TREES KILL: KEY FACTORS IN LOGGING SAFETY

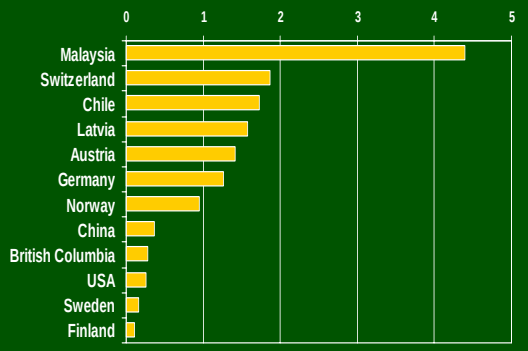
LOGGING IS THE MOST HAZARDOUS INDUSTRY for workers in the Pacific Northwest. Only in the past 30 years have fatalities and injuries decreased significantly due to increased attention to safety, and safety regulations.

As logging intensifies in Asia, Africa, and South America, more workers are exposed to extreme hazards in unmanaged conditions.

According to data supplied by the Food and Agriculture Organization of the United Nations (www.fao.org), the world's softwood timber harvest since 1965 has been dominated by Russian states, China, and the USA. Many other countries with high production in 1965 have depleted their resources significantly, including Japan, Canada, France, Romania, and Finland, among others. Substantial growth has occurred meanwhile in New Zealand (with plantation timber), Hungary, and developing countries such as Brazil, Viet Nam, Malaysia, and Tanzania.

Experience with state regulation and employer commitment to safety in logging activities in the Pacific Northwest may help others to improve safety and reduce injuries and death in logging operations.

Fatality Rates in Timber Harvesting in Selected Countries



Fatality rate per million cubic meters
Data date range: 1987-1995
Source: International Labour Organization

SAFETY CULTURE

- Expect safety. Most workplace injuries are preventable and should not be considered as a normal cost of doing business. Employers, management, and workers must develop an attitude that incorporates safety into daily practice.
- Select experienced workers, and provide adequate training/apprenticeship to new workers, respecting safety regulations and best practices developed by state and professional agencies.
- An employer must develop a safety and health program that is enforced by an onsite supervisor. Hazards must be identified and corrected. All injuries and near-misses must be investigated, and steps taken to prevent similar incidents in the future.
- Conduct monthly safety meetings with all employees to reinforce an attitude and knowledge for safe practices.

COMMUNICATION

- Employers must encourage workers to participate in site planning, and conduct pre-work safety meetings to discuss site conditions and known hazards.
- Work teams should establish signals and work procedures in advance.
- Workers must accept responsibility to identify and report hazards.
- Isolated workers must remain in visual, audible, or radio contact with other workers in case of sudden hazards or emergencies.
- Warning signs, high-visibility vests, and flaggers must be used to identify hazards wherever workers or others may be exposed.

PERSONAL PROTECTIVE EQUIPMENT

- Employers must provide workers exposed to particular hazards with the following equipment:
  - ✓High-visibility hardhats
  - ✓Eye and face protection
  - ✓Hearing protection
  - ✓Gloves, especially for work with cables
  - ✓Chaps to protect legs from the top of the thigh to the top of the boot, for work with chainsaws
  - ✓Heavy-duty caulked or slip-resistant boots
  - ✓Respiratory protection when exposed to dust or engine exhaust
- All equipment, tools, and machines must be maintained in good condition, with guards and safety devices intact.

FIRST-AID

At a remote worksite, first-aid can significantly reduce the harm of injuries and prevent death. All loggers must be trained in first-aid and CPR, and first-aid supplies must be available.

All workers must be informed of emergency contact procedures and how to communicate their worksite location.

FALLER SAFETY

Felling trees is the most hazardous job in logging. The following five-step plan summarizes safe procedures.

Assess the area. Identify hazards and the potential failure zones of snags and danger trees. Remove or avoid hazards.

Assess the tree. Calculate the falling direction and assess potential impacts. Discuss danger trees with an experienced faller.

Establish a safe work area. Clear the area around the tree and make an escape route. Ensure no other person is present in the falling zone. Never approach a falling zone without a visible signal by the faller that it is safe.

Fall the tree. The face-cut must be clean and within specified proportions to the size of the tree. The backcut must leave an adequate hinge to avoid kickback. Never stand directly behind the direction of the fall.

Get in the clear. Most injuries occur at the stump of a falling tree. As soon as the tree starts to fall, put down the saw and get away by your escape route. Never turn your back on a falling tree. Stay alert for impacts that could send a branch or debris in your direction.

CABLE SAFETY

- A competent person must inspect all cables, rigging, and anchors to ensure good condition and adequate capacity to bear the intended load.
- All workers must remove themselves beyond the bight of the line when a cable is in motion.
- Workers must not approach a machine or cable in motion – wait for a complete stop.
- Never directly handle a moving line – use a tool when it is necessary to spool or guide a line.

RESOURCES

Oregon Occupational Safety and Health Division (OR-OSHA). *Division 7, Forest Activities* (2005). Available online: www.cbs.state.or.us/osha/rules_laws.html

Oregon Fatality Assessment and Control Evaluation (OR-FACE). *Fallers Logging Safety* (2007). Available online: www.ohsu.edu/croet/face/pubs.html

Oregon Fatality Assessment and Control Evaluation
503-494-2281 orface@ohsu.edu www.ohsu.edu/croet/face
Center for Research on Occupational and Environmental Toxicology
Oregon Health & Science University

Oregon Fatality Assessment and Control Evaluation is funded by the National Institute for Occupational Safety and Health through the Oregon Worker Illness and Injury Prevention Program, and is administered by the Center for Research on Occupational and Environmental Toxicology at Oregon Health & Sciences University.