The story of 100 years towards safer & healthier work

Mega Trends in the world of work

Responding to the OSH challenges and opportunities

Introduction

• 2030 Agenda for Sustainable Development
• Sustainable Development Goals 3 and 8
1. Why the world needed to respond to accidents and diseases at work 100 years ago

A historical perspective

• 18th, 19th and 20th Centuries: Industrialization
• Early 20th Century
  – 1919: creation of the League of Nations & International Labour Organization
2. The ILO: Founded on the concept of safe and healthy work

- The very first session of the International Labour Conference in 1919:
  Instruments of OSH and the Tripartite Structure

3. Post-Second World War: An increasingly global perspective on OSH

Declaration of Philadelphia, 1944 regarding the health of workers:
"The Conference recognizes the solemn obligation of the International Labour Organisation to further among the nations of the world programmes which will achieve [...] adequate protection for the life and health of workers in all occupations."
ILO Core International Labour Standards on OSH

The ILO has adopted more than 40 International Labour Standards specifically dealing with Occupational Safety and Health. These standards can be classified as:

- Related to Specific Risks: such as mining accidents, asbestos, microbiological cause and chemicals.
- Related to Specific Sections or Branches of Work Activity: such as agriculture, construction and mining.
- Encompassing General Principles and Outcomes: such as those relating to a program of OSH labour inspection and effective enforcement.

Dealing with the Fundamental Principles of Occupational Safety and Health:

- Occupational Health Services Convention, 1985 (No. 187); and
- Preventive Framework for Occupational Safety and Health Convention, 2004 (No. 191).

Post-Second World War: An increasingly global perspective on OSH

Major Industrial Accidents after 1919

1. Flixborough Disaster 1974
2. Seveso 1976
3. Bhopal 1984
4. The Philips Disaster 1985
5. Chernobyl 1986
6. Chile Mining Rescue 2010
7. Fukushima 2011
8. Rana Plaza 2013
9. The Vale Dam Disaster 2019
4. Towards a culture of prevention

• After Chernobyl: New emerging concept of Safety Culture

5. ILO and safety and health at work in the new millennium
Chapter 2
A safe and healthy future of work: Challenges and opportunities
2.1 Technology

- Replicating human thinking: AI
- Virtualization of work
- Telework, working remotely
- Human-machine interfaces
- Smart technology and wearable smart devices
- Increasing OSH skills, training and inspection

Digitalization and ICT

- Opportunities
  - Possible reduction in some psychosocial risks
  - Removing people from hazardous environments
  - Health promotion
  - Improved prevention measures
  - Reducing inequality

- Challenges
  - Possible increase in some psychosocial risk
  - Increased risk to security and privacy
  - Exposure to new chemical or biological risks or electromagnetic fields
  - Increased risk of incidents and exposures
  - OSH management and outcome challenges
Automation and robotics

- Human interaction with AI and robotics
- Robotics and AI and their role in decreasing musculoskeletal disorders or mental health risks.
- Ergonomic risks
- Psychological risks
- Automation’s threat on employment

Nanotechnology

- Nanomaterials
- Unique health hazards
- Lungs, oxidative stress, inflammation and tissue damage, fibrosis and tumor generation

AUTOMATION AND ROBOTICS: OSH OPPORTUNITIES AND CHALLENGES

OPPORTUNITIES
- Removing people from hazardous environments.
- Robotics and automation can reduce need for workers to carry out dangerous or mundane tasks which can cause illness or injury.
- Increased understanding of risk-taking behaviour.

CHALLENGES
- Increased ergonomic risks from new forms of human-machine interaction.
  - Exposure to new risks.
  - Occupational safety.
  - Accidents as result of misunderstanding, training and knowledge of work processes.
  - Nanomaterials is new and untested untrained, particularly severe hazards and risks inherit.
  - ISM management and alternative changes required.
  - More obvious decrease of additional access to employment and distressed decreases of acute workplace accidents.
  - Job replacement and job transformation.
2.2 Demographics

- Changing global workforce
- Expanding young and old population in different parts of the world
- Gender gaps in labour market

Young workers and aging worker populations

Gender

- Resisting gender gaps in the labour market
- Women are 26.0 percentage points less likely to be employed
- Gender employment gap has shrunk last 27 years, less than 2 percent points during the last 27 years.
Migrant workers

• Accounted for 164 million of the world's approximately 277 million international migrants.
• 86.5 per cent of migrants are between 20 to 64 years of age.
• The complexity and diversity of circumstances throughout the various dimensions of the migration cycle may render them highly vulnerable to poor physical and mental health outcomes.
• High skilled jobs vs. "D" jobs (dirty, dangerous and demeaning)

2.3 Sustainable development and OSH

Climate change, air pollution and environmental degradation

• Effects: 4 billion are among the poorest and also work outdoors, in agriculture.
• Southern Asia and Western Africa
• Exposure to sun is a risk
HIGHER TEMPERATURES AND OSH

HIGHER TEMPERATURES CAN AFFECT WORK AND WORKERS, ESPECIALLY IN HOT AREAS
• Reduction in areas where work is possible
• Increase in related health effects
• Heat related health effects
• Heat related OSH risks
• The performance of physically demanding work
• Migrant workers, informal workers and day-labourers
• The health burden related to climate change
• Extreme weather events also affect workers involved in emergency, rescue and clean-up work

The green economy

GREEN TECHNOLOGIES AND OSH

Health and safety aspects of green technologies arise in all stages of their lifecycle: from the extraction of the necessary raw materials, the manufacturing of technological devices, to their transport, installation, operation, decommissioning and disposal. They can occur across different countries and regions, involving many different groups of workers.

WORKERS IN ‘GREEN’ INDUSTRIES MAY FACE RISKS:
• In the wind turbine sector
• In the solar energy industry and the later recycling of its parts
• In the manufacture of fluorescent light bulbs
• In recycling
• Risks as a result of substitution for more environmentally friendly substances
2.4 Changes in work organization

- Excessive hours of work
- Non-standard forms of employment
- Working time arrangements
- The informal economy
- The example of digital labour platforms

OSH RISK FACTORS IN NON-STANDARD EMPLOYMENT ARRANGEMENTS

**DISORGANIZATION**
- Shift factor, unpredictability
- Poor induction, training and supervision
- Ineffective procedures and communications
- Ineffective OSH management systems, inability to organize

**REGULATORY FAILURE**
- Poor technology or legal data, information
- Limited access to OSH auditor’s inspection and right
- Tasked or no explicit legal obligations
- Non-compliance and poor reporting

**SPILL OVER**
- Irregular work
- Long or irregular work hours
- Multiple jobs
- Work life conflict
- Contingent, irregular payment
- Extra hours, workload shifting
- Frugal pay, security, smallness
- Endless public health/crude

OSH OPPORTUNITIES AND CHALLENGES IN PLATFORM WORK

**OPPORTUNITIES**
- Removing people from hazardous environments.
- Greater control over work life balance.
- Shift of work previously carried out in the informal economy into the formal sector.

**CHALLENGES**
- Reduced security, decreased regulatory visibility and increased risks
- Atypical employment and working arrangements
- Challenges in applications of OSH and employment regulations
- Little or no access to traditional contractual benefits
- Poor workplace OSH management
- Lack of clarity and specificity in tasks
- Non-appropriate certification, knowledge etc.
Chapter 3
Responding to the safety and health challenges and opportunities of the future of work

Anticipation of new OSH risks

- New and emerging work-related safety and health risks
- New trends in work organization = autonomous work or away
- Concept of well-being, safety and health at work
- Traditional risks across the world should be kept in mind still
Multidisciplinarity in managing OSH

- OSH professionals in the future = multidisciplinary
- Consideration and application of new skill sets in the field.

Building competence on OSH

- Continuing education
- Lifelong learning

In the 2019 report, Work for a brighter future, the ILO's Global Commission on the Future of Work proposes "a universal entitlement to lifelong learning that enables people to acquire skills and to reskill and upskill" (ILO, 2019a).

Widening the Horizon: The Link to Public Health

International labour standards and other instruments on OSH

- National OSH legislation and management
- Governance of OSH
Reinforcing the role of governments and social partners and expanding partnerships

Concluding remarks

Thank you