**Avoid**	Dolphinfish caught by Panamanian fleets in the Eastern Central Pacific with drifting longlines has been downgraded to an Avoid due to red **Other Species** and **Management** ratings. A limited, exploratory stock assessment suggests overfishing is unlikely. Information about bycatch is limited, but there are indications that endangered or vulnerable turtles and sharks are caught. This fishery also catches yellowfin tuna, which are experiencing overfishing. Bycatch management is rated ineffective because the existing measures are inadequate given the potential impacts of the fishery. Drifting longlines don't contact the seafloor, and the Inter-American Tropical Tuna Commission has implemented some ecosystem-based measures that Panama must follow.
Dolphinfish	*Coryphaena hippurus*	United States - Hawaii, Eastern Central Pacific Ocean	Handlines and hand-operated pole-and-lines	**Good Alternative**	**Good Alternative**	Dolphinfish caught by U.S. fleets in the Eastern Central Pacific with handlines and hand-operated pole-and-lines remains a Good Alternative due to yellow **Target Species**, **Other Species**, and **Management** ratings. A limited, exploratory stock assessment suggests overfishing is unlikely, but more information is needed about fishing levels north of the equator. Also, this fishery catches bigeye tuna, and there's significant uncertainty about the latest assessment data. Management is rated moderately effective overall. There are conservation measures for some tuna stocks, but they are needed for all the species covered by this Seafood Watch assessment. Species that play an essential role in the food web are caught or used for bait, and more robust measures may be needed to protect the ecosystem. Pole-and-line gears don't impact the habitat.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Dolphinfish	*Coryphaena hippurus*	United States - Hawaii, Eastern Central Pacific Ocean	Trolling lines	**Good Alternative**	**Good Alternative**	Dolphinfish caught by U.S. fleets in the Eastern Central Pacific with trolling lines remains a Good Alternative due to yellow **Target Species**, **Other Species**, and **Management** ratings. A limited, exploratory stock assessment suggests overfishing is unlikely, but more information is needed about fishing levels north of the equator. While trolling lines are highly selective, this fishery catches bigeye tuna, and there's significant uncertainty about the latest assessment data. Management is rated moderately effective overall. There are conservation measures for some tuna stocks, but they are needed for all the species covered by this Seafood Watch assessment. Species that play an essential role in the food web are caught or used for bait, and more robust measures may be needed to protect the ecosystem. Trolling lines don't impact habitat.
Dolphinfish	*Coryphaena hippurus*	United States - Hawaii, Eastern Central Pacific Ocean | Northeast Pacific Ocean (Covers U.S. vessels landing in Hawaii or California)	Longline (deep-set)	**Good Alternative**	**Good Alternative**	Dolphinfish caught by U.S. fleets in the Eastern Central or Northeast Pacific with deep-set longlines remains a Good Alternative due to a red **Other Species** rating and yellow **Target Species** and **Management** ratings. A limited, exploratory stock assessment suggests overfishing is unlikely, but more information is needed about fishing levels north of the equator. However, the catch of at-risk or overexploited whales, turtles, seabirds, and sharks is a major concern. Management is rated moderately effective overall. There are conservation measures for some tuna and swordfish stocks, but they are needed for all the species covered by this Seafood Watch assessment. In addition, regulations to reduce impacts on bycatch species are in place. This fishery catches species that play an essential role in the food web, and there are policies to protect the ecosystem, though it's unknown if they effectively protect all ecologically important species. Longlines have minimal habitat impacts. This recommendation covers U.S. vessels landing in Hawaii or California.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Dolphinfish	*Coryphaena hippurus*	United States - Hawaii, Eastern Central Pacific Ocean | Northeast Pacific Ocean	Longline (shallow-set)	**Good Alternative**	**Good Alternative**	Dolphinfish caught by U.S. fleets in the Eastern Central or Northeast Pacific with shallow-set longlines remains a Good Alternative due to a red **Other Species** rating and yellow **Target Species** and **Management** ratings. A limited, exploratory stock assessment suggests overfishing is unlikely, but more information is needed about fishing levels north of the equator. However, the catch of at-risk turtles is a major concern. Management is rated moderately effective overall. There are conservation measures for some tuna and swordfish stocks, but they are needed for all the species covered by this Seafood Watch assessment. In addition, there are measures to reduce impacts on bycatch species, including 100 percent observer coverage. This fishery catches species that play an essential role in the food web, and there are policies to protect the ecosystem, though it's unknown if they effectively protect all ecologically important species. Longlines have minimal habitat impacts.
Dolphinfish	*Coryphaena hippurus*	United States - Hawaii, Northwest Pacific Ocean | Western Central Pacific Ocean	Longline (deep-set)	**Good Alternative**	**Good Alternative**	Dolphinfish caught by U.S. fleets in the Northwest or Western Central Pacific with deep-set longlines remains a Good Alternative due to a red **Other Species** rating and yellow **Target Species** and **Management** ratings. A limited, exploratory stock assessment suggests overfishing is unlikely, but more information is needed about fishing levels north of the equator. However, the catch of at-risk or overexploited whales, turtles, seabirds, sharks, and marlins is a major concern. Management is rated moderately effective overall. There are conservation measures for some tuna and swordfish stocks, but they are needed for all the species covered by this Seafood Watch assessment. In addition, regulations to reduce impacts on bycatch species are in place. This fishery catches species that play an essential role in the food web, and there are policies to protect the ecosystem, though it's unknown if they effectively protect all ecologically important species. Longlines have minimal habitat impacts.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Dolphinfish	*Coryphaena hippurus*	United States - Hawaii, Northwest Pacific Ocean | Western Central Pacific Ocean	Longline (shallow-set)	**Good Alternative**	**Good Alternative**	Dolphinfish caught by U.S. fleets in the Northwest or Western Central Pacific with shallow-set longlines remains a Good Alternative due to a red **Other Species** rating and yellow **Target Species** and **Management** ratings. A limited, exploratory stock assessment suggests overfishing is unlikely, but more information is needed about fishing levels north of the equator. However, the catch of at-risk turtles is a major concern. Management is rated moderately effective overall. There are conservation measures for some tuna and swordfish stocks, but they are needed for all the species covered by this Seafood Watch assessment. In addition, there are measures to reduce impacts on bycatch species, including 100 percent observer coverage. This fishery catches species that play an essential role in the food web, and there are policies to protect the ecosystem, though it's unknown if they effectively protect all ecologically important species. Longlines have minimal habitat impacts.
Octopus, Big Blue	*Octopus cyanea*	Philippines - Western Central Pacific Ocean	Hand implements	**Avoid**	**Avoid**	Big blue octopus caught in the Philippines with hand implements remains an Avoid due to red **Target Species**, **Other Species**, and **Management** ratings. It's unknown if the octopus stocks are overfished or experiencing overfishing. While selective, artisanal fishing methods are used, other highly vulnerable species of octopus are caught, and their stock statuses are unknown too. Some conservation measures are in place for all commercial fisheries, but management is rated ineffective overall because there are no measures specific to the octopus fishery. In addition, fishermen using hand implements may be walking on and harming coral reef habitat. There have been efforts to develop ecosystem-based management, but related measures and policies haven't been implemented.
Octopus, Big Blue	*Octopus cyanea*	Philippines - Western Central Pacific Ocean	Vertical lines	**Avoid**	**Avoid**	Big blue octopus caught in the Philippines with vertical lines remains an Avoid due to red **Target Species**, **Other Species**, and **Management** ratings. It's unknown if the octopus stocks are overfished or experiencing overfishing. While selective, artisanal fishing methods are used, other highly vulnerable species of octopus are caught, and their stock statuses are unknown too. Some conservation measures are in place for all commercial fisheries, but management is rated ineffective overall because there are no measures specific to the octopus fishery. Vertical lines typically have low habitat impacts because fishing takes place on boats, and seafloor contact is minimal. There have been efforts to develop ecosystem-based management, but related measures and policies haven't been implemented.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Octopus, Common	*Octopus vulgaris*	Philippines - Western Central Pacific Ocean	Hand implements	**Avoid**	**Avoid**	Common octopus caught in the Philippines with hand implements remains an Avoid due to red **Target Species**, **Other Species**, and **Management** ratings. It's unknown if the octopus stocks are overfished or experiencing overfishing. While selective, artisanal fishing methods are used, other highly vulnerable species of octopus are caught, and their stock statuses are unknown too. Some conservation measures are in place for all commercial fisheries, but management is rated ineffective overall because there are no measures specific to the octopus fishery. In addition, fishermen using hand implements may be walking on and harming coral reef habitat. There have been efforts to develop ecosystem-based management, but related measures and policies haven't been implemented.
Octopus, Common	*Octopus vulgaris*	Philippines - Western Central Pacific Ocean	Vertical lines	**Avoid**	**Avoid**	Common octopus caught in the Philippines with vertical lines remains an Avoid due to red **Target Species**, **Other Species**, and **Management** ratings. It's unknown if the octopus stocks are overfished or experiencing overfishing. While selective, artisanal fishing methods are used, other highly vulnerable species of octopus are caught, and their stock statuses are unknown too. Some conservation measures are in place for all commercial fisheries, but management is rated ineffective overall because there are no measures specific to the octopus fishery. Vertical lines typically have low habitat impacts because fishing takes place on boats, and seafloor contact is minimal. There have been efforts to develop ecosystem-based management, but related measures and policies haven't been implemented.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Salmon, Atlantic	*Salmo salar*	Canada - British Columbia, Northeast Pacific Ocean	Marine net pen	**Good Alternative**	**Avoid**	Atlantic salmon farmed in British Columbia, Canada, in marine net pens has been downgraded to an Avoid due to red **Chemical Use** and **Disease** ratings. On average, from 2018-2020, half the farms didn't use any antimicrobials, but the other half used them multiple times a year. Even though pesticides were used less than once per site per year, antimicrobials listed as highly important for human medicine by the World Health Organization were used an average of 1.3 times per site per year. The open design of net pens means there's an inherent risk of farmed salmon transmitting disease to wild salmon populations. Many pathogens are associated with both farmed and wild salmon, but the impacts to wild fish remain inconclusive. Parasitic sea lice – which are highly variable each year and across production areas – are likely to have substantial impacts to wild salmon in some areas and years. While salmon farming is not considered a primary cause of declining wild salmon populations, the potential transmission of pathogens and parasites from farms to vulnerable populations is a high concern. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.
Salmon, Atlantic	*Salmo salar*	Canada - New Brunswick, Northwest Atlantic Ocean	Marine net pen	**Avoid**	**Avoid**	Atlantic salmon farmed in New Brunswick, Canada, in marine net pens remains an Avoid due to red **Chemical Use**, **Escapes**, and **Disease** ratings. Pesticide use to treat parasitic sea lice was high through 2018, with multiple treatments per site per year, and while the use has declined substantially since then, more information is needed to confirm this trend and better understand the potential impacts to other species. Producers have implemented best practices to prevent escapes, but large- and small-scale escapes have occurred over the last decade. Farmed Atlantic salmon are genetically distinct from wild salmon, and escaped farmed salmon are regularly detected in rivers with vulnerable wild Atlantic salmon populations. While salmon farming is not considered a primary cause of declining wild salmon populations, parasitic sea lice numbers on salmon farms in New Brunswick are high, so additional impacts to vulnerable populations are a high concern. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Salmon, Atlantic	*Salmo salar*	Canada - Newfoundland and Labrador, Northwest Atlantic Ocean	Marine net pen	**Avoid**	**Avoid**	Atlantic salmon farmed in Newfoundland and Labrador, Canada, in marine net pens remains an Avoid due to red **Chemical Use**, **Escapes**, and **Disease** ratings. Pesticide use to treat parasitic sea lice was high through 2018, with multiple treatments per site per year, and while the use has declined substantially since then, more information is needed to confirm this trend and the potential impacts to other species. Producers have implemented best practices to prevent escapes, but large- and small-scale escapes have occurred over the last decade. Farmed Atlantic salmon are genetically distinct from wild salmon, and escaped salmon have been shown to have a negative impact on wild Atlantic salmon in Newfoundland rivers. While salmon farming is not considered a primary cause of declining wild salmon populations, parasitic sea lice numbers on salmon farms in Newfoundland are poorly understood and potentially high, so additional impacts to vulnerable populations are a high concern. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.
Salmon, Atlantic	*Salmo salar*	Canada - Nova Scotia, Northwest Atlantic Ocean	Marine net pen	**Avoid**	**Good Alternative**	Atlantic salmon farmed in Nova Scotia, Canada, in marine net pens has been upgraded to a Good Alternative mainly due to a green **Chemical Use** rating and yellow **Escapes** and **Disease** ratings. Antimicrobial use has declined to less than one treatment per site per year, and no pesticides have been used to treat parasitic sea lice since at least 2016. Producers have implemented best practices to prevent escapes, and reported escapes are very low. Few escaped fish are detected in rivers, though better monitoring would be useful. The low incidence of sea lice also means a lower risk of disease transmission to wild species. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Salmon, Atlantic	*Salmo salar*	Chile - Southeast Pacific Ocean (Region X, Los Lagos)	Marine net pen	**Avoid**	**Avoid**	Atlantic salmon farmed in Chile's Region X (Los Lagos) in marine net pens remains an Avoid due to a critical **Chemical Use** rating. The high use of antimicrobials and pesticides to control diseases and parasitic sea lice is a critical concern. Atlantic salmon are treated, on average, 3.1 times per site per year with antimicrobials listed as highly important for human medicine by the World Health Organization. The potential development of antimicrobial resistance is a high concern. Determining the origin, drivers, and scale of resistance is challenging, and this is an active area of research in Chile. Still, the widespread, repetitive, and prolonged use of antimicrobials on Atlantic salmon farms is also likely contributing to bacterial resistance. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.
Salmon, Atlantic	*Salmo salar*	Chile - Southeast Pacific Ocean (Region XI, Aysen)	Marine net pen	**Avoid**	**Avoid**	Atlantic salmon farmed in Chile's Region XI (Aysen) in marine net pens remains an Avoid due to a critical **Chemical Use** rating. The high use of antimicrobials and pesticides to control diseases and parasitic sea lice is a critical concern. Atlantic salmon are treated, on average, 2.9 times per site per year with antimicrobials listed as highly important for human medicine by the World Health Organization. The potential development of antimicrobial resistance is a high concern. Determining the origin, drivers, and scale of resistance is challenging, and this is an active area of research in Chile. Still, the widespread, repetitive, and prolonged use of antimicrobials on Atlantic salmon farms is also likely contributing to bacterial resistance. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Salmon, Atlantic	*Salmo salar*	Chile - Southeast Pacific Ocean (Region XII, Magallanes)	Marine net pen	**Avoid**	**Good Alternative**	Atlantic salmon farmed in Chile's Region XII (Magallanes) in marine net pens has been upgraded to a Good Alternative due to a red **Effluent** rating and yellow ratings for **six criteria**. Chemical use is a concern across most of Chile's Atlantic salmon production areas, but the incidence of bacterial disease and parasitic sea lice is currently relatively low in Region XII. Antimicrobials are used 0.5 times per site per year, but the chemicals used are considered highly important for human medicine by the World Health Organization, and there's a high concern for the development of antimicrobial resistance across Chile. However, these factors indicate that judicious use must be very highly prioritized. Effluent impacts on the seabed can be substantial, and compliance with impact thresholds is poor in Region XII, which is particularly concerning given the ongoing expansion of production. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.
Salmon, Atlantic	*Salmo salar*	Norway - Northeast Atlantic Ocean (Production Area 1, Swedish border to Jæren)	Marine net pen	**Avoid**	**Good Alternative**	Atlantic salmon farmed in Norway's Production Area 1 (Swedish border to Jæren) in marine net pens has been upgraded to a Good Alternative. Chemical use, escapes, and disease are the main areas of concern across all of Norway's 13 salmon production areas, but the degree of environmental impacts varies. Chemical use to treat parasitic sea lice has declined throughout Norway, but that has been driven by the development of resistance. In Production Area 1, pesticides are still being used more than once per site per year. Also, the use of copper antifoulants is a moderate concern. Escapes of farmed salmon can impact the genetic composition and fitness of wild, native salmon populations. However, escapes are less frequent in Production Area 1, and the wild salmon population is resilient to further genetic change. The open design of net pens means there's a risk of spreading disease to wild salmon and sea trout populations, but the farms in this area have a low risk of parasitic sea lice transmission impacting those populations. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Salmon, Atlantic	*Salmo salar*	Norway - Northeast Atlantic Ocean (Production Area 2, Ryfylket)	Marine net pen	**Avoid**	**Avoid**	Atlantic salmon farmed in Norway's Production Area 2 (Ryfylket) in marine net pens remains an Avoid due to a critical **Disease** rating. The high risk of mortality due to parasitic sea lice transmission from farmed salmon to vulnerable wild salmon and sea trout populations is a critical concern. Chemical use and escapes are concerns across all of Norway's 13 salmon production areas, but the degree of environmental impacts varies. Chemical use to treat parasitic sea lice has declined throughout Norway, but that has been driven by the development of resistance. In Production Area 2, pesticides are now being used less than once per site per year. Also, the use of copper antifoulants is a moderate concern. Escapes of farmed salmon can impact the genetic composition and fitness of wild, native salmon populations. However, data indicate escape numbers are lower in this area, and the wild salmon population is resilient to further genetic change. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.
Salmon, Atlantic	*Salmo salar*	Norway - Northeast Atlantic Ocean (Production Area 3, Karmøy to Sotra)	Marine net pen	**Avoid**	**Avoid**	Atlantic salmon farmed in Norway's Production Area 3 (Karmøy to Sotra) in marine net pens remains an Avoid due to critical **Escapes** and **Disease** ratings and a red **Chemical Use** rating. Escaped farmed salmon is a critical conservation concern because the data indicate they're impacting the genetic composition and fitness of wild, native salmon populations. The high risk of mortality due to parasitic sea lice transmission from farmed salmon to vulnerable wild salmon and sea trout populations is another critical concern. In addition, chemicals to treat parasitic sea lice are used more than once per site per year. Also, the use of antifouling chemicals poses a high risk of environmental impacts in Production Area 3. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Salmon, Atlantic	*Salmo salar*	Norway - Northeast Atlantic Ocean (Production Area 4, Nordhordland to Stadt)	Marine net pen	Avoid	Avoid	Atlantic salmon farmed in Norway's Production Area 4 (Nordhordland to Stadt) in marine net pens remains an Avoid due to critical **Escapes** and **Disease** ratings and a red **Chemical Use** rating. Escaped salmon is a critical conservation concern because the data indicate they're impacting the genetic composition and fitness of wild, native salmon populations. The high risk of mortality due to parasitic sea lice transmission from farmed salmon to vulnerable wild salmon and sea trout populations is another critical concern. In addition, chemicals to treat parasitic sea lice are used more than once per site per year, and the use of antifouling chemicals poses a high risk of environmental impacts in Production Area 4. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.
Salmon, Atlantic	*Salmo salar*	Norway - Northeast Atlantic Ocean (Production Area 5, Stadt to Hustadvika)	Marine net pen	Avoid	Avoid	Atlantic salmon farmed in Norway's Production Area 5 (Stadt to Hustadvika) in marine net pens remains an Avoid due to a critical **Disease** rating and a red **Escapes** rating. The high risk of mortality due to parasitic sea lice transmission from farmed salmon to vulnerable wild salmon and sea trout populations is a critical concern. Escaped salmon is a high concern because the data indicate there's a risk of impacting the genetic composition and fitness of wild, native salmon populations. In addition, chemical use is a concern across all of Norway's 13 salmon production areas, but the degree of environmental impacts varies. Chemical use to treat parasitic sea lice has declined throughout Norway, but that has been driven by the development of resistance. In Production Area 5, they're still being used more than once per site per year. Also, the use of copper antifoulants is a moderate concern. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Salmon, Atlantic	*Salmo salar*	Norway - Northeast Atlantic Ocean (Production Area 6, Nordmøre and Sør-Trøndelag)	Marine net pen	**Avoid**	**Avoid**	Atlantic salmon farmed in Norway's Production Area 6 (Nordmøre and Sør-Trøndelag) in marine net pens remains an Avoid due to a critical **Disease** rating. The high risk of mortality due to parasitic sea lice transmission from farmed salmon to vulnerable wild salmon and sea trout populations is a critical concern. In addition, chemical use and escapes are concerns across all of Norway's 13 salmon production areas, but the degree of environmental impacts varies. Chemical use to treat parasitic sea lice has declined throughout Norway, but that has been driven by the development of resistance. In Production Area 6, pesticides are now being used less than once per site per year. Also, the use of copper antifoulants is a moderate concern. Escapes of farmed salmon can impact the genetic composition and fitness of wild, native salmon populations. However, data indicate escape numbers are lower in this area, and the wild salmon population is somewhat resilient to further genetic change. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.
Salmon, Atlantic	*Salmo salar*	Norway - Northeast Atlantic Ocean (Production Area 7, Nord-Trøndelag and Bindal)	Marine net pen	**Avoid**	**Avoid**	Atlantic salmon farmed in Norway's Production Area 7 (Nord-Trøndelag and Bindal) in marine net pens remains an Avoid due to a critical **Disease** rating and a red **Escapes** rating. The high risk of mortality due to parasitic sea lice transmission from farmed salmon to vulnerable wild salmon and sea trout populations is a critical concern. Escaped salmon is a high concern because the data indicate there's a risk of impacting the genetic composition and fitness of wild, native salmon populations. In addition, chemical use is a concern across all of Norway's 13 salmon production areas, but the degree of environmental impacts varies. Chemical use to treat parasitic sea lice has declined throughout Norway, but that has been driven by the development of resistance. In Production Area 7, they're still being used more than once per site per year. Also, the use of copper antifoulants is a moderate concern. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Salmon, Atlantic	*Salmo salar*	Norway - Northeast Atlantic Ocean (Production Area 8, Helgeland to Bodø)	Marine net pen	**Avoid**	**Avoid**	Atlantic salmon farmed in Norway's Production Area 8 (Helgeland to Bodø) in marine net pens remains an Avoid due to a critical **Escapes** rating and a red **Disease** rating. Escaped salmon is a critical conservation concern because the data indicate they're impacting the genetic composition and fitness of wild, native salmon populations. The high risk of mortality due to parasitic sea lice transmission from farmed salmon to vulnerable wild salmon and sea trout populations is another significant concern. In addition, chemical use is a concern across all of Norway's 13 salmon production areas, but the degree of environmental impacts varies. Chemical use to treat parasitic sea lice has declined throughout Norway, but that has been driven by the development of resistance. In Production Area 8, but they're still being used more than once per site per year. Also, the use of copper antifoulants is a moderate concern. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.
Salmon, Atlantic	*Salmo salar*	Norway - Northeast Atlantic Ocean (Production Area 9, Vestfjorden and Vesterålen)	Marine net pen	**Avoid**	**Avoid**	Atlantic salmon farmed in Norway's Production Area 9 (Vestfjorden and Vesterålen) in marine net pens remains an Avoid due to a critical **Escapes** rating and a red **Disease** rating. Escaped salmon is a critical conservation concern because the data indicate they're impacting the genetic composition and fitness of wild, native salmon populations. The high risk of mortality due to parasitic sea lice transmission from farmed salmon to vulnerable wild salmon and sea trout populations is another significant concern. In addition, chemical use is a concern across all of Norway's 13 salmon production areas, but the degree of environmental impacts varies. Chemical use to treat parasitic sea lice has declined throughout Norway, but that has been driven by the development of resistance. In Production Area 9, they're still being used more than once per site per year. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Salmon, Atlantic	*Salmo salar*	Norway - Northeast Atlantic Ocean (Production Area 10, Andøya to Senja)	Marine net pen	**Avoid**	**Avoid**	Atlantic salmon farmed in Norway's Production Area 10 (Andøya to Senja) in marine net pens remains an Avoid due to a critical **Escapes** rating and a red **Disease** rating. Escaped salmon is a critical conservation concern because the data indicate they're impacting the genetic composition and fitness of wild, native salmon populations. The high risk of mortality due to parasitic sea lice transmission from farmed salmon to vulnerable wild salmon and sea trout populations is another significant concern. In addition, chemical use is a concern across all of Norway's 13 salmon production areas, but the degree of environmental impacts varies. Chemical use to treat parasitic sea lice has declined throughout Norway, but that has been driven by the development of resistance. In Production Area 10, they're still being used more than once per site per year. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.
Salmon, Atlantic	*Salmo salar*	Norway - Northeast Atlantic Ocean (Production Area 11, Kvaløya to Loppa)	Marine net pen	**Avoid**	**Avoid**	Atlantic salmon farmed in Norway's Production Area 11 (Kvaløya to Loppa) in marine net pens remains an Avoid due to a critical **Escapes** rating. Escaped salmon is a critical conservation concern because the data indicate they're impacting the genetic composition and fitness of wild, native salmon populations. In addition, chemical use and disease are concerns across all of Norway's 13 salmon production areas, but the degree of environmental impacts varies. Chemical use to treat parasitic sea lice has declined throughout Norway, but that has been driven by the development of resistance. In Production Area 11, they're still being used more than once per site per year. The open design of net pens means there's a high risk of spreading disease to wild salmon and sea trout populations, but the farms in this area have a low risk of parasitic sea lice transmission impacting those populations. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Salmon, Atlantic	*Salmo salar*	Norway - Northeast Atlantic Ocean (Production Area 12, West Finnmark)	Marine net pen	**Avoid**	**Good Alternative**	Atlantic salmon farmed in Norway's Production Area 12 (West Finnmark) in marine net pens has been upgraded to a Good Alternative. Chemical use, escapes, and disease are the main areas of concern across all of Norway's 13 salmon production areas, but the degree of environmental impacts varies. Chemical use to treat parasitic sea lice has declined, but that has been driven by the development of resistance. In Production Area 12, they're still being used more than once per site per year. Escapes of farmed salmon can impact the genetic composition and fitness of wild, native salmon populations. However, the wild salmon population in this area is resilient to further genetic change. The open design of net pens means there's a risk of spreading disease to wild salmon and sea trout populations, but the farms in this area have a low risk of parasitic sea lice transmission impacting those populations. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.
Salmon, Atlantic	*Salmo salar*	Norway - Northeast Atlantic Ocean (Production Area 13, East Finnmark)	Marine net pen	**Avoid**	**Good Alternative**	Atlantic salmon farmed in Norway's Production Area 13 (East Finnmark) in marine net pens has been upgraded to a Good Alternative. Chemical use, escapes, and disease are the main areas of concern across all of Norway's 13 salmon production areas, but the degree of environmental impact varies. Chemical use to treat parasitic sea lice has declined, but that has been driven by the development of resistance. In Production Area 13, the use of pesticides is greater than once per site per year, but they are of lower-risk types and there are very few farms in the area, thus limiting the concern for cumulative impacts. Escapes of farmed salmon can impact the genetic composition and fitness of wild, native salmon populations. However, escapes are less frequent in Production Area 13, and the wild salmon population is somewhat resilient to further genetic change. The open design of net pens means there's a risk of spreading disease to wild salmon and sea trout populations, but the farms in this area have a low risk of parasitic sea lice transmission impacting those populations. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Salmon, Atlantic	*Salmo salar*	Scotland - Northeast Atlantic Ocean (Northwest)	Marine net pen	**Avoid**	**Avoid**	Atlantic salmon farmed in Northwest Scotland (Highland) in marine net pens remains an Avoid due to a critical **Escapes** rating and red **Chemical Use** and **Disease** ratings. Farmed Atlantic salmon are genetically distinct from wild Atlantic salmon, and large- and small-scale escapes continue. Due to the vulnerable status of wild salmon populations and the unknown degree of genetic impact, this is a critical conservation concern. Chemical use to treat parasitic sea lice has declined over the last decade, but pesticides are still used multiple times per site per year. Resistance to common treatments is widespread, likely due to overuse. Parasitic sea lice numbers are often high, and there's little monitoring of potential impacts to declining wild salmon and sea trout populations in Scotland. While salmon farming is not considered a primary cause of the declines, the potential transmission of pathogens and parasites from farms to vulnerable populations is a high concern. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.
Salmon, Atlantic	*Salmo salar*	Scotland - Northeast Atlantic Ocean (Southwest)	Marine net pen	**Avoid**	**Avoid**	Atlantic salmon farmed in Southwest Scotland in marine net pens remains an Avoid due to a critical **Escapes** rating and red **Chemical Use** and **Disease** ratings. Farmed Atlantic salmon are genetically distinct from wild Atlantic salmon, and large- and small-scale escapes continue. Due to the vulnerable status of wild salmon populations and the unknown degree of genetic impact, this is a critical conservation concern. Chemical use to treat parasitic sea lice has declined over the last decade, but pesticides are still used multiple times per site per year. Resistance to common treatments is widespread, likely due to overuse. Parasitic sea lice numbers are often high, and there's little monitoring of potential impacts to declining wild salmon and sea trout populations in Scotland. While salmon farming is not considered a primary cause of the declines, the potential transmission of pathogens and parasites from farms to vulnerable populations is a high concern. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Salmon, Atlantic	*Salmo salar*	Scotland - Orkney Islands, Northeast Atlantic Ocean	Marine net pen	**Good Alternative**	**Good Alternative**	Atlantic salmon farmed in Scotland's Orkney Islands in marine net pens remains a Good Alternative mainly due to a green **Chemical Use** rating and yellow **Escapes** and **Disease** ratings. Antimicrobial use is low, and as parasitic sea lice are low in the Orkney Islands, pesticides are used less than once per site per year. Escapes of farmed Atlantic salmon are a risk to the genetic composition and fitness of wild, native salmon populations. However, no escape events have been reported since 2012, and there are no local wild salmon populations. The low incidence of parasitic sea lice also means a lower risk of disease transmission to wild species. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.
Salmon, Atlantic	*Salmo salar*	Scotland - Shetland Islands, Northeast Atlantic Ocean	Marine net pen	**Avoid**	**Avoid**	Atlantic salmon farmed in Scotland's Shetland Islands in marine net pens remains an Avoid due to red **Chemical Use**, **Escapes**, and **Disease** ratings. Chemical use to treat parasitic sea lice has declined over the last decade, but pesticides are still used multiple times per site per year. Resistance to common treatments is widespread, likely due to overuse. Farmed Atlantic salmon are genetically distinct from wild Atlantic salmon, and large- and small-scale escapes continue. However, there are no local wild salmon populations in the Shetland Islands. Parasitic sea lice numbers are often high, and there's little monitoring of potential impacts to declining wild salmon and sea trout populations in Scotland. While salmon farming is not considered a primary cause of the declines, the potential transmission of pathogens and parasites from farms to vulnerable populations is a high concern. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Salmon, Atlantic	*Salmo salar*	Scotland - Western Isles, Northeast Atlantic Ocean	Marine net pen	**Avoid**	**Avoid**	Atlantic salmon farmed in Scotland's Western Isles in marine net pens remains an Avoid due to a critical **Escapes** rating and red **Chemical Use** and **Disease** ratings. Farmed Atlantic salmon are genetically distinct from wild Atlantic salmon, and large- and small-scale escapes continue. Due to the vulnerable status of wild salmon populations and the unknown degree of genetic impact, this is a critical conservation concern. Chemical use to treat parasitic sea lice has declined over the last decade, but pesticides are still used multiple times per site per year. Resistance to common treatments is widespread, likely due to overuse. Parasitic sea lice numbers are often high, and there's little monitoring of potential impacts to declining wild salmon and sea trout populations in Scotland. While salmon farming is not considered a primary cause of the declines, the potential transmission of pathogens and parasites from farms to vulnerable populations is a high concern. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.
Salmon, Atlantic	*Salmo salar*	United States - Maine, Northwest Atlantic Ocean	Marine net pen	**Good Alternative**	**Good Alternative**	Atlantic salmon farmed in Maine in marine net pens remains a Good Alternative mainly due to a green **Chemical Use** rating and yellow **Escapes** and **Disease** ratings. Antimicrobials haven't been used since 2017, and pesticides to treat parasitic sea lice haven't been used since 2018. Producers have implemented best practices to prevent escapes, none have been reported since 2003, and very few escaped fish have been detected in rivers. Wild Atlantic salmon populations are vulnerable, and while there's little evidence of disease impacts, the potential transmission of pathogens and parasitic sea lice from farms remains a moderate concern. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Salmon, Coho	*Oncorhynchus kisutch*	Chile - Southeast Pacific Ocean (Region X, Los Lagos)	Marine net pen	Avoid	Avoid	Coho salmon farmed in Chile's Region X (Los Lagos) in marine net pens remains an Avoid due to a critical **Escapes** rating. Large-scale escape events and trickle losses continue to occur, and coho salmon appear to be establishing in the wild and increasing their range. Research shows they pose a high risk to wild, native species through predation and resource competition. Coho salmon were previously stocked throughout Chile, but without data to demonstrate the expanding population is not the result of aquaculture escapes, the overall concern remains critical. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.
Salmon, Coho	*Oncorhynchus kisutch*	Chile - Southeast Pacific Ocean (Region XI, Aysen)	Marine net pen	Avoid	Avoid	Coho salmon farmed in Chile's Region XI (Aysen) in marine net pens remains an Avoid due to a critical **Escapes** rating. Large-scale escape events and trickle losses continue to occur, and coho salmon appear to be establishing in the wild and increasing their range. Research shows they pose a high risk to wild, native species through predation and resource competition. Coho salmon were previously stocked throughout Chile, but without data to demonstrate the expanding population is not the result of aquaculture escapes, the overall concern remains critical. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.
Salmon, Coho	*Oncorhynchus kisutch*	Chile - Southeast Pacific Ocean (Region XII, Magallanes)	Marine net pen	Avoid	Avoid	Coho salmon farmed in Chile's Region XII (Magallanes) in marine net pens remains an Avoid due to a critical **Escapes** rating and a red **Effluent** rating. Large-scale escape events and trickle losses continue to occur, and coho salmon appear to be establishing in the wild and increasing their range. Research shows they pose a high risk to wild, native species through predation and resource competition. Coho salmon were previously stocked throughout Chile, but without data to demonstrate the expanding population is not the result of aquaculture escapes, the overall concern remains critical. Effluent impacts on the seabed can be substantial, and compliance with impact thresholds is poor in Region XII, which is particularly concerning given the ongoing expansion of production. For more information, please see Seafood Watch's Explanation of Farmed Salmon Recommendation Updates 2021.

Species	Scientific Name	Location	Method	Previous Rating	Updated Rating	Justification
Shrimp, Giant Freshwater Prawn	*Macrobrachium rosenbergii*	Bangladesh	Ponds	**Good Alternative**	**Good Alternative**	Giant freshwater prawns farmed in Bangladesh in ponds remain a Good Alternative due to a red **Source of Stock** rating, yellow **Habitat** and **Escapes** ratings, and green ratings for all other criteria. The industry relies on wild-caught juveniles to produce farmed prawns, and there are significant concerns about the health of wild stocks. All other environmental impacts (or the risk of impacts) are rated low to moderate concerns.
Shrimp, Giant Tiger Prawn	*Penaeus monodon*	Bangladesh	Ponds	**Avoid**	**Avoid**	Giant tiger prawns farmed in Bangladesh in ponds remain an Avoid due to red **Habitat** and **Source of Stock** ratings. Giant tiger prawn farms are located in coastal agricultural lands, and these operations contribute to ongoing saltwater intrusion's many impacts. Saltwater degrades freshwater resources as well as soil health and its ability to support plants and animals. Habitat management measures are also poorly implemented and enforced. In addition, the industry is entirely reliant on wild-caught broodstock from stocks that are likely in decline.