

**Eradicate hunger, food insecurity
and malnutrition**



**Eliminate rural poverty through socio-
economic development**



**Sustainable management and
utilization of natural resources**



**Europe, the Ocean and Feeding the World
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European Parliament, Brussels, Belgium**



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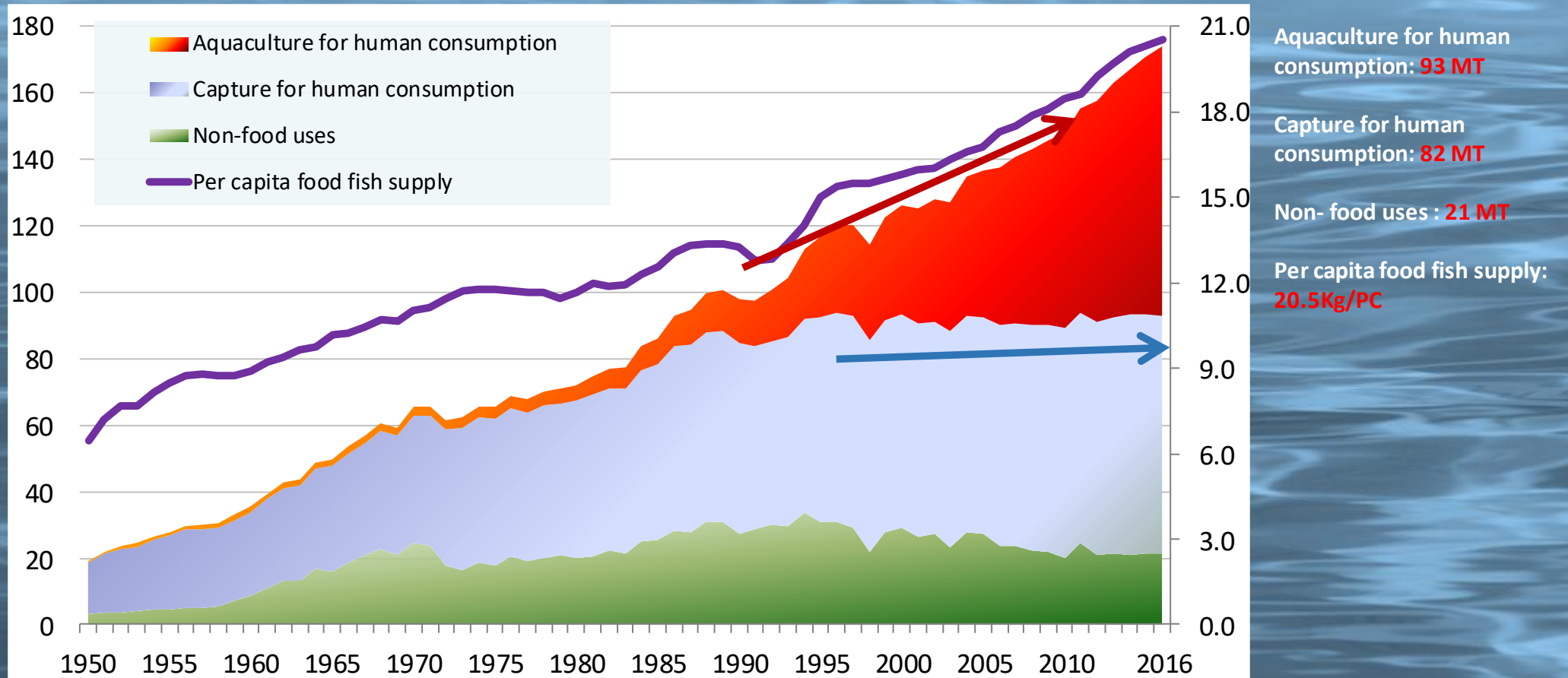
What are we achieving now?

Fish production and utilization

174.1 MT

Utilisation du poisson (millions des tonnes –équivalent en poids vif)

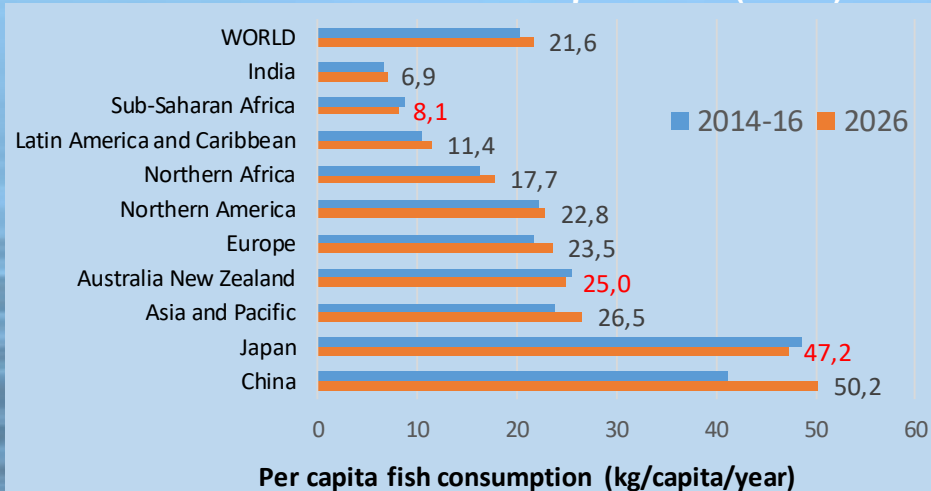
Consommation de poisson par personne (kg)



Hors plantes aquatiques. 2015/2016: estimations/perspectives

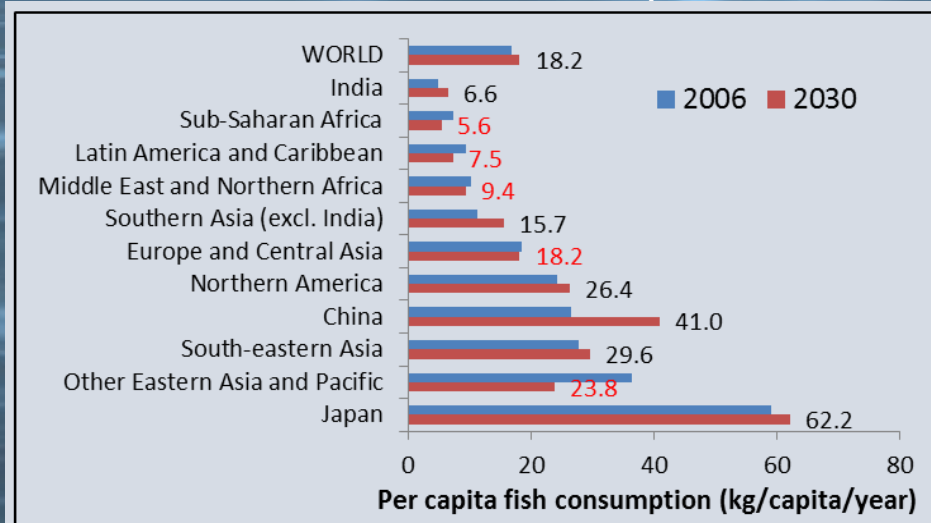


OECD-FAO Fish Model Projections (2026)



Source: OECD-FAO Agricultural Outlook 2017-2026
 Countries/regions ranked by per capita fish consumption in 2014-16 average.
 Countries/regions with declined per capita fish consumption highlighted in red.

WB-FAO-IFPRI Fish to 2030 Projections



Source: World Bank Report on Fish to 2030 (Table 3.7).
 Countries/regions ranked by per capita fish consumption in 2006.
 Countries/regions with declined per capita fish consumption highlighted in red.

Future fish supply and demand projections

FAO/FI Fish Supply-Demand Gap Projections

| Country/region | Fish Demand (2030) | | Total fish prod. (2012, mil. tonne) | S-D gap 2030 (col. 4 minus col. 3) |
|----------------|--------------------|--------------------|-------------------------------------|------------------------------------|
| | kg/cap. | Total (mil. tonne) | | |
| WORLD | 29.1 | 261.2 | 156.5 | -104.7 |
| S.S. Africa | 10.8 | 15.1 | 6.9 | -8.2 |
| L.A. & C. | 12.2 | 18.3 | 14.8 | -3.4 |
| N. Africa | 12.9 | 3.7 | 2.8 | -0.8 |
| Europe | 27.3 | 23.4 | 16.0 | -7.4 |
| N. America | 29.8 | 12.9 | 6.7 | -6.1 |
| Oceania | 31.9 | 1.8 | 1.4 | -0.3 |
| Asia | 37.0 | 186.3 | 107.8 | -78.5 |

Source: Estimation of FI/FAO (preliminary results)
 Main assumptions: 1) Per capita fish demand affected by income growth.
 2) Fish price unchanged. 3) Preference over fish unchanged



Filling Fish Supply-Demand

Maintaining/increasing capture fisheries production

- Rebuilding overexploited stocks
- Recovery of the “Sunken Billions” through reducing overcapacity

More direct human consumption

- Shifting industrialized use of fish (fish meal and fish oil) to direct human consumption

Reducing waste

- Utilization of bycatch and discards
- Utilization of processing waste
- Reducing post-harvest spoilage (cold storage, more efficient value chain, etc.)

Sustaining aquaculture growth

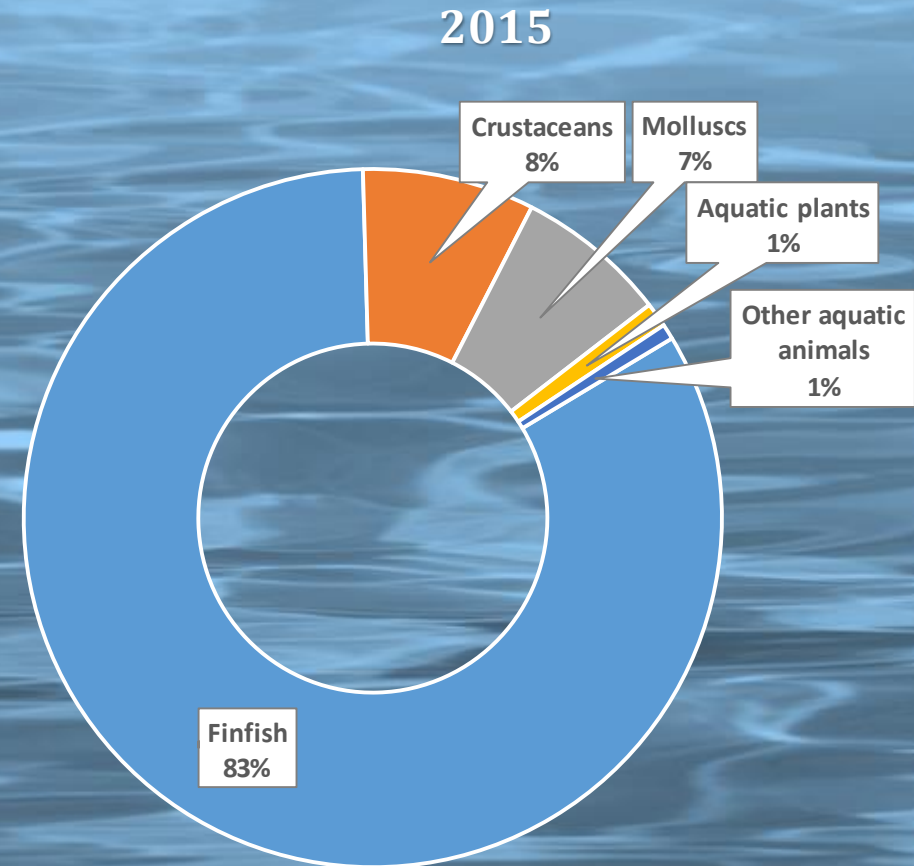
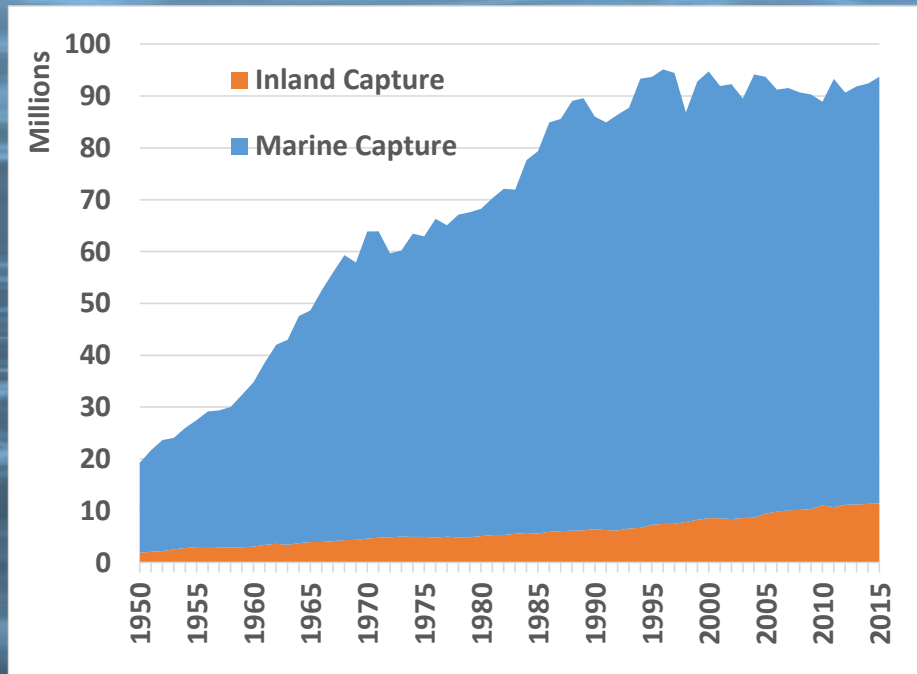
- Sustainable intensification in Asia.
- Expansion in Africa and Latin America
- Increasing acceptance in western countries
- More efficient feed and feed management
- Genetic improvement of seed stocks
- Low-trophic species (non-fed finfishes, mollusks, etc.)
- Innovation in farming systems and technologies



What are we achieving now?

Capture fisheries production

million tonnes in live weight

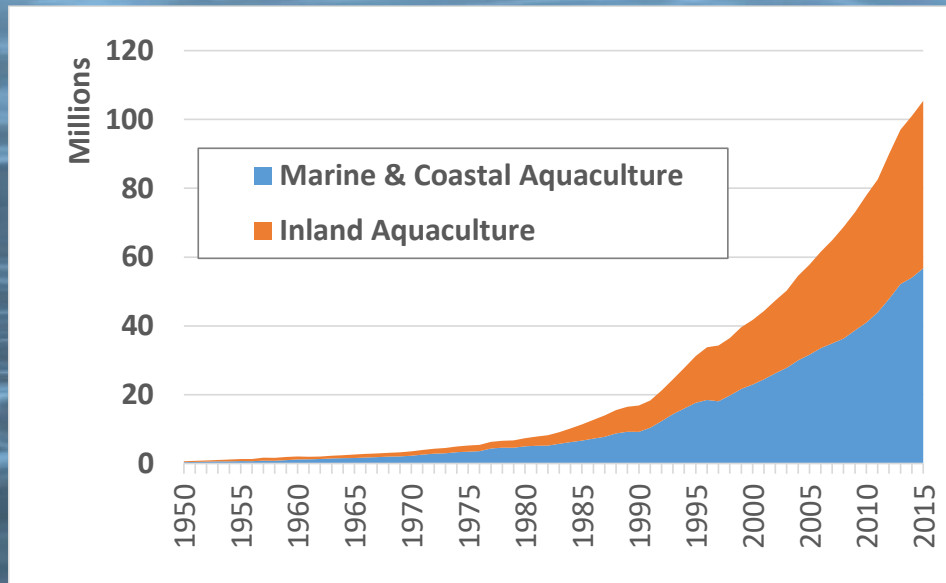


Including aquatic plants

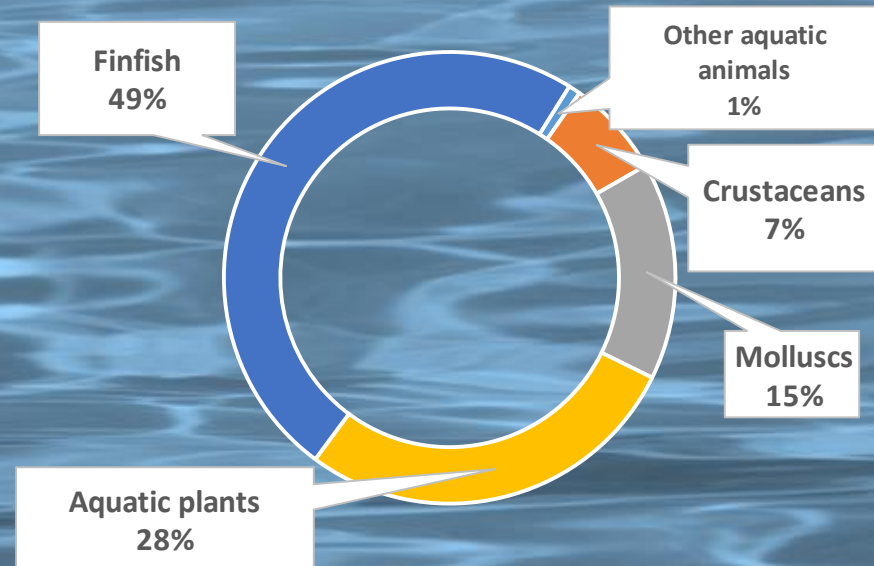
What are we achieving now?

Aquaculture production

million tonnes live weight



2015

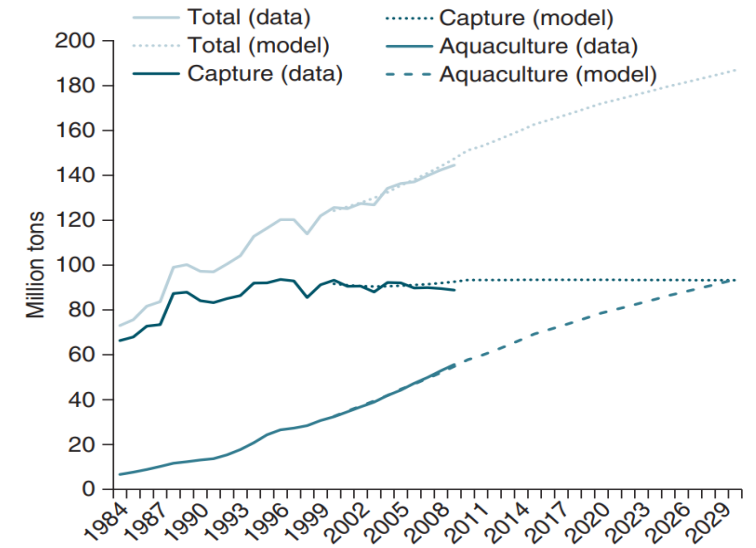


Including aquatic plants

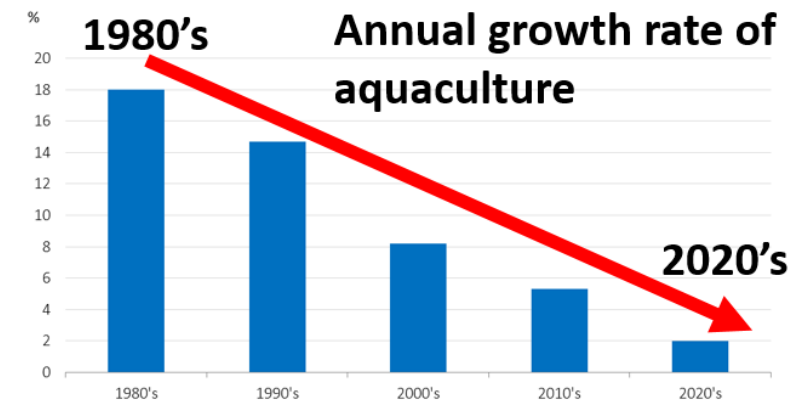
Available for consumption

- Increased proportion for human consumption
- Reduced waste
- Rebuilding stocks
- Aquaculture expected to exceed 100 million tonnes by 2025
- Aquaculture annual growth expected to slow from 5.3% over previous decade to 2.3% pa for coming decade (1970-2010 8.3% pa)
- Human consumption 2026 180 MT ; 100 MT Aquaculture - 80 MT Capture Fisheries

FIGURE 3.1: Global Fish Production: Data and Projections, 1984–2030



Sources: FishStat and IMPACT model projections.



Issues, constraints and challenges

Resources and environment

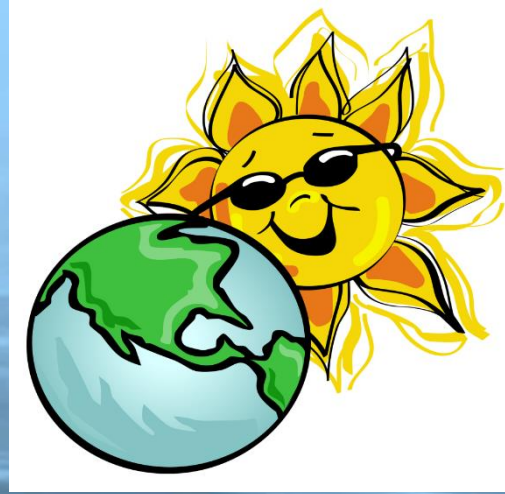
- Environment degradation and habitat destruction
- Loss of biodiversity
- Overexploited fish stocks
- Biosecurity (disease outbreaks)
- Climate changes (El Niño, ocean acidification, stock migration, severe weather conditions, etc.)

Socioeconomic and governance

- Overcapacity (fleets and labor)
- IUU fishing
- Bycatch and discards
- Access to capital and financial services (loans, insurance, etc.)
- Economic development and Equity (poverty, forced labor, child labor, etc.)
- Public image of fisheries and aquaculture



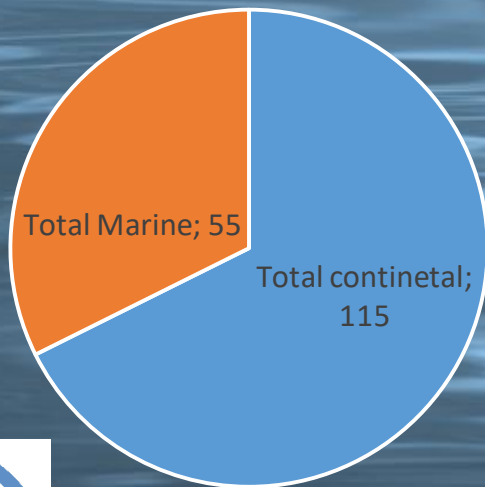
What is the potential?



Global Primary Production

Total Continental 115 billion tons a year

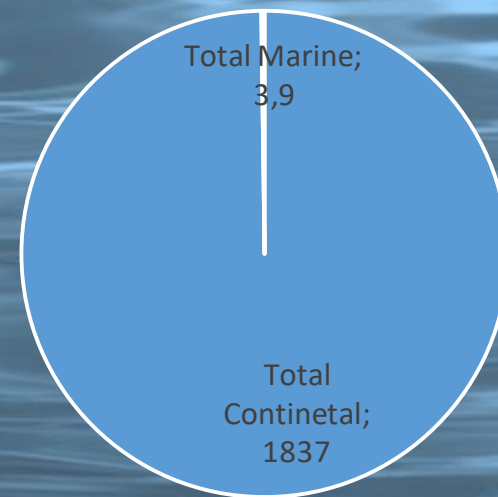
Total Marine 55 billion tons a year



World Biomass/Standing Stock

Total Continental 1837 billion tons

Total Marine 3.9 billion tons

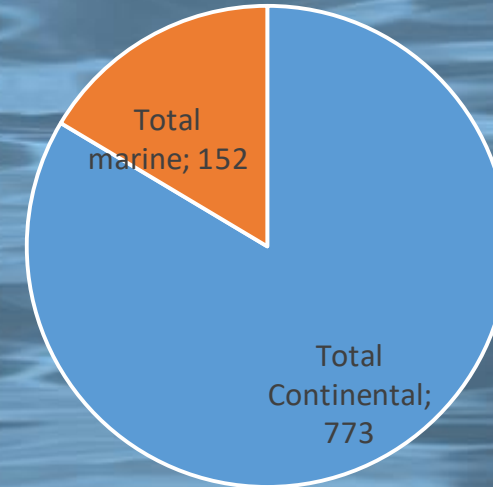


Primary Production

Mean NPP (g/m²/year)

Total Continental 773

Total Marine 152



We are only using a fraction of the Ocean Space and PP today



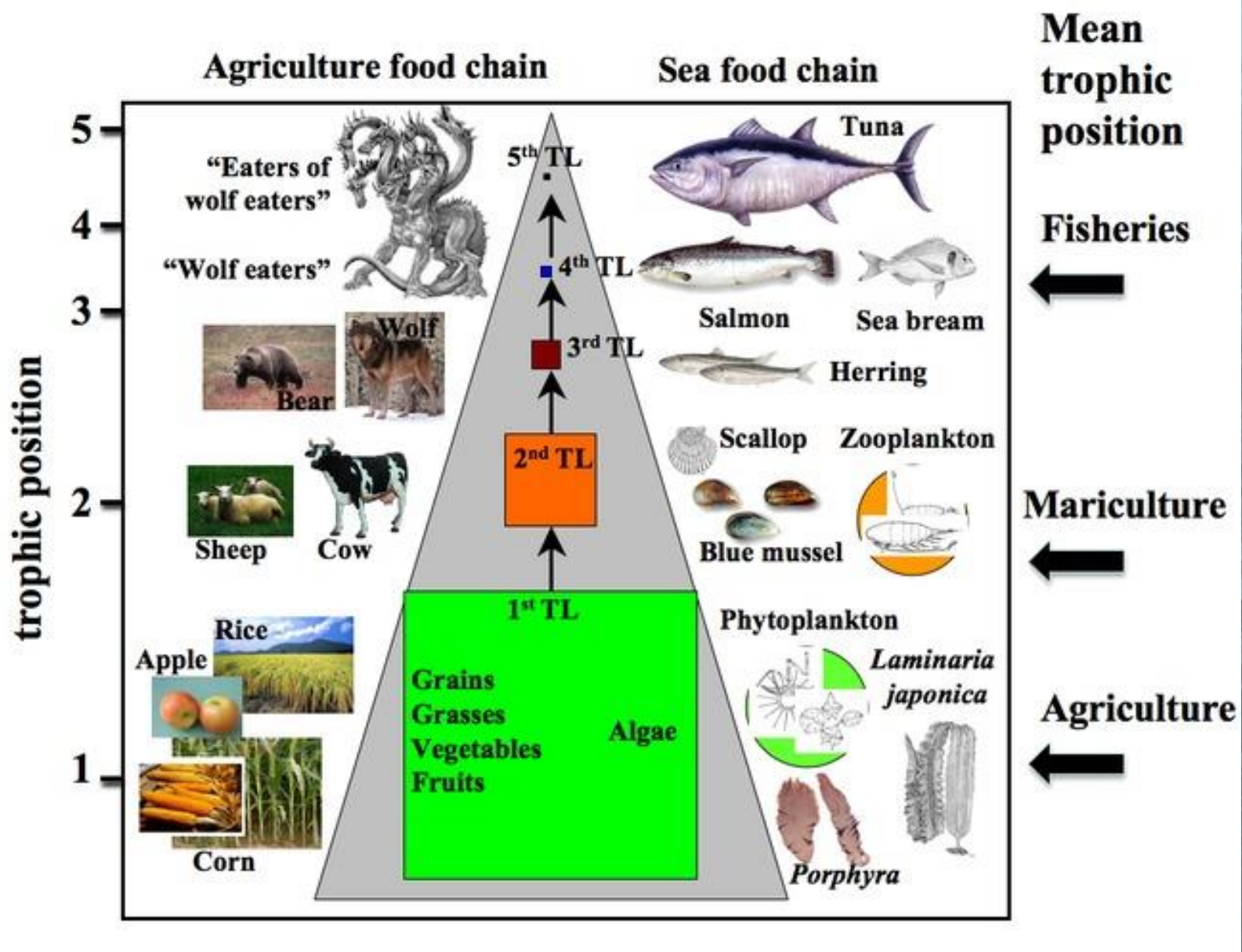
1. What can we achieve with in the conventional?
2. Can we use more of the PP?
3. Can we increase the PP?

Are there limits?

Yes (Technical, Environmental)

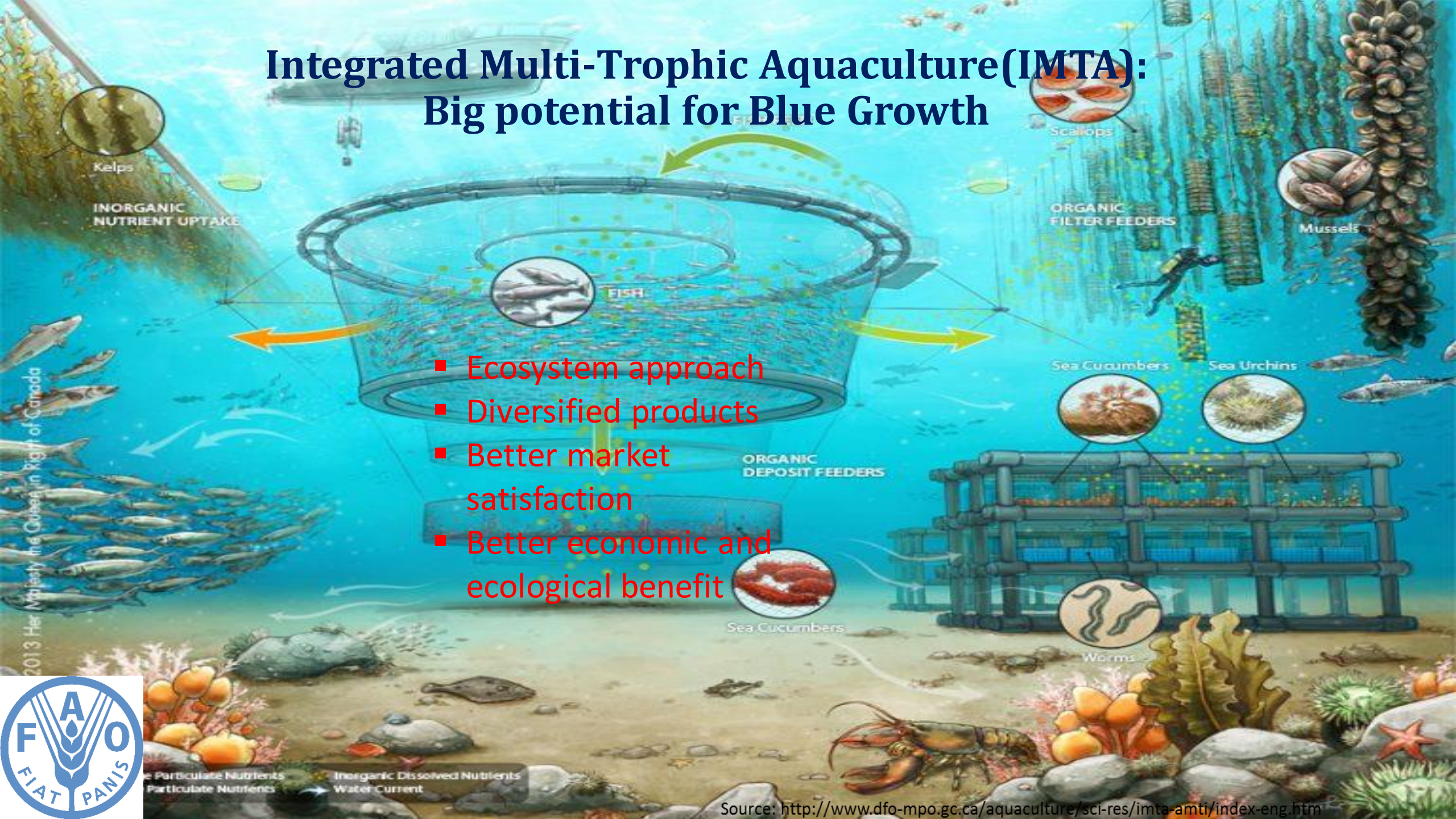
What are the limits? **We don't know**





Integrated Multi-Trophic Aquaculture (IMTA): Big potential for Blue Growth

- Ecosystem approach
- Diversified products
- Better market satisfaction
- Better economic and ecological benefit



2013 Her Majesty the Queen in Right of Canada



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<http://www.slideshare.net/FAOoftheUN/international-trade-in-fish-and-fish-production>

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Impact, Boracay Islands, Philippines 9th
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https://www.youtube.com/watch?v=OQ-fS2TZX_Y

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potential of seas and oceans,
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<http://www.slideshare.net/rniMatthiasMathiesen/blue-bio-economy-unlocking-the-potential-of-seas-and-oceans>

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[Future Prospects for Fisheries and Aquaculture and their contribution to preserving food security - YouTube](#)

THANK YOU

