

# Global fisheries sustainability: challenges and successes

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Department



Food and Agriculture  
Organization of the  
United Nations



Rome, 18-21 November 2019

Keynote lecture  
Opening ceremony

@Manu\_FAO  
#sustainablefisheries

International Symposium on Fisheries Sustainability:  
*Strengthening the Policy-Science Nexus*

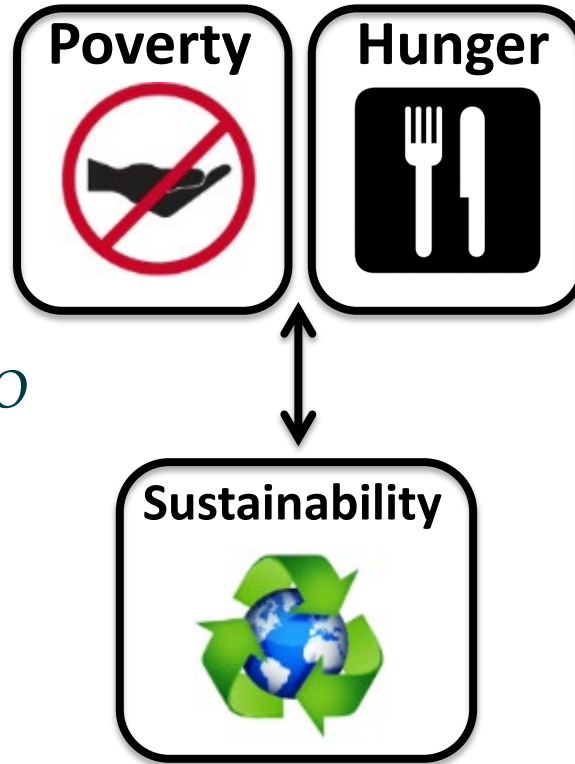


# THE FOOD AND AGRICULTURE ORGANIZATION OF THE UN



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*Oct 1945, Quebec- 40 nations formed FAO*



12158r7706 - ©FAO/Riccardo De Luca

*1965 – COFI established*



*1950 - The World Census of Agriculture*



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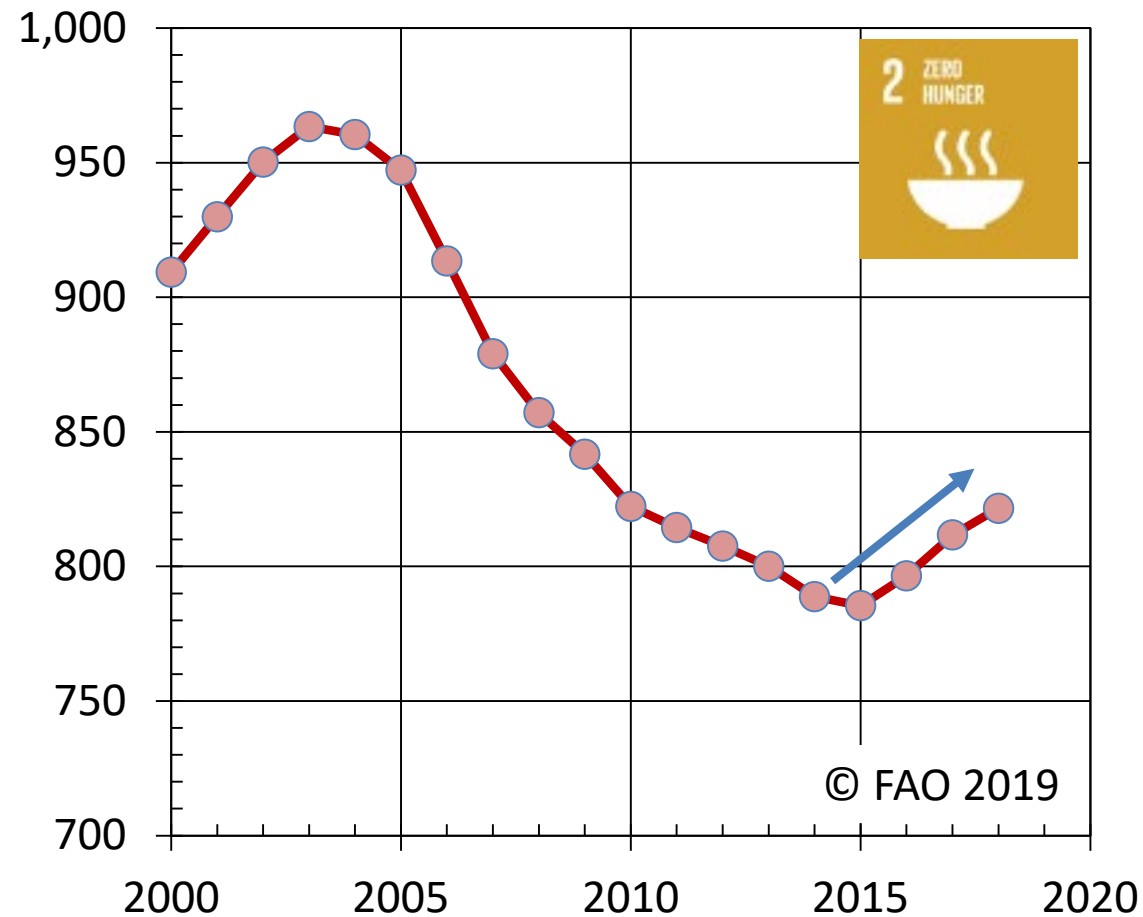
*1951- Headquarters move to Rome*



# ENOUGH FOOD, BUT NOT MAKING HUNGER HISTORY

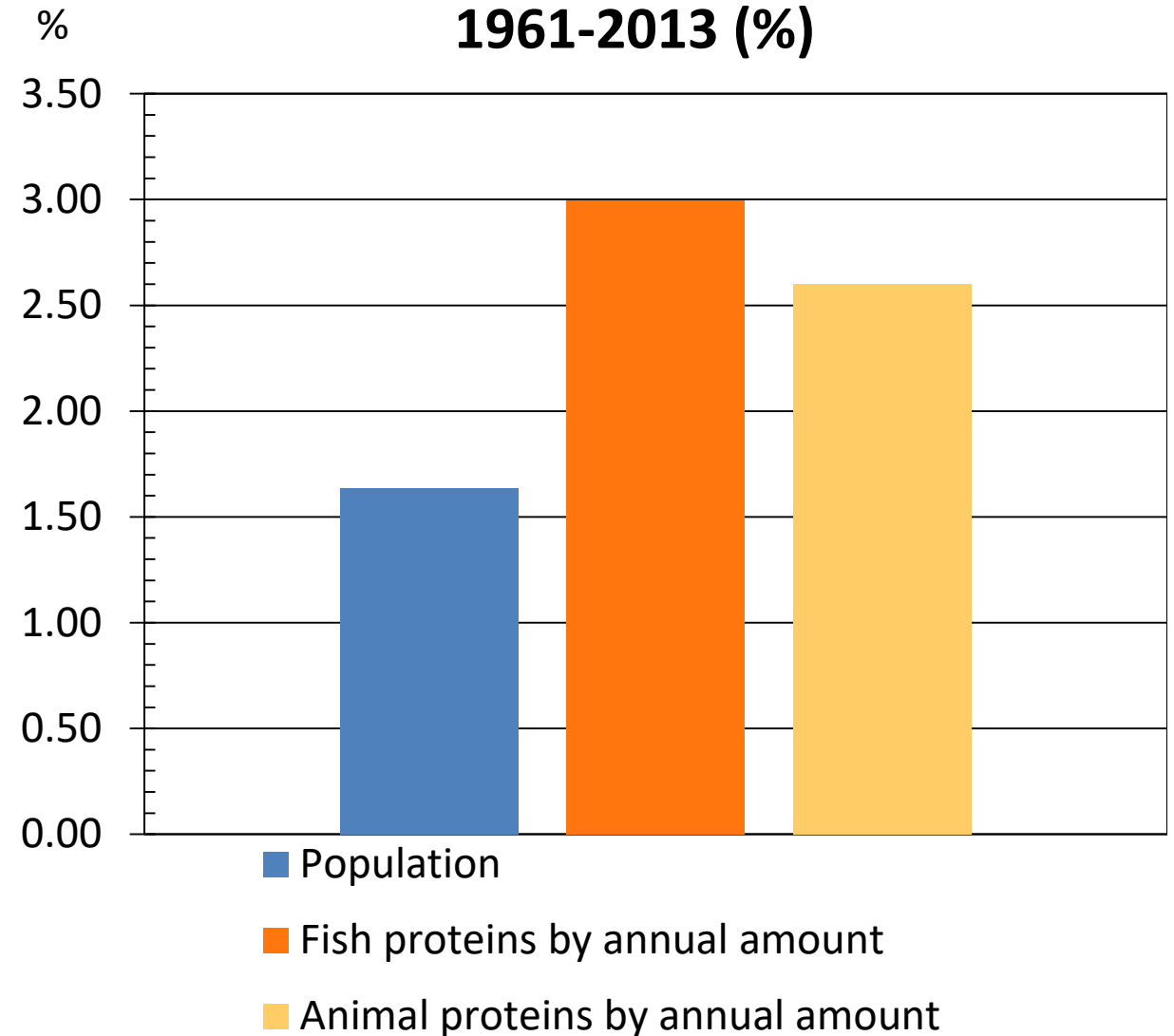


## Undernourished people (Million)



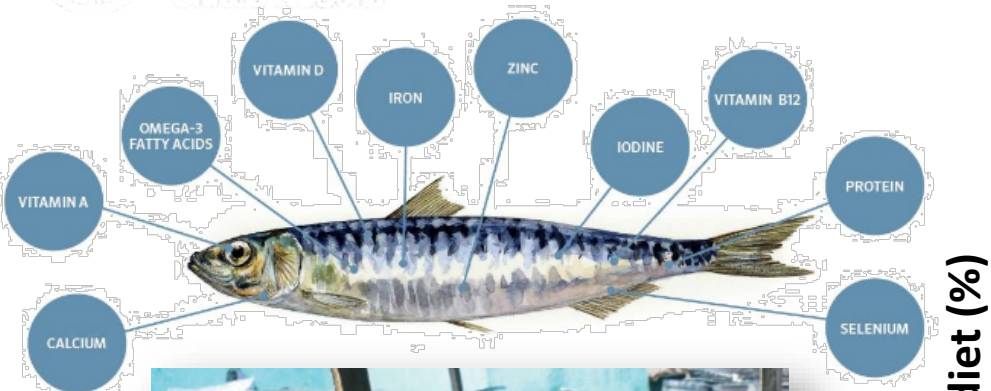
*2 billion experience moderate or severe food insecurity*

## Global annual growth rate 1961-2013 (%)



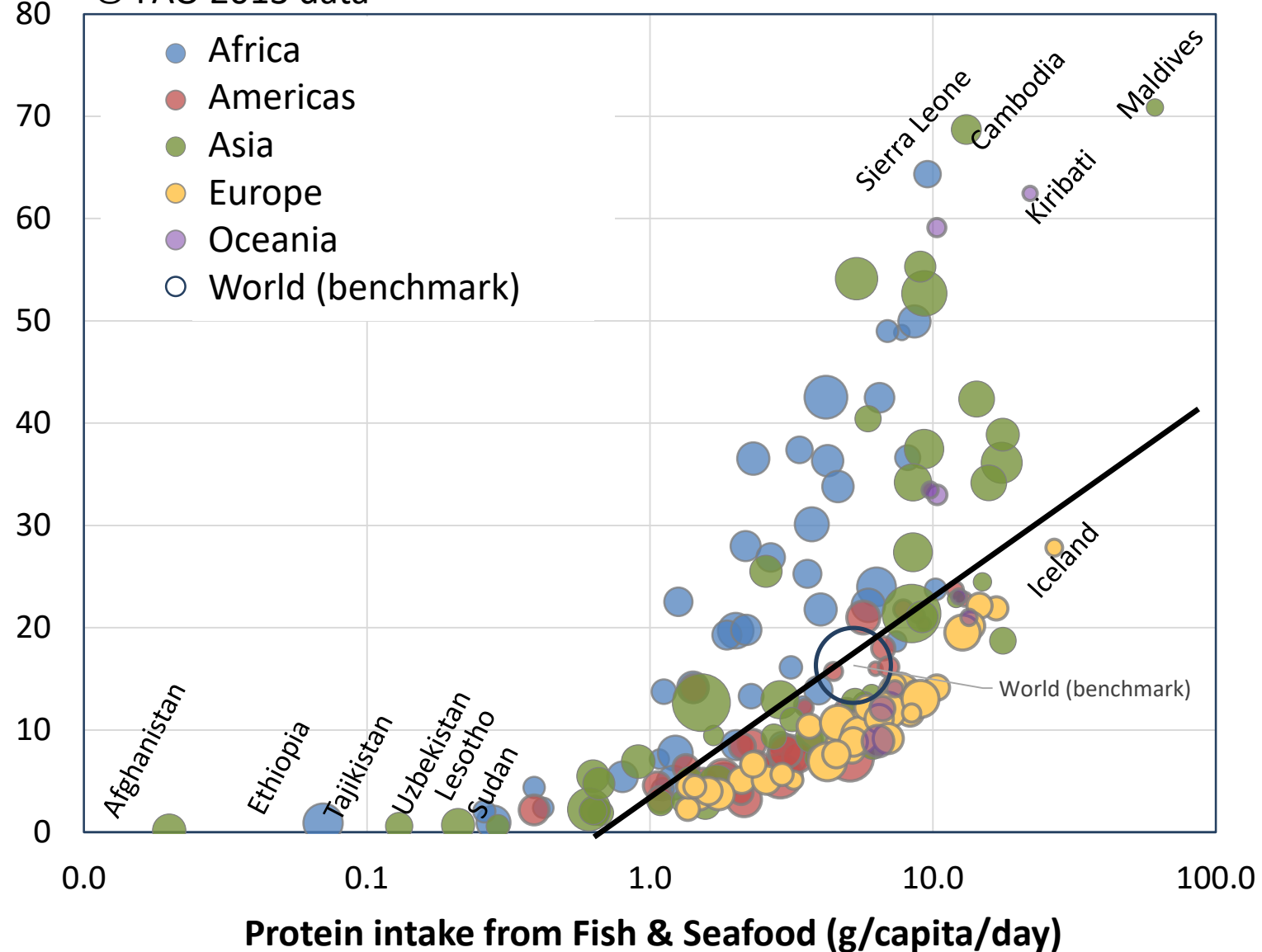


# SEAFOOD - NUTRITION OF FOOD DEFICIT COUNTRIES



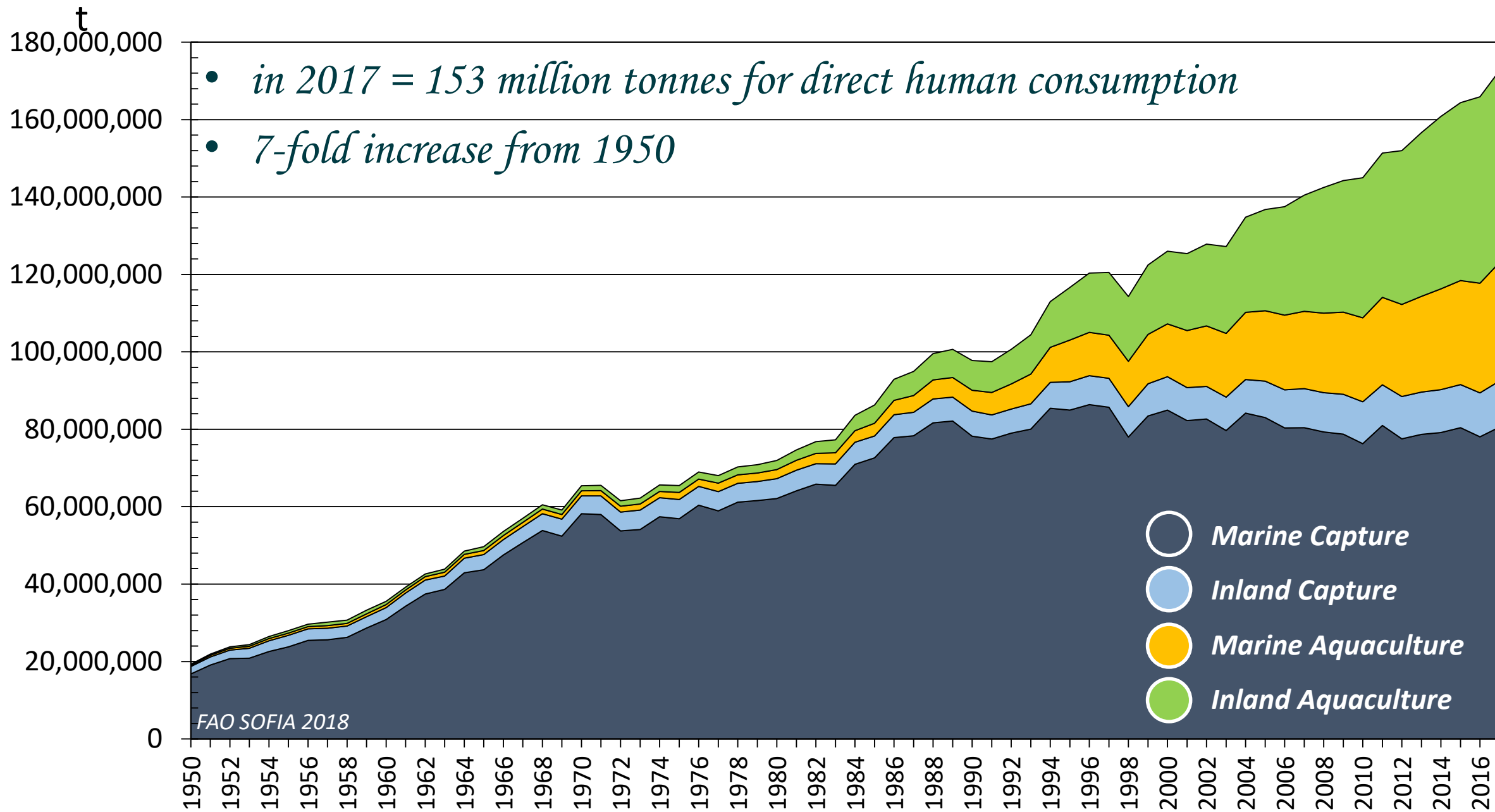
Fish & seafood / Animal protein in diet (%)

© FAO 2013 data





# FISHERIES PRODUCTION: OUTPACING POPULATION GROWTH





# MARINE FISHERIES – GLOBALLY STABLE, HIGHLY VARIABLE NATIONALLY



# INLAND FISHERIES – CRUCIAL TO LIFD COUNTRIES



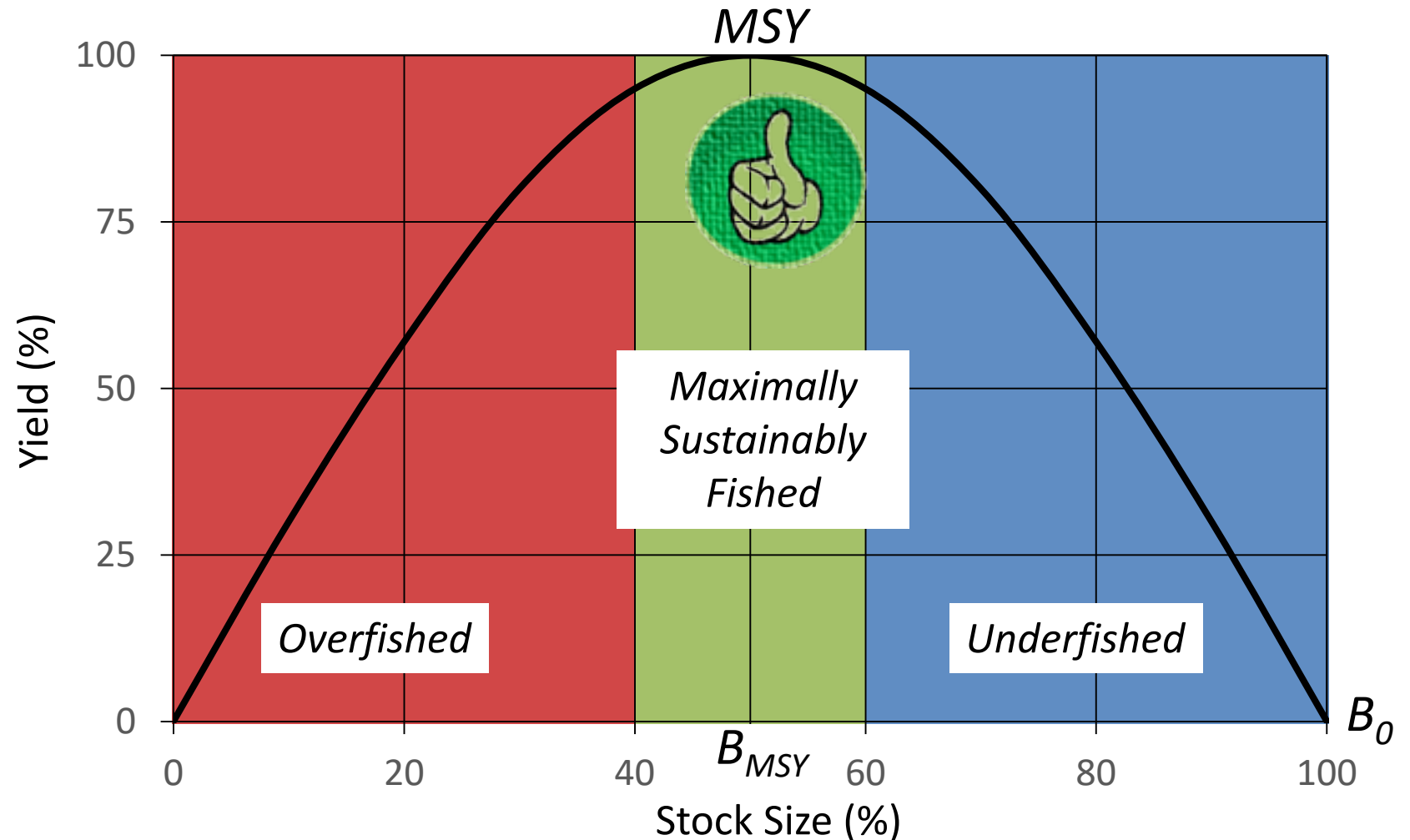


# ESTIMATING FISH STOCK STATUS

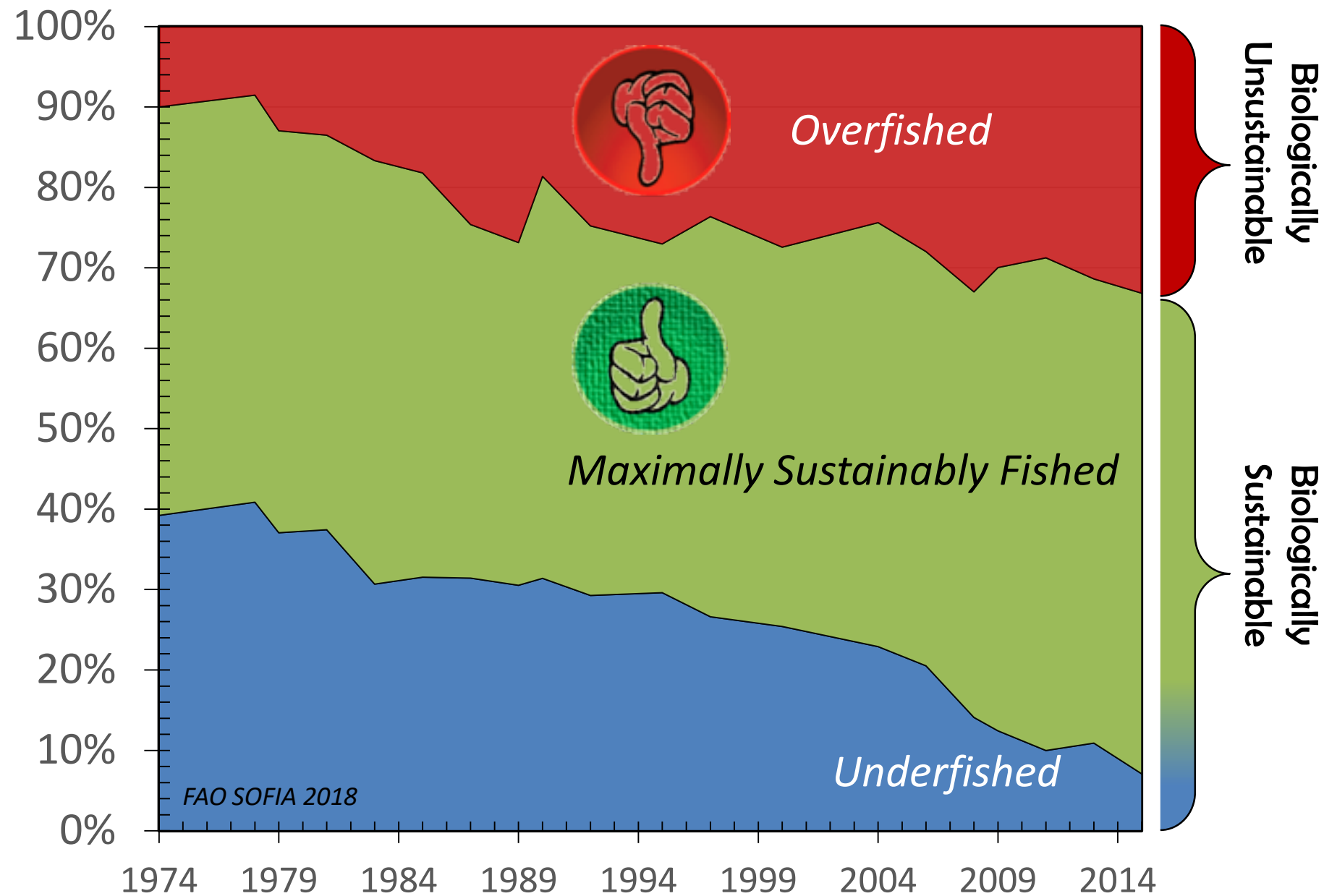
- Based on ~450 stocks
- Reflects ~75% landings



(UNCLOS, 19821): "...State(s) must set an allowable catch, based on scientific information, which is designed to maintain or restore species to **levels supporting a maximum sustainable yield (MSY).**"



# MOST STOCKS SUSTAINABLE- A GROWING NUMBER ARE NOT



**Bad + Good  $\neq$  Worse**



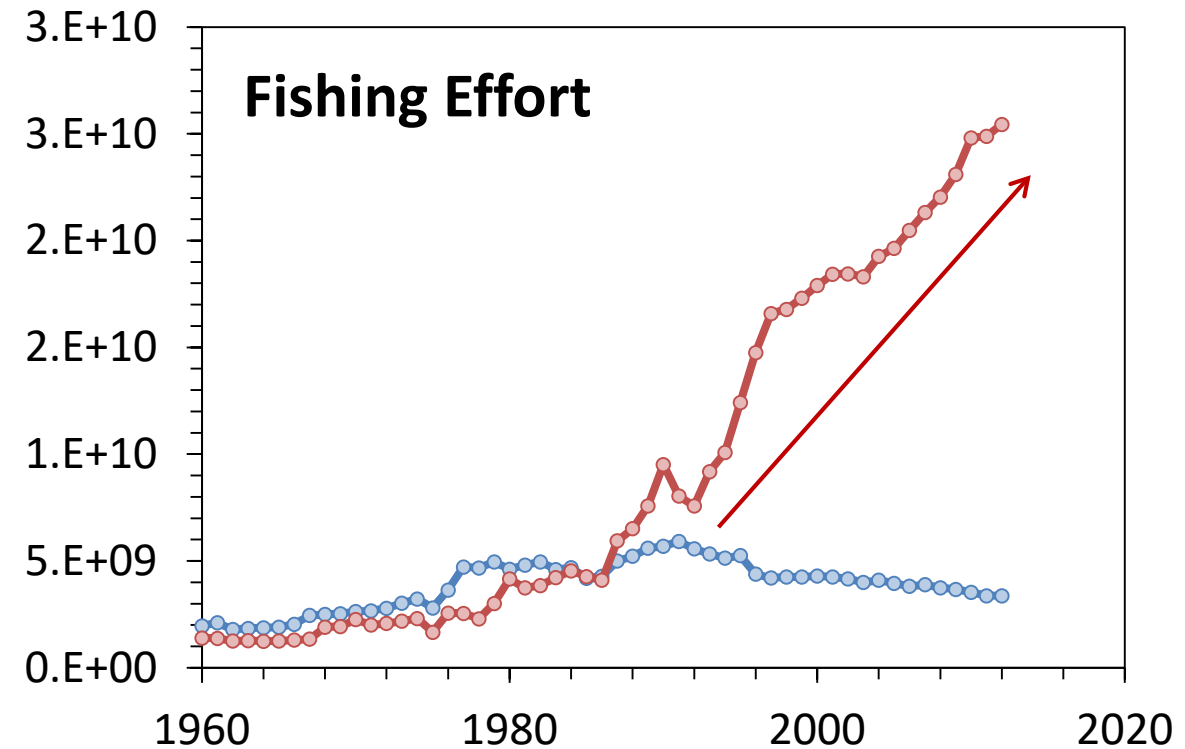
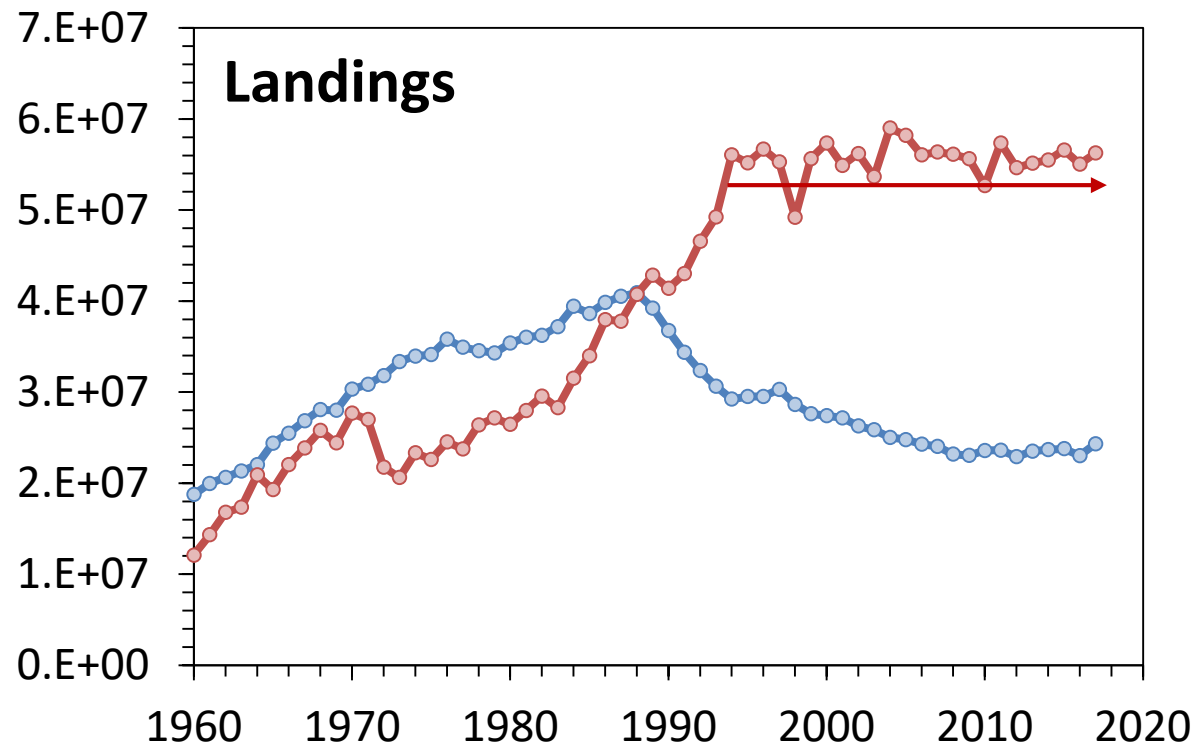
# DIFFERENTIAL TRENDS DEVELOPED/ DEVELOPING REGIONS

© Catena FAO



—●— Developed Countries    —●— Developing Countries

[As per UN standard country codes for statistical use, @UNSTATS]

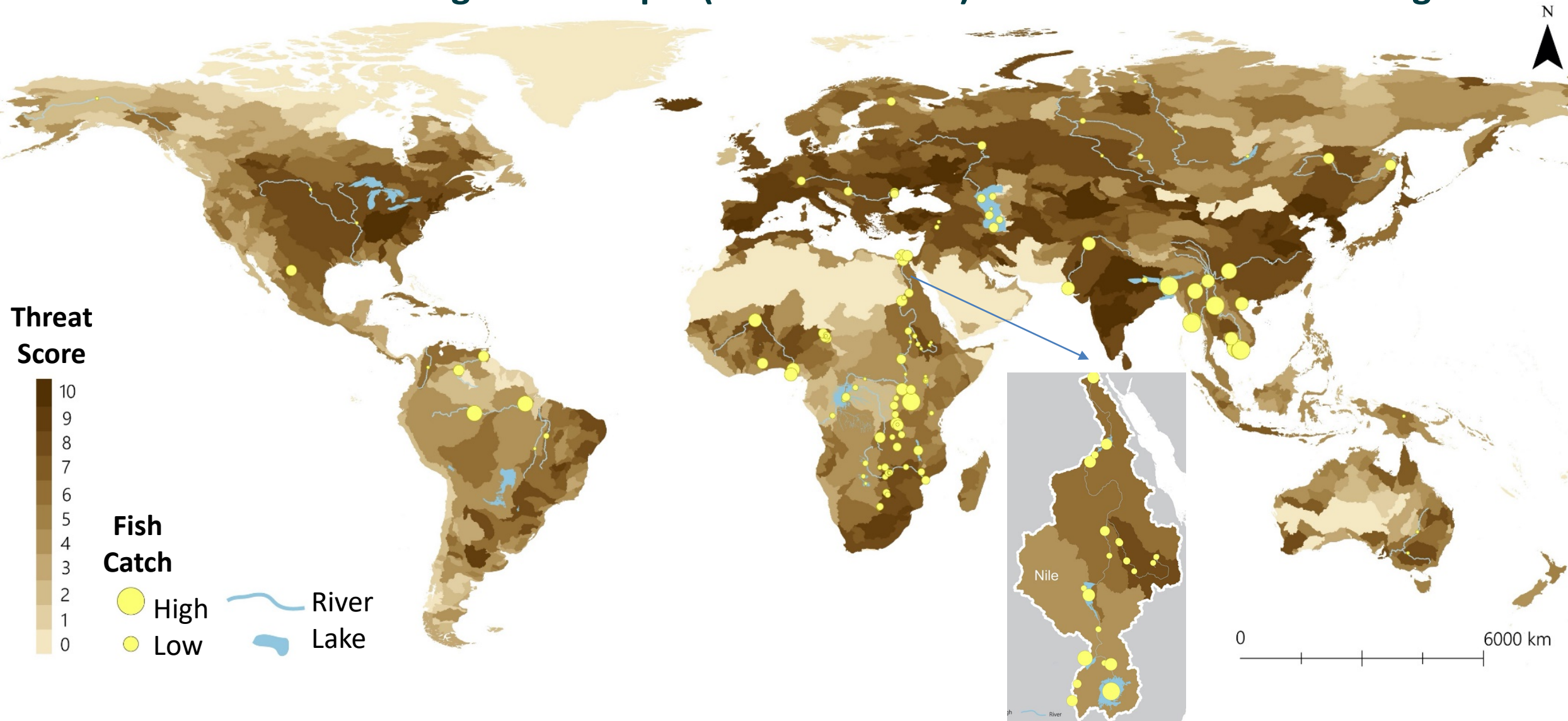


(updated) Ye and Gutierrez 2017

# INLAND FISHERIES – UNCERTAIN, UNDERVALUED, UNSEEN



Limited monitoring and multiple (environmental) drivers unrelated to fishing



*Source: Unpublished data US Geological Survey, Land and Water Lab at the University of Florida, Hull International Fisheries Institute*

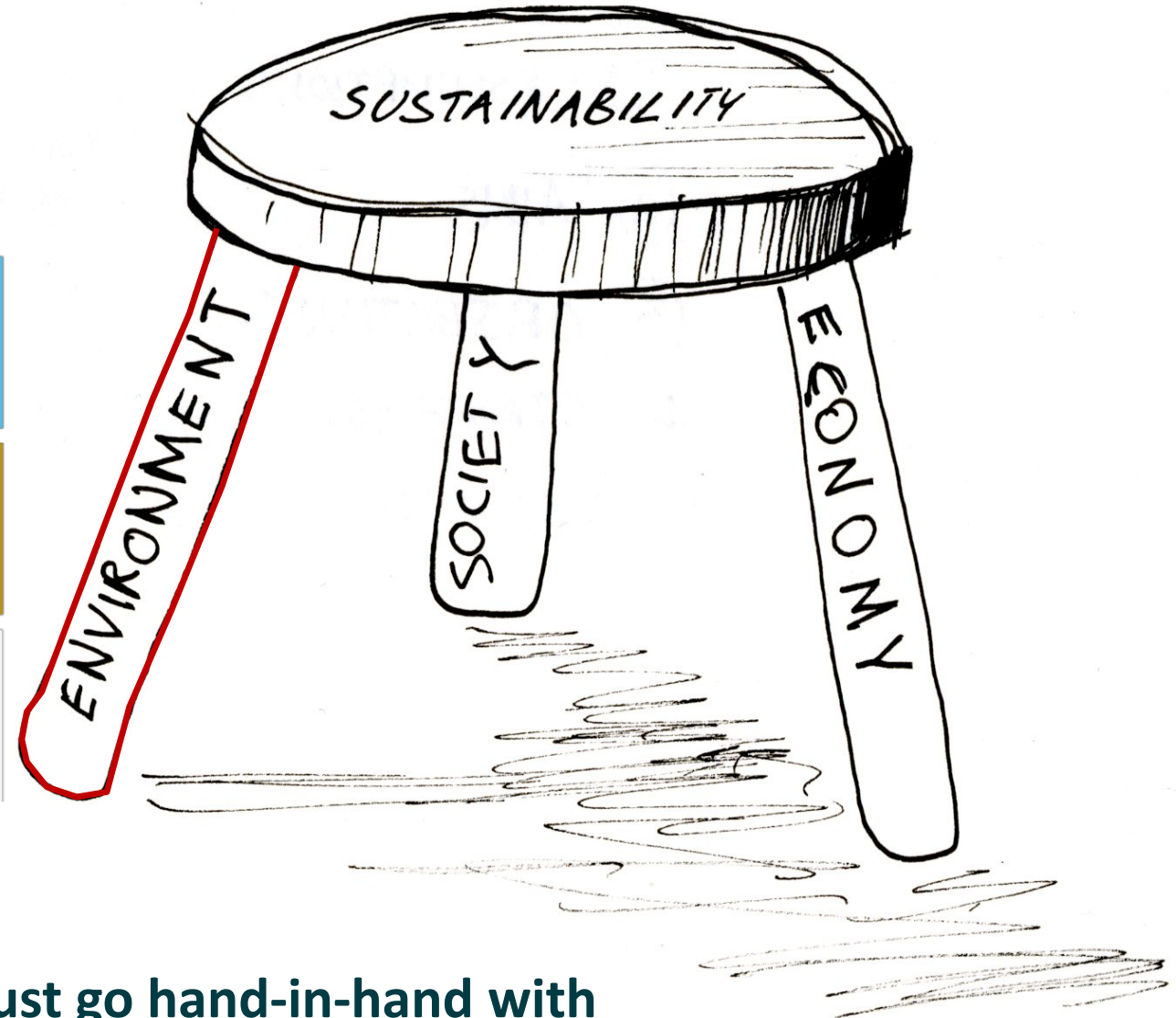


# SUSTAINABILITY – A THREE LEGGED STOOL



**SUSTAINABLE  
DEVELOPMENT GOALS**

17 GOALS TO TRANSFORM OUR WORLD



The SDGs recognize that ending poverty must go hand-in-hand with strategies that build economic growth and addresses a range of social needs

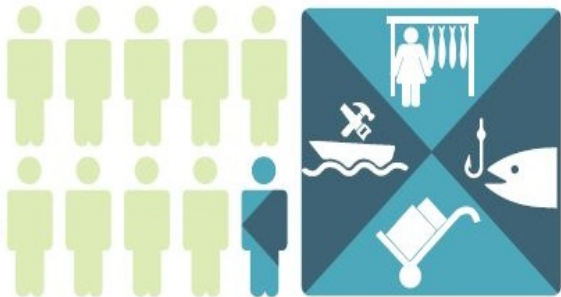


# EASY TO UNDERVALUE FISHERIES IF YOUR LIFE DOES NOT DEPEND ON IT



© FAO

Approximately  
**1 in 10**  
**PEOPLE**  
rely on fisheries  
and aquaculture for  
their livelihoods.

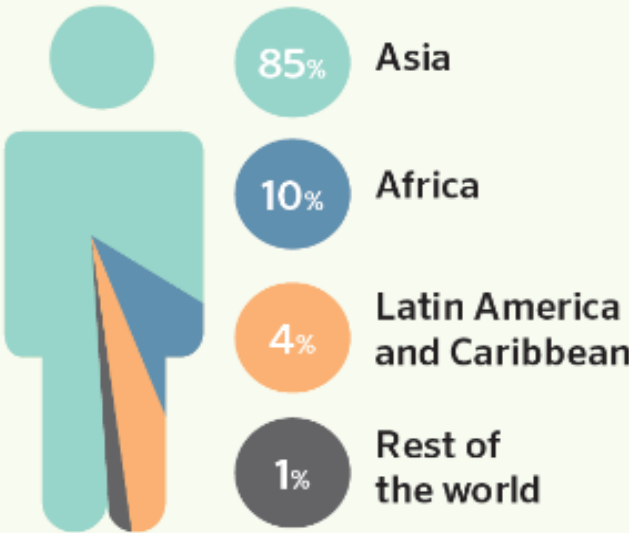


When including the  
secondary sector, over

**50%**  
**ARE WOMEN**

## Employment in fisheries and aquaculture

**59.7 million** people engaged in primary  
sector of fisheries



© Franz, FAO

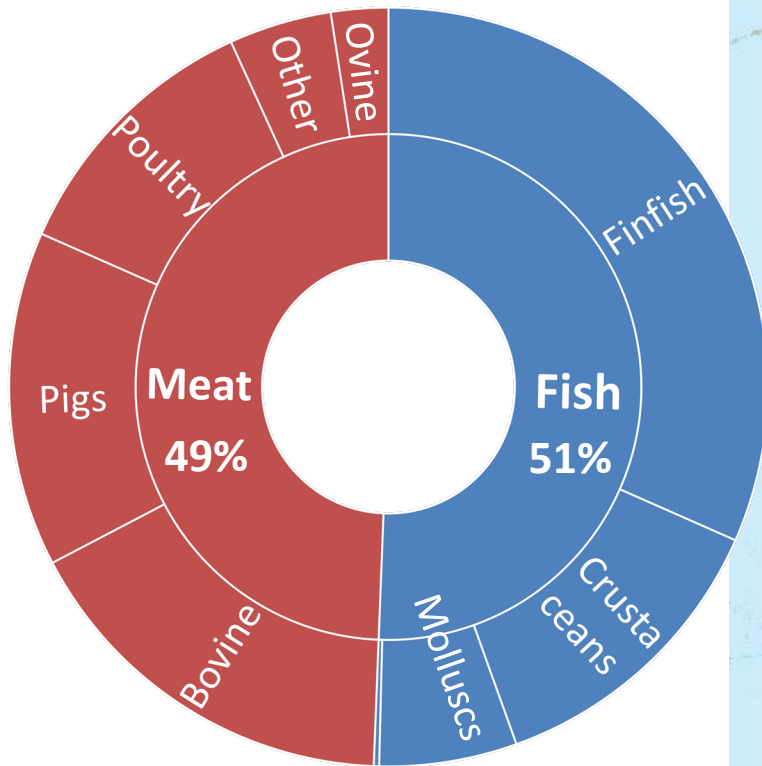


# FISH – ONE OF THE MOST GLOBALLY TRADED FOOD COMMODITIES

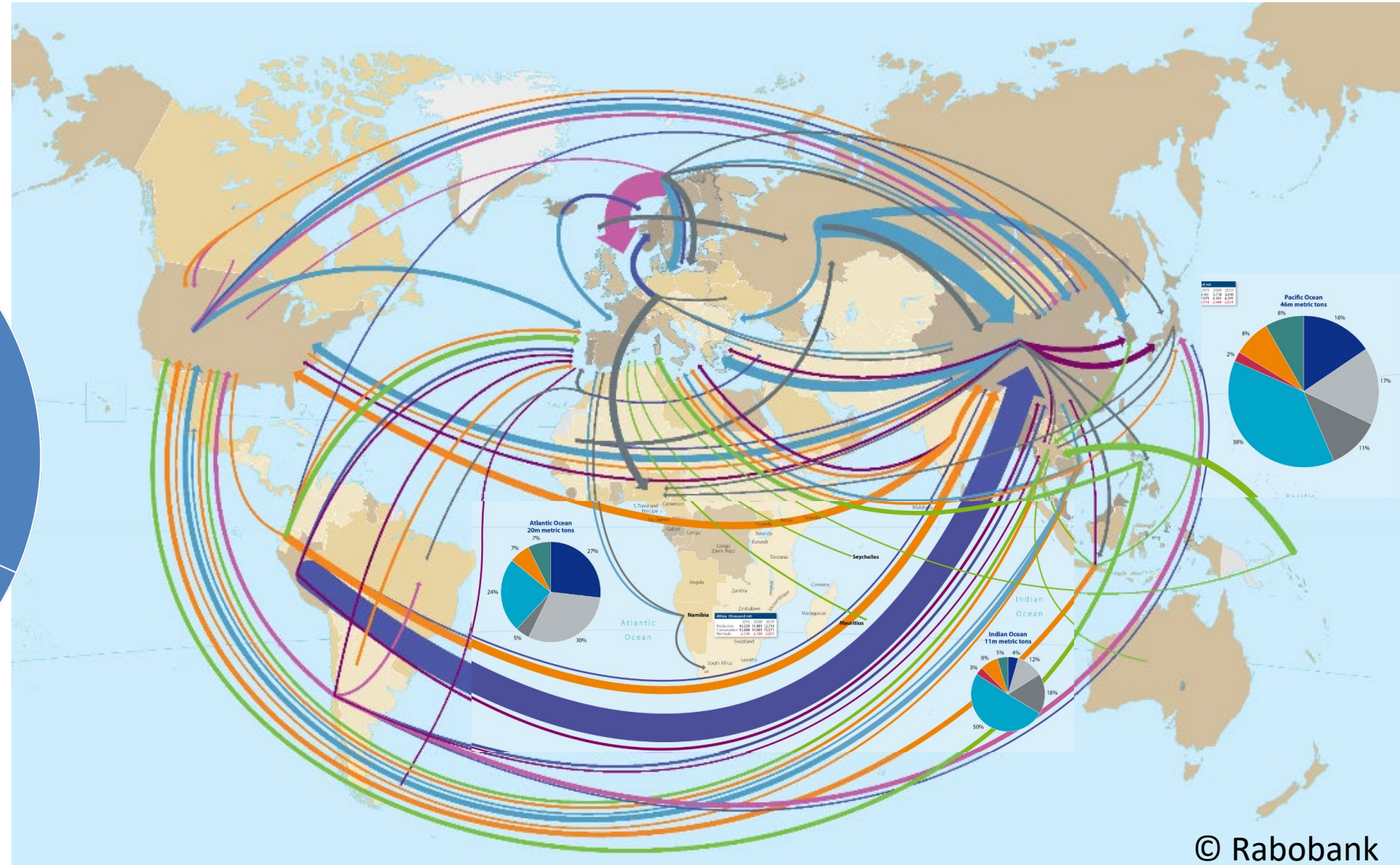


Exports of fish products reached a record USD156 billion in 2017

International food trade value (% , 2017)



© FAO



© Rabobank

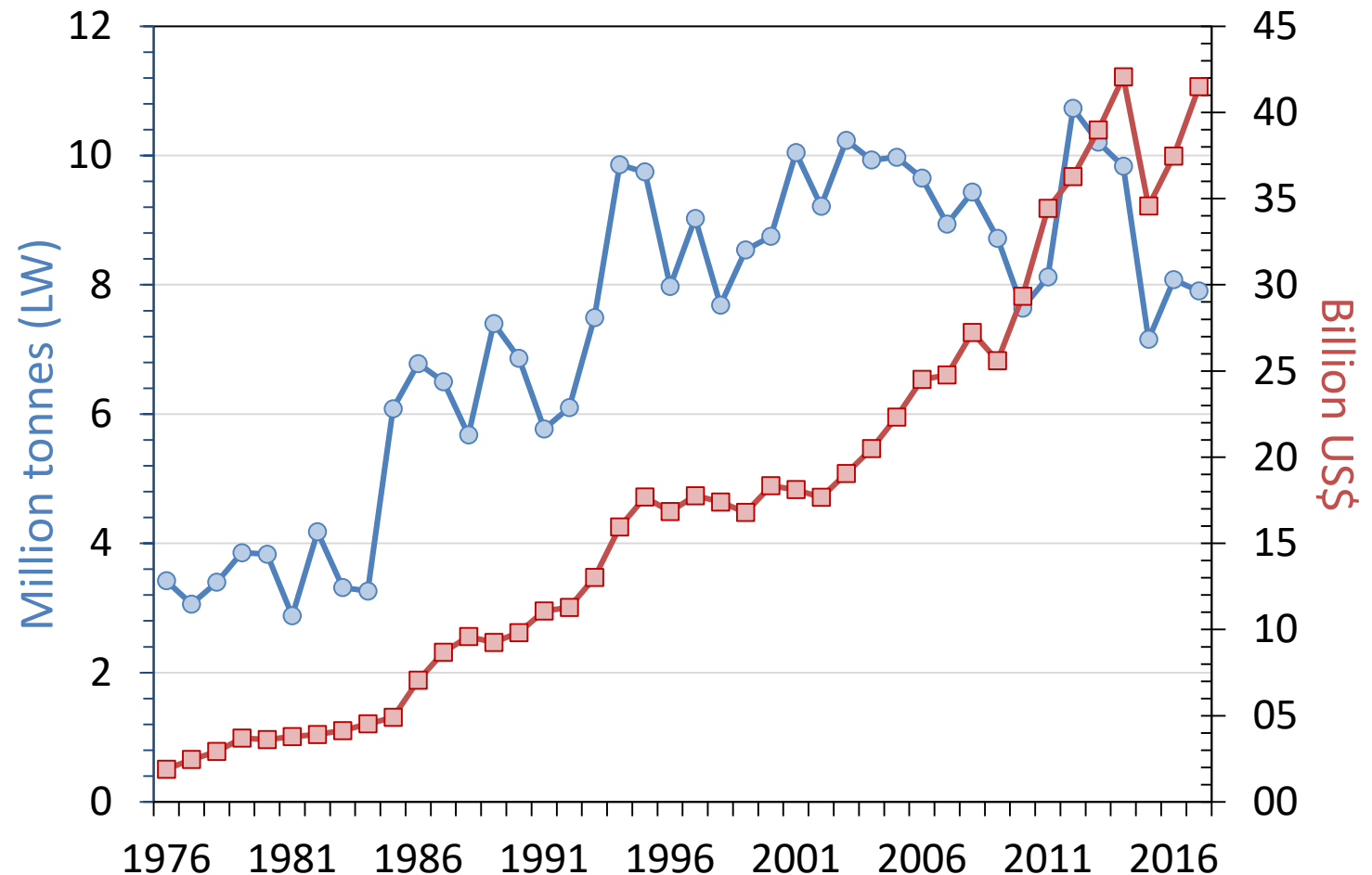


# DEVELOPING COUNTRY EXPORTS ACCOUNT FOR 54% BY VALUE (2016)



## Net trade (exports minus imports) Developing Countries<sup>#</sup>

[<sup>#</sup> As per UN standard country codes for statistical use, @UNSTATS]



# PREDICTION IS DIFFICULT, ESPECIALLY ABOUT THE FUTURE



# LOOKING INTO THE CRYSTAL BALL – 2050 SCENARIOS



FAO 2018    OECD/FAO 2019    -----FAO FI (in progress)-----

|                          | 2017       | 2028       | 2050 HIGH  | 2050 BAU   | 2050 LOW   |
|--------------------------|------------|------------|------------|------------|------------|
| Capture Fisheries (Mt)   | 93         | 94         | 115        | 95         | 81         |
| Aquaculture (Mt)         | 80         | 102        | 146        | 140        | 127        |
| Total Production (Mt)    | 173        | 196        | 261        | 235        | 208        |
| ...of which as food (Mt) | <b>155</b> | <b>178</b> | <b>242</b> | <b>217</b> | <b>193</b> |
|                          |            |            |            |            |            |



Full MSY  
No IUU  
Reduced GEC

Reduced catch  
High GEC  
Culture limited

Per Capita  
consumption

24.8 kg/yr  
11.8 from capture

22.3 kg/yr  
9.7 from capture

19.8 kg/yr  
8.4 from capture

*Current per capita consumption 20.3 kg/ yr*

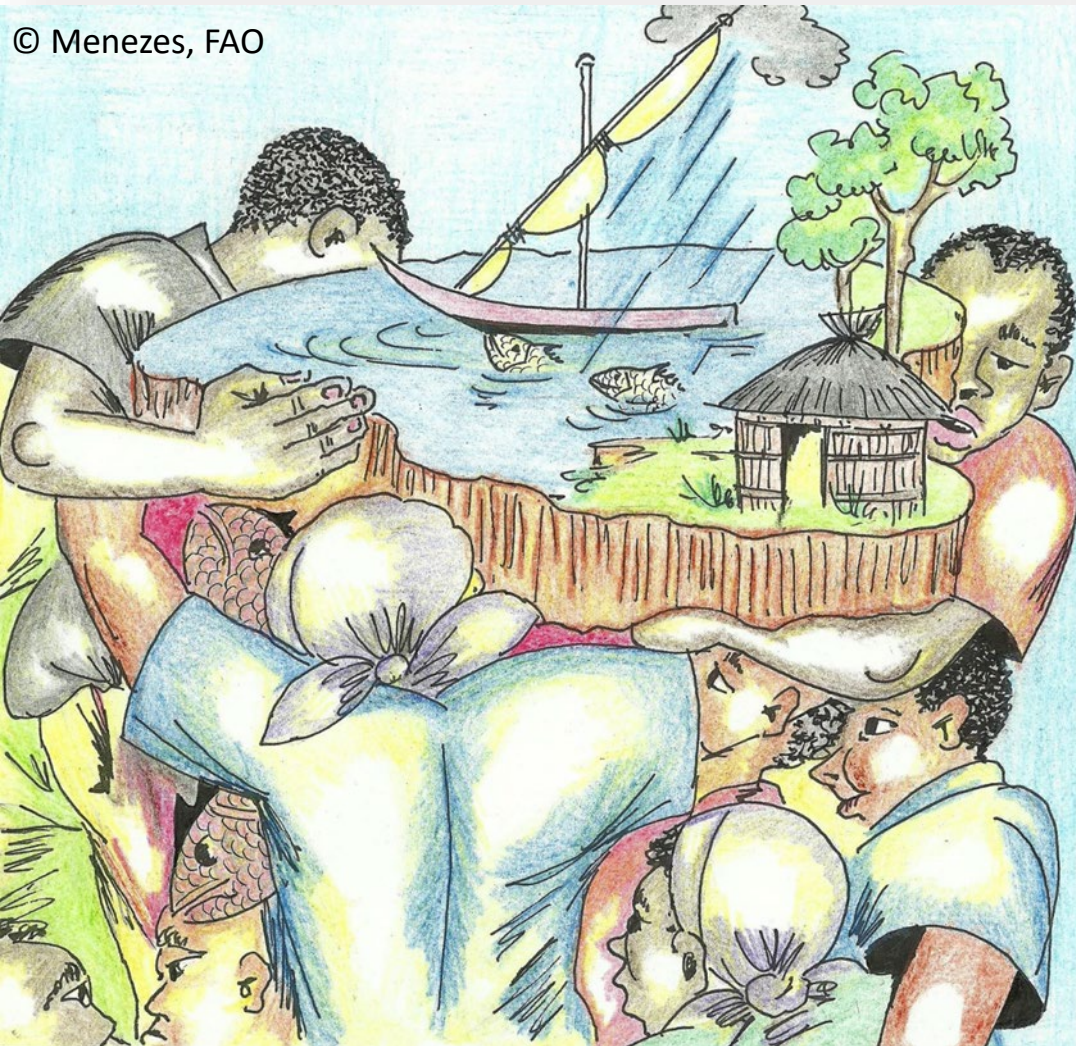


# CONSIDERATIONS WHEN TAKING THE HIGH ROAD



1. **All food production systems have impacts** – If fisheries fail, the environmental impacts of our food needs would be much larger. We need to incorporate fish in our food system strategies
2. **Achieving sustainability is difficult** – Divestment in fisheries sustainability programmes has made things worse in developing regions. Conservation alone will not fix this. Our target should be 100% effectively managed seascapes
3. **We need a better science-policy interface** – Evidence-based decision making has proven to be most effective in reaching sustainable solutions. But what constitutes evidence?

# CONSIDERATIONS WHEN TAKING THE HIGH ROAD



4. **Climate Change: the ultimate disruptor**– Distributional shifts and differential productivity patterns will challenge management systems, fisheries operations and consumer demand.
5. **Get toolboxes, not hammers** – Sustainability failures are governance failures, but the reasons that challenge sustainability are complex. Beware of simple solutions – seek the underlying causes



# CONSIDERATIONS WHEN TAKING THE HIGH ROAD



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6. **Biodiversity –the ultimate enabler** – Without healthy ecosystems there is no food. We must do a better job at connecting biodiversity conservation with food security objectives



# CONSIDERATIONS WHEN TAKING THE HIGH ROAD

© Ward, FAO



7. **If you want something new, you need to stop something old** – New technologies in water and on land, innovative science, adaptive management, value chain improvements, etc., will transform the fisheries sector.
8. **Without fishers there will not be fish to eat** – Social sustainability is paramount. Fishers (and particularly fisherwomen) must be considered, valued and supported.
9. **Hunger and good governance are poor partners** – If hunger, poverty and conflict continues – we can forget other global progress such as resource sustainability.
10. **Fish is food for the poor**. If we fail, we fail them





**GLOBAL MILLENNIUM +20  
CONFERENCE ON AQUACULTURE  
26-30 OCTOBER 2020 - SHANGHAI, CHINA**

[www.aquaculture2020.org](http://www.aquaculture2020.org)



Food and Agriculture  
Organization of the  
United Nations



**中华人民共和国农业农村部**

Ministry of Agriculture and Rural Affairs of the People's Republic of China



# A NEW VISION FOR FISHERIES IN THE 21<sup>st</sup> CENTURY

## SDG 14.2

*By 2020, sustainably manage and protect marine and coastal ecosystems...*

## SDG 14.4

*By 2020, effectively regulate harvesting and end overfishing...*

## SDG 14.5

*By 2020, conserve at least 10 % of coastal and marine areas...*

## SDG 14.6

*By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing...*

**FAO International Symposium on Fisheries Sustainability**  
Rome, Nov 2019



**2020 UN Ocean Conference**  
Lisbon, June 2020



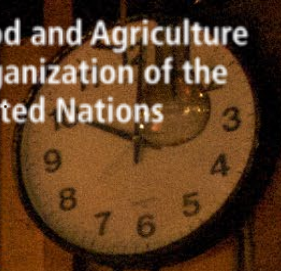
**2020 FAO State of Fisheries and Aquaculture (SOFIA)**  
June 2020



**COFI 34, 25<sup>th</sup> anniversary CCRF**  
Rome, July 2020







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まぶろの  
吉富



Thank you





Food and Agriculture  
Organization of the  
United Nations

SUSTAINABLE  
DEVELOPMENT  
GOALS

# Partnering with FAO to make fisheries sustainable

Working for  #ZeroHunger