



Food and Agriculture  
Organization of the  
United Nations

# FAO REGIONAL WORKSHOP ON OPPORTUNITIES AND CHALLENGES IN ECONOMIC AND POST-HARVEST ISSUES RELATED TO FISHERIES AND AQUACULTURE PRODUCTS



FAO  
Fisheries and Aquaculture Division

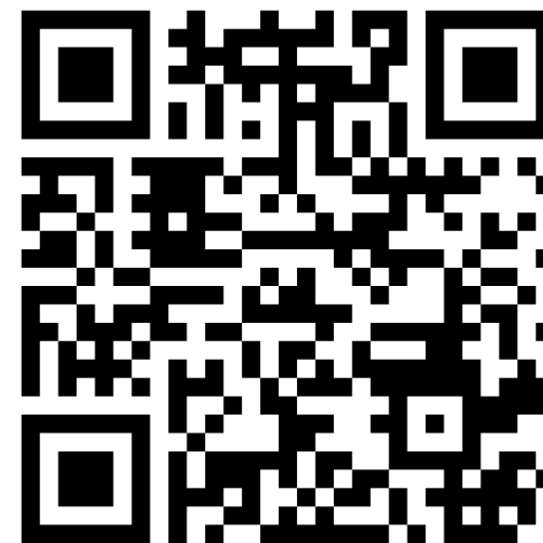
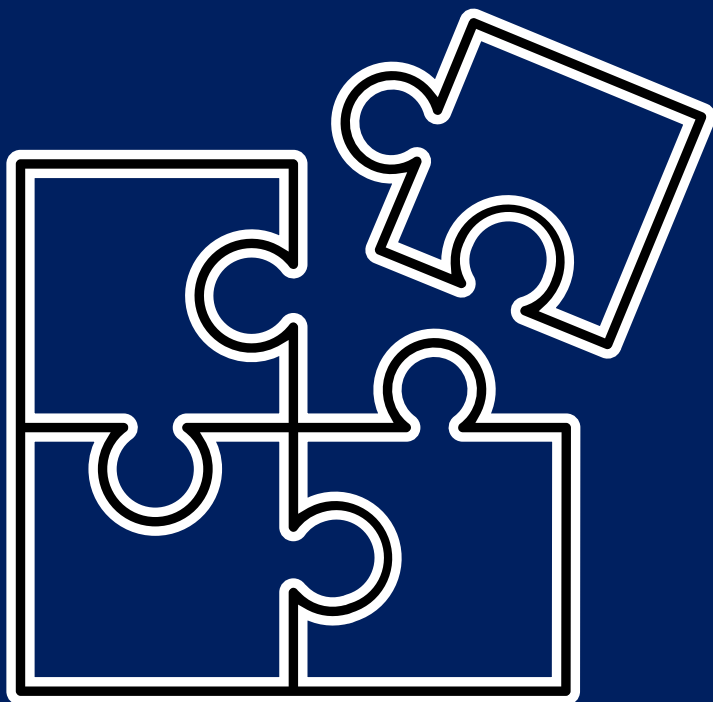
*With the collaboration of the Ministry of Marine Affairs  
and Fisheries of Indonesia and INFOFISH*

*October 2024*

# Interaction

- Go to [www.menti.com](https://www.menti.com) and type

**6449 2740**

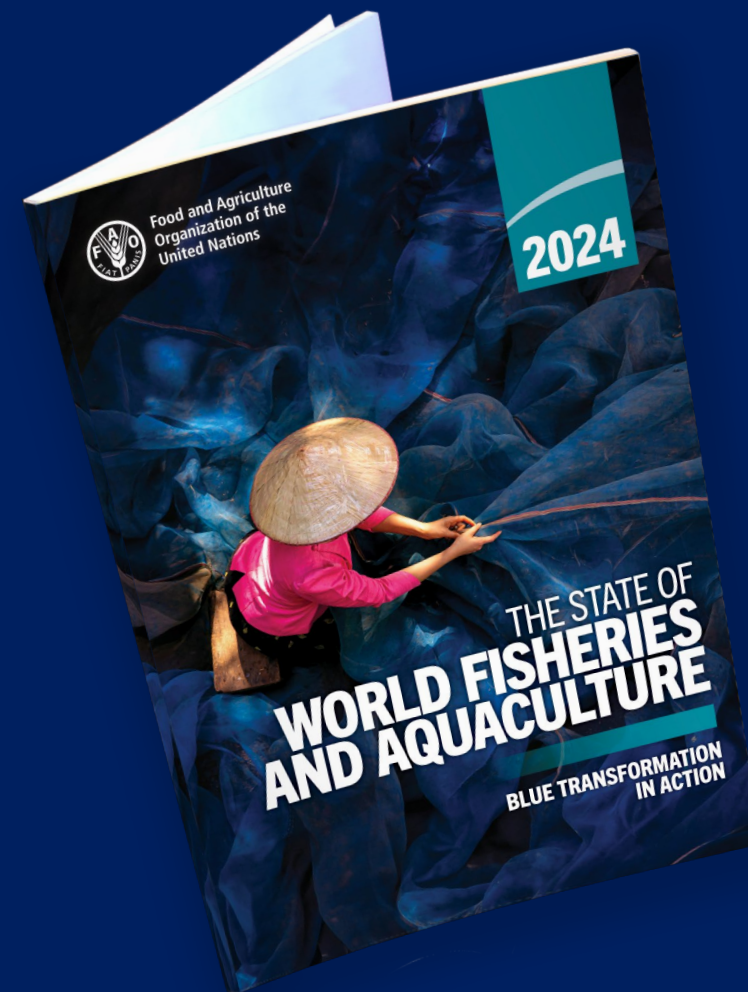


# Fisheries and Aquaculture



An Important Group of Animal Proteins in  
Social, Economic and Environmental Terms

# THE STATE OF THE WORLD FISHERIES AND AQUACULTURE 2024



<https://doi.org/10.4060/cd0683en>



Food and Agriculture  
Organization of the  
United Nations



# What are fisheries and aquaculture products?



# What are fisheries and aquaculture products?

## In terms of products

- Aquatic animals
  - Fish
  - Crustaceans
  - Molluscs
- Algae
  - Macroalgae
  - Microalgae
  - Cyanobacteria
- Other aquatic animals
  - Corals
  - Sponges
  - Others

## In different forms and for different uses

- Forms
  - Whole
  - In parts
  - Processed
  - Not Processed
- Uses
  - Consumption
  - Other final utilization
  - Domestic Markets
  - International Markets

## What is **NOT** included

- Mammals
- Reptiles
- Amphibians
- Turtles

# Fisheries Production

Marine and Inland Waters

Metric Tons

100

90

80

70

60

50

40

30

20

10

Previous 10-year  
average

Previous 10-year average

Previous 10-year average

Previous 10-year average

Previous 10-year average

Previous 10-year average

1970

1980

1990

2000

2010

2015

2016

2017

2018

2019

2020

2021



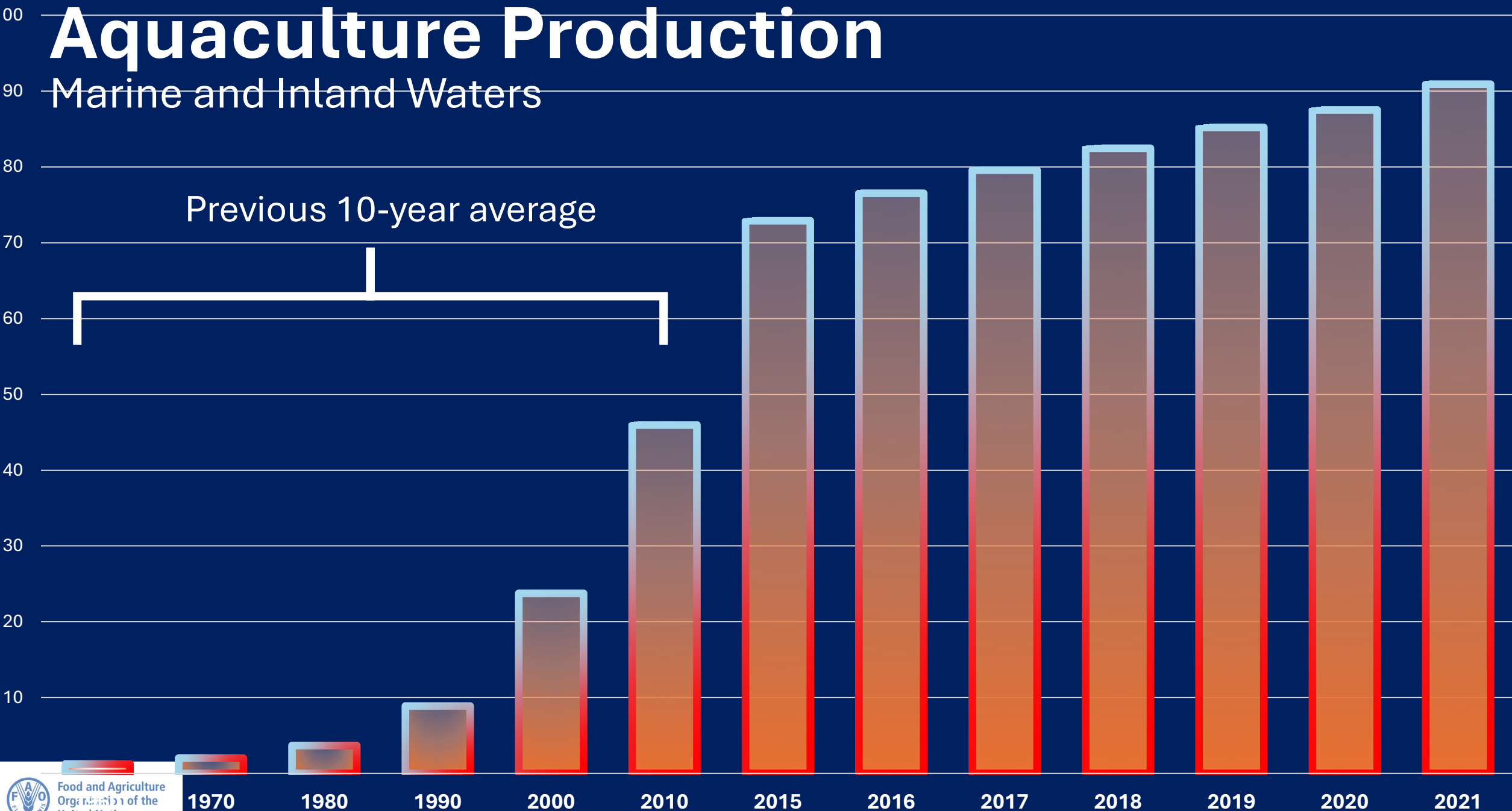
Food and Agriculture  
Organization of the  
United Nations

# Aquaculture Production

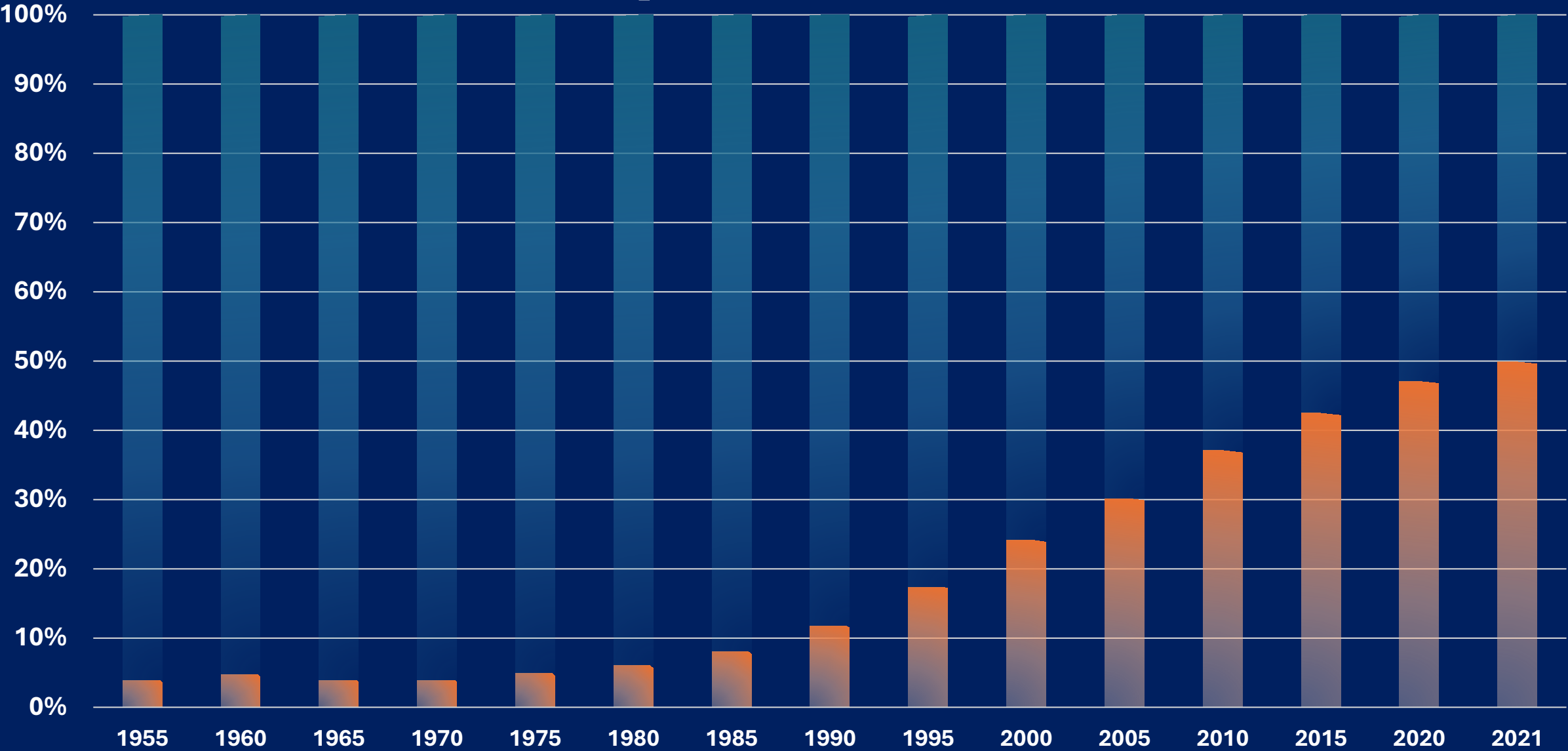
Marine and Inland Waters

Metric Tons

Previous 10-year average



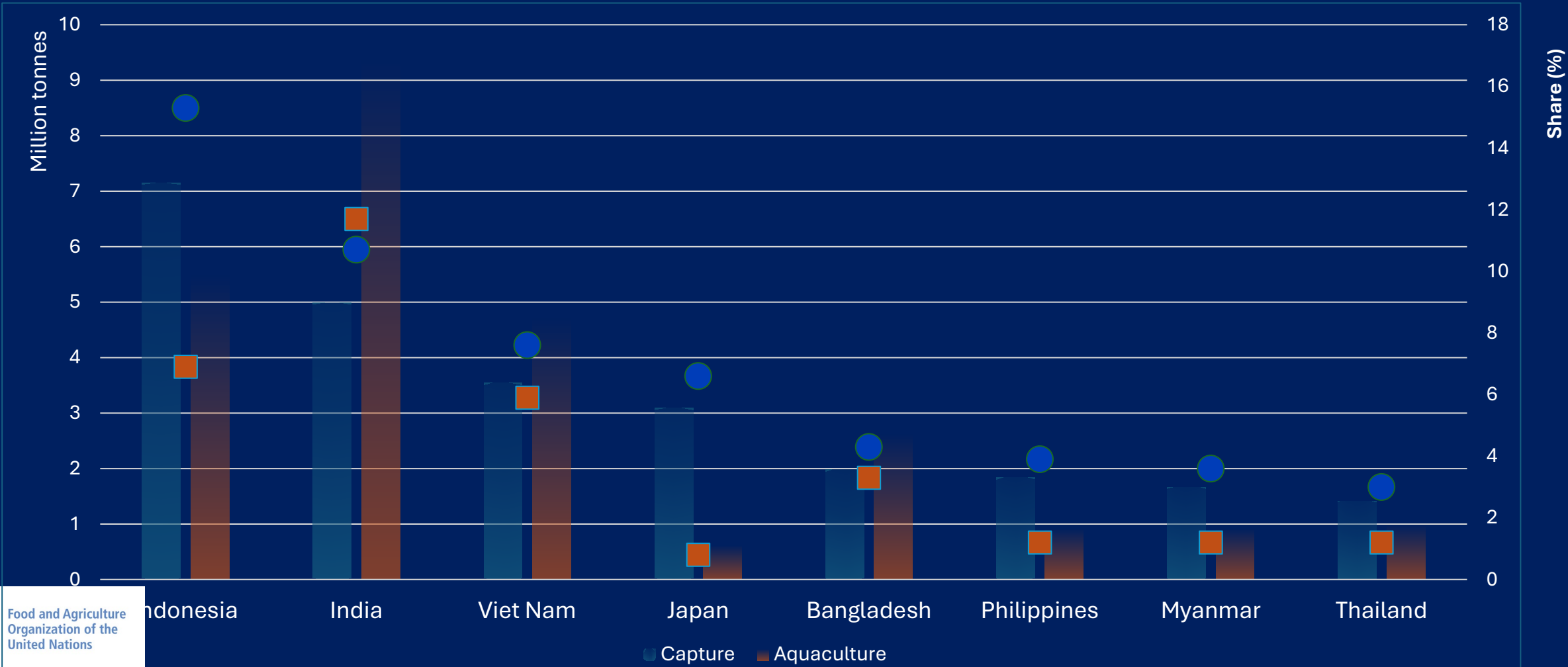
# Fisheries and Aquaculture Production



# Fisheries and Aquaculture Production

Total fisheries and aquaculture production:

**218 million tonnes**

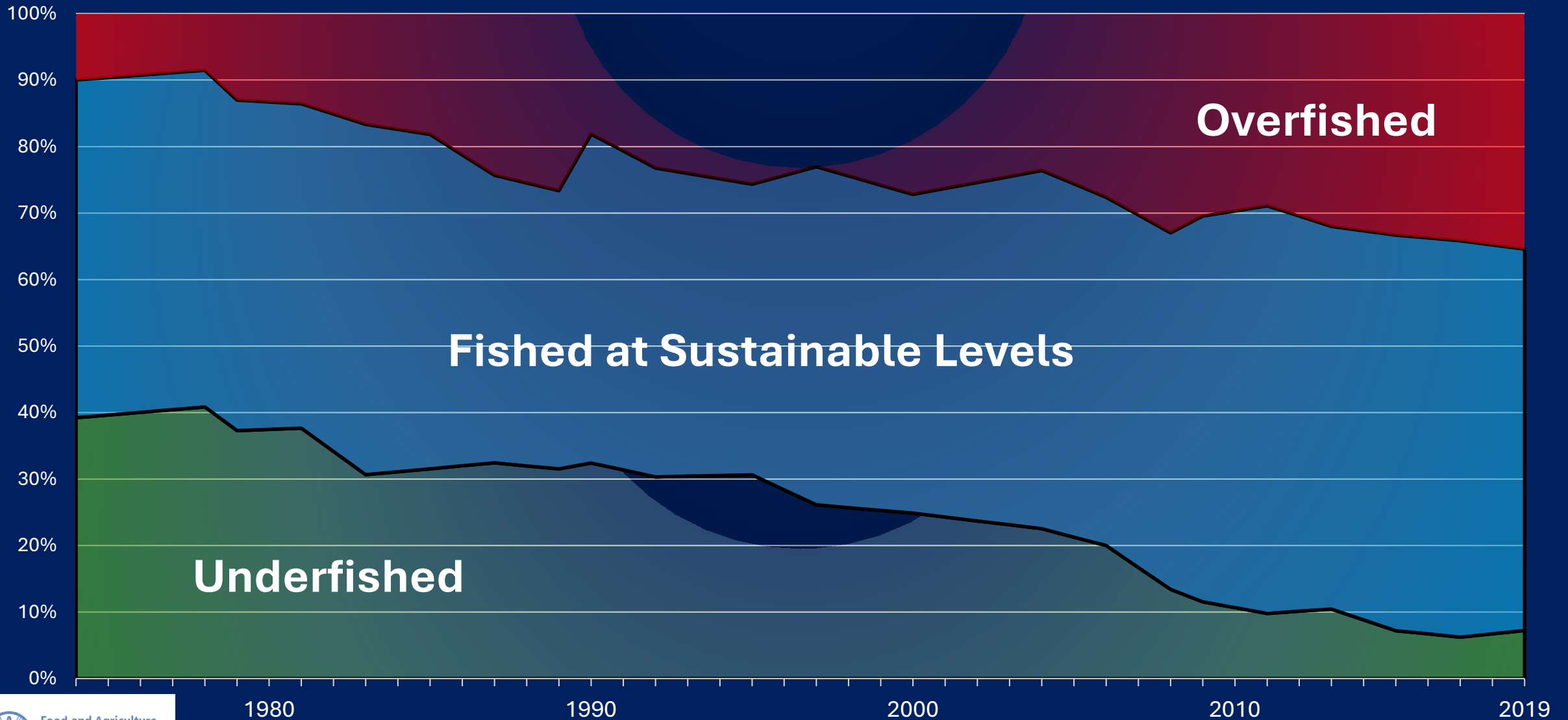




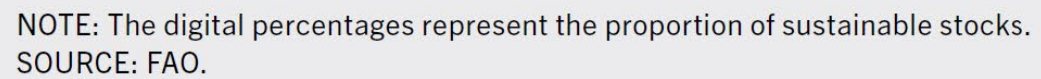
# What is the status of fish stocks?



# Stock Status along the Years



culture  
of the





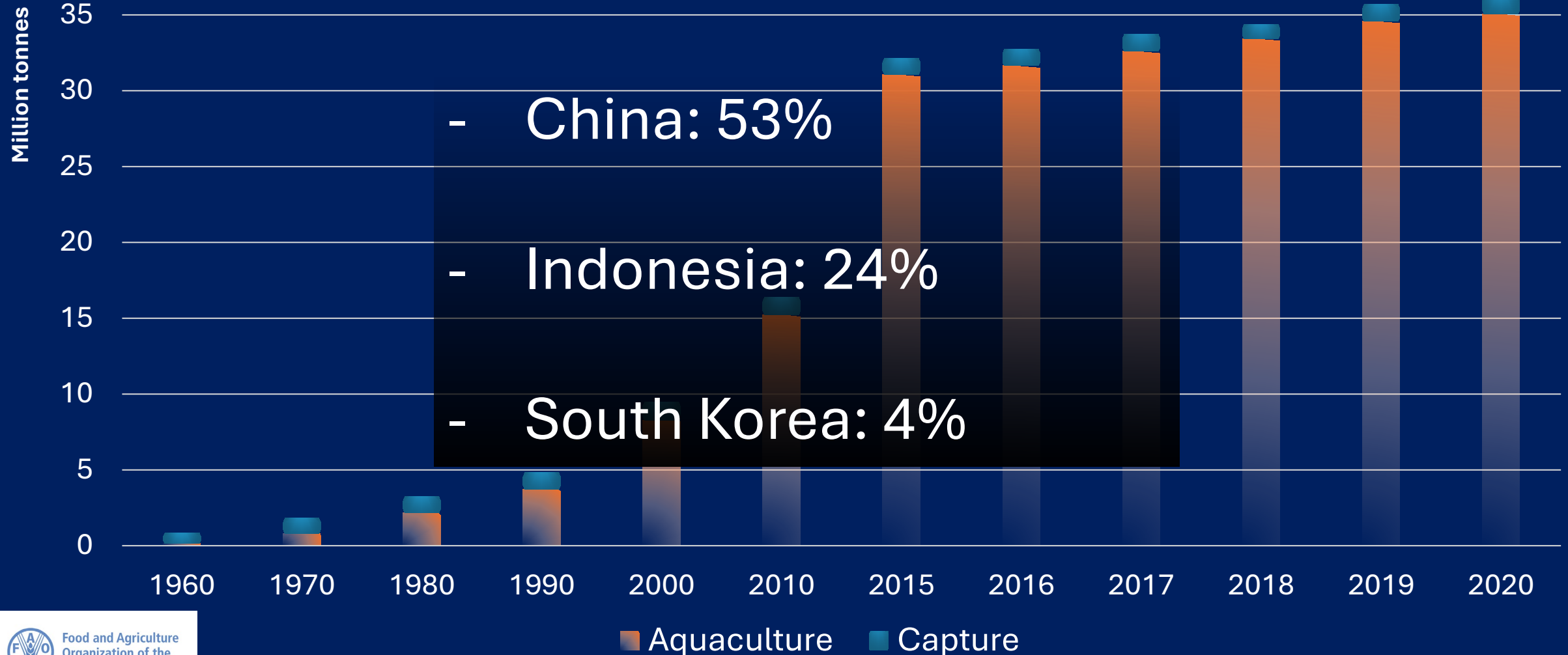
# The incredible growth of aquatic plant production





# The incredible growth of aquatic plant production

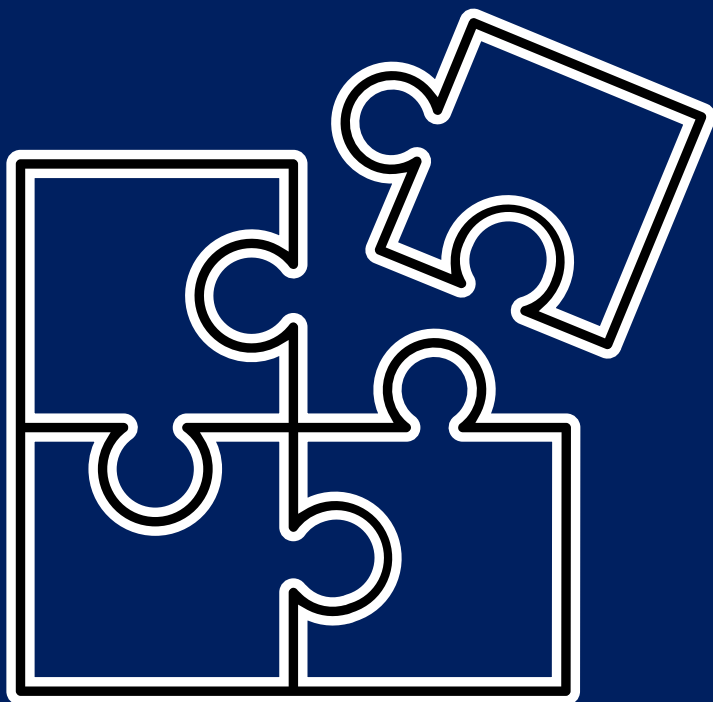
Chart Title



# Interaction

- Go to [www.menti.com](https://www.menti.com) and type

**6449 2740**







# The Importance of Fisheries and Aquaculture in Social Terms

# The Importance of Fisheries and Aquaculture in Social Terms

More than  
**60 million people** employed

- 65% in capture
- 35% in aquaculture

Geographic Distribution

- **84%** in Asia

Gender inclusion

- 21% are **women**

Importance of **Small-Scale Fisheries**

- 40% of total catch
- 500 million people associated



# The Economic Spillovers of Fisheries and Aquaculture

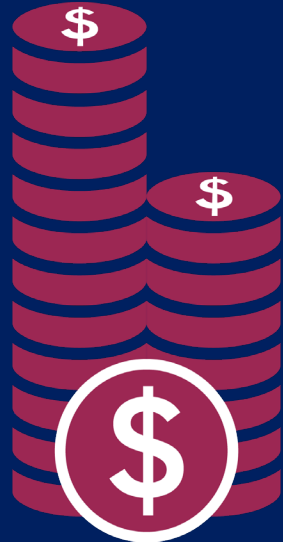




# SECTOR INCREASINGLY IMPORTANT IN CONTRIBUTING TO LOCAL ECONOMIES

TOTAL FIRST SALE VALUE

**USD 472 BILLION**



**AQUACULTURE**  
USD 312.8 billion

↑ 12%



**CAPTURE FISHERIES**  
USD 159.0 billion

↑ 12%

STATES AND TERRITORIES TRADING

**230**

**TRADE VALUE**  
(Aquatic Animals)

**USD 192.0  
billion**

↑  
19% IN VALUE  
FROM PRE-COVID



Food and Agriculture  
Organization of the  
United Nations

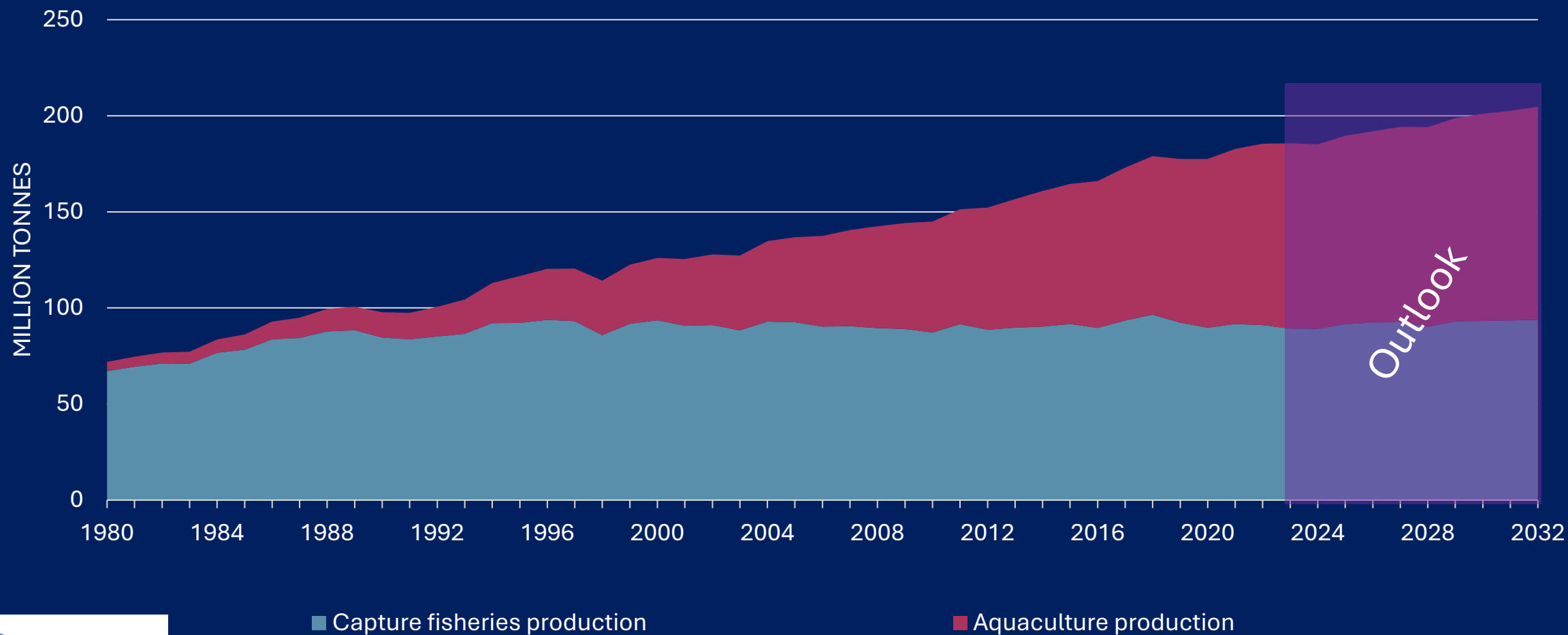
\* from 2020

# MORE IS EXPECTED FROM AQUATIC FOOD SYSTEMS



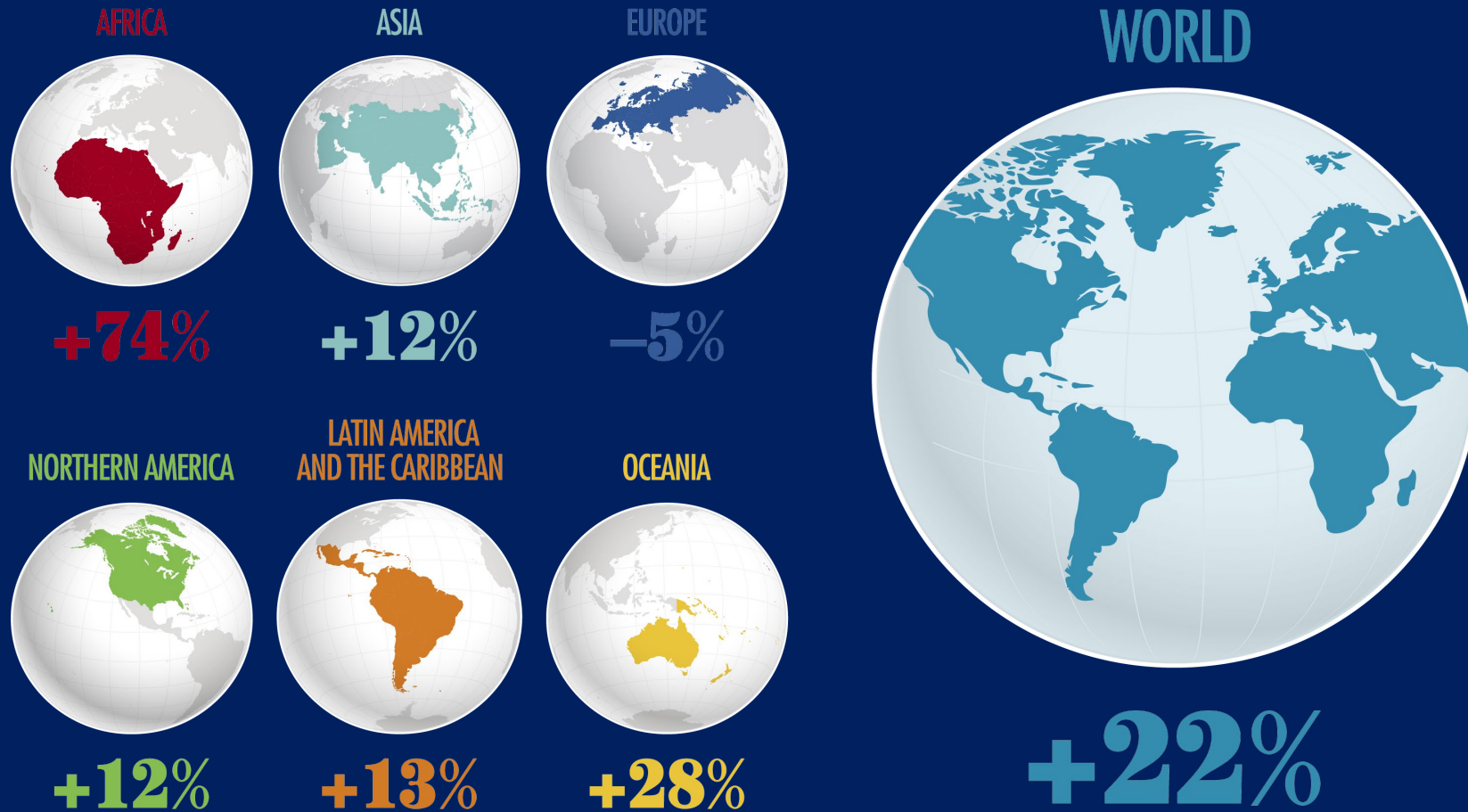
Food and Agriculture  
Organization of the  
United Nations

# PRODUCTION OF AQUATIC ANIMALS EXPECTED TO GROW BY 10% BY 2032





# NEED FOR GROWTH IN AQUATIC ANIMAL SUPPLY BY REGION BY 2050\*



\* Supply needed to sustain 2022 per capita consumption by region.

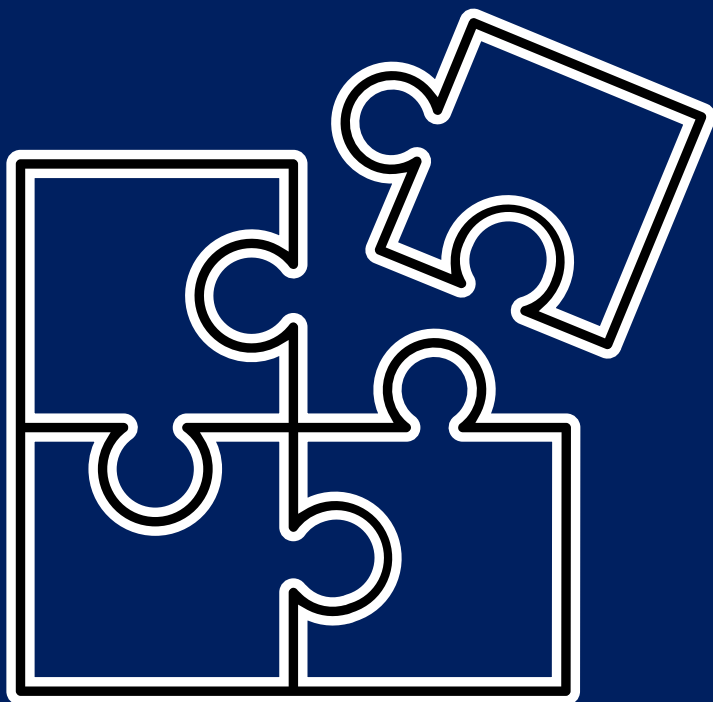


Food and Agriculture  
Organization of the  
United Nations

# Interaction

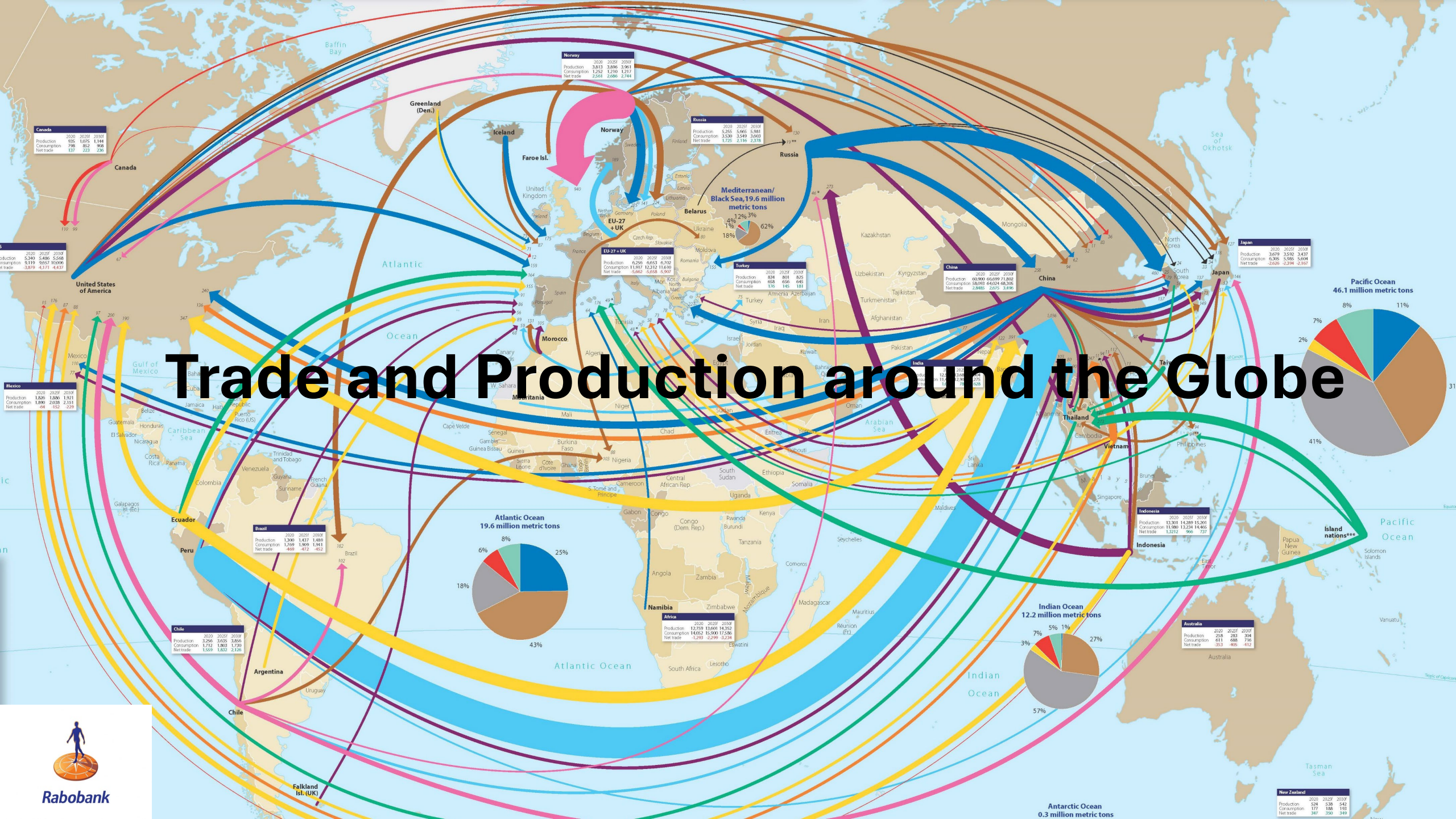
- Go to [www.menti.com](https://www.menti.com) and type

**6449 2740**





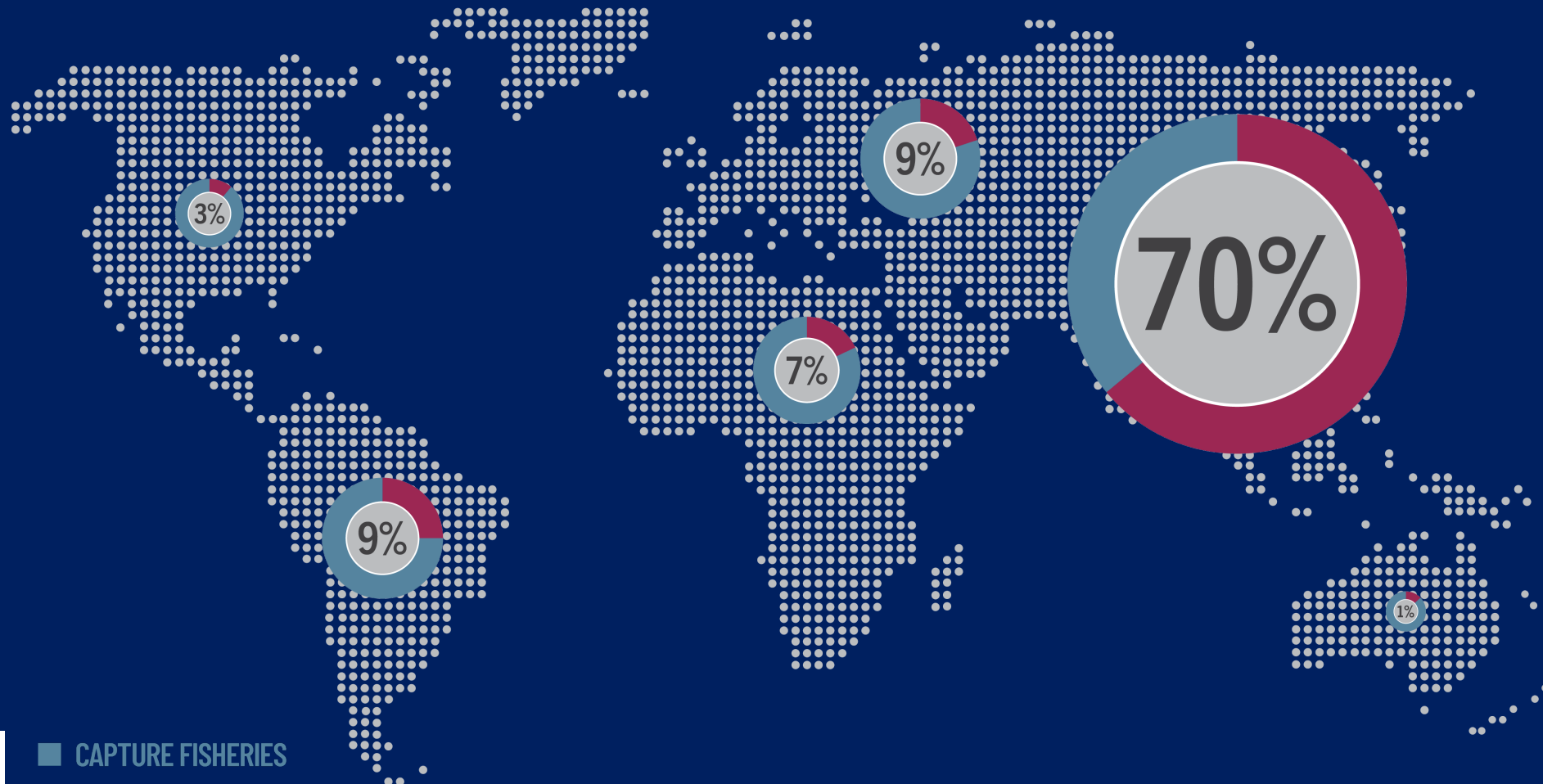
# Trade and Production around the Globe



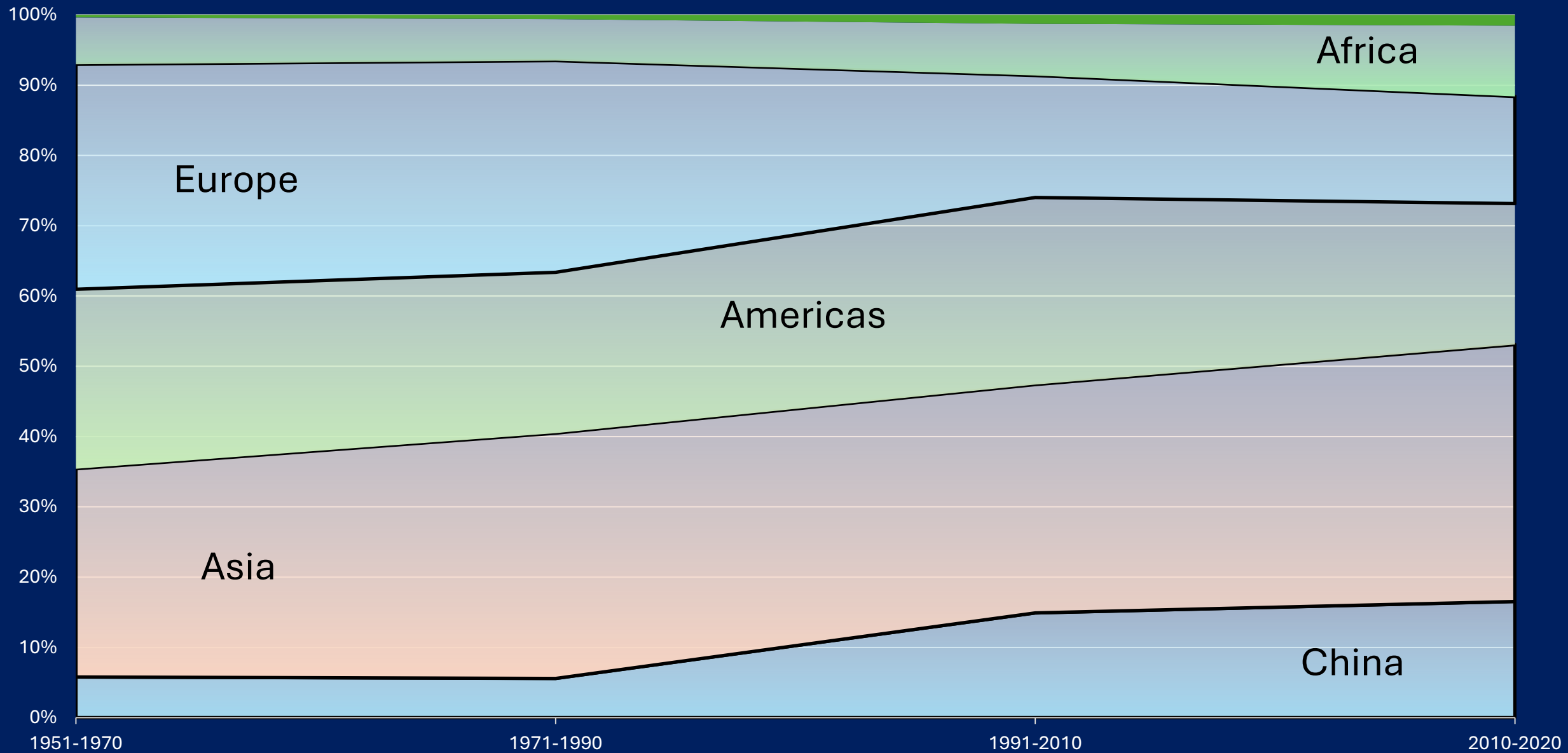
Rabobank



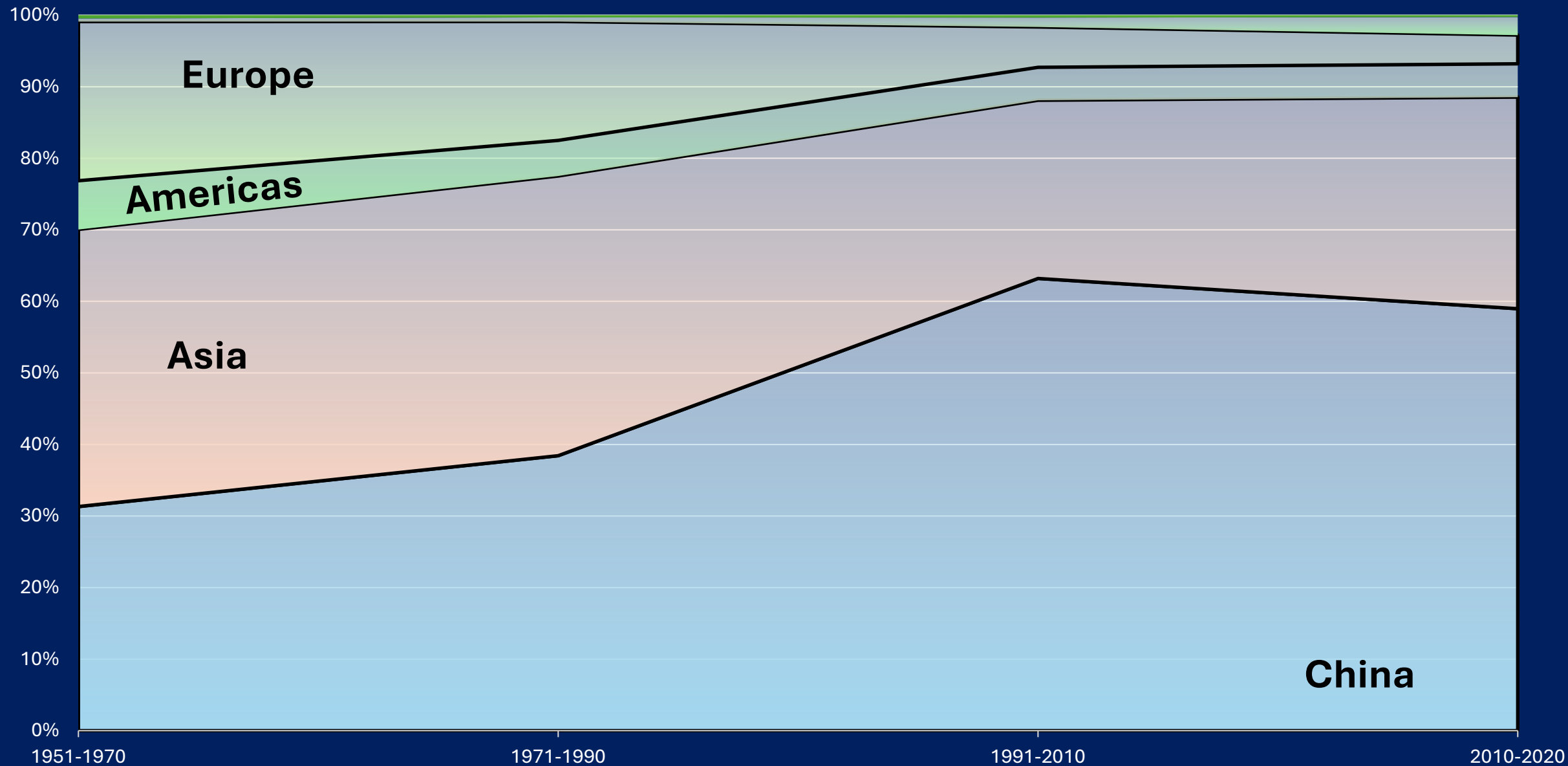
# PRODUCTION BY REGION IN 2022



# Fisheries Production by Region



# Aquaculture Production by Region





# Main Aquaculture Producers



56.4%



6.1%



10.3%



5.2%



Food and Agriculture  
Organization of the  
United Nations

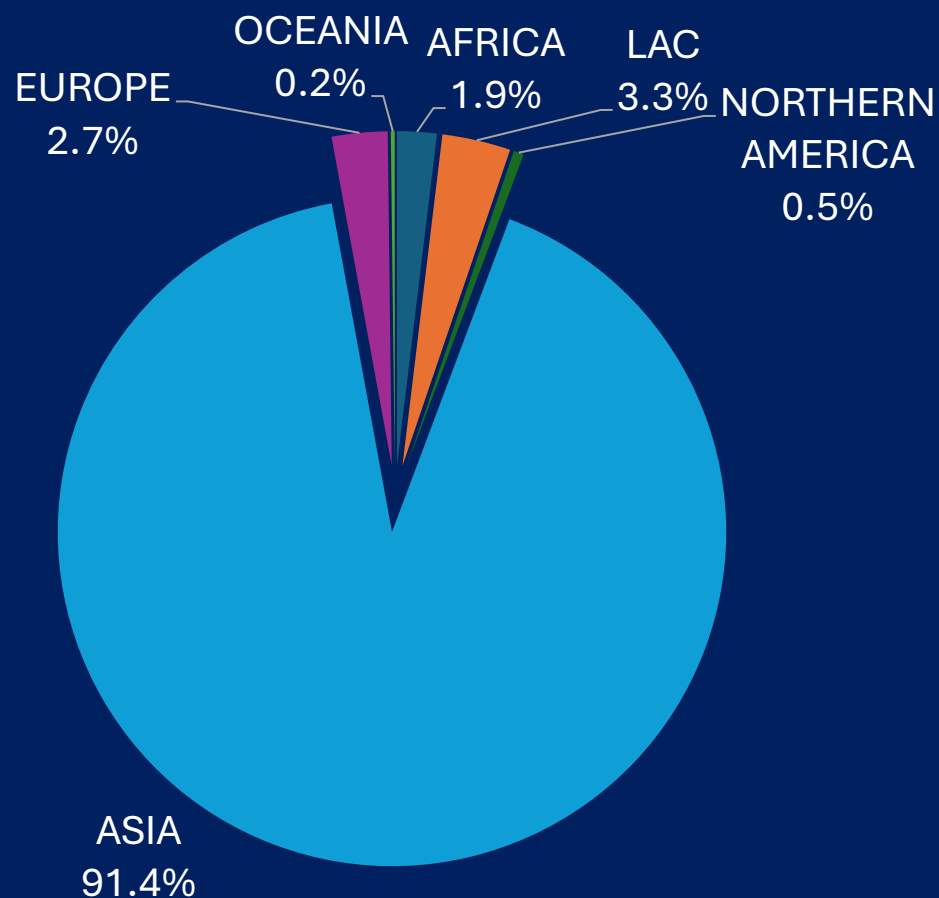
# **AQUACULTURE HAS THE POTENTIAL TO MEET THE GROWING DEMAND FOR AQUATIC FOODS**



# WORLD AQUACULTURE PRODUCTION IN 2022

## 130.9 MT (94.4MT ANIMALS), A NEW RECORD

### AQUACULTURE DEVELOPMENT



### Growth 2000-2022 (%)

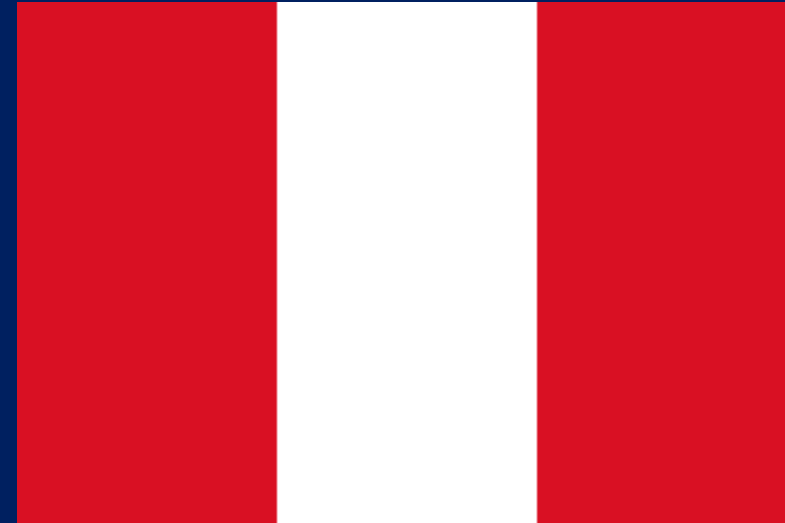
Africa	8.1 %
Latin America and the Caribbean	7.6 %
North America	0.5 %
Asia	5.2 %
Europe	2.5 %
Oceania	2.7 %
World	5.2 %



# Main Capture Producers



14.2%



7.2%



7.8%



5.7%

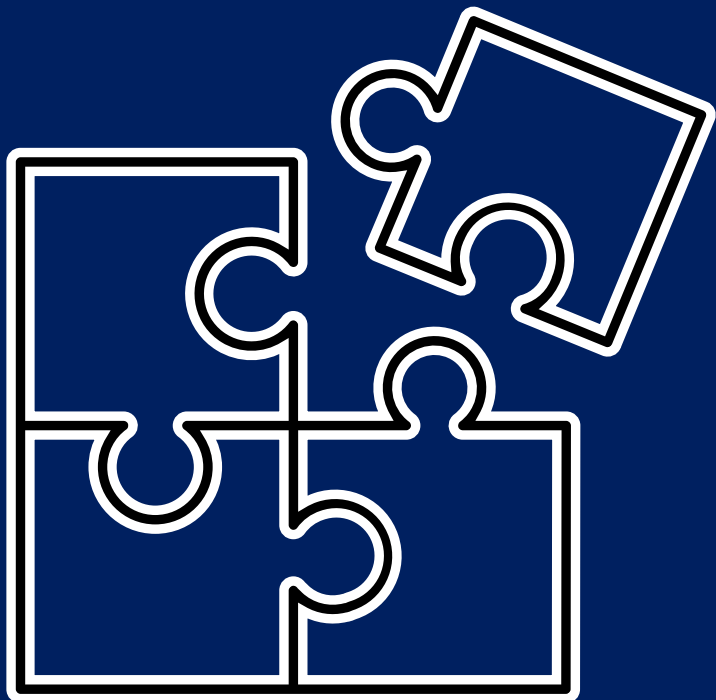




# Interaction

- Go to [www.menti.com](https://www.menti.com) and type

**6449 2740**



# What are the most internationally traded species?

Salmon, Trouts  
and Smells

18%

Tunas, bonitos  
and billfishes

10%

Shrimps and  
Prawns

16%

Cods, Hakes and  
Haddocks

10%

# Main Exporters



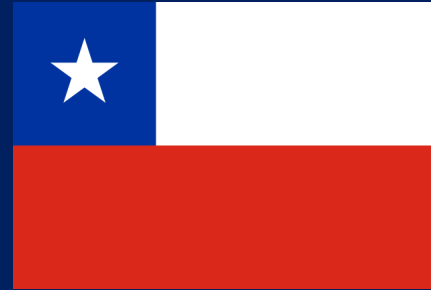
12%



8%



5%



4%



4%



4%



4%

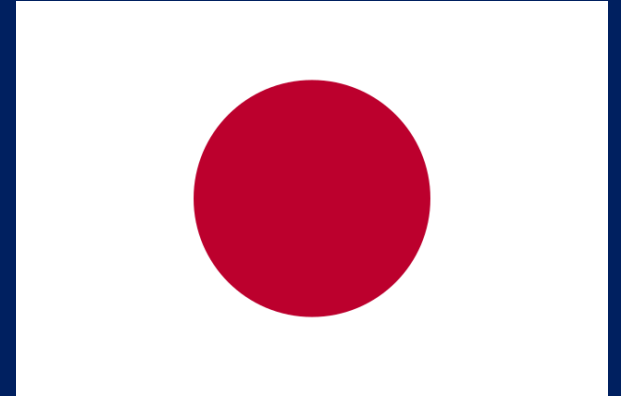
# Main Importers



17%



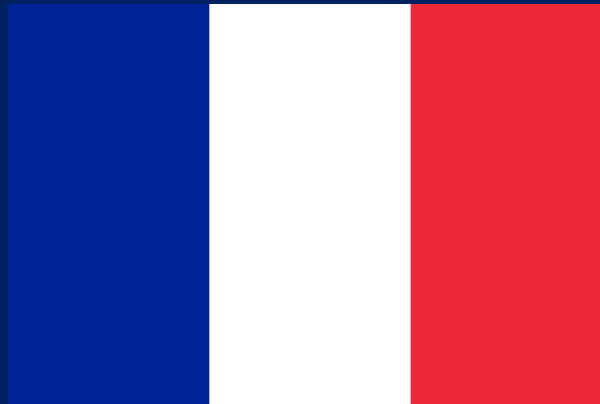
10%



8%



5%



4%

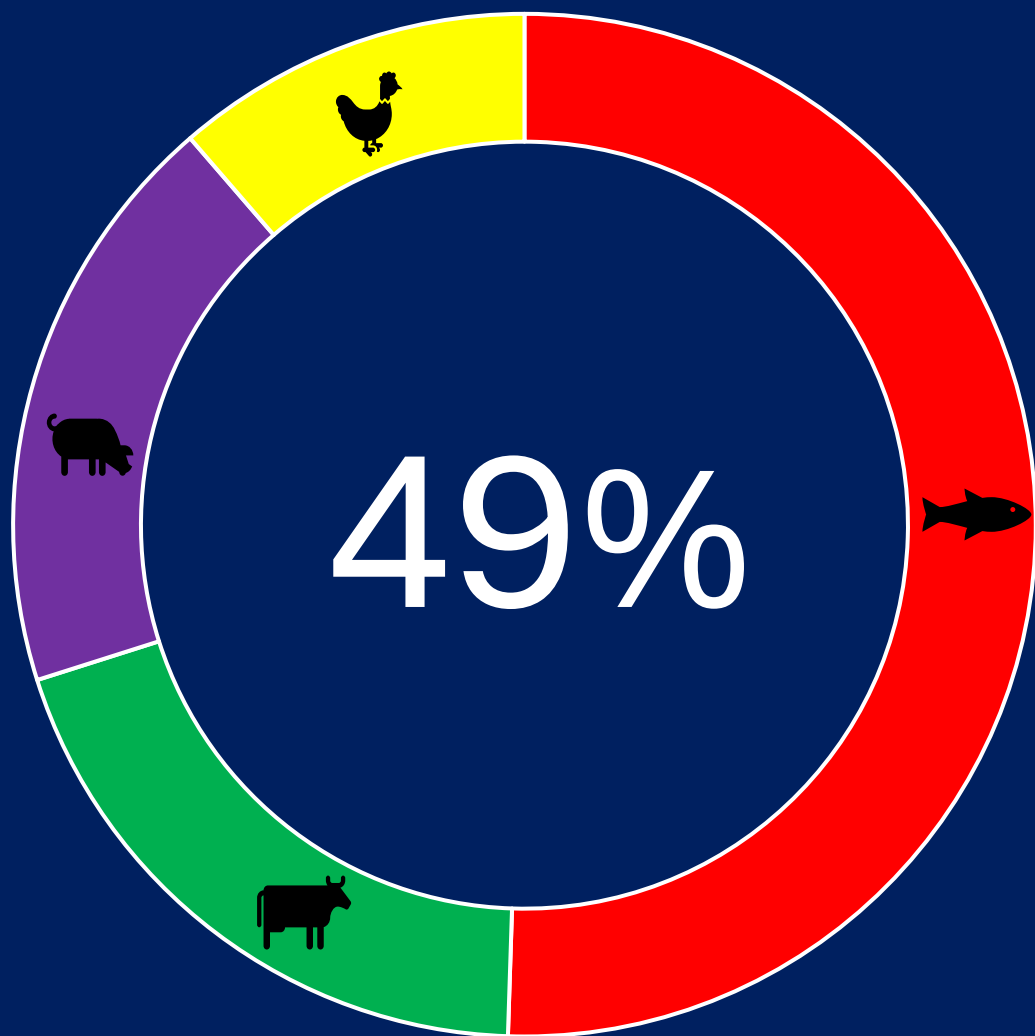


4%



Food and Agriculture  
Organization of the  
United Nations

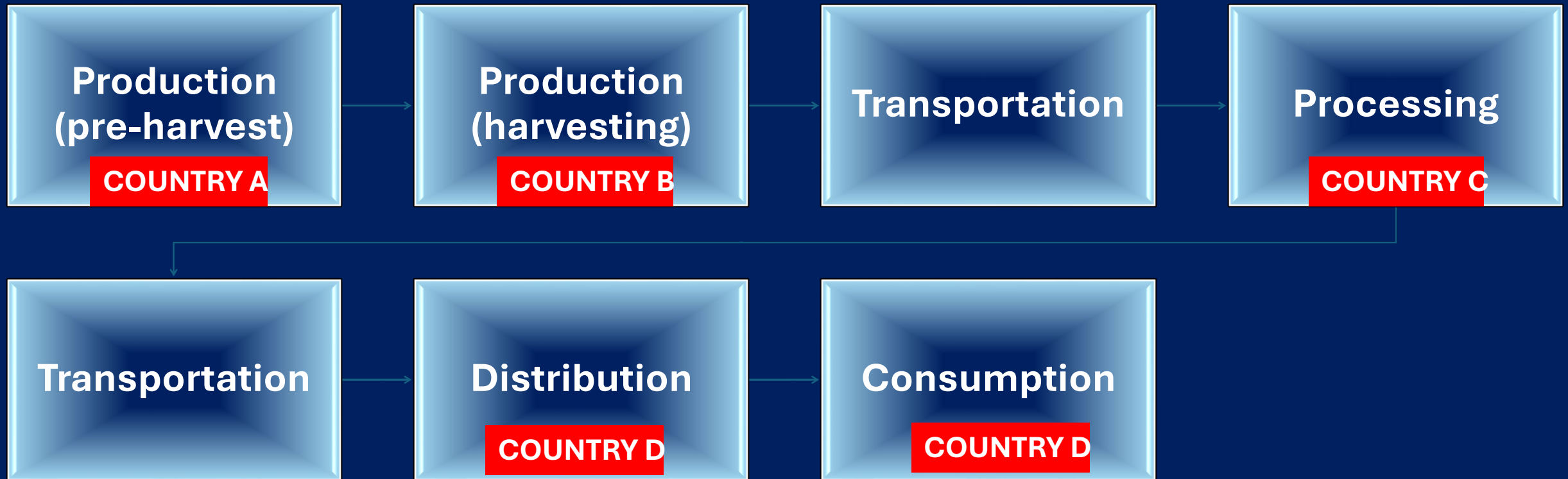




Global Exports  
(USD)

Aquatic Products  
and  
Other Animals

# Simplified Value Chain Fisheries and Aquaculture

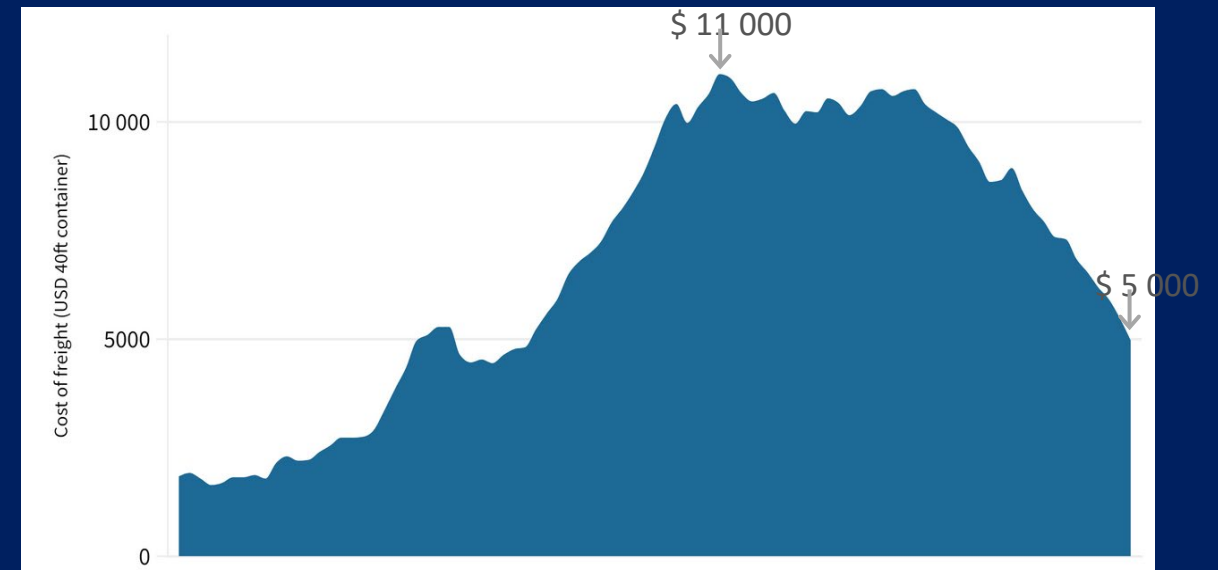


# RECENT EXAMPLES OF MARKET DISRUPTIONS

COVID-19

Freight Costs

Changes in consumer preferences



2020  
Price hikes -

The last three years have seen rapid rises in freight rates

2021  
World economy slows

2022  
Varied picture



Food and Agriculture  
Organization of the  
United Nations

**“In every crisis lies the  
seed of opportunity”**





# Opportunities

## Production

- Short cycles can be easier to respond to changes

## Markets

- Expansion to alternative markets
- Local AND international
- New product packaging opportunities

## Demand

- Healthier food
- Role of Millennials and Generation-X
- Growing import needs by traditional markets
- Home cooking
- HORECA and final consumers

# Some FAO instruments in support of sustainable production and trade



# FAO Instruments

**Code of Conduct for  
Responsible Fisheries  
(CCRF)  
1995**

**International Plan of  
Action IPOA-IUU  
2001**

**Port State Measures  
Agreement (PSMA)  
2009**

**International Plan of  
Action IPOA-Capacity  
2009**

**Voluntary Guidelines  
for Small-Scale Fishers  
2014**

**Voluntary Guidelines  
for Catch  
Documentation  
Schemes (CDS)  
2017**

**Voluntary Guidelines  
for Transshipment  
2022**



Food and Agriculture  
Organization of the  
United Nations

# FAO Code of Conduct for Responsible Fisheries (CCRF)

## Comprehensive Instrument

## Basic Axiological Values

- Solid, sustainable, precautionary and inclusive actions
- Shared responsibilities
- Holistic approach
- Good source of guidance for the main pillars of WTO Fisheries Subsidies negotiation process

## Main Covered Areas

- Fisheries management
  - Overfishing
- Small-Scale Fishers
  - Specific approach
- Post-Harvest Issues



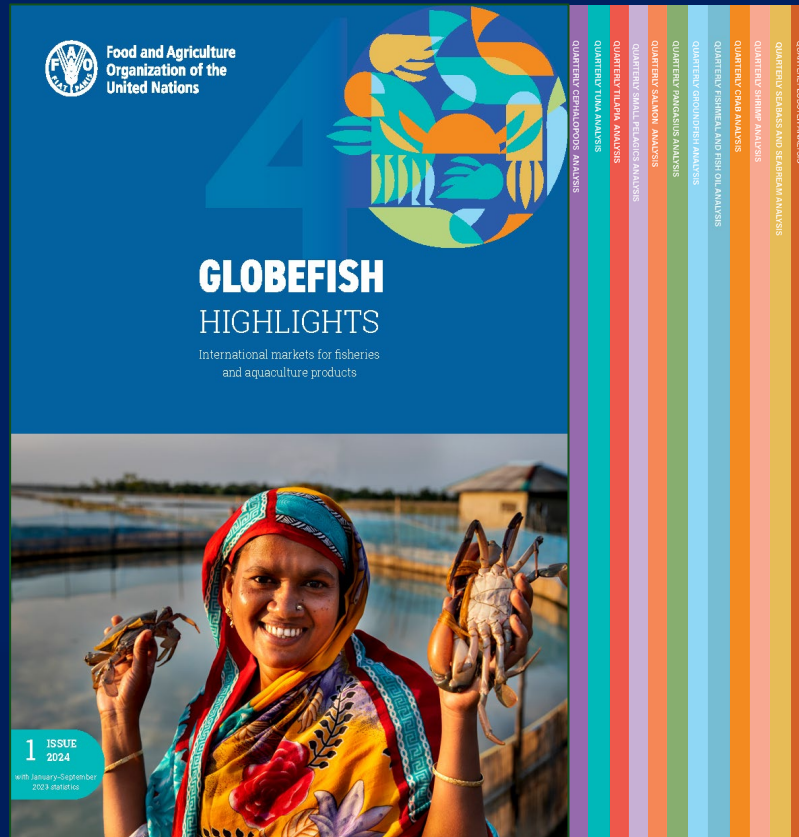
# Information! Information! Information!





# GLOBEFISH HIGHLIGHTS

- Comprehensive quarterly update on market trends for 13 major commodities
- Trade date and price information from multiple sources



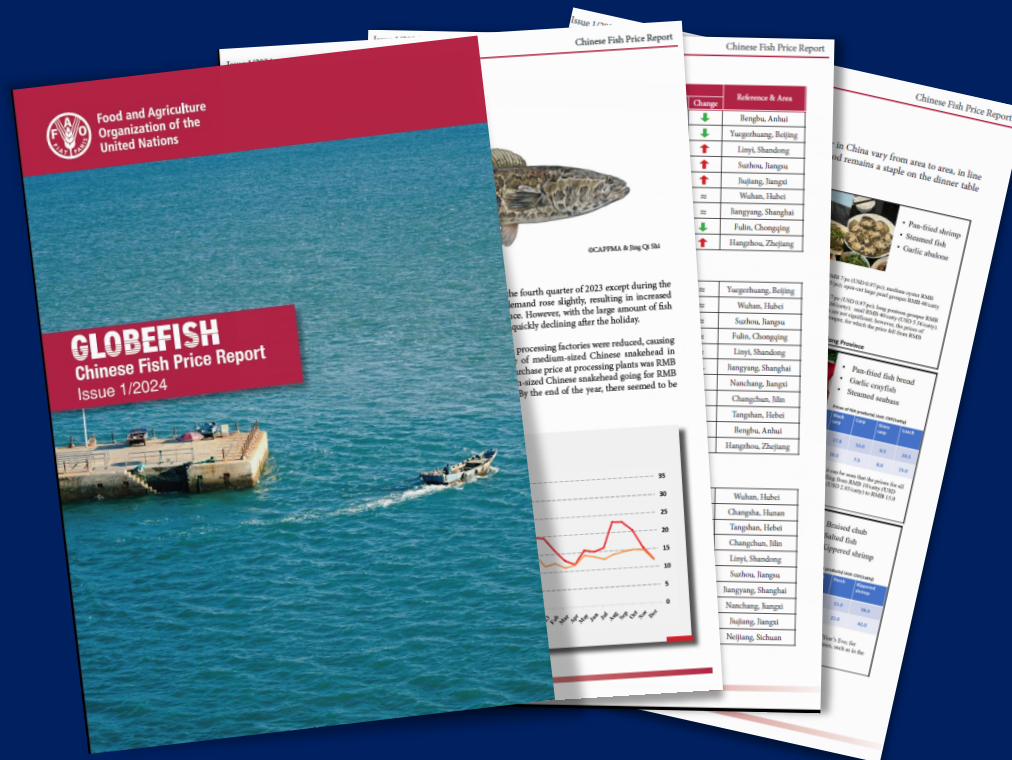
# EUROPEAN FISH PRICE REPORT

- Monthly price report
- Covers some 700 prices of different fish products traded in Europe directly from producers and suppliers.



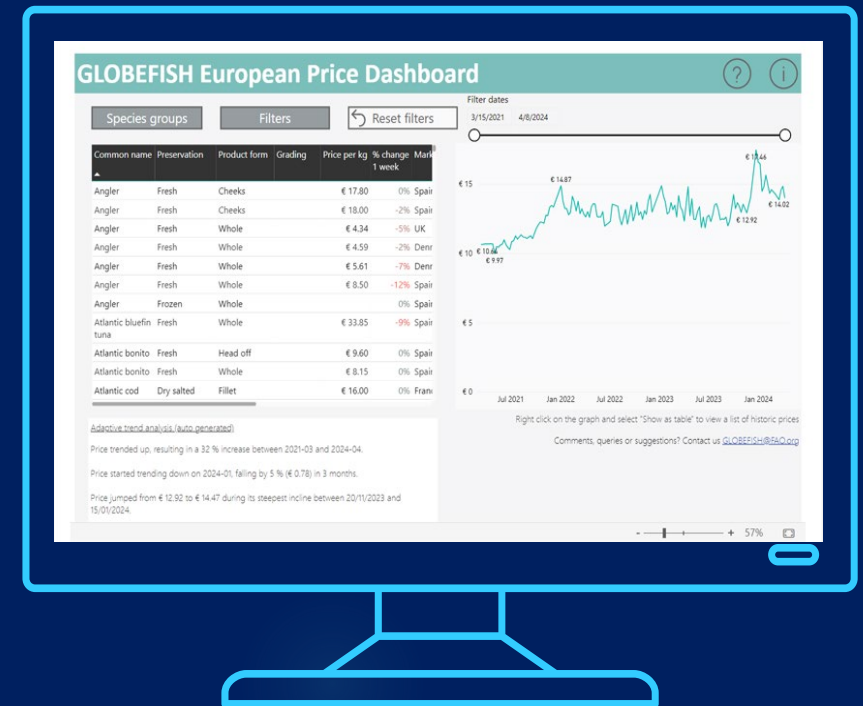
# CHINESE FISH PRICE REPORT

- Quarterly report analyzing overarching market and price trends in China
- Concise overview of industry developments and policy modifications



# GLOBEFISH PRICE DASHBOARD

- user-friendly interface that displays the prices of fisheries and aquaculture products in Europe
- dynamic instrument for data monitoring and information dissemination to end users





# HS Codes for fisheries and aquaculture products

Second edition 2022



## Full description of fisheries and aquaculture products

0301.11	Freshwater ornamental fish, live
0301.19	Ornamental fish, live; excluding freshwater ornamental fish
0301.91	Trout ( <i>Salmo trutta</i> , <i>Oncorhynchus mykiss</i> , <i>Oncorhynchus clarki</i> , <i>Oncorhynchus aguabonita</i> , <i>Oncorhynchus gila</i> , <i>Oncorhynchus apache</i> and <i>Oncorhynchus chrysogaster</i> ), live; excluding ornamental
0301.92	Eels ( <i>Anguilla</i> spp.), live; excluding ornamental
0301.93	Carp ( <i>Cyprinus</i> spp., <i>Carrasius</i> spp., <i>Ctenopharyngodon idella</i> , <i>Labeo</i> spp., <i>Osteochilus hasselti</i> , <i>Leptobotrys hoeveri</i> , <i>Megalobrama</i> spp.), live; excluding ornamental
0301.94	Atlantic and Pacific bluefin tunas ( <i>Thunnus thynnus</i> , <i>Thunnus orientalis</i> ), live; excluding ornamental
0301.95	Southern bluefin tunas ( <i>Thunnus maccoyii</i> ), live; excluding ornamental
0301.99	Fish, live; excluding Atlantic bluefin tunas, carp, eels, Pacific bluefin tunas, southern bluefin tunas, trout, and also excluding ornamental
0302.11	Trout ( <i>Salmo trutta</i> , <i>Oncorhynchus mykiss</i> , <i>Oncorhynchus clarki</i> , <i>Oncorhynchus aguabonita</i> , <i>Oncorhynchus gila</i> , <i>Oncorhynchus apache</i> and <i>Oncorhynchus chrysogaster</i> ), fresh or chilled; excluding fillets and other meat (whether or not minced), livers, roes, milk, fins, heads, tails, maws and other edible offal
0302.13	Pacific salmon ( <i>Oncorhynchus nerka</i> , <i>Oncorhynchus gorbuscha</i> , <i>Oncorhynchus keta</i> , <i>Oncorhynchus tshawytscha</i> , <i>Oncorhynchus kisutch</i> , <i>Oncorhynchus masou</i> and <i>Oncorhynchus rhodurus</i> ), fresh or chilled; excluding fillets and other meat (whether or not minced), livers, roes, milk, fins, heads, tails, maws and other edible offal
0302.14	Atlantic salmon ( <i>Salmo salar</i> ) and Danube salmon ( <i>Hucho hucho</i> ), fresh or chilled; excluding fillets and other meat (whether or not minced), livers, roes, milk, fins, heads, tails, maws and other edible offal
0302.19	Salmonidae, fresh or chilled; excluding Atlantic salmon, Danube salmon, Pacific salmon, trout, and also excluding fillets and other meat (whether or not minced), livers, roes, milk, fins, heads, tails, maws and other edible offal
0302.21	Halibut ( <i>Reinhardtius hippoglossoides</i> , <i>Hippoglossus hippoglossus</i> , <i>Hippoglossus stenolepis</i> ), fresh or chilled; excluding fillets and other meat (whether or not minced), livers, roes, milk, fins, heads, tails, maws and other edible offal
0302.22	Plaice ( <i>Pleuronectes platessa</i> ), fresh or chilled; excluding fillets and other meat (whether or not minced), livers, roes, milk, fins, heads, tails, maws and other edible offal
0302.23	Sole ( <i>Solea</i> spp.), fresh or chilled; excluding fillets and other meat (whether or not minced), livers, roes, milk, fins, heads, tails, maws and other edible offal
0302.24	Turbots ( <i>Paralichthys maxima</i> ), fresh or chilled; excluding fillets and other meat (whether or not minced), livers, roes, milk, fins, heads, tails, maws and other edible offal
0302.29	Flat fish ( <i>Pleuronectidae</i> , <i>Bothidae</i> , <i>Cynoglossidae</i> , <i>Soleidae</i> , <i>Scophthalmidae</i> ), fresh or chilled; excluding halibut, plaice, sole, turbot, and heads, tails, maws and other edible offal
0302.31	Albacore or longfinned tunas ( <i>Thunnus alalunga</i> ), fresh or chilled; excluding fillets and other meat (whether or not minced), livers, roes, milk, fins, heads, tails, maws and other edible offal
0302.32	Yellowfin tunas ( <i>Thunnus albacares</i> ), fresh or chilled; excluding fillets and other meat (whether or not minced), livers, roes, milk, fins, heads, tails, maws and other edible offal
0302.33	Skipjack or stripe-bellied bonito ( <i>Euthynnus (Katsuwonus) pelamis</i> ), fresh or chilled; excluding fillets and other meat (whether or not minced), livers, roes, milk, fins, heads, tails, maws and other edible offal
0302.34	Bigeye tunas ( <i>Thunnus obesus</i> ), fresh or chilled; excluding fillets and other meat (whether or not minced), livers, roes, milk, fins, heads, tails, maws and other edible offal
0302.35	Atlantic and Pacific bluefin tunas ( <i>Thunnus thynnus</i> , <i>Thunnus orientalis</i> ), fresh or chilled; excluding fillets and other meat (whether or not minced), livers, roes, milk, fins, heads, tails, maws and other edible offal
0302.36	Southern bluefin tunas ( <i>Thunnus maccoyii</i> ), fresh or chilled; excluding fillets and other meat (whether or not minced), livers, roes, milk, fins, heads, tails, maws and other edible offal
0302.39	Tunas (of the genus <i>Thunnus</i> ), fresh or chilled; excluding albacore tunas, Atlantic bluefin tunas, bigeye tunas, longfinned tunas, Pacific bluefin tunas, skipjack, stripe-bellied bonito, southern bluefin tunas, yellowfin tunas, and also excluding fillets and other meat (whether or not minced), livers, roes, milk, fins, heads, tails, maws and other edible offal
0302.41	Herrings ( <i>Clupea harengus</i> , <i>Clupea pallasii</i> ), fresh or chilled; excluding fillets and other meat (whether or not minced), livers, roes, milk, fins, heads, tails, maws and other edible offal

## Pacific salmon

*Oncorhynchus gorbuscha*, *Oncorhynchus keta*, *Oncorhynchus tshawytscha*, *Oncorhynchus kisutch*, *Oncorhynchus masou*, *Oncorhynchus rhodurus*

*Oncorhynchus gorbuscha* (Walbaum, 1792)  
SIZE: Max L 75 cm  
FAO NAMES: Eng Pink (= humpback) salmon  
Esp Salmón rosado

### MAIN CHARACTERISTICS:

A. Elongate black spots dorsally, on upper flanks, on adipose fin and on both lobes of caudal fin (oval-shaped, some of them big as eye); B. colour steel blue, green blue dorsally, silvery on flanks, white-silvery ventrally (marine specimens).

DISTRIBUTION: Anadromous species. Pacific and tributary rivers: California to the Strait of Bering and the Sea of Japan. Arctic Ocean: from the Strait of Bering to the Mackenzie River and the Kola Peninsula (the White Sea). Europe: introduced several times in the White Sea and in the Sea of Barents.



*Oncorhynchus keta* (Walbaum, 1792)  
SIZE: Max L 100 cm  
FAO NAMES: Eng Chum (= Keta= Dog) salmon  
Esp Keta

### MAIN CHARACTERISTICS:

A. Absence of evident black spots on back, flanks and fins; back and flanks may display blackish dots; margins of caudal, anal and pectoral fins display black shadings; B. colour steel blue dorsally and on upper portion of head; silvery on flanks, white-silvery on belly (marine specimens).

DISTRIBUTION: Anadromous species. North Pacific and tributary rivers: from Sacramento River (United States) to the Bering Sea and the Chotsk Sea, southwards to the Korean Peninsula and the Sea of Japan. Arctic Ocean: from Mackenzie River to the Lena River. Introduced in New Zealand and the Islamic Republic of Iran.



*Oncorhynchus kisutch* (Walbaum, 1792)  
SIZE: Max L 108 cm  
FAO NAMES: Eng Coho (= silver) salmon  
Esp Salmón plateado

### MAIN CHARACTERISTICS:

A. Rounded black spots dorsally, on upper flanks, on base of dorsal fin and on upper lobe of caudal fin (a few scattered spots); B. steel blue, with green highlights dorsally, bright silvery on flanks, white-silvery ventrally (marine specimens); white gums at the base of the teeth.

DISTRIBUTION: Anadromous species. Western Pacific and tributary rivers: from Chamalu Bay in Baja California (Mexico) to northwestern Alaska and from the northern Sea of Japan (Hokkaido) to the Anadyr River. Europe: southern France.

*Oncorhynchus masou masou* (Brevoort, 1856)  
SIZE: Max L 79 cm  
FAO NAMES: Eng Masu (= cherry) salmon  
Esp Salmón japonés

### MAIN CHARACTERISTICS:

A. Small dark spots dorsally and on upper flanks, on adipose fin and on proximal part of dorsal and caudal fins; B. colour steel blue dorsally, silvery on flanks, white-silvery ventrally (marine specimens).

DISTRIBUTION: Northern Pacific and surrounding rivers. Present along the coasts of Japan and the Korean Peninsula.



GLOBEFISH  
monitors the leading  
causes of border  
alerts and rejections  
across major  
markets.

# GLOBEFISH MARKET PROFILES

- GLOBEFISH compiles and publishes Market Profiles based on nationally reported data or information published by international agencies.
- The profiles present a snapshot of the most up to date countries' fisheries profiles.



# Resource Materials

<https://linktr.ee/fishtrade>

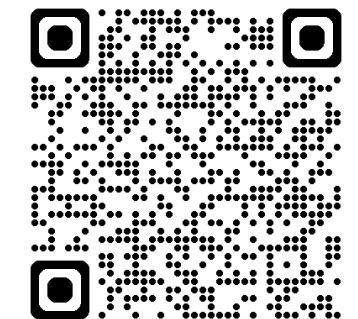




# Sustainable Fish Trade For Today and Tomorrow



[www.linkedin.com/in/mcdesouza](https://www.linkedin.com/in/mcdesouza)



Food and Agriculture  
Organization of the  
United Nations