



## CO2e emission data on fish species

The CO2e emission data on fish is found with the help of WWF Denmark and are also used in the WWF Fingerprint project. All emission data has been assessed and approved by Position Green. Although much work has gone into finding valid emission data we have to keep in mind that there is still a lot of work that has to go into finding better CO2e emission data for the sea and the species that live in it. The fish are divided according to species.

NO	Name of the emission group	Species included in this group	Link to source	Who also use this source	CO2e per ton product
1	Seaweed	Seaweed	Ingen source	Nordward	0 ton CO2e/ ton product
2	Tuna species	Tuna, fresh tuna, frozen tuna, refreshed tun	Tyedemers and Parker 2012	WWF	8 tCO2e/t fish
3	Flat fish species. trawled	Trawled flat fish, plaice, flounder, whiting, turbot, halibut (rødspætte, skrubbe, ising, slethvar, pighvar, skærising, rødtunge, søtunge, helleflynder)	Schau et al. 2009; Table 5 (comparison with other studies)	WWF	8 tCO2e/t fish
4	Flat fish species gillnet	Gillnet: flat fish, plaice, flounder, whiting, turbot, halibut (rødspætte, skrubbe, ising, slethvar, pighvar, skærising, rødtunge, søtunge, helleflynder)	Schau et al. 2009; Table 5 (comparison with other studies)	WWF	3.4 tCO2e/t fish
5	Bivalves molluscs	Mussel farmed, Blue mussels line farmed mussels	RISE 1.7 (2020)	Rise	1.3 tCO2e/t fish
6	Pelagic species	Herring, mackerel, herring in	RISE 1.7 (2020)	Rise	0.8 tCO2e/t fish



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		buckets			
7	Farmed fish species	Salmon, king fish, trout	SINTEF (2019) - Greenhouse gas emissions of Norwegian seafood products in 2017	Norway seafood council	6.5 tCO2e/t fish
8	Farmed fish species fillet	Salmon fillet, king fish fillet, trout fillet	SINTEF (2019) - Greenhouse gas emissions of Norwegian seafood products in 2017	Norway seafood council	7.6 tCO2e/t fish
9	Round fish species	Tench, cod, light tench, whiting, haddock, hake, ling, tusk (Sej, torsk, lyssej, hvilling, kuller, kulmule, lange, brosme)	SINTEF (2019) - Greenhouse gas emissions of Norwegian seafood products in 2017	Norway seafood council	1.8 tCO2e/t fish
10	Round fish species fillet	Tench, cod, light tench, whiting, haddock, hake, ling, tusk (Sej, torsk, lyssej, hvilling, kuller, kulmule, lange, brosme)	SINTEF (2019) - Greenhouse gas emissions of Norwegian seafood products in 2017	Norway seafood council	1.9 tCO2e/t fish
11	Squid and octopus species	Octopus, 8-armed and 10-armed, frozen octopus	Gephart, J. A., Henriksson, P. J., Parker, R. W., Shepon, A., Gorospe, K. D., Bergman, K., ... & Tyedmers, P. (2021). Environmental performance of blue foods. Nature.		9 tCO2e/t fish
12	Langoustine, mantis shrimp	Langoustine, (Jomfruhummer)	Parker 2016 Energy performance of wild-capture marine fisheries <a href="https://eprints.utas.edu.au/23045/2/Parker_whole_thesis">https://eprints.utas.edu.au/23045/2/Parker_whole_thesis</a>	WWF	7.5 tCO2e/t fish



NO	Name of the emission group	Species included in this group	Link to source	Who also use this source	CO2e per ton product
13	Shrimp, prawn and farmed crayfish	Shrimp, prawns in brine, prawns, sea-boiled prawns, crate-caught prawns, organic Madagascar prawns  (rejer i lage, pil selv rejer, søkogte rejer, tejnfangede rejer, øko madagascar rejer)	Parker 2016 Energy performance of wild-capture marine fisheries <a href="https://eprints.utas.edu.au/23045/2/Parker_whole_thesis">https://eprints.utas.edu.au/23045/2/Parker_whole_thesis</a>	WWF	7.5 tCO2e/t fish
14	Lobster and other wild crayfish species	Lobster, Canadian lobster, Danish lobster, European lobster  (Lobster, canadisk hummer, dansk hummer, europæisk hummer)	Parker 2016 Energy performance of wild-capture marine fisheries <a href="https://eprints.utas.edu.au/23045/2/Parker_whole_thesis">https://eprints.utas.edu.au/23045/2/Parker_whole_thesis</a>	WWF	7.5 tCO2e/t fish