SAFETY AND HEALTH AT THE HEART OF THE FUTURE OF WORK

Building on 100 years of experience

International Labour Organization

1919·2019

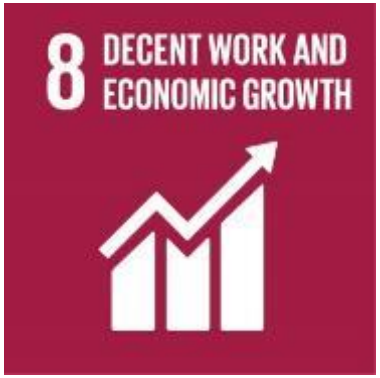
The story of 100 years towards safer & healthier work

Mega Trends in the world of work

Responding to the OSH challenges and opportunities

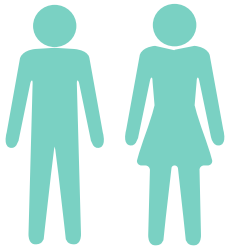
Introduction

- 2030 Agenda for Sustainable Development
- Sustainable Development Goals 3 and 8



6,500

die from work related diseases



7,500

people die due to unsafe and unhealthy working conditions every day

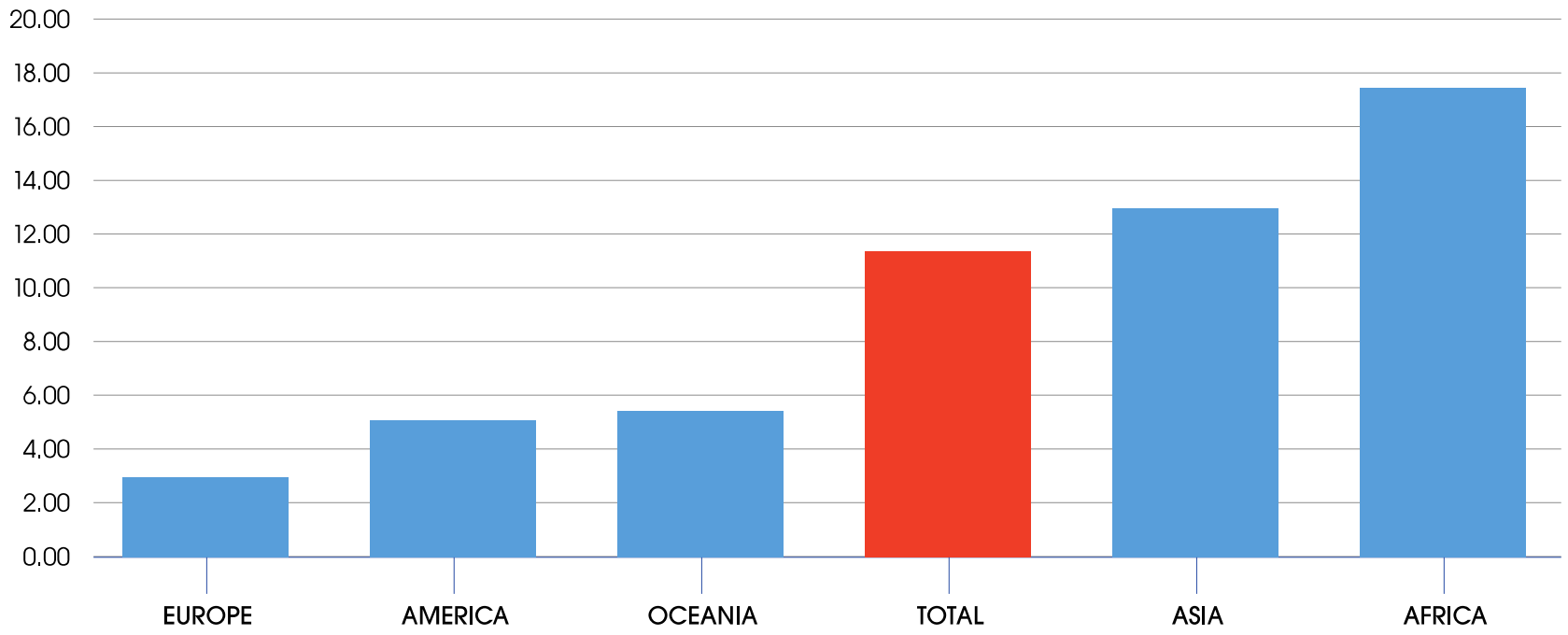
5-7%

of deaths globally

1,000

die from occupational accidents

Figure 1: Accident fatality rates per 100,000 persons in the labour force, by region, 2014



Chapter 1
100 years of safety and health at work

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

MAJOR DISASTERS BEFORE 1919[3]

FACTORIES 1911

145 workers died in the fire at the Triangle Shirtwaist Factory in New York on March 25, 1911.

MINING 1913

439 miners and a rescuer died in the Senghenydd colliery disaster at the Universal Colliery in Senghenydd, in South Wales (UK) on 14 October 1913.

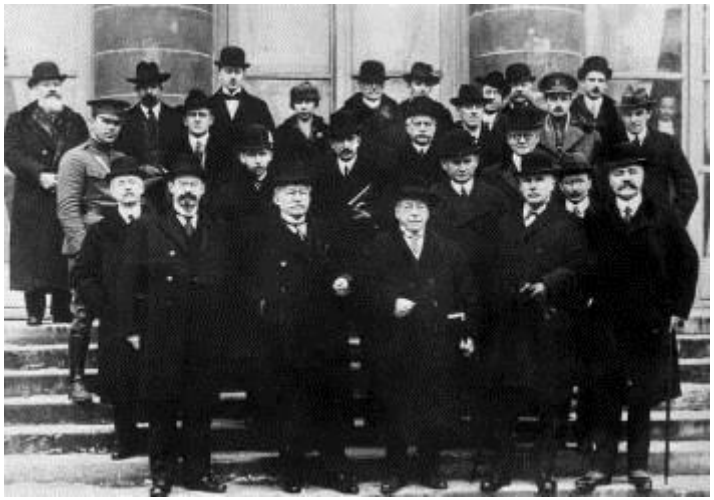
SHIPPING 1917

Approximately 2000 people were killed, and more than thousands were wounded when a vessel collided with a cargo ship carrying explosives at Halifax. It was considered to be the largest man-made explosion prior to the Atomic Bomb.

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

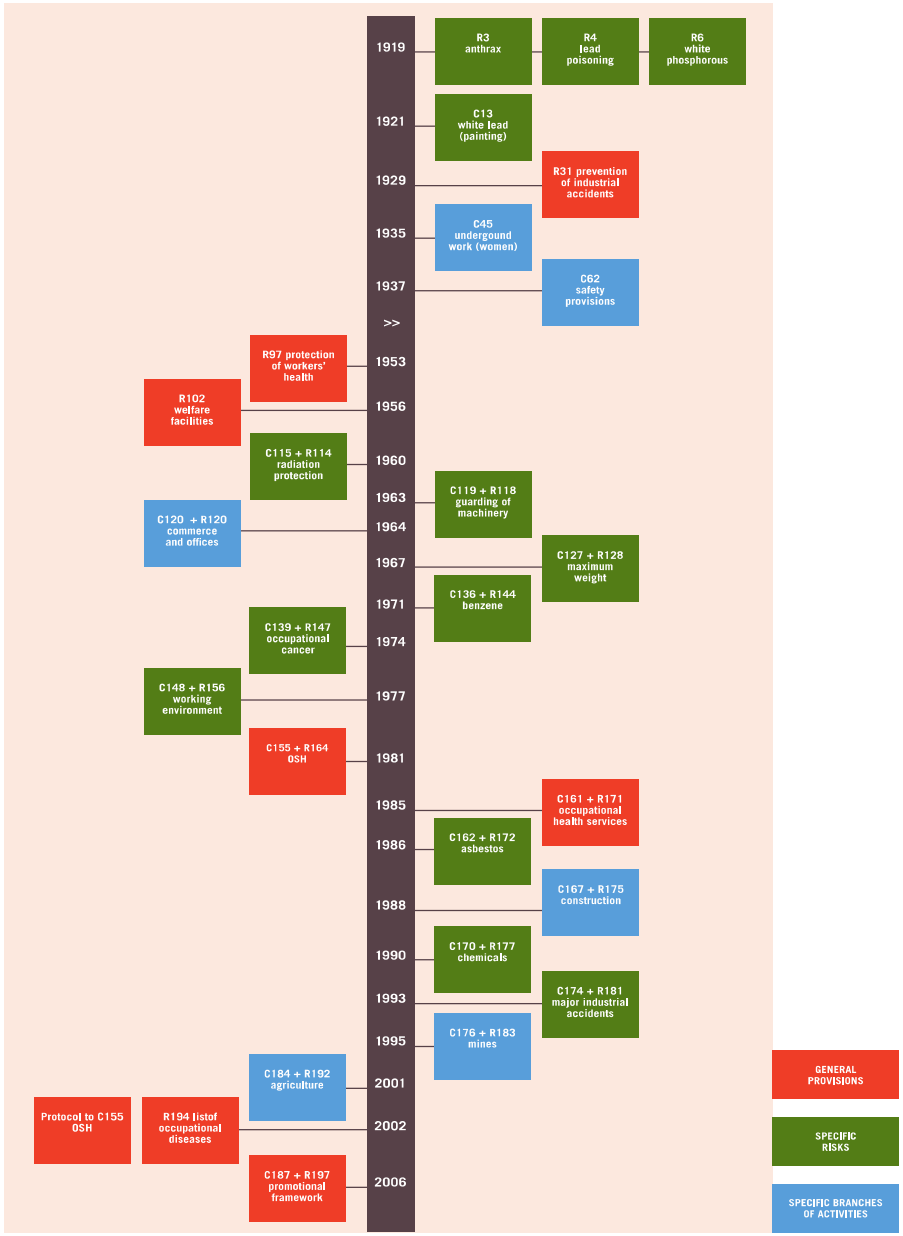


3. Post-Second World War: An increasingly global perspective on OSH

Declaration of Philadelphia, 1944 regarding the health of workers:

“ The Conference recognizes the solemn obligation of the International Labour Organization 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 INTERNATIONAL LABOUR STANDARDS ON OSH



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 THOSE:

a) RELATED TO SPECIFIC RISKS

(such as ionizing radiation, asbestos, occupational cancer and chemicals)

b) RELATED TO SPECIFIC SECTORS OR BRANCHES OF WORK ACTIVITY

(such as agriculture, construction and mining)

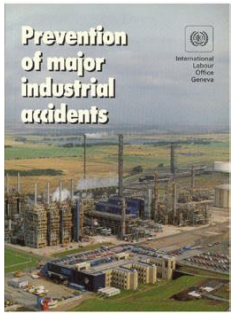
c) ENCOMPASSING GENERAL PRINCIPLES AND OUTCOMES

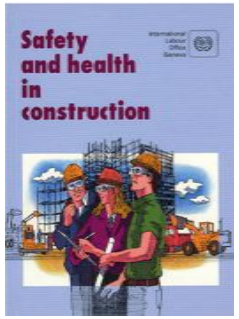
(such as those relating to management of OSH, labour inspection and welfare facilities)

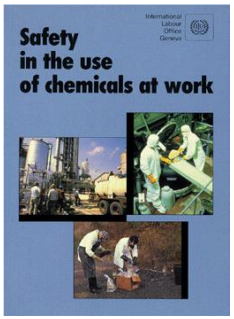
d) DEALING WITH THE FUNDAMENTAL PRINCIPLES OF OCCUPATIONAL SAFETY AND HEALTH:

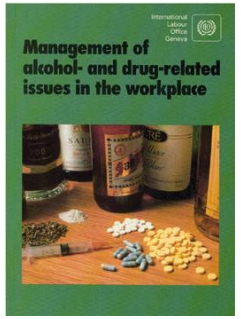
- **Occupational Safety and Health Convention, 1981 (No. 155) and its Protocol of 2002;**
- **Occupational Health Services Convention, 1985 (No. 161); and**
- **Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187).**

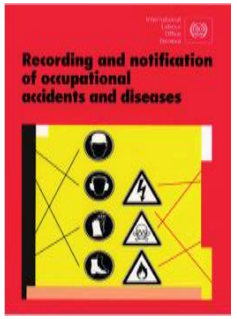
Some ILO Codes of Practice on OSH >

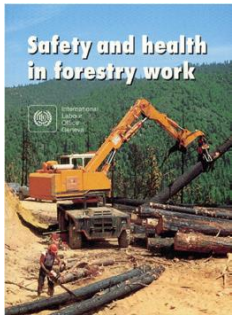


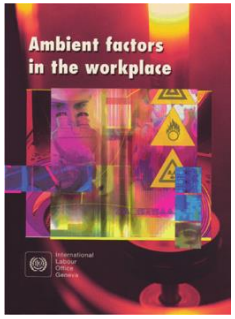


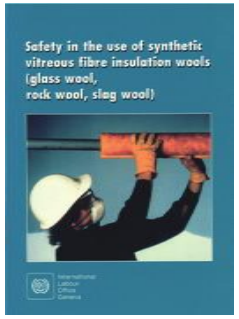


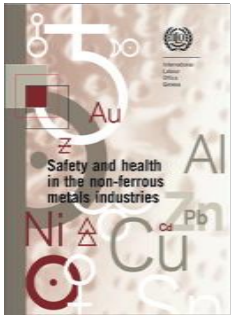


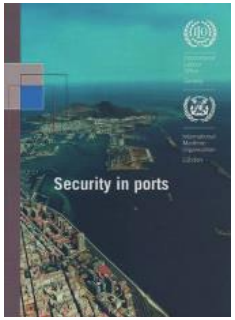


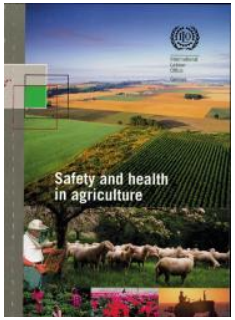


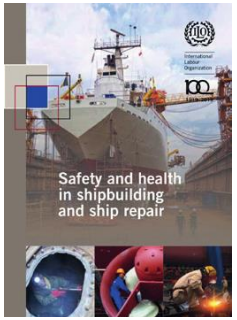




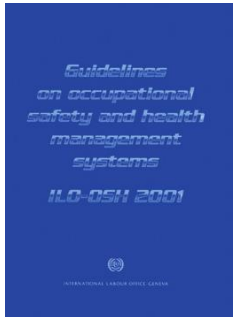


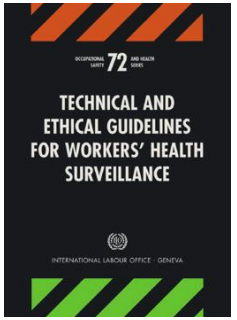






ILO Guidelines on OSH >





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

Major Indusrial 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

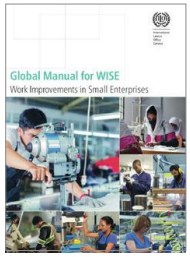
4. Towards a culture of prevention

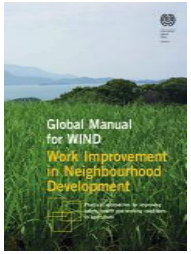
- After Chernobyl: New emerging concept of Safety Culture

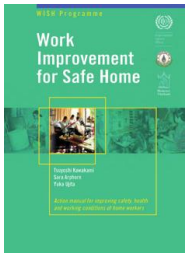
5. ILO and safety and health at work in the new millennium

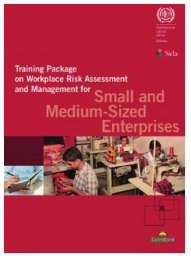
WORLD DAY FOR SAFETY AND HEALTH AT WORK

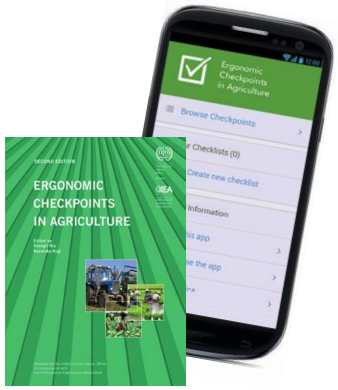
THE ILO SUPPORTS ITS CONSTITUENTS THROUGH THE DEVELOPMENT OF NUMEROUS PUBLICATIONS AND TRAINING PACKAGES ON OSH

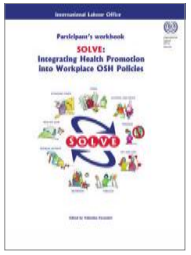












WORLD CONGRESS ON SAFETY AND HEALTH AT WORK

Chapter 2
A safe and healthy future of work:
Challenges and opportunities

2.1 Technology

Digitalization and ICT

- 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
- Cybersecurity risks
- Psychological risks
- Automation's threat on employment

AUTOMATION AND ROBOTICS: OSH OPPORTUNITIES AND CHALLENGES

OPPORTUNITIES

- Removing people from hazardous environments;
- Robotics and exoskeletons can reduce need for workers to carry out dangerous or mundane tasks which can cause stress or MSDs;
- Improved automated prevention measures;
- Increased understanding of risk-taking behaviour.

CHALLENGES

- Increased ergonomic risk from new forms of human-machine interaction
- Exposure to new risks:
  - Electromagnetic fields
  - Accidents as a result of loss of understanding, control and knowledge of work processes, over-confidence in robot/AI infallibility, particularly where humans and robots interact closely
- OSH management and outcome challenges related to:
  - A more diverse (because of widened access to employment) and dispersed (because of remote working) workforce
  - Job replacement and job transformation.

Nanotechnology

- Nanomaterials
- Unique health hazards
- Lungs, oxidative stress, inflammation and tissue damage, fibrosis and tumor generation
- ILO Occupational Safety and Health Convention, 1981: Necessary Further Training, lifelong learning

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

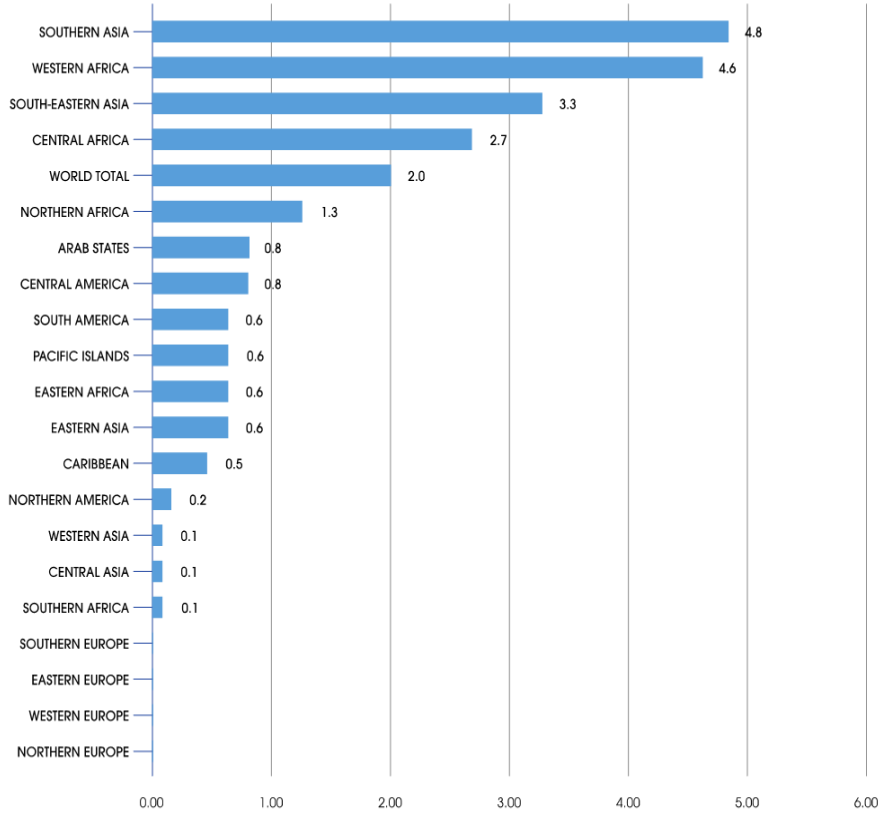
- Accounted for 164 million of the world's approximately 277 million international migrants.
- 86.5 per cent of migrants are between 20 to 64 years of age.
- The complexity and diversity of circumstances throughout the various dimensions of the migration cycle may render them highly vulnerable to poor 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

Figure 4: Projected working hours lost due to heat stress under a 1.5 degree scenario, 2030



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

Photo caption:

Waste pickers collect household or commercial/industrial waste. They may collect from private waste bins or dumpsters, along streets and waterways or on dumps and landfills. Some rummage in search of necessities; others collect and sell recyclables to middlemen or businesses. Some work in recycling warehouses or recycling plants owned by their cooperatives or associations

The green economy

GREEN TECHNOLOGIES AND OSH

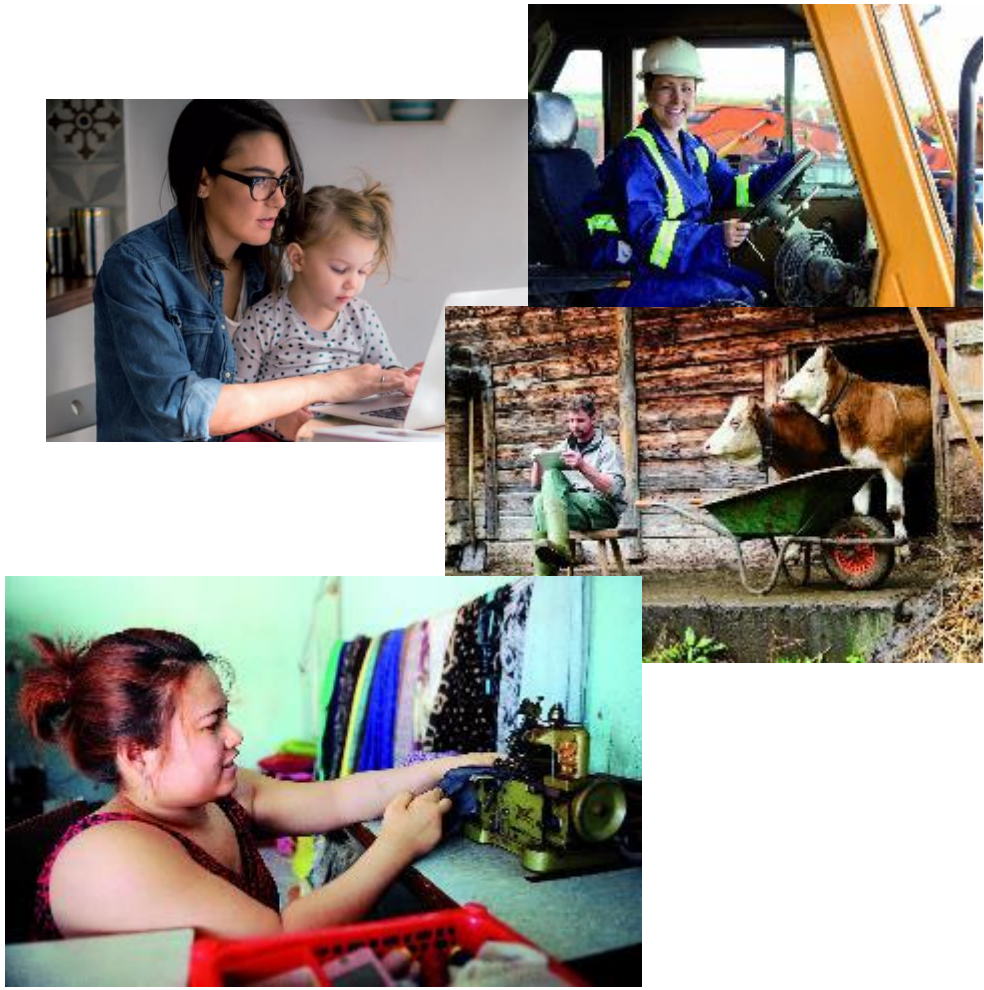
Health and safety aspects of green technologies arise in all stages of their lifecycle: from the extraction of the necessary raw materials, the manufacturing of technological devices, to their transport, installation, operation, decommissioning and disposal. They can occur across different countries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

- Short tenure, inexperience
- Poor induction, training and supervision
- Ineffective procedures and communication
- Ineffective OSH management systems, inabilty to organise

REGULATORY FAILURE

- Poor knowledege of legal rights, obligations
- Limited access to OSH, worker's compensation rights
- Fractured or disputed legal obligations
- Non-compliance and poor regulatory oversight

SPILL OVER

- Insecure work
- Long or irregular work hours
- Multiple jobs
- Work-life conflict
- Contingent, irregular payment
- Extra tasks, workload shifting
- Eroded pay, security, entitlements
- Eroded public healthy/safety

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

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 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 up skill" (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

Apa yang Dilakukan ILO untuk K3 di Indonesia?

1. Dukungan ILO untuk K3 di Indonesia – Kampanye K3 tahun 2018/ ILO 100 tahun
2. Proyek-proyek Terkait K3 ILO Jakarta 2019
    - SafeYouth@Work
    - Youth4OSH
    - HIV
    - PalmOil
    - BetterWork
    - SCORE
    - SEA Fisheries

Thank you