National Institute for Occupational Safety and Health
NIOSH

Alaska Pacific Office

Commercial Fishing Safety Trends, Alaska, 2004-2013

Jennifer Lincoln, PhD, CSP
Mallory Davis, MPH

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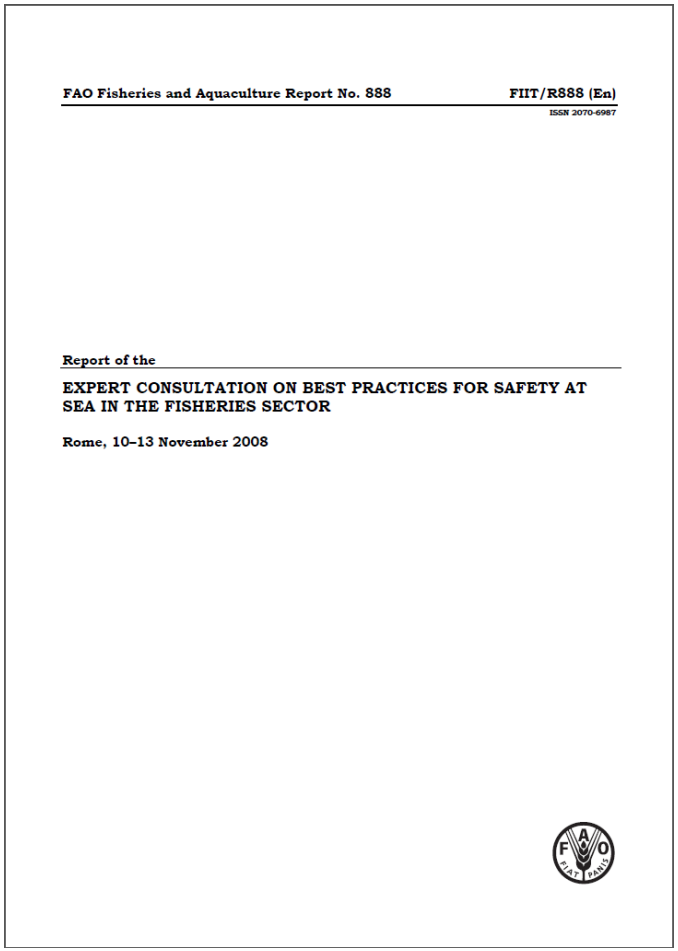
Safety (hazard reduction) is part of Fisheries Management

- Trends over time
  - Discuss the patterns and learn about concerns
- Discuss specific findings
  - Perfect audience
- Testify on appropriate topics
  - A80 5 year review



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Report of the

EXPERT CONSULTATION ON BEST PRACTICES FOR SAFETY AT SEA IN THE FISHERIES SECTOR

Rome, 10–13 November 2008

Occupational Safety and Health

Department of Labor

Department of Health and Human Services

Occupational Safety and Health Administration

OSHA

Centers for Disease Control and Prevention (CDC)

National Institute for Occupational Safety and Health

NIOSH

Regulation/Enforcement

Research, Training, and Prevention Recommendations

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NIOSH Commercial Fishing Safety Research and Design Program

- Provide scientific assessment of hazards
- Identify workers at risk & high priority problems
- Support the development of interventions
- Evaluate interventions

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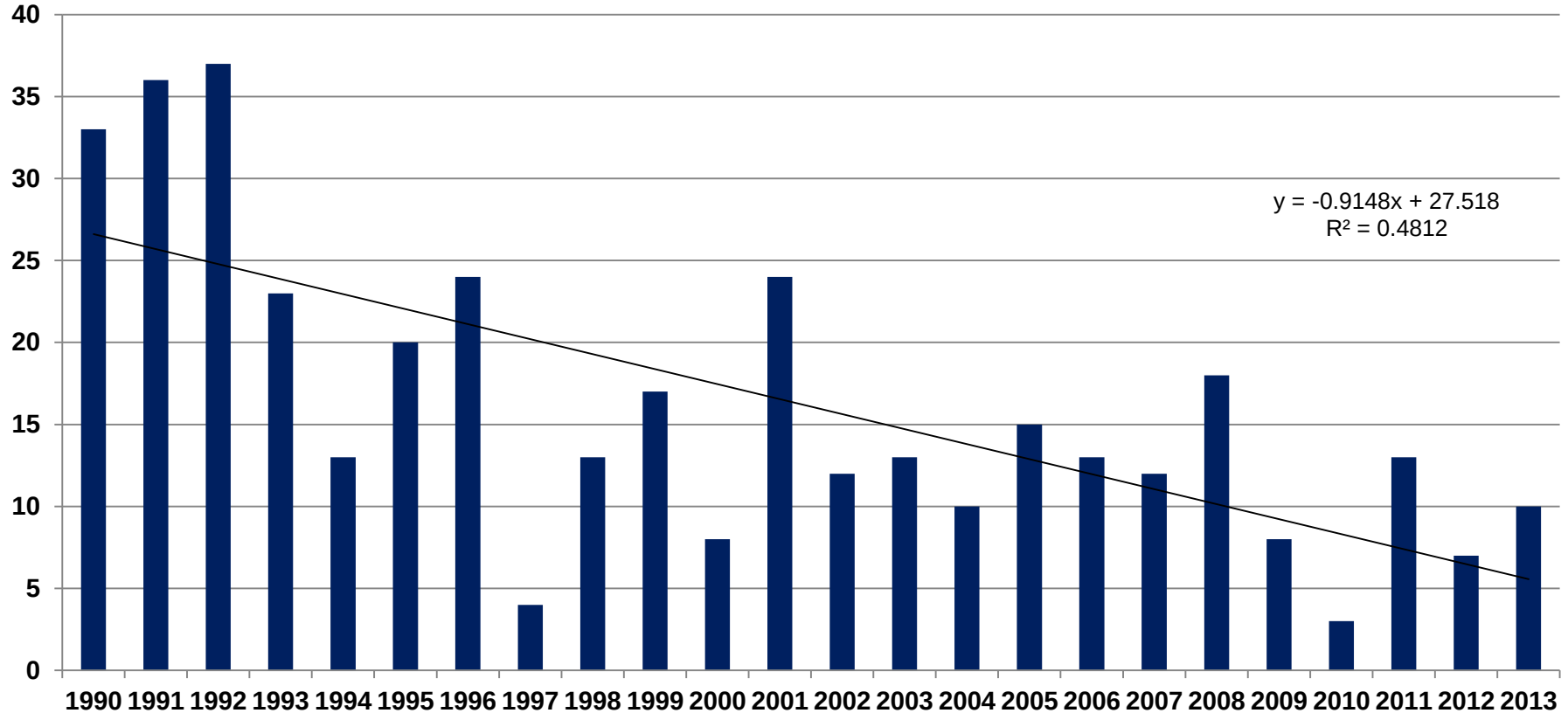
Commercial Fishing Fatalities, Alaska, 1990-2013 (n=386)



Fatality Rate decline due to…

- Commercial Fishing Industry Vessel Safety Act

  Lincoln, J. and Conway, G. (1999). "Preventing commercial fishing deaths in Alaska." *Occupational & Environmental Medicine, 56*(10), 691-695.

- Halibut IFQs

  Lincoln, J., Mode, N., and Woodley, C. "An evaluation of quota based management systems in Alaska," NPRB Project 533 Final Report, November 2007.

- BSAI Crab Safety and Stability Checks

  Woodley, C., Lincoln, J., and Medlicott C. "Improving Commercial Fishing Vessel Safety through Collaboration." USCG Proceedings Spring 2009 pg 38-44.

Other Risk-Reducing Programs Evaluated

- American Fisheries Act

  Lincoln, J., Mode, N., and Woodley, C. "An evaluation of quota based management systems in Alaska," NPRB Project 533 Final Report, November 2007.

- Crab Rationalization

  Lincoln J, Woodley C. "Safety Analysis of the BSAI Fishery for the Five-year review of Crab Rationalization" Testimony for the North Pacific Fishery Management Council. December 2010.

- Alternate Compliance and Safety Agreement

  Lucas, D., Kincl, L., Bovbjerg, V., Branscum, A., & Lincoln, J. (2014). "Primary. Prevention of Fishing Vessel Disasters: Evaluation of a United States Coast Guard Policy Intervention." Under review.

- Amendment 80

  Lucas, D. and Lincoln, J. "Amendment 80 5-Year Review Assessment of Worker Safety in the A80 Fleet." Testimony for the North Pacific Fishery Management Council. April 9, 2014.

U.S. Commercial Fishing Fatalities by Year and Region, 2000-2013 (n=665*)

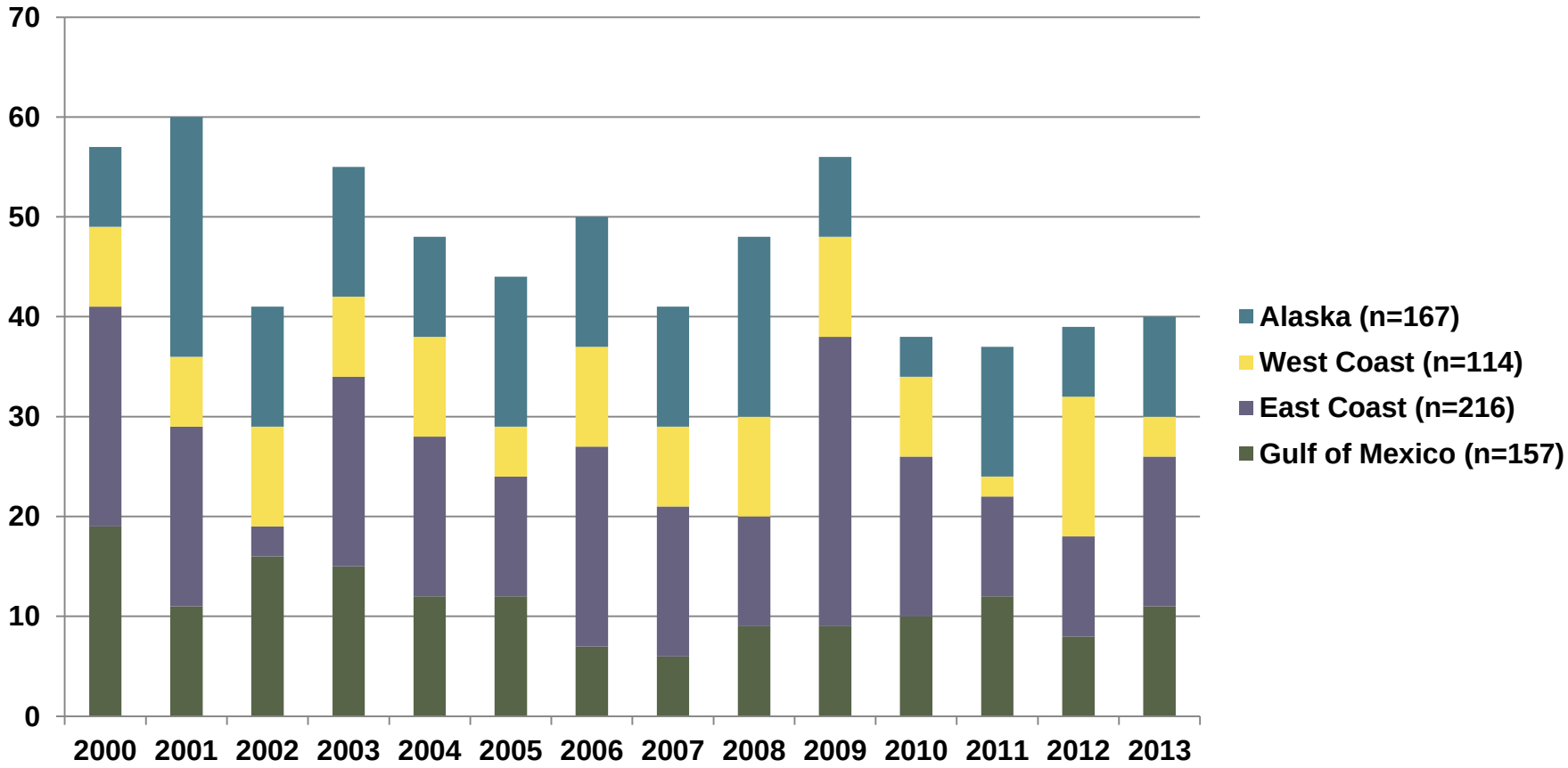


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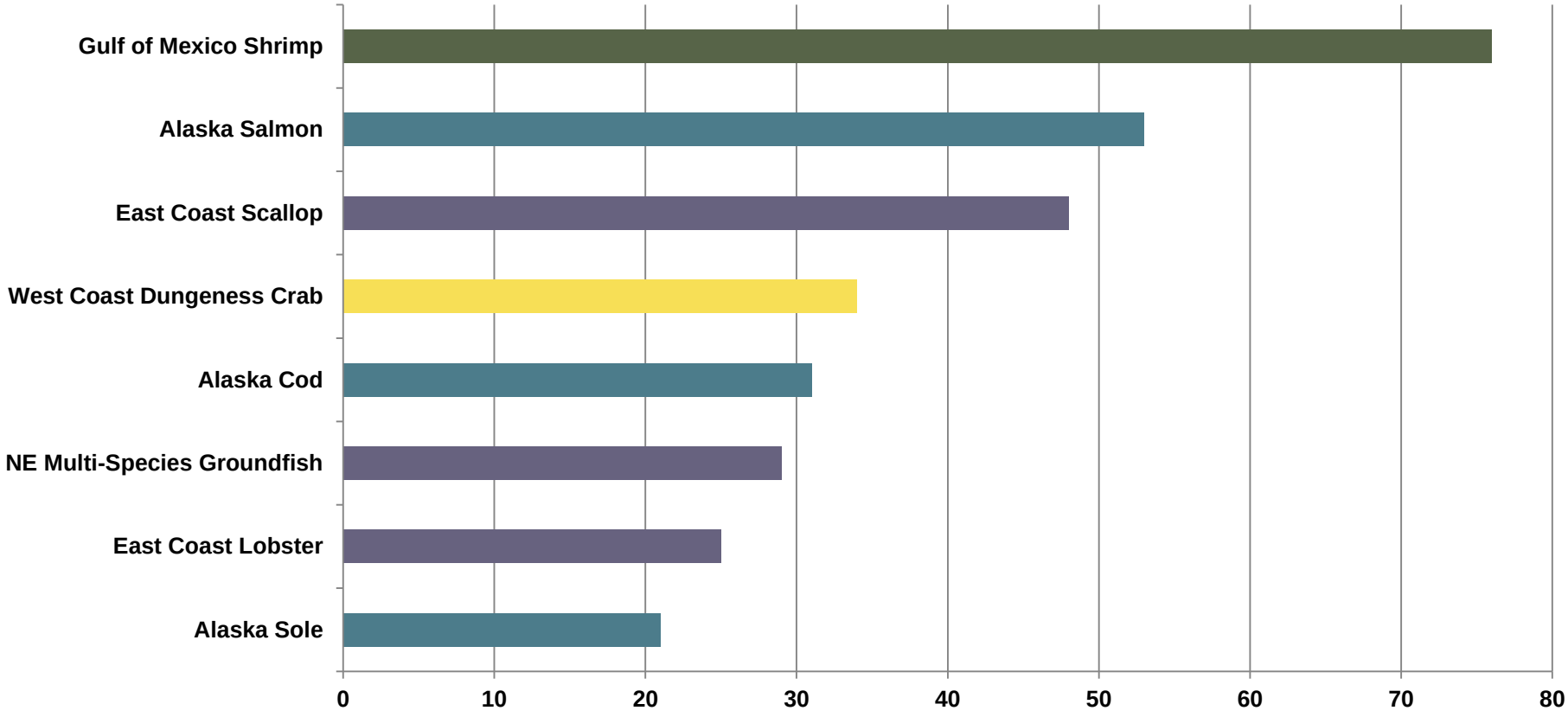
*Chart excludes 8 deaths in Hawaii, 2 in Canadian waters during transit to AK, 1 in Great Lakes region

50% of all fatalities in the US occur in these fisheries, 2000-2013



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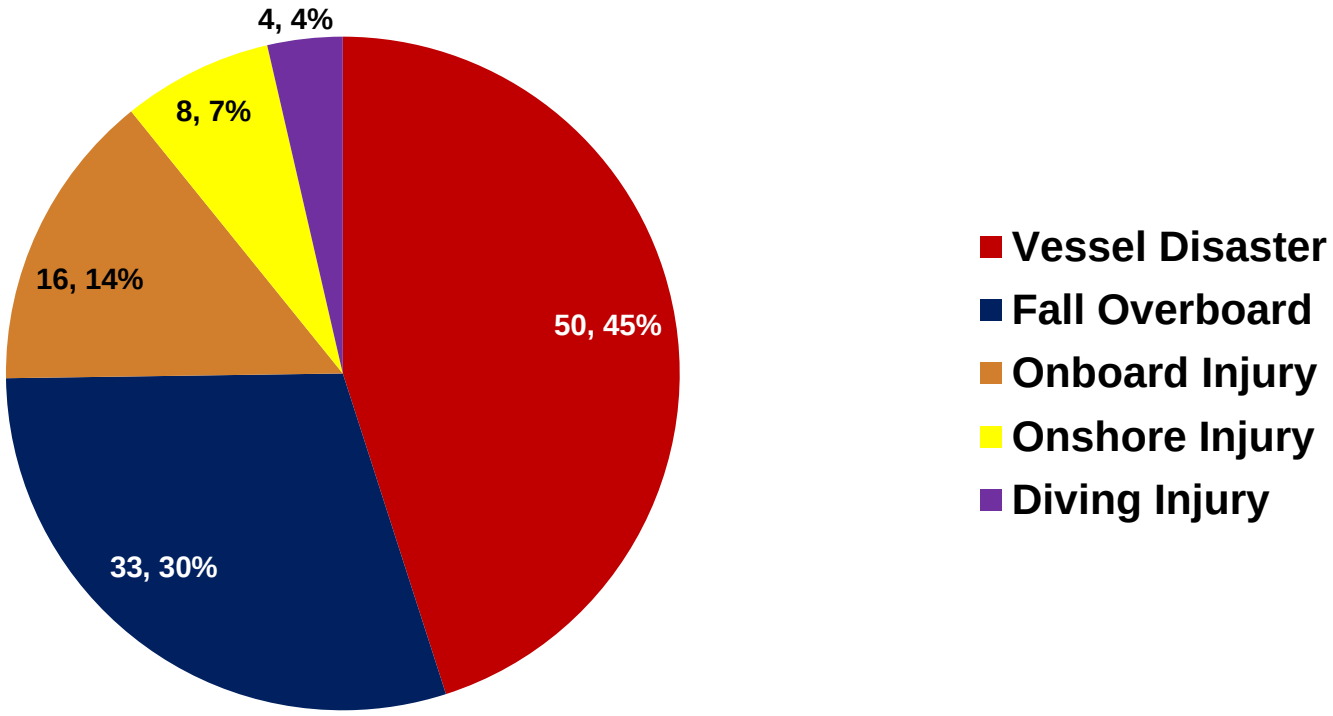
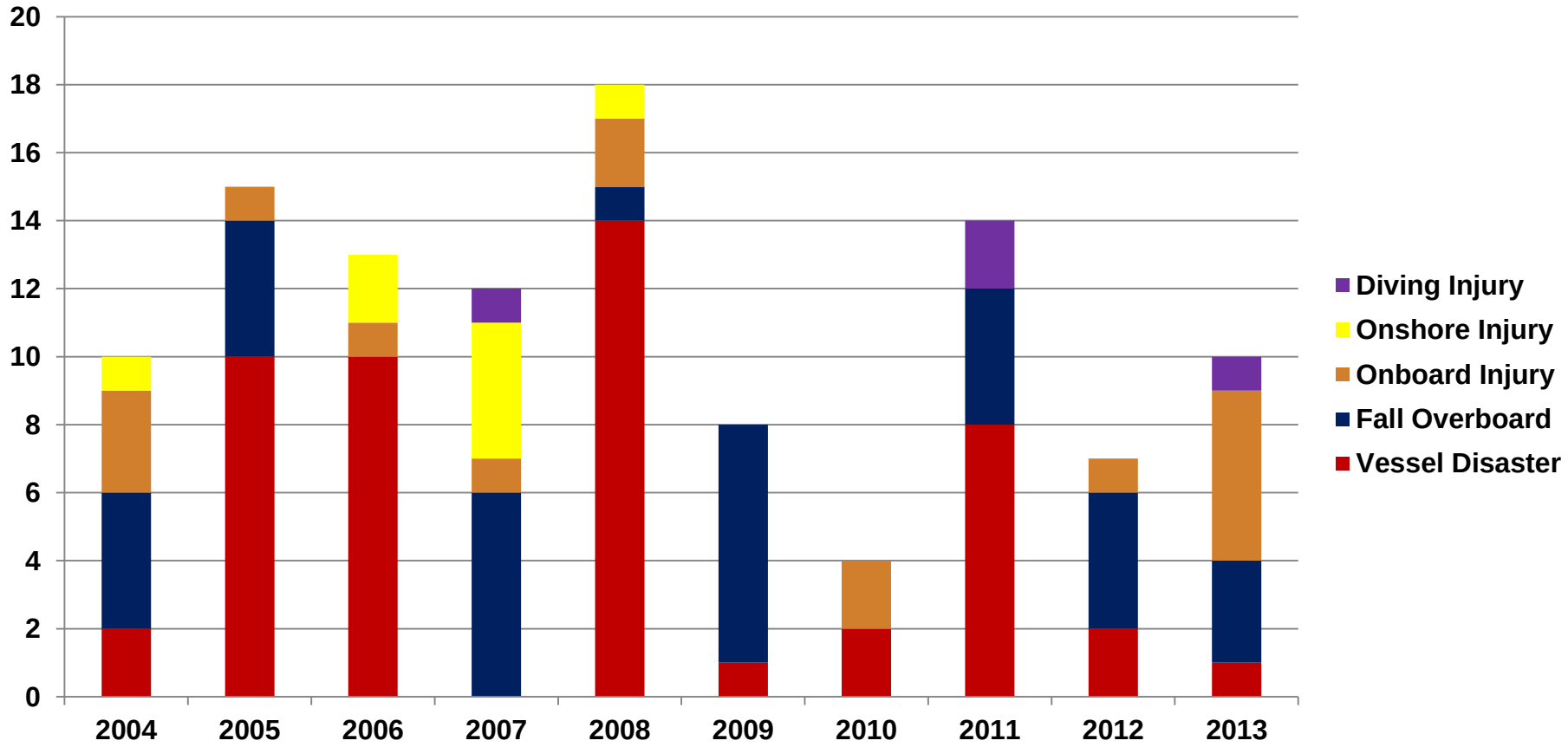
Commercial Fishing Fatalities by Incident Type, Alaska, 2004-2013, (n=111)



Commercial Fishing Fatalities, Alaska, 2004-2013 (n=111)



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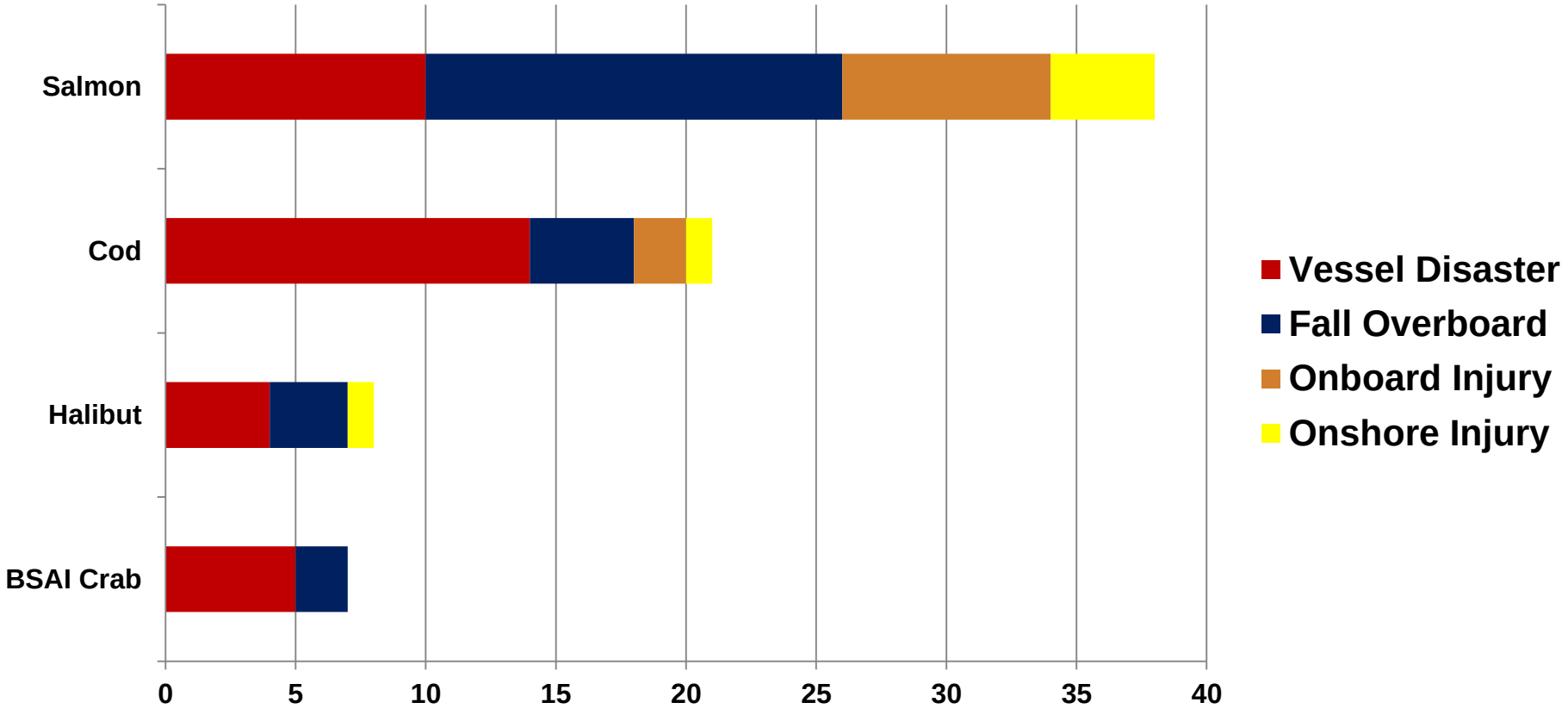
Commercial Fishing Fatalities by Fishery, Alaska, 2004-2013 (n=74)*



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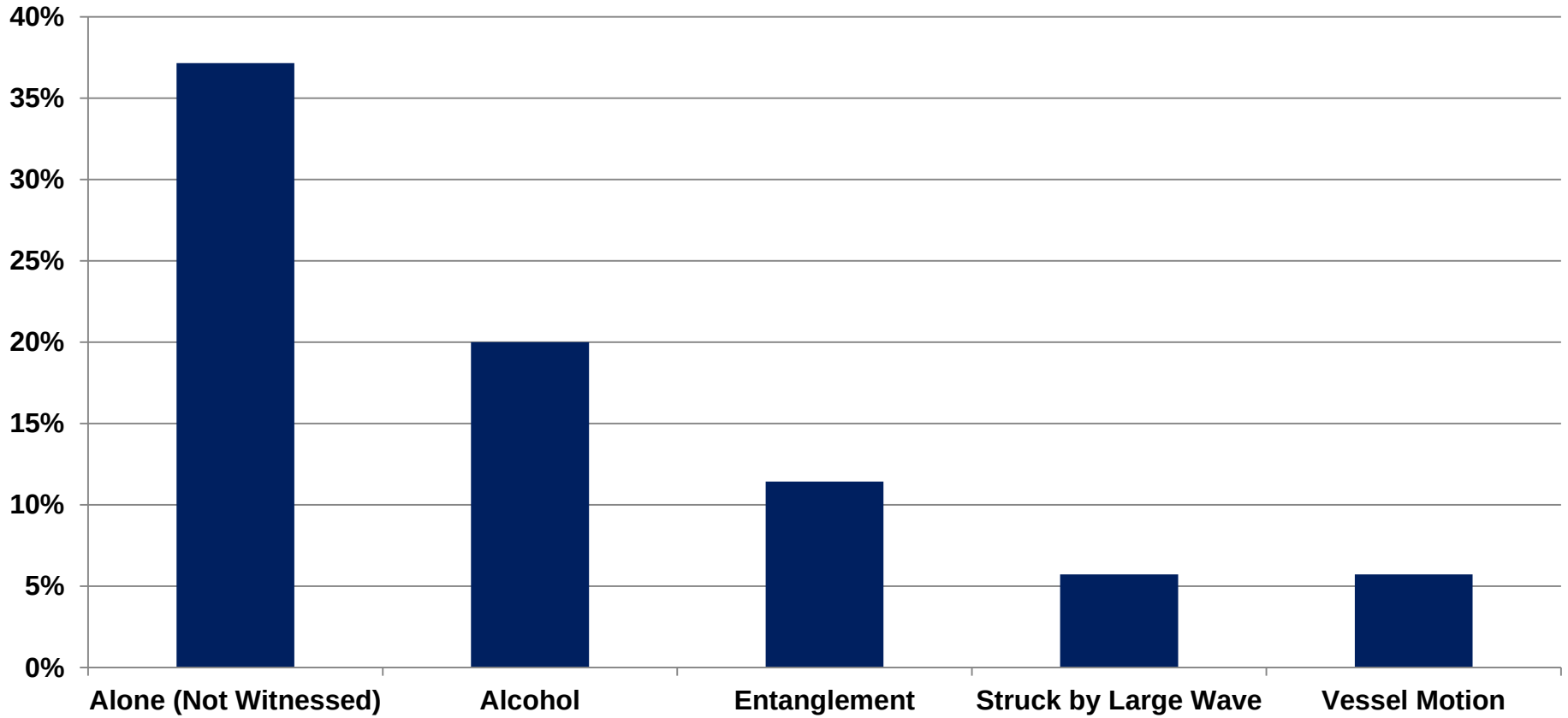
* Not included: any category with fewer than 7 fatalities (35) and unknown (2)

Contributing Factors to Fatal Falls Overboard, Alaska, 2004-2013



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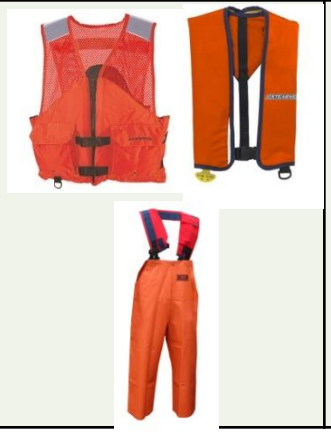
Falls Overboard

- 48% (16/33) salmon vessels
- Gear Type
  - 10 Drift gillnet
  - 2 Seine
  - 2 Troll
  - 2 Set gillnet

Purpose of the study: "Wearability"

- Measure perceptions of risks of falling overboard and beliefs about PFDs
- Evaluate new styles and types of PFDs
  - Are there new PFDs which overcome fishermen's complaints?

Results

	Crabbers (n=38)	Gillnetters (n=36)	Longliners (n=24)	Trawlers (n=47)
PFD with highest satisfaction score				
Acceptable PFDs based on evaluation scores				

Lucas DL, Lincoln JM, Somervell PD, Teske TD. Worker satisfaction with personal flotation devices (PFDs) in the fishing industry: Evaluations in actual use. *Applied Ergonomics* 43 (2012) 747-752.

TRAWLERS

PFDs That Work

Researchers from the NI
commercial fishermen
of six modern persona
asked to evaluate a PFD for on
could be identified. This docu

PFD Use Among Trawlers:

Mustang Inflatable Su
(MD3188)

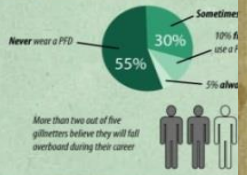
Regatta Fishermen's
Oilskins with Flotation

GILLNETTERS

PFDs That Work

Researchers from the NIO
commercial fishermen f
of six modern personal
asked to evaluate a PFD for one
could be identified. This docum

PFD Use Among Gillnetters:



PFD Evaluation:

After the 30 day on deck evaluation
PFDs, gillnetters said that the Regat
raingear with built in flotation woul
on their vessels. Comments on the d
include:

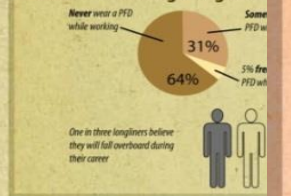
- Lightweight, did not interfere v
their work
- Did not snag on fishing gear
- Easy to keep clean and easy to
- The Stearns inflatable suspend
were also acceptable for work d
gillnet vessels; they too did not
the gear and were easy to clear

LONGLINERS

PFDs That Work

Researchers from the NI
commercial fishermen
of six modern personal
asked to evaluate a PFD for on
could be identified. This docu

PFD Use Among Longliner



PFD Evaluation:

After the 30 day on deck evaluation
longliners said that the Mustang In
Suspenders (MD3188) was the only
from the NIOSH study for work on t
Comments on the device include:

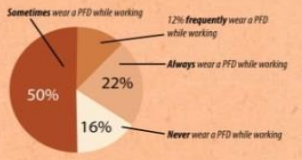
- Not bulky, did not interfere wit
- Easy to put on, and did not sna
- Was rated as comfortable to w
was non-chafing

CRABBERS

PFDs That Work

Researchers from the NIOSH Alaska Pacific Office conducted an evaluation with commercial fishermen from 4 gear groups to rate the comfort and acceptability of six modern personal flotation devices (PFDs).[1] About 200 fishermen were asked to evaluate a PFD for one month while working on deck so that wearable PFDs could be identified. This document shows which PFDs were preferred by crabbers.

PFD Use Among Crabbers:



Crabbers' Responses to Survey:

- Over half of the crabbers said they knew someone who had died from a fall overboard
- 60% of crabbers believed PFDs are effective at saving lives
- Most crabbers didn't think that PFDs are uncomfortable or interfere with work, although half of them thought PFDs could be an entanglement hazard

PFD Evaluation:

After the 30 day on deck evaluation of PFDs, crabbers preferred Mustang and Stearns Inflatable Suspenders. Comments on the devices include:

- Did not constrict motion or snag on gear
- Did not interfere with their work
- Were rated as comfortable to wear because they were not tight or bulky

Mustang Inflatable Suspenders
(MD3188)

Stearns Inflatable Suspenders
(1339)

"I feel that the [Mustang suspenders PFD] is something that would be received well by the deckhands of the fleet."

— Crabber and study participant

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http://youtu.be/XuFo6lIqTNM

"Live to be Salty"

- Multimedia health communication campaign
- Incorporates web, print, broadcast, and social media to promote MOB safety
- Edgy fishermen spokesman to deliver safety messages

Non-fatal Injury Prevention

- Magnitude of the Problem
- *Non-Fatal Injuries Among Commercial Fishermen – Dutch Harbor, 2007-2008*
  - Hand Injuries
- Improved efficiency
- Cost savings

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Tank & Flood Rate Monitor

- Installed on 7 tanks on 2 fishing vessels
- Monitor status of tanks
  - Slack or pressed
- Can eventually lead to a flood rate monitor
- Measure rate of flooding

Contact Information

Jennifer Lincoln
NIOSH – Alaska Pacific Regional Office
jlincoln@cdc.gov
(907) 271-2383

cdc.gov/niosh/topics/fishing
@NIOSHFishing

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