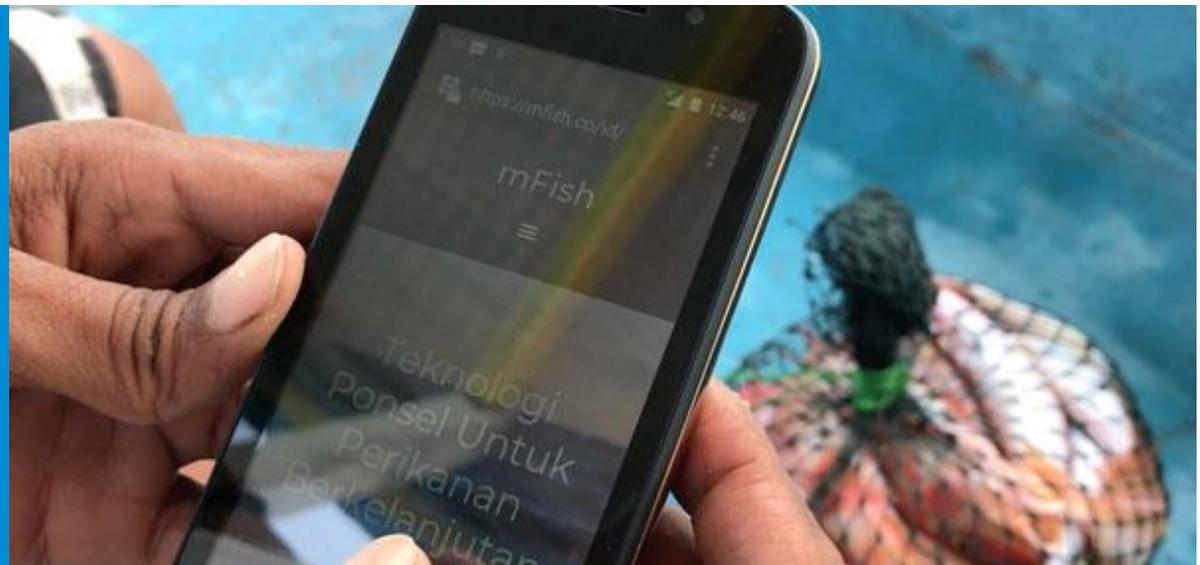


# Increasing trust and transparency in fisheries with emerging data technologies

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# Introduction



Source: [https://www.chinadaily.com.cn/opinion/cartoon/2017-04/17/content\\_28952890.htm](https://www.chinadaily.com.cn/opinion/cartoon/2017-04/17/content_28952890.htm)

- We all produce data in real time
- This data is connected
- Connected data can be [and is] stored, processed, analysed and converted into new products and services
- It's happening everywhere

# Consumers thoughts...

Where does this come from?

What is it?

How was this caught?

Who made this?



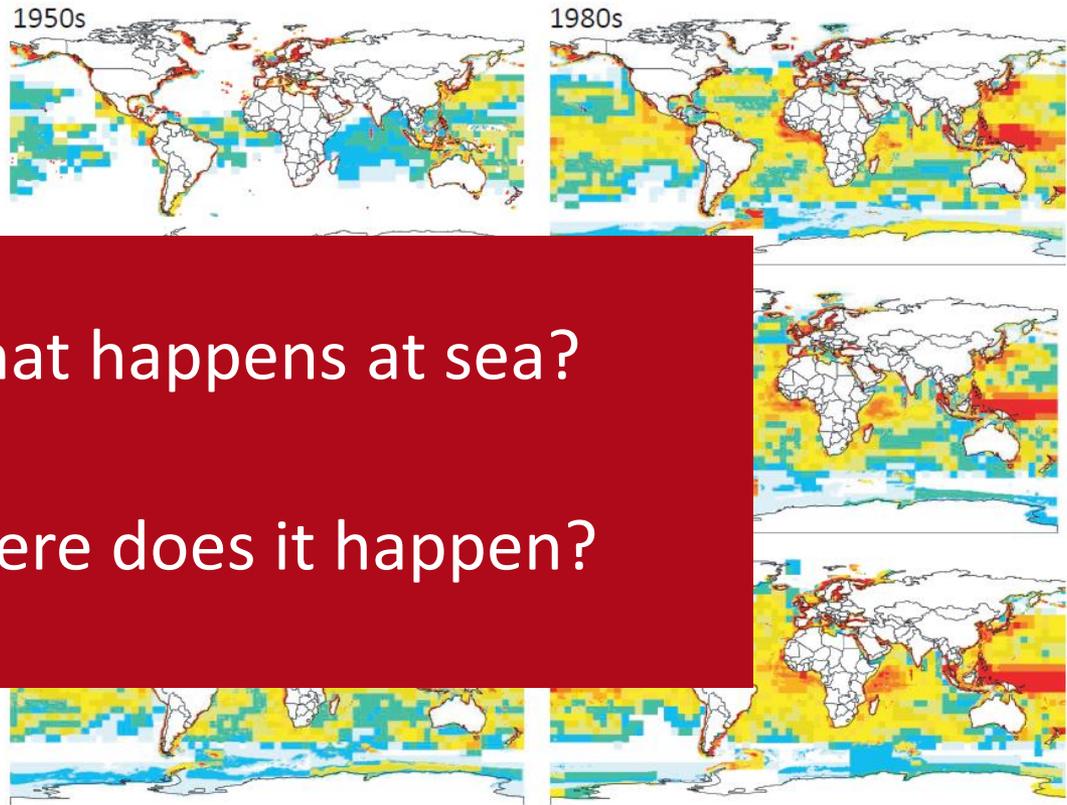
Hopefully bycatch was not too high...

Are workers paid fairly?

Where mangroves chopped for this?

<https://www.fischinfo.de/>

# Fisheries: A global & elusive enterprise

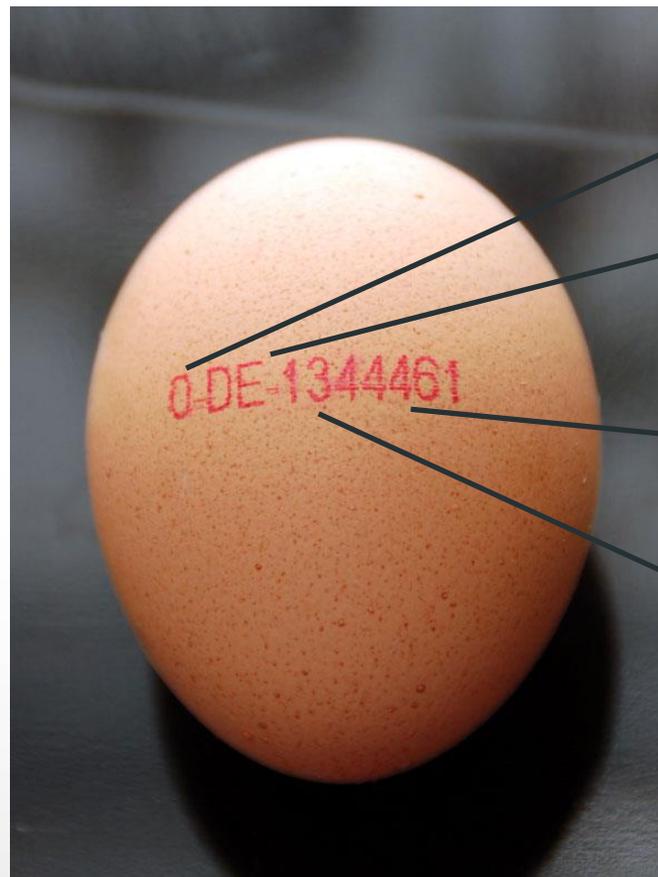


What happens at sea?

Where does it happen?

Watson, R. A., Cheung, W. W. L., Anticamara, J. A., Sumaila, R. U., Zeller, D., and Pauly, D. 2012. Global marine yield halved as fishing intensity redoubles. *Fish & Fisheries*: n/a-n/a.

# An example of consumer transparency



Rearing system

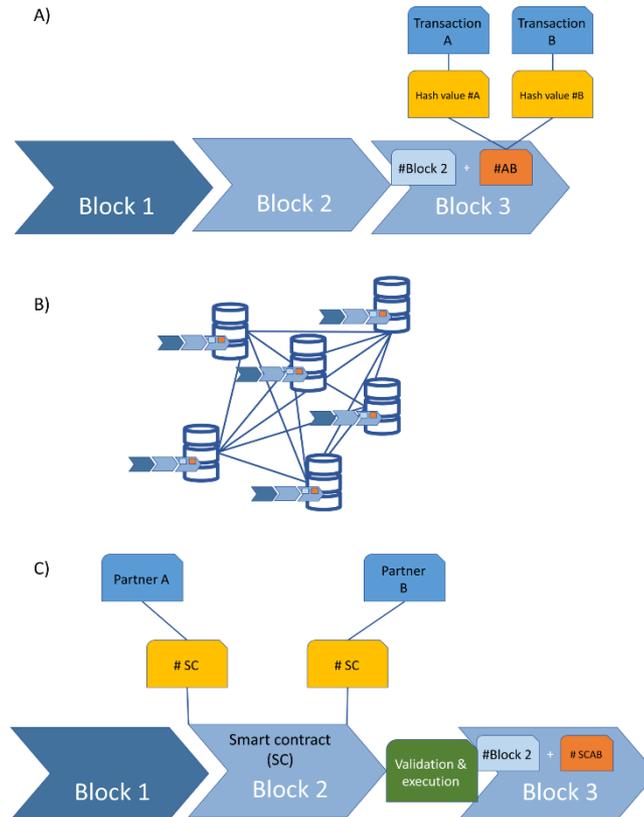
Country of origin

Producer ID

Federal state

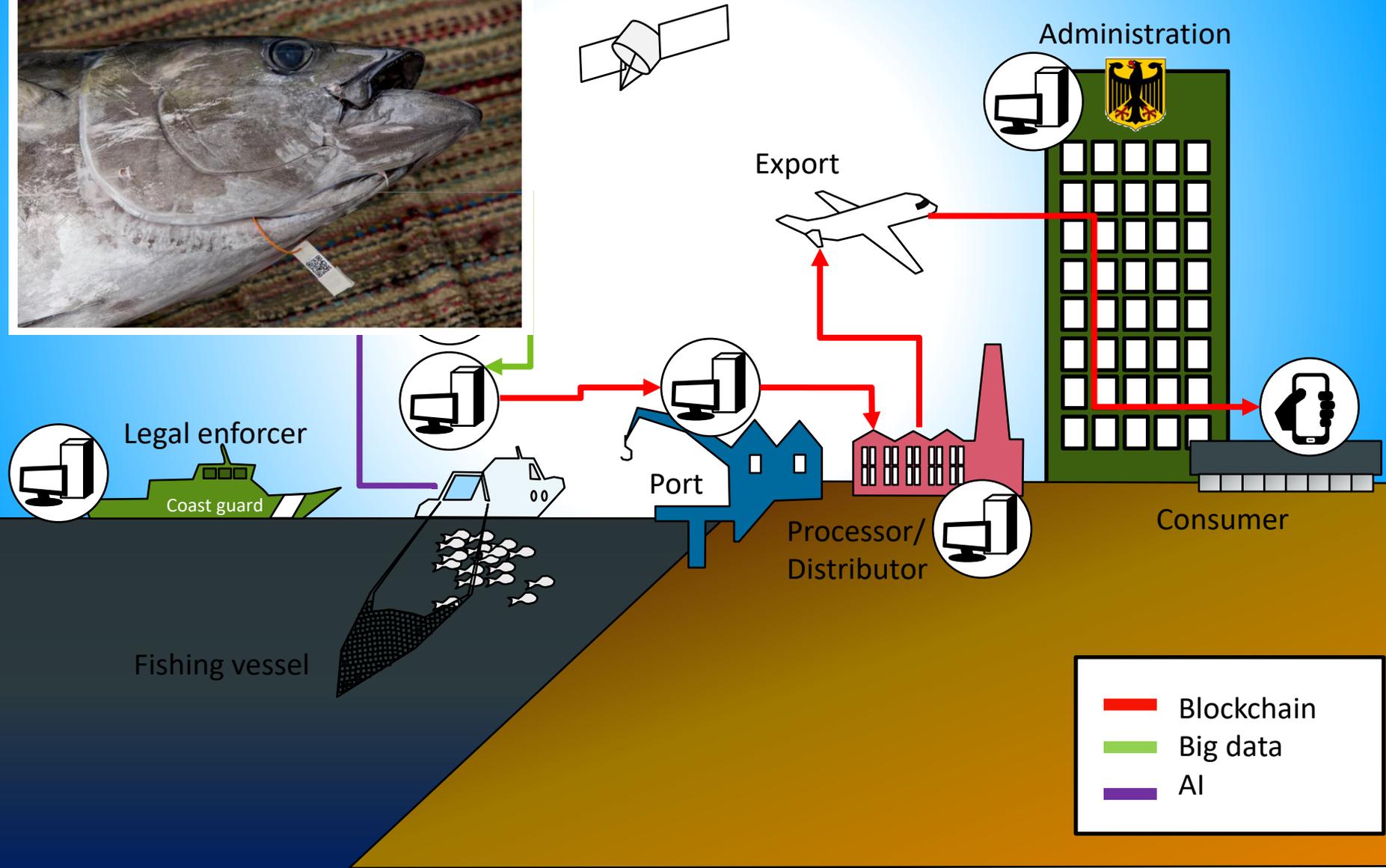
# What are the new data technologies?

- Blockchain
- Real-time atomized data mining
- Artificial intelligence

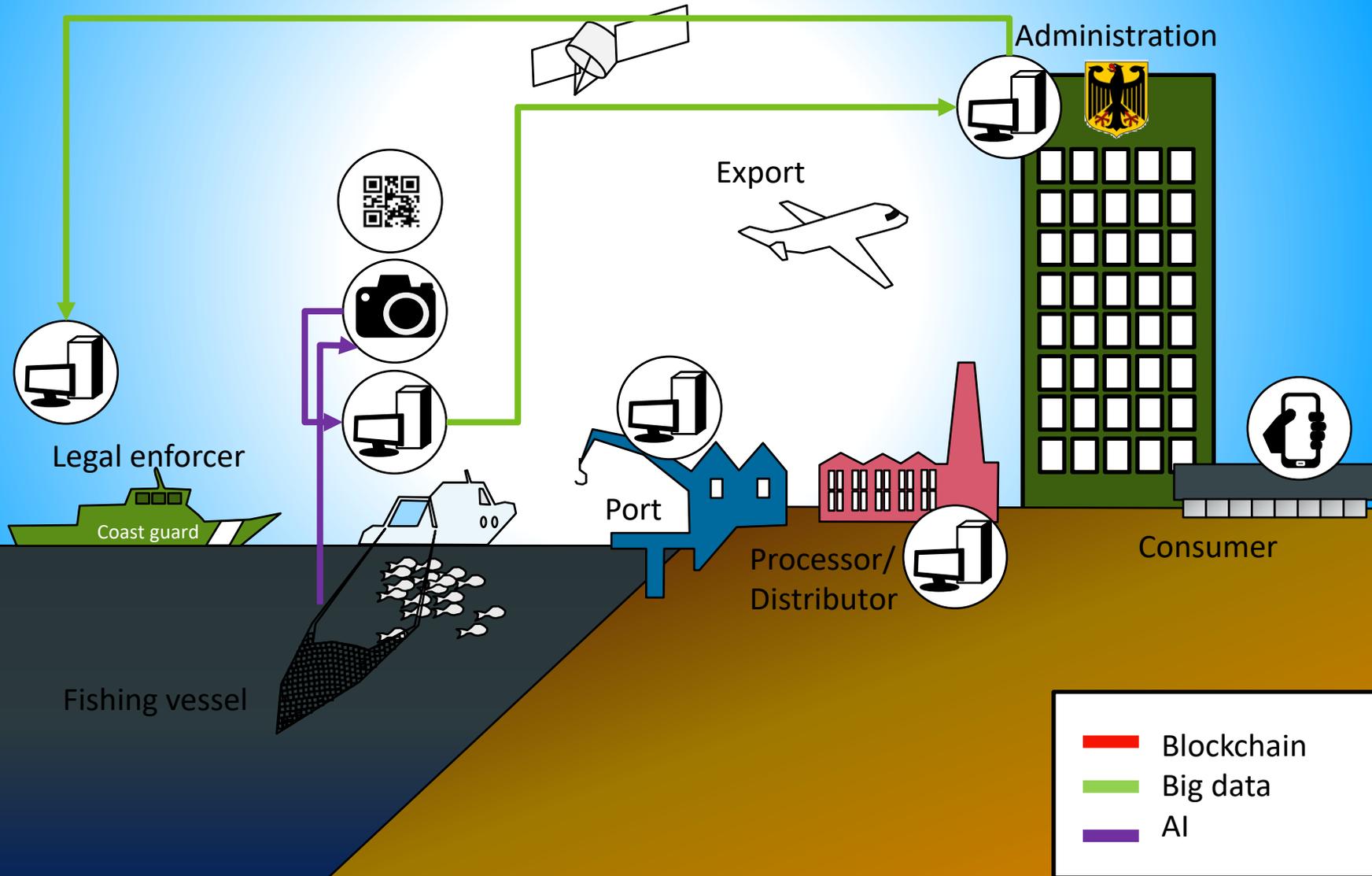


Probst, W. N. 2019. How emerging data technologies can increase trust and transparency in fisheries. ICES Journal of Marine Science, 77: 1286-1294.

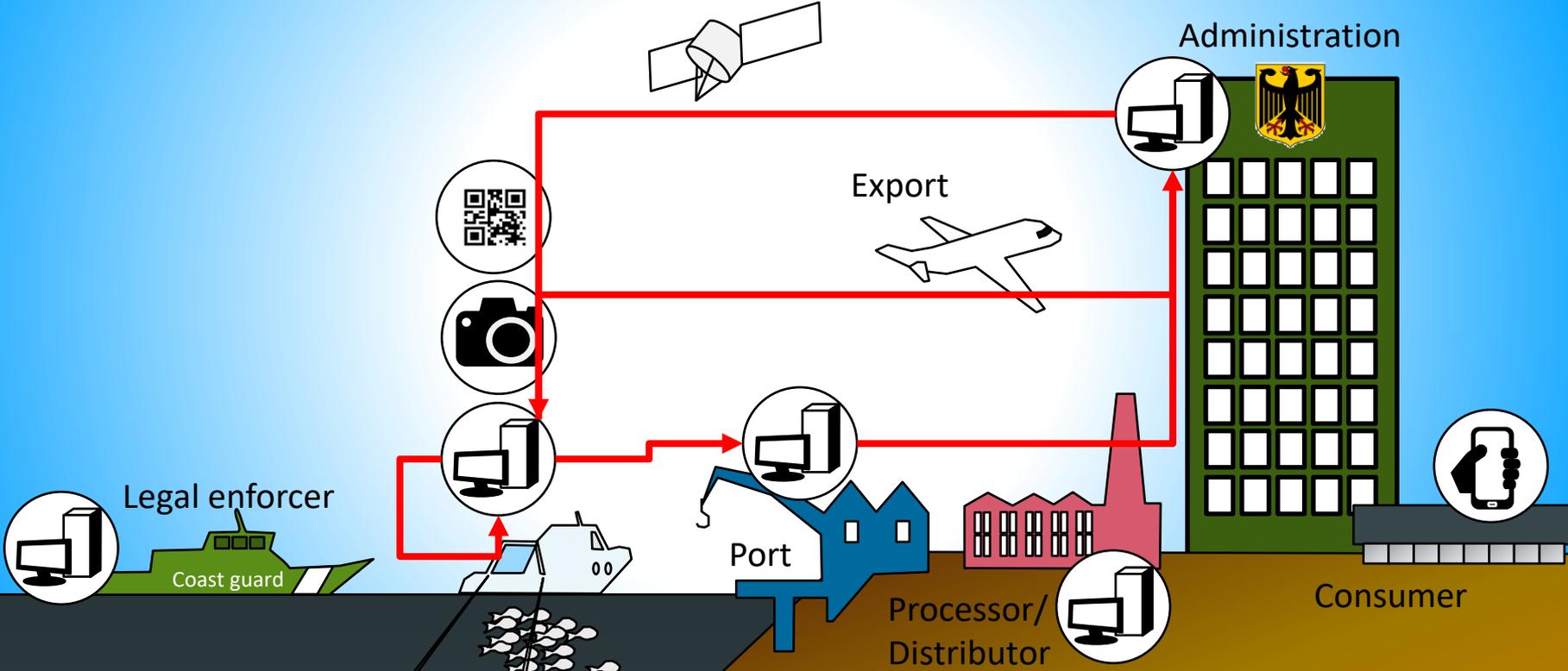
# Track the supply chain (Visser et al. 2017)



# Identify catches

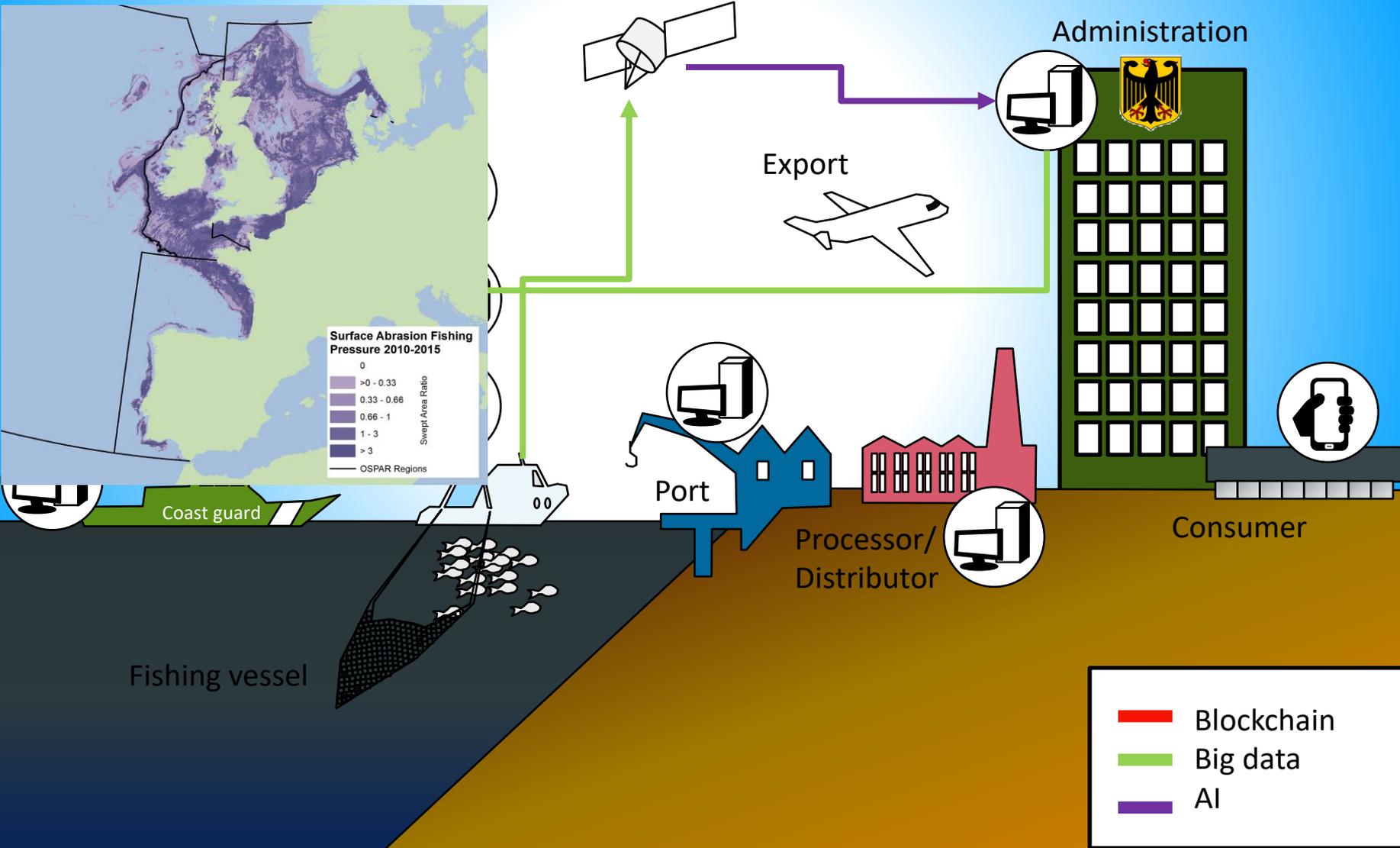


# Trade quotas & catches



	Blockchain
	Big data
	AI

# Track vessel activities (Kanjir et a. 2018)



# 2 Cents from a scientists perspective....

Accessible blockchains and real-time databases would facilitate ...

- Fish stock assessments
- Evaluation of environmental impacts of fisheries
  - Damage to seabed habitats
  - Bycatch of vulnerable and sensitive species
- Facilitate the implementation of management measures
  - Enforcement of technical measures (by catch, spatial restrictions)
  - Monitoring of catches, landings

# Thank you for your attention!

