# Aquaculture Safety Stats and Facts



## FACTS

1. Aquaculture operations can involve various hazards that pose risks to aquatic organisms, workers, and the surrounding environment.
2. Aquaculture facilities can be susceptible to infectious diseases that can spread rapidly among cultured organisms. Pathogens, parasites, and bacteria can enter the system through contaminated water, infected stock, or improper biosecurity measures.
3. Poor water quality can have detrimental effects on aquaculture systems. Factors such as low oxygen levels, high ammonia or nitrate concentrations, temperature fluctuations, and excessive organic matter can stress or harm cultured organisms.
4. The use of chemicals, including antibiotics, disinfectants, and pesticides, in aquaculture can lead to contamination of water and the accumulation of residues in the aquatic organisms.
5. Escape events can occur in aquaculture facilities, where farmed species are unintentionally released into the wild. These escapes can lead to genetic contamination of wild populations or the establishment of non-native species, potentially causing ecological imbalances.
6. Aquaculture workers face various occupational hazards, such as slips and falls on slippery surfaces, machinery-related injuries, exposure to hazardous substances, and manual handling injuries.
7. Malfunctioning or inadequate maintenance of equipment and infrastructure, such as pumps, aerators, nets, and cages, can lead to accidents, injuries, or production losses.

## STATS

- An average of 6,627 workers employed in the aquaculture industry. These workers suffer fatal injuries at a rate of 18.9 per 100,000.3 Additionally, occupational injuries and illnesses occur in this worker population at a rate of 5,237 per 100,000. This is approximately twice the rate of injury/illness among all U.S. workers.
- The mortality categories ‘smolt-related mortality’, ‘infectious diseases’ and ‘handling and treatment’ were responsible for 10%, 17% and 29% of the total number of dead fish respectively.
- Over 400 aquatic species are farmed around the world – in the ocean, along the coast, or in freshwater on land. Of fish farmed for food, most – about 63% (51 million mt) – comes from inland ponds or tanks growing freshwater finfish like

carp and tilapia. Marine and coastal aquaculture, sometimes called mariculture, makes up the remaining 37% (31 million mt) and includes bivalve mollusks (17.3 million mt, including oysters and mussels), finfish (7.3 million mt, mostly salmon) and crustaceans (5.7 million mt, mainly shrimp) (FAO, 2020).