

Environmental impacts and energy transition in the Nordic seafood sector



The sustainability approach of Royal Greenland

- Materiality assessment, fishery and CO₂e emission
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Agenda

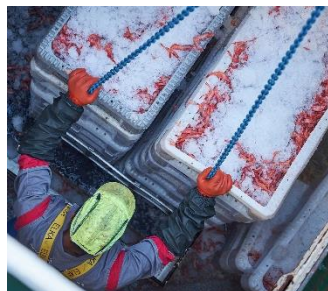
Introduction to Royal Greenlands materiality assessment and integrated value chain

Sustainable fisheries

CO₂e emission in Royal Greenland

CO₂e hot spots in the value chain

Life cycles assessment on seafood products



Royal Greenland

- A large seafood company in the North Atlantic
- Independent company owned by the Greenlandic Government
- Present in 37 settlements in Greenland of 65
- More than 2.200 employees around the globe, here of almost 1.400 in Greenland
- Operates own off shore and coastal fishing fleet and production units in Greenland, Atlantic Canada and Germany
- Local presence in major world markets

Mission

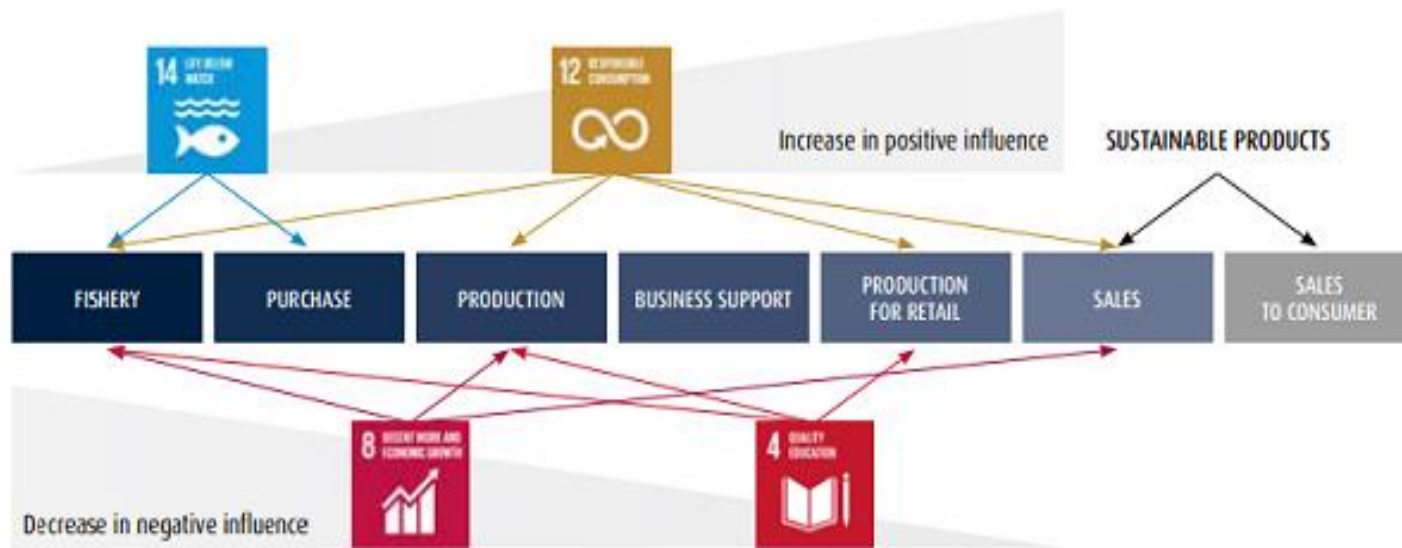
We *sustainably* maximize the value of marine resources to which we have privileged access, for the benefit of our owners and our local communities

Materiality assessment

We used SDGs as basic for the sustainability program



Royal Greenland has a vertical integrated value chain



The target of our sustainability goals are to reduce negative impacts in the value chain and to increase the positive opportunities



Sustainable fishing

Sustainable raw materials

Our fisheries must be managed in accordance with the scientific advice.

We buy fish and shellfish according to equivalent principles and contribute to building up knowledge of sustainable fisheries

Initiatives

- Maintain the current certificates
- Certification of new fisheries e.g. Newfoundland lobster and in Greenland working through partnership Sustainable Fisheries Greenland to improve management
- Certification of a larger proportion of purchased raw materials and finished products for sale than in 2022 (63%)

Fisheries development – new species

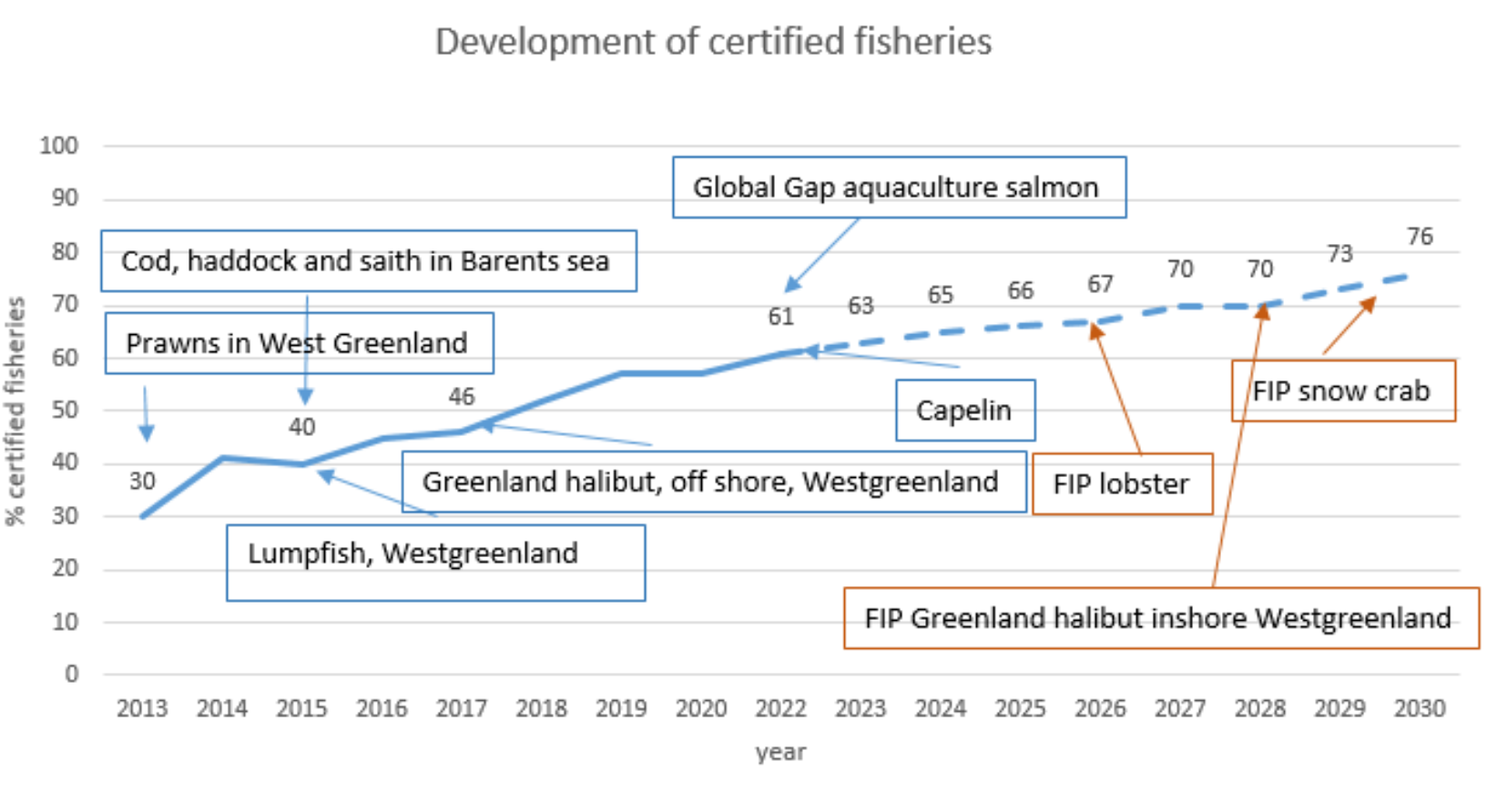
We must make better use of marine resources, so that we as a company can develop food products for an ever-increasing global population

Initiatives

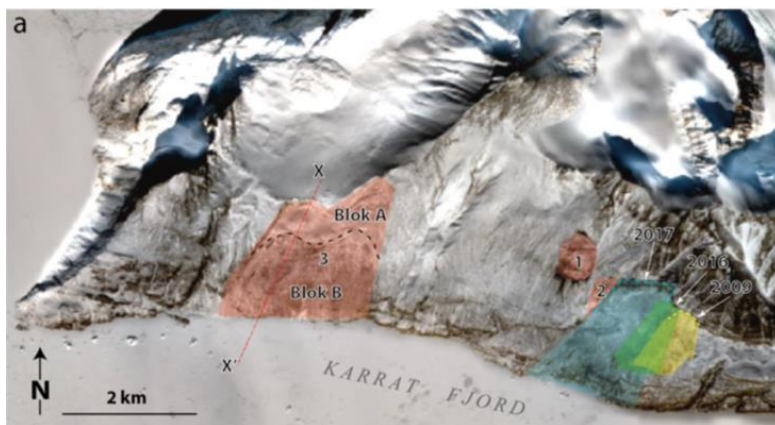
- Development of new fisheries, primarily in the coastal fishing area e.g. sea urchin, sea cucumber and whelk
- Cultivation of seaweed

Certified fisheries

Development of certified fisheries



Visual climate change



Rock slides made tsunami in fjord in Uummanaq



Prawns are moving north





Responsible footprint

Five sub areas

- Energy consumption
- CO2e emission
- Maximum utilisation of resources
- Cardboard, paper and plastic
- Water consumption

We will minimise our environmental footprint through responsible consumption and circular handling of non-renewable resources

We will maximise the degree of utilisation by creating new food products from the fish and shellfish that we produce.

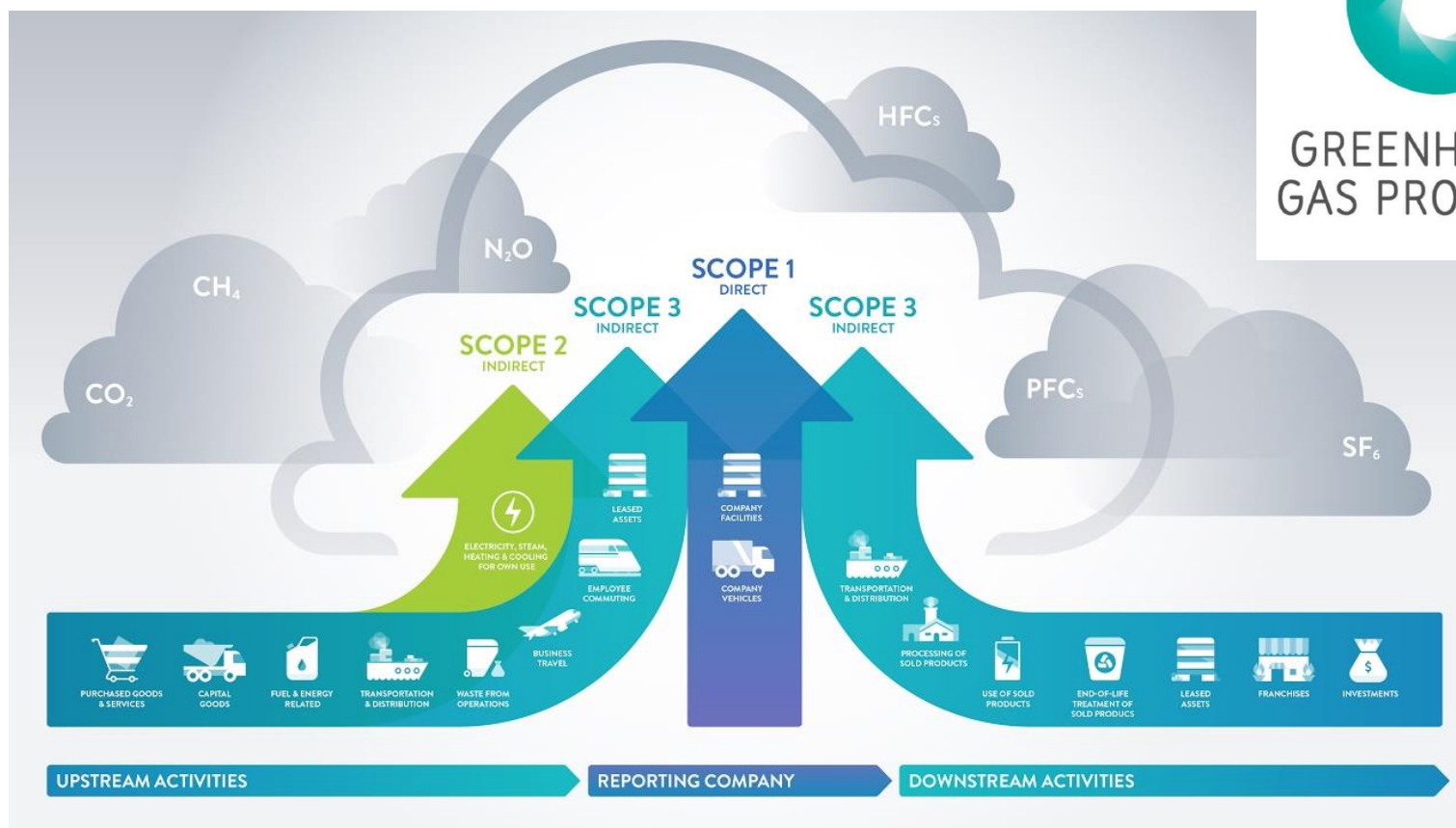
Initiatives (extracts)

- Determine action plans to reduce energy consumption at factories and facilities
- Engage in a partnership for a model to calculate the carbon footprint for seafood-based product chains
- Development of production methods for maximum utilisation of resources
- Substitution of laminates with mono-materials
- Production of fresh water from seawater approved for food production at certain locations

Definition of scope 1-2-3

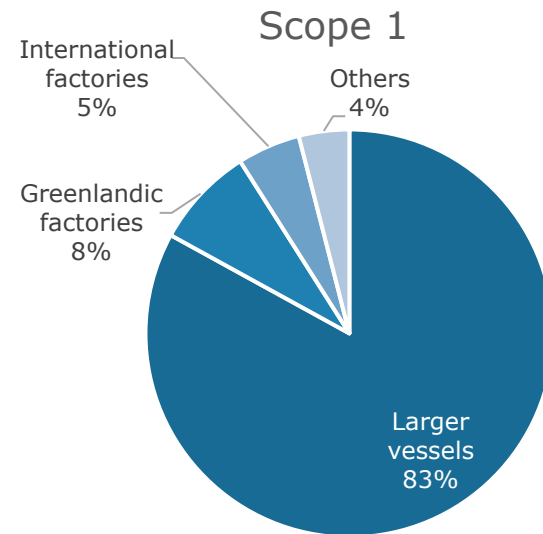
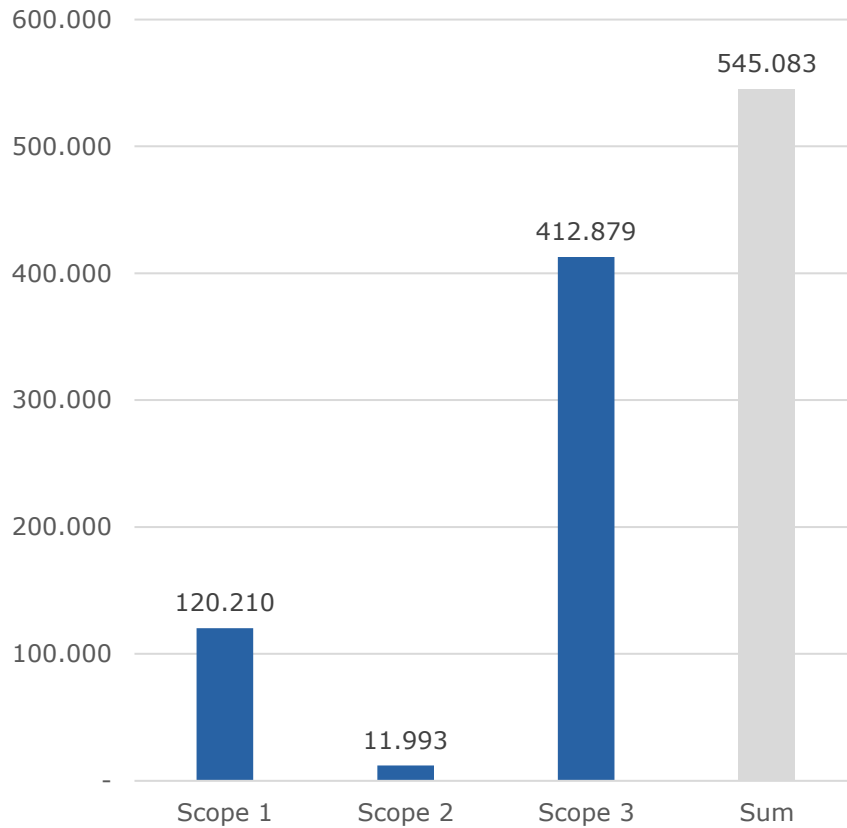


GREENHOUSE GAS PROTOCOL



Royal Greenland scope 1-2-3

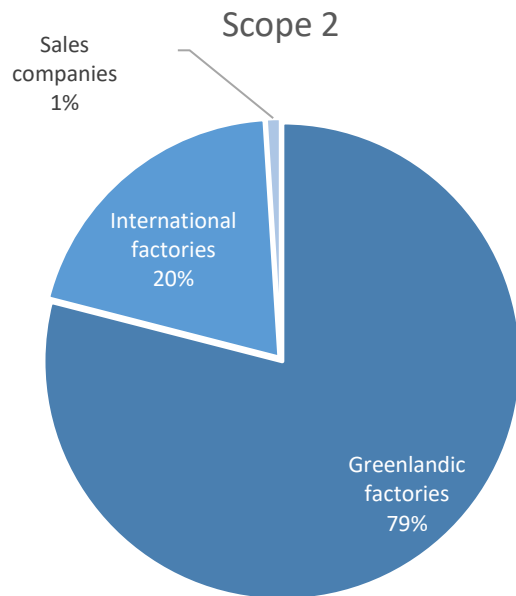
CO₂e emission in Royal Greenland



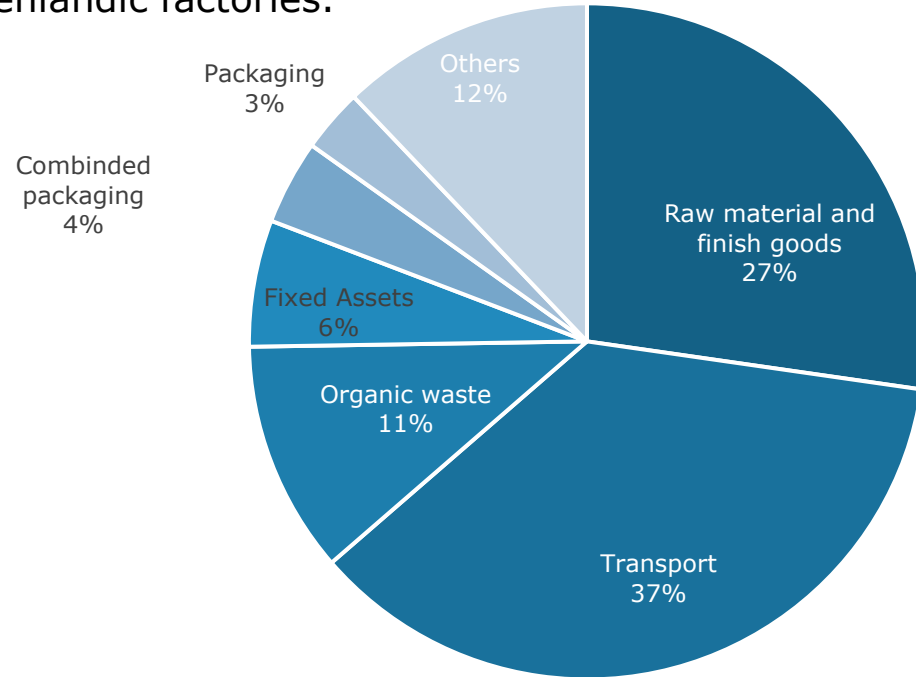
Scope 1 account for approx. 22%, scope 2 for 2 % and scope 3 about 76% of the total 545.083 t CO₂e

Scope 2 and scope 3

Scope 2 is mainly emissions from Greenlandic factories.

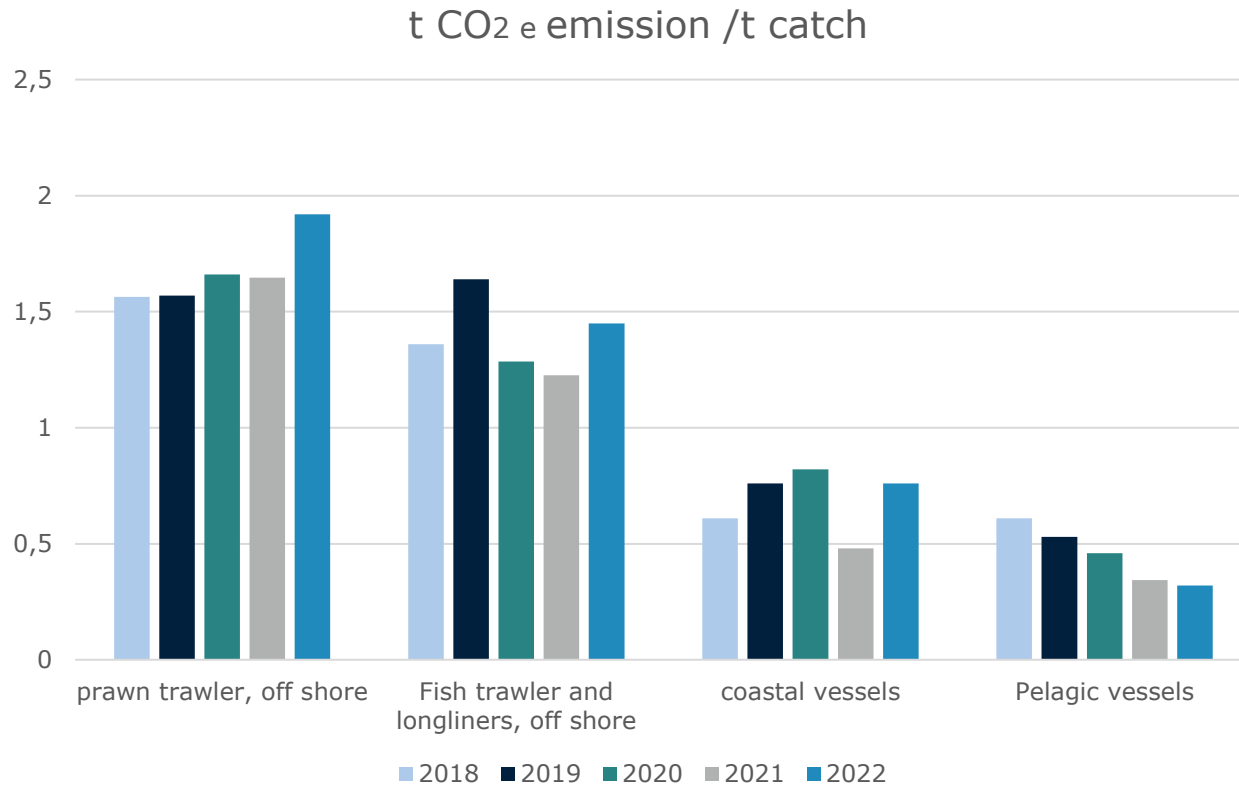


Scope 3



Scope 3 is dominated by transport and purchasing of raw material and finish goods

CO₂e emission per ton catch - Differences between vessels



Results are depending of type of fishing gear, distance to fishing area, catch efficiency and time used for other activities like shipyard.

New trawlers

M/tr Sisimiut, halibut/cod/meal and oil 2019



M/tr Avataq, prawn/halibut 2020



M/tr Nataarnaq, prawn 2021



M/tr Tuugalik, fish 2022



Fossil fuel and environmental impact

Royal Greenland use Marine Gas oil

Low in sulphur content, < 1%
=> risk of acidification is reduced

Low in risk of black particles to the surroundings

BUT

The same CO₂e emission as other types of fuel!

How to reduce the CO₂e emission?

Development is necessary

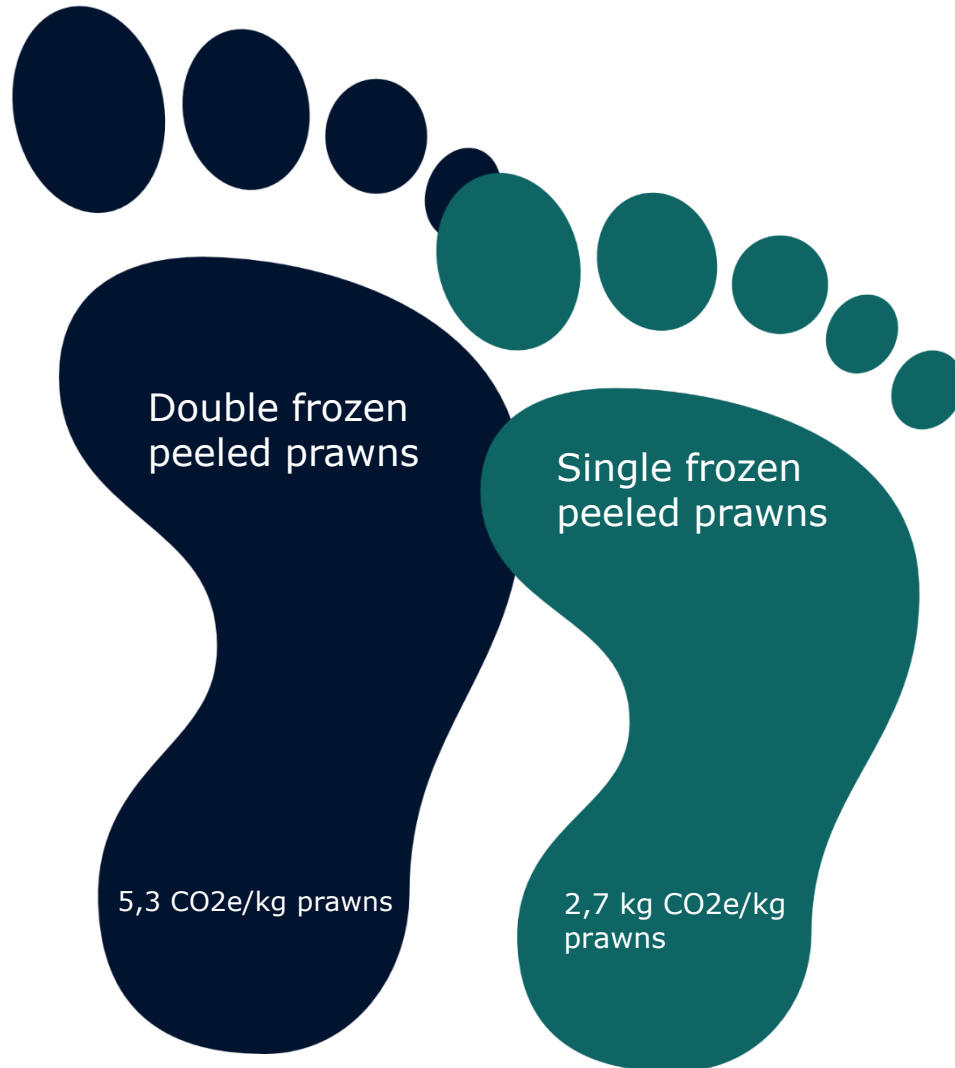
Reduce fuel ->
Efficiency in transport and fishery

Development in fishing gears

Development in new energy systems usable for
vessels

CO₂e emission per kg finish goods

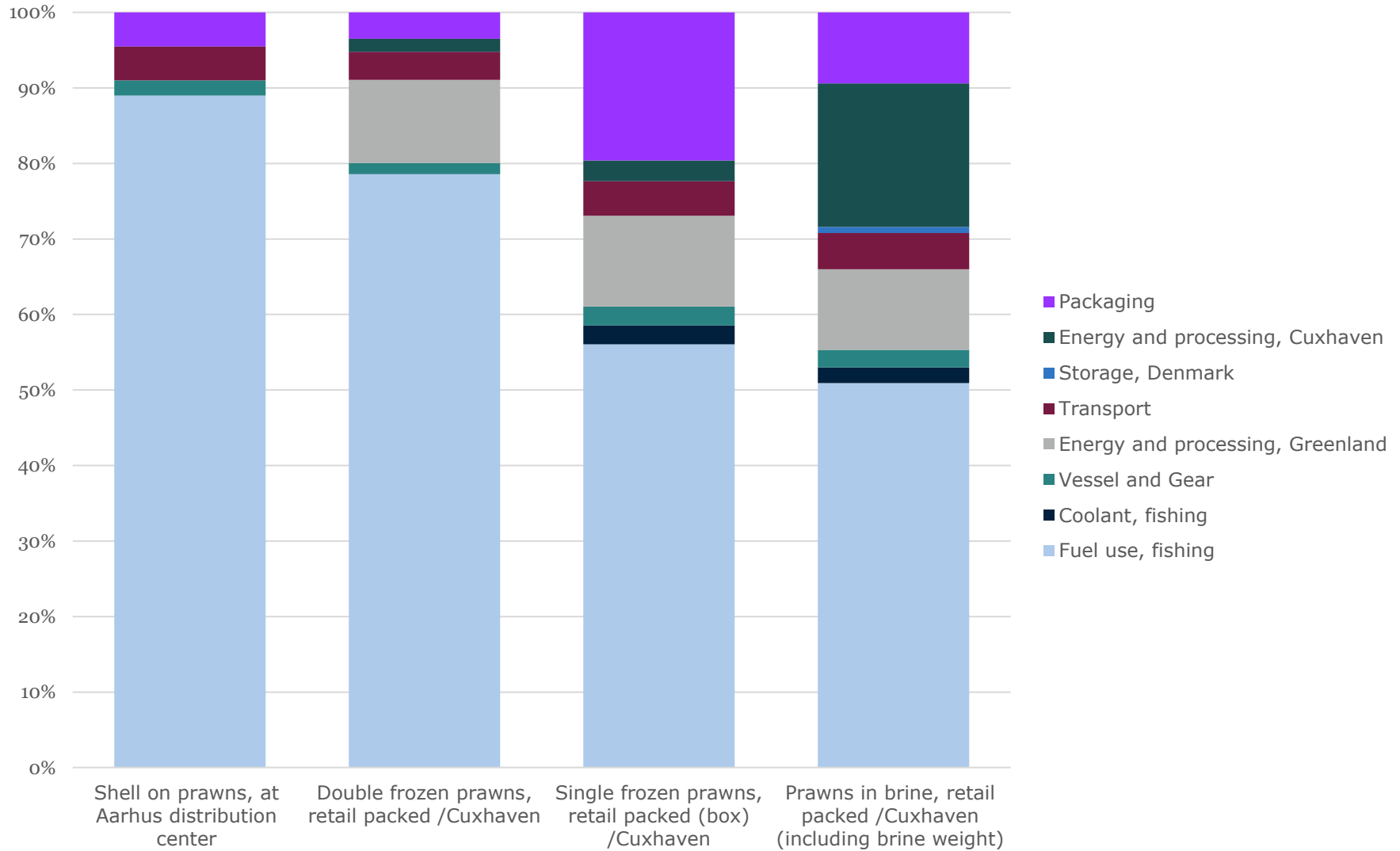
- From fishery in Greenland to gate in Germany



Attributional LCA
based on utilisation
of the goods

Ref. RISE Sweden

Distribution of CO₂e emission - Depending of the processing



Thank you.

