



SINTEF



Occupational accidents in the Norwegian fishing fleet – an updated analysis for the years 2000 - 2022

Ingunn M Holmen, Trine Thorvaldsen, Cecilie Salomonsen,
Halvard L. Aasjord, Ingrid B. Utne*

SINTEF Ocean, *NTNU Dept Marine Technology

Content

- Background
 - Norwegian fishing fleet short intro
 - Norway's Zero vision
- Objectives
- Methods and data sources
- Results:
 - Fatalities and injuries in the Norwegian fishing fleet 2000-2022 – timelines, incident types, vessel groups, activity, incidents rates
- Summary

KL. 12.21, 27. DES. 2023 | AV SIRI NILSEN AHMER

Politiet søker ikke lenger etter antatt omkommet på Lopphavet



FOTO: REDNINGSSKAPET

Source: Fiskeribladet (Fishing industry newspaper) 27.12.2023:
"The police has stopped searching for assumed lost (fisher) at sea"

Technology for a better society

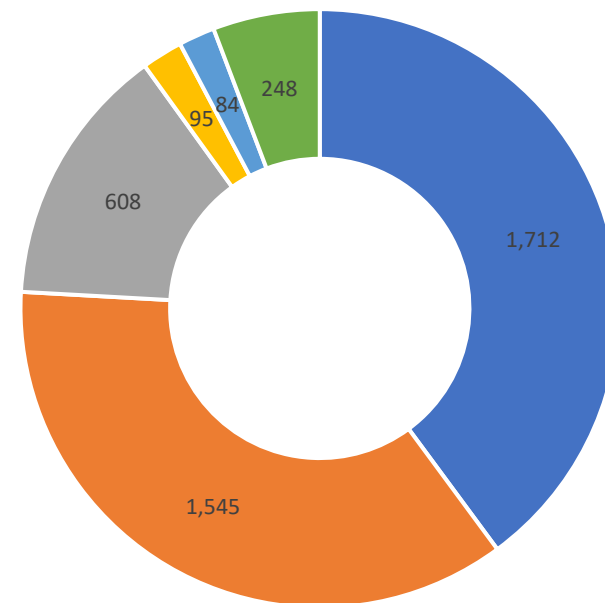
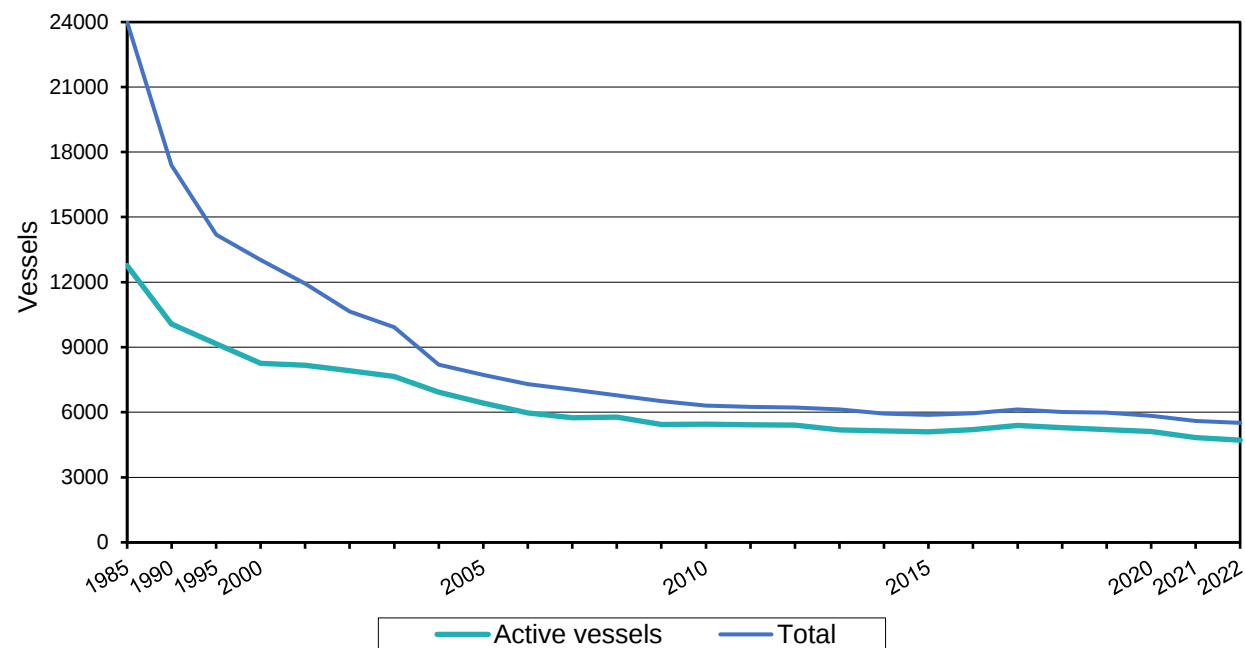


SINTEF

Norwegian fishing industry – vessels

Source: Official statistics Norwegian Directorate of Fisheries

Active fishing vessels in the years 1985-2022



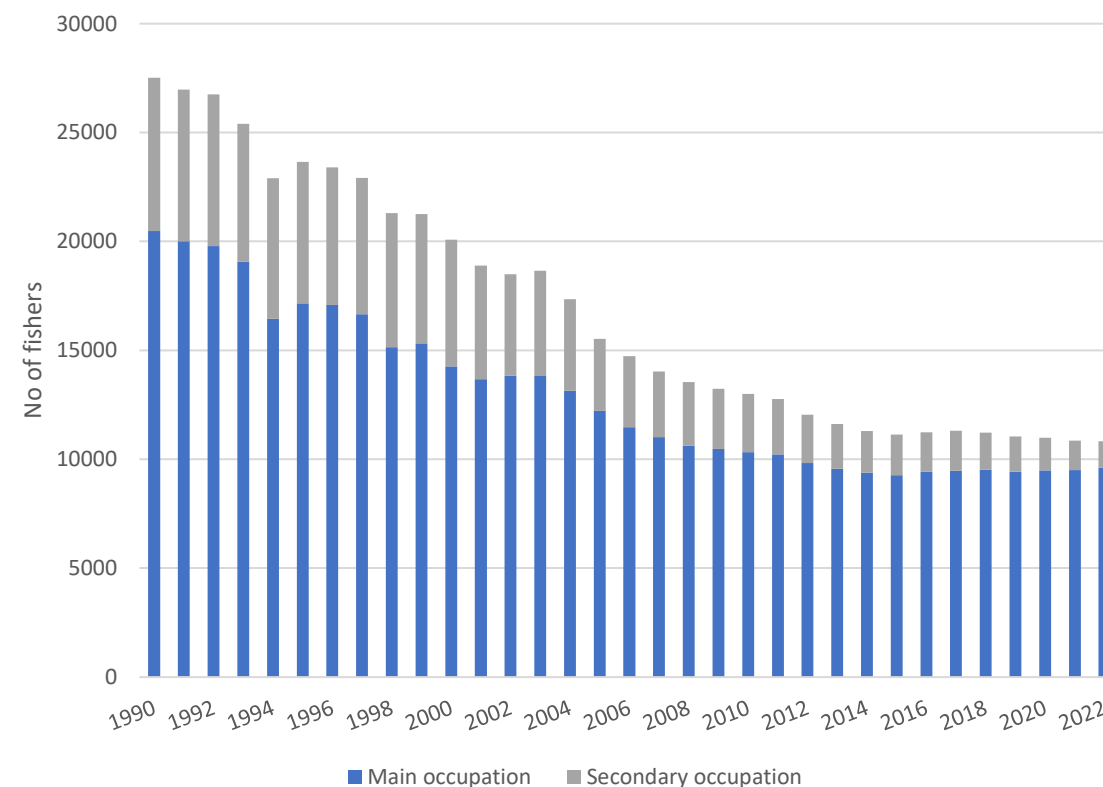
Vessel groups by length in meters (2022)

■ <10 ■ 10- ■ 11- ■ 15- ■ 21- ■ 28-

Norwegian fishing industry – fishers

Source: Official statistics Norwegian Directorate of Fisheries

- Main occupation fishers halved from 1990 to 2010
- 2000-2022: 33% reduction (main occ.)
- 2022:
 - 9,597 main occupation fishers
 - 4.5 % female fishers





SINTEF

A National vision: Zero seriously injured at sea

- In 2022, a historical vision for zero serious occupational injuries at sea was passed by the Norwegian Parliament (Stortinget).
- This requires knowledge-based action plans well anchored within the fishing industry.



Source: Norwegian Maritime Authority webpage

<https://www.sdir.no/aktuelt/nyheter/nullvisjon-til-havs---alle-skall-komme-hjem-fra-jobb-pa-havet/>



SINTEF

Objectives



- The aim of this study is to establish knowledge about direct and indirect causes of occupational accidents in the Norwegian fishing fleet, based on registrations of personal injuries and fatalities.

Methods and data sources

- Frequency counts of events 2000-2022
- The accident data are analysed according to
 - Comparison over years
 - Type of accident
 - Vessel group
 - Mode of operation
 - Work operation
 - Age
 - Length of absence after injury
- SINTEF Ocean database of fatal accidents in Norwegian fisheries and aquaculture
- Norwegian Maritime Authority (NMA) registrations of occupational accidents
- Norwegian Safety Investigation Authority investigation reports on vessel disasters and fatalities in the fishing fleet



SINTEF

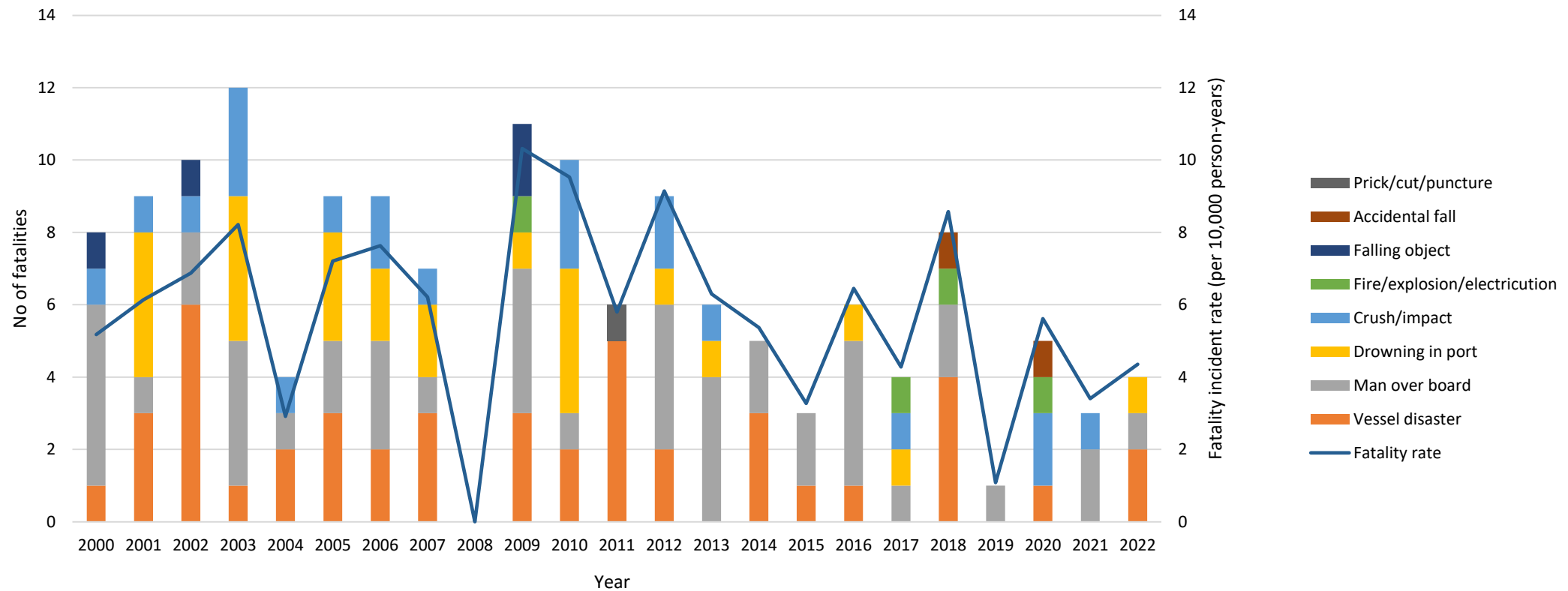
Fatalities in the Norwegian fishing fleet 2000-2022

SINTEF Ocean database



Technology for a better society

Incident types - fatality modes 2000-2022

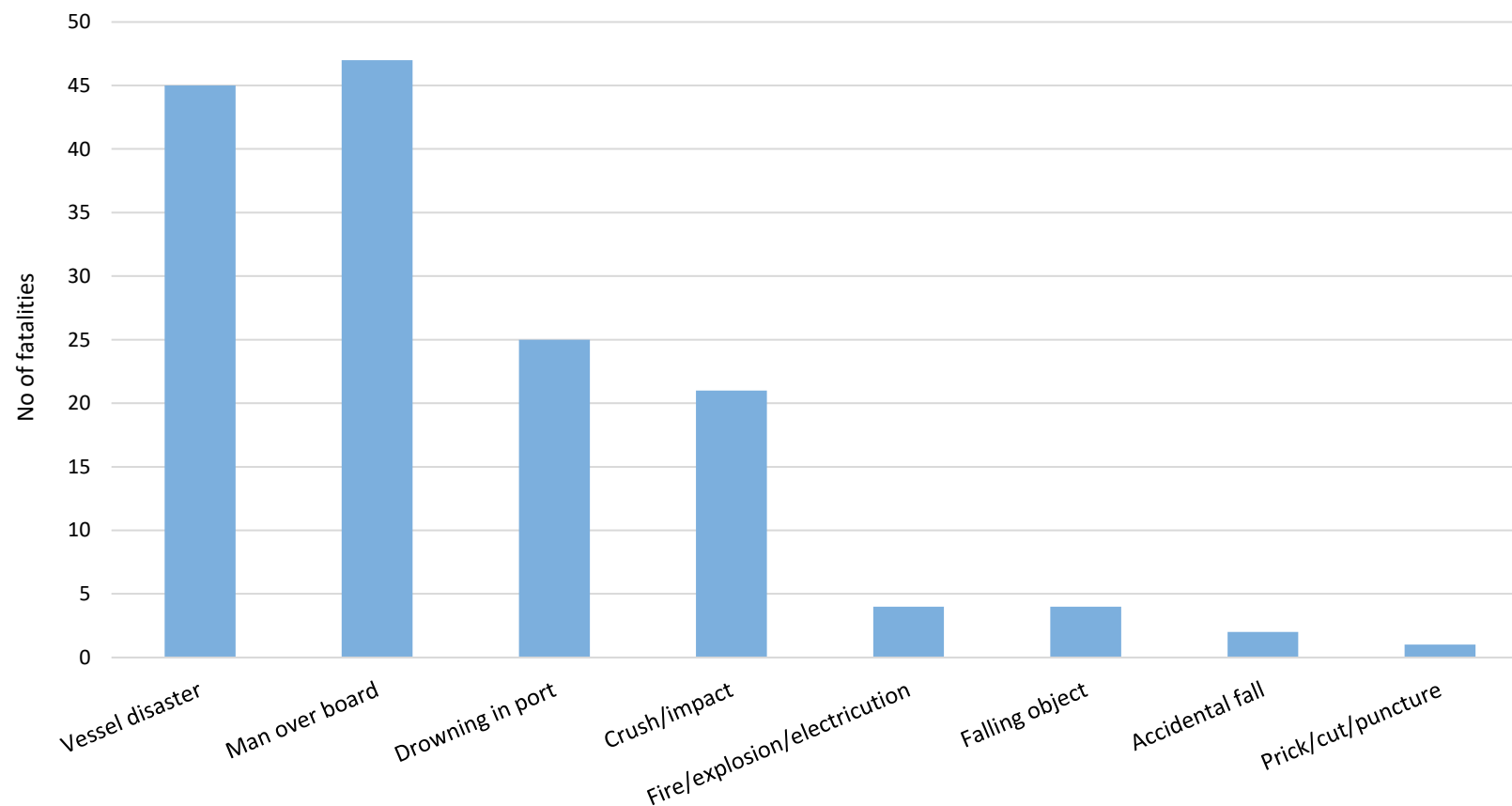


Source: SINTEF Ocean database of fatalities in Norwegian fisheries and aquaculture

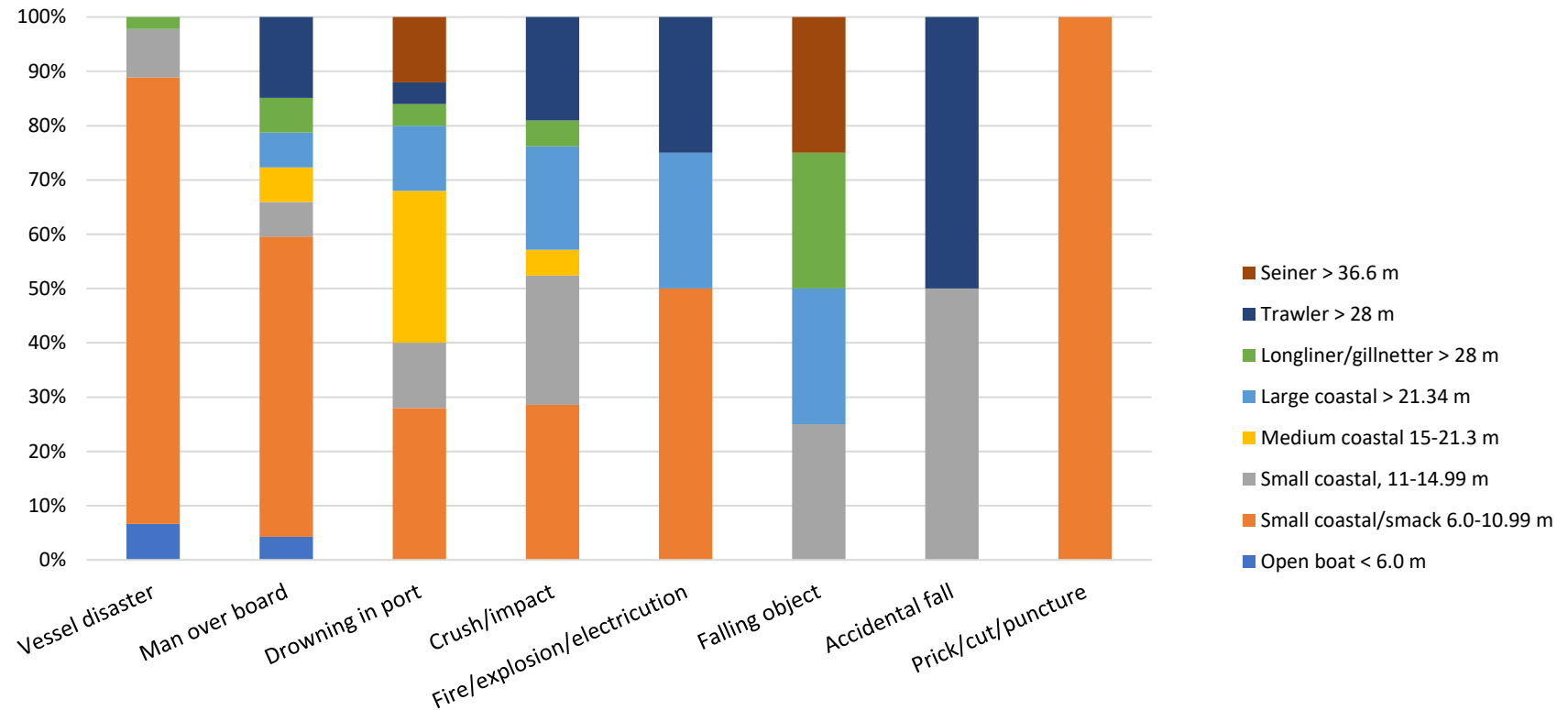


SINTEF

Fatality modes in total 2000-2022



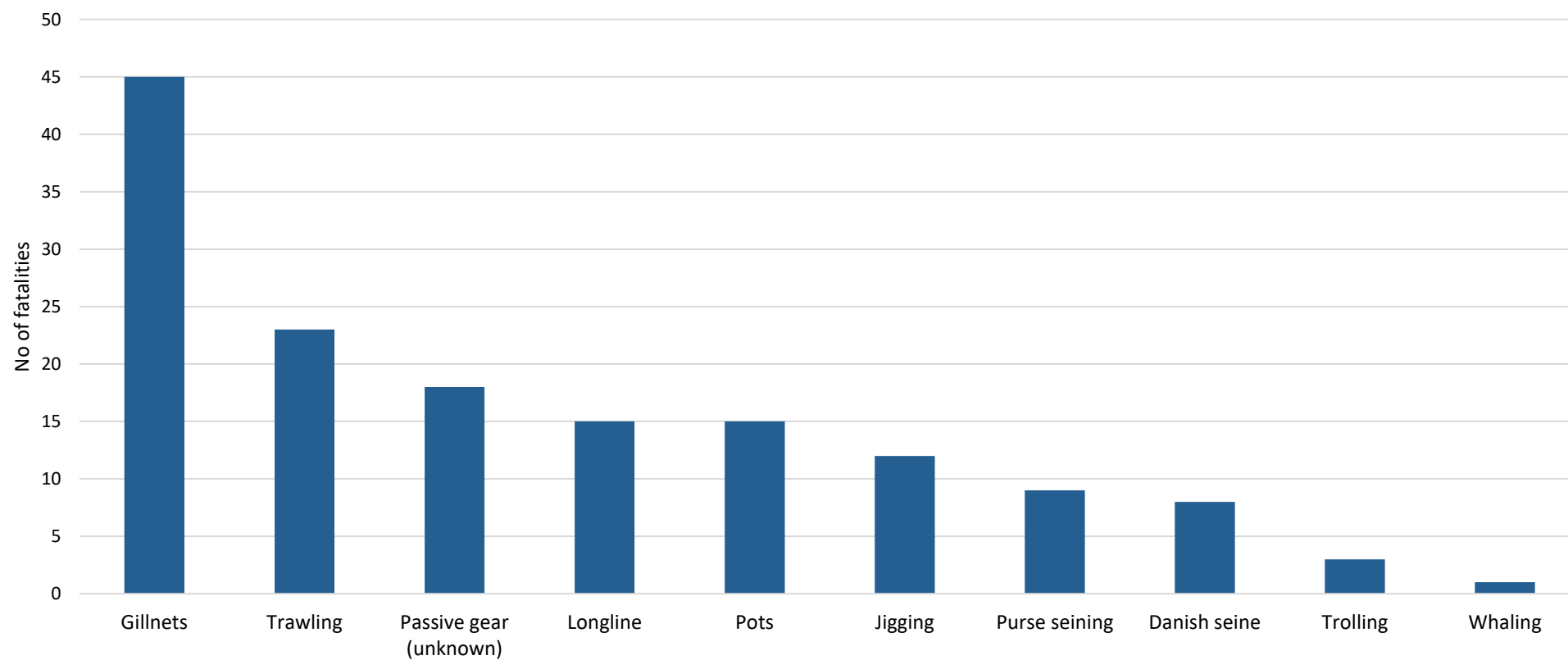
Vessel groups and fatality modes - percentage





SINTEF

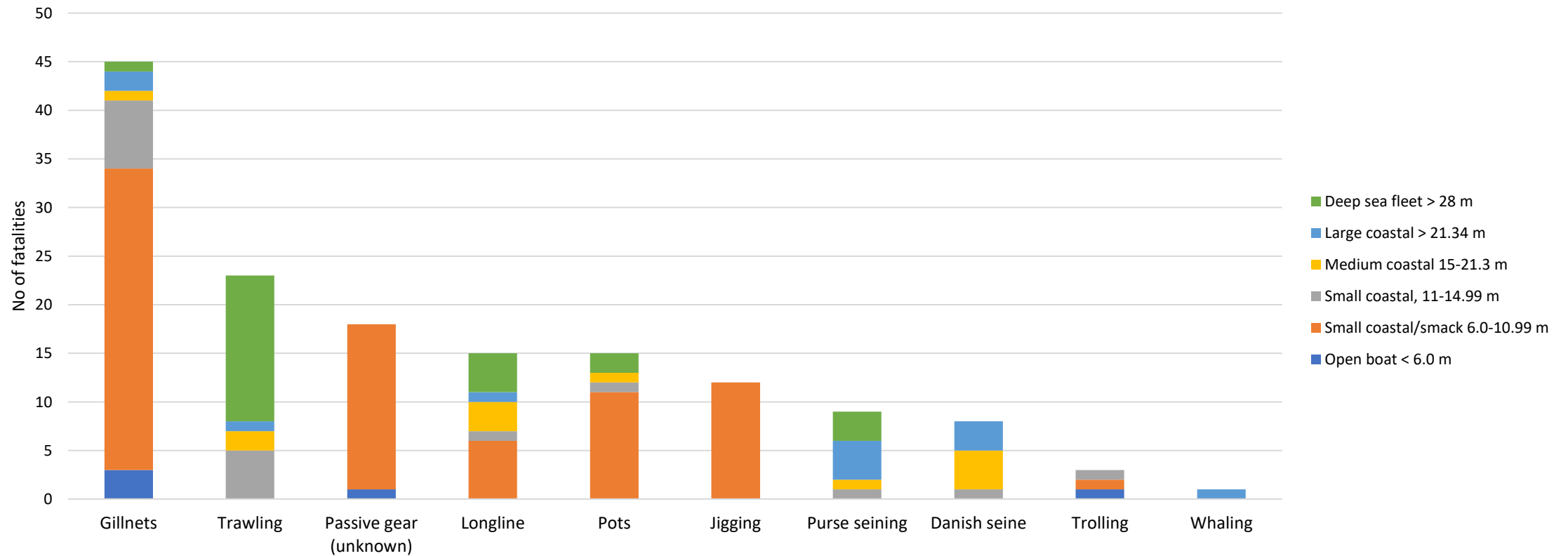
Fishing vessel activity





SINTEF

Fishing vessel activity – vessel groups

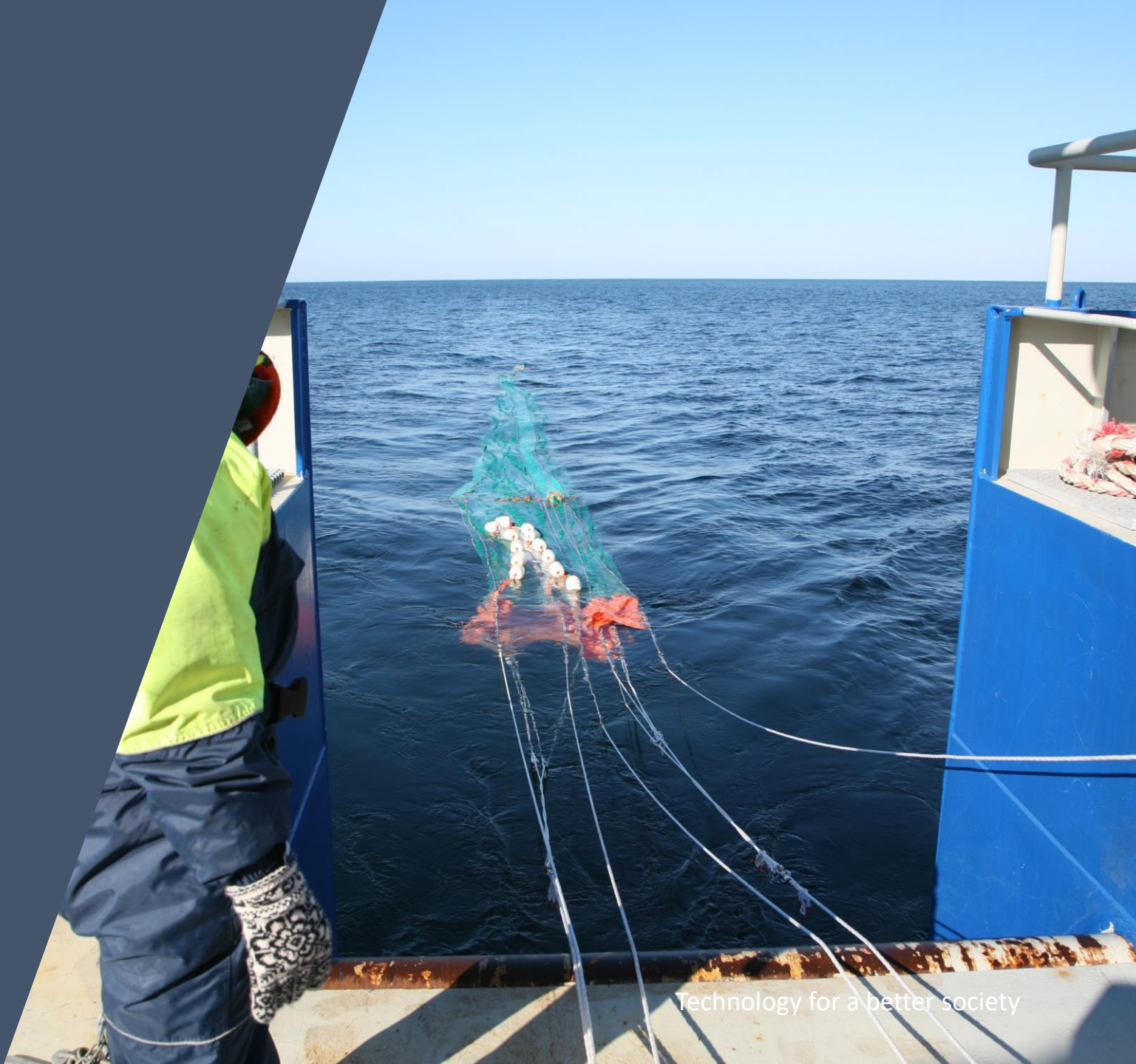




SINTEF

Occupational accidents in the Norwegian fishing fleet 2000-2022

Registered by the Norwegian Maritime Authority

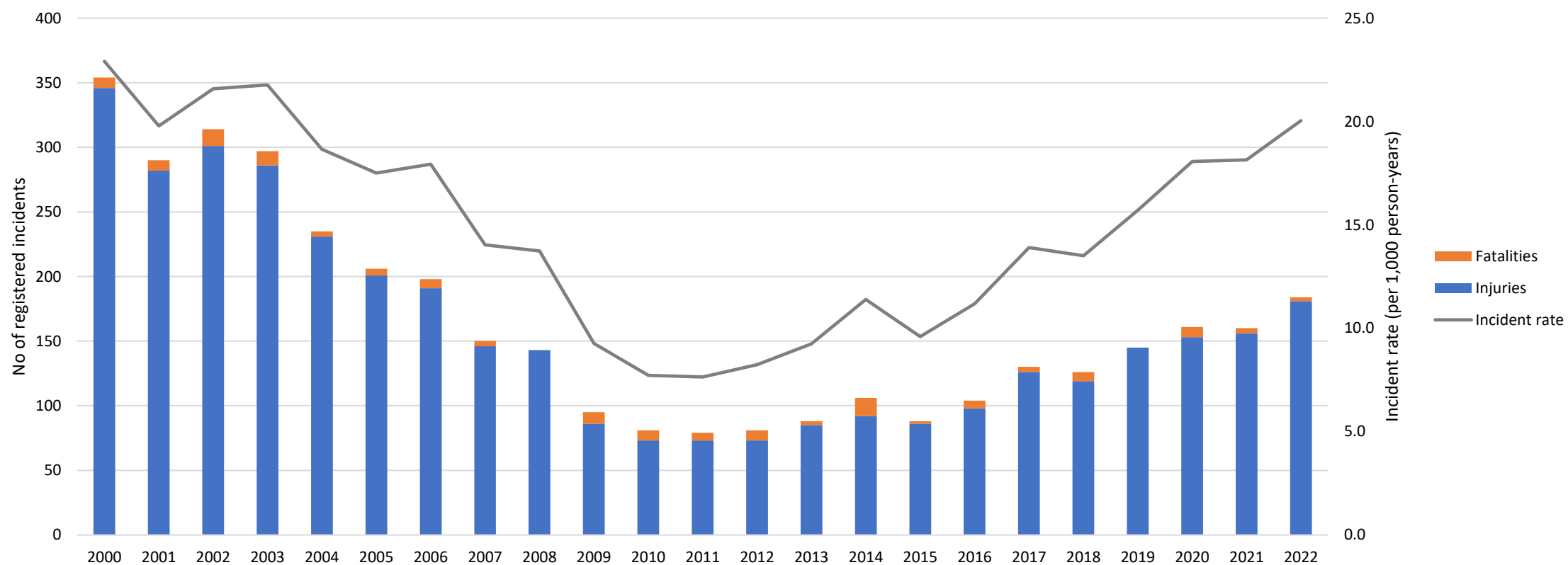


Technology for a better society



SINTEF

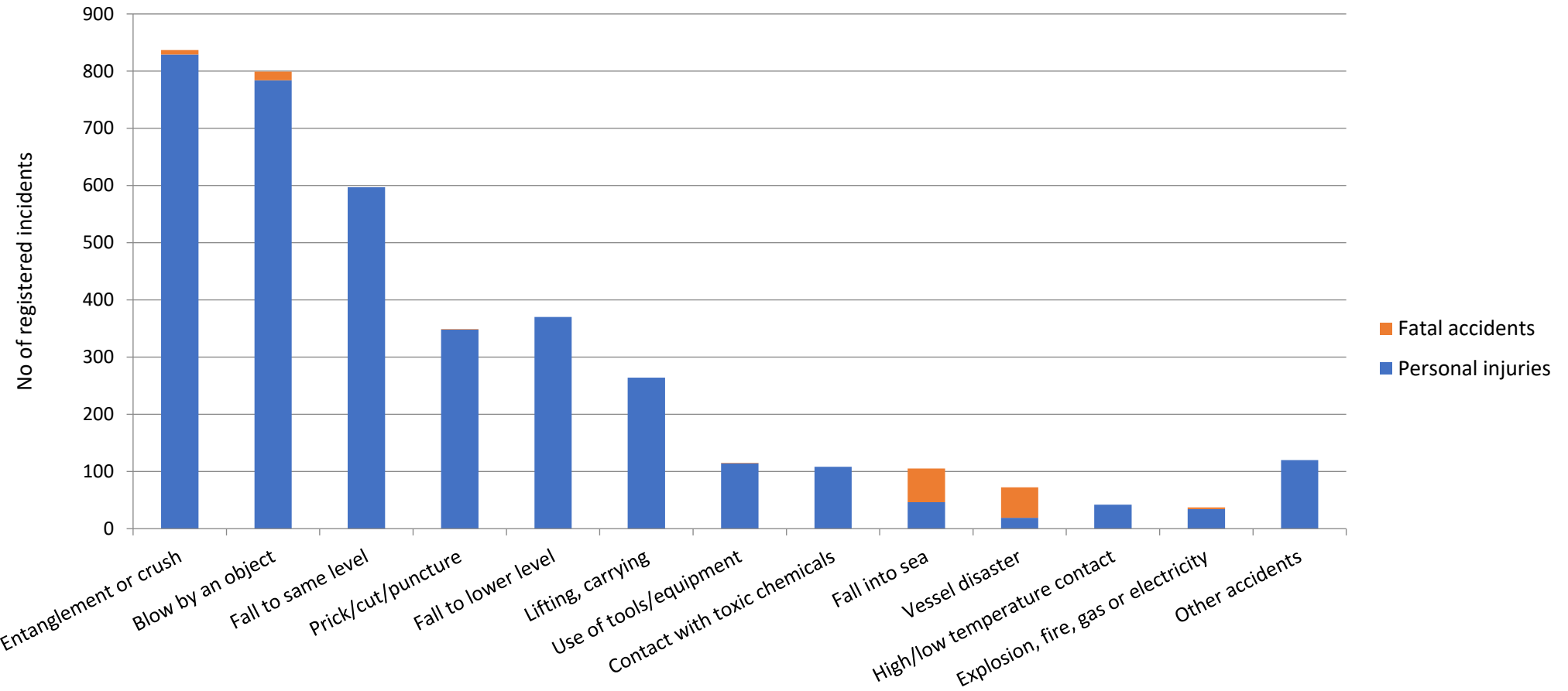
Occupational accidents registered 2000-2022



Source: Norwegian Maritime Authority

Incident types

Personal injuries and fatalities 2000-2022

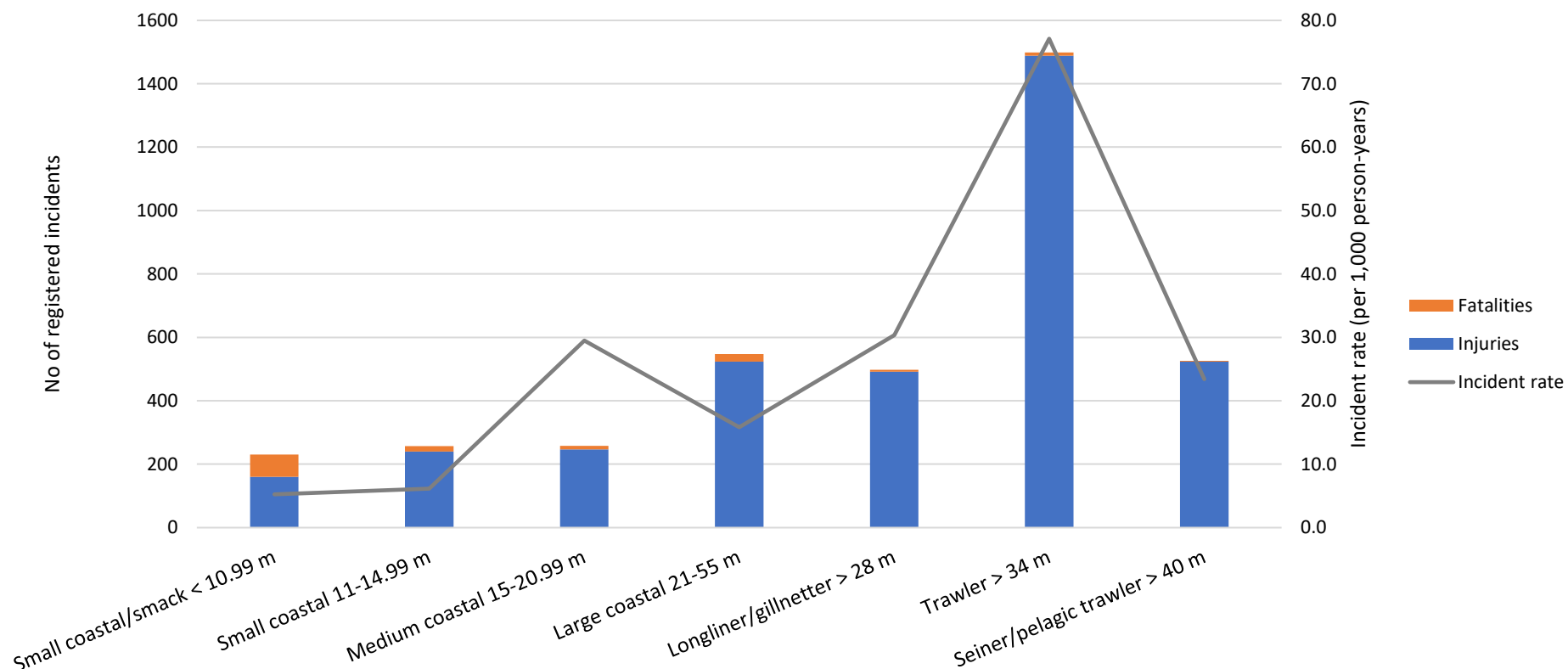




SINTEF

Vessel groups and incident rates

Personal injuries and fatalities 2000-2022



Source: Norwegian Maritime Authority

Contributing causes

Norwegian Safety Investigation Authority (2012-2022)

Fishing alone

- 14 of 40 accidents/investigation reports

Stability of vessel

- Poor stability contributed to 12 of 16 vessel disasters
- Lacking or error in stability tests/calculations
- Change in deck layout/loading
- No requirement for boats <8 m

Technology design

- 8 of 40 fatalities
- Current regulations do not require risk assessments of future operation of vessel
- A need for integrated, physical safety barriers

Regulations & inspections

- Lacking regulatory requirements for safety barriers (e.g., AIS)
- Inspections could have detected safety defects



SINTEF

Norwegian fishing fleet 2000-2022 - summary



Photo: SINTEF Ocean

- 149 fatalities in SINTEF Ocean database
 - More than half caused by vessel disasters and man overboard
 - Decreasing trend last ten years
 - Highest fatality rate
 - Smacks (6-10,99 m) – 79 fatalities
 - Net fishing
 - Age groups 40-49 & 60-69 yrs
 - Fishing alone and poor stability increases risk level (Safety Investigation Authority)
- 3815 occupational accidents registered by NMA
 - Higher injury rate after 2013 – more reported?
 - Most frequent “impact/crush against object”
 - Trawlers report most accidents (1499), least from coastal fleet <21 m
 - Fishing operations on deck 52 %, catch handling and cargo room/load work 25 %



SINTEF

Workshop 11.01: Improving safety in commercial fishing

- Thursday, January 11th 14:45-16:00
- Lebanon room
- How to improve safety management in the coastal fishing fleet?
 - Risk-influencing factors and contributing causes to hazardous events
 - Measures for prevention and mitigation of occupational accidents
- Open discussion and exchange of experience between countries
- You are all invited!



Technology for a better society



SINTEF

Acknowledgement:

The presentation is based on results from the project "Serious occupational accidents in coastal fishing", financed by the Norwegian Seafood Research Fund (project number 901828).

