

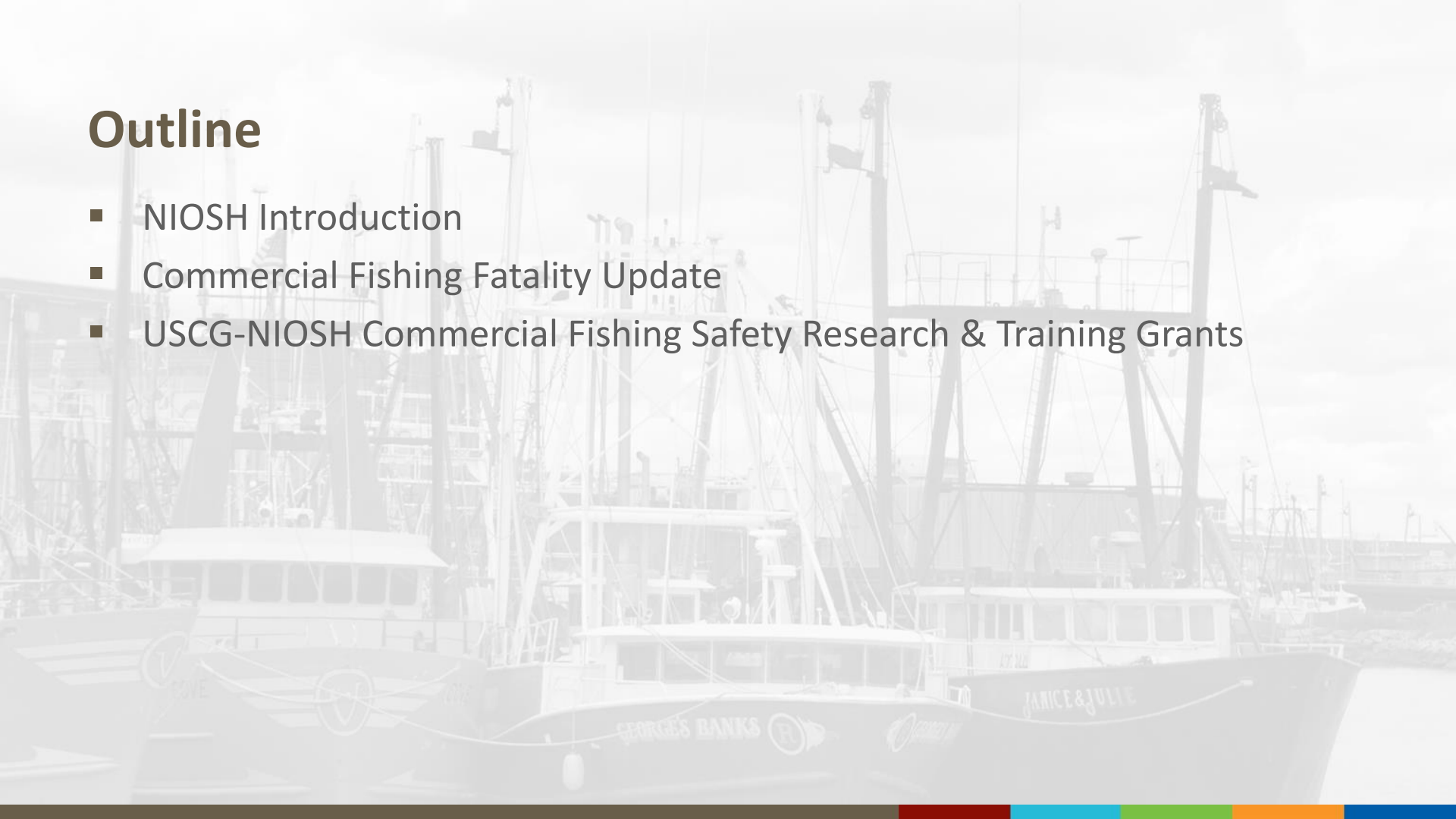
Commercial Fishing Safety Research Updates from NIOSH

presented to the
National Commercial Fishing Safety Advisory Committee
Norfolk, VA | May 23, 2023

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Outline

- NIOSH Introduction
- Commercial Fishing Fatality Update
- USCG-NIOSH Commercial Fishing Safety Research & Training Grants





Department of
Health and Human Services



Centers for Disease
Control and Prevention (CDC)



National Institute for
Occupational Safety and Health
(NIOSH)

Research and
Prevention Recommendations



Department of
Labor



Occupational
Safety and Health
Administration
(OSHA)

Regulation/Enforcement



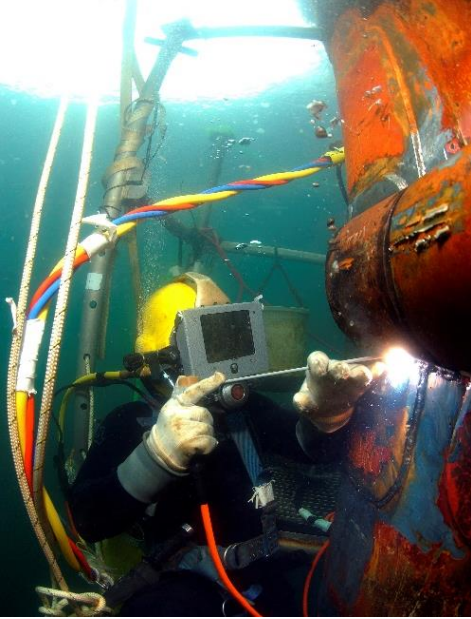
Department of
Homeland
Security



United States
Coast Guard
(USCG)

Regulation/Enforcement

Center for Maritime Safety and Health Studies (CMSHS)



- Brings focus to safety and health needs for maritime workers in:
 - Commercial fishing
 - Seafood processing
 - Aquaculture
 - Marine terminals
 - Shipyards
 - Marine transportation
- Multidisciplinary researchers work to understand and reduce hazards
- Collaborates with industry and workers

Commercial Fishing Fatality Update

NIOSH/USCG Partnership



Memorandum of Agreement (MOA)

- Last renewed in 2019
- Encourages data sharing between agencies
- NIOSH scientist granted USCG credentials as federal affiliate
- Statistical analyses of data allow us to identify hazards leading to deaths and injuries

Collecting Fatality and Vessel Disaster Data

Marine casualty occurs



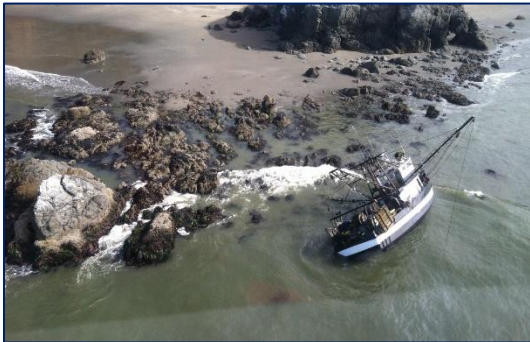
USCG or local law enforcement agency investigates






NIOSH reviews reports



Data entered into the NIOSH Commercial Fishing Incident Database (CFID)



DEPARTMENT OF HOMELAND SECURITY U.S. Coast Guard			OMB No: 1625-0001 Exp. Date: 07/31/2022	
REPORT OF MARINE CASUALTY, COMMERCIAL DIVING CASUALTY, or OCS-RELATED CASUALTY				
Section I - Reporting Vessel/Facility Information				
1. Vessel or Facility Name		2. Vessel Official Number or MCO Number		3. Vessel Flag
4. Vessel Length <input type="checkbox"/> Feet <input type="checkbox"/> Meters		5. Vessel Gross Tons		6. Vessel Propulsion Type
7. Vessel or Facility Type		8. Vessel or Facility Service or Occupation		
9. Arrangement: FOR TOWING ONLY <input type="checkbox"/> Pushing Ahead <input type="checkbox"/> Towing Astern <input type="checkbox"/> Towing Alongside		10. Number of Vessels Towed: Empty <input type="checkbox"/> Loaded <input type="checkbox"/> Total <input type="checkbox"/>		11. Maximum Size of Tow/Tow-Boat(s): Length <input type="checkbox"/> feet Width <input type="checkbox"/> feet
12. Did one or more of the barges in the tow cause or sustain damage in the marine casualty? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes complete and attach one or more CG-2692A forms to this report)				
Section II - Reason for Submitting this Report (Check all that apply)				
13. The above vessel was involved in a Marine Casualty consisting in (46 CFR 4.05-1 and 4.05-10):				
<input type="checkbox"/> 1. Unintended grounding or an unintended strike of (allison with) a bridge				
<input type="checkbox"/> 2. Intended grounding or intended strike of a bridge that created a hazard to navigation, the environment or the safety of the vessel, or that meets any of the criteria in 3 through 8 below				
<input type="checkbox"/> 3. Loss of main propulsion, primary steering, or any associated component or control system that reduces the maneuverability of the vessel				
<input type="checkbox"/> 4. Occurrence materially and adversely affected the vessel's seaworthiness or fitness for service or route				
<input type="checkbox"/> 5. Loss of life				
<input type="checkbox"/> 6. Injury that requires professional medical treatment (beyond first aid) and, if the person is engaged or employed on board a vessel in commercial service, that renders the individual unfit to perform his or her routine duties				
<input type="checkbox"/> 7. Occurrence causing property damage in excess of \$75,000				
<input type="checkbox"/> 8. Occurrence involving significant harm to the environment				



Commercial Fishing Incident Database

Create/View/Modify Incident

Fishing Incident
An event resulting in personnel injuries, illnesses, or fatalities, and/or vessel casualties.

Incident Search

Search

Incident ID

Vessel (ID/Name/%)

Shore Location (ID/Name)

Person (ID/Name)

Date

Filter Express Status

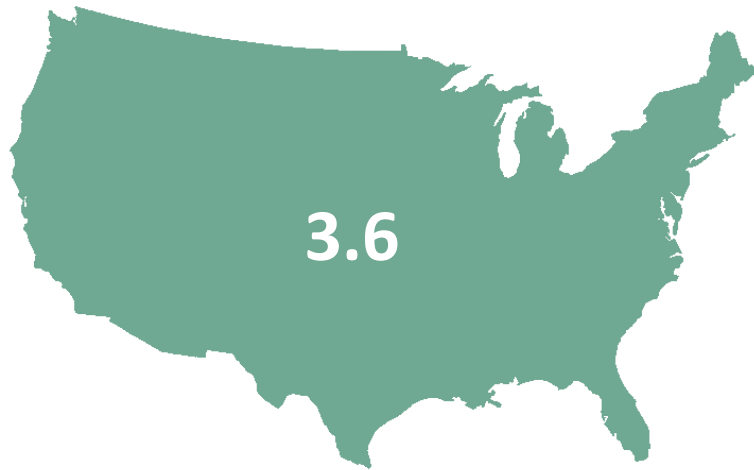
Who Counts What?

	USCG	NIOSH
Vessel capsizes and sinks	✓	✓
Deckhand falls overboard	✓	✓
Captain becomes entangled in deck winch	✓	✓
Processor dies by suicide while in bunk		✓
Deckhand falls off dock while trying to board vessel		✓

Work-Related Fatality Rates*, 2021

per 100,000 Full Time Equivalent (FTE) Workers

Average U.S. Worker

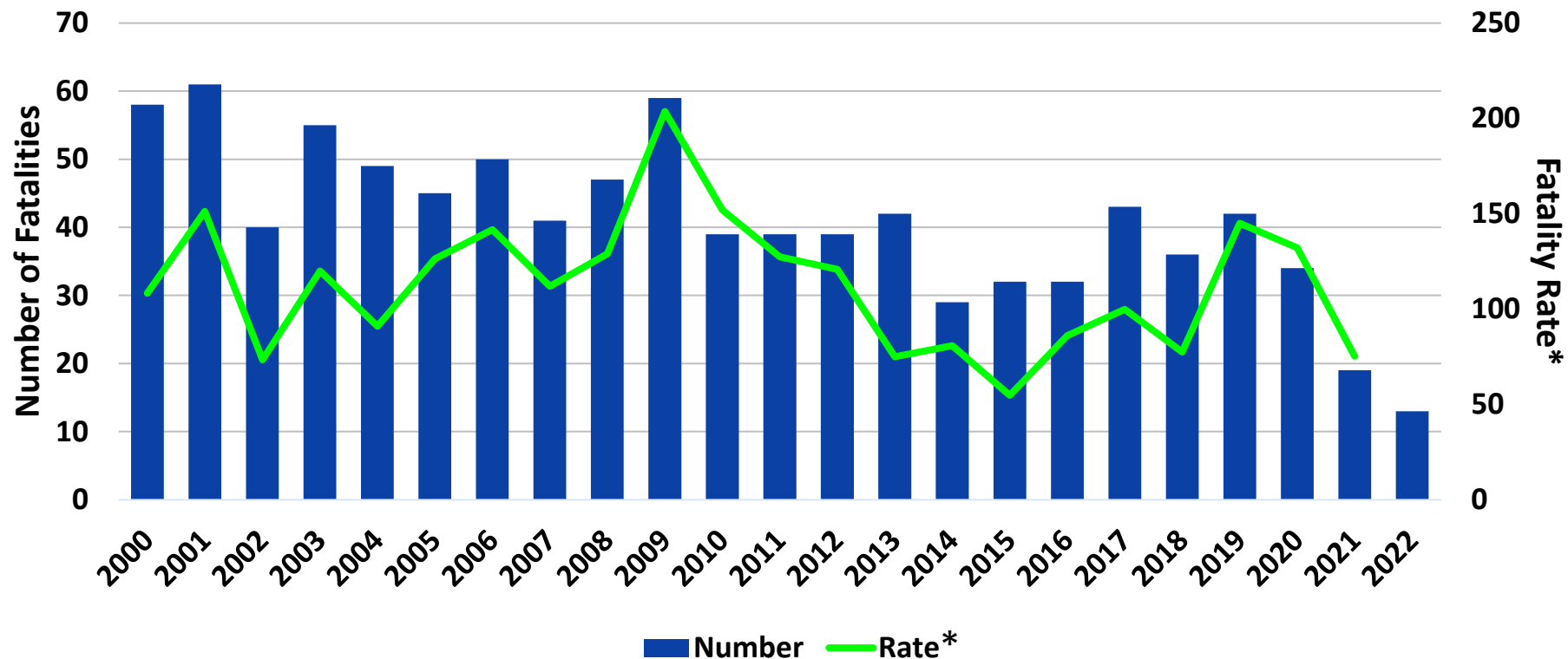


Commercial Fishing



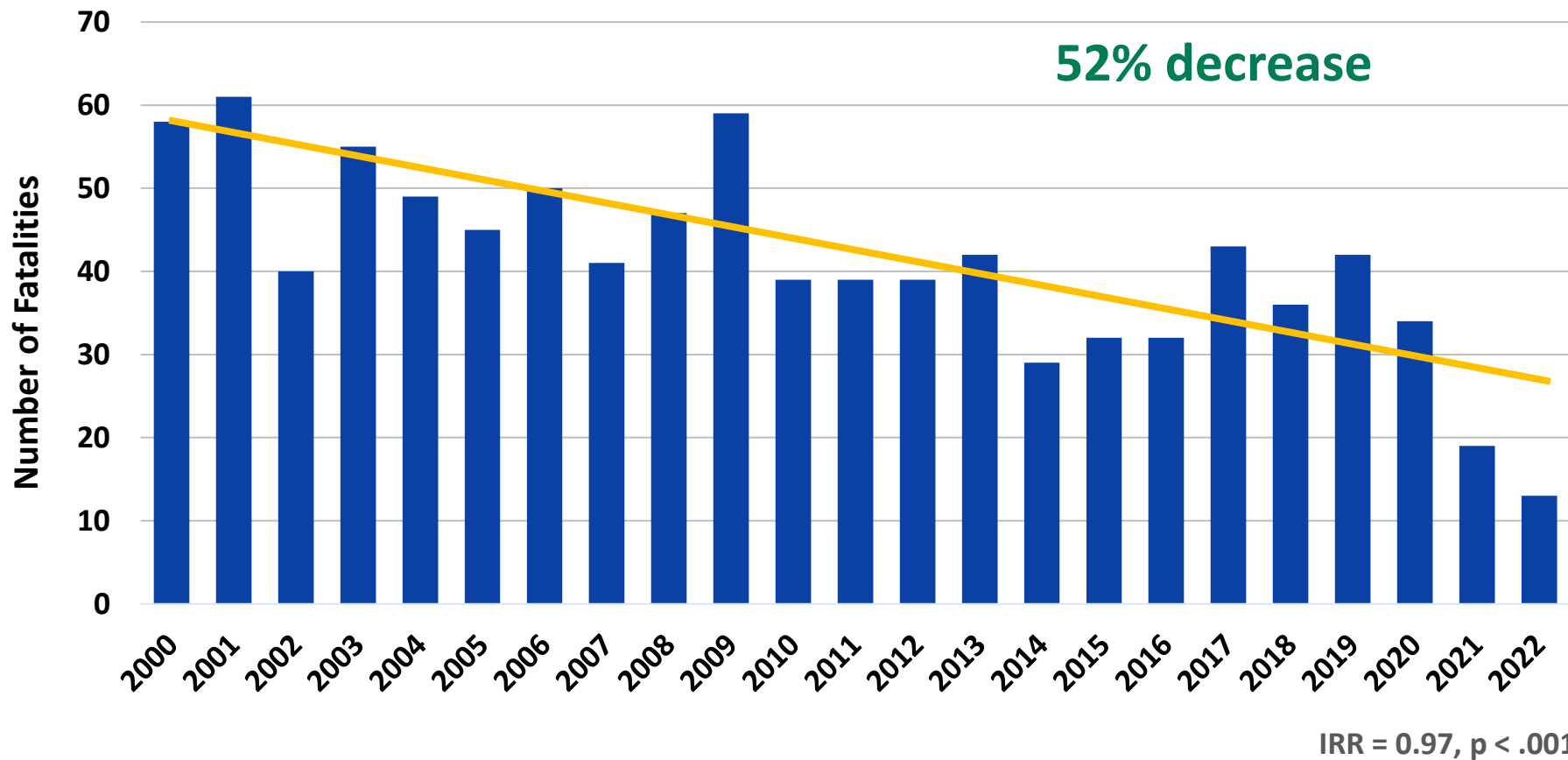
~21x higher

Commercial Fishing Fatalities, United States, 2000-2022 (n=944)

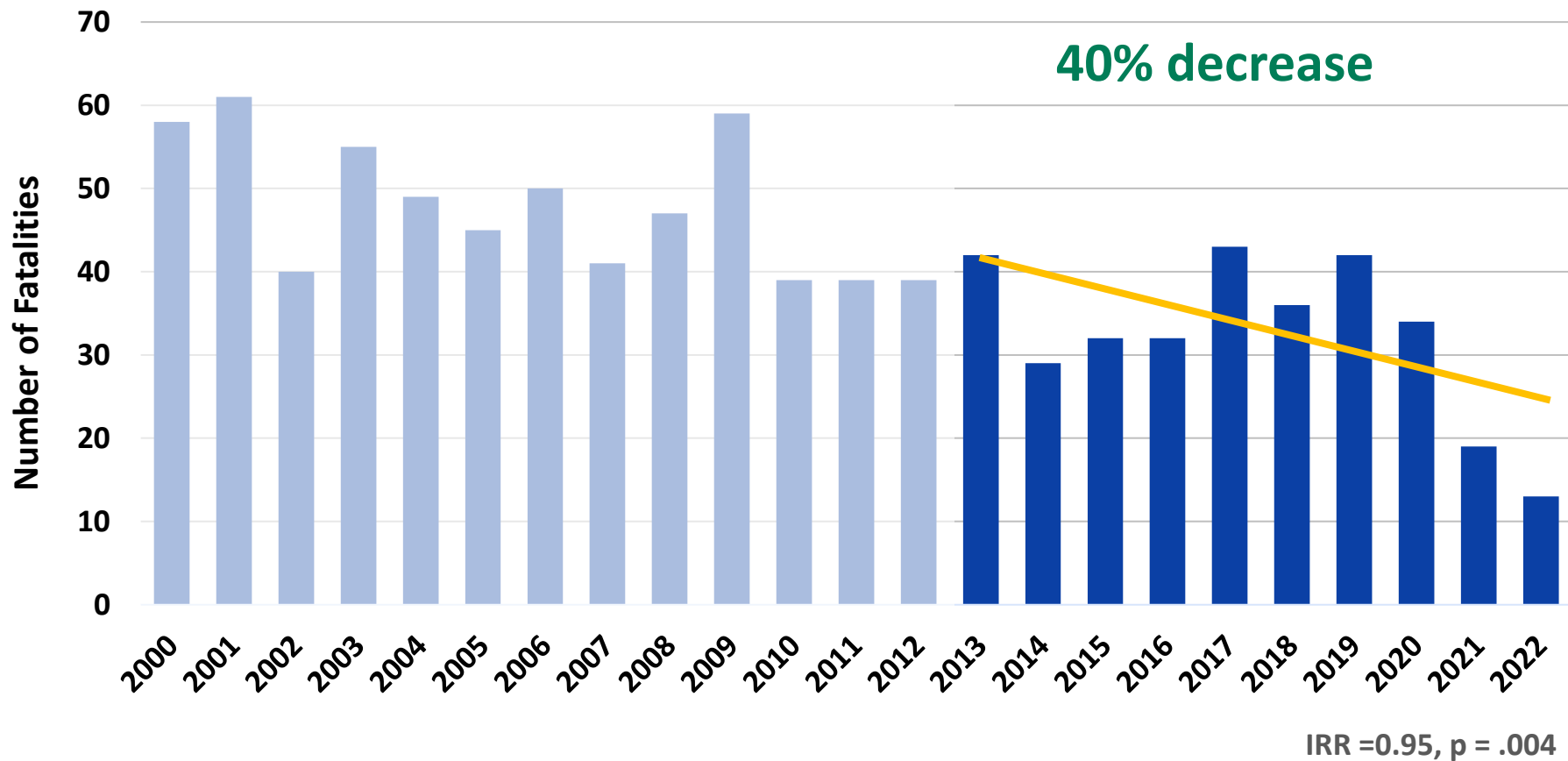


*Bureau of Labor Statistics

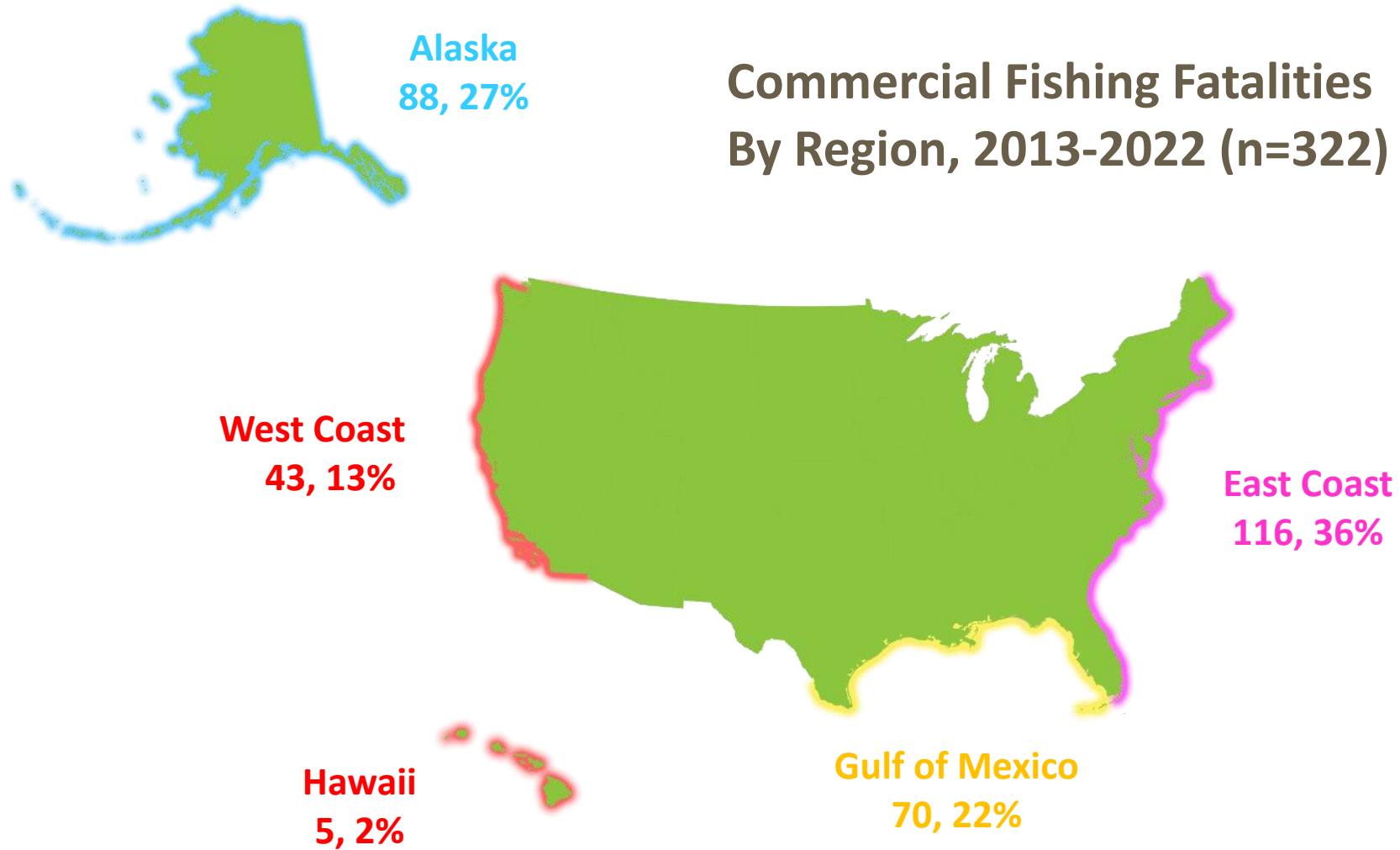
Commercial Fishing Fatalities, United States, 2000-2022 (n=944)



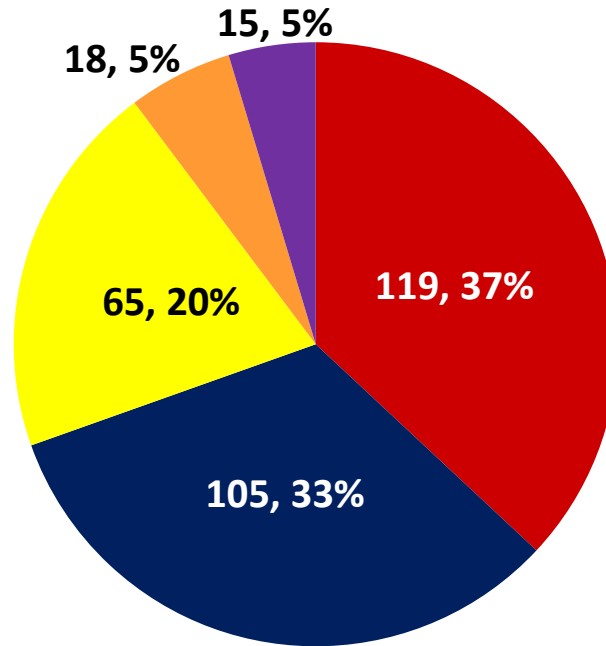
Commercial Fishing Fatalities, United States, 2000-2022 (n=944)



Commercial Fishing Fatalities By Region, 2013-2022 (n=322)

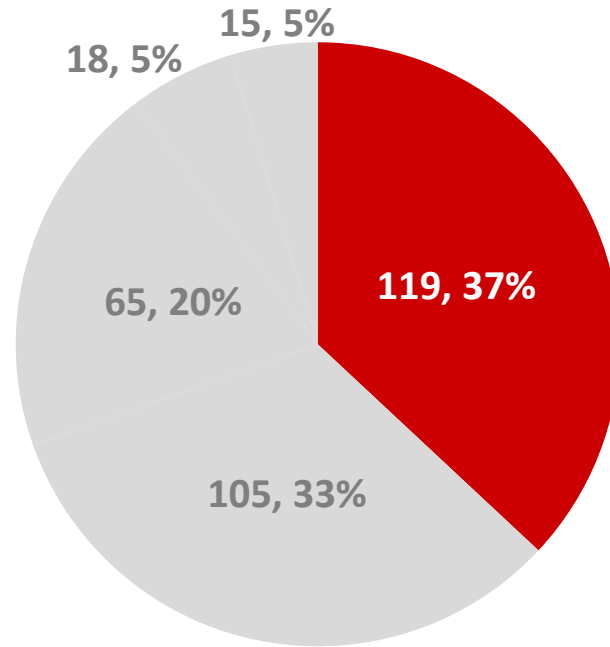


Commercial Fishing Fatalities by Incident Type, 2013-2022 (n=322)



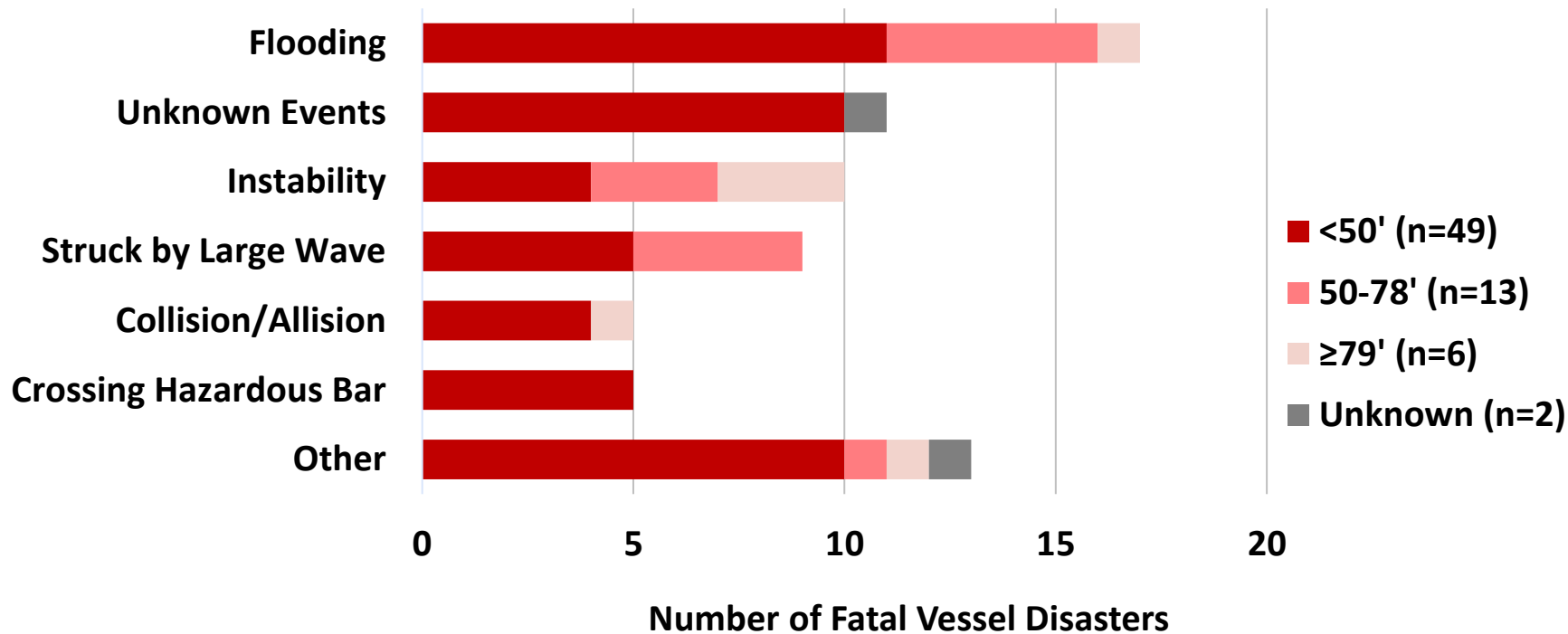
■ Vessel Disaster ■ Fall Overboard ■ Onboard Fatality ■ Onshore Fatality ■ Diving Fatality

Commercial Fishing Fatalities by Incident Type, 2013-2022 (n=322)



■ Vessel Disaster ■ Fall Overboard ■ Onboard Fatality ■ Onshore Fatality ■ Diving Fatality

Initiating Events of Fatal Vessel Disasters by Vessel Length, 2013-2022 (n=70)



Factors Associated with Fatal Vessel Disasters, 2013-2022 (n=70)

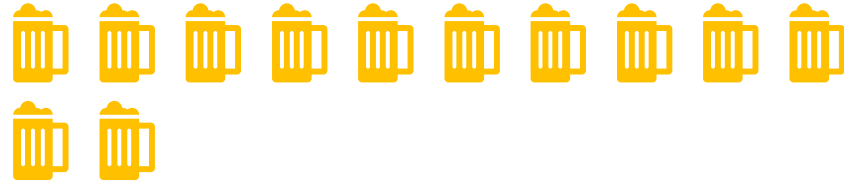
Heavy Weather (36, 51%)



Navigational Error (7, 10%)



Alcohol/Drug Use (12, 17%)



Fatigue (4, 6%)

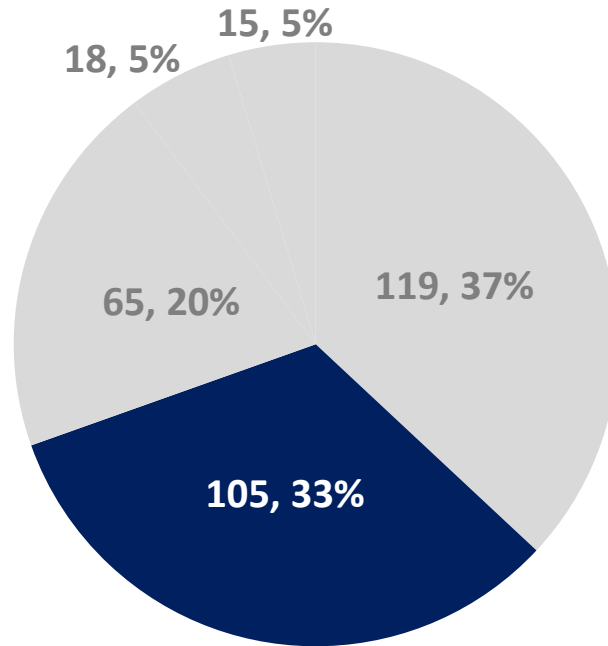


Unattended Helm (3, 4%)



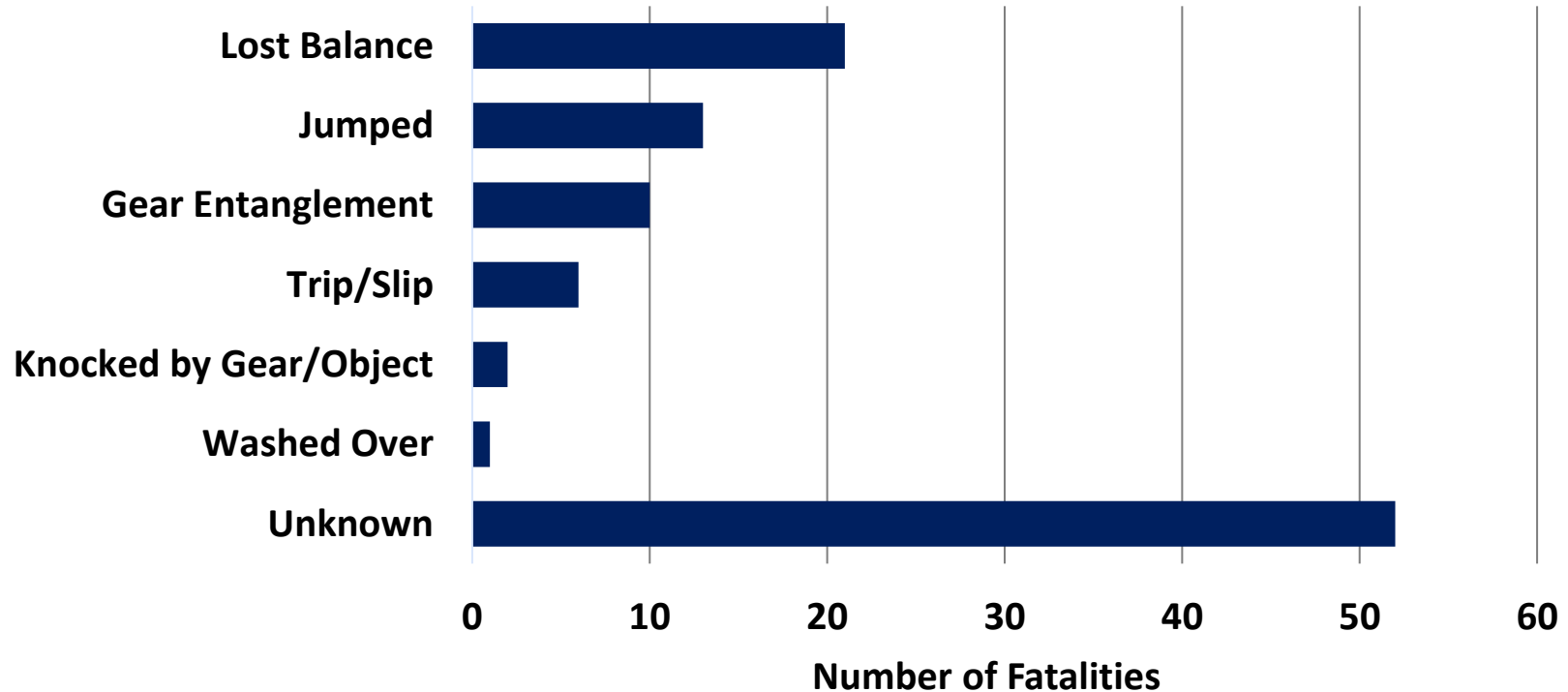
Each icon = one case

Commercial Fishing Fatalities by Incident Type, 2013-2022 (n=322)



■ Vessel Disaster ■ Fall Overboard ■ Onboard Fatality ■ Onshore Fatality ■ Diving Fatality

Immediate Causes of Fall Overboard Fatalities, 2013-2022 (n=105)

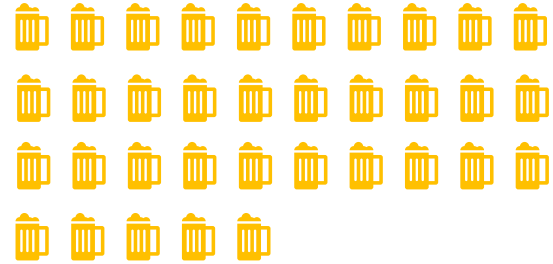


Factors Associated with Fatal Falls Overboard, 2013-2022 (n=105)

MOB Not Witnessed (69, 66%)



Alcohol/Drug Use (35, 33%)



Fatigue (14, 13%)

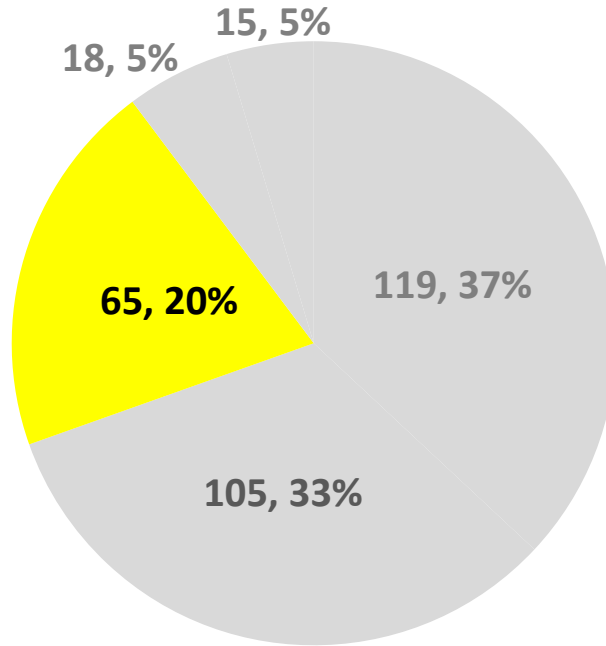


PFD Worn (2, 2%)



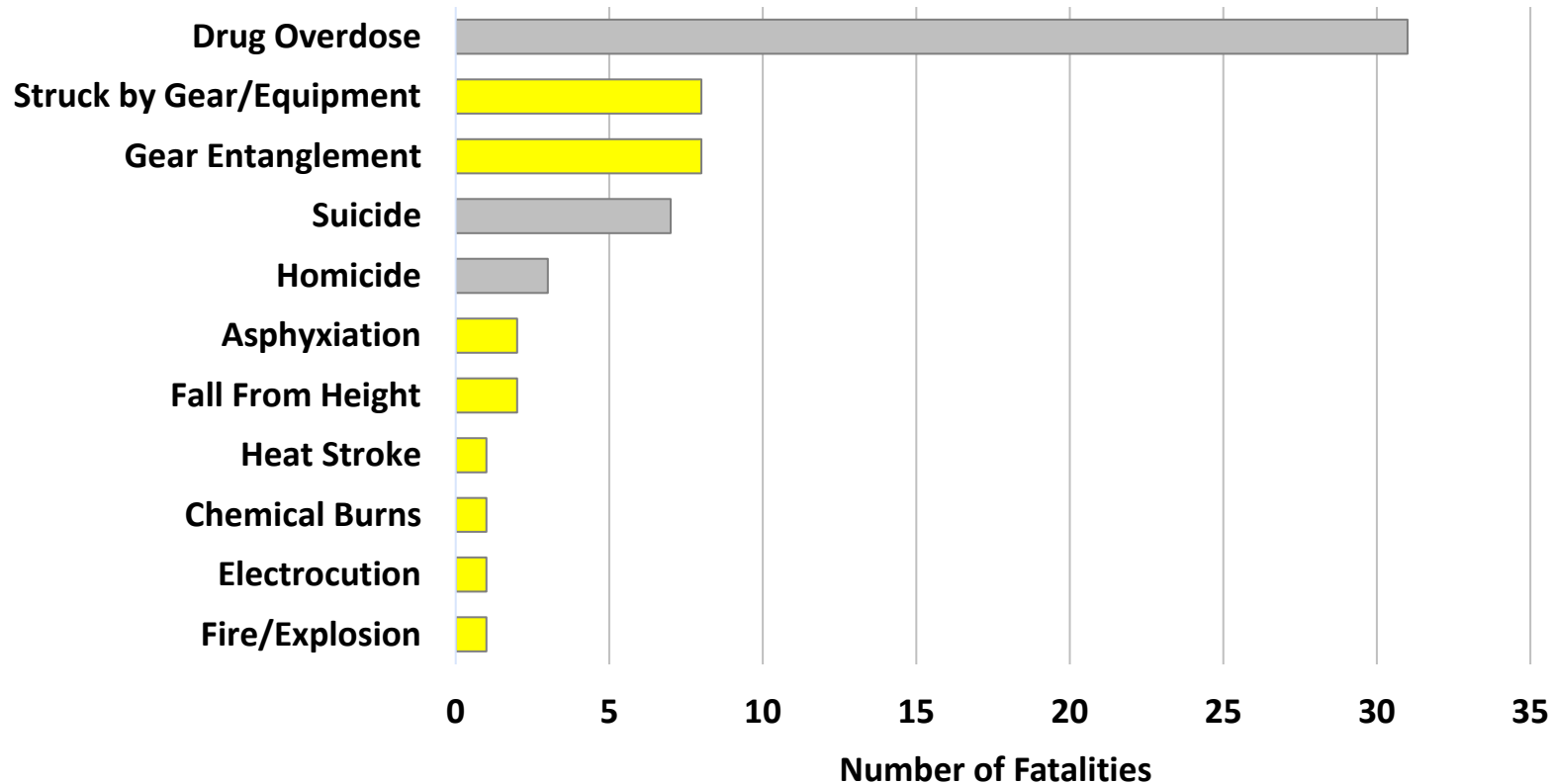
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Commercial Fishing Fatalities by Incident Type, 2013-2022 (n=322)

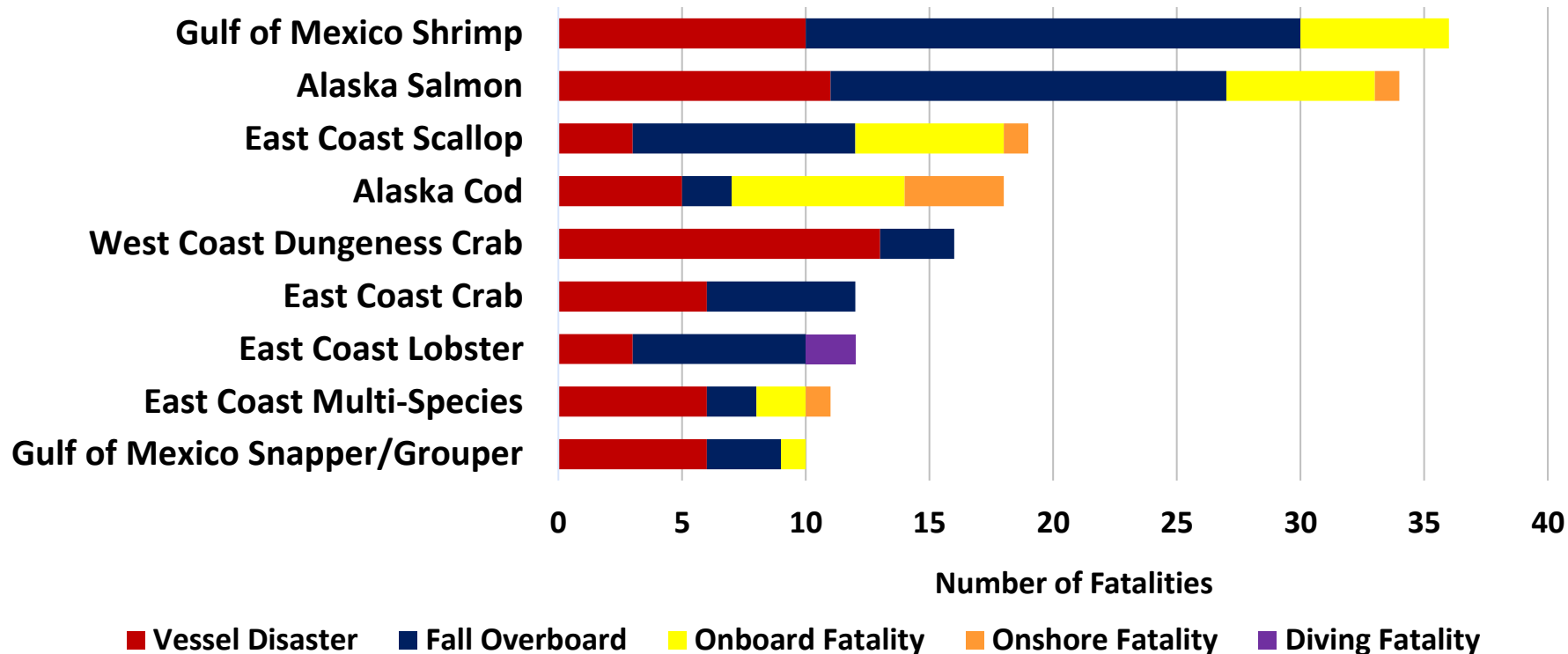


■ Vessel Disaster ■ Fall Overboard ■ Onboard Fatality ■ Onshore Fatality ■ Diving Fatality

Causes of Onboard Fatalities, 2013-2022 (n=65)



Commercial Fishing Fatalities by Fishery (≥10) and Incident Type, 2013-2022 (n=168)



Recommendations

Vessel Disasters

- Take a marine safety training class at least once every five years
- Participate in monthly drills
- Ensure watertight integrity
- Maintain proper watch
- Adhere to stability instructions



Photo: USCG

Recommendations

Falls Overboard

- Wear a PFD on deck
- Use a man-overboard alarm system
- Add effective recovery devices and re-boarding ladders
- Conduct man-overboard drills monthly



Recommendations

Onboard Fatalities

- Install safety devices on deck machinery
- Eliminate slip and trip hazards
- Develop safe work policies and practices
- Consider making naloxone available on fishing vessels



Photo: NIOSH

USCG-NIOSH Commercial Fishing Safety Research & Training Grants

Commercial Fishing Occupational Safety Research & Training Program



Photo: NIOSH

- Foster and enhance new **research** to improve commercial fishing safety
- Enhance the quality and availability of **safety training** for fishermen
- USCG and NIOSH signed Memorandum of Understanding in 2018 to administer the grants

cdc.gov/niosh/oep/commercial-fishing-research-training/

Examples of Funded Research Projects

- Developing a near-miss sharing system
(American Bureau of Shipping)
- Assessing sleep deprivation in fishermen
(Northeast Center for Occupational Health and Safety)
- Improving fall overboard recovery in the
Gulf of Mexico (University of Texas)
- Reducing ergonomic hazards associated
with Dungeness crab fishing gear (Oregon
State University)



Photo: Northeast Center for
Occupational Health and Safety

Examples of Funded Training Projects

- National fishing safety training infrastructure (AMSEA)
- Community-based safety training in New England (Fishing Partnership)
- Fishermen first aid and safety training (Oregon State University)
- Comprehensive safety and wellness program in Maine (Maine Center for Coastal Fisheries)



Photo: Jesse Costa/WBUR

Funding Information

- \$6 million available in FY2023
- Individual grant awards are \$150,000 - \$975,000
 - Funding is for 3 years
 - Requires 25% cost match of amount awarded
- Last cycle – January 31, 2023
 - Nine applications under review
- Next application deadline – August 29, 2023



Eligible Organizations



- Higher education institutions
- Non-profits
- Businesses
- Governments (state, local, tribal)
- Tribal organizations
- Fishing associations
- Faith-based or community-based organizations

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cdc.gov/niosh/oep/commercial-fishing-research-training/

Thank You!

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www.cdc.gov/niosh/topics/fishing/

www.cdc.gov/niosh/topics/maritime/

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

