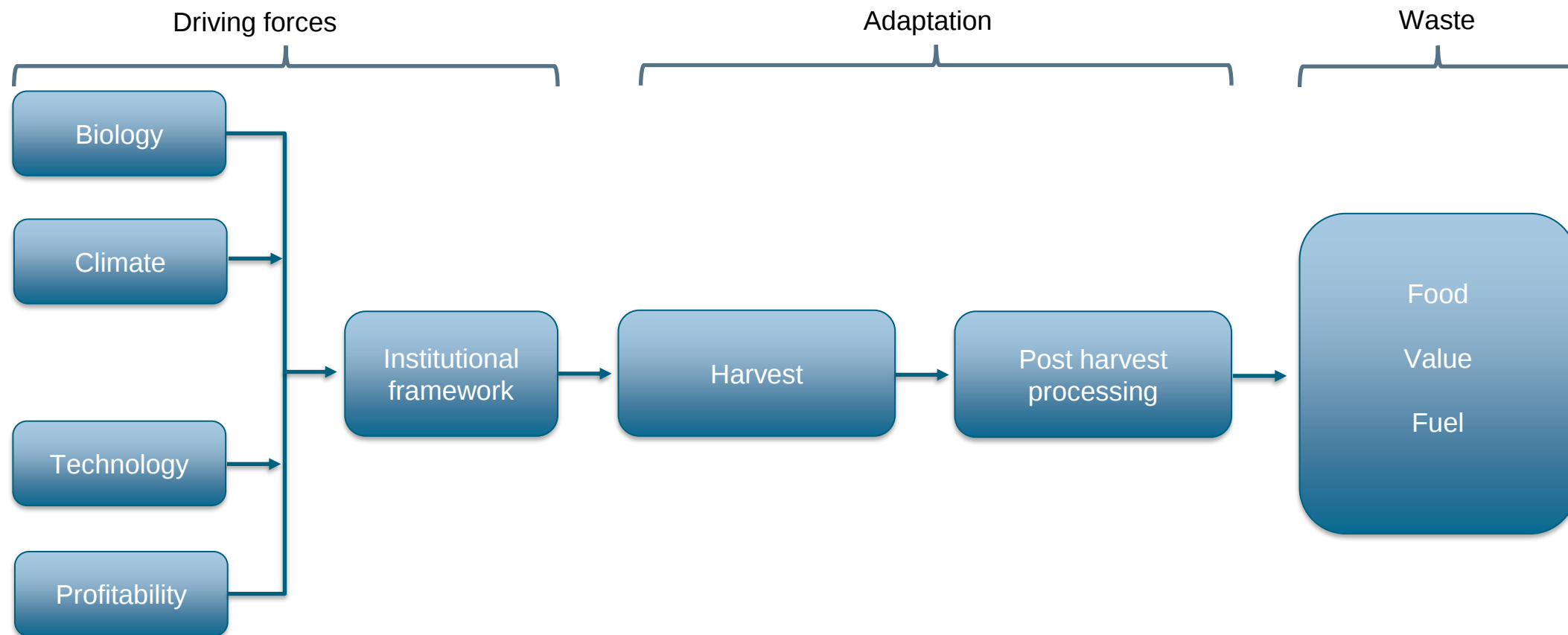


Waste in fisheries

Challenges in the Norwegian seafood industry

Bent Dreyer
Director of research





Skin



Milt



Roe



Head



Backbone



Liver



Viscera



Stomach

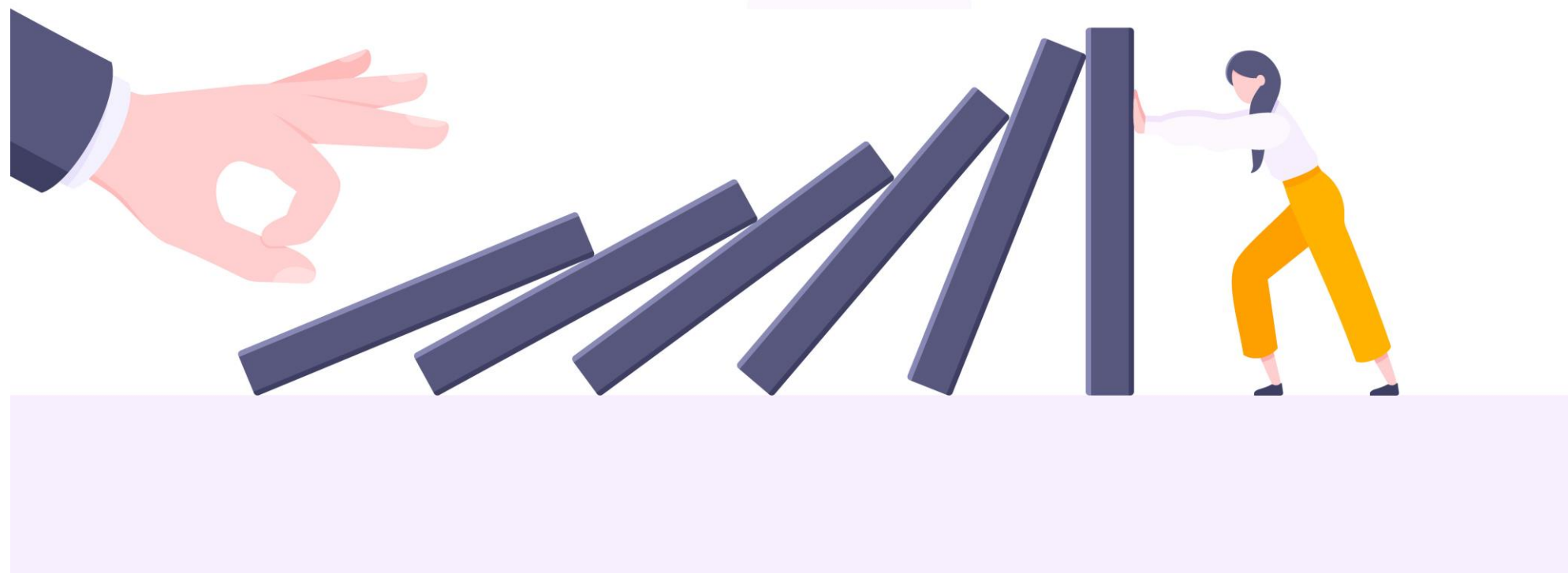
Available raw material of by-products



Source: Sintef, Myhre et al

Productcategory	Level	Production / Share	
		2012	2022
Human consumption		38 000 t / 10%	75 000 t / 15%
Feed		294 000 t / 77%	340 000 t / 67%
Biofuel		50 000 t / 13%	90 000 t / 18%

Source: Sintef, Myhre et al



In Sea

At Sea

Post Harvest

At home

PERFORMANCE



TAC

2010

2020

2024

MSY

Cod - Northeast Arctic

271 000

334 000

214 124

560 000

Haddock - Northeast Arctic

116 000

105 159

70 605

162 500

Saithe - Northeast Arctic

204 000

156 482

209 323

300 000

Caplin - Barents Sea

245 000

0

117 300

1 740 000

Herring - Norwegian spring-spawning

894 000

399 451

255 846

1 160 000

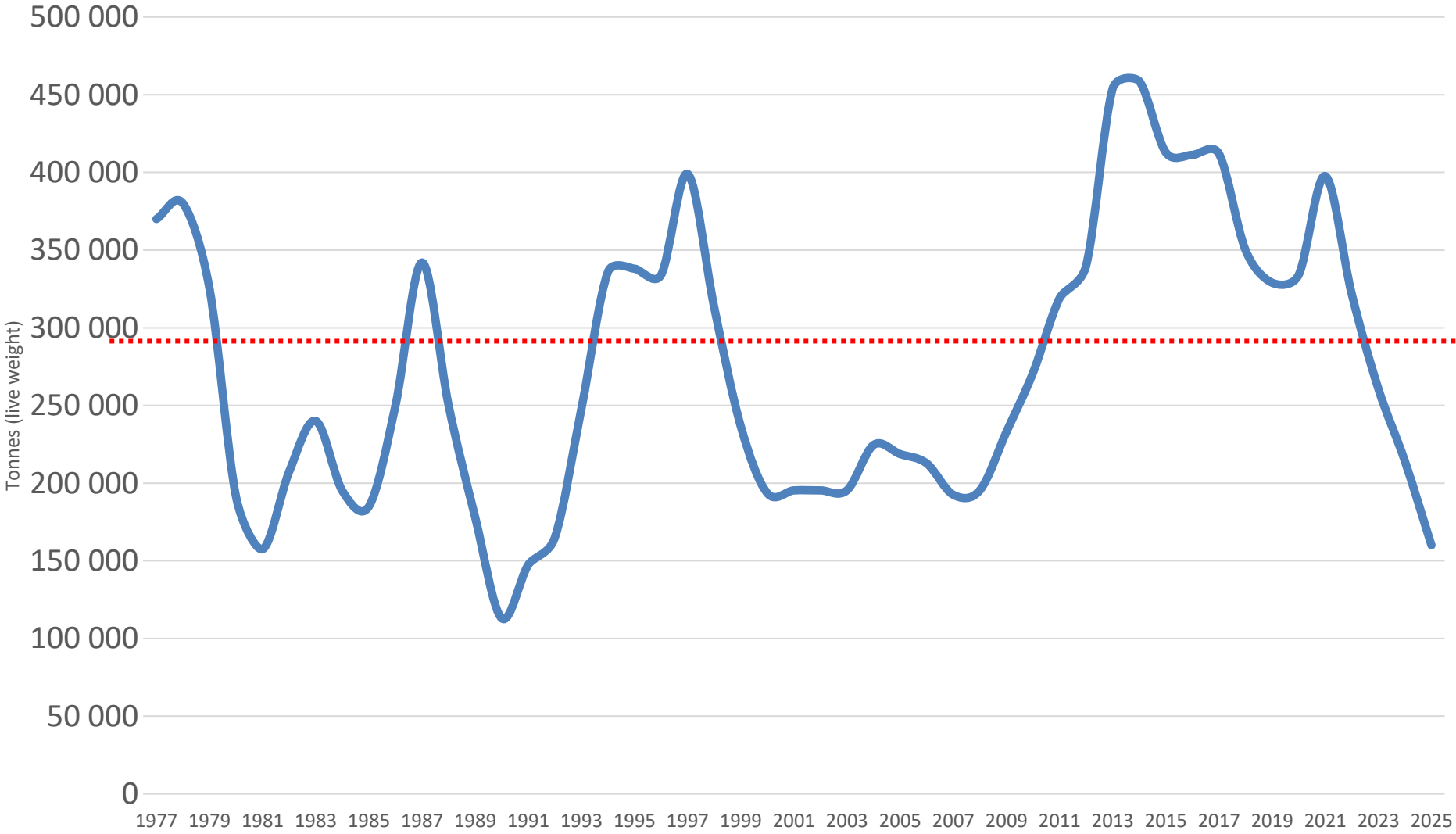
1 730 000

995 092

867 198

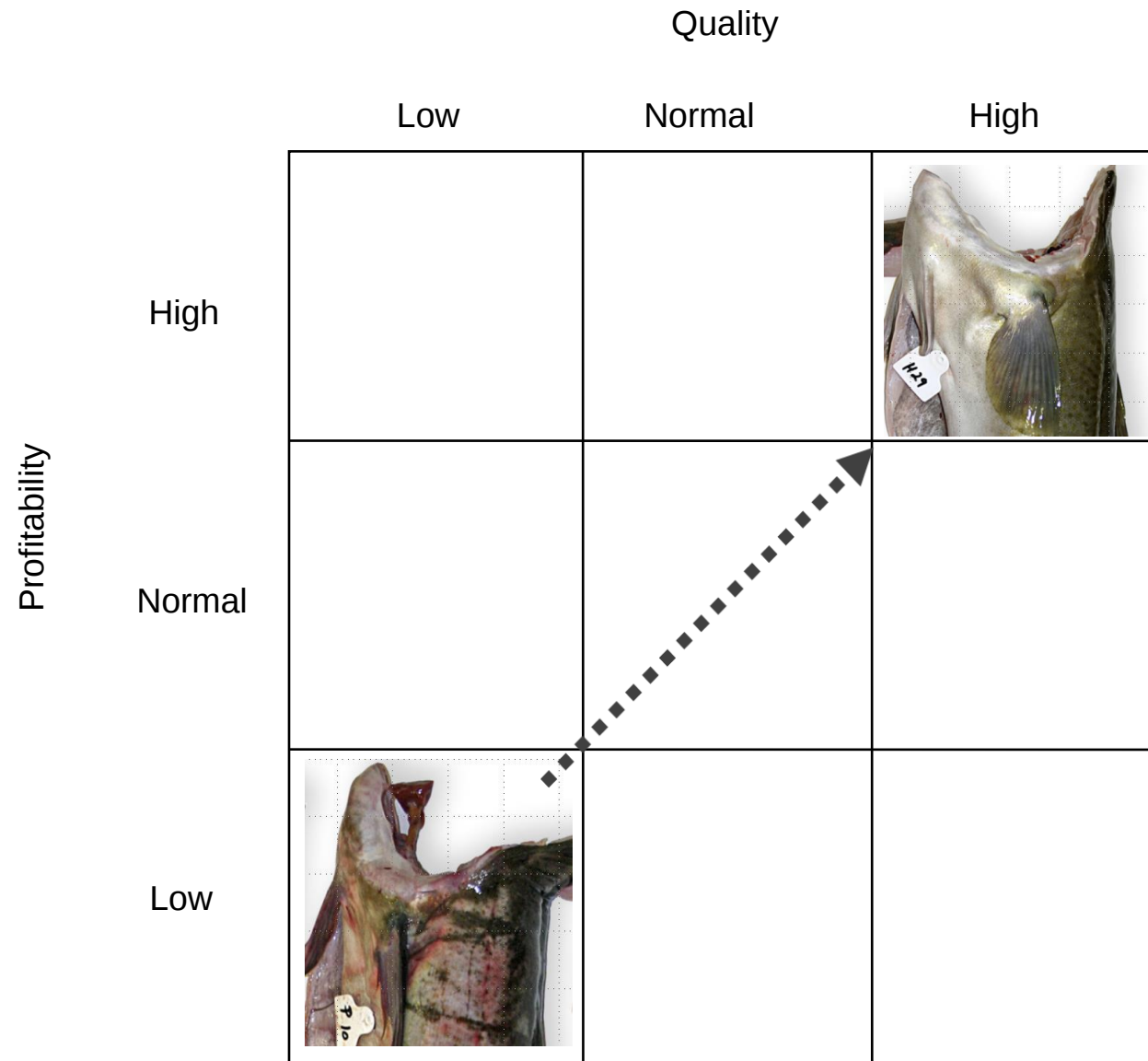
3 922 500

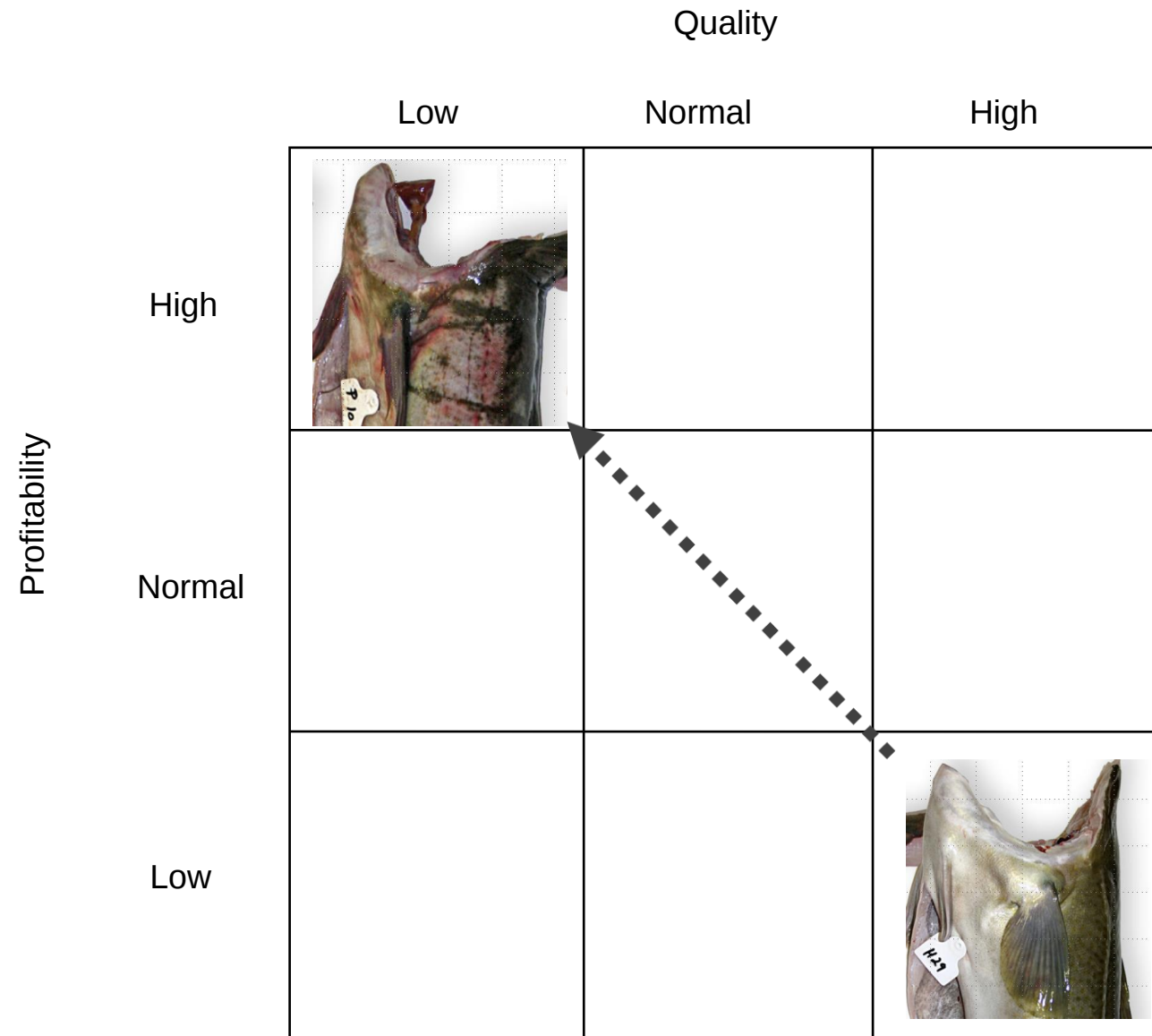
Norwegian TAC: Cod – Northeast Arctic









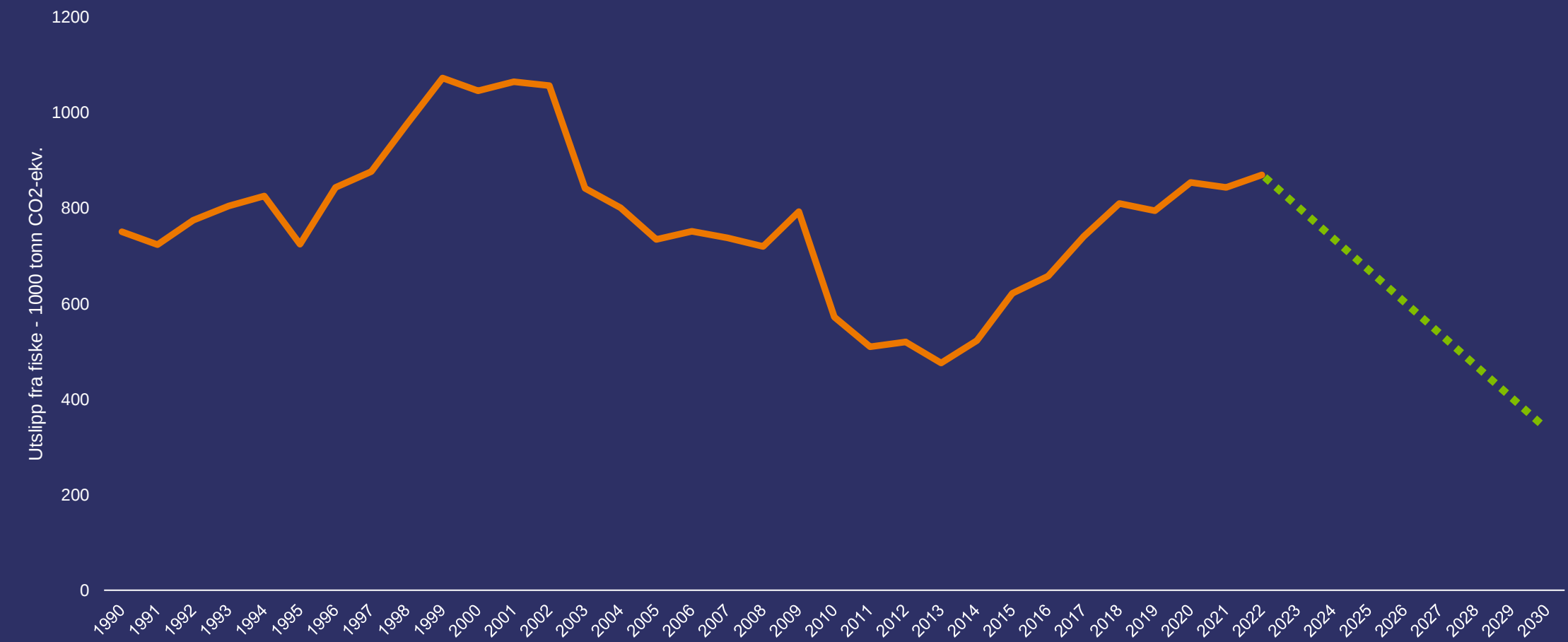




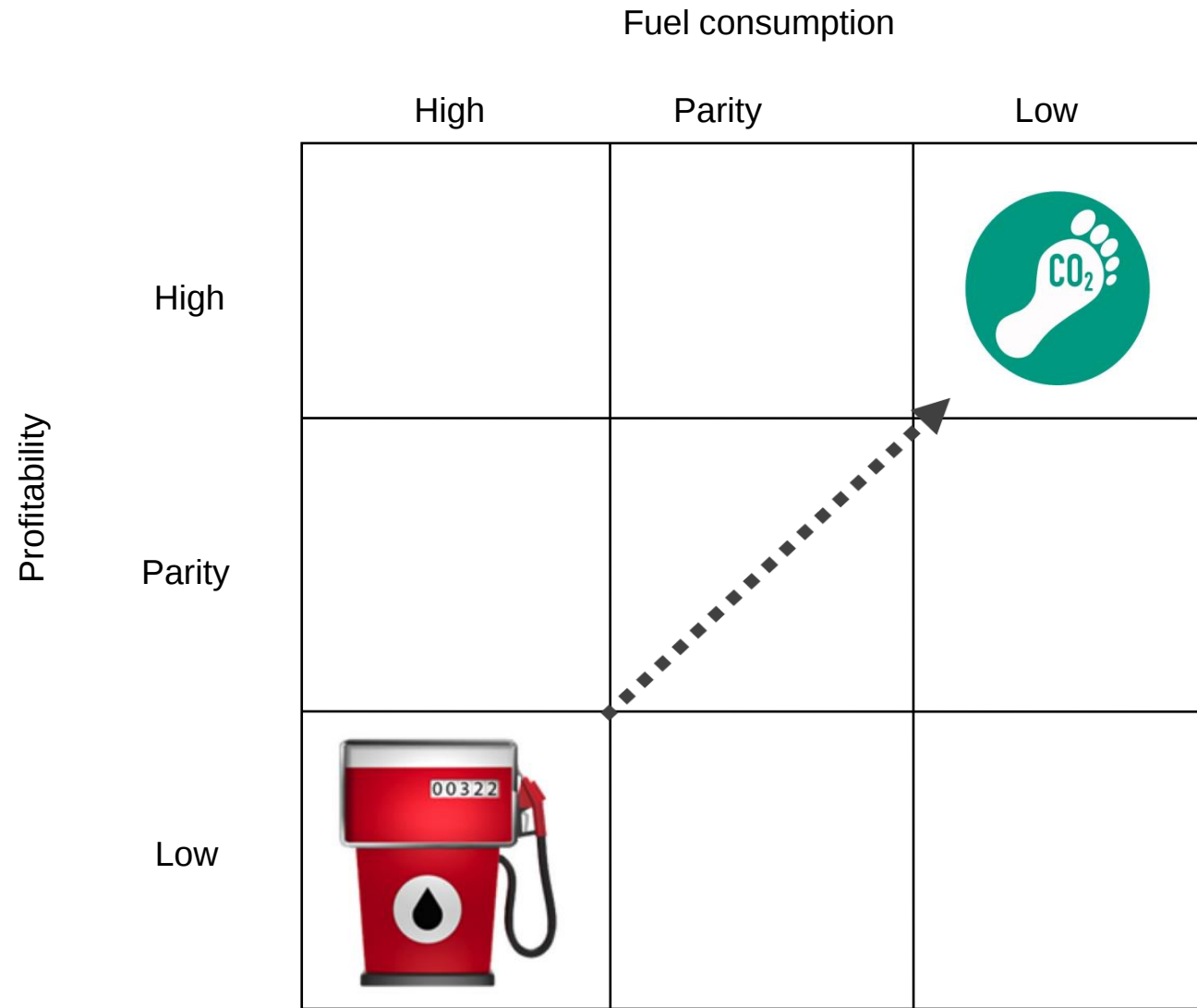
CO₂-footprint

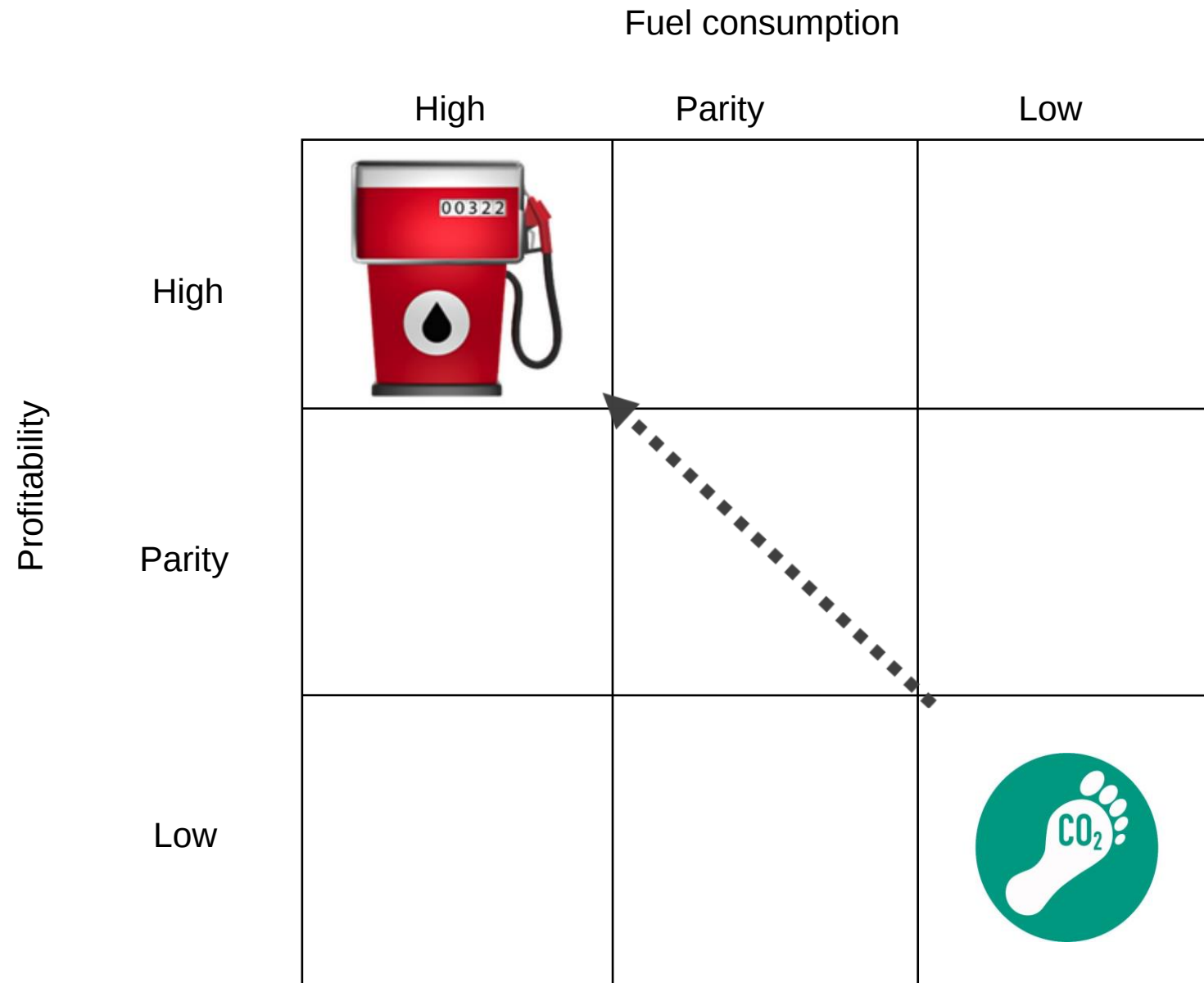


CO₂-footprint – Norwegian fishing vessels 1990 – 2022 (SSB)



Kilde: SSB, utslipp til luft, tabell 13931







Value pr liter fuel

6-pack

 Biology

- 
1. Quota (Close to MSY)
 2. Species (High value and low CO₂ – footprint)
 3. When (High CPUE and high quality)
 4. Where (Hot spots close to the shore)

 Adaptation

- 
5. Gear (High CPUE, high quality and low CO₂ – footprint)
 6. Vessel (High carrying capacity and low CO₂ – footprint)

– Skulle gjerne levert til konsum, men det ville kostet dyrt

Ringnotbåten «Steinevik» er på vei til Danmark med 1900 tonn NVG-sild til oppmaling. – Fjordlinjer og reguleringer gjør et effektivt fiskeri vanskelig, sier Kai Eliassen, daglig leder i rederiet Steinevik AS.



Ringnotbåten «Steinevik» tungt lastet med nvg-sild på vei gjennom Tjeldsundet. (Foto: Jon Eirik Olsen)

*“We would like our herring to be consumed by humans,
but the costs are too high*

*So, we have chosen to transport 1900 tons of high-quality
herring to Denmark, where it will end up as fish meal and oil –
due to the way this fishery is managed and organized.”*

