



# **IUU fishing in a global market of fishery products**

Cornelia E. Nauen

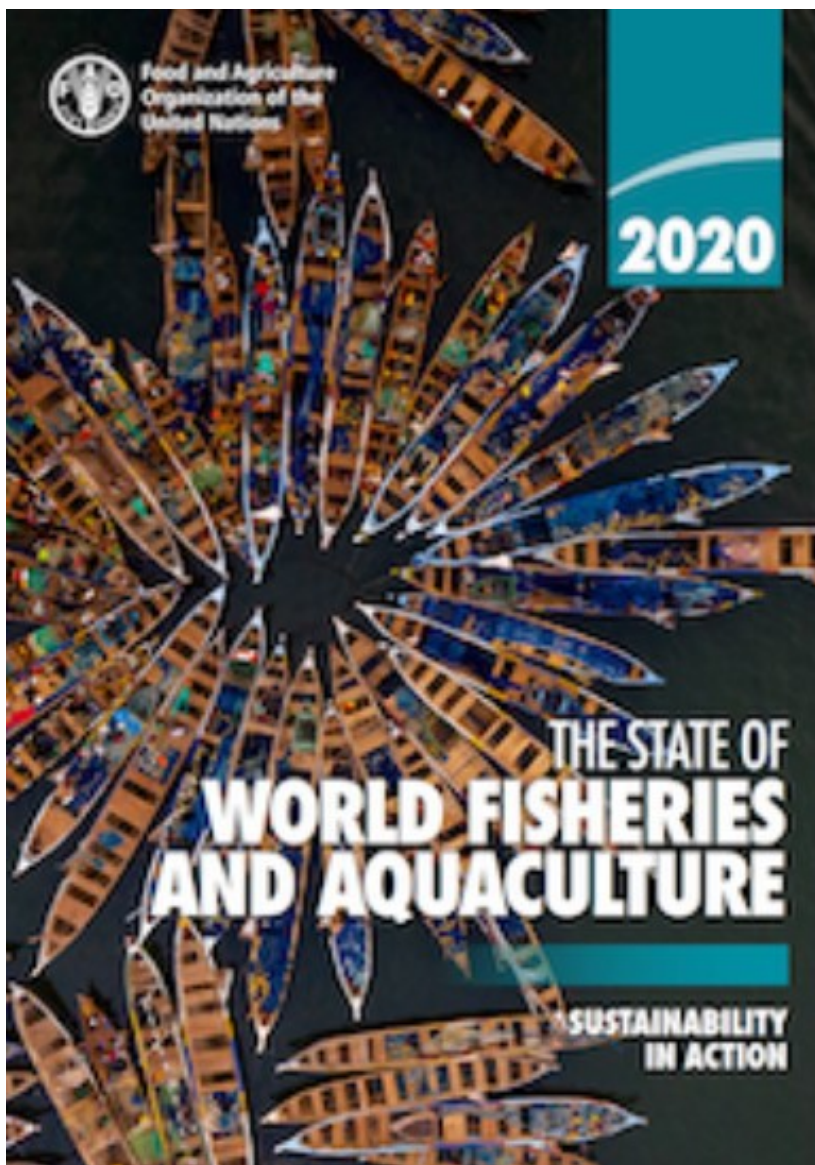
Mundus maris

Sciences and Arts for Sustainability asbl

Virtual Course 6/11/2020 – Preparing World Fisheries Day



# What are we talking about? (1)



FAO (2020) estimates 39 million workers in primary extraction, most in small-scale fisheries: 85% in Asia, 9% in Africa, 4% in Latin America, rest in North America, Europe, Oceania. 50% of workers overall active along value chains are believed to be women: 14% in primary extraction, most in pre- and postharvest activities. Independent SSF production estimate is **20-25% of total** (Pauly & Zeller 2016, Nature Communication, 7:1-9)



## What are we talking about? (2)

4.56 fishing vessels globally in 2018, down 2.8% from 2016  
3.1 mio in Asia (68%), Africa 20%, Americas 10%  
2.86 mio vessels are motorised, most <12m loa  
67,800 fishing vessels >24 m loa

Total global production according to FAO 158 mio t (46% from aquaculture), 88% for human consumption, 12% for non-food purposes

In 1974 90% of stocks within safe biological limits, in 2017 only 65.8%; unsustainably fished 10% and 34.2% respect.

67 mio t or 37.6% of production were internationally traded, for a value of first point of sale of USD 164 billion



# According to FAO 2020

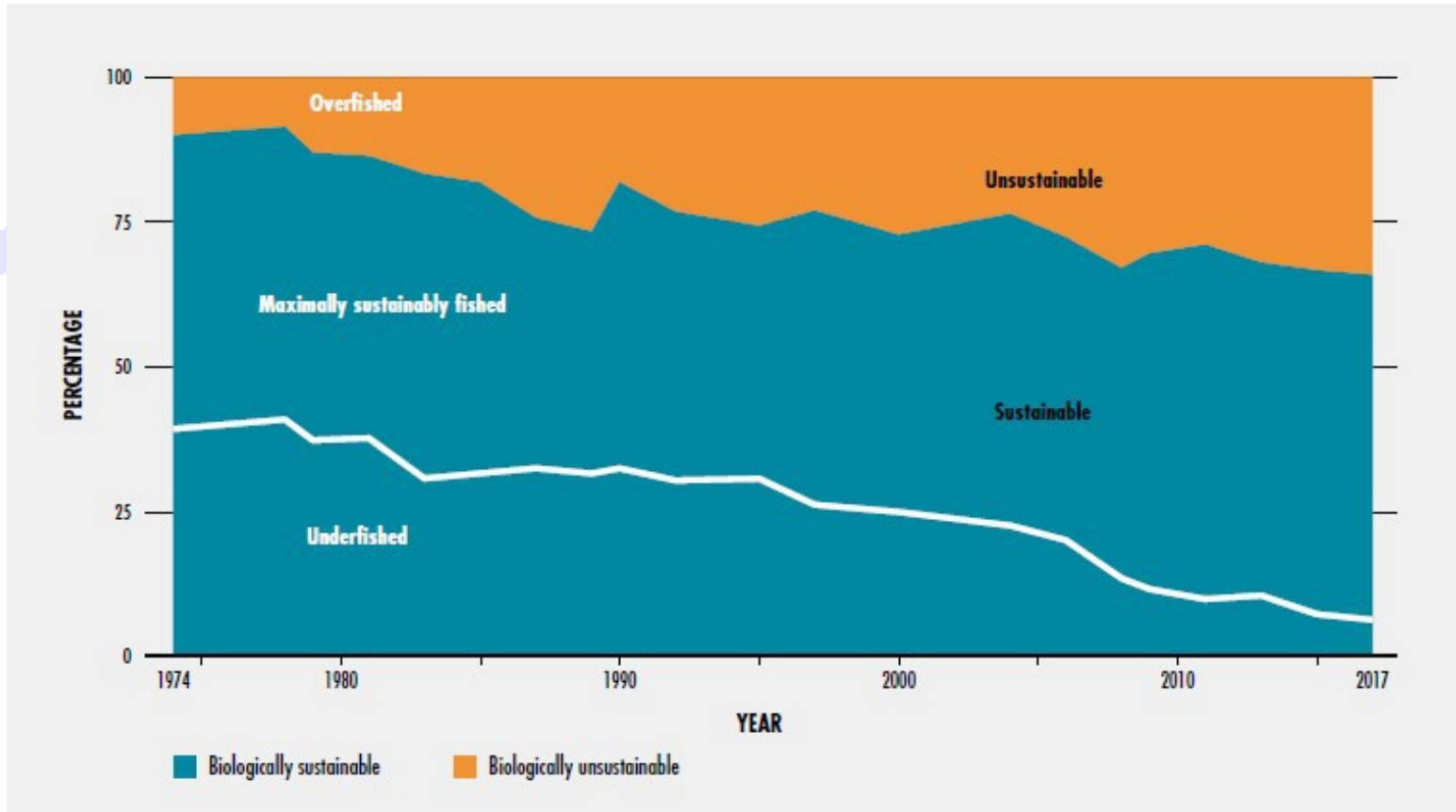


Fig.: Global trends in fish stock status 1974-2017

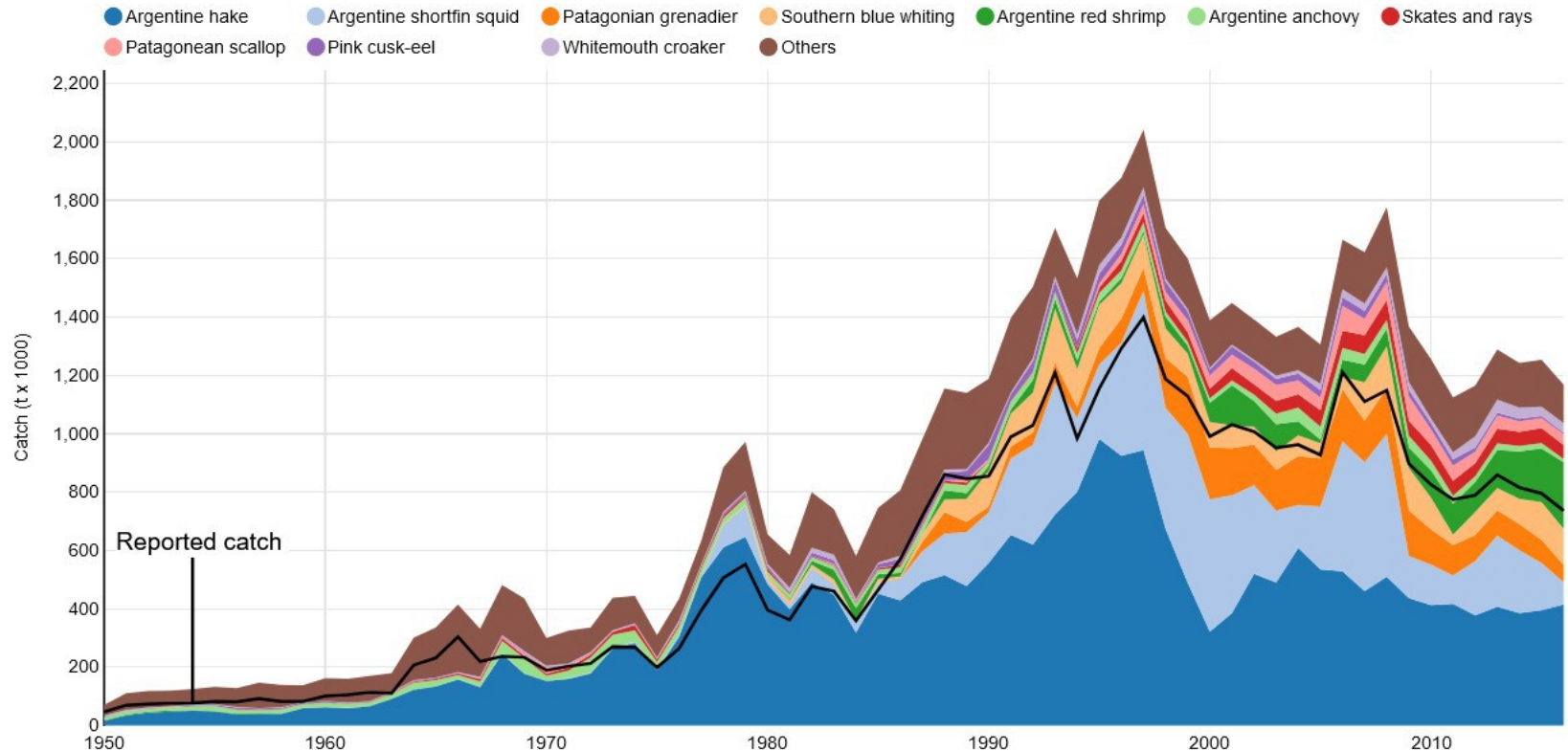
China, Indonesia, USA, Russian Federation, Peru, India, Japan, Viet Nam, Norway, Philippines, Malaysia, Chile, Morocco, Rep. Korea, Thailand, others with shrinking landings



# Reconstructed catches for Argentina (1)

Dimension  Measure  Limit  Color scheme

Show declaration year  
Show scientific names  
Hide 'Reported catch' line  
Method

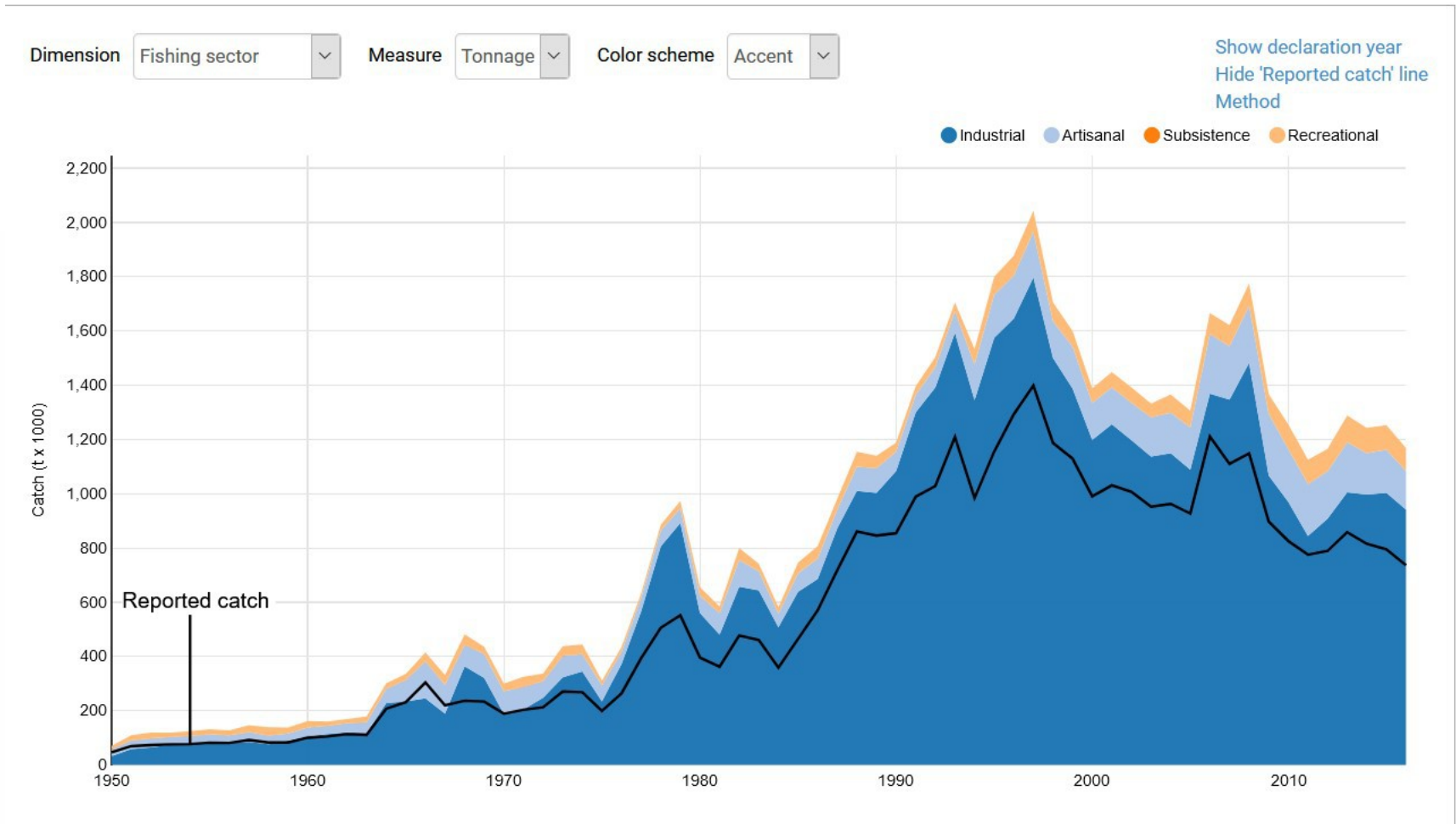


By taxon - source: [www.searoundus.org](http://www.searoundus.org)





# Reconstructed catches for Argentina (2)



**Note:** The data we present ('reconstructed data') combine official reported data and reconstructed estimates of unreported data (including major discards), with reference to individual EEZs. Official reported data are mainly extracted from the Food and Agriculture Organization of the United Nations (FAO) FishStat database. The "Reported catch" line overlaid on the catch graph represent all catches deemed reported (including foreign) and allocated to this spatial entity. For background information on the reconstruction data, download the .pdf file for the specific EEZ(s) and also examine our methods for data and spatial allocation.

By fishing subsector - source: [www.searoundus.org](http://www.searoundus.org)



# IUU fishing (1)

**Illegal:** Activities in breach of existing laws and regulations, such as fishing in protected areas, illegal by-catch, incl. of protected species, falsifying papers, corruption, illegal transshipment at sea and other criminal offences in any part of the fisheries value chain in contravention of national or international legislation and regulations.

**Unreported:** Falsifying logbooks, under-declaration of catches to avoid taxes and levies, in contravention of national legislation and regulations or those of regional fisheries management organisations (RFMOs).

**Unregulated:** Fishing in the area of application of a relevant RFMO conducted by vessels without nationality, or by those flying the flag of a State not party to that organisation, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organisation.



## IUU fishing (2)

IUU fishing is driven by overcapacity, government subsidies, and weak national and regional governance as well as adaptive strategies of vessel owners responding to attempts at enforcing rules in one place by, for instance, changing flag state, vessel name, ports for unloading and laundering IUU catches.



Photo courtesy: Mr Austin Jones, Director of the Surveillance Operations Coordinating Unit, Banjul, The Gambia

In combination with transshipment at sea, it deprives countries of reliable data for management as it falsifies stock assessments by underestimating extractions.

Characterised by high criminal energy and often associated with international organised crime (Österblom et al. 2010, UNODC 2011, Tickler et al. 2018).





## IUU fishing (3)

**NB:** significant unreported catches concern **small-scale fisheries**, where countries do not have the capabilities and resources to document their often widely scattered and informal activities. These should not be confounded with IUU fishing.

The magnitude of under-estimating small-scale fisheries was quantified for the first time through the detective work of independent researchers around the globe collaborating under the umbrella of the Sea Around Us initiative.





# Conditions facilitating IUU

=> Fisheries crimes have long been underestimated and framed as mere transgressions of administrative rules. Accordingly, levied fines were inconsequential compared to the gains from the illicit activity (Doumbouya et al., 2017).

=> Key vulnerabilities to fisheries crime tend to be associated with the following conditions (UNODC, 2011):

==> global reach of fishing vessels and the significant excess capacity create opportunities to conceal illicit activities next to legitimate ones

==> Transshipment in the high seas or outside of control

==> Flag states with vessel registries fail their responsibility

==> Lack of enforcement of existing rules, weak governance

==> High frequency ports make concealment of illicit catches combined with other types of illegal traffic easy (Petrosian et al. 2014)

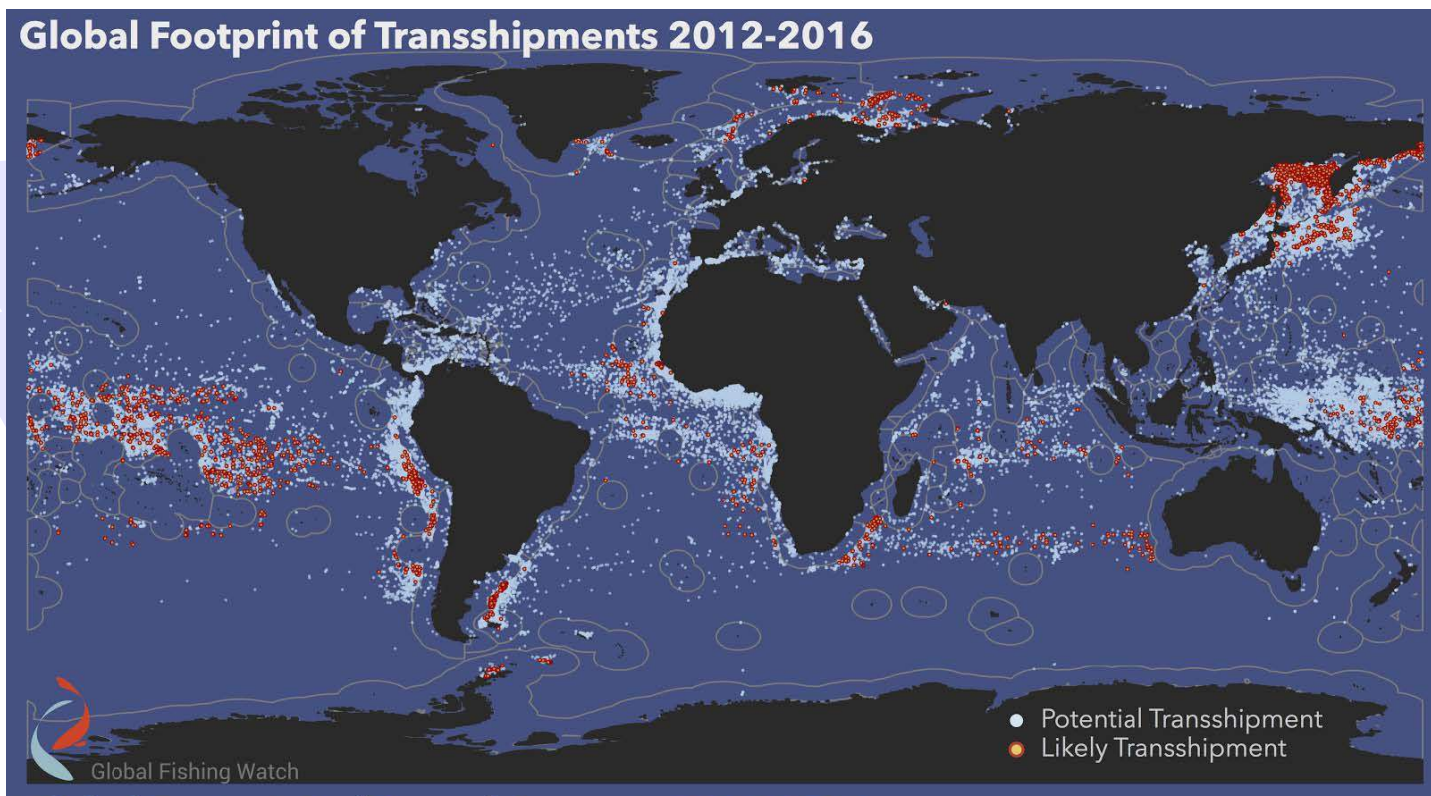


# Internat. Organised Crime in Fisheries





## Dubious or criminal practices...



New observation methods facilitate searching dubious or criminal practices – e.g. transshipment at sea, prohibited in many countries, as often associated with fiscal fraud, overfishing, human trafficking etc. (Global Fishing Watch)





# Global trade and IUU

- => The large seafood import markets, European Union (EUMOFA 2018), Japan, the USA and other wealthy Asian countries, are expected to be prone to illegal or dubious supply chains.
- => Estimated range of 20-32% of illegal imports to the US out of 2.3 million t for 2011 (Pramod et al. 2014).
- => Globally between 8 and 14 mio t of unreported catches are potentially traded illegally. That's a gross revenue for fraudsters of USD9 to 17 billion, losses to legitimate economic actors and USD 2 to 4 billion in lost tax revenue (Sumaila et al. 2020).





# Promising responses to IUU

=> FAO (2001). International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing.

=> Stop harmful subsidies in the WTO and deliver on SDG 14.6 by 2020. They are estimated at USD 22.2/year (Sumaila et al. 2019).

=> Improve detection methods (e.g. Global Fishing Watch) and interagency cooperation at national and international levels, deny insurance and market access to IUU vessels.

=> Prohibit transshipment at sea, strengthen (inter)national capabilities and cooperation and promote global catch registration schemes to increase transparency and accountability (Sall and Nauen 2017). Better vessel registries.



# Outlook

- => Step one: Greater awareness and better, shared understanding of the issues.
- => Step two: Human and institutional capacity building.
- => Step three: Combinations of positive incentives to make legal behaviour worthwhile and different forms of discouragement and repression of illicit behaviours.

Most people are ok, some need some nudging to stay on course, a few need repression of criminal energy.





# Sources of information (1)

Cheung, W.W.L., Sarmiento, J.L., Dunne, J., Frölicher, T.L., Lam, V.W.Y., Palomares, M.L.D., Watson, R. and Pauly, D. (2012). Shrinking of fishes exacerbates impacts of global ocean changes on marine ecosystems. *Nature Climate Change*, DOI: 10.1038/NCLIMATE1691

Doumbouya, A., Camara, O.T., Mamie, J., Intchama, J.F., Jarra, A., Ceesay, S. et al. (2017). Assessing the effectiveness of monitoring control and surveillance of illegal fishing: the case of West Africa. *Frontiers in Marine Science*, 4:50. DOI: 10.3389/fmars.2017.00050

EUMOFA 2018. The EU fish market 2018 edition. Brussels, European Commission, Directorate-General for Maritime Affairs and Fisheries, Director-General. 120 p. DOI: 10.2771/41473

Ewell, C., Cullis-Suzuki, S., Ediger, M. et al. (2017). Potential ecological and social benefits of a moratorium on transshipment on the high seas. *Marine Policy*, 81:293–300.

FAO (1995). Code of conduct for responsible fisheries. Rome, FAO, 41 p.

FAO (2001). International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. Rome, FAO, 24 p. <http://www.fao.org/fishery/ipoa-iuu/en>

FAO (2020). The State of World Fisheries and Aquaculture 2020. Sustainability in Action. Rome, Food and Agriculture Organization of the United Nations, 206 p. <http://www.fao.org/publications/sofia/2020/en/>

High Level Ocean Panel for a Sustainable Ocean Economy – Series of Blue Papers with commissioned full reports and summaries for decision makers: <https://oceanpanel.org/>

Marschke, M. and Vandergeest, P. (2016). Slavery scandals: Unpacking labour challenges and policy responses within the off-shore fisheries sector. *Mar. Policy*, 68:39–46.



## Sources of information (2)

- Österblom, H., Sumaila, U.R., Bodin, Ö., Hentati Sundberg, J. and Press, A.J. (2010). Adapting to Regional Enforcement: Fishing Down the Governance Index. *PLoS ONE*, **5**(9), e12832. <https://doi.org/10.1371/journal.pone.0012832>
- Pauly, D. and Zeller, D. (2016). Catch reconstructions reveal that global marine fisheries catches are higher than reported and declining. *Nature Communication*, 7:1-9. DOI: 10.1038/ncomms10244.
- Petrossian, G.A. (2015). Preventing illegal, unreported and unregulated (IUU) fishing: A situational approach. *Biological Conservation*, 189:39-48.
- Petrossian, G.A., Marteache, N. and Viollaz, J. (2014). Where do undocumented fish land? An empirical assessment of port characteristics for IUU fishing. *Eur. J. Crim. Policy Res.*, 21(3), 337351. DOI 10.1007/s10610-014-9267-1
- Sall, A. and Nauen, C.E. (2017). Criminal fisheries practices and their perverse effects in West Africa. Poster presented at the EGU Conference, Vienna, 23-28 April 2017. DOI: 10.13140/RG.2.2.14442.72642
- Sumaila, U.R., Ebrahim N., Schuhbauer, A., Skerritt, D., Li, Y., Kim, H.S., Mallory, T.G., Lam, V.W.L. and Pauly, D. (2019). Updated estimates and analysis of global fisheries subsidies. *Marine Policy*, 109 (2019) 103695 <https://doi.org/10.1016/j.marpol.2019.103695>
- Sumaila, U.R., Zeller, D., Hood, L., Palomares, M.L.D., Li, Y. and Pauly, D. (2020). Illicit trade in marine fish catch and its effects on ecosystems and people worldwide. *Sci. Advances*, 6, eaaz3801
- Tickler, D., Meeuwig, J.J., Bryant, K., David, F., Forrest, J.A., Gordon, E. et al. (2018). Modern slavery and the race to fish. *Nature Communication*, 9:1-9. DOI:10.1038/s41467-018-07118-9
- UNODC (2011). Transnational Organized Crime in the Fishing Industry. Focus on: Trafficking in persons, smuggling of migrants and illicit drugs trafficking. New York, NY: United Nations Office on Drugs and Crime.

**I'm still a baby,  
let me live and grow**



[www.mundusmaris.org](http://www.mundusmaris.org) [www.facebook.com/MundusMaris](https://www.facebook.com/MundusMaris)

**Thanks for your  
attention**

More Infos:

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

[ce.nauen@mundusmaris.org](mailto:ce.nauen@mundusmaris.org)

