



International
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► Safe and healthy working environments for all

Realizing the fundamental right to a safe and healthy working environment worldwide



ILO Introductory Report:
23rd World Congress on Safety
and Health at Work
27-30 November 2023
Sydney, Australia

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First published 2023



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ISBN 978-92-2-039612-4 (print)
ISBN 978-92-2-039613-1 (pdf web)

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Printed in Switzerland
Designed in Switzerland

BIP

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Introduction

A safe and healthy working environment is not only a fundamental principle and right at work but also an essential requirement for fostering sustainable and inclusive economic growth, full and productive employment and decent work for all. Despite significant progress in occupational safety and health (OSH) over the years, the unfortunate truth remains that workers continue to suffer due to injuries and diseases or even lose their lives while on the job each day.

According to the most recent International Labour Organization (ILO) estimates, 2.93 million workers die every year due to work-related accidents and diseases. This toll of work-related deaths and diseases serves as a stark reminder of the ongoing challenges in protecting the well-being of workers worldwide.

Today's ever-evolving work landscape is causing multiple challenges to the effective prevention of work-related fatalities, injuries and diseases. The impact of climate change, including extreme weather events and rising temperatures, changing patterns of work, fast technological advances, and the global COVID-19 pandemic have all introduced new pressing concerns for safety and health at work. Actual or potential major industrial accidents pose grave dangers, highlighting the need for robust risk management systems and comprehensive safety protocols. At the same time, these fast and often unpredictable changes amplify mental health problems at work, creating new psychosocial risks or exacerbating existing ones.

Workers continue to face the persistent threat of traditional hazards and risks, including biological, chemical, and physical hazards. Workers are exposed to dangerous machinery, strenuous physical tasks and poor work ergonomics, putting them at risk of fatalities, injuries, illnesses, and long-term health implications.

This report delves deeper into the multifaceted nature of safety and health at work, focusing in particular on the work carried out by the ILO on OSH. Recognizing the complexities and challenges associated with ensuring worker well-being, this report explores the range of initiatives, programmes, and policies implemented by the ILO to support its constituents in the realization of the fundamental right to a safe and healthy working environment worldwide and to enhance global OSH standards and practices.



A factory worker is seen during her shift in a footwear manufacturing plant. Cambodia, 04/2016. © Marcel Crozet/ILO

Chapter 1.

Challenges and opportunities in occupational safety and health: a global overview

1.1. Data on accidents and diseases at work

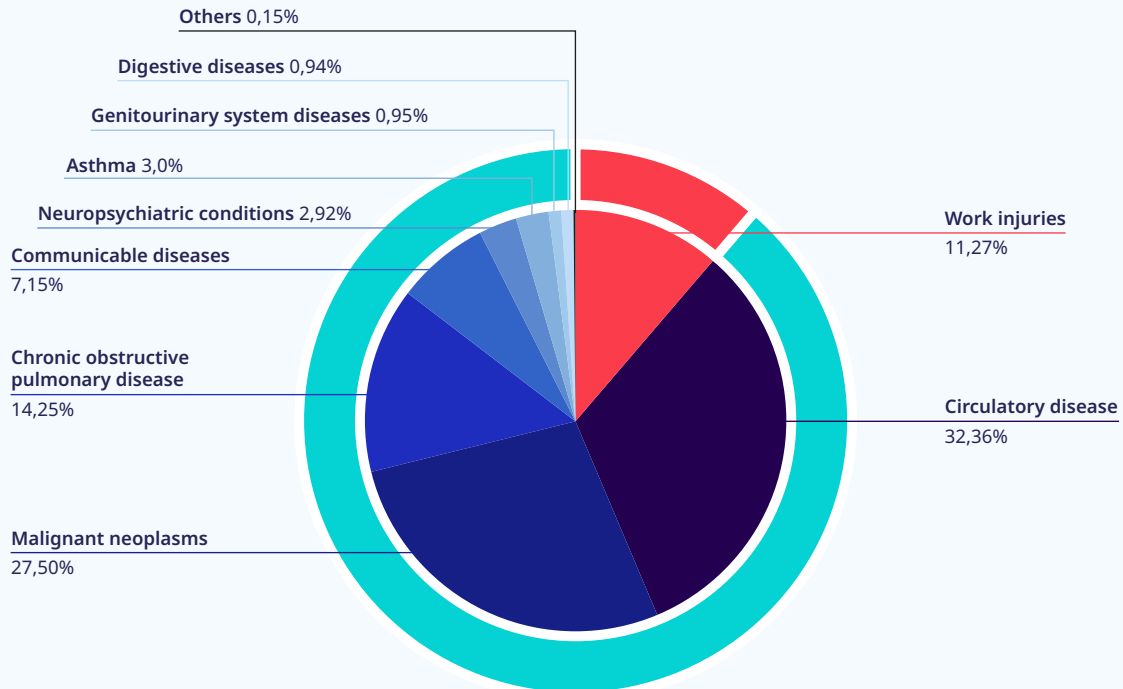
Reliable data concerning occupational accidents and work-related diseases are essential for identifying their causes, detecting new hazards and emerging risks, defining priorities and ensuring effective prevention. However, gathering accurate data remains a global challenge, due to the limitations of the recording and notification systems available in many countries.

To bridge this information gap, the ILO has been producing estimates on fatal work-related injuries since 1998 and on work-related diseases since 2001, based on the best sources available. The latest estimates developed by the ILO cover the year 2019 and are used for the first time in this report.¹

According to these latest estimates, over 395 million workers worldwide sustained a non-fatal work injury in 2019. In addition, around 2.93 million workers died as a result of work-related factors, an increase of more than 12 per cent compared to 2000 (ILO forthcoming). The sizeable increase in the absolute number of work-related fatalities is influenced by several factors, which may relate to an aggravation in terms of unprotected exposures to occupational risks or to socio-demographic changes. For example, the global labour force increased by 26 per cent between 2000 and 2019, from 2.75 billion to 3.46 billion.² As figure 1 shows, the large majority of these work-related deaths, 2.6 million, were attributed to work-related diseases, while work accidents resulted in 330,000 deaths. The diseases that caused most work-related deaths were circulatory diseases, malignant neoplasms and respiratory diseases. Together, these three categories contributed to almost three-quarters of total work-related mortality.

¹ These estimates are based on the latest estimation method by Jukka Takala and colleagues (see Hämäläinen, 2017), which was further updated specifically for this purpose.

² See <https://ilostat.ilo.org/data>.

► **Figure 1. Composition of global work-related deaths**

In relative terms, work-related fatalities represented 6.71 per cent of all deaths globally,³ with occupational injuries accounting for 8.48 per cent of all fatal injuries and work-related diseases contributing to 6.54 per cent of all global fatalities due to disease. The attributable fraction of work-related deaths is estimated to be highest in Africa (7.39 per cent), followed by Asia and the Pacific (7.13 per cent) and Oceania (6.52 per cent).

Work-related deaths are unequally distributed, with the male mortality rate (51.4 per 100,000 working age adults) much higher than the female rate (17.2 per 100,000). In terms of regional distribution, Asia and the Pacific holds the highest share, contributing to almost 63 per cent of global work-related mortality. This reflects the fact that countries in this region possess most of the world's working population.

Looking in detail at the most prevalent occupational risk factors, the World Health Organization (WHO) and the ILO developed a joint estimation methodology to produce the WHO/ILO Joint Estimates on the burden of disease. To date, 42 pairs of occupational risk factors and associated health outcomes (namely a specific disease or injury) have been studied (ILO & WHO 2021a, Pega et al., 2023). According to these estimates, a total of 90.22 million disability-adjusted life years (DALYs) were attributable to these 42 specific pairs. A disproportionately large work-related burden of disease was observed in the WHO African Region, South-East Asia Region and the Western Pacific Region, and in males and older age groups (ILO & WHO 2021a, Pega et al., 2023)

³ Work-related deaths were more than double those due to road traffic injuries (1,286,446 deaths). Annual work-related deaths also exceeded those caused by COVID-19 in 2020 (2,256,130 deaths).



1.2. Causes for concern

Despite global efforts to improve safety and health at work, workers' lives and well-being continue to be at risk for several reasons. These include working in hazardous sectors, being exposed to major industrial accidents and disasters, the outbreak of crises and emergencies, changing demographics, patterns and forms of employment and evolving environmental challenges, as well as new technology, digitalization, artificial intelligence (AI) and nanomaterials.

1.2.1. Hazardous sectors

The agriculture, forestry and fishing, construction, and manufacturing sectors are widely recognized as the most hazardous. Each year, 200,000 fatal injuries occur in these sectors, representing over 60 per cent of all fatal occupational injuries (ILO 2018a). In particular, one out of three fatal occupational injuries worldwide occurs among agricultural workers (ILO forthcoming).

Looking at the fatal occupational injury rate⁴, the mining and quarrying, construction, and utilities (water, gas, electricity) sectors are the three most hazardous sectors globally. The ILO estimated that in 2019 the mining industry contributed to about 3 per cent of fatal accidents at work and the estimated fatality rate was found to be four times higher than the global average of all sectors (ILO forthcoming).

Common features of these sectors are working environments that combine a wide range of hazards and risks, including heavy machinery, unpredictable natural elements, hazardous substances, and physically demanding tasks. The nature of the work in these sectors often involves working at heights, in confined spaces, or in close proximity to large equipment, increasing the likelihood of accidents, injuries and diseases.⁵

1.2.2. Major industrial accidents and disasters

Major industrial accidents⁶ pose a significant threat to workers and wider communities. Recent events such as the explosion of a large store of ammonium nitrate in the Beirut port (Lebanon) in 2020 and an explosion in a waste management centre in Leverkusen (Germany) in 2021, serve as stark reminders of the devastating consequences that can occur when adequate measures to prevent and control risks are not properly implemented. These accidents have resulted in deaths, injuries, diseases, environmental pollution, business disruption and substantial economic damage for entire communities.

The aftermath of major industrial accidents is long and costly, as communities continue to grapple with the consequences for many years – even for decades. Victims and their families may never fully recover from the physical and emotional trauma they have suffered.

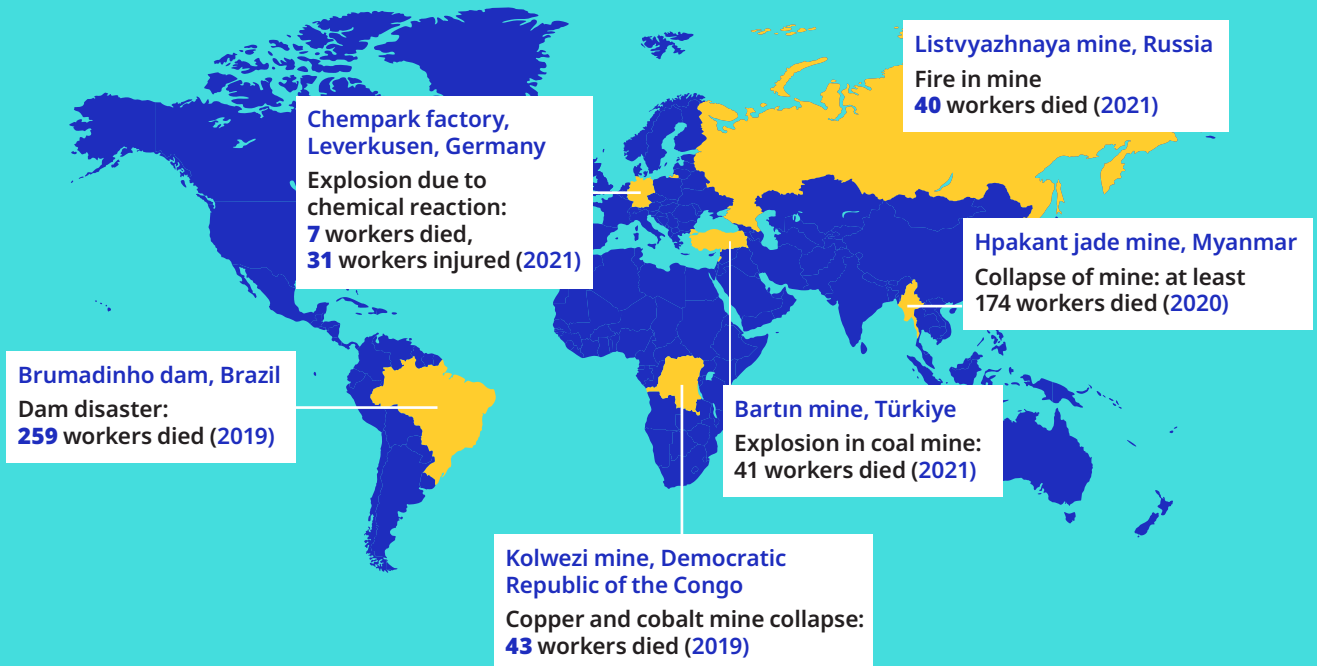
In addition to the well-known disasters that raise concerns globally, there are numerous other accidents that occur every year without attracting international media attention. These accidents still have severe impacts on workers and their families, surrounding communities, businesses and the environment, significantly deteriorating the quality of life.

4 The fatal injury rate refers to the number of fatal injuries per 100,000 workers.

5 More information on these hazards and risks will be discussed in 1.3 *Traditional and emerging risk factors*.

6 The term “major accident” means a sudden occurrence - such as a major emission, fire or explosion - in the course of an activity within a major hazard installation, involving one or more hazardous substances and leading to a serious danger to workers, the public or the environment, whether immediate or delayed (see ILO's [Prevention of Major Industrial Accidents Convention, 1993a \(No. 174\)](#), Article 3(d)).

► Figure 2. Examples of major industrial accidents and disasters since 2019



1.2.3. Crisis and emergencies

Different types of crises occur from time to time around the world, ranging from natural disasters to conflicts, or public health emergencies.

During recent years, the COVID-19 pandemic has posed great challenges to OSH. The ripple effects of the crisis have dramatically affected working conditions and labour rights.⁷ The pandemic, as well as outbreaks of other diseases such as avian influenza and Ebola, reminded the world of the threat of biological hazards. All actors in the world of work were exposed to the risk of infection with the novel coronavirus, but also to new and emerging risks correlated with the emergency and newly adopted working practices and procedures.

The pandemic has also disrupted labour markets and increased financial instability for both workers and employers. Likewise, other crises such as conflict continue to cause profound disruption to where, how and whether people are able to work.

⁷ The COVID-19 pandemic has significantly increased the number of children involved in work, slowed the trend towards formalization observed over the past 15 years and contributed to the first global increase in poverty in more than 21 years (ILO 2022a, ILO 2021a, The World Bank Group 2020).

The impact of COVID-19 on workers

The burden of COVID-19 was particularly prominent among health care workers. They were more than ten times more likely to be infected with COVID-19 than the general population (Mutambudzi et al. 2022). Worldwide, between January 2020 and May 2021, 80,000 to 180,000 health care workers may have died from COVID-19 (WHO 2021).

In addition to health care and emergency workers, other workers faced an increased risk of transmission. These included frontline workers – such as those involved in the production of essential goods, delivery and transportation, or ensuring the security and safety of the population – as well as workers involved in service and sales, cleaning and domestic work, education, hospitality and construction.

The COVID-19 pandemic has accelerated the pace of change, especially in remote working, e-commerce and automation. For example, in Europe the proportion of workers engaged in teleworking increased from 11 per cent prior to the pandemic to 48 per cent during the pandemic (ILO & WHO 2021b).

1.2.4. Demographics

The global workforce is constantly changing in relation to age and gender, and in terms of related matters such as migration. These demographic changes have important implications for OSH and the prevention of occupational accidents and diseases.

Young workers and aging worker populations

While in some parts of the world, youth populations are expanding, in others, populations are ageing. This presents both new challenges and opportunities for more inclusive labour markets and safer and healthier societies.

Young people⁸ face significant challenges when it comes to securing decent work. Their unemployment rate is over three times higher than that of adults aged 25 or older. Even when they have a job, they are more likely to be engaged in non-standard forms of employment and the informal economy (ILO 2023a), which often lack the protections and benefits provided by regular employment.⁹

Young workers experience higher rates of occupational injuries compared to older workers. According to eurostat data, the rate of non-fatal work accidents in Europe was more than 50 per cent higher among young workers aged 18–24 in comparison to older workers in 2020.¹⁰ In the United States, the probability that young workers aged 15–24 will suffer an occupational injury is approximately 1.2 – 2.3 times higher than it is for workers aged 25 or older (CDC 2020). Several factors contribute to this, including lower levels of physical, psychosocial, and emotional maturity, as well as limited job skills and work experience. Additionally, young workers are often unaware of their OSH rights and responsibilities, which can make them reluctant to report hazards or incidents.

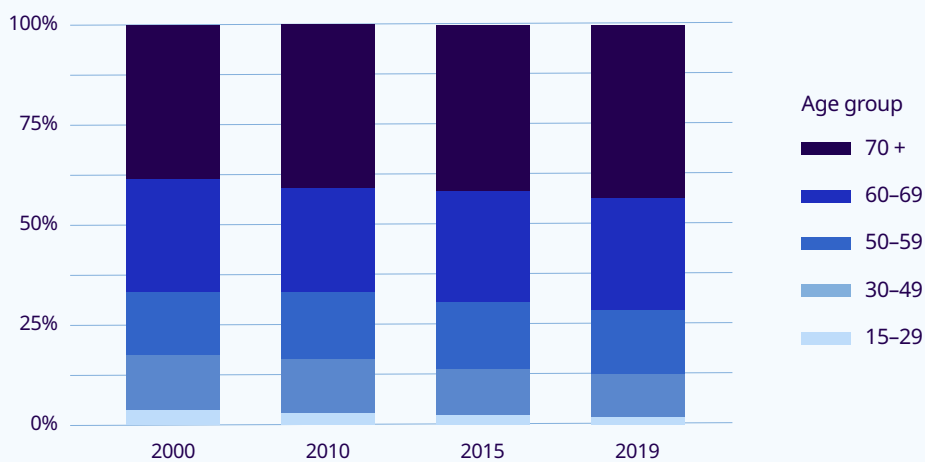
8 The United Nations, for statistical purposes, defines “youth” as anyone between the ages of 15 and 24.

9 Further information on non-standard forms of employment is provided in 1.2.5. *Patterns and forms of employment*.

10 See eurostat’s data browser: [Non-fatal accidents at work](#) (2023).

On the other hand, as people live and work longer, the demographic shift has an impact on the world of work. According to the latest ILO estimates, the proportion of fatal work-related diseases among workers exhibits a consistent upward trend with age (see figure 3). While for the age group below 50 years old there is a slight relative decrease over time, for **older workers** aged 70 years and more, the proportion of fatal work-related diseases has been steadily increasing since 2000, reaching 42.97 per cent in 2019 (ILO forthcoming). The higher burden of deaths caused by work-related diseases in this age group can be explained by the cumulative effects of occupational exposures over working years, coupled with the decline in biological functions.

► Figure 3. Proportion of fatal work-related diseases among workers by age (2000-2019)



Sex and gender

Men and women have physiological and psychological differences that can determine how risks affect them. Men and women often occupy different job roles and perform different tasks which have different exposures to various occupational hazards and risks. For instance, men are more likely to be involved in physically demanding work, while women may be more likely to be engaged in repetitive and sedentary tasks, with different effects on, among others, musculoskeletal disorders. Even when employed in the same occupation and carrying out the same tasks, men and women can experience different demands, exposures and effects. Differences in physical attributes between men and women can influence their ergonomic needs and the design of work equipment including personal protective equipment (PPE), tools and workspace layout.

Likewise, there are many workplace hazards that can affect the reproductive health of both sexes (including pesticides, metals, dyes and solvents, noise and vibration, radiation and infectious diseases) and, at the same time, some may affect the genital organs and reproductive health and faculties of men and women differently.

On the other hand, stereotyped perceptions about the capabilities and other characteristics of men and women may interfere when determining the different impact of occupational hazards and risks for each gender. Prohibitions on women working in hazardous or difficult conditions are often presented as a measure to protect their safety and health. However, working in hazardous or difficult conditions may entail risks affecting the health of any worker, regardless of their gender. To this end, provisions relating to the protection of persons working under hazardous or difficult conditions should be aimed at protecting the health and safety of both men and women at work, while taking account of gender differences with regard to specific risks to their health (ILO 2023b).

Unfortunately, the gender perspective is often neglected in OSH practice, with inequalities in women's participation in OSH decision-making processes. Gender-responsive OSH indicators based on sex-disaggregated data are scarce.

Disability

According to the recent ILO Global Estimates, at least 1.6 million workers suffer from a work-related injury which results in permanent incapacity. The ILO estimates that approximately 13 million working-aged people are living with vision impairment of occupational origin. This places work-related vision impairment as the third largest causal factor of vision-related conditions. (ILO 2023c)

People with disabilities encounter significant challenges when it comes to participating in the labour market.¹¹ These challenges arise due to unprepared workplaces, discrimination and inadequate legislation and policy frameworks. Workers with disabilities may face additional OSH risks or are at greater risk from exposure to hazards. For instance, they are more likely to be exposed to violence and harassment in the workplace, and thus at a greater risk of psychosocial risks.

Migrant workers

Worldwide, an estimated 169 million people are international migrant workers, constituting 4.9 per cent of the global labour force (ILO 2021b).

While labour migration offers potential advantages by expanding employment prospects, it also exposes migrant workers to difficulties and heightened vulnerability in their destination countries. Migrant workers often encounter adverse health consequences due to workplace hazards, exposure to harmful conditions, discrimination, insufficient insurance coverage, a lack of safety measures, and even abuse in jobs where they face elevated risks to their safety and well-being.

While some migrant workers hold high-skilled jobs, most migrants are employed in the three "D" jobs (dirty, dangerous and demeaning). These jobs are mostly found in informal and/or unregulated sectors such as agriculture, construction or domestic work, where labour and OSH protections are often lacking. Such work is of intensive and temporary or seasonal nature, with significantly higher occupational hazards (Ujita et al. 2019).

Data on work-related injuries and diseases of migrant workers remain scarce. Migrant workers often avoid reporting occupational accidents and diseases or seeking medical care for fear of being dismissed from work or because they may not be able to afford time away from work (ILO 2018b).

¹¹ According to available statistics, employment-to-population ratios are significantly lower among people with disabilities: 36 per cent compared to 60 per cent among people with no disabilities (UN 2019).

1.2.5. Patterns and forms of employment

The landscape of forms of employment is vast and new work arrangements are on the rise. An increasing proportion of the global workforce is now involved in non-standard forms of employment (ILO 2016).¹²

These workers often lack adequate OSH conditions and face greater risk of injury at work. They usually have little or no access to traditional contractual benefits, including holiday and paid sick leave, medical surveillance, induction and regular training, etc. In many cases they are responsible for ensuring their own safety and health at work, including the need to cover expenses for injury benefit insurances (Garben 2017; EU-OSHA 2015).

Non-standard forms of employment are associated with psychosocial risks to workers.¹³ Having an involuntarily temporary or part-time job may lead to stress for workers arising from perceptions of job insecurity, with negative impacts on mental health. Temporary workers may also be more susceptible to violence and harassment, including sexual harassment, with economic insecurities exposing workers to higher risk of supervisory abuse (ILO & WHO 2022).

Platform workers

Platform work¹⁴ is a form of work that has received significant attention over the last few years. A relatively high proportion of platform workers are migrants. The average age of platform workers is younger than the average of all employed individuals and men engage in platform work more frequently than women (ILO 2022b).

Platform work offers new and important opportunities for both individuals and businesses. Specifically, it has the potential to impact workers' lives positively by granting them greater control over their working hours and work-life balance. It may also facilitate the transition of work that was previously conducted in the informal economy into the formal sector (Garben 2017; ILO 2018c).

On the other hand, platform workers often suffer from a lack of safety and health protection, with no or little access to paid sick leave, OSH advice and training, suitable working equipment or adequate PPE. Some psychosocial risks are also quite prevalent among platform workers. For instance, platform work has been associated with an over-emphasis on "quasi-continuing" availability. Digital platform workers may also face an additional risk related to content moderation tasks, which involve screening digital materials for violent content (ILO 2019).

¹² Non-standard employment encompasses work that falls out of the realm of the "standard employment relationship", understood as work that is continuous, full time and part of a subordinate and bilateral employment relationship. It includes workers in temporary, part-time, contract, irregular, casual or on-call work, with zero-hours contracts, self-employment or other similar kinds of employment arrangements. Further information: [Non-standard employment around the world](#) (ILO 2016).

¹³ See [Non-standard employment around the world](#) (ILO 2016).

¹⁴ The emergence of the gig or platform economy is one of the most important new transformations in the world of work. An important component of the platform economy is digital labour platforms which includes both web-based platforms, where work is outsourced through an open call to a geographically dispersed crowd ("crowdwork"), and location-based applications (apps) which allocate work to individuals in a specific geographical area, typically to perform local, service-oriented tasks such as driving, running errands or cleaning houses (see [Digital labour platforms](#) (ILO 2023)).

Informal economy

More than 60 per cent of the world's employed population work in the informal economy, amounting to around 2 billion people (ILO 2023a), with significant differences between regions. While the informal economy exists everywhere, it is more prevalent in low-income countries, where it represents 89 per cent of total employment, compared to 82 per cent and 50 per cent respectively in lower-middle and upper-middle-income countries and 16 per cent in high-income countries. 84 per cent of employment in Africa is informal. Asia and the Pacific (66 per cent) has a slightly higher level of informality than the Arab States (54 per cent). Informal employment accounts for 37 per cent of total employment in the Americas and 1 in 5 workers in Europe and Central Asia (ILO 2023d).

Six sectors have informal employment rates that exceed the global average: agriculture (9 in 10 workers); domestic work (more than 8 in 10 workers); construction (close to 3 in 4 workers); accommodation and food service activities; wholesale and retail trade and repair of motor vehicles and motorcycles and other services activities (about 3 in 5 workers per sector) (ILO 2023d).

Workers involved in the informal economy often face numerous challenges. They may lack a stable or regular income and are unlikely to enjoy legal or social protections. Furthermore, they have limited or no access to labour unions or other forms of representation, collective bargaining and social dialogue. Their work often falls outside the purview of labour inspectorates, rendering them practically invisible in terms of OSH regulation and oversight. Promoting the transition to formal economy remains the best strategy to ensure legal and social protections and access for these workers to appropriate labour rights and benefits, including the fundamental right to a safe and healthy working environment.

Domestic workers

Of the 75.6 million domestic workers worldwide, 61.4 million (81.2 per cent) are informal workers. The share of informal employment among domestic workers is twice the share of that among other employees (39.7 per cent) (ILO 2023e). This is a strong indicator of how very few domestic workers enjoy labour and OSH rights and protection in practice.

Domestic work is female-dominated, with women accounting for 76.2 per cent of domestic workers. Globally, one in every 12 female employees works as a domestic worker (ILO 2023f).

Domestic workers tend to experience poorer OSH conditions and are more vulnerable to the impacts of OSH risks due to the characteristics of their work, their workplaces and the sector. They are exposed to a wide range of hazards, including chemical, physical and ergonomic hazards. Moreover, domestic workers often work for multiple households and in close proximity with the persons in these households, making them especially vulnerable to biological hazards and communicable diseases.

Psychosocial hazards pose an additional risk to domestic workers. Live-in domestic workers are vulnerable to long working hours, workplace isolation and social exclusion. Violence and harassment against domestic workers are also widespread. The most common types of violence and harassment experienced by domestic workers in their workplaces include economic abuse, psychological abuse, physical and sexual abuse, verbal abuse and lack of access to appropriate food.

The situation is further aggravated by the exclusion of the domestic work sector from labour and OSH legislation, making it difficult to ensure adequate OSH conditions and protections for those workers in practice.

Micro, small and medium-sized enterprises

Micro-, small and medium-sized enterprises (MSMEs) play a major role in most economies, particularly in developing countries. They account for 90 per cent of businesses worldwide and are important contributors to job creation and global economic development, generating 50 per cent of global gross domestic product (GDP) (UN 2023).

Despite their crucial role for economic growth, MSMEs often face considerable challenges to providing decent work. Commonly precarious, they often face both human and resource constraints, limiting their awareness of and compliance with OSH standards, which are often not adapted to the needs of smaller businesses. Labour inspectorates often lack the necessary resources, skills and training to monitor and enforce OSH compliance in these enterprises (ILO 2020).

Furthermore, most MSMEs operate in the informal economy. Unregulated and unregistered, these enterprises are not following any statutory regulations protecting workers in terms of working conditions, wages and OSH (ILO 2020).

Working from home

Working from home has long been an important feature of the world of work, with about 260 million home-based workers¹⁵ worldwide in 2019 (7.9 per cent of global employment). Working from home encompasses a wide range of situations, from economically disadvantaged industrial home-based workers to highly skilled teleworkers¹⁶. In 2019, most of the 260 million home-based workers were women (56 per cent), who were also more exposed to informality than men (88 per cent) on average and in all regions (ILO 2023e).

Telework has leaped since 2020 as a result of the containment measures adopted to halt the spread of COVID-19 and it is becoming increasingly clear that there will be no going back to the way things were before the pandemic in terms of telework. While telework is the predominant form of home working in high-income countries, in developing nations, particularly in Asia, homeworkers can be found at the bottom of supply chains associated with industries such as apparel, electronics, and houseware (ILO 2021c).

Home-based workers face significant OSH challenges, often due to their working location not being adapted to the activities that take place there. Most of the time the environment and equipment do not meet adequate ergonomic, environmental, and OSH standards. Compliance with OSH laws and regulations are difficult to inspect, including in relation to ensuring proper risk assessment and control.

One significant risk arises from the handling of tools, chemicals, or products (e.g. shoe glue) that are not adequately adapted for home use and are used without correct risk control measures or training in safe practices. This risk is amplified because it not only affects the homeworker but also extends to other members of the household.

Psychosocial risks are also common among home-based workers. Physical and social isolation is quite common, as are the blurred boundaries between work time and personal or family time.

¹⁵ Home-based work is generally understood to be work that is carried out in one's own home. The nature of home-based work is wide-ranging, encompassing workers that are in an employment relationship as well as those who are independent, self-employed workers. Homeworkers are a subset of home-based workers who do not have the degree of autonomy and economic independence necessary to be considered as independent workers in national law (see [Working from home: from invisibility to decent work](#) (ILO 2021c)).

¹⁶ Telework, which is when employees use ICT tools to perform their work remotely, includes teleworkers who work at their home or another location of their choosing on a regular or permanent basis.

1.2.6. Environmental challenges

Climate change, environmental degradation and air pollution

It is estimated that even a conservative projected increase of 1.5°C in the global temperature by the end of the twenty-first century will render 2 per cent of all work hours too hot to work by 2030, representing a loss of 72 million full-time jobs (ILO 2018d). Half of the world's population lives around the equator where heat levels will increase fastest. Many of those 4 billion people are among the poorest and often work outdoors, in sectors such as agriculture, fishing and forestry, facing increased risk of heat stress and other heat-related conditions and disorders.

Climate change poses a multidimensional challenge to OSH, and, without proper control measures in place, may increase the risk of injury, disease and death for workers. Numerous health effects on workers have been linked to climate change, including injuries, cancer, cardiovascular disease, respiratory conditions, and effects on their psychosocial health (ILO 2023g). Climate change and environmental degradation impact OSH in different ways. Firstly, they aggravate known safety and health hazards, for instance severe weather events, heat, wildland fire, infectious disease, and air pollution (Kiefer et al. 2016). Moreover, they can also result in new, unanticipated or unrecognized hazards such as widening infectious disease vector ranges (which may also result in epidemics and a global pandemic as well as chronic diseases and health conditions), rise in pesticide use, and increases in aeroallergens (Kiefer et al. 2016). In addition, desertification and loss of productive land, polar ice melting, ultraviolet (UV) radiation, extreme weather events may crucially impact workers' safety and health, among others (Adam-Poupart et al. 2013; Kiefer et al. 2016; Pega et al. 2023; Schulte et al. 2016; Schulte & Chun 2009)

Air pollution¹⁷ such as from the burning of fossil fuels, is another serious threat to safety and health. Air pollution increases health risks for all workers and, as with heat stress, particularly affects those engaged in physical activity outside. According to the Organisation for Economic Co-operation and Development (OECD), premature deaths from exposure to air pollution are estimated to increase up to five times, representing up to a third of all global projected deaths by 2060 (OECD 2016).

Finally, the human response to climate change and the move towards a just transition towards inclusive and environmentally sustainable economies and societies ("just transition") may, in some cases, introduce new or exacerbate existing hazards in the working environment such as in the course of the development of renewable energy, waste management, carbon sequestration, or green industries (Kiefer et al. 2016). Rapid technological innovation may lead to an OSH landscape characterized by new processes and constantly changing materials, requiring workplace training and adapted risk assessments.

► Case study on the effects of the production and recycling of solar panels on workers

Solar panels are essential for shifting away from fossil fuels and reducing carbon dioxide emissions. However, their production and disposal can be hazardous for workers. While the International Renewable Energy Agency (IRENA) estimates that photovoltaic panel waste volume was around 250,000 tonnes in 2016, the global solar energy systems market is expected to grow annually by 15.7 per cent from 2022 to 2030, potentially resulting in up to 78 million tonnes of waste. Solar panels are often made of lead, cadmium and other toxic chemicals, making their recycling and disposal difficult. Chemicals such as cadmium can be washed off the panels by rainwater or released during hurricanes, hailstorms, earthquakes or other extreme weather events. This does not only affect the local environment, but also endangers workers processing the waste (Grand View Research 2020; IRENA 2016).

¹⁷ ILO's [Working Environment \(Air Pollution, Noise and Vibration\) Convention, 1977 \(No. 148\)](#) refers to the term air pollution to cover all air contaminated by substances, whatever their physical state, which are harmful to health or otherwise dangerous.

The green economy and green technologies

Green industries¹⁸ are growing substantially and could be worth 5 per cent of global GDP by 2050 (Reuters 2023a). While some jobs with high OSH risks such as coal mining may decline, green jobs that are created are not always guaranteed to result in decent work. In fact, if not proactively managed and controlled, new and emerging risks associated with new technologies, processes or materials, can affect workers' safety and health in new green industries. Safety and health issues of green technologies arise in all stages of their life cycle: from the extraction of the necessary raw materials and the manufacturing of technological devices, to their transportation, installation, operation, decommissioning and disposal. They can occur across different countries and regions, involving many different groups of workers. For instance, in emerging and developing countries, recycling activities are generally carried out by workers in the informal economy. There are an estimated 20 million waste pickers working globally (Reuters 2023b). Waste pickers generally have little or no social, economic or legal protections, and often include women and children. They are continually exposed to hazardous substances, materials and pathogens, as well as to new, complex and hazardous waste flows, such as electronic waste (ILO 2012).

1.2.7. Technology, digitalization, artificial intelligence and nanomaterials

The development, use and communication of digitized information are key technological developments which are driving the "fourth industrial revolution" (Garben 2017). People are increasingly connected to digital information anywhere and at any time, which has implications for safety and health at work (EU-OSHA 2022a).

One key impact on safety and health at work is that technological developments have, in certain instances, been able to take over dirty, dangerous and demeaning jobs previously undertaken by workers such as in waste management, livestock nurturing, mine exploration, or warehousing for e-commerce (Association for Advancing Automation 2019). The emergence of new technology (e.g. smart wearables) has also improved protection against hazards in many scenarios. For instance, automation, robotics, or autonomous technology can prevent the physical exposure of workers to noise, vibration or moving machinery and reduce exposure to hazardous substances and injuries. Innovation in manual handling may support ergonomic movements and positions, while at the same time allowing the inclusion of a broader range of workers in certain activities at work such as those with a disability or older workers. AI is also increasingly being used to support workers' safety and health in different ways, for example in medical diagnosis (IBM 2016).

On the other hand, the use of digitalization and artificial intelligence creates challenges, with possible detrimental effects on OSH. New risks can emerge from increased human-machine interfaces. Work-related accidents may result from collision with equipment, mechanical failures, electrical hazards, or programming errors of robots (HSEBLOG 2023). Moreover, ergonomic risks may result for example from the increased use of mobile devices and sedentary work. Stress and human error may appear due to high cognitive, visual and/or sensory load (EU-OSHA 2018). Workers increasingly using smart devices can lose autonomy in how they carry out their work and forego interaction with their colleagues, which can lead to stress and feelings of isolation (ILO 2019). The use of AI and new technology has also led to the replacement of workers, for instance financial analysts or personal assistants (Biewald 2015). This can increase job insecurity, unemployment and underemployment, which affects workers' mental health and well-being.

¹⁸ Green industries include renewable energy production and water services, green transportation, waste management, green buildings, sustainable agriculture and forestry, recycling and the development and use of low-carbon technologies.

1.3. Traditional and emerging risk factors

1.3.1. Biological hazards

Workers in all sectors may be exposed to biological hazards (as for example demonstrated by COVID-19); however, there are some workplaces where these hazards are more prevalent. These include hospitals and laboratories, animal husbandry activities and grain silos, sewage maintenance facilities, or collection of waste, among others.

1.3.2. Chemical hazards

Workers around the world are exposed to chemicals within almost all work activities¹⁹ and across global supply chains, with more than 1 billion workers exposed to hazardous substances, including pollutants, dusts, vapours and fumes, every year (ILO 2021d). In fact, it is estimated that annually, more than 1 million workers die, amounting to 2,900 global deaths every day, due to hazardous chemical exposure alone. Worldwide, occupational exposure to particulate matter, gases and fumes results in more than 450,000 deaths each year (ILO & WHO 2021a). Despite advances in global evidence and increased regulation, classic hazards such as asbestos remains one of the top chemical exposures – and occupational killers – in the working environment, with around 239,000 deaths attributable to its occupational exposure (Institute for Health Metrics and Evaluation 2019). In addition, more than 42,000 deaths were caused by occupational exposure to silica (ILO & WHO 2021a). Thousands of new chemical mixtures and compounds enter the market every year, while risk assessment and workplace regulation struggles to keep up.

1.3.3. Physical and safety hazards

Noise²⁰ and vibrations²¹ are long established risk factors, but still widely present. Exposure to occupational noise causes 8.16 million DALYs²² every year (ILO & WHO 2021a). In Europe, a total of 48.6 million workers reported to be regularly exposed to vibrations. Workers in construction, manufacturing, mining, agriculture, fishing and forestry and electricity, gas and water supply are the most affected (EU-OSHA 2022b).

In relation to radiation hazards,²³ around 24 million workers worldwide are monitored for exposure to natural and artificial ionizing radiation (UNSCEAR 2020/21 report, Volume IV, Annex D). Of these, about 12.6 million work in occupations that involve natural sources of radiation and the rest in occupations

19 Workers may be exposed to chemical hazards during: (a) the production of chemicals; (b) the handling and use of chemicals; (c) the storage of chemicals; (d) the transport of chemicals; (e) the disposal and treatment of waste chemicals; (f) the release of chemicals resulting from work activities; (g) the maintenance, repair and cleaning of equipment and containers for chemicals (see [Safety in the use of chemicals at work](#) (ILO 1993)).

20 ILO's [Working Environment \(Air Pollution, Noise and Vibration\) Convention, 1977 \(No. 148\)](#) refers to the term noise to cover all sound which can result in hearing impairment or be harmful to health or otherwise dangerous. Exposure to excessive noise may cause hearing loss or other auditory problems.

21 Vibrations generated by power tools or heavy machinery and transferred to the human body can cause harm in various ways, ranging from discomfort and decreased productivity (due to short term exposure) to functional and organic aberrations of body functions and structure (due to chronic exposure) (see [Vibration](#) (EU-OSHA 2022)).

22 One DALY, or disability-adjusted life year, represents the loss of the equivalent of one year of full health. It is a universal measurement to calculate health burdens.

23 Radiation describes any process in which energy emitted by one body travels through a medium or through space, ultimately to be absorbed by another body. Radiation hazards comprise both ionizing and non-ionizing radiations. Ionizing radiation includes cosmic rays, X-rays and the radiation from radioactive materials. Non-ionizing radiation includes radiant heat, radio waves, microwaves, terahertz radiation, infrared light, visible light, and UV light. The purpose of radiation protection is to provide an appropriate level of protection for humans without unduly limiting the beneficial actions giving rise to radiation exposure. Radiation protection is to prevent the occurrence of harmful deterministic effects and to reduce the probability of occurrence of stochastic effects (e.g. cancer and hereditary effects). For further information: [Radiation Protection](#) (ILO 2023).

that involve exposure to artificial sources of radiation. Ionizing radiations can induce acute effects (for example, burns) and long-term effects (for example, cancer and hereditary diseases), which are also known as non-stochastic (deterministic) and stochastic effects. Exposure to UV radiation is the main occupational risk factor for skin cancer, causing outdoor workers to be the most vulnerable to developing occupational skin cancer. For instance, outdoor workers are exposed to at least 2 to 3 times more UV radiation than indoor workers and often to daily UV radiation doses 5 times above internationally recommended limits (John et al. 2021).

Thermal hazards²⁴ leading to heat stress may emerge due to environmental conditions (e.g. air temperature, humidity, or sunlight), the level of physical activity, the use of restrictive clothing (preventing the body from losing excess heat) or individual factors (OSHA 2023). As mentioned above, increasing temperatures due to climate change pose a huge threat for workers' well-being. At the same time, working in the cold also poses a risk to the occupational health of workers. Despite the contrasting temperatures, factors similar to those for heat stress may be considered to prevent adverse effects in the cold, namely air temperature, wind speed, humidity, physical activity, or protective clothing.

1.3.4. Ergonomic hazards

Ergonomic hazards in the workplace often stem from the improper design of work systems, setup of workstations, tools, equipment, and tasks, which can place strain on the body and result in injuries. Adverse ergonomic working conditions can cause visual, muscular and psychological disturbances such as eye strain, headaches, fatigue, musculoskeletal disorders (MSDs) including chronic back, neck and shoulder pain, cumulative trauma disorders (CTDs), repetitive strain injuries (RSIs) and repetitive motion injuries (RMIs), psychological tension, anxiety and depression. Psychosocial factors that result from the organization of work are considered to have impacts on the development of MSDs. Injuries caused by occupational ergonomic factors were responsible for 12.27 million work-related DALYs lost in 2016 (ILO & WHO, 2021b).

1.3.5. Psychosocial hazards and mental health

Globally, the WHO estimates that 12 billion working days are lost every year to depression and anxiety at a cost of 1 trillion US dollars per year in lost productivity (WHO 2022). Work can be a protective factor for mental health, but it can also potentially contribute to harm. Unemployment or unstable or precarious employment, job and financial insecurity and job loss can have a severe impact on mental health, including increasing the risk of suicide attempts (ILO & WHO 2022). How the job is designed, including the worker's control over the job, unclear roles, lack of communication, inequality, discrimination, violence and harassment, can be an important source of stress at work, affecting both physical and mental health and well-being. Globally, it was estimated that 744,924 deaths occurred in 2016 that were attributable to exposure to long working hours (≥ 55 hours per week) (ILO & WHO, 2021b).

²⁴ Thermal hazards, whether in the form of extreme heat or cold temperature, pose risks such as heat exhaustion, heatstroke, frostbite, or hypothermia.



1.4. Policy trends

Sound legal and policy frameworks on OSH, built on social dialogue and participation, can enhance decent work for all workers. Successful approaches deal with the OSH needs of all groups of workers and address inequalities in OSH conditions, thereby promoting equal access to safe and healthy working environments, OSH services and OSH protections.

1.4.1. National OSH policies and programmes

Comprehensive national policies and programmes on OSH are essential for improving OSH conditions in a country.²⁵ However, in 2023 only 47 per cent of ILO Member States have a national OSH policy. Overall, the ILO region with the highest percentage of Member States with a national OSH policy is Europe and Central Asia (57 per cent), followed by Asia and the Pacific (47 per cent), the Americas (46 per cent), the Arab States (45 per cent) and Africa (39 per cent) (ILO 2023h). Even fewer countries have a national OSH programme. In 2023, only 63 Member States (34 per cent) have an up-to-date national OSH programme. Europe and Central Asia have the highest percentage of Member States with an up-to-date programme on OSH (47 per cent), followed by Asia and the Pacific (36 per cent), the Americas (31 per cent), Africa (24 per cent) and the Arab States (18 per cent) (ILO 2023h).

Concerning specific occupational hazards, countries continued to implement innovative policies and programmes to reduce exposure to dangerous chemicals and e-waste. Around 67 countries now have laws addressing e-waste management, but they primarily focus on environmental protection. Many countries such as Australia, the Bahamas, Kenya, Malawi, Oman and the Philippines have also included provisions on biological hazards in their national OSH policies or programmes (ILO 2023e).

1.4.2. National OSH legislation

National OSH legislation is a central pillar of national OSH systems and will continue to play a key role in the future. The COVID-19 crisis increased awareness of the need to develop legislation and guidance to respond to biological threats. As teleworking and hybrid work arrangements have become commonplace in many industries, laws and regulations covering ergonomics, the physical environment and psychosocial risks and proper means to address them have been developed in many countries (ILO 2023e).

In response to the impact of climate change on OSH, laws and regulations have been developed, particularly to protect workers from heat stress – for example in Qatar and other Gulf countries, as well as in Australia, China, Germany, Spain and the United States of America (ILO 2023e).

Legal frameworks are also starting to address the OSH challenges posed by the use of digitalization and AI. For example, the 2020 European Social Partners Framework Agreement on Digitalisation²⁶ sets out a commitment to optimize the benefits and deal with the challenges of digitalization in the world of work, which demands guaranteed control by humans over machines and AI in the workplace. More than 60 countries have developed laws, regulations and guidelines on AI, but OSH still tends not to be prominently addressed except in some countries such as Austria, Croatia and the Netherlands (ILO 2023e).

²⁵ The ILO's fundamental OSH Conventions ([Occupational Safety and Health Convention, 1981 \(No. 155\)](#) and [Promotional Framework for Occupational Safety and Health Convention, 2006 \(No. 187\)](#)) require the government or public authority, in consultation with the social partners, to formulate, implement and review a national policy on OSH. In order to implement such national policy and improve the OSH situation, Convention No. 187 calls on governments, in consultation with social partners, to develop a national programme on OSH.

²⁶ See [European Social Partners Framework Agreement on Digitalisation](#) (ETUC 2020).

1.4.3. Social dialogue on OSH

The participation of the social partners in OSH decision-making and implementation processes is key, either through national tripartite bodies or bipartite committees at the workplace level.

At the national level, successful social dialogue structures and processes have the potential to resolve important economic and social issues, encourage good governance, advance social and industrial peace and stability, and boost economic progress. In 2023, 79 per cent of ILO Member States have a national tripartite body dealing with OSH issues (ILO 2023h). At the workplace level, some 73 per cent of ILO Member States have provisions in national legislation for the establishment of workplace OSH committees. The functions, roles and prerogatives of these committees may differ from country to country. Their tasks often include monitoring the implementation of risk control measures, conducting OSH training and monitoring data relating to accidents, injuries and hazards. Joint OSH committees have proven to be a successful way of ensuring cooperation between employers and workers in order to fulfill OSH requirements (ILO 2015).

The COVID-19 pandemic emphasised the vital role of social dialogue in the adoption and implementation of emergency measures during crisis, as well as in the design and application of national recovery plans and policies. According to a global study, in 59 per cent of the 133 countries surveyed, tripartite dialogue took place to respond to the COVID-19 crisis, with one of the priority areas for negotiation being OSH measures. Respondents in a global survey of trade unions noted that COVID-19 increased the impact of OSH on their collective bargaining agendas, with OSH comprising a large proportion of agreements (ILO 2021e).



Chapter 2.

ILO action on OSH

2.1. The recognition of a safe and healthy working environment as a fundamental principle and right at work

The [ILO Centenary Declaration for the Future of Work](#) recognized that safe and healthy working conditions are fundamental to decent work. At its 110th Session in June 2022, the International Labour Conference made a significant decision to enhance the prevention of occupational injuries and diseases. It decided to include “a safe and healthy working environment” in the ILO framework of fundamental principles and rights at work²⁷.

In addition, the International Labour Conference designated as fundamental Conventions the [Occupational Safety and Health Convention, 1981 \(No. 155\)](#) and the [Promotional Framework for Occupational Safety and Health Convention, 2006 \(No. 187\)](#). As a result of these decisions, all Members of the ILO now have an obligation, regardless of whether they have ratified these Conventions, to promote, respect and progressively realize the principles regarding the fundamental right to a safe and healthy working environment. This obligation arises from the mere fact of their membership of the ILO and should be carried out in good faith and in accordance with the ILO Constitution.

The inclusion of a safe and healthy working environment as a fundamental principle and right at work changes the reporting obligations both for Member States who have ratified the two fundamental OSH Conventions and for those who have not. Starting in 2024, Member States that have ratified either fundamental Convention will be obliged to report on its implementation in 3-year cycles (instead of 6-year cycles previously). On the other hand, Member States that have ratified neither Convention No. 155 nor Convention No. 187 will now have to provide information regarding improvements related to the new fundamental principle and right at work as part of the report requested annually from all Member States that have not ratified fundamental standards.

In addition, at the 111th Session in June 2023, the International Labour Conference adopted the [Safe and Healthy Working Environment \(Consequential Amendments\) Convention, 2023 \(No. 191\)](#), which amended several ILO instruments²⁸. Amendments consequential upon the inclusion of a safe and healthy working environment as the fifth category of fundamental principles and rights at work have been included in the [ILO Declaration on Social Justice for a Fair Globalization \(2008\)](#), the [Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy \(2022\)](#), the [ILO Declaration on Social Justice for a Fair Globalization \(2008\)](#), the [Global Jobs Pact](#) and all relevant international labour standards.

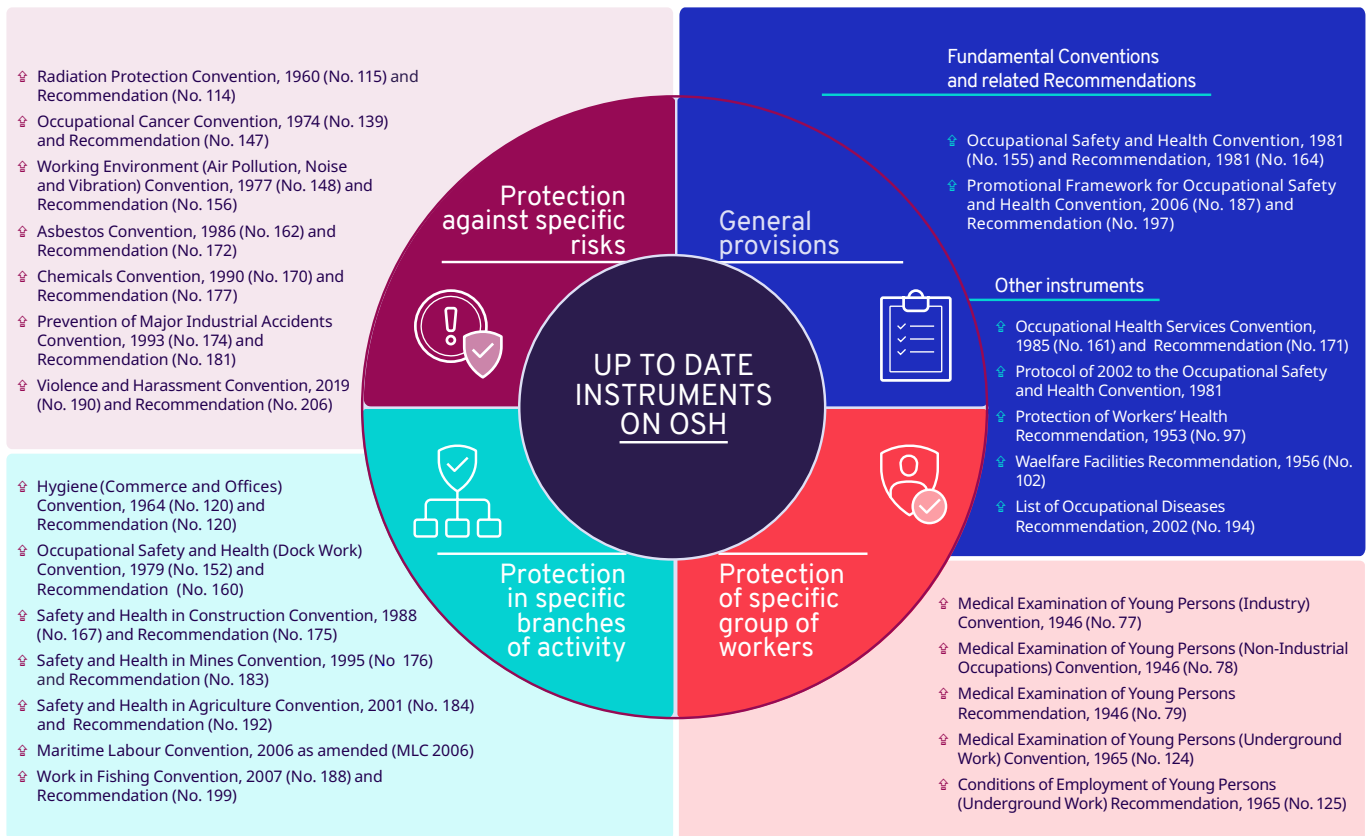
²⁷ The ILC decided that the inclusion of “a safe and healthy working environment” as a fundamental principle and right at work would be done through a modification of paragraph 2 in the [ILO Declaration on Fundamental Principles and Rights at Work \(1998\)](#), resulting in consequential amendments to the [ILO Declaration on Social Justice for a Fair Globalization \(2008\)](#) and [the Global Jobs Pact \(2009\)](#).

²⁸ Article 1 of the ILO [Convention No. 191](#) contains the details of the amendments.

2.2. OSH instruments

International labour standards and instruments on OSH provide minimum standards for the control and management of work-related risks and the protection of workers across a wide range of occupations and situations in which work takes place.

► Figure 4. ILO Conventions on OSH



In 2019, the International Labour Conference adopted the [Violence and Harassment Convention, 2019 \(No. 190\)](#) and its [Recommendation \(No. 206\)](#). The Convention recognizes the right of everyone to a world of work free from violence and harassment, which includes gender-based violence and harassment. Accordingly, OSH provisions on violence and harassment shall be taken into account in national laws, regulations and policies.

Primarily working with governments, employers' and workers' organizations, the ILO promotes the ratification and supports the implementation of international labour standards related to OSH. In particular, the fundamental Occupational Safety and Health Conventions, Nos. 155 and 187, provide a blueprint for progressive and continuous improvements towards the attainment of a safe and healthy work environment.

In recent years, the ILO has made significant strides in updating and introducing revised codes of practice in several sectors.

In 2018, the revised code of practice for safety and health in opencast mines²⁹ was adopted. This updated code reflects the numerous changes that have taken place in the industry, its workforce, the roles of competent authorities, employers, workers, and their organizations, as well as the development of new ILO instruments on OSH, including the [Safety and Health in Mines Convention, 1995 \(No. 176\)](#).

In October 2021, a meeting of experts successfully adopted the first ILO code of practice on safety and health in the textiles, clothing, leather and footwear industries³⁰. This comprehensive code provides practical advice on how governments, employers, workers, and their representatives can collaborate to eliminate, reduce, and control major hazards and risks in these industries.

Furthermore, in 2022, the revised ILO code of practice on safety and health in construction³¹ was adopted. This new code supersedes the previous one from 1992, which had become outdated due to changes in working practices and conditions within the construction sector over recent decades. The revised code takes into consideration emerging areas that require improved safety and health practices as well as other protective measures.

In December 2021, the [Guidelines on general principles of labour inspection](#) were adopted by a tripartite meeting of experts. The Guidelines are intended to assist Member States in addressing current and emerging trends in labour inspection and promoting modern and effective labour inspection policies and practices, implementing the key principles contained in the [Labour Inspection Convention, 1947 \(No. 81\)](#), and the [Labour Inspection \(Agriculture\) Convention, 1969 \(No. 129\)](#).

29 See ILO's [Code of practice on safety and health in opencast mines](#) (2018).

30 See [Safety and health in textiles, clothing, leather and footwear](#) (ILO 2022).

31 See [Safety and health in construction \(Revised edition\)](#), (ILO 2022).

Biological hazards

In June 2022, experts from governments, employers and workers' organizations meeting at the ILO adopted [technical guidelines for handling biological hazards in the working environment](#). The guidelines provide specific advice, aligned with international labour standards, on preventing and controlling work-related injuries, diseases and deaths related to exposure to biological hazards in the working environment. This includes questions related to the responsibilities and rights of competent authorities, employers, occupational health services and workers, workplace risk management, workers' health surveillance, and preparedness for and response to emergencies. The technical guidelines will assist in preparing for the Conference discussion.

The Governing Body noted a regulatory gap in standards concerning biological hazards and decided³² that a standard-setting item on biological hazards should be placed on the agenda of the 112th (2024) and 113th (2025) Sessions of the Conference. As part of the process, the ILO developed a law and practice report³³ that also included a questionnaire calling for a reply from Governments, after consultation with the most representative organizations of employers and workers. The replies to the questionnaire will form the basis of the background report for the Conference discussion.



Group of women filleting hake in a factory. Namibia, 12/2021. © Victor Libuku/ILO

32 See [Minutes of the 341st Session of the Governing Body of the International Labour Office](#), (ILO 2021).

33 See [Biological hazards in the working environment](#) (ILO 2022).

2.3. Promotion, awareness-raising and advocacy

The ILO actively organizes and engages in initiatives aimed at promoting, raising awareness of and advocating for improving safety and health at work. Every year, the ILO celebrates the World Day for Safety and Health at Work by organizing a campaign to raise awareness of specific OSH issues.

► World Day for Safety and Health at Work

Since 2003, the ILO has celebrated the [World Day for Safety and Health at Work](#), respecting the workers' commemoration event, also known as Workers' Memorial Day, organized on 28 April. This annual international campaign aims at raising widespread awareness of the importance of OSH and promoting a global preventative safety and health culture. Each year, the ILO produces materials on a specific, timely theme related to OSH such as workplace stress, safety and health of young workers, the future of work, investing in resilient OSH systems and building a positive safety and health culture.

The 2023 campaign³⁴ celebrated the inclusion of a safe and healthy working environment as a fundamental principle and right at work. In this context the report "[Implementing a safe and healthy working environment: Where are we now?](#)" was produced to provide an overview of the global implementation status of some of the key provisions contained in the fundamental OSH Conventions Nos. 155 and 187.

In the preceding years, the global campaign focused on different aspects of the COVID-19 crisis and its aftermath, looking at how to ensure OSH in the world of work facing the pandemic (2020)³⁵; the importance of resilient OSH systems in anticipating and responding to crises (2021)³⁶ and lessons learned on enhancing social dialogue on OSH (2022)³⁷.

The ILO co-organizes the triennial World Congress on Safety and Health at Work together with the International Social Security Agency (ISSA) and a host government.

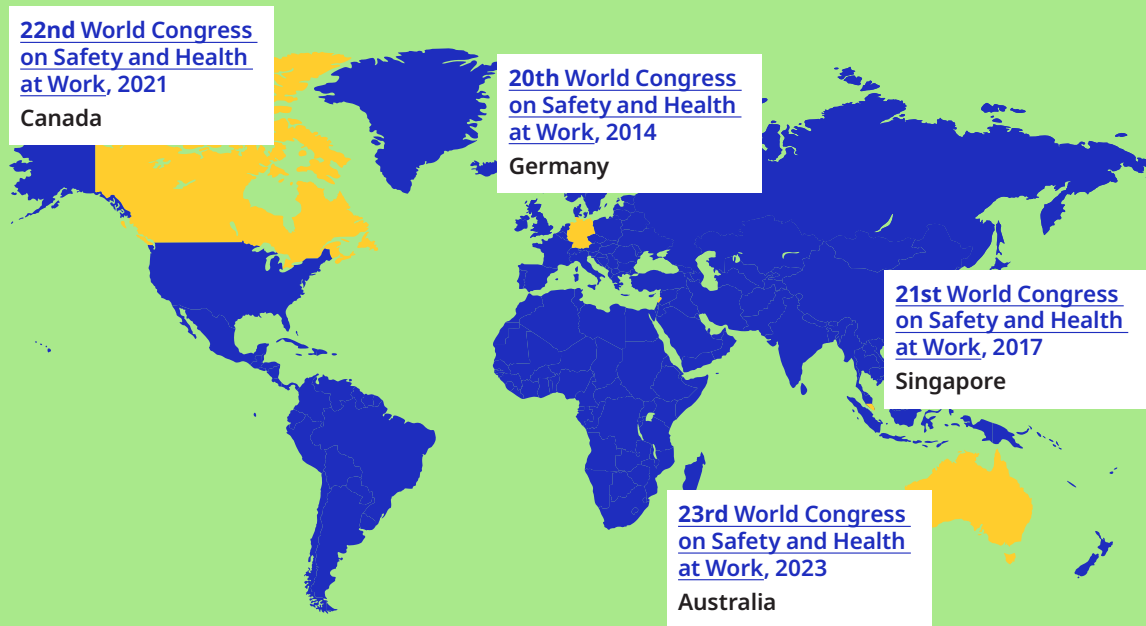
³⁴ The 2023 World Day for Safety and Health at Work theme was: "A safe and healthy working environment is a fundamental principle and right at work".

³⁵ The 2020 World Day for Safety and Health at Work theme was: "Stop the pandemic: Safety and health at work can save lives", with the global report "[In the face of a pandemic: Ensuring Safety and Health at Work](#)".

³⁶ The 2021 World Day for Safety and Health at Work theme was: "Anticipate, prepare and respond to crises: Invest now in resilient occupational safety and health systems", with the global report "[Anticipate, prepare and respond to crises – Invest now in resilient occupational safety and health systems](#)".

³⁷ The 2022 World Day for Safety and Health at Work theme was "Act together to build a positive safety and health culture", with the global report "[Enhancing social dialogue towards a culture of safety and health: What have we learned from the COVID-19 crisis?](#)".

► Figure 5. World Congresses on Safety and Health at Work 2014-2023



The ILO has advocated for the inclusion of labour references in important international instruments. This was the case at the International Conference on Chemicals Management (ICCM5) which took place from 22-29 September 2023 in Bonn, Germany. The ILO and its constituents secured critical text in the documents to promote labour sector engagement, as well as key ILO principles related to decent work, just transition, OSH, due diligence and a direct reference to the inclusion of a safe and healthy working environment as a fundamental principle and right at work. The framework adopted also includes direct reference to international labour standards.

The [ILO International Training Centre \(ITCILO\)](#), the training arm of the ILO, offers various training courses on OSH. These courses are delivered both face-to-face and online. Examples of these courses include the biennial Academy on Labour Administration, Labour Inspection and Workplace Compliance, the Master programme in OSH and other short courses focused on OSH.³⁸

³⁸ A comprehensive list of courses on OSH can be found here: [Occupational Safety and Health](#) (ITC-ILO 2023).

2.4. Technical assistance and development cooperation

As part of its mandate, the ILO provides technical support to its Member States in their efforts to improve national OSH frameworks with a view to creating a sustainable preventative OSH culture and ensuring the right to a safe and healthy working environment.

At country level, the ILO supports its constituents in formulating or reviewing national policies and programmes; improving their national OSH systems through the adoption or adaptation of national laws and regulations, effective advisory services and enforcement; the establishment and reinforcement of OSH institutions and bodies, including national tripartite OSH bodies or committees, OSH services and labour inspectorates; ensuring the availability and quality of data on occupational accidents and diseases; and the progressive expansion in coverage of occupational health services (among others). The ILO also assists its constituents in promoting the implementation of comprehensive OSH management systems in workplaces, including adequate emergency preparedness and response, taking into account the characteristics of different sectors and enterprises. Technical assistance is also provided for strategic OSH workforce planning capacity-building for OSH bodies, occupational health services, professional associations, and employers’ and workers’ organizations.³⁹

Since 2015, the ILO Flagship Programme [Safety + Health for All](#) has been the key vehicle in promoting development cooperation in the field of OSH. The programme mobilizes governments, employers’ and workers’ organizations and other key stakeholders to implement strategic interventions at all levels. It is specifically aimed at workers in vulnerable conditions such as female, young and migrant workers, as well as those in hazardous sectors such as agriculture, construction and more recently, mining. By the beginning of 2023, Safety + Health for All had directly or indirectly benefited over 182 million workers in 23 countries.

► Figure 6. Safety + Health for All (an ILO Flagship Programme): Operations in 23 countries



39 See [ILO Programme & Budget 2022-2023](#) – Output 7.2 as well as the ILO Decent Work Dashboard - [Decent Work Results](#).

An integral part of Safety + Health for All is the [Vision Zero Fund](#) which was a G7 initiative and later endorsed by the G20 in 2017. Working with global supply chains in the agriculture, garment and construction sectors, the Fund strives to reach zero work-related fatalities, severe injuries and diseases through fostering public and private action in selected businesses operating in low- and middle-income countries and introducing prevention activities to improve OSH.

Building safe and healthy supply chains in Madagascar

In Madagascar⁴⁰, interventions within the framework of the Vision Zero Fund aim to promote a safe and healthy working environment in selected supply chains. A first phase (2017-2019) focused on the lychee supply chain and the current phase (2020-2024) focuses on the textile and construction supply chains. It is estimated that over 400,000 workers will have benefited from Programme interventions by 2024.

Regarding the development of a conducive legal framework, a national OSH profile was developed and a gap analysis conducted to assess the compliance of Malagasy legislation with international labour standards on OSH. The Government then set up a Tripartite Committee to monitor the ratification and implementation of the two Conventions recently promoted as fundamental (C155 and C187), as well as Convention C161 on occupational health services. In June 2023, Madagascar deposited the instruments of ratification of the three ILO Conventions with the Director-General of the ILO, concluding an intensive process of strengthening its legal OSH framework with the support of the project. A national roadmap for the implementation of the Conventions was adopted and is under implementation with the support of the project.

In addition, the ILO progressively supported the strengthening of the labour inspectorate leading to the adoption, in 2022, of the first national labour inspectorate strategic plan, with a particular focus on OSH promotion in the construction, textile, mining, vanilla and retail sectors.

The Programme interventions also focused on making employers' and workers' organizations positive agents of change in the field of OSH. Following regular engagement with the employers' organization in the textile sector, the organization adopted a charter for the promotion of safety and health at work. Engagement with the unions also led to the adoption of an action plan by the Madagascar Labour Conference (*Conférence des Travailleurs de Madagascar*, or CTM) enhancing unions' capacity to train and advocate for their members on OSH issues. As a result, CTM strengthened the capacity of over 1500 workers' representatives and appointed 104 OSH focal points in regions to support the implementation of OSH initiatives at the workplace level.



The manual pressing unit of the KFBMH factory. Madagascar, 11/2021. © ILO

40 See [Madagascar – Building safe and healthy textile and construction supply chains in Madagascar](#) (ILO 2023).

Cotton farmer project in Telangana, India

The cotton farmer project being implemented in Telangana, India was aimed at the promotion of safety and health improvements in conjunction with the other elements of the fundamental principles and rights at work.

Cotton farmers, both women and men, are at the first tier of the global supply chain in the cotton textile business. They face many safety and health challenges such as carrying heavy materials, sustained awkward work posture, exposure to strong heat, unsafe use and storage of pesticides, and the risk of snake bites. In addition, cotton farmers need adequate welfare facilities including safe drinking water, toilets and rest facilities on the farm.

In the participatory safety and health training, the farmers actively shared their own safety and health experiences and ideas for improvement, for example: use of wheelbarrows when moving heavy materials, better informed selection of safer seeds as commercial seeds are often coated with chemicals, safe storage of pesticides and fertilizers, and guards for moving parts of agricultural machinery, etc.

After the initial training, 20 farmer representatives joined a training of trainers to become farmer OSH trainers. They continue spreading the knowledge to other farmers in neighbouring villages.



2.5. Knowledge development, management and dissemination

To provide widespread access to information, the ILO has developed and manages several OSH databases, information resources and networks. These include the [ILO Global Database on OSH Agencies, Institutions and Organizations \(INTEROSH\)](#), the [International Chemical Safety Cards \(ICSCs\) database](#), the [ILO Encyclopaedia of Occupational Health and Safety](#) and the [OSH country profiles](#).

The ILO also continues to support and engage in research on various topics related to OSH, including biological, chemical, physical, and ergonomic hazards, as well as emerging risks linked to climate change, technology, demographics, new forms of work, and supply chains. Psychosocial risks and workplace health promotion, including the prevention of violence and harassment and of substance abuse, are also areas of continued significance.

► Occupational Health

Diagnostic and exposure criteria for occupational diseases

The ILO has a long history in the identification of diseases as occupational for the purpose of their prevention and compensation. This publication provides guidance notes for diagnosis and prevention of the diseases in the ILO List of Occupational Diseases. The [List of Occupational Diseases Recommendation, 2002 \(No. 194\)](#), adopted by the International Labour Conference in 2002, annexed a list of occupational diseases which was revised in 2010. The [revised 2010 ILO List of Occupational Diseases](#) represents the most recent ILO work in this regard.

The causal relationship between work and disease is established on the basis of clinical and pathological data, occupational background and job analysis, identification and evaluation of occupational risk factors and the role of other risk factors. The relationship between occupational exposure and the resulting severity of impairment among workers and the number of workers exposed are important criteria for the determination of a disease to be included in the ILO list of occupational diseases.

ILO International Classification of Radiographs of Pneumoconioses

The Classification provides a means for describing and recording systematically the radiographic abnormalities in the chest provoked by the inhalation of dusts. It is used to describe radiographic abnormalities that occur in any type of pneumoconiosis and is designed for classifying only the appearances seen on postero-anterior chest radiographs.

The 2022 revised edition of the Guidelines for the use of the ILO International Classification of Radiographs of Pneumoconioses transitions the ILO classification to using a new set of digitally acquired radiographic standard images. This new set of digital images replaces the previous set of digitized analogue standard images used in the 2011 edition.

► COVID-19 and the world of work

The ILO's actions in response to COVID-19 focused on supporting its constituents during the crisis by providing policy and advocacy support, business continuity and support tools, local survey instruments, and online trainings. The ILO produced knowledge products to guide its constituents, including more than 170 COVID-19 related publications and 20 sectoral briefs. Furthermore, information on global COVID-19 policy responses based on four pillars of action to lessen the impact of COVID-19 on businesses, jobs and the most vulnerable members of society was shared. These included: 1) stimulating the economy and jobs; 2) supporting enterprises, employment and income; 3) protecting workers in the workplace; 4) using social dialogue between government, workers and employers to find solutions (ILO 2023i).

Promoting safe and healthy working environments in MSMEs

Recently the ILO has developed global products to inform policy action on OSH in MSMEs. In particular, the ILO project “[Upholding sustainable delivery mechanisms to promote OSH in small and medium-sized enterprises](#)”, funded by the Republic of Korea, aimed to identify and promote sustainable and effective mechanisms to improve OSH conditions in MSMEs. In this framework, the global report [Improving Safety and Health in Micro-, Small and Medium-Sized Enterprises: An overview of initiatives and delivery mechanisms](#) (ILO 2020) analysed the OSH situation in MSMEs and reviewed a broad range of support mechanisms that national governments, social partners and other actors had developed to incentivize the adoption of OSH measures in MSMEs. The report was complemented by the publication [Safety and Health in Micro-, Small and Medium-Sized Enterprises: A collection of five case studies](#) (ILO 2020), which summarized the OSH situations of MSMEs in Cameroon, Colombia, Indonesia, the Philippines and Tunisia. Both the report and the case studies highlight some key lessons to ensure the effective implementation by MSMEs of OSH measures. In particular, national supporting initiatives should be low-cost or preferably cost-free, easy to access and tailored to the specific needs of MSMEs. Initiatives should also integrate OSH with other management goals or business processes. Based on the findings and lessons learned, the “how to” guide [Designing a national strategy to improve safety and health in micro-, small and medium-sized enterprises](#) was developed to provide decision-makers with a practical tool that is adaptable to different contexts and situations. The draft guide was pilot-tested in Mozambique and Zambia to ensure the quality and usability of the tool.



Manager of a hairdressing salon and her client during the COVID-19 pandemic. 05/2020, France. © Marcel Crozet/ILO

2.6. International collaboration

The ILO's international collaboration in the area of OSH includes all activities undertaken jointly or in cooperation with other intergovernmental organizations. These include developing policies and programmes, participating in technical committees, preparing technical standards, developing databases and information materials, and organizing conferences and workshops.

Overview of the ILO's international collaborations, initiatives, and commitments

Within the [Inter-Organization Programme for the Sound Management of Chemicals \(IOMC\)](#), the ILO coordinates policies and global activities with ten other participating organizations on the sound management of chemicals and waste, sustainability and the environment.

The ILO's participation in the [Strategic Approach to International Chemicals Management \(SAICM\)](#) involves stakeholders from the world of work in global discussions on the sound management of chemicals.

The ILO also has multilateral commitments related to the [Basel, Rotterdam, Stockholm and Minamata Conventions](#).

Collaboration with the WHO includes work on major industrial accidents, non-ionizing radiation, chemicals, biological hazards and communicable and non-communicable diseases, including as part of the [United Nations Inter-Agency Task Force on the Prevention and Control of Non-communicable Diseases](#).

The ILO has also worked with the WHO by providing technical guidance on the development of WHO guidelines for mental health in the workplace and guidance on COVID-19 and teleworking.

Other forms of multilateral collaboration include work with the International Atomic Energy Agency and other international organizations to promote the application of the [Radiation Protection Convention, 1960 \(No. 115\)](#), including by promoting the active involvement of employers' and workers' organizations in the development of international standards on radiation safety and protection, participating in the work of the Radiation Safety Standards Committee and the Emergency Preparedness and Response Standards Committee, and membership of the Inter-Agency Committee on Radiation Safety and the Inter-Agency Committee on Radiological and Nuclear Emergencies.

The ILO has a Memorandum of Understanding with the OECD and participates in the work of the OECD's Committee on Radiological Protection and Public Health.

The ILO works in partnership with the Food and Agriculture Organization of the United Nations to promote OSH in rural areas and chairs two workstreams of the UN-OSH Forum, a platform established for the development of OSH policies and systems for UN staff.

The ILO also has a long-standing tradition of collaborating on OSH with financial institutions such as the World Bank (including on the Environmental and Social Framework), the European Bank for Reconstruction and Development, and the African Development Bank.

Furthermore, the ILO regularly collaborates with non-governmental organizations such as the International Ergonomics Association, the International Commission on Occupational Health, the International Commission on Radiological Protection, the International Radiation Protection Association, the International Commission on Non-Ionizing Radiation Protection, the International Social Security Association, the International Occupational Hygiene Association, the Institution of Occupational Health and Safety, and the International Association of Labour Inspection.

The ILO collaborates with global and regional bodies and platforms such as the G20 OSH Network, the European Commission, the European Agency for Safety and Health at Work, the Association of Southeast Asian Nations, the Pan American Health Organization and the Southern African Development Community.

Chapter 3.

Looking to the future: Advancing efforts to create safe and healthy working environments for all

3.1. A new global strategy on OSH

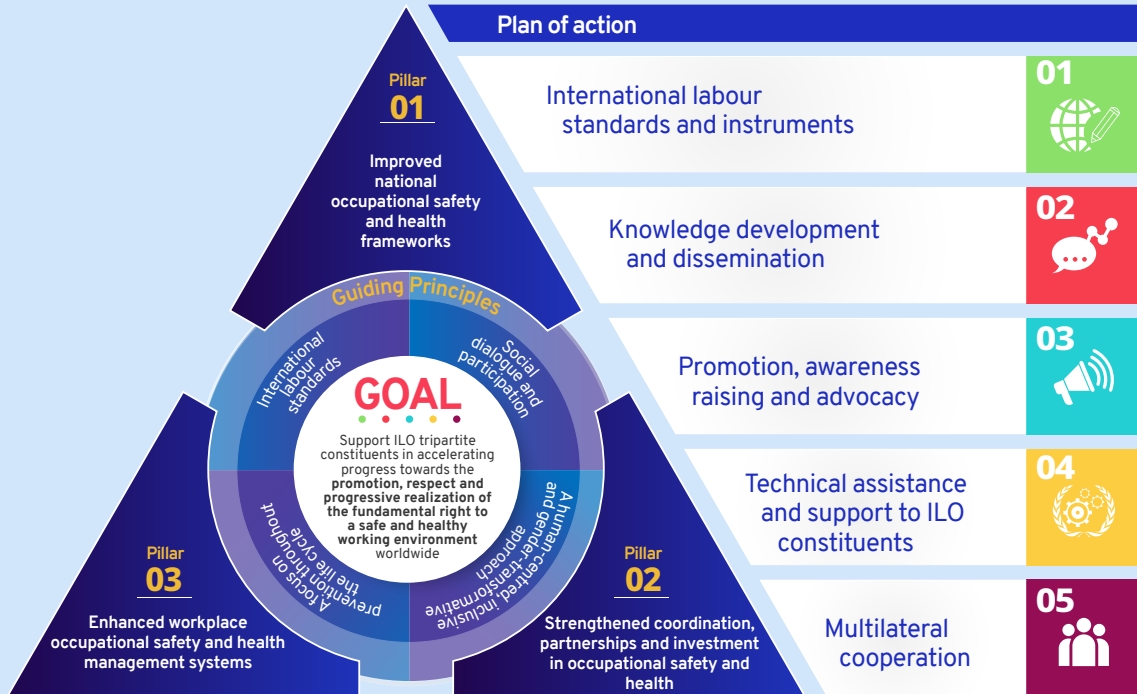
The ILO Governing Body, at its 349th Session in November 2023, adopted a new [Global Strategy on Occupational Safety and Health](#), which aims to support ILO constituents in accelerating progress towards the promotion, respect and progressive realization of the fundamental right to a safe and healthy working environment worldwide. The new strategy and the plan of action for its implementation are grounded in the 2003 Global Strategy on Occupational Safety and Health and call upon ILO constituents to accelerate action towards continuous improvement in building a preventative safety and health culture. The strategy confirms the commitment of the ILO and its constituents to advancing social justice by protecting the health and lives of workers and promoting decent work for all.

The strategy brings the ILO's mandate, in particular international labour standards and social dialogue, to the forefront of all ILO action on OSH. It also adopts a human-centred, inclusive and gender-transformative approach and applies the principle of prevention throughout the life cycle.

The strategy seeks to encourage and assist ILO Members to take action on three complementary and interdependent pillars. The first concerns improving national OSH frameworks by strengthening all elements of a national OSH system, including through ensuring effective governance, promoting reliable data and evidence-based research and developing competency in OSH services. The second focuses on strengthened coordination, partnerships, and investment in OSH, by mainstreaming OSH in broader policies at national and global levels, promoting whole of government approaches to OSH, securing key partnerships at national and multilateral level, and guaranteeing adequate and sustainable investments in OSH. The third looks at enhancing systems for managing workplace OSH, by promoting the principles and values of the Guidelines on occupational safety and health management systems and developing tailored gender-responsive guidance adapted to specific hazards, risks, sectors and occupations.

The strategy will be implemented through a plan of action that will cover different areas, namely: (1) International labour standards and instruments on OSH; (2) Knowledge development and dissemination; (3) Promotion, awareness-raising and advocacy; (4) Technical assistance and support to ILO constituents; and (5) Multilateral cooperation.

► Figure 7. Overview of the strategic framework



3.2. ILO’s normative work on OSH

To ensure that the body of standards is robust and responsive to the constantly changing patterns of the world of work, the ILO’s Standards Review Mechanism Tripartite Working Group⁴¹ reviewed instruments concerning OSH and made recommendations which were adopted by the Governing Body, to prepare for standard-setting items on biological hazards and ergonomics in future agendas of the International Labour Conference, consolidate the instruments on chemical hazards, and review the instruments concerning guarding of machinery (ILO 2022c; ILO 2017a, ILO 2017b).⁴² The Office has also been requested to develop technical guidelines on chemical hazards and an update of the [Code of Practice on Safety and Health in the Use of Machinery](#) (ILO 2022c).

41 The Standards Review Mechanism Tripartite Working Group (SRM TWG) was established in 2015. It has been mandated to review the ILO’s international labour standards. With this review, the ILO’s tripartite constituents aim to ensure that the body of standards is robust and responsive to the constantly changing patterns of the world of work, for the purpose of the protection of workers and taking into account the needs of sustainable enterprises.

42 In March 2021, the ILO Governing Body placed an item related to OSH protection against biological hazards on the agenda of the 112th and 113th Sessions (2024/2025) of the International Labour Conference (see [GB.341/INS/3/1\(Rev.2\)/Decision](#)). In November 2022, the Governing Body decided to place an item on the consolidation of instruments on chemical hazards for standard-setting on the basis of a double discussion either on the agenda of the 114th (2026) and 115th (2027) sessions or 116th (2028) sessions of the Conference (see [GB 346/INS/2](#)).



3.3. ILO's OSH activities in 2024-2025

A safe and healthy working environment is central to people's well-being, sustainable enterprises, emergency preparedness and a just transition. The ILO programme for 2024-2025⁴³ on OSH is designed to provide support to constituents to develop and adapt policies and institutions for a human-centred recovery that creates decent jobs and extends protection to all (ILO 2022c).

The overall goal of the ILO's work on OSH is to increase the capacity of Members for the realization of safe and healthy working environments for all. In order to support this realization, the ILO will engage in global advocacy, awareness-raising and leadership for coordinated multilateral action and in support of tripartite constituents for the ratification and effective implementation of Conventions Nos. 155 and 187 and other OSH standards.

At country level the ILO will support constituents in:

- ▶ formulating national gender-responsive OSH policies and programmes, in coordination with public health, social protection, and other relevant policy frameworks;
- ▶ developing strategies and interventions to address specific hazards and challenges such as climate change, and to extend OSH protection to informal micro and small undertakings and the self-employed;
- ▶ strengthening the national OSH infrastructure, especially regulatory frameworks, compliance mechanisms, occupational health services and recording and notification systems, improving national availability of data and contributing to reporting under Sustainable Development Goal indicator 8.8.1; and
- ▶ strengthening capacities of tripartite constituents on OSH management systems, including in relation to violence and harassment, at all levels and throughout all layers of supply chains, in collaboration with the ILO's International Training Centre.

At the global level the ILO will:

- ▶ prepare reports for standard-setting discussions, including on biological hazards for the International Labour Conference 2024-25;
- ▶ organize tripartite meetings of experts upon decisions by the Governing Body to discuss emerging topics of importance;
- ▶ develop and carry out global campaigns to promote universal ratification and implementation of the fundamental OSH Conventions;
- ▶ conduct global research and develop policy tools on both traditional and new and emerging risks in the world of work;
- ▶ facilitate high-level events and tripartite debates to promote political commitment to OSH.

43 Further information: [Preview of the Programme and Budget proposals for 2024-25](#) (ILO 2022).



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experiencia
datos
literaria
**Riesgo y
Severidad**

TIPO	Ambiente
Biologico	personas
QUIMICO	maquinaria, equipo humano.
Fisico	red, equip. proceso empleados

→ Arbol de decision

ISO / HAC

Don't

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