

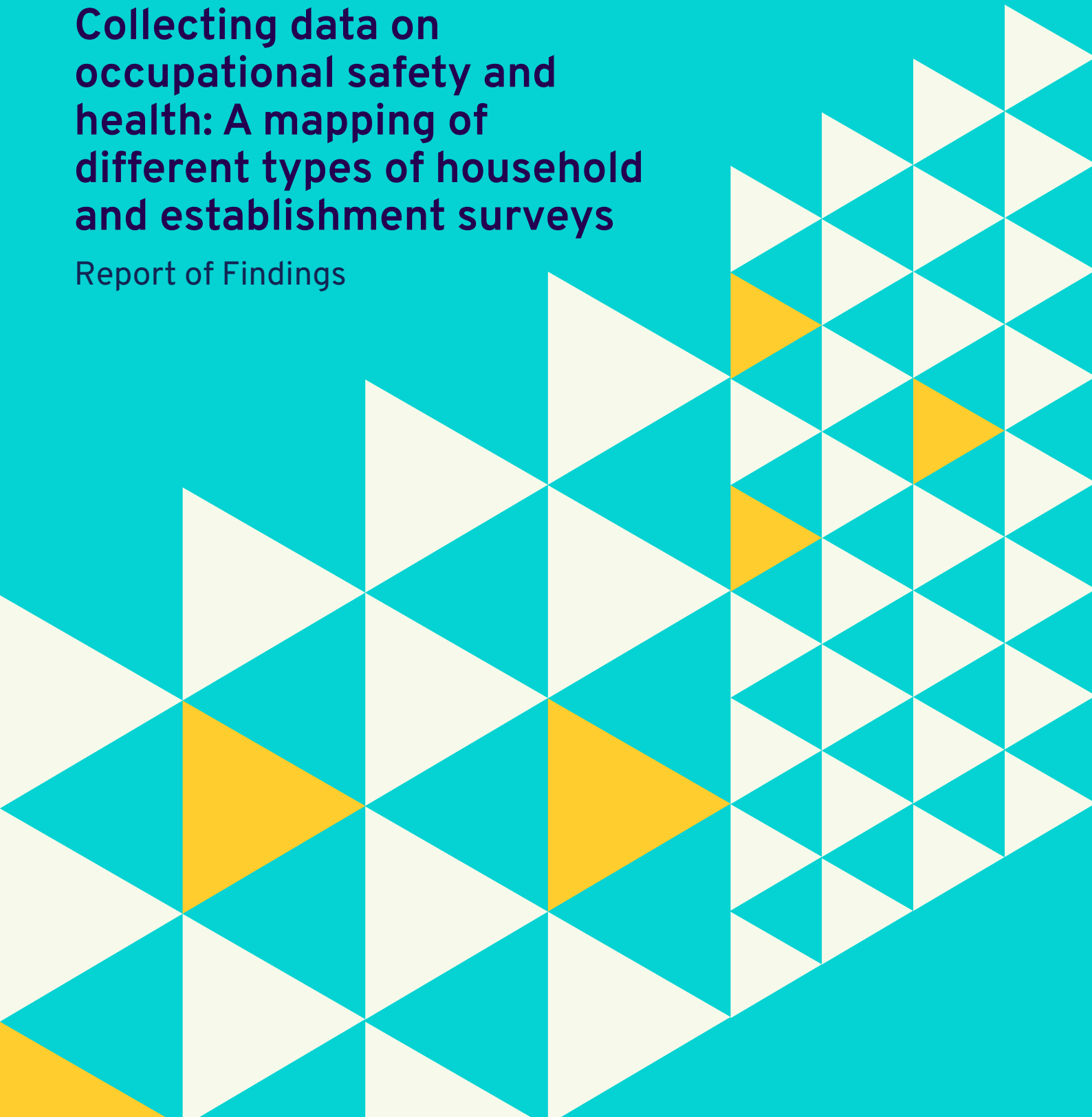


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Collecting data on occupational safety and health: A mapping of different types of household and establishment surveys

Report of Findings



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Abbreviations and acronyms

BLS	Bureau of Labor Statistics (United States)
CNIS	National Council on Statistical Information (France)
DALYs	Disability-Adjusted Life Years
DARES	Directorate for the Coordination of Research, Studies and Statistics (France)
ECETSS	National Survey of Workers on Conditions of Employment, Work, Health and Safety (Argentina)
ENESS	National Survey of Employment and Social Security (Mexico)
EU	European Union
Eurofound	European Union Foundation for the Improvement of Living and Working Conditions
Eurostat	Statistical Office of the European Union
EWCS	European Working Conditions Survey
FAO	Food and Agriculture Organization of the United Nations
GSCs	Global Supply Chains
HSE	Health and Safety Executive (United Kingdom)
ICLS	International Conference of Labour Statisticians
ILOSTAT	ILO Department of Statistics online portal
INEGI	National Institute of Statistics, Geography and Informatics (Mexico)
ISCO	International Standard Classification of Occupations
ISIC	International Standard Industrial Classification of all Economic Activities
ISLE	Integrated Survey on Labor and Employment (Philippines)
LFS	Labour force survey
MPyT	Ministry of Production and Labour (Argentina)
OSH	Occupational Safety and Health
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations
SDGs	Sustainable Development Goals
SOII	Survey of Occupational Injuries and Illnesses (United States)
SUMER	Medical Survey of Exposure of Employees to Occupational Risks (France)
STPS	Ministry of Labour and Social Welfare (Mexico)
TVK	Workers' Compensation Centre (Finland)
VZF	Vision Zero Fund
WCS	Working Conditions Survey
WHO	World Health Organization

1 Introduction

1.1 Context and rationale for conducting the mapping

The burden of disease and injury from exposure to risks and hazards at work is high. According to the first Joint Estimates of the Work-related Burden of Disease and Injury compiled by the World Health Organization (WHO) and the International Labour Organization (ILO), globally in 2016, a total of approximately 1.9 million deaths and 90 million disability-adjusted life years (DALYs) were attributable to 41 pairs of occupational risk factor and health outcomes (WHO and ILO 2021, viii).

Timely, relevant and accurate data and statistics are essential for assessing the extent of occupational risks and hazards and developing policies to reduce this burden of disease and injury. Comprehensive and high-quality statistics are necessary to support decision-making and inform the development of strategies, policies and programmes for improving occupational safety and health (OSH) and to evaluate their effectiveness in reducing and preventing occupational accidents, injuries and diseases.

Statistics for measuring the overall burden of occupational injury and disease are needed to draw the attention of policymakers and decision-makers to the magnitude of the problem and to assess the economic and social costs for individuals, families, businesses and society in general. When compiled on a consistent basis over a period of time, summary statistics allow us to determine whether things are improving or getting worse as a result of the broad range of measures being taken. Indeed, the WHO/ILO joint estimates show that between 2000 and 2016, the global rates of total deaths attributable to exposure to occupational risk factors decreased from 39.9 to 34.3 deaths per 100,000 working-age population, or by 14.2 per cent. Similarly, the global rate of total DALYs attributable to exposure to occupational risk factors decreased from 1,878.4 to 1,635.9 DALYs per 100,000 working-age population, or by 12.9 per cent. (WHO/ILO 2021, 39).

The importance of aggregate measurement of the burden of occupational injury and disease over time is reflected in the adoption of indicator 8.8.1, “Fatal and non-fatal occupational injuries per 100,000 workers, by sex and migrant status”, as one of two indicators under target 8.8 of the Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development. [Statistics for SDG indicator 8.8.1](#) are compiled in two separate tables in the ILOSTAT database – one for fatal injuries and another for non-fatal injuries.

SDGs and OSH

Goal 8

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Target 8.8

Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment

Indicator 8.8.1

Fatal and non-fatal occupational injuries per 100,000 workers, by sex and migrant status

Accurate measurement of the overall burden of occupational injury and disease at global, regional and national levels requires comprehensive coverage in relevant data sources of exposure to risk factors and cases of fatal and non-fatal occupational injuries. However, in many countries data coverage is far from complete and data may not be available from a single reliable source. As a result, a large but unknown number of cases of occupational injury and disease may go unreported and be excluded from statistics. We will come to some of the reasons for this presently, but the outcome of such exclusion is that statistics are frequently not comparable between countries or over time and the compilation of global estimates is fraught with difficulty due to missing and unreliable data. Estimates may therefore vary significantly, depending on the data sources and estimation methods used.

The need to support the development of methodologies for collecting reliable data on occupational injuries is recognized by Vision Zero Fund (VZF), an initiative established by the Group of Seven (G7) countries and endorsed by the Group of Twenty (G20) countries, which aims to prevent work-related accidents, injuries and diseases in global supply chains.¹ Global supply chain refers to “goods and services that cross international borders for consumption or as inputs for further production” and domestic supply chain refers to “goods and services for consumption or as inputs for further production”.² In practice, “global and domestic supply chains are both interwoven and overlapping in most countries.”³

The VZF implements a model of joint responsibility for collective action, involving a wide range of stakeholders and resources to address the root causes of the most serious OSH deficits in global supply chains, focusing on countries with weak governance. For the model of joint responsibility for collective action to function effectively, it is imperative that timely, relevant and accurate knowledge, data and statistics on OSH are available to support decision-making and inform the development of strategies to reduce occupational accidents, injuries and diseases.

Currently, VZF operates in eight countries (Colombia, Ethiopia, Honduras, the Lao People’s Democratic Republic, Madagascar, Mexico, Myanmar and Viet Nam) and in global supply chains in three sectors: garment/textiles, agriculture and construction. In these countries and sectors, most of the available data on occupational injuries and diseases are poor and statistics, where available, are not always representative of the real situation concerning occupational injuries and diseases at the enterprise, industry and national levels. More reliable data are essential to establish priorities and develop strategies to prevent occupational injuries and diseases in targeted sectors in VZF countries. As part of its strategy, the VZF supports the development of methodologies for collecting reliable and comparable data on occupational injuries and diseases in countries.

1.2 What kinds of statistics are needed?

To produce statistics that will support and inform the development and evaluation of policies to effectively reduce the burden of occupational injury and disease, there is a need not only for comprehensive coverage but also for detailed data. Data on the nature of exposure to risks, the causes and nature of injuries and the occupations and economic activities most heavily impacted are needed at a detailed level. This detail is needed to inform the development of targeted measures to improve OSH. Depending on the data source and national context, however, the

1. The Vision Zero Fund is administered and implemented by the Labour Administration, Labour Inspection and Occupational Safety and Health (LABADMIN/OSH) Branch of the ILO. The Fund is a key component of the ILO’s Safety and Health for All programme. For more information, see <http://www.ilo.org/vzf>.

2. ILO, Gap analysis of ILO normative and non-normative measures to ensure decent work in supply chains (2021), p. 9. Also see Alliance 8.7 Report on Ending child labour, forced labour and human trafficking in global supply chains (2019), p. 2.

3. ILO, ACT/EMP Research Note, Wages and Working Conditions in and out of Global Supply Chains: A Comparative Empirical Review. 2017

available statistics are frequently not sufficiently detailed to allow this type of targeted action. For example, the data may not be coded to a sufficiently detailed level of the national classifications of occupations and economic activities to allow identification of the groups most heavily impacted by specific types of injury and disease.

Statistics on OSH are not, of course, limited to data on cases and rates of occupational injuries and diseases. They include data on compensation for occupational accidents and diseases (such as the number and shares of workers and establishments covered by insurance, the number of persons receiving benefits and so on). They also include statistics on labour inspection services, given the relevance of labour inspection to promoting safety and health at work. To compile statistics on the total rates of injury or disease or the share of workers covered by compensation, data are also needed on reference populations of workers in specific occupational groups and industries, as well as data on total employment and the total working age population.

The OSH indicators published by the ILO in ILOSTAT include data on days lost due to cases of occupational injury with temporary incapacity for work, cases and rates of fatal and non-fatal injuries, and various aspects of labour inspection. The complete set of indicators is the following:

- days lost due to cases of occupational injury with temporary incapacity for work, by sex and migrant status
- days lost due to cases of occupational injury with temporary incapacity for work, by economic activity
- cases of fatal occupational injury, by sex and migrant status
- cases of fatal occupational injury, by economic activity
- cases of non-fatal occupational injury, by sex and migrant status
- cases of non-fatal occupational injury, by economic activity
- cases of non-fatal occupational injury, by type of incapacity and economic activity
- cases of non-fatal occupational injury, by sex, type of incapacity and migrant status
- fatal occupational injuries per 100,000 workers, by sex and migrant status
- fatal occupational injuries per 100,000 workers, by economic activity
- non-fatal occupational injuries per 100,000 workers, by sex and migrant status
- non-fatal occupational injuries per 100,000 workers, by economic activity
- registered workplaces that could be selected for labour inspection
- number of labour inspectors, by sex (thousands)
- number of labour inspection visits to workplaces during the year
- number of labour inspectors per 10,000 employed persons
- labour inspection visits per inspector

The ILO collects OSH data (except for SDG reporting) through two main channels: an annual questionnaire and survey microdata. The annual questionnaire is sent out each year to national statistical offices and labour ministries worldwide to collect data for a wide range of labour statistics, including 13 OSH indicators. This questionnaire allows countries to share data from whatever sources are available, including administrative records, household surveys and establishment surveys. The ILO microdata repository includes information on OSH for countries that include relevant questions in national surveys (mostly labour force surveys (LFSs)). For some countries, these microdata sets have been used to compile estimates of cases of non-fatal occupational injury and days lost due to cases of occupational injury.

Administrative records are the most widely used source of data on OSH, including records kept by agencies responsible for workers' compensation insurance, labour inspectorates, labour administration, social security and health. However, there are concerns that statistics compiled from administrative records cannot provide a complete picture, not least because they frequently only cover establishments and workers that have access to workers' compensation insurance. In some countries, this type of insurance is not compulsory for the self-employed and some other categories

of workers. Enterprises in the informal economy and workers with informal jobs are not generally included in data obtained from administrative sources. In countries with high levels of informality, therefore, the value and usefulness of administrative records for the compilation of statistics on occupational injuries and diseases may be quite limited.

To address the perceived shortcomings of administrative data, household surveys and establishment surveys have been used in several countries to provide a more complete picture of safety and health at work, as well as to provide statistics on the incidence of occupational injuries and diseases from the perspective of workers and employers, respectively. These types of survey may be used to complement and supplement administrative data – at least to allow the assessment of the level of completeness and the extent of undercount in the administrative data – or in some cases, they are used as the main or the only source of statistics on accidents and injuries. In some countries, such surveys are conducted only infrequently, while data from administrative sources are generally available annually.

The type of information collected through household and establishment surveys varies from country to country and different types of surveys are used. Until now, there has been no comprehensive overview of the different types of surveys for collecting data on OSH. In this context, the VZF, in collaboration with the ILO Department of Statistics, conducted a mapping of different types of household and establishment surveys currently used to collect data on OSH.

1.3 Objectives of the mapping exercise

The objective of the mapping activity and of this report of findings is to provide an overview of the different types and contents of household and establishment surveys, with the aim of informing and supporting countries in the development of such surveys. More specifically, the report aims to provide information that will assist countries in selecting the most appropriate mix of data sources and survey vehicles and question sets that will reflect the national context and needs.

It is hoped that this report will provide a useful reference on the use of household and establishment surveys to collect data on OSH in different countries, as well as the strengths and weaknesses of these types of survey compared to other types of data source. It provides links to useful resources in order to support countries in developing and using household and establishment surveys to collect data on OSH as a supplement or substitute for administrative data.

The report is intended for a non-technical audience drawn from staff in government agencies, political decision-makers and their advisers, employers, workers and their representatives. The report may also be useful for staff in agencies involved in the compilation of statistics on OSH and the design of surveys and questionnaires, by providing an overview of approaches that have been used in the selected countries as well as links to more detailed methodological information.

1.4 Methodology

To collect the information needed to provide a sufficiently representative overview, 22 countries or territories at different stages of economic development and with different levels of statistical capacity were selected from all regions of the world, including the eight countries in which the VZF operates. The aim was to cover various types of surveys and indicators.

The following 22 countries or territories were included in the mapping exercise:

- Argentina
- Armenia
- Austria
- Colombia

- Finland
- France
- Ethiopia
- Honduras
- Lao People's Democratic Republic
- Madagascar
- Mexico
- Myanmar
- Occupied Palestinian Territory
- Pakistan
- Philippines
- Russian Federation
- Turkey
- Ukraine
- United Kingdom of Great Britain and Northern Ireland
- United States of America
- Uruguay
- Viet Nam

For these 22 countries or territories, a review was initially undertaken of the information available in ILOSTAT concerning indicators and sources of data on OSH. Searches were then undertaken to identify additional sources of data found on the websites of agencies such as national statistical offices, labour ministries and health ministries, and annual reports and research reports covering the topic.

Information was compiled about household surveys, establishment surveys, administrative records, official estimates and other types of source for the latest year available in each of the 22 countries or territories. This included information on coverage (for example geographical coverage, population, establishment size, institutional sector, economic activity and reference group, as applicable); the main indicators on OSH available; and the types of disaggregated statistics available for each group of indicators (for example whether the data can be disaggregated by variables such as sex, occupation, migrant status and economic activity). Each indicator was mapped to one of ten groups of related indicators, as shown below.

Indicator groups used in the mapping exercise	
Indicator group	Definition
1. Cases of fatal occupational injury	All indicators relating to cases of fatal occupational injury, in which fatal occupational injury is the result of occupational accidents and in which death occurred within one year of the day of the accident (excluding incidence rates).
2. Cases of non-fatal occupational injury	All indicators relating to cases of non-fatal occupational injury, in which non-fatal occupational injury is the result of occupational accidents that result in lost work time.
3. Days lost due to cases of occupational injury with temporary incapacity for work	All indicators relating to the measurement of work time lost following cases of occupational injury leading to temporary incapacity for work of a maximum of one year, in which occupational injury relates to any personal injury, disease or death resulting from an occupational accident (excluding incidence rates).

Indicator group	Definition
4. Incidence rate of occupational injury	All indicators measuring cases of occupational injury per number of workers, distribution of workers per injury, frequency rate or severity rate.
5. Occupational accident	All indicators measuring cases of occupational accidents, in which the occupational accident is an unexpected and unplanned occurrence, including acts of violence, arising out of or in connection with work, which results in one or more workers incurring a personal injury, disease or death.
6. Labour inspection services	All indicators relating to labour inspection, such as the number of inspection visits or the number of inspectors.
7. OSH services	All indicators relating to OSH preventive measures, such as the presence of medical service in the establishment and the level of information on OSH.
8. Cases of occupational disease	All indicators relating to cases of occupational disease, in which occupational disease is contracted as a result of exposure over a period of time to risk factors arising from work activity.
9. Compensation for occupational injury	All indicators relating to compensation following an occupational injury, such as claims for occupational injury benefits or occupational injury insurance.
10. Other	

For those countries in which household surveys, establishment surveys or other non-administrative data sources were identified, further desk-top research was undertaken to gain information about the data collection methods used and other methodological issues, such as sample design. Investigation and analysis were undertaken, where possible, to determine how the data are used and disseminated in order to evaluate data quality and assess the extent to which data from different sources are integrated to provide a coherent statistical picture. When statistics from different sources were compiled for the same or closely related indicators, for example on cases and rates of occupational injury, analysis was undertaken to compare the results and assess the strengths and weaknesses of each source.

1.5 Structure of the report

[Chapter 1](#) describes the importance of good-quality and detailed statistics on OSH to support the development and evaluate the effectiveness of policies and programmes aimed at reducing occupational injuries and diseases and improving safety at work. It describes in broad terms the types of statistics that are needed, the data sources used to provide these statistics and some of the shortcomings and limitations of the currently available statistics. Finally, it explains the rationale for and objectives of the mapping exercise and the methods used.

[Chapter 2](#) provides a brief introduction to household and establishment surveys, explaining what they are and the relevance and usefulness of different types of survey for the collection of data on OSH.

[Chapter 3](#) describes and provides links to useful resources for learning more about household and establishment surveys and how to develop and use such surveys for the compilation of statistics on OSH.

Chapter 4 describes the findings of the mapping exercise, including the extent to which the different types of source are used in the target countries. It provides an overview of the most recent surveys for some of the targeted countries or territories, their characteristics and differences, with some insights on the advantages and disadvantages of the different types of survey used.

Chapter 5 draws conclusions based on these findings and makes recommendations for countries or territories and agencies that wish to improve the quality of their statistics on OSH.

2 Introduction to household and establishment surveys

2.1 The problem with data sources

The most relevant sources of data for the different components of statistics on OSH will vary according to the specific topic and data elements required, but also according to the national context and specific population groups concerned. While administrative records are the most widely used source of data on OSH, other types of data source are also widely used. These include household surveys and establishment surveys, as well as other types of source such as safety and health monitoring programmes. An example is the Medical Survey of Exposure of Employees to Occupational Risks (SUMER) conducted in France (see [section 4.2](#) below).

No single type of data source can be used to provide a comprehensive set of OSH statistics. Administrative records will be the obvious and most reliable source for data related to the administrative aspects of OSH programmes. For some indicators, administrative records are typically the only source of information used. This is because they may be the only logical source or are clearly the most reliable type of source. This would be the case, for example, for indicators on deaths resulting from occupational injuries and diseases; the number of registrations and claims for compensation; and the number of labour inspections and inspectors.

To compile statistics on the total number of occupational injuries incurred or the number of workers impacted, however, administrative records are typically incomplete since some accidents are not reported or recognized administratively as occupational injuries and some workers are not covered. The reliability of the data is greatly influenced by whether or not the registration or notification of accidents, injuries and/or diseases with the agency keeping the record is obligatory. Where statistics are derived from insurance records, it is also important to take the coverage of the compensation scheme into consideration in order to assess how comprehensive the statistics are.

While statistics on the number of cases of injury or disease are interesting and useful in their own right, they are not ideal for comparison over time or between groups or countries, as the total number of workers in each country and each group is different and will change over time. For these purposes, it is more useful to express the statistics as a rate, percentage or other ratio. The calculation of rates based on administrative records, however, may require data from these sources to be used in conjunction with data from other sources that can provide denominators for the total population or reference groups, or for total employment by economic activity. These sources would include household surveys such as the LFS, establishment surveys and official estimates based on censuses and or population and business registers.

The data for the reference group to be used as the denominator in the calculation of ratios may often need to be drawn from a different source than the data on the number of cases. For example, data on total employment might be drawn from a household survey or from an employment or population register, while data on the number of occupational injuries are drawn from the administrative records of workers compensation insurance schemes. If the coverage of workers included in the insurance scheme is low or if employers (or workers and entitled persons) are reluctant to report accidents, then the total number of reported cases will not reflect the real number of cases. Incidence rates calculated using a reference population from a data source with broader coverage than the administrative records will potentially be misleading. Incidence rates based on a narrow reference population, such as the number of workers covered by workers' compensation insurance, will be more accurate. However, these rates may exclude some groups that are at high risk of occupational injury and disease.

A further problem with statistics that are based on administrative records is that the compilation of statistics is not the primary purpose of the data collection. The definitions of the concepts used may

not be fully consistent with those used for statistical purposes at international level, as they may be established by the agency concerned for its own administrative and operational purposes. This may impact on the comparability and quality of the statistics both within countries (for example if there is more than one workers' compensation insurance scheme) and between countries.

The problem of non-comparability between countries has been addressed to a certain extent in some regions. The European Statistics on Accidents at Work (ESAW) methodology, which was launched in 1990, seeks to harmonize administrative data on accidents at work for all accidents that result in more than three days' absence from work. The ESAW methodology provides standardized variables and classifications for the reporting of statistics on accidents at work published by the Statistical Office of the European Union (Eurostat) for Member States of the European Union (EU) and other countries participating in the European Statistical System. The ESAW methodology also provides guidance on reference populations and the calculation of rates. However, reporting of data for some groups of workers, including the self-employed, is voluntary (Eurostat 2013).

In countries that have low levels of informal employment and comprehensive workers' compensation insurance or have effective accident reporting and disease monitoring schemes, administrative records can be a relatively complete and rich source of data. They typically include detailed information on the nature and cause of the injury or disease and the occupations and economic activities in which they occurred. Even in these countries, however, there are concerns that some occupational injuries and diseases are not reported and certain groups of workers, such as the self-employed or workers with zero-hours contracts, may not be adequately covered.

In the many countries in the world in which a large share of workers are employed informally and are thus not covered by workers' compensation insurance, the number and rates of reported cases of occupational injuries and diseases are frequently unrealistically low when administrative records are used as the main or only source of data. Where there are concerns that the administrative records may be incomplete, national agencies may integrate data from a range of sources and use analytical and modelling techniques to compile official estimates.

When survey instruments that collect data from households and establishments include questions pertaining to the worker's employment situation and OSH, it becomes possible to reach workers who are often not covered by the national reporting and notification systems, including workers in small and micro enterprises, the self-employed, migrant workers and workers in informal employment. Such surveys can also serve to collect a wide range of information on various aspects of OSH, including exposure to occupational hazards.

2.2 Household surveys

Household surveys collect data directly from members of households, using the household as the sampling unit. The data may be collected through personal interview conducted in the household or by telephone interview. Computer-assisted interviewing technology is frequently used and allows a complex sequencing of questions based on the responses to previous questions. Self-enumerated questionnaires may also be used, using paper forms to be mailed back or completed electronically through the internet.

In some surveys, the information is provided by one member of the household on behalf of the other members. In other cases, each member of the household is interviewed separately or only a selection of members of the household is interviewed. This depends on the sensitivity of the information being collected and the likelihood that one household member would be able to provide the types of information requested about other members of the household.

The reliability of the occupational injuries data collected in household surveys depends heavily on the accuracy of the responses to questions, the respondents' recollection of accidents and injuries

and their subjectivity in defining these occurrences. This is in contrast to administrative data, which generally have a restrictive definition of occupational injuries, for which specific criteria may need to be met for an event to be counted as an injury. Effectively, this means that administrative data collections and household surveys measure slightly different concepts of occupational injury. The administrative data refer to occupational injuries that were (a) reported and (b) satisfied the criteria for compensation. The data from household surveys refer to the perception of the respondent that an injury occurred as the result of an accident at work.

Similarly, statistics on occupational diseases compiled from administrative data sources do not measure the same concept as the concept of occupational disease (or work-related illness) measured in household surveys. However, the difference is more pronounced than in the case of occupational injuries. According to the Protocol of 2002 to the Occupational Safety and Health Convention, 1981, the term “occupational disease” covers any disease contracted as a result of an exposure to risk factors arising from work activity. However, administrative data on occupational diseases generally refer to those caused because of occupational exposure to a specific risk and recognized as such by an official authority based on national legislation. The specific diseases that are officially considered to be “occupational diseases” are included in national lists and in an ILO list, which are updated periodically.

The concept measured in household surveys is a disease or health problem that the respondent perceives is related to a job or work activity. This is a much broader concept that embraces conditions such as stress and stroke, which are known in many cases to be caused by exposure to occupational hazards but are not generally included in lists of occupational diseases, as well as many other diseases that are not recognized as official “occupational diseases”. It is useful, therefore, to distinguish between occupational diseases as reported in administrative data and work-related diseases, illnesses or health problems as reported in household surveys. Terminology along these lines is frequently used when statistics from the different sources on occupational diseases and work-related health problems are reported. While almost any type of household survey could potentially be used to collect information on OSH, we have identified three main types of survey in which relevant data are collected for statistical purposes: LFSs, working conditions surveys (WCSs) and child labour surveys. In this discussion we will focus mainly on LFSs and WCSs, as these surveys generally cover the entire working-age population.

2.2.1 Labour force surveys

LFSs are the main regular source of statistics on the labour market. In many countries, they provide estimates on a subannual basis (monthly or quarterly) on the main aggregates of employment, the labour force and labour underutilization (including unemployment). In some developing countries, however, LFSs are conducted only annually or less frequently. Data on occupation and economic activity in the main job – and sometimes in secondary jobs – are almost always included in the LFS but may be released in detailed tabulations on an annual basis.

The advantage of using LFSs to collect data on OSH, particularly on occupational injuries, is that they generally cover the whole working-age population, including all employed persons regardless of their economic activity, occupation or status in employment, as well the unemployed and those outside the labour force. This also means that they cover workers in the informal economy and/or in informal employment. Since LFSs include comprehensive information about the characteristics of workers, their jobs and the households in which they live, as well as information about some characteristics of the enterprise in which they work, data on occupational injuries can be cross-tabulated with numerous variables of interest.

In common with other household surveys, the principal difficulties in using the LFS to compile statistics on OSH derive from the sample size and design. For example, the sample may not be

large enough to compile reliable estimates for occupations in which only small numbers of people are employed. Although LFS data on occupation are typically coded to the four-digit level of the International Standard Classification of Occupations (ISCO) or a related national classification, most statistics are tabulated at aggregate levels. Since occupational injuries and diseases occur annually to a relatively small proportion of the population, reliable estimates may only be possible at a very aggregate level of the classifications of occupations and economic activities.

The items related to OSH most commonly collected in labour force and other household surveys are the number of non-fatal occupational injuries suffered and the workdays lost due to them. LFSs may be less suitable for the collection of data on other aspects of OSH, such as exposure to risk factors, due to the number of additional questions that would need to be added to a regularly conducted survey and the potential impact on both costs and response rates. The information required for occupational injuries and work-related illnesses can be collected through a relatively short module of questions on cases that occurred at work in the 12 months prior to the date of enumeration. Such a module may be included in the LFS on a permanent or annual basis, as is the case in Pakistan, or may be included on a periodic basis as part of a supplementary survey, as has been the case in many European countries.

In Europe, modules of questions on “accidents at work and other work-related health problems” were included in the European Labour Force Survey (EU LFS) in 2007, 2013 and 2020. The data compiled from these modules complement the data transmitted to Eurostat in the ESAW annual administrative data collection. They are part of the system of ad hoc modules added annually to the LFS in the Member States of the EU and the European Free Trade Association (EFTA) as part of the EU LFS.

The 2020 EU LFS ad hoc module aimed to cover the need for data on work-related accidents and diseases, occupational exposures and work-related ill health. It also aimed to provide information on occupational exposure to risk factors for physical health and mental well-being. In particular, the 2020 LFS ad hoc module aimed to answer the following questions at the European level:

- How many accidents occur at work leading to an injury?
- How many people have health problems caused or made worse by work?
- How many people are exposed to risk factors that affect their physical health and mental well-being?
- Which types of accidents, health problems and risk factors occur?
- What is the impact of accidents and health problems in terms of lost days from work?
- Who is affected in terms of individual, occupational and labour market characteristics?

The submodule on accidents at work involves approximately eight questions, but only one question is asked of those who did not have an accident in the 12 months prior to enumeration. In order to avoid memory problems for respondents, accidents and health problems to be reported were limited to those which occurred during the year before the end of the reference week (Eurostat, 2019). The list of variables included in the modules, explanatory notes, national questionnaires and instructions, evaluation reports and the results of the survey can be accessed free of charge on the “Eurostat” website .

2.2.2 Working conditions surveys

WCSs typically collect data about working and employment conditions, health-related problems and occupational risk-preventive activities. They allow information to be obtained on the risk factors present in the workplace, employment conditions, working time arrangements, the resources and preventive measures put in place by employers to improve safety and health, and the impact on health derived from the work, among other dimensions (Iñiguez *et al.* 2012). Importantly, they can provide data on the relationship between working conditions and safety and health.

Most commonly, the sample of workers used in WCSs is drawn from a sample of households, while in some cases workers have been selected from a sample of registered enterprises (Merino-Salazar *et al.* 2015). WCSs tend to be conducted by research institutions and ministries and may include some questions of a more subjective nature than those typically asked in surveys conducted by national statistical offices. The samples tend to be smaller in WCSs than those used in LFSs and they are typically conducted on a less frequent basis.

The European Working Conditions Survey (EWCS) has been conducted by the European Union Foundation for the Improvement of Living and Working Conditions (Eurofound) every five years since 1990. The survey initially covered all EU Member States but has been expanded to cover several other European countries. Themes covered include employment status; working time duration and organization; work organization; learning and training; physical and psychosocial risk factors; health and safety; work-life balance; worker participation; earnings and financial security; and work and health. In each wave, a random sample of workers, including employees and the self-employed, were interviewed face to face. The 2021 extraordinary edition of the EWCS is being conducted as a telephone survey in 36 countries or territories, including the EU Member States, as well as Albania, Bosnia and Herzegovina, Kosovo,⁴ Montenegro, Norway, North Macedonia, Serbia, Switzerland and the United Kingdom, following disruption of the 2020 edition due to the global pandemic (Eurofound 2021).

A basic questionnaire and methodological criteria for surveys of working conditions, employment and health in Latin America and the Caribbean has been developed by the Expert Network on Surveys of Working Conditions and Health (Benavides *et al.* 2016). This questionnaire establishes a minimum set of indicators to be included in surveys of working conditions and health in the region, with the aim of ensuring comparability between different countries.

2.3 Establishment surveys and censuses

Establishment censuses and surveys are statistical data collections that collect data directly from businesses (establishments) and provide extensive information about the characteristics of businesses. An establishment census is an exhaustive data collection that covers all establishments in a country or provides a complete enumeration of a specific subset of establishments. For example, a census of agriculture is a statistical operation for collecting, processing and disseminating data on the structure of agriculture, covering the whole or a significant part of a country (FAO 2015, 3). An establishment survey collects data from a representative sample of establishments. Establishment surveys were the source used by ILOSTAT to report data from eight countries under SDG indicator 8.8.1 on the rate of non-fatal occupational injuries per 100,000.

Establishments are able to provide detailed information on their own characteristics (establishment size, economic activity, production and so on). They can provide reliable data on the number of workers on their payrolls and the characteristics of their jobs, such as wages and working time. However, they can generally provide only basic demographic information about the characteristics of the workers themselves, such as age and sex. Provided that information is also recorded about any accidents suffered by workers while working for the establishment during a specified period, establishment surveys have the potential to provide reliable statistics of the incidence, frequency and severity of occupational accidents, which are broadly consistent with the statistics from administrative sources. They can also be a good source of data on OSH practices, prevention and safety-related training programmes. However, since establishment surveys collect data from only a representative sample of establishments, in common with household surveys, it may not be possible

4. As defined in United Nations Security Council resolution No. 1244 of 1999.

to compile reliable statistics for detailed groups of occupations, industries or types of injury and occurrence, unless a very large sample is used.

Establishment surveys may also be limited in their coverage. For example, they may cover only establishments above a certain size or in certain economic activities. They rarely cover enterprises in the informal economy and typically include data only on employees with formal jobs. The self-employed and employees with informal jobs may therefore be excluded. Data from establishment surveys may therefore exclude a large share of the employed population. It follows that the validity of establishment survey data for a given country is linked to the share of informal employment, the share of workers employed in small businesses and the share of self-employment.

In some countries, an establishment survey may be specifically designed for the collection of data on OSH, such as the United States Survey of Occupational Injuries and Illnesses (SOII), which we discuss below in [section 4.2.10](#). In other cases, a module of questions related to safety and health is included in an establishment survey that collects a broad range of information on employment, as was the case in the [Philippines Integrated Survey on Labour and Employment 2017/2018](#).

3 Useful resources for collection and analysis of data on occupational health and safety through household and establishment surveys

The main international standard dealing specifically with the compilation and dissemination of OSH statistics is the *Resolution concerning statistics of occupational injuries (resulting from occupational accidents)*, adopted by the Sixteenth International Conference of Labour Statisticians (ICLS), which was held in 1998. This ICLS resolution is an essential resource and reference for the development statistics on OSH. It describes the objectives and uses of occupational injuries statistics and stresses the importance of basing these statistics on a range of sources of information. It provides standard definitions for the key concepts to be measured related to occupational accidents and injuries and lists the main data items to be collected and disseminated.

Extensive information and resources on the collection, compilation and use of labour statistics can be found on the ILOSTAT web page "[Resources](#)", especially with respect to the conduct of household surveys. The resources available include a series of guides and manuals that provide in-depth guidance on producing and using labour statistics, as well as model LFS questionnaires, an online questionnaire builder and guidance on add-on modules for collecting data on work-related topics that may be required on a less frequent basis than the core LFS items. At this stage, an add-on module related to OSH is not available.

Terms and definitions for the purposes of statistics of occupational injuries (Sixteenth ICLS)

Occupational accident:

an unexpected and unplanned occurrence, including acts of violence, arising out of or in connection with work which results in one or more workers incurring a personal injury, disease or death;

- Includes travel, transport or road traffic accidents in which workers are injured and which arise out of or in the course of work, i.e. while engaged in an economic activity, or at work, or carrying on the business of the employer.

Commuting accident:

an accident occurring on the habitual route, in either direction, between the place of work or work-related training and:

- (i) the worker's principal or secondary residence;
- (ii) the place where the worker usually takes his or her meals; or
- (iii) the place where he or she usually receives his or her remuneration; which results in death or personal injury.

Occupational injury:

any personal injury, disease or death resulting from an occupational accident; an occupational injury is therefore distinct from an occupational disease, which is a disease contracted as a result of an exposure over a period of time to risk factors arising from work activity.

Case of occupational injury:

the case of one worker incurring an occupational injury as a result of one occupational accident.

Incapacity for work:

inability of the victim, due to an occupational injury, to perform the normal duties of work in the job or post occupied at the time of the occupational accident.

There are two resources that are of particular relevance for the collection and analysis of data on OSH:

- ILO, *Quick Guide on Sources and Uses of Statistics on Occupational Safety and Health*, 2020 ; and
- ILO, *Occupational Injuries Statistics from Household Surveys and Establishment Surveys: An ILO Manual on Methods*, 2008.

3.1 Quick guide on sources and uses of statistics on OSH

The *Quick Guide on Sources and Uses of Statistics on Occupational Safety and Health*, published in 2020, provides an overview of the main aspects of OSH statistics, including their relevance and uses. It describes the international standards governing OSH statistics, as well as the most commonly used OSH indicators. The guide also reviews the various types of potential sources of OSH statistics, highlighting their advantages and disadvantages in more depth than has been possible in this report. It provides examples of questions on OSH that have been used in household surveys and establishment surveys in different countries and discusses the importance of combining different sources of data. It concludes by pointing to the main challenges surrounding the compilation, dissemination and interpretation of OSH statistics.

3.2 Occupational injuries statistics from household surveys and establishment surveys: An ILO manual on methods

The ILO manual *Occupational Injuries Statistics from Household Surveys and Establishment Surveys* was published in 2008 as the culmination of a project to develop and test new methodologies for statistics on occupational injuries. It aims to provide guidance to national labour statisticians engaged in or proposing to start the compilation of statistics of occupational injuries through household surveys or establishment surveys in accordance with their own countries' circumstances. It also aims to improve the comparability of data between countries by promoting the application of internationally agreed standards in the field. To achieve this, it provides practical guidance for

the production of statistics on occupational injuries through household and establishment surveys, based on the provisions of the Resolution concerning statistics of occupational injuries (resulting from occupational accidents) adopted by the Sixteenth ICLS.

The manual describes the framework for statistics on occupational injuries and provides in-depth explanations of the concepts and indicators defined in the resolution, including the categories included in the various classification schemes used in the compilation of statistics on occupational injuries. It discusses the factors that will affect the choice of methods of data collection and the types of survey to be used, depending on the national situation. There are separate chapters on household surveys and establishment surveys, respectively, in relation to OSH. These chapters describe the characteristics of such surveys and provide advice on their design and implementation. In a very practical way, they include model questionnaires for stand-alone surveys and short modules of questions that can be attached to existing surveys, as well as examples of questions that could be inserted into existing household and establishment surveys.

In using these model questionnaires and some of the technical advice provided in the manual, it is important to bear in mind that standards and best practice in relation to labour statistics have developed and evolved significantly since the manual was published in 2008. In particular, it would be important to ensure that the concepts, questions and classifications used are in line with the resolutions adopted by the ICLS from 2008 onwards, as well as with updates of international classification schemes. The relevant classification schemes would include but would not be limited to:

- International Standard Classification of Occupations (ISCO);
- International Standard Industrial Classification of all Economic Activities (ISIC);
- International Classification of Status in Employment (ICSE); and
- International Classification of Diseases (ICD).

The model questionnaires also imply the collection of data at only aggregate levels of ISCO and ISIC, which is likely to be inaccurate if respondents are simply asked to indicate, for example, which of 10 broad occupational groups a person's job belongs to. Moreover, dissemination of data at only aggregate levels of these two classification schemes would not allow the identification of the occupations and economic activities in which accidents occur most often at a sufficiently detailed level for the targeting of prevention policies.

Bearing all of these issues in mind, agencies using the manual to develop national statistics of occupational injuries should adapt the methodological information and model questionnaires to reflect current best practices in relation to work statistics in general, as described on the ILOSTAT web page "[Resources](#)". It would be important to pay particular attention to the questions and methodological approaches described in the model LFS questionnaires. We would also recommend considering the questions and approaches used to collect data on occupational injuries in household and employer surveys more recently, including those described in section 4.2 below. Many of these questions and methods may have been adapted as a result of further testing of the questions proposed in the manual.

4 Findings of the mapping of household and establishment surveys

4.1 Sources of data on occupational health and safety in the targeted countries

As we have already seen, administrative records are the most widely used type of data source for the compilation of statistics on OSH and have been used by all the selected target countries or territories. Some of the administrative records used are held in centralized databases that are populated by agencies responsible for statistics on OSH. These databases can bring together information drawn from records of different types of administrative activities. In other cases, the data are extracted directly from the agencies responsible for activities such as workers' compensation insurance, social security and labour inspection.

The mapping shows significant disparities among countries or territories in the use of household and establishment surveys to collect OSH data. Within the 8 VZF countries, Colombia, Honduras and Madagascar have not collected these data through household surveys or establishment surveys. Conversely, Ethiopia, the Lao People's Democratic Republic, Mexico, Myanmar and Viet Nam have at least used one household survey to collect data on OSH. Recent data are available for the Lao People's Democratic Republic (2017), Mexico (2018), Myanmar (2015) and Viet Nam (2018), while the latest availability of data on OSH from a household survey in Ethiopia is 2010.

Among the other 14 targeted countries or territories, only Armenia and the Occupied Palestinian Territory have not collected data on occupational health and safety through a household survey or establishment survey. Most of the countries have recent data that was collected either through a household survey or an establishment survey, with the exception of Turkey (2013).

All 22 countries or territories in the target group used administrative records as a data source for statistics on occupational injuries and all except 2 of them (Madagascar and the Lao People's Democratic Republic) sourced data on fatal occupational injuries from administrative sources. A total of 13 countries also compiled statistics on cases and/or rates of non-fatal occupational injuries from household survey data.

Among the target countries or territories, 5 of them used establishment surveys as a source of data on OSH, while 4 of them (the Philippines, the Russian Federation, Ukraine and the United States) used these surveys to compile data on both fatal and non-fatal injuries, thereby potentially introducing the possibility of inconsistency with data compiled from administrative sources. These 4 countries also used establishment surveys as a source of data on days lost due to cases of occupational injury with temporary incapacity for work. The Philippines used the same establishment survey, the Integrated Survey on Labour and Employment (ISLE), to compile statistics on occupational diseases and on cases of occupational commuting accidents. This was the only example identified among the target group where statistics were compiled on the number of accidents rather than on the number of injuries.

In one country, Uruguay, an establishment survey was used as a source of statistics on the number of workplaces with occupational injury insurance. This survey, conducted by the Ministry of Industry, Energy and Mining, covered formal sector enterprises with less than 100 employees. The results of the 2017 survey showed that almost 60 per cent of these enterprises had industrial accident insurance, which was similar to the results found in the 2012 survey (Uruguay 2018, 56).

Household and establishment surveys collecting OSH data in the targeted countries or territories		
Country/territory	Establishment survey	Household survey
Argentina	n/a	National Survey of Workers on Employment Conditions, Work, Health and Safety (2018)
Armenia	n/a	n/a
Austria	n/a	EU LFS ad hoc module (2019) EU LFS (2015)
Colombia	n/a	n/a
Finland	n/a	EU LFS ad hoc module (2019)
France	Working Conditions Survey (2019)	Working Conditions Survey (2019) EU LFS ad hoc module (2019)
Ethiopia	n/a	LFS (2005) Urban Employment Unemployment Survey (2010)
Honduras	n/a	n/a
Lao People's Democratic Republic	n/a	LFS (2017)
Madagascar	n/a	n/a
Mexico	n/a	National Survey of Household Income and Expenses (2018)
Myanmar	n/a	LFS (2015)
Occupied Palestinian Territory	n/a	n/a
Pakistan	n/a	LFS (2018)
Philippines	ISLE (2017)	n/a
Russian Federation	Establishments Sample Survey on Employees' Wages by Occupation (2018)	n/a
Turkey	n/a	Research on Accidents at Work and Work-Related Health Problems (2013)
Ukraine	Report on occupational injuries (2018) Survey of Enterprises on Matters Pertaining to Labour Statistics (2013)	n/a
United Kingdom	n/a	LFS (2019)
United States	- Survey of Occupational Injuries and Illnesses (2018) - Childhood Agricultural Injury Survey (2014) - Occupational Injury Surveillance of Production Agriculture (OISPA) Survey (2014) - Current Employment Statistics survey (2008) - Minority Farm Operator Occupational Injury Surveillance of Production Agriculture (M-OISPA) Survey (2008)	n/a
Uruguay	Encuesta Nacional de Mipymes Industriales, Comerciales y de Servicios (2017)	National Child Labour Survey (2010)
Viet Nam	n/a	National Child Labour Survey (2018) Household Injury Survey (2005)

A total of 17 countries or territories in the target group compiled statistics on days lost due to cases of occupational injury with temporary incapacity for work. Of those, 13 used administrative records as a source of data on days lost and 4 of them also used establishment surveys, while 6 of them used household surveys. In 3 cases (Lao People's Democratic Republic, Myanmar and Pakistan) household surveys (LFSs) were the only sources identified, while in 1 case (the United States) establishment surveys were the only source.

Statistics related to labour inspection services were compiled by 17 of the 22 target countries or territories. In all of them, administrative records were used as a primary source of data, although in some cases the indicators were drawn from official estimates or reports based wholly or partly on administrative data. In many cases, official estimates were used as the source for statistics on the number of registered workplaces that could be selected for labour inspection.

Among the target group, 2 countries were found to compile statistics on OSH preventive measures. In the Philippines, data on OSH preventive measures were collected in an establishment survey, the Integrated Survey of Labour and Employment. In Argentina, the information was collected through the National Survey of Workers on Employment Conditions, Work, Health and Safety (ECETSS), a household survey conducted in 2018. The report of the survey provides data on the following indicators related to OSH preventive measures:

- percentage of workers for whom the establishment has a health committee;
- percentage of workers for whom the establishment has a medical service;
- percentage of workers for whom the establishment conducts regular medical check-ups;
- percentage of workers for whom the establishment has a health risk evaluation; and
- level of information on OSH ([Argentina 2019, 62–64](#)).

A total of 13 countries or territories in the target group compiled statistics on occupational diseases and work-related illnesses. Of these, 8 used administrative records as a source of data on occupational diseases, while 1 (the Philippines) collected data on specified occupational diseases through an establishment survey and 3 used household surveys to collect data on work-related illnesses. The indicators used referred mainly to the number of cases expressed in absolute numbers, with some referring to rates. The most commonly used indicators were:

- cases of occupational disease;
- cases of occupational disease, by sex;
- cases of occupational disease, by economic activity;
- cases of occupational disease, by sex and economic activity; and
- cases of occupational disease, by sex and occupation.

The mapping exercise identified 5 countries or territories that compiled statistics related to compensation for occupational injury or disease. Of these, 2 used administrative records as a data source for the numbers of workers covered, receiving benefits and/or making claims; 2 used household surveys as a source of data on the percentage of workers with access to social benefits in case of injury; and 1 (Mexico) used the 2017 Household Income and Expenditure Survey as a source of statistics on the percentage of the population who received social security following an occupational injury. As already noted above, an establishment survey was used as a source of statistics on the number of workplaces with occupational injury insurance in Uruguay.

4.2 Household and establishment surveys used to collect data on OSH: Examples from selected countries

4.2.1 Argentina

In Argentina, administrative records are used to compile a wide range of statistics related to OSH. These statistics – which cover cases and rates of fatal and non-fatal occupational injuries; days lost due to cases of occupational injury with temporary incapacity for work; and labour

inspection services – have been reported regularly to the ILO for publication by ILOSTAT. However, the administrative data on occupational injuries and days lost cover only reported injuries among insured persons. Injuries and diseases among the approximately 43 per cent of the employed population with informal jobs (MPyT 2019, 23) would not therefore be included.

The ECETSS, conducted in 2018 by the Ministry of Production and Labour, also collected an extensive range of information on OSH. Its main objective was to obtain statistical information on the employment and work situation, social protection and OSH, from the perspective of the working population. It collected information from workers on risk factors for occupational injuries and diseases; compensation for occupational injury; preventive measures; health and well-being; and various other aspects of working conditions that may impact on workers' safety and health. (MPyT 2019)

The survey population comprised employed persons (excluding contributing family workers) aged 15 years or older, who were usually resident in private dwellings located in urban localities of 2,000 or more inhabitants throughout the country. One currently employed person from each household was selected for face-to-face interview in their own household. Interviews were conducted with 8,966 workers, selected from a sample of 15,305 households contacted (MPyT 2019; MPyT, n.d).

The most relevant indicators of OSH compiled from the survey are listed in the box below. These indicators are published in the report of the survey, which can be downloaded free of charge, with disaggregation by a range of variables, including sex, age group, qualifications, formal/informal employment, occupation, economic activity and size of establishment, as relevant. The results are represented as a percentage of the survey population.

Argentina		
Household Survey: National Survey of Workers on Employment Conditions, Work, Health and Safety (ECETSS) (2018)		
Coverage	Geographical: Economic activity: Population: Institutional sector: Reference group: Establishment size:	Excluding localities with less than 2,000 inhabitants Excluding contributing family workers All employed persons aged 15 or over in localities of 2,000 inhabitants or more All institutional sectors n/a n/a
Indicators	<p>Indicators related to OSH management and prevention Percentage of workers for whom the establishment has a health committee Percentage of workers for whom the establishment has a health risk evaluation Level of information on OSH</p> <p>Indicators related to occupational health services: Percentage of workers for whom the establishment conducts regular medical check-ups Percentage of workers for whom the establishment has a medical service</p> <p>Indicators related to compensation for occupational injury: Percentage of workers with access to social benefit in case of occupational injury Percentage of workers with access to social benefit in case of occupational injury</p> <p>Indicators relating to incidence rate of occupational injury: Share of workers who have had an occupational injury (% of total population employed) Share of workers who have had an occupational injury as a result of exposure to noise or toxic chemical substances Share of workers who have had an occupational injury by work time organization</p> <p>Indicators relating to incidence rate of occupational disease Share of workers who have had an occupational disease Share of workers who have had an occupational disease due to exposure to noise or toxic chemical substances Share of workers who have had an occupational disease by work time organization Share of occupational disease (% of total diseases)</p>	

Link to questionnaire	<p>Link to questionnaire and methodological documents: http://www.trabajo.gob.ar/estadisticas/ecetss/index.asp</p> <p>The questionnaire includes four sections with questions related to OSH:</p> <ul style="list-style-type: none"> ○ Risk factors in the workplace environment (section 6) ○ Psychosocial risk factors (section 7) ○ Preventive measures (section 9) ○ Health and occupational injuries (section 10)
Public availability of data	Free access to the report presenting the survey results published on the website of the Ministry of Labour, Employment and Social Security.
Link to the report of the survey	Encuesta Nacional a trabajadores sobre Condiciones de Empleo, Trabajo, Salud y Seguridad (ECETSS) 2018

To promote comparability between the information obtained in the ECETSS and other studies carried out in Argentina and internationally, data structures were taken into consideration from previous studies that included information on working conditions. The basic questionnaire and methodological criteria for surveys on working conditions, employment and health in Latin America and the Caribbean, which was developed by the Expert Network on Surveys of Working Conditions and Health (Benavides *et al.* 2016), was taken as the reference point in developing the survey. Some 80 per cent of the content of the ECETSS is comparable with the basic questionnaire. Indicators from the sixth EWCS conducted by Eurofound and the Permanent Household Survey of the National Institute of Statistics and Censuses of Argentina were also included. For the research and evaluation of psychosocial risks, questions were derived from the Argentinian adaptation of the [Copenhagen Psychosocial Questionnaire](#) (CoPsoQ-AR) (see Amable *et al.*, n.d.), as well as from the battery of five questions from the WHO-5 Wellbeing Index Questionnaire developed by the WHO (WHO, 1998).⁵ (MPyT, n.d., 7).

According to the results of the ECETSS, 6.5 per cent of workers suffered an accident at work during the 12 months prior to enumeration. According to data from the Register of Accidents at Work and Occupational Injuries used to provide the data for SDG indicator 8.8.1, there were 3,771 occupational injuries per 100,000 workers. This would equate to almost 3.8 per cent of workers if each worker had no more than one accident.

4.2.2 Austria

In Austria, the Umbrella Association of Social Insurance Institutions publishes annually updated statistics on approved insurance cases related to occupational activity in the [Statistical Manual of Austrian Social Security](#) (in German) (Umbrella Association of Social Insurance Agencies, 2021). The published statistics provide separate totals for accidents at work, commuting accidents and occupational diseases, with fatal cases identified separately. The statistics show the total number of approved cases but are not expressed as a proportion of insured persons. They include time series statistics from 2012 to 2021, broken down by age groups. The data on occupational accidents and diseases in this publication are not disaggregated by sex, occupation or industry, but this information would presumably be able to be compiled from the records held in central databases of insurance institutions.

Statistics Austria has also compiled statistics on self-reported accidents at work, work-related health problems and health risks from ad hoc modules on “accidents at work and other work-related health problems”, which were included in the microcensus LFS in 2007, 2013 and 2020. The ad hoc modules were part of the system of ad hoc modules added annually to the LFS in the Member States of the EU and the EFTA as part of the EU LFS.

⁵ Versions of the WHO-5 questionnaire in multiple languages can be accessed on the WHO-5 website created by the Psychiatric Research Unit of the Psychiatric Centre North Zealand in Denmark.

A summary table of the results of the ad hoc module in Austria can be downloaded free of charge from the Statistics Austria web page “Health at Work”. It shows that 163,000 people, representing 3.5 per cent of the labour force, reported that they had an accident at work in the year preceding data collection. A significantly higher proportion of men (4.9 per cent) than women (2.0 per cent) reported an accident at work.

On the same web page, Statistics Austria also provides summary statistics of approved insurance cases obtained from the Umbrella Association of Social Insurance Institutions. The annual time series shows a more or less steady decline in the number of work accidents, from 185,605 (or 5.9 per cent of insured workers) in 1975 to 107,038 (or 2.1 per cent) in 2019. A sharp decline in the number of work accidents to 82,910 in 2020 most likely reflects the reduction in economic activity as a result of the pandemic. Compared with the 163,000 cases reported in the LFS ad hoc module, this could imply that a little more than half the self-reported accidents were reported and approved for insurance purposes. However, a significant proportion of the accidents reported through the ad hoc module would have occurred during 2019, before the start of the pandemic. The data from the 2013 ad hoc module indicate 186,600 self-reported work accidents, compared with 108,353 approved insurance cases of work accidents. While these numbers are not entirely comparable, due in part to the different reporting periods, they suggest that about 58 per cent of self-reported accidents were reported and approved for insurance purposes.

Comprehensive reports of the 2007 and 2013 ad hoc modules can be downloaded free of charge from the Statistics Austria website. The report of the 2013 survey shows that 4.2 per cent of the economically active reported at least one accident at work during the year preceding the survey, while 15.6 per cent indicated at least one work-related health problem (Statistics Austria 2014, 63). While the concept of a “work-related health problem” does not equate exactly to the tightly defined notion of designated “occupational diseases”, it does provide a more complete perspective on the burden and nature of work-related health problems and diseases as perceived by workers. Concerning health risks at work, 80 per cent of ever-employed respondents indicated they had been exposed to one or more physical and/or mental health risks. The report of the 2013 survey provides an extensive set of tabulations classified by age, sex and a wide range of other socio-demographic variables, including occupation, status in employment and economic activity. It also includes details on the nature and severity of the accidents, injuries, work-related health problems and risks.

Austria		
Household Survey: Microcensus Labour Force Survey (EU LFS Ad hoc module 2020)		
Coverage	Geographical: Economic activity: Population: Institutional sector: Reference group: Establishment size:	Total national All Population in private households aged 15 or over All institutional sectors n/a n/a
Indicators	Indicators relating to cases of occupational injury: Cases of non-fatal occupational injury, by sex Cases of non-fatal occupational injury, by sex and economic activity Cases of non-fatal occupational injury, by sex and education Cases of non-fatal occupational injury, by sex and occupation	
Link to questionnaire	Link to questionnaire and methodological documents: https://www.statistik.at/web_en/statistics/PeopleSociety/health/health_determinants/health_at_work/index.html	
Public availability of data	An overview of the results of the 2020 survey, published in October 2021 and a comprehensive report on the results of the 2007 and 2013 ad hoc modules “Accidents at work and related health problems” can be downloaded free of charge from the Statistics Austria website. At the time of writing, a report on the 2020 module was not available.	
Link to the report of the survey	Arbeitsunfälle und arbeitsbezogene Gesundheitsprobleme 2020 (Statistics Austria 20122)	

4.2.3 Finland

In Finland, administrative records are the main source of statistics on OSH. Statistics from administrative sources are provided regularly to the ILO and include the following indicators:

- cases of fatal occupational injury, by economic activity
- cases of fatal occupational injury, by type of incapacity and economic activity
- cases of fatal occupational injury, by sex and migrant status
- cases of non-fatal occupational injury, by economic activity
- cases of non-fatal occupational injury, by sex and migrant status
- cases of non-fatal occupational injury, by sex, type of incapacity and migrant status
- days lost due to cases of occupational injury with temporary incapacity for work, by sex and economic activity
- days lost due to cases of occupational injury with temporary incapacity for work, by sex and migrant status
- fatal occupational injuries per 100,000 workers, by sex and migrant status
- fatal occupational injuries per 100,000 workers, by economic activity
- non-fatal occupational injuries per 100,000 workers, by sex and migrant status
- non-fatal occupational injuries per 100,000 workers, by economic activity
- number of labour inspection visits to workplaces during the year
- number of labour inspectors, by sex (thousands)
- registered workplaces that could be selected for labour inspection

The Workers' Compensation Centre (TVK), formerly known as the Federation of Accident Insurance Institutions, is the official authority for statistics on occupational accidents and diseases in Finland. The institutions that underwrite insurance as defined in the Workers' Compensation Act and the State Treasury are required to provide TVK annually with the required information on policyholders and claims. Under the Act on Farmers' Accident Insurance, compensable claims are reimbursed and compiled into statistics by the Farmers' Social Insurance Institution (MELA), which is the national institution responsible for the social security of farmers and grant recipients. Data from TVK and the Farmers' Social Insurance Institution on occupational accidents are combined by Statistics Finland, while the data on occupational diseases were combined by the Finnish Institute of Occupational Health. (TVK, n.d.)

According to Statistics Finland, the information on accidents involving wage and salary earners and self-employed persons (excluding farmers) is based on the data obtained from TVK, in which the individual accident is used as an observation unit. The data include demographic information on the injured party (age, sex) and a range of information on the circumstances, causes and consequences. These data conform with the joint European list of variables specified by Eurostat in the ESAW methodology. The information on accidents involving farmers is based on individual-level total data provided to Statistics Finland by the Farmers' Social Insurance Institution. The compulsory insurance covers self-employed farmers, reindeer breeders and fishers and their contributing family members aged 18 to 64 who reside in Finland. Farmers who are involved in regular agricultural activities but excluded from compulsory insurance due to their age or their small labour input may take out an optional accident insurance policy. The content of the data for farmers is largely equivalent to the data compiled by the TVK and for some variables the classification is more detailed. In both cases, the data include information on all accidents for which compensation has been paid (Statistics Finland, n.d.).

The data supplied by TVK and the Farmers' Social Insurance Institution are complemented by other data held by Statistics Finland to compile the statistics on occupational accidents. Information on accident victims' level of education is collected based on social security numbers. This is made possible due to the extensive use of administrative data available in Finland and other Nordic countries, whereby data from administrative records can be matched with data collected in surveys. Information on the number of employees and labour input (hours worked) is obtained from Statistics Finland's LFS. (Statistics Finland, n.d.)

Statistics Finland publishes the statistics on occupational accidents annually in a report that can be downloaded from its website free of charge. Customizable tables for selected variables are also available. The most recent data available refer to 2019.

For accidents involving wage and salary earners, Statistics Finland notes in its quality statement that the statistical coverage is good, since all employees are in practice covered by accident compensation insurance and accident reporting is not neglected because reporting accidents is financially beneficial for the employer. The insurance is optional for self-employed persons except for farmers, fishers and reindeer breeders. Farmers must take out a compulsory insurance policy if the size of the farm exceeds five hectares. Approximately 41 to 42 per cent of self-employed persons other than farmers, fishers and reindeer breeders have taken out an optional accident insurance policy (Statistics Finland, n.d.) leaving almost 60 per cent of the self-employed other than farmers without accident insurance coverage. This represents approximately 6 per cent of total employment (own calculation, based on Sutela 2019, 2).

Informal employment is considered to represent only a small proportion of total employment in Finland. It is estimated that 1 to 3 per cent of employment is not covered by labour legislation (Sutela 2019, 29), although this percentage may be increasing as more workers earn some or all of their income through digital platform work. Since there is an overlap between the uninsured self-employed and workers not covered by labour legislation, it seems likely that about 7 per cent of workers are not covered by employment-related accident insurance. Any accidents occurring among the uninsured would not be included in the statistics based on insurance records – nor would unreported accidents among the insured and accident claims that were not compensated. According to the statistics of the Workers' Compensation Centre, about 10 per cent of claim events reported to insurance companies were rejected on legal or medical grounds (TVK, n.d.).

Statistics Finland has also collected data on self-reported occupational accidents in the LFS through the EU LFS ad hoc modules on accidents at work and other work-related health problems conducted in 2007, 2013 and 2019. The resulting statistics are published by Eurostat and can be accessed online from the Eurostat database. According to the results of the 2013 ad hoc module, 3.3 per cent of persons employed in Finland in the 12 months preceding the date of enumeration reported an accident at work resulting in time off work and 2.1 per cent were absent for four days or more (Eurostat 2021a). According to the official statistics based on insurance records for 2013, there were 47,432 accidents at work resulting in a disability of at least four days (Statistics Finland 2015a, 1). This is close to the 2.1 per cent of workers who reported accidents resulting in time off work of four days or more in the LFS ad hoc module, which equates to a total of 48,300 people assuming total employment in 2013 of approximately 2.3 million (Statistics Finland 2015b, Appendix table 1). While these ratios refer to different units and reference periods, they do suggest that a high proportion of the more serious self-reported accidents were also reported and compensated through the accident insurance system.

Concerning the less serious accidents resulting in time off work of less than four days (including less than one day off), there were 64,916 cases in 2013 according to the statistics based on insurance records (Statistics Finland 2015a, 1). In the EU LFS ad hoc module in 2013, it was reported that 5.3 per cent of the employed and previously employed had an accident at work that resulted in absence from work from 0 to 3 days. This equates to approximately 122,000 people (own calculation, based on Eurostat 2021a and 2021c) – almost twice as many as the number of accidents reported through insurance records. This suggests that a significant proportion of the less serious accidents are either not reported or do not result in a successful claim.

It may be concluded, nevertheless, that the difference between self-reported occupational accidents collected through the ad hoc modules and those compiled from insurance records in Finland is relatively small compared to many other countries, especially for the more serious cases.

4.2.4 France

In France, statistics on OSH are compiled from multiple types of source. Statistics on occupational injuries and recognized occupational diseases are compiled annually from insurance records and provide detailed and rich data on the numbers, evolution over time and frequency of recognized cases. The statistics can be classified by sex, severity, economic activity, type of incapacity and a range of other variables. These statistics are complemented by statistics from the Working Conditions Survey and the Medical Surveillance of Exposure of Employees to Occupational Risks (SUMER), both conducted periodically by the Directorate for the Coordination of Research, Studies and Statistics (DARES) of the Ministry of Labour.

In addition, the National Institute for Statistics and Economic Studies (INSEE) publishes statistics and reports from its LFS based on data collected through the EU LFS ad hoc modules on accidents at work and other work-related health problems that were conducted in 2007, 2013 and 2019. The National Council on Statistical Information (CNIS) notes that the advantages of the LFS ad hoc module are that it combines OSH information with comprehensive information about employment and allows direct comparison with other European countries (CNIS, n.d). INSEE also publishes summary statistics on OSH obtained from insurance records, the Working Conditions Survey and other sources.

An INSEE report on the results of the 2013 ad hoc module provides an explanation of the differences between the data on accidents at work obtained from the ad hoc module and insurance records. It notes that in 2012, among private sector employees and workers in the agricultural sector, 676,700 work-related accidents (excluding commuting) with a work stoppage of more than one day were recorded by the national health insurance fund and the agricultural social mutuality. The report explains that the ad hoc module did not allow a direct estimate of the number of accidents at work, notably because people may have had several accidents or work stoppages due to accidents without physical injury, but that it measured a minimum of 620,000 workplace accidents over the year among the same groups of workers. (Babet and Lê, 2018). This suggests a close correspondence between the data on accidents at work collected through insurance records and the ad hoc module.

The Working Conditions Survey was administered every seven years, from 1984 to 2005, as a household survey to complement data from the LFS. The main topics covered were:

- organization of working time;
- organization of work;
- physical hardship and occupational risks;
- mental burden; and
- accidents and prevention (DARES, 2011).

From 2013 onwards, the frequency of the Working Conditions Survey was increased to every three years, with separate questionnaires for individuals and employers – effectively a household survey and an establishment survey packaged together. The questionnaires for individuals are administered through face-to-face interviews, while the employer component is self-completed by the management of the establishment.

The 2019 version of the survey included a module in the questionnaire for individuals on physical constraints, prevention and accidents. It includes submodules on irritants, physical constraints and risks; prevention; and accidents at work over the last 12 months – including a question on whether the accident was recognized and indemnified by Social Security as an accident at work. The employer component included a module of questions on the management of OSH in the establishment.

The SUMER has been conducted by DARES approximately every seven years since 1987, with the most recent iteration in 2017. It evaluates the exposure of employees to occupational risks, the duration of these exposures and the protective measures available to individuals and groups. The

data on exposures are collected by occupational physicians through medical interviews undertaken during their periodic visits to workplaces. The resulting knowledge of jobs in the establishment allows them to complete a questionnaire on exposure to risks that in places is very technical, particularly with respect to chemical and biological hazards. From 2003 onwards, an additional questionnaire completed by employees has been used to collect information on psychosocial risks at work and the employee's perception of his or her health in relation to work.

The data collected through the Working Conditions Survey and the SUMER are brought together, alongside statistics compiled from insurance records and administrative sources, in a summary report on key figures on working conditions and health at work, which was published by Dares (DARES, 2021). This report, as well as various thematic reports on different aspects of OSH, can be downloaded free of charge from the DARES website. It includes sections on the following topics:

- Exposure to occupational hazards:
 - Exposure to noise in the workplace
 - Exposure to carcinogens/chemical hazards in the workplace
 - Exposure to biological agents
 - Joint stresses at work
 - Exposure to arduous conditions in the workplace
 - Exposure to psychosocial risks
 - Duration and organization of work
 - Working conditions of the self-employed
- Health and work:
 - Work, health and disability
 - Accidents at work
 - Work-related pathologies: designated occupational diseases
 - Work-related pathologies: work-related illnesses
- Risk prevention:
 - Employers' risk-prevention practices

4.2.5 Mexico

The Ministry of Labour and Social Welfare (STPS) publishes an extensive set of statistics on OSH based on the database of administrative records held by the Mexican Institute of Social Security. Statistics on fatal and non-fatal occupational injuries, commuting accidents and occupational diseases can be accessed free of charge from the Ministry's web page "[Riesgos de trabajo registrados en el IMSS](#)". They include incidence rates and statistics on the number of cases classified by occupation, economic activity, external cause and nature of injury, with further disaggregation by sex and year of occurrence.

Since the Institute of Social Security covers approximately 80 per cent of the formally employed population in Mexico, the statistics provide reasonably complete coverage of reported occupational accidents and diseases among the formally employed (Sánchez, 2019). To provide more comprehensive statistics that cover workers in both formal and informal employment, data on OSH are also collected directly from households in the National Survey of Employment and Social Security (ENESS). This survey has been conducted every four years since 1996 (except for 2009) by the National Institute of Statistics, Geography and Informatics (INEGI) and the Institute of Social Security. It was conducted as a supplementary module to the National Survey of Employment in 1996, 2000 and 2004, and to the National Survey of Occupation and Employment in 2009, 2013 and 2017. The ENESS provides statistical information at national and state levels on, among others,

coverage of social security and health services; social security contributions; pensions; work risks; childcare; and autonomy of the elderly (INEGI, n.d.).

Mexico: ENESS questions on work hazards and days lost

18. WORK HAZARDS

From June 2016 to date, has (NAME) had to have medical attention for....

RECORD THE CODES LISTED

IF THE PERSON HAD MORE THAN TWO ACCIDENTS OR DISEASES, ASK FOR THE TWO THAT HAVE AFFECTED THEIR ACTIVITIES THE LONGEST, STARTING WITH THE ONE WITH THE LONGEST DURATION

- an accident that occurred at work?** _____ 1
- an accident on the way from home to work or back?** _____ 2
- a work-related illness?** _____ 3
- an accident not related to work?** _____ 4
- an illness not related to work?** _____ 5
- Did not have an accident or illness** _____ 6
- Doesn't know** _____ 9
- Does not work or did not work during that period** _____ 0

19. DAYS OF ABSENCE FROM WORK (Codes 1-5 Q.18)

How many days did (NAME) take off work because of this?

RECORD NUMBER OF DAYS OR THE CODES LISTED

- None** _____ 000
- Did not go back to work** _____ 997
- Doesn't know** _____ 999

According to the results of the 2017 ENESS, a total of 1,366,534 people aged 15 and over reported that during the year preceding the date of the survey they had an accident at work resulting in an absence from work, while 313,769 people reported that they had a work-related illness (INEGI 2018, table 3.25). This compares with 387,884 accident cases and 13,603 cases of occupational illness based on the administrative records of the Institute of Social Security (STPS 2021, table 1.1). The very large difference between these two sources can in large part be explained by the high numbers of workers who are not covered by the Institute of Social Security. Of the economically active population of 54.4 million in 2017, only 20.1 million were insured as workers, 16.8 million of whom were covered through the Institute of Social Security, (INEGI 2018, table 3.36), reflecting the high levels of informal employment in Mexico. The tendency observed in other countries for less serious injuries not to be reported as insurance claims, as well as different perceptions of the concepts of work-related injury and disease when self-reported, most likely also contributes to these differences.

Mexico		
Household Survey: National Survey of Employment and Social Security		
Coverage	Geographical: Economic activity: Population: Institutional sector: Reference group: Establishment size:	Total national All Population in private households aged 15 or over All institutional sectors n/a n/a
Indicators	<p>Indicators related to compensation for occupational injury: Cases of non-fatal occupational injury, by sex Cases of non-fatal occupational injury, by sex and duration of absence from work Days lost due to cases of occupational injury, by sex</p> <p>Indicators relating to cases of occupational disease: Cases of occupational disease, by sex Cases of occupational disease duration of absence from work Days lost due to cases of occupational disease, by sex</p> <p>Indicators relating to compensation for occupational injury: Percentage of the population who receive social security following an occupational injury Percentage of workers with access to social benefit in case of occupational injury</p>	
Link to questionnaire	<p>Link to questionnaire and methodological documents: http://en.www.inegi.org.mx/programas/eness/2017/#</p> <p>The survey covered the entire population in private households, but questions related to occupational injury and disease were asked only of those aged 15 and over.</p>	
Public availability of data	A presentation of the results of the survey, as well as basic tables and microdata can be downloaded from the website of the National Institute of Statistics, Geography and Informatics.	
Link to the report of the survey	http://en.www.inegi.org.mx/programas/eness/2017/#	

4.2.6 Myanmar

Statistics from administrative records are compiled on various aspects of OSH in Myanmar. These include annual statistics from labour inspectorate records provided to the ILO, which cover cases and incidence rates of fatal occupational injuries by sex and economic activity, as well as the numbers of labour inspections and inspectors. The latest data available on ILOSTAT refer to 2019. In addition, statistics on employment and establishments registered with the Social Security Board, as well as on the numbers of claims and awards for temporary and permanent disability, are included in the Myanmar Statistical Yearbook (Central Statistical Organization 2018, 248–250).

The first LFS in Myanmar conducted since 1990 was conducted in 2015 as part of the Myanmar Labour Force, Child Labour and School-to-Work Transition Survey. The survey was conducted by the Ministry of Labour, Immigration and Population, with financial and technical support from the ILO. It included a section on occupational injuries and hazards within the last year. Based on a sample of

24,000 households, it was estimated that 408,781 persons aged 15 or over received an occupational injury. This represented 1.8 per cent of the employed population aged 15 or over, or 21.8 million people (Myanmar 2016, ii and v).

Myanmar		
Household survey: LFS		
Coverage	Geographical: Economic activity: Population: Institutional sector: Reference group: Establishment size:	Total national All Total population All institutional sectors n/a n/a
Indicators	Indicators relating to cases of occupational injury: Cases of non-fatal occupational injury, by sex and economic activity Cases of non-fatal occupational injury, by sex and migrant status Cases of non-fatal occupational injury, by sex and occupation Days lost due to cases of occupational injury with temporary incapacity for work, by sex and economic activity Days lost due to cases of occupational injury with temporary incapacity for work, by sex and migrant status	
Link to questionnaire	Link to questionnaire and methodological documents: https://www.ilo.org/surveyLib/index.php/catalog/1291/download/9661 Questions related to occupational injury of the employed population aged 10 and over	
Public availability of data	The report of the survey is available on the website of the Central Statistical Office	
Link to the report of the survey	https://www.ilo.org/surveyLib/index.php/catalog/1291/download/9663	

According to labour inspectorate insurance records, the total number of cases of non-fatal injuries in Myanmar in 2015 was 18.7 per 100,000 (see ILOSTAT). This source of data was used to report data on the rate of non-fatal occupational injuries for SDG indicator 8.8.1. If the total employed population of 21.8 million is used as the reference population for this rate, this would imply that the total number of non-fatal injuries was of the order of 4,077 – about 100 times less than the estimate based on the LFS. This difference can be explained in part by the low levels of formal employment in Myanmar. However, the magnitude of the difference may also suggest a significant level of under-reporting of accidents among the formally employed.

Extract from Myanmar LFS Questionnaire, 2015

Occupational injuries and hazards within the last year i.e. since (DATE) to today

For persons aged 5 years and above who worked in the last year

READ

Now I would like to ask you about any accidents (NAME) may have had while working in the last year
i.e. since (DATE) to today.

Q128 In the last year i.e. since (DATE) to today, was (NAME) hurt in any accident while working that caused him/her injury/illness?

(Include accidents that took place while commuting to/from work)

1 = Yes

2 = No 2 →Q139CHECK 2 →Q139CHECK

Q129 Did any of the injuries received in the last year i.e. since (DATE) to today result in (NAME) being absent from work or unable to work, for at least one day, apart from the day of the accident?

1 = Yes 1 →Q131 1 →Q131

2 = No

Q130 Did the injuries seriously restrict (NAME)'s work or activities even though (NAME) was able to work or not absent from work?

1 = Yes 1 →Q139CHECK 1 →Q139CHECK

2 = No 2 →Q139CHECK 2 →Q139CHECK

Q131 How many of these injuries/illnesses (with lost time) did (NAME) have in the last year i.e. since (DATE) to today?

(record number of accidents)

Q132 In this work accident / the most serious work accident, what type of injury did (NAME) receive?

Code the most severe injury

1= Superficial injury

2= Fracture

3= Dislocation, sprain, strain

4= Amputation

5= Concussion, internal injury

6= Burn, corrosion, scald

7= Acute poisoning or infection

9= Other injury (specify)

Q133 What kind of work was (NAME) doing when this accident happened?

1= Main job in the last 7 days →Q137

2= Secondary job in the last 7 days →Q137

3= Main job in the last 12 months →Q137

9= Other job (specify occupation) →Q137

(If "Other" record the title of the job if there is one)

.....
(specify) (specify)

Q134 What were (NAME)'s main tasks or duties in this job/activity?

(Write a short description of the main tasks/duties)

4.2.7 Pakistan

In Pakistan, the LFS is the main source of statistics on OSH and has been used to report data on the rate of non-fatal occupational injuries under SDG indicator 8.8.1. The LFS has been conducted by the Pakistan Bureau of Statistics (PBS) annually (with a few exceptions) since 1963. It is enumerated from July to June of the following year, with the total sample for the year evenly distributed on a quarterly basis to offset seasonal variations. The most recent results available are for 2018–2019.

The survey covers all urban and rural areas of the four provinces of Pakistan and the capital, Islamabad, excluding federally administered tribal areas and military restricted areas. The population of excluded areas constitutes about 2 per cent of the total population of approximately 203 million. A stratified two-stage sample design is adopted for the survey, with a sample of 41,012 households enumerated in the 2018–2019 survey, representing a very high response rate of 99.58 per cent of the 41,148 households selected in the sample. Data for all members of the selected households are collected by direct interview from the head of the household or from another informed member of the household.

The questionnaire includes a module on occupational injuries and work-related diseases that occurred during the 12 months prior to the interview and resulted in time off work or consultation with a doctor, but does not allow the separate identification of injuries and diseases. As shown in the box below, data are collected on the cause of accident/injury; type of treatment; conditions that caused the accident/injury; and number of days before being able to go back to work. Inclusion of these questions in the LFS means that the results can be cross-classified by the wide range of socio-demographic and labour force variables included in the survey.

The survey results are presented in the annual report of the LFS and on the PBS website, as a percentage distribution of all employed persons 10 years of age and over (for details of the available tabulations, see second box below). The results showed that in 2018–2019, 3.3 per cent of all employed persons aged 10 years or more suffered an occupational injury or disease in the 12 months preceding the date of enumeration. This was a significant reduction from the 4 per cent reported for 2014–2015 and 3.7 per cent for 2017–2018. There was a much higher incidence among males (3.9 per cent) than females (1.2 per cent), as well as significant variations among regions ([PBS](#), n.d.).

Pakistan	
Household survey: LFS	
Coverage	<p>Geographical: Total national, excluding federally administered tribal areas and military restricted areas</p> <p>Economic activity: All</p> <p>Population: All persons in private households</p> <p>Institutional sector: All institutional sectors</p> <p>Reference group: n/a</p> <p>Establishment size: n/a</p>
Indicators	<p>Indicators relating to cases of occupational injury: Cases of non-fatal occupational injury, by sex and economic activity Cases of non-fatal occupational injury, by sex and migrant status Cases of non-fatal occupational injury, by sex and occupation Cases of non-fatal occupational injury, by sex, type of incapacity and migrant status</p> <p>Indicators of days lost due to cases of occupational injury with temporary incapacity for work: Days lost due to cases of occupational injury with temporary incapacity for work, by sex and migrant status</p> <p>Indicators of incidence rate of occupational injury: Non-fatal occupational injuries per 100,000 workers, by sex and migrant status Percentage distribution of employed persons 10 years of age and over who suffered occupational injuries/diseases due to unsafe conditions causing the accident/disease, by area and sex Percentage distribution of employed persons 10 years of age and over who suffered occupational injuries/diseases, by area, sex and province, by status Percentage distribution of employed persons 10 years of age and over who suffered occupational injuries/diseases, by employment status, province, sex and area Percentage distribution of employed persons 10 years of age and over who suffered occupational injuries/diseases, by major industry division, sex and area Percentage distribution of employed persons 10 years of age and over who suffered occupational injuries/diseases, by major occupation groups, sex and area Percentage distribution of employed persons 10 years of age and over who suffered occupational injuries/diseases, by type of incapacity to work, area and sex Percentage distribution of employed persons 10 years of age and over who suffered occupational injuries/diseases, by type of treatment received, sex, area and province Percentage of employed persons 10 years of age and over who suffered occupational injuries/diseases, by unsafe act that caused the accident/disease Share of workers who have had an occupational disease by work time organization Share of occupational disease (% of total diseases)</p>
Link to questionnaire	Link to questionnaire and methodological documents: https://www.pbs.gov.pk/content/labour-force-survey-2018-19-annual-report
Public availability of data	The annual report of the survey, including a description of the methodology, the questionnaire and an extensive set of tables, can be downloaded free of charge from the PBS website.
Link to the report of the survey	https://www.pbs.gov.pk/content/labour-force-survey-2018-19-annual-report

4.2.8 Philippines

The ISLE is a modular survey of establishments that provides data on employment, industrial relations, occupational injuries and labour costs. It is conducted every two years by the Philippine Statistics Authority (PSA). The main topics covered by the survey are total employment, by category of worker and specific groups of workers; outsourcing activities within and outside the premises of establishments; occupational shortages and surpluses; training of workers; productivity improvement and gainsharing practices; employees' compensation programmes; OSH practices; and the extent of occupational injuries and diseases.

The 2017–2018 ISLE was a nationwide survey that covered establishments in both agricultural and non-agricultural industries with total employment of 20 or more. The sample was drawn from the PSA's list of establishments. Small business and any informal establishments with more than 20 employees, as well as establishments in certain industries, are excluded (PSA, n.d.).

In addition to the types of statistics reported in ILOSTAT, the statistics published from the 2017–2018 ISLE include the following indicators of OSH practices:

- number of establishments employing 20 or more workers with preventive and control measures/activities against work safety and health hazards, by type of activity conducted and major industry group, Philippines: 2017
- number of establishments employing 20 or more workers, by OSH policies/programmes implemented and major industry group, Philippines: 2017
- number of establishments employing 20 or more workers with OSH-related training events/seminars by type of training event/seminar and conducting agency, Philippines: 2017
- number of establishments employing 20 or more workers with designated health and safety personnel, by designated personnel and major industry group, Philippines: 2017

These statistics were compiled from the responses to a series of three questions on OSH practices covering:

- prevention/control measures/activities against work safety and health hazards;
- OSH policies and programmes; and
- safety and health-related training/seminars.

For each of these questions, respondents are asked to select "yes" or "no" from a list of types of measures, activities and programmes,

To collect data on occupational injuries and diseases, respondents were first asked whether the establishment recorded any occurrences of occupational injuries or diseases during the calendar year. They were then asked whether the establishment experienced any occupational accidents during the year – and if so, how many. The numbers of fatal cases, cases resulting in permanent incapacity, cases resulting in temporary incapacity, workdays lost and cases without workdays lost, by type of injury, are then reported, using a grid as shown below (PSA, n.d., Questionnaire, Part IX).

**Grid used to record data on occupational accidents by type of injury,
Philippines ISLE, 2017**

1. Did your establishment experience any occupational accidents during the year? 1 – Yes 2 – No, Go to item 8 <i>If answer is YES, indicate in items 3-7, as applicable, the number of cases of occupational injuries.</i>		2. How many occupational accidents were there?				
Type of Injury (See description of classifications below) (1)	Fatal Cases (2)	Permanent Incapacity		Temporary Incapacity		Cases Without Workdays Lost (7)
		Cases (3)	Workdays Lost (4)	Cases (5)	Workdays Lost (6)	
3. Total (sum of corresponding entries in cols. 2 to 7)						
3.1. Superficial injuries and open wounds						
3.2. Fractures						
3.3. Dislocations, sprains and strains						
3.4. Traumatic amputations						
3.5. Concussions and internal injuries						
3.6. Burns, corrosions, scalds and frostbites						
3.7. Acute poisonings and infections						
3.8. Foreign body in the eye						
3.9. Others (Please specify)						

Data on the number of fatal cases, permanent incapacity cases and temporary incapacity cases are reported for the part of the body injured, the cause of injury, agent of injury and nine major occupational groups. Short definitions of the categories in the classifications of type of injury, part of the body injured, cause of injury, agent of injury and occupation are provided on the form.

Data on the number of new cases of occupational diseases recognized, diagnosed and recorded during the year are recorded for a list of specific occupational diseases, with a space to write in any other occupational diseases that occurred. A definition of occupational disease is provided on the form. The statistics on occupational injuries and diseases are useful in that they provide baseline data on injuries and diseases and measurement changes over time. Identification of the causes, nature and severity of the injuries, classified by broad categories of economic activity, may assist in targeting prevention policies. However, the statistics are not disaggregated by sex, age or other characteristics of the person affected or by status in employment. Data classified by occupation and economic activity are published only at the broadest levels of the relevant national classifications, making it difficult to target the detailed occupational groups and industries that are most affected. The limitation of coverage to relatively large formal sector establishments inevitably means that a significant share of injuries and diseases will not be included, including those occurring in small-scale agriculture, in which it could be expected that a significant proportion of injuries and diseases might occur.

Philippines		
Establishment survey: ISLE (2017-2018)		
Coverage	Geographical:	Total national
	Economic activity:	All except central banking; public administration and defence and compulsory social security; retail sale via stalls and markets, jeepney and autonomous underwater vehicle operation; tricycle, calesas and pedicabs operation; public education services; public medical, dental and other health services; cockpits operation activities; musical band or band in operation during fiestas; activities of membership organizations; households as employers of domestic personnel; undifferentiated goods- and services-producing activities of household for own use; and extraterritorial organizations and bodies.
	Population:	All employed persons except: <ul style="list-style-type: none"> - silent or inactive partners - members of the board of directors paid solely for attendance at meetings - consultants, persons employed on a retainer basis, subcontracted/agency-hired workers, homeworkers - workers on indefinite leave, workers laid off for six months or more - workers paid purely on commission without employer control - students under on-the-job training
	Institutional sector:	Most public sector establishments are excluded
	Reference group:	
	Establishment size:	Agricultural and non-agricultural establishments employing 20 persons or more
Indicators	<p>Indicators relating to cases of occupational injury: Cases of occupational injury, by economic activity Cases of occupational injury, by economic activity and agent of injury Cases of occupational injury, by economic activity and cause of injury Cases of occupational injury, by economic activity and incapacity for work Cases of occupational injury, by economic activity and occupation Cases of occupational injury, by economic activity and part of the body injured Cases of occupational injury, by economic activity and type of injury</p> <p>Indicators related to days lost due to cases of occupational injury with temporary incapacity for work: Severity rates and average workdays lost for cases of occupational injuries resulting in temporary incapacity, by economic activity</p> <p>Indicators related to incidence rate of occupational injury: Frequency rates of cases of occupational injuries, by economic activity and incapacity for work Frequency rates of cases of occupational injuries, by economic activity and incapacity for work Incidence rates of cases of occupational injuries, by economic activity and incapacity for work</p> <p>Indicators related to occupational accidents: Cases of occupational commuting accidents, by economic activity</p> <p>Cases related to cases of occupational disease: Cases of occupational diseases, by economic activity and type of disease</p>	
Link to questionnaire	Integrated Survey on Labor and Employment (ISLE)	
Public availability of data	Comprehensive statistical tables, infographics and methodological information can be accessed free of charge from the survey web page.	
Link to the report of the survey	Integrated Survey on Labor and Employment (ISLE)	

4.2.9 United Kingdom

In the United Kingdom, statistics on OSH for England, Scotland and Wales are compiled by the Health and Safety Executive (HSE). Comparable statistics for Northern Ireland are the responsibility of the Health and Safety Executive Northern Ireland. The statistics published by the HSE cover the following broad topics:

- work-related ill health and disease;
- workplace injury;
- enforcement of health and safety legislation;
- working days lost and costs to England, Scotland and Wales as a result of health and safety incidents;
- working conditions and management of health and safety in the workplace.

The main data sources are the LFSs conducted by the Office for National Statistics and administrative data collected through the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR). The LFS includes questions commissioned by the HSE on work-related illness and injury that are asked in the first quarter of each year.

United Kingdom LFS Questions on incidence of accidents at work and duration of absence

Thinking of the twelve months since [full date], have you had any accident resulting in injury at work or in the course of your work?

- 1 yes
- 2 no

Was that (most recent) injury caused by...?

- 1 A road accident HSE
- 2 Or in some other way?

May I just check, was the job you were doing when you were injured the one you previously mentioned as...?

- 1 [Occupation title – main job]
- 2 [Occupation title – second job] or (n/a)
- 3 Or was it some other job?

How soon were you able to start working again after the accident?

- 1 Still off paid work
- 2 Same day
- 3 The day after the accident
- 4 On the second day after the accident
- 5 On the third day after the accident
- 6 On the fourth day after the accident
- 7 On the fifth day or longer after the accident
- 8 Don't know

How many days after the accident did you go back to work?

(If the respondent has difficulty remembering the number of days, please enter the number of weeks or months)

As shown above, difficulties in remembering the exact number of days of absence from work when the absence was five days or longer are addressed by allowing the respondent to state the number of weeks or months of absence (ONS 2021, 209-210). This allows estimation of the total number of days lost. These questions are followed by questions on the nature of the injury and how the accident happened.

Questions are then asked on work-related illnesses, as shown below. In the 2021 edition of the LFS, additional questions were also asked on whether the illness was linked to coronavirus or suspected coronavirus (COVID-19) at work.

UK LFS: Questions on work-related illnesses (ONS 2021)

(Apart from the accident you have told me about,) within the last twelve months have you suffered from any illness, disability or other physical or mental problem that was caused or made worse by your job or by work you have done in the past?

- 1 Yes
- 2 No
- 3 don't know

How many illnesses have you had (in the last twelve months) that have been caused or been made worse by your work?

How would you describe this illness?

- 1 bone, joint or muscle problems which mainly affect (or is mainly connected with) arms, hands, neck or shoulder,
- 2 ...hips, legs or feet,
- 3 ...back,
- 4 breathing or lung problems,
- 5 skin problems,
- 6 hearing problems,
- 7 stress, depression or anxiety,
- 8 headache and/or eyestrain,
- 9 heart disease / attack, other circulatory system,
- 10 infectious disease (virus, bacteria)
- 11 Other

The statistics from the LFS and RIDDOR are complemented by data from other sources, including, among others, medical practitioner reporting on cases of work-related ill health; specific occupational diseases reported on death certificates as the cause of death; and cases of specific “prescribed diseases” (with an established occupational cause) assessed for compensation under the Industrial Injuries Disablement Benefit scheme (HSE, 2020b).

Statistics on fatal injuries and deaths from occupational diseases are sourced from RIDDOR, while overall estimates of work-related ill health are based on self-reports from the LFS. Statistics on non-fatal injuries at work are compiled from both of these sources. According to self-reports from the LFS, a total of 693,000 workers sustained non-fatal injuries in England, Scotland and Wales in 2019–2020, a number more than ten times greater than the 65,427 employee non-fatal injuries reported by employers through RIDDOR for the same period. The reasons given for this difference are that RIDDOR requires employers to report only certain types of workplace non-fatal injuries and that it is known that employers substantially under-report these injuries. The HSE notes that the LFS provides the most complete estimate of workers sustaining a non-fatal injury at work, because “data are available for all workplace injuries, irrespective of time off work; they are not subject to the substantial under-reporting that affects RIDDOR; and they are not affected by changes in legislation. However, RIDDOR provides greater richness in terms of details about the injury sustained” (HSE, n.d.).

More detailed statistics on specific occupational diseases are compiled from a range of sources. For example, statistics on deaths from mesothelioma, by occupation, are sourced from death certificates that record the last reported occupation of the deceased. This allows the calculation of proportional mortality ratios calculated for detailed occupational groups (4-digit level of the United Kingdom Standard Occupation Classification) and provides a way of highlighting occupations that may be associated with higher than average mortality from mesothelioma (HSE, 2021).

Summary statistics from the different sources are brought together in an annual publication (HSE 2020a), while detailed statistical tables can be accessed through an index of tables organized by data source from the HSE's "Health and Safety Statistics" web page. Explanations and time series statistics are provided in a series of reports, organized by theme.

United Kingdom		
Household survey: LFS (2019)		
Coverage	Geographical: Economic activity: Population: Institutional sector: Reference group: Establishment size:	Total national All Total population All institutional sectors n/a n/a
Indicators	<p>Indicators relating to cases of occupational injury: Cases of non-fatal occupational injury, by kind of accident Cases of non-fatal occupational injury, by sex and economic activity Cases of non-fatal occupational injury, by sex and migrant status Cases of non-fatal occupational injury, by sex and occupation Cases of non-fatal occupational injury, by type of incapacity Cases of non-fatal occupational injury, by workplace size</p> <p>Indicators related to days lost due to cases of occupational injury with temporary incapacity for work Days lost due to cases of occupational injury with temporary incapacity for work, by kind of accident Days lost due to cases of occupational injury with temporary incapacity for work, by sex and economic activity Days lost due to cases of occupational injury with temporary incapacity for work, by sex and migrant status Days lost due to cases of occupational injury with temporary incapacity for work, by sex and occupation</p> <p>Indicators relating to cases of occupational diseases Cases of occupational disease, by sex and economic activity Cases of occupational disease, by sex and migrant status Cases of occupational disease, by sex and occupation Cases of occupational disease, by workplace size</p>	
Link to questionnaire	<p>Link to questionnaire and methodological documents: https://www.hse.gov.uk/statistics/lfs/modules.htm</p> <p>The module of questions on workplace injury has been administered since 1993 to individuals aged 16 or over who are currently employed or have been employed in the previous year. There is a core set of questions asked annually, with additional questions included periodically.</p>	
Public availability of data	Free access to a comprehensive set of tables presenting the survey results published on the HSE website.	
Link to the report of the survey	LFS - Labour Force Survey - Self-reported work-related ill health and workplace injuries: Index of LFS tables	

4.2.10 United States

The main sources of statistical data on OSH in the United States are the SOII, which is an establishment survey, and the Census of Fatal Occupational Injuries (CFOI), which is an administrative data collection. These two data collections are used as the source of data under SDG indicator 8.8.1.

The SOII is used to estimate the incidence rates and counts of workplace injuries and illnesses and provides detailed case and demographic data for cases that involve one or more days away from work and for days of job transfer and restriction (BLS, 2020a). For selected industries, the survey also provides estimates of the counts and incidence rates of employer-reported non-fatal workplace injuries and illnesses, by industry and type of case, as well as detailed estimates of case circumstances and worker characteristics for cases that resulted in days away from work.

The SOII data are collected directly from a sample of establishments and are mainly collected electronically over the internet, but may also be submitted by fax, telephone or mail. Establishments selected to participate in SOII are notified by the Bureau of Labor Statistics (BLS) in writing in advance of the year for which they will be required to provide data, so as to ensure that they maintain injury and illness logs and case forms for the survey year. For private establishments, response to the survey is compulsory by law.

A stratified sample of 230,000 establishments is selected to represent all in-scope private industries, state governments and local governments, taking into account industry, ownership and establishment size. Establishments that have a large number of cases involving days away from work are instructed to report a subsample of their cases that occurred in specified time periods.

The large sample and the survey design allow the provision of estimates of non-fatal occupational injuries at the detailed levels of the North American Industrial Classification System and the United States Standard Occupation Classification, with disaggregation by the nature of injury or illness, parts of the body affected and the types of event or exposure. A major limitation of the SOII, however, is that the self-employed as well as employees in agricultural establishments with fewer than ten employees are not included. Evidence from other countries would tend to suggest that injuries among the self-employed and among agricultural employees are likely to be high. There are also concerns that:

- the SOII estimates are subject to under-reporting due to potential filtering effects on the reporting of work-related injuries and illnesses;
- employers may wish to under-report or misclassify injuries and illnesses to keep injury and illness rates low; and
- the employer may not be aware of reportable events that occurred because some workers do not report incidents due to concern that they may risk losing their job or other opportunities, such as a raise or promotion.

To address these concerns, BLS has developed and piloted a Household Survey of Occupational Injuries and Illnesses, which it is hoped will complement the current SOII and resolve some of the issues surrounding quality (BLS, 2020c).

United States		
Establishment survey: SOII		
Coverage	Geographical:	Total national
	Economic activity:	All
	Population:	All establishments except those in agriculture with 10 or fewer employees, private households and those concerned with postal workers (NAICS 491), space research and technology (NAICS 927) and national security and international affairs (NAICS 928)
	Institutional sector:	Excluding federal jurisdictions
	Reference group:	All employees (self-employed are excluded)
	Establishment size:	All
Indicators	<p>Indicators relating to cases of occupational injury: Cases of non-fatal occupational injury, by sex and economic activity Cases of non-fatal occupational injury, by sex, type of incapacity and economic activity Cases of non-fatal occupational injury, by type of incapacity and economic activity</p> <p>Indicators related to days lost due to cases of occupational injury with temporary incapacity for work Days lost due to cases of occupational injury with temporary incapacity for work, by sex and economic activity</p> <p>Cases related to Incidence rate of occupational injury Non-fatal occupational injuries per 100,000 workers, by sex and economic activity</p>	
Link to questionnaire	https://www.bls.gov/respondents/iif/soii-sy2019-long-form-omb.pdf	
Public availability of data	A news release reporting the key results of the survey is available free of charge on the website of the Bureau of Labour Statistics. Comprehensive statistical tables, with detailed disaggregation by occupation and industry, can also be accessed free of charge.	
Link to the report of the survey	Employer-Reported Workplace Injuries and Illnesses (Annual)	

Occupational injuries in agriculture

The need for statistics on occupational injuries in agriculture in the United States has been addressed to a certain extent through various surveys targeting agricultural safety conducted by the National Institute for Occupational Safety and Health (NIOSH), including the Occupational Injury Surveillance of Production Agriculture (OISPA) Survey. The first OISPA was conducted for the calendar year 2001 and additional surveys were conducted for the years 2004, 2009, 2012 and 2014. The OISPA was conducted in conjunction with the Childhood Agricultural Injury Survey (CAIS). Using the Census of Agriculture as a sampling frame, a stratified (by geographic region) random sample of 50,000 farm households nationwide was selected for inclusion in the CAIS. A stratified random subsample of 25,000 farms was selected for the OISPA. The data collected included information on farm characteristics, household demographics and occupational injuries to adults 20 years of age and older living on, working on and visiting the farm. Detailed injury information was collected for the two most recent injury events that occurred on each farm. (NIOSH 2018)

The OISPA data can be freely accessed from the NIOSH website, which includes tables on agricultural work-related injuries to adults, disaggregated by type of worker, type of farm and the characteristics of

the injury and event causing the injury. However, these statistics cannot easily be integrated with the SOII data to allow the compilation of estimates on total occupational injuries for the United States.

Fatal injuries

The CFOI collects and publishes a complete count of work-related fatal injuries and descriptive data on their circumstances, based on administrative records. It aims to capture data on all workers in any status in employment (wage and salary, self-employed and so on), as well as data on volunteers in all sectors (private, federal, including resident military, state, local, foreign and other government) who have been fatally injured while working in the United States. Data are collected from a wide range of sources, including death certificates, state workers' compensation reports and reports from medical examiners, coroners, police, the SOII and other sources.

CFOI provides annual fatal injury rates and counts by case circumstances and worker characteristics, with a wide range of charts and tables disaggregated by:

- industry, by selected event or exposure;
- occupation, by event or exposure;
- worker characteristics (worker status, gender, age, race or ethnic origin) by event or exposure;
- and
- event or exposure, by major private industry sector.

The data on industry and occupation are available at the most detailed level of the relevant national classifications. Data on events or exposure are classified into the following categories:

- violence and other injuries caused by persons or animals;
- transportation incidents;
- fires and explosions;
- falls, slips, trips;
- exposure to harmful substances or environments; and
- contact with objects and equipment.

A report of the survey and detailed tables can be accessed free of charge from the CFOI's ["Injuries, Illnesses, and Fatalities"](#) web page.

5 Conclusions

5.1 Relevance and importance of household and establishment surveys as a source of data on OSH

Based on the mapping exercise and analysis of statistics available on OSH in the 22 targeted countries, we have seen that good-quality and useful statistics on occupational injuries and work-related diseases can be produced based on data collected in both household surveys and establishment surveys.

Household surveys are used for this purpose much more frequently than establishment surveys, most commonly as part of a supplementary or regular module of questions in national LFSs. Data on OSH are also collected from households as part of WCSs, child labour surveys and potentially some other kinds of household survey.

Household surveys have the important advantage of allowing coverage of the entire population, and therefore include workers with all kinds of employment status, as well as those in unpaid forms of work, including volunteers, unpaid trainee workers and own-use producers of goods and services. However, due to sampling limitations, household surveys do not usually provide information at a detailed level on the occupations and economic activities in which occupational accidents occur and diseases are acquired. The quality of information may also be impacted by recall effects, the use of proxy respondents and respondents' interpretation of questions.

Establishment surveys are also capable of providing reliable information on OSH, especially with respect to the nature of the accident and injury, as this information is likely to be kept in personnel records in considerable detail when insurance claims for compensation are made. It is also possible for establishment surveys to provide detailed information on the occupations and economic activities in which injuries and diseases occur, as is the case in the United States SOII. However, this requires a large sample and possibly a survey dedicated to the subject. For many countries, the cost of collecting statistics in establishment surveys at this level of detail may be prohibitive. Equally importantly, employer surveys frequently do not cover certain types of establishment, such as small businesses and those in the informal economy. This problem is acknowledged in the United States, where consideration is being given to using household surveys to complement the data from the SOII and other employer surveys. Establishment surveys are a good source of data on OSH practices.

5.2 Strengths and limitations of administrative data

Administrative data, especially the records of agencies that provide workers' compensation insurance, can also be a source of rich and detailed statistics on occupational injuries and diseases, as well as on topics related to workers' compensation and labour inspection. In many countries, administrative data will also be the best source for statistics on fatalities arising from occupational injuries and diseases.

In countries with low levels of informality, administrative records can provide relatively comprehensive and complete statistics on occupational injuries and diseases. Comparison of data from household surveys and insurance records suggests that in some cases, statistics on the numbers and rates of cases of injury and disease obtained from administrative sources can, at least for the more serious cases, be as comprehensive as those obtained from household surveys – since very few accidents reported in household surveys are excluded from administrative data, while administrative data do not suffer from errors due to recall and proxy reporting. This appears to be the case when there is a financial incentive for both employers and workers to report an accident, injury or disease for compensation purposes, such as in Finland and possibly other Nordic countries – even though some groups of workers are not included in the administrative data.

Frequently, however, the number of cases and incidence rates obtained from administrative sources are significantly (or even massively) lower than those obtained from household surveys. This implies significant levels of under-reporting and/or incomplete coverage in administrative records, when some

groups of workers do not have workers' compensation insurance. This is especially the case in countries with high levels of informal employment or when insurance coverage is not compulsory for some workers, such as the self-employed or casual and short-term employees.

When occupational injury insurance schemes are improved and the level of reporting of accidents increases as a result of improved incentives to claim or when the coverage of such schemes becomes more complete, then the statistics derived from them will inevitably show an apparent increase in the number of injuries and potentially in the rate of injury as well. This will certainly be the case if the uninsured are included in the denominator used to calculate the rates, but may also be the case when the reference group is insured workers. Statistics based on administrative records may therefore be an indicator of the effectiveness of the workers' compensation and accident reporting systems, in as much as they represent the real incidence of injuries and accidents.

5.3 Importance of using multiple types of data source

In countries with high levels of informal employment, household surveys are likely to be the only source of data that can allow assessment of the total incidence of occupational injuries and work-related diseases. This implies that consideration should be given in these countries to including questions on occupational injuries and work-related diseases in household surveys such as LFSs and/or WCSs, either on a permanent basis or as a supplementary module of questions. Even when countries have very strong reporting and compensation systems that have near complete coverage, it would be important to compile statistics, at least on occupational injuries, from household surveys on a periodic basis in order to assess the extent of completeness of administrative data and the effectiveness of the workers' compensation insurance system.

There are several good examples of question sets that have been used successfully in household surveys in countries at different levels of development – and that are relatively short. These questions could be tested and adapted for use in other countries. However, the advice on question modules on occupational injuries provided by the ILO in the manual published in 2008 is obsolete and not easy to find. Considering the importance of providing statistics on OSH, it may therefore be useful to develop an add-on module covering at least occupational injuries, as part of the set of ILO LFS model questionnaires.

Good quality and comprehensive statistics on OSH require obtaining statistics from multiple sources. As we have seen, there are limits to the detail that can be provided by household surveys alone. Where possible, statistics should be compiled from administrative records as well as from household surveys. This will allow provision of data on topics that cannot easily be collected from households and establishments, such as the numbers of workers and employers covered by compensation schemes.

The provision and analysis of statistics on occupational injuries and diseases sourced from both the administrative records of insurance schemes and household surveys can provide valuable insights, as they measure the same phenomena from different perspectives, although they do not measure exactly the same thing. The administrative data refer to occupational injuries that were (a) reported and (b) satisfied the criteria for compensation. The data from household surveys refer to the perception of the respondent that an injury occurred as the result of an accident at work. Comparability between the data from these two perspectives can be improved by counting only the injuries that resulted in absence from work and by collecting data on the number of days of absence. The longer the absence, the more likely it will be that the accident will be reported and that claims for compensation will be accepted.

It is not necessarily the case that one source is more accurate than the other and we should not expect the statistics from these different sources to tell exactly the same story, as they each measure something slightly different. This allows assessment not only of the accuracy and completeness of the statistics but also the assessment of the extent of coverage and effective functioning of the insurance schemes. This should surely be one of the purposes of collecting data on occupational injuries from household surveys.

When statistics are published on the same or closely related topics based on data obtained from different sources, it is important to explain why the numbers are different and what it is that each source

is measuring. If coverage of the data from administrative sources is limited, this should be explained, whether or not data are also available from other sources. Unfortunately, such information is frequently not available or easily accessible to users of the data. In some of the targeted countries, we have seen that significant value has been added by bringing data together from different sources, including from additional sources such as medical surveillance programmes.

5.4 Summary of recommendations to improve OSH statistics

In countries with high or moderate levels of informal employment or low levels of workers' compensation insurance coverage, household surveys should be seen as the main source of statistics on the prevalence of occupational injuries and work-related illnesses. These countries should consider including a module of questions on the topic on a regular basis, either annually or every few years, in a household survey such as the LFS, a multi-purpose household survey or a WCS.

Data on occupational injuries and diseases from administrative records such as insurance records can be used to produce richer and more detailed statistics than household surveys on the distribution of injuries and diseases by occupation, economic activity, the nature of the injuries and diseases, and the type of occurrence. Where possible, countries with high levels of informal employment should therefore complement statistics obtained from household surveys with data obtained from administrative sources and seek to improve the quality and coverage of the statistics obtained from these sources as part of wider policy initiatives to formalize the informal economy.

Rates of injury and disease extracted from administrative records should be calculated using the total number of insured persons or workers as the denominator, rather than total employment, especially when the levels of insurance coverage are low.

In countries with low levels of informal employment and high levels of workers' compensation insurance coverage, insurance records may be the most useful or main source of statistics on occupational injuries and diseases. These countries should collect data from household surveys on a periodic basis in order to assess the extent of completeness of the administrative data and the effectiveness of the workers' compensation insurance system.

The development of an add-on module to the ILO's model LFS questionnaires could support countries that wish to collect data on occupational injuries and diseases in household surveys and would be a useful means of sharing information about best practice. Consideration should also be given to revising and updating the ILO manual *Occupational Injuries Statistics from Household Surveys and Establishment Surveys*.

Administrative data will generally be the most useful source of statistics on fatalities due to occupational injuries and diseases, as well as on indicators such as the level and nature of coverage by workers' compensation schemes and labour inspection services.

If data on injuries and diseases are not available from administrative sources, for example because of different reporting mechanisms in different jurisdictions, establishment surveys can provide a rich source of information that is broadly comparable with the data from administrative sources, although it may not be as detailed. Establishment surveys should also be used as a source of data on OSH practices.

Also, when statistics from different sources are compiled and disseminated, this should be done in an integrated manner, with explanation of what the statistics from each source mean and the reasons for the differences in estimates based on different data sources.

Finally, employers, workers and their representatives play important role in OSH data collection and analysis. Social partners take an active role in national recording and notification systems, and need to be involved, from the very beginning, in the design of a system for national data collection and analysis, including in the design of any survey to collect data on OSH.

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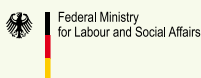
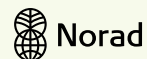
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