

Carbon emissions in the seafood value chain - Greenhouse gas emissions of Norwegian seafood products

North Atlantic Seafood Forum
June 2022, Ulf Johansen, SINTEF Ocean



Greenhouse gas emissions of Norwegian seafood products in 2017

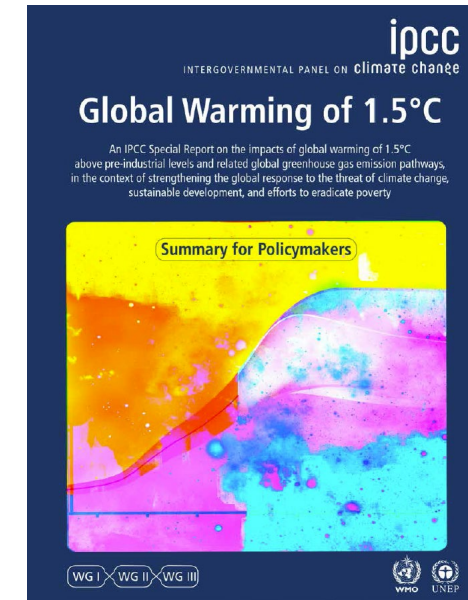
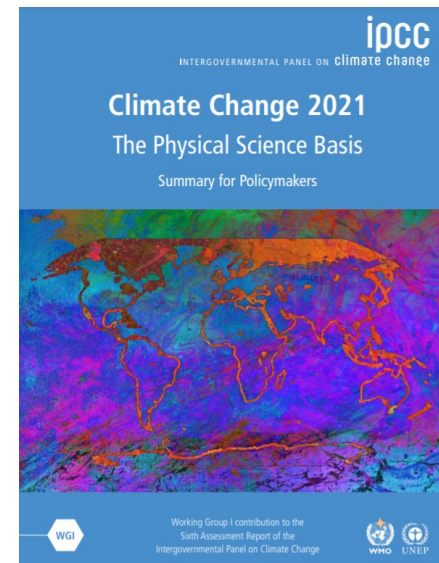
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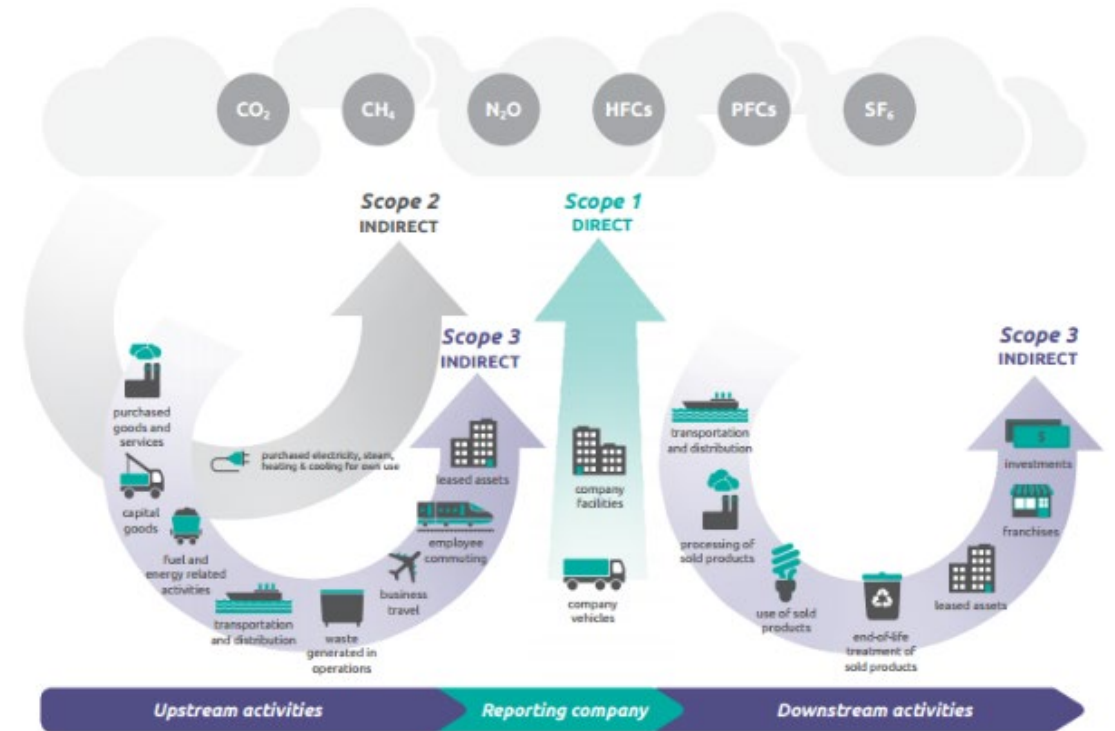
The challenge

- The damaging effects of 1.5 degrees global warming are dramatically less than a 2 degrees warming
- To limit global warming to 1.5 degrees, it is necessary to remove CO2 from the atmosphere and the ocean in addition to reducing emissions
- Food production is estimated to emit between 20–30 % of global anthropogenic carbon emissions



What is climate accounting?

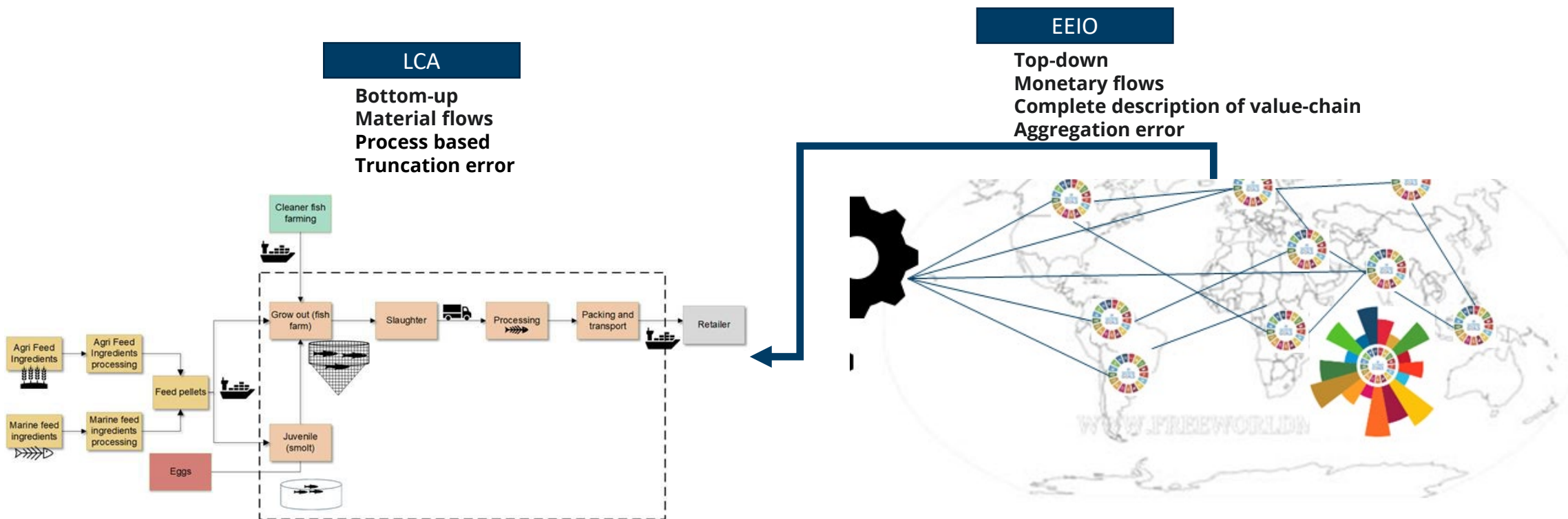
- Clarification of concepts: Climate trace, climate accounts, carbon footprint, GHG assessment, LCA...
- Common to them all: A transparent accounting of consumption and activities that cause greenhouse gas emissions and other climate impacts.
- Climate accounts and climate tracks prepare accounts for the DIRECT and INDIRECT climate impact (Scope 1,2 and 3)
- The methodology used in making complete climate accounts / tracks - LCA (life cycle analysis) or EEIO (Environmentally extended input–output analysis)



Two Methods to cover GHG emission from the value-chain:

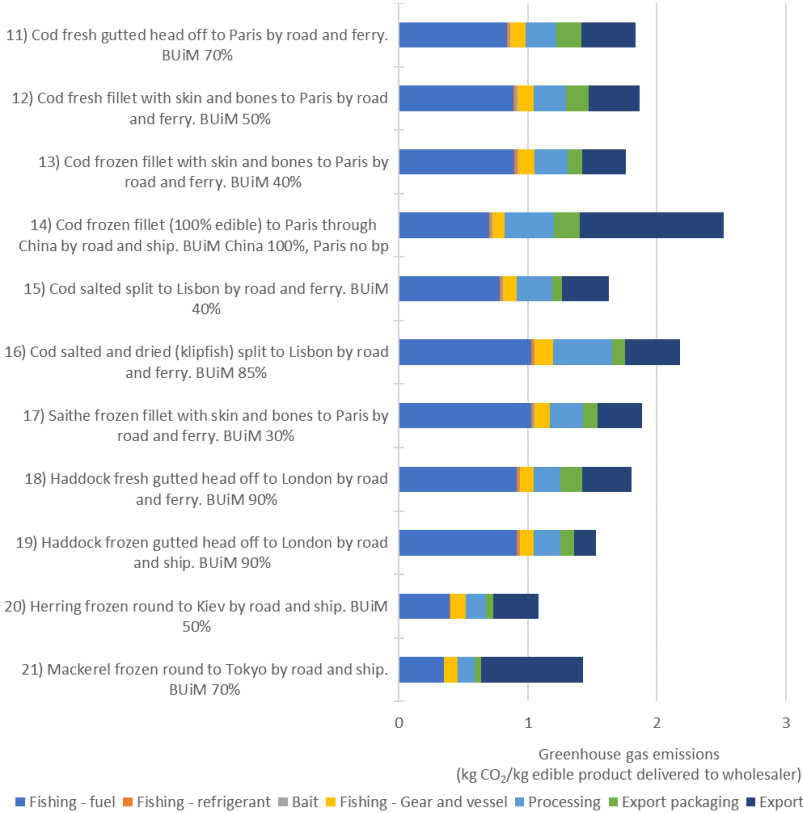
1.) Life cycle assessment (LCA)

— 2.) Environmental extended input–output analysis (EEIO)

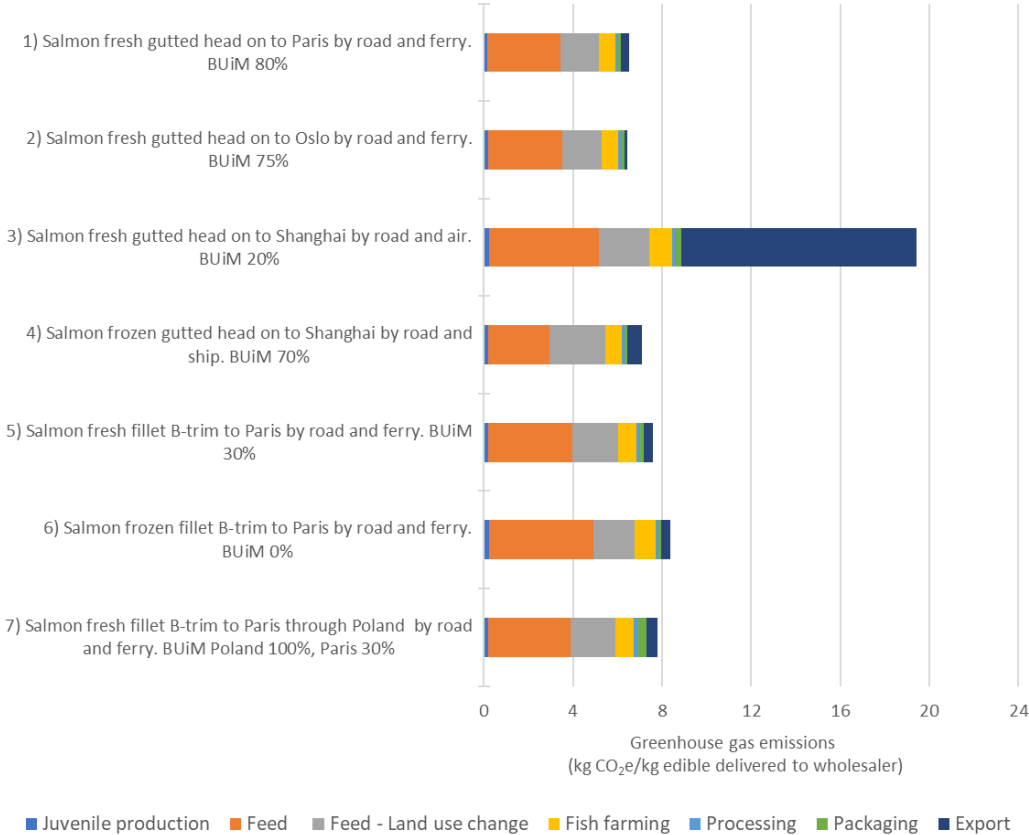


Different seafood value-chains - different hot spots..

Fisheries – fuel and export

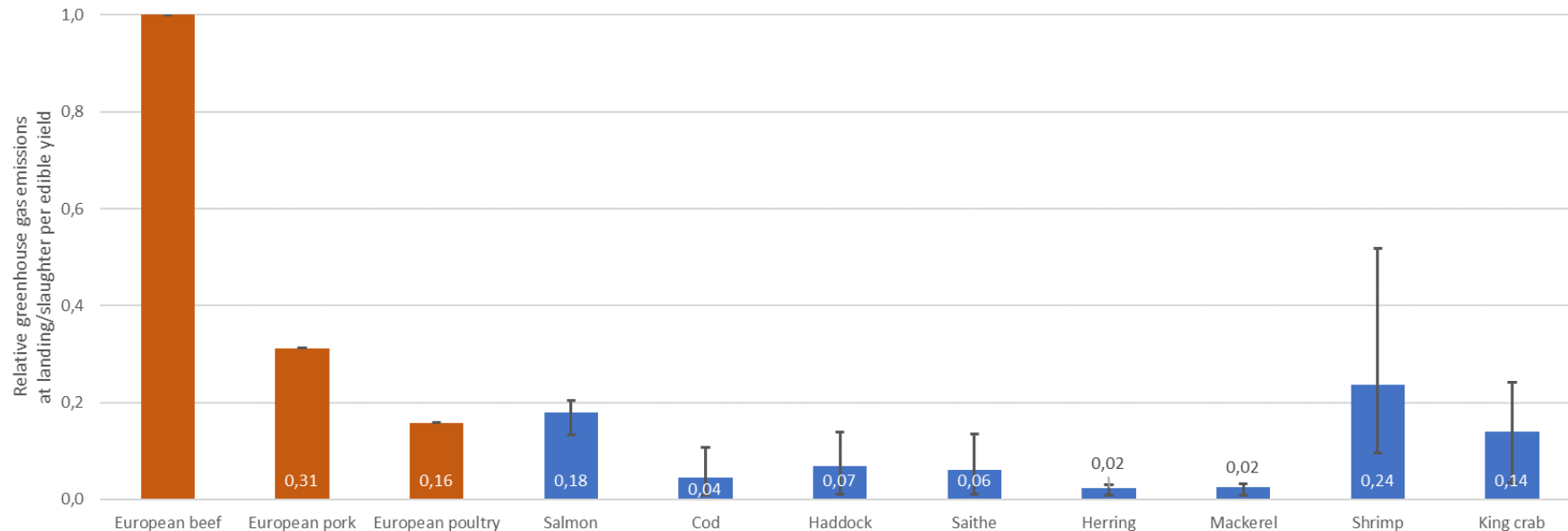


Aquaculture – feed and export



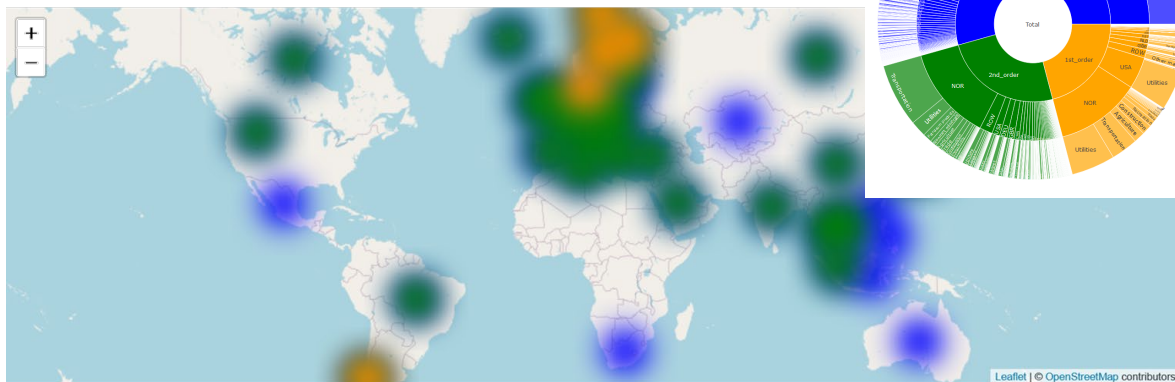
Benchmarking – over time and with comparable food products

- The footprint should be updated every 2 to 3 years - can then see how different measures work – benchmark over time
- Easier to this analysis in 2022 as more and more companies make their own reports
- These reports are important for the industry to be able to position themselves in the green economy
New report available in November 2022!



How to include climate accounting at the company level?

- www.MoreScope.com
- Integrated in the accounting system
- Calculates emissions of all economic transactions within the company (Scope 1-2-3)
- We need both customers and investors to further develop MoreScope!
- [Contact: ulf.johansen@sintef.no](mailto:ulf.johansen@sintef.no)



Map showing footprints from economic activity

The screenshot shows the homepage of the MoreScope website. At the top left is the MoreScope logo, and at the top right are navigation links for 'About us', 'Business', 'Research', and 'Contact'. The main content area features a dark background with a view of Earth from space. Overlaid on this are several green dashed squares and circles, representing a network of transactions. The text 'This is MoreScope' is prominently displayed in white, with the subtitle 'A scientific analysis of your effect on sustainable development.' below it. A red 'Read more' button is positioned at the bottom right of the main content area.

The footprint of most businesses is an invisible network of transactions. We help connect the dots, and identify how more sustainable operation will make customers and investors choose you.