

## Fishmeal and Fish oil supply and demand: a summary of global trends

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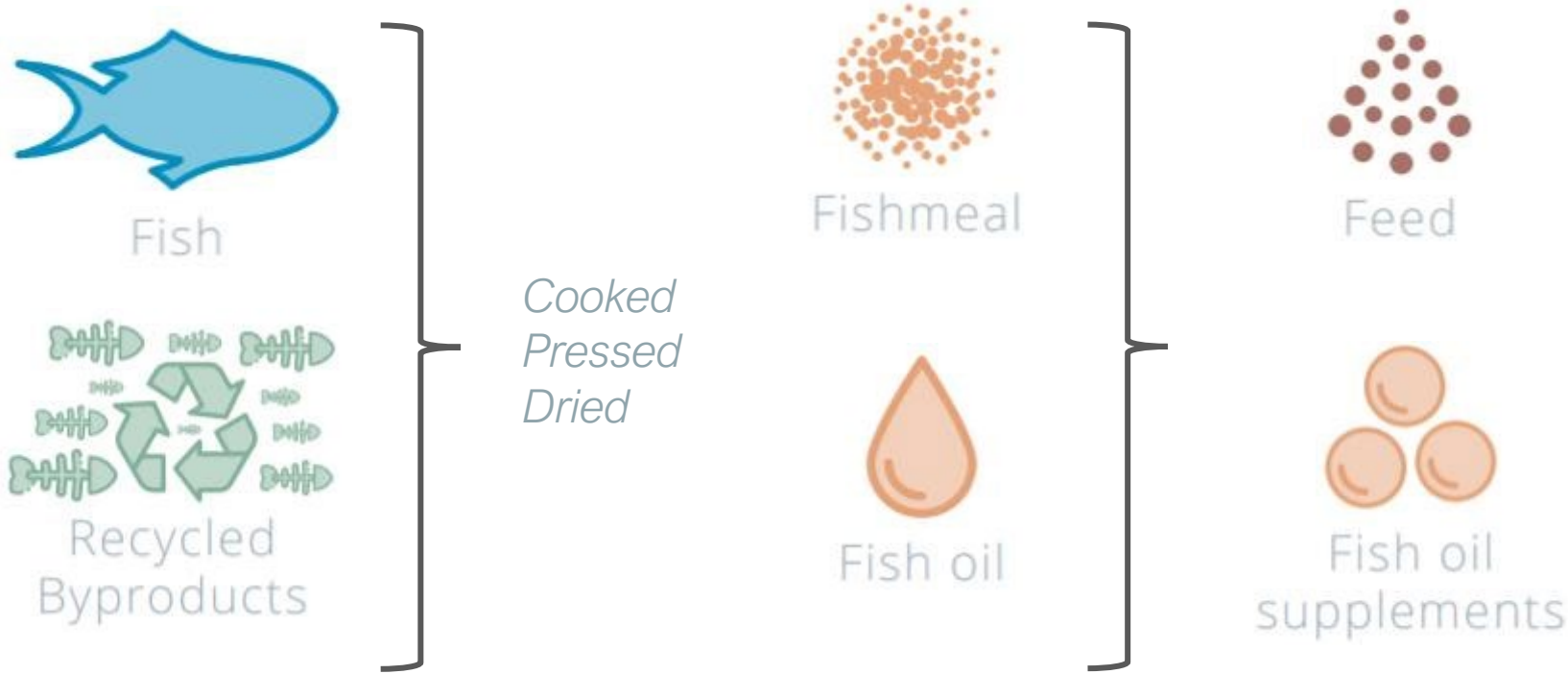


## Fishmeal and Fish oil supply



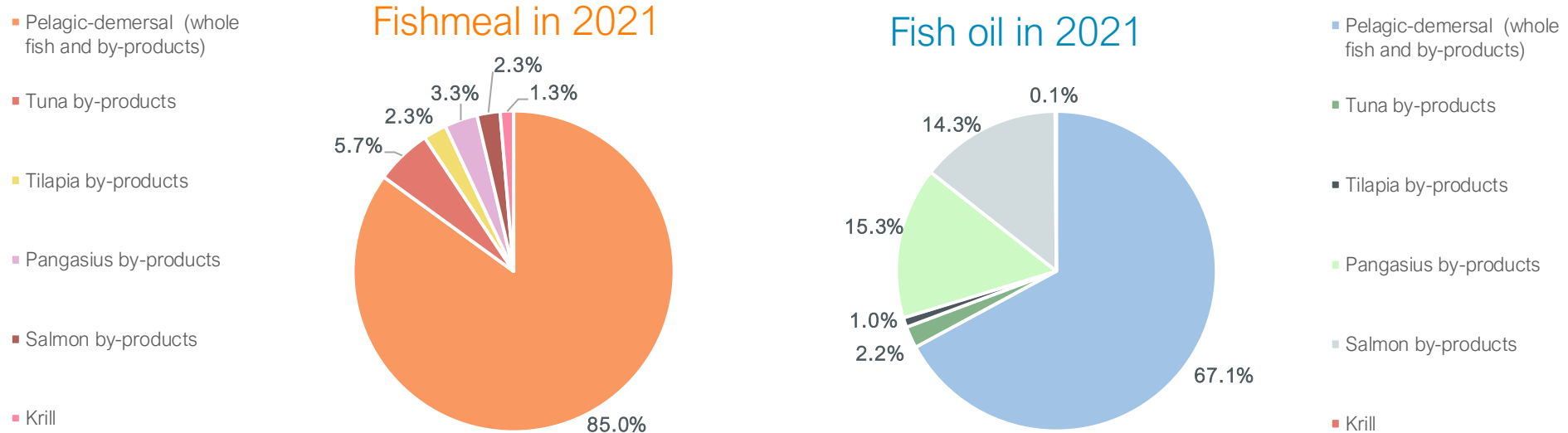
# WHAT MARINE INGREDIENTS ARE

*Fishmeal and fish oil are obtained from fish raw material*



*\*Other marine ingredients such as hydrolysates also utilise fish raw material*

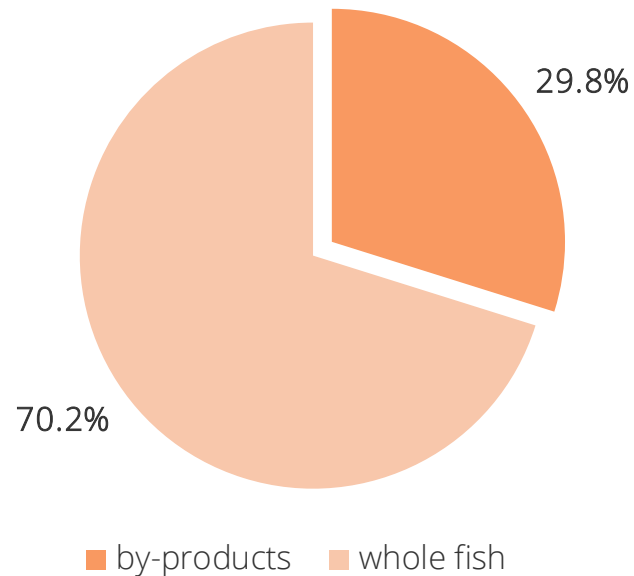
*Most of the raw material for reduction continues to come from the traditional wild pelagic and demersal species, but the contribution of other species is growing*



**Pelagic-demersal species** include anchovy, anglerfish, blue whiting, boar fish, cod, capelin, haddock, hake, herring, Japanese scad, lantern fish, lemon sole, mackerel, menhaden, Norway pout, saithe, sand eel, sardine, sardinella, seabream, sea bass, sprat, Pacific saury, plaice, pilchard, pollock.

*IFFO has estimated that in 2021 66.5% of the raw material used for reduction came from whole fish, while the remaining 33.5% from by-products.*

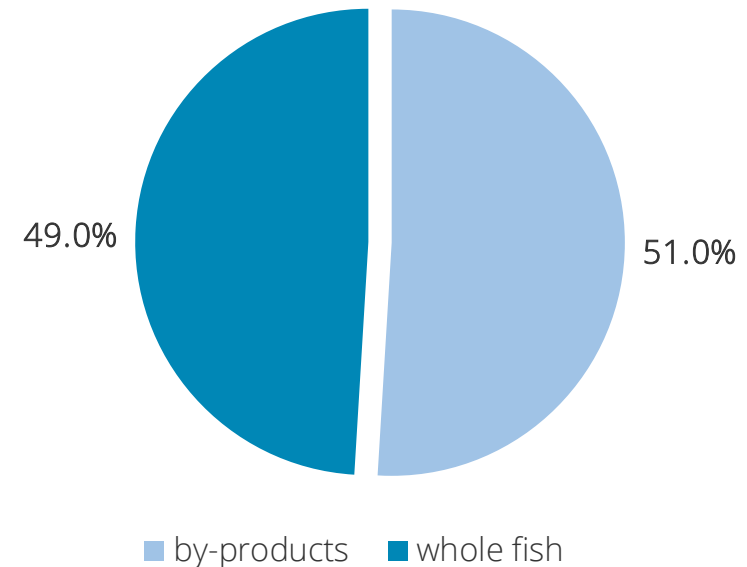
### Fishmeal in 2021



*By considering the latest complete year, 2021, we could estimate the overall production of fishmeal and fish oil produced by using by-products (trimming, offcuts, offal etc).*

*In terms of fishmeal, around 30% of the global supply was obtained by using by-products, either from wild fish processed for direct human consumption or from farmed fish.*

### Fish oil in 2021

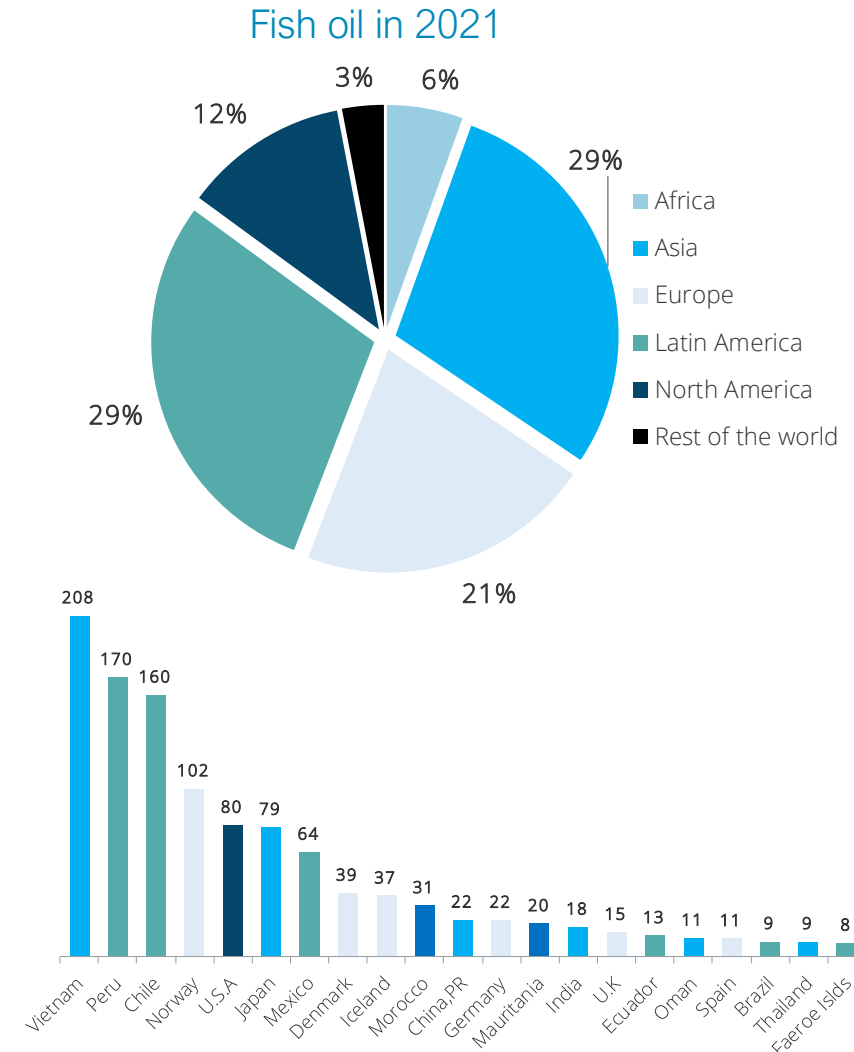
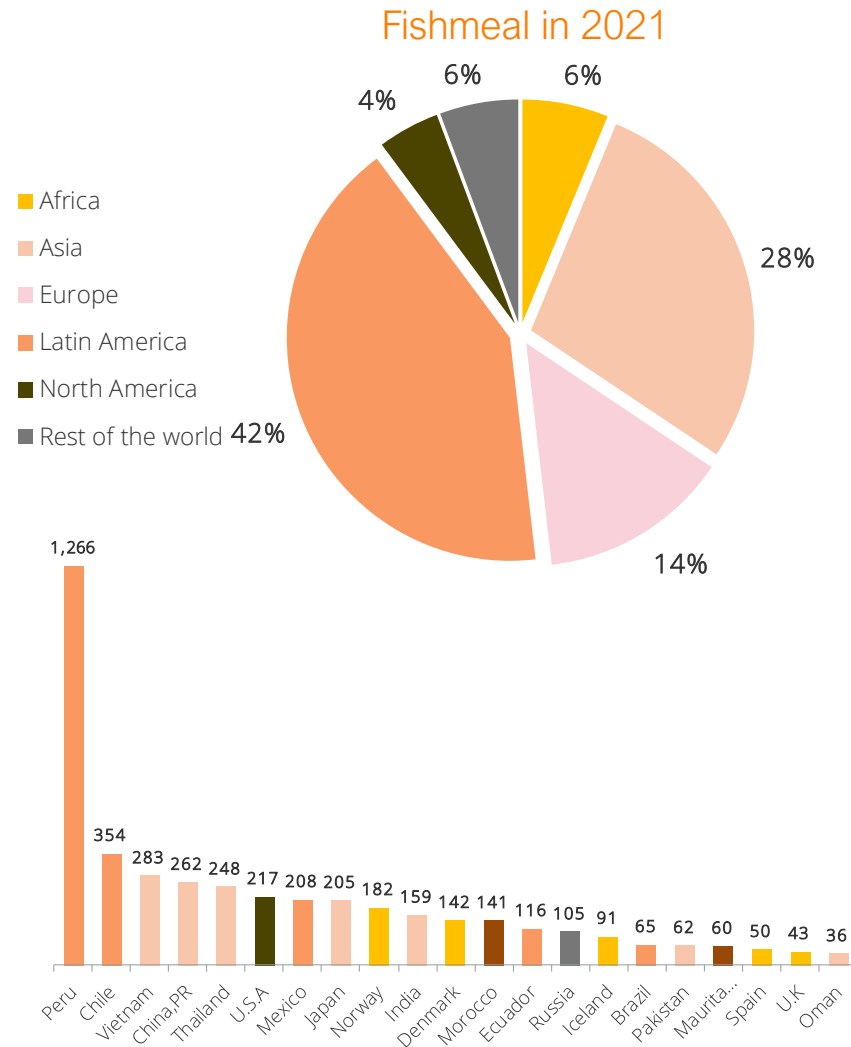


*As for fish oil, 51% of the global output was obtained from by-products, both from wild or farmed fish*

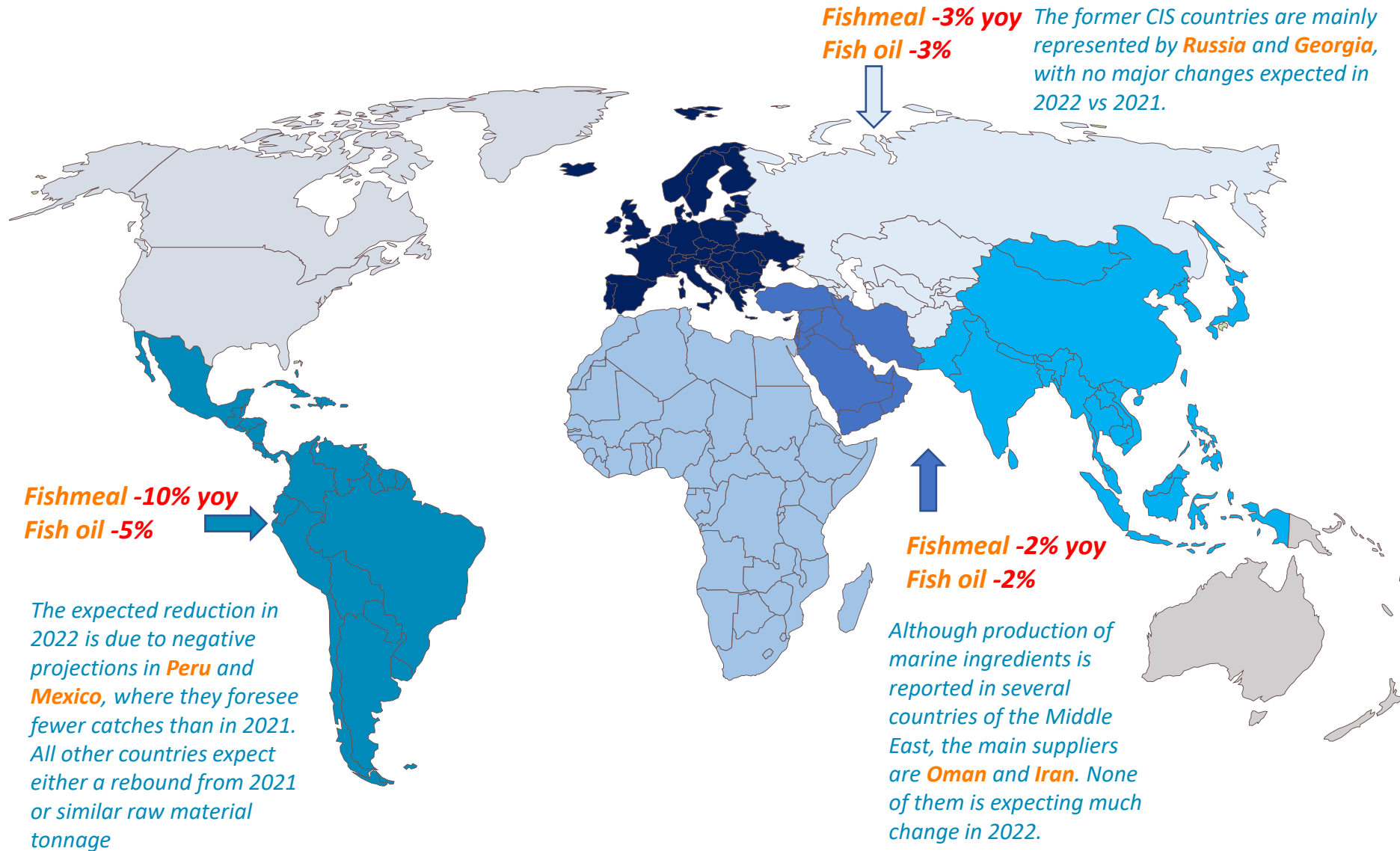
*\*we do not include shrimp or squid meal in our estimates*

# SUPPLY GEOGRAFICAL BREAKDOWN

*Marine ingredients are produced everywhere, although Latin America, Asia and Europe are the biggest providers*



# SUPPLY PROJECTIONS 2022



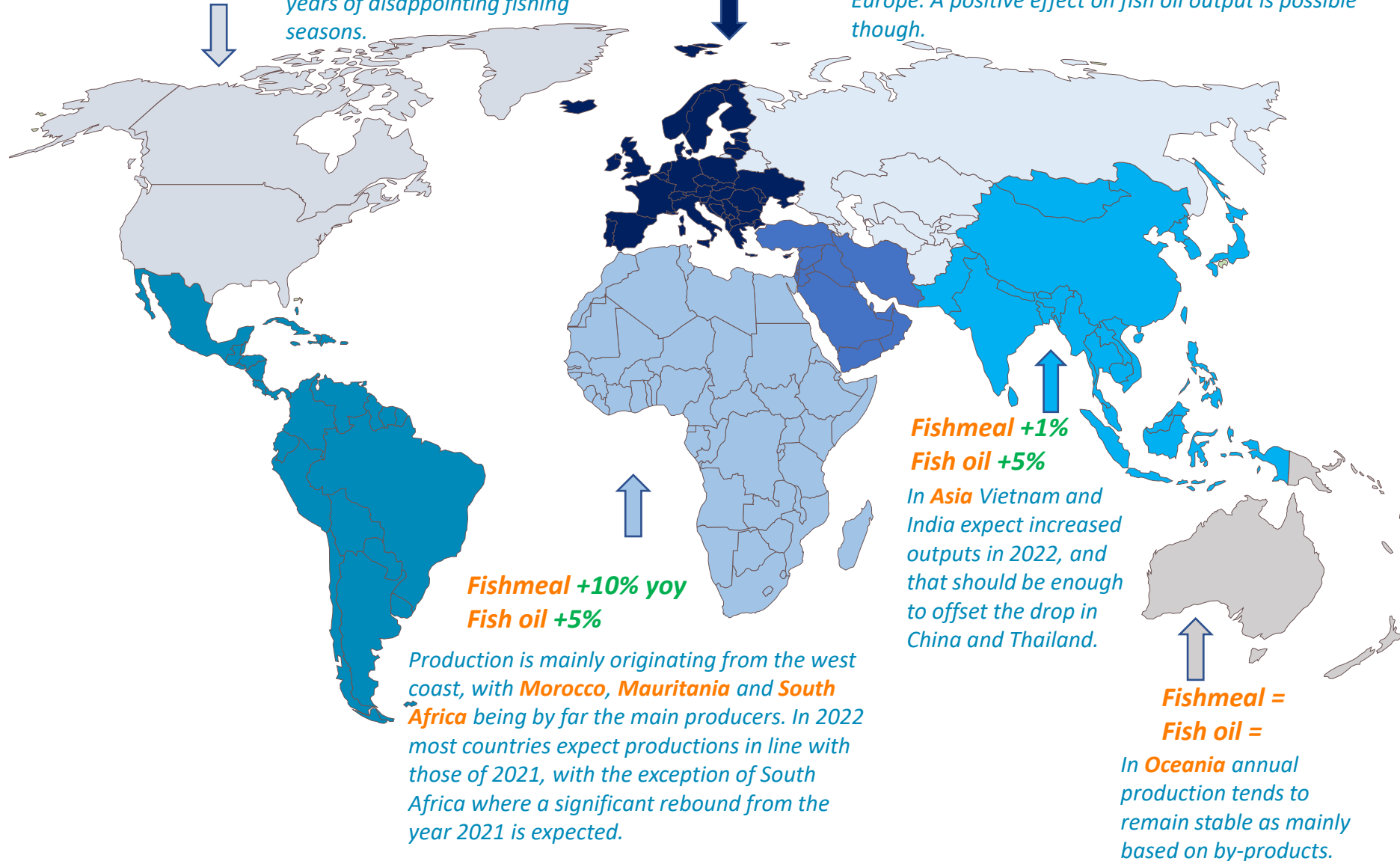
# SUPPLY PROJECTIONS 2022

**Fishmeal +12.5% yoy**  
**Fish oil +12.5%**

The **USA** are betting on better menhaden landings in 2022 after 3 years of disappointing fishing seasons.

**Fishmeal =**  
**Fish oil +8%**

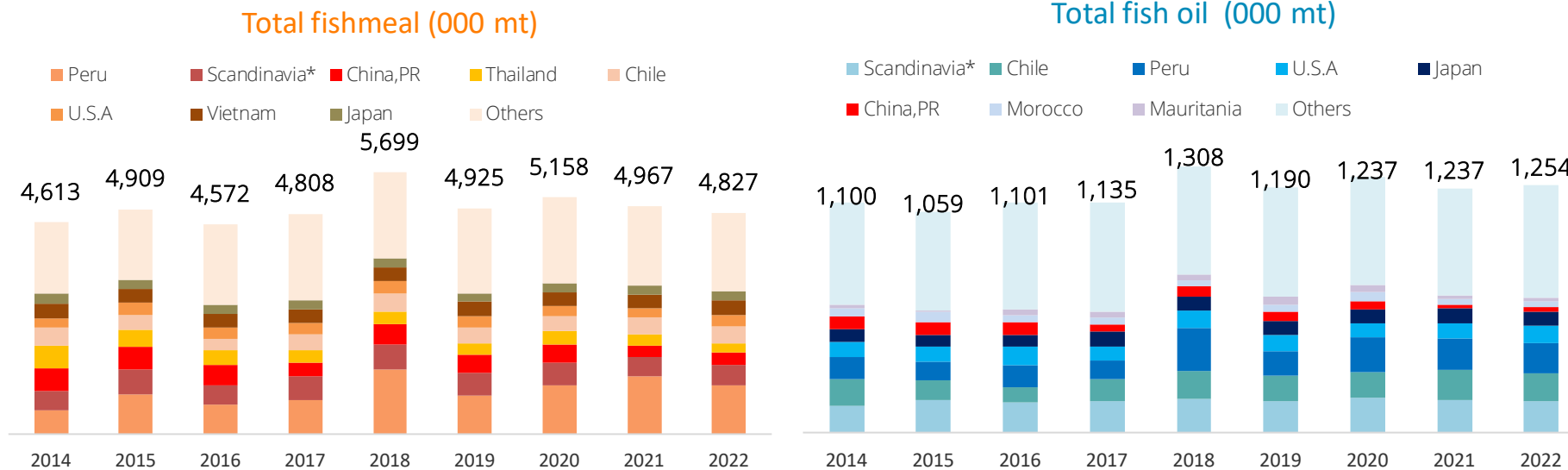
In **Europe** the recovered capelin fishery should offset the general reduction of the fishing quotas in Northern Europe. A positive effect on fish oil output is possible though.





*The projected lower production in Peru will slightly reduce overall world's supply of fishmeal, while fish oil supply might increase thanks to the larger output in several regions*

*Steady supply of both fishmeal and fish oil over time*



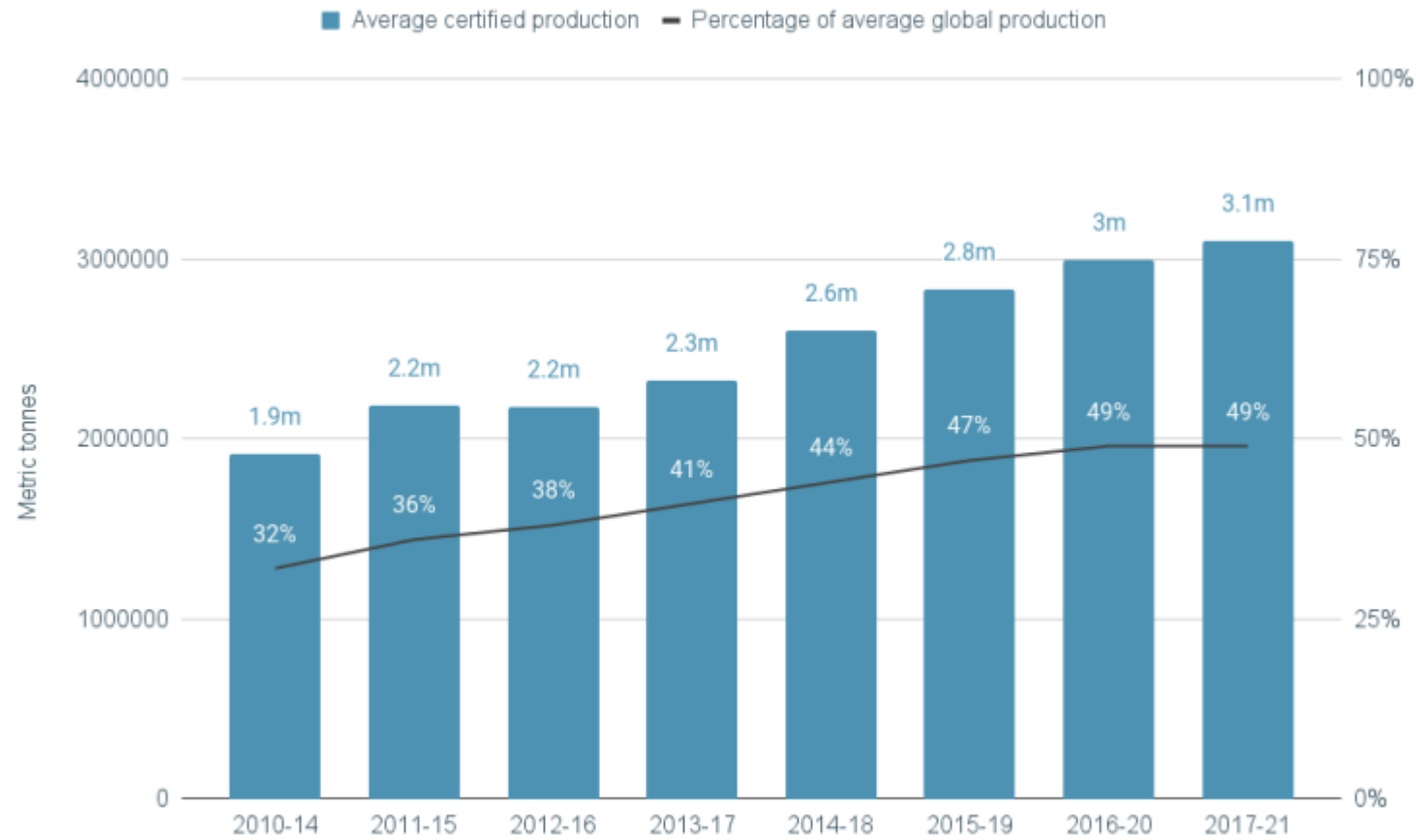
*5 million metric tonnes of fishmeal are produced on average every year.*

*1.2 million metric tonnes of fish oil are produced on average every year.*

\*Scandinavia = Denmark, Iceland, Norway

# RESPONSIBLE SUPPLY IN 2022

*Half of the global supply of marine ingredients are responsibly sourced.  
No other bulk feed ingredient enjoys the same status.*



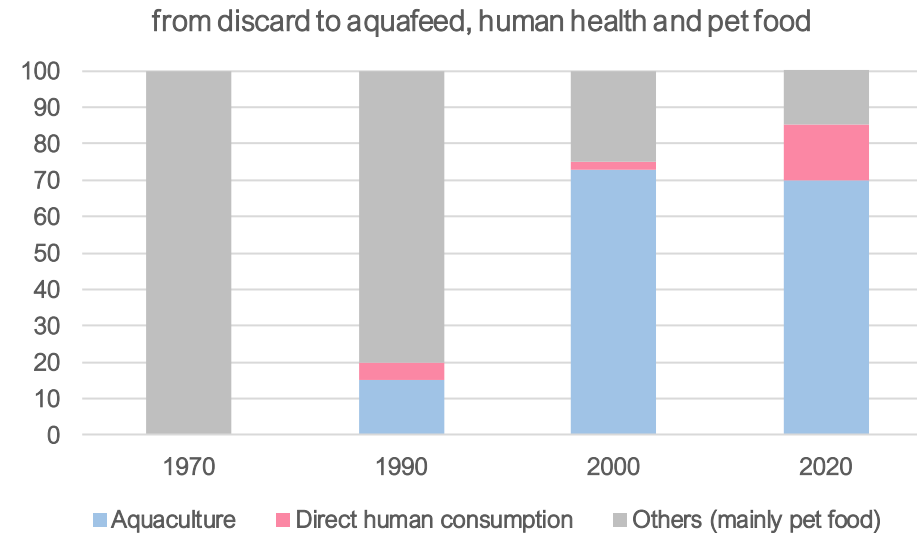
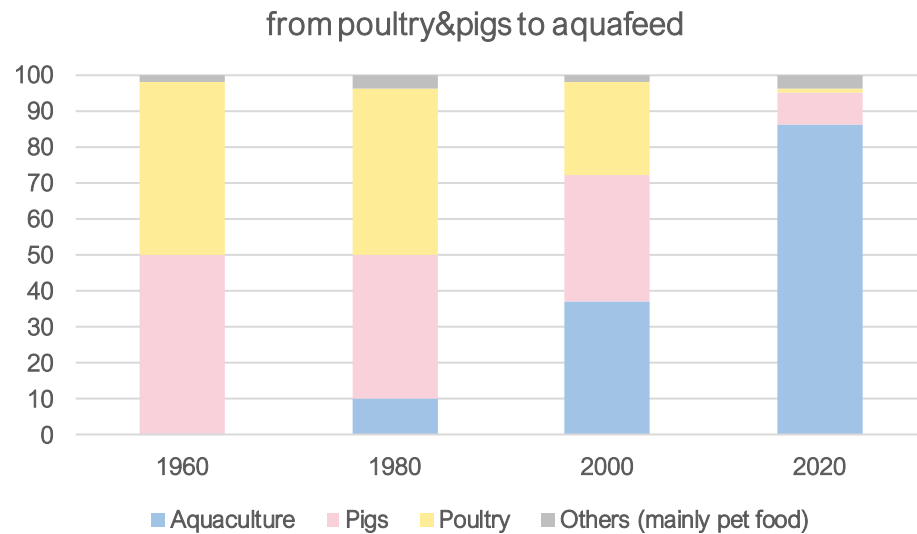
source:



## Fishmeal and Fish oil demand



*Marine ingredients have contributed to the development of aquaculture  
First as a bulk ingredient and now as a strategic feed ingredient*



*“Fishmeal and fish oil are still considered the most nutritious and most digestible ingredients for farmed fish, as well as the major source of omega-3 fatty acids”.*

*UN FAO SOFIA Report (2020)*

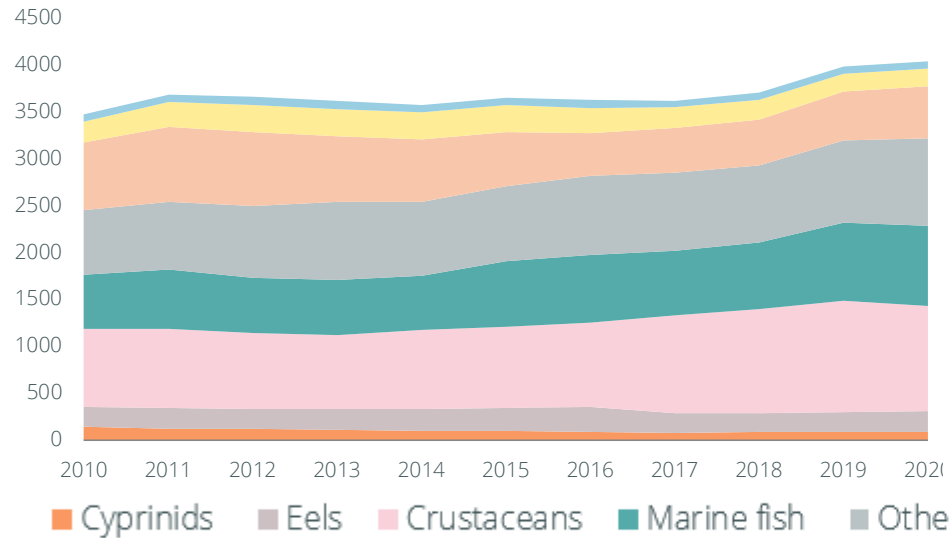
# BACKBONE OF AQUACULTURE



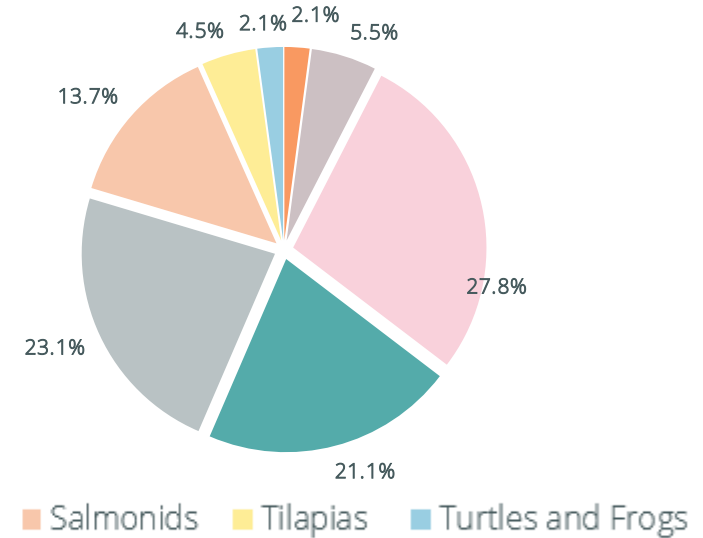
Fishmeal

*Crustaceans are the biggest users of fishmeal meal, followed by fresh water and marine fish. Salmonids only come fourth.*

World fishmeal aquaculture usage ('000 mt)



Use of fishmeal in aquaculture by species in 2020



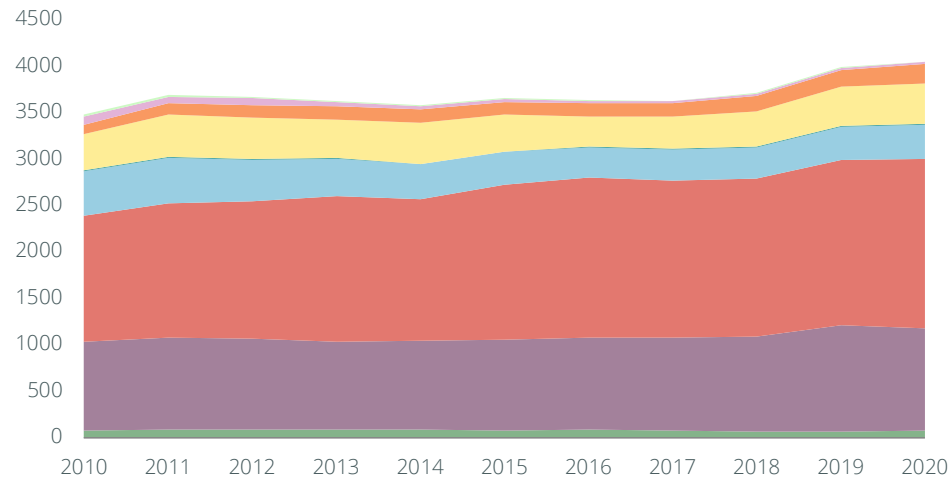
# THE ROLE OF ASIA



Fishmeal

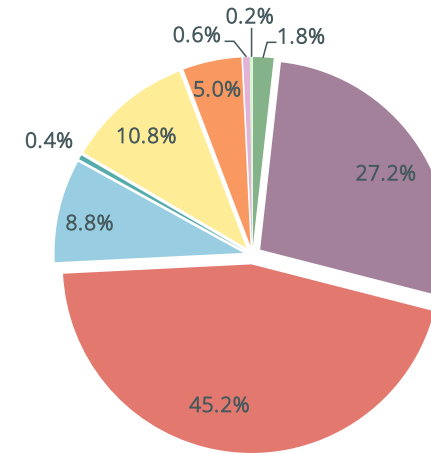
*Asia and China combined represent more than 70% of the global consumption of fishmeal.*

Fishmeal use in aquaculture by region ('000 mt)



Legend: Africa (green), Asia (purple), China (red), Europe (blue), Former Russia (teal), Latin America (yellow), Middle East (orange), North America (pink), Oceania (light green)

Use of fishmeal in aquaculture by region in 2020

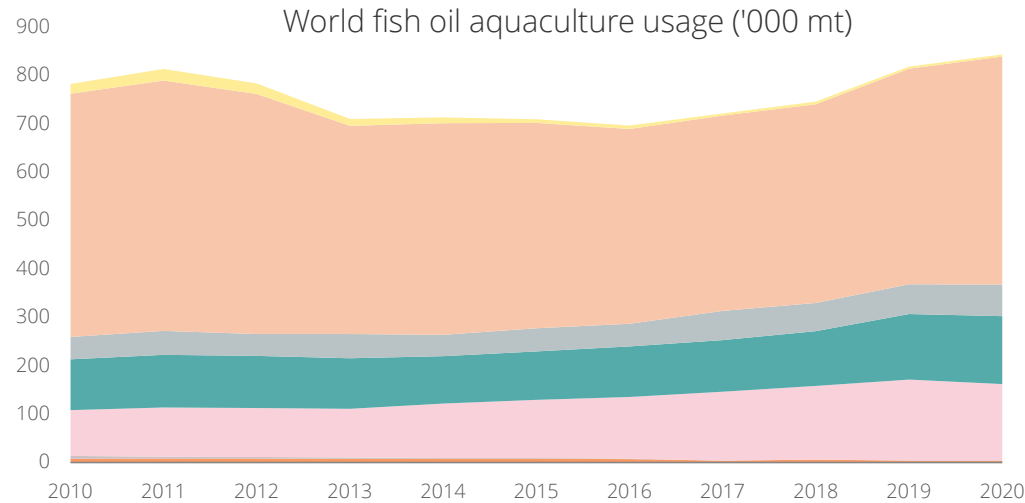


# NOT ONLY SALMONIDS

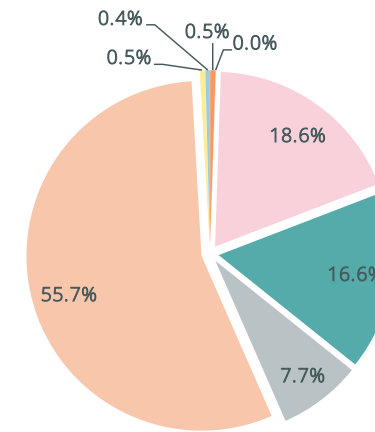


Fish oil

*Salmonids remain the dominant user of fish oil, but shrimp farming is gaining ground.*



Use of fish oil in aquaculture by species in 2020

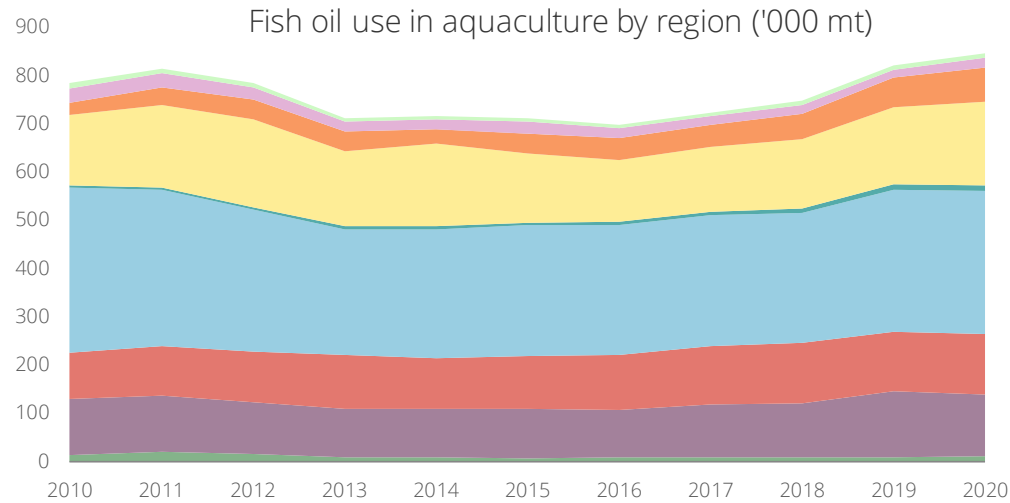


■ Cyprinids ■ Eels ■ Crustaceans ■ Marine fish ■ Other Freshwater ■ Salmonids ■ Tilapias ■ Turtles and Frogs

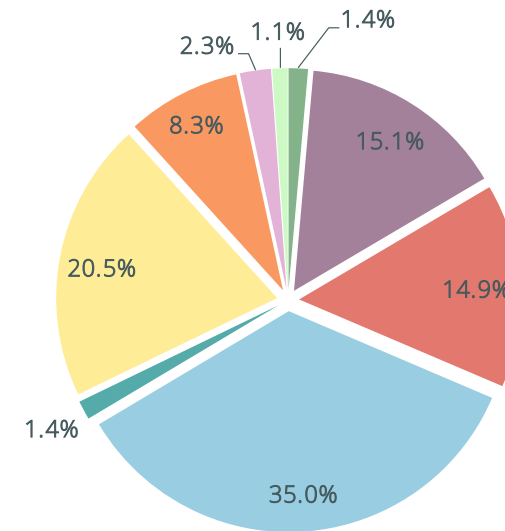


Fish oil

*Salmonids and shrimp farming areas determine the geographical distribution of fish oil consumption.*



Use of fish oil in aquaculture by region in 2020



■ Africa 
 ■ Asia 
 ■ China 
 ■ Europe 
 ■ Former Russia 
 ■ Latin America 
 ■ Middle East 
 ■ North America 
 ■ Oceania



Thanks for your attention

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