

Measuring the Change

The following is a compilation of materials that can be used to provide an introduction to fundamental statistical concepts and methods in the effort to end forced labour, modern slavery, human trafficking and child labour. This document covers concepts related to measuring:

- Child labour
 - Forced labour
 - Human trafficking
 - Related Target 8.7 issues
 - Social protections
 - Government response
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Measuring Child Labour

The child labour estimates from the [UCW programme](#), an inter-agency research cooperation initiative involving the International Labour Organization, UNICEF and the World Bank, are derived from survey data from several sources.


As UCW explains:

“The data sets included in the UCW database are from [ILO SIMPOC surveys](#), [World Bank multi-purpose household surveys](#), [UNICEF MICS surveys](#) and a variety of labour force and other national household surveys. Based on comprehensive interviews with a stratified sample of households, these nationally-representative surveys provide information on the nature and key characteristics of child labour, as well as on links between child labour and a range of household and community background variables. Although efforts are made to harmonize the child labour-related questions used in the survey questionnaires, significant differences remain across the different survey instruments in this regard. Cross-country comparisons of child labour estimates, therefore, should be interpreted with caution. Further information on how the data were collected and their reliability can be found on the relevant websites of the three agencies.”

Operational Definition of Child Labour

As explained by UCW:

“Based on [the international conventions](#) and [a foundational] [International Conferences of Labour Statisticians \(ICLS\) resolution](#), and consistent with the approach utilized in the [ILO global child labour estimates exercise](#), the statistical definition of child labour used in the UCW database comprises the following three groups of children:

- a. children aged 5-11 years in all forms of economic activity. The inclusion of this group derives from ILO Convention No. 138, which stipulates a minimum age (at
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least 12 years in less developed countries) below which no child should be allowed to work, where work implies 'economic activity'. For the purposes of comparability, the minimum permissible working age for this indicator is set at 12 years. It should be noted, however, that Convention No. 138 allows ratifying states some flexibility in setting minimum ages, and in some countries the minimum working age is set higher than 12 years. Children in economic activity, in turn, are those engaged in any economic activity for at least one hour during the reference period. Economic activity covers all market production and certain types of non-market production (principally the production of goods and services for own use). It includes forms of work in both the formal and informal economy; inside and outside family settings; work for pay or profit (in cash or in kind, part-time or full-time), or as a domestic worker outside the child's own household for an employer (with or without pay).

b. children aged 12-14 years in all forms of economic activity except permissible 'light' work. The inclusion of this group also derives from ILO Convention No. 138, which stipulates a minimum age (at least 14 years in less developed countries) below which no work except "light work" should be permitted, where work again implies 'economic activity'. For the purposes of comparability, 12-14 years is used as the age range for which light work is allowed; it should be again noted, however, that Convention No. 138 allows ratifying states some flexibility in setting minimum ages. 'Light work' is operationally defined as economic activity that (i) does not exceed 14 hours per week and that (ii) is not hazardous in nature. The choice of this time threshold was based on provisions in ILO Convention (No. 33) on the Minimum Age (Non-Industrial Employment), 1932, which sets two hours per day, on either school days or holidays, as the maximum for light work from the age of 12 years.

c. children and adolescents aged 15-17 years in hazardous work. ILO Conventions No. 138 and No. 182 state that the specific types of employment or work constituting hazardous work are determined by national laws or regulations or by the competent authority. From a strictly legal standpoint, in other words, there is no standard international list of hazardous jobs and occupations. In order to permit international comparisons, hazardous work is measured using the hazardous list and estimation methodology utilized by the ILO in producing its global child labour estimates. Based on the ILO estimation methodology hazardous work comprises the following: (i) children or adolescent engaged in designated hazardous industries...(ii) children and adolescents employed in designated hazardous occupations ... and (iii) children or adolescents who worked long hours during the reference week. Long hours are defined for the present purpose as 43 or more hours of work during the reference week. The expanded definition of child labour included in the UCW database also considers one additional group of children as child labourers:

d. children aged 5-14 years performing household chores for at least 21 hours per week. Household chores, in turn, consist of services performed without pay



for consumption within an individual's own household, such as cooking/washing up, indoor cleaning and upkeep of abode, care of textiles, installation, servicing and repair of personal and household goods, outdoor cleaning and upkeep of surroundings, minor home improvements, maintenance and repair. They also include the care of family members and the procurement of household goods and services. The inclusion of this groups marks recognition of the fact that the international legal standards do not rule out a priori children's production outside the System of National Accounts (SNA) production boundary from consideration in child labour measurement. The ICLS resolution, building on this recognition, recommends classifying those performing hazardous household chore as part of the group of child labourers for measurement purposes. The ICLS resolution does not recommend a specific hours threshold for classifying household chores as hazardous (and therefore as child labour), and cites establishing hazardousness criteria as area requiring further conceptual and methodological development. In the absence of detailed statistical criteria for hazardousness, an hours threshold of 21 weekly working hours is used in the database, above which performance of household chores is classified as child labour. It should be kept in mind, however, that this threshold is based only on preliminary evidence of the interaction between household chores and school attendance, and does not constitute an agreed measurement standard.

The UCW database aggregates the distribution of working children by five industrial categories (sectors of employment):

- Agriculture
- Manufacturing
- Construction, mining and other industrial sectors
- Commerce, hotels and restaurants
- Other services

The category 'Agriculture' comprises activities in agriculture, hunting forestry, and fishing. The grouping 'Construction, mining and other industrial sectors' includes construction, mining and quarrying and public utilities (electricity, gas and water). The category 'Commerce, hotels and restaurants' comprises wholesale, retail trade and restaurants and hotels. The grouping 'Other services' covers transport, storage and communications, finance, insurance, real estate and business services, other community, social and personal service activities, private household with employed persons and activities of extraterritorial organizations and bodies."

Measuring Forced Labour

Measuring the incidence of forced labour presents unique methodological challenges: obtaining a representative sample that can be used to make inferences about the total population; and obtaining accurate information from individuals being sampled.



Both of these issues arise from the fact that forced labour is hidden or hard to detect and largely criminalized. This makes it more difficult to access victims for inclusion in a sample and for victims to be forthcoming in providing information that could put them at risk. (Source: Forced Labour, Andrees and Belser 2009)

At the global and regional level, forced labour is measured by the International Labour Organization. [The Global Estimates of Modern Slavery: Forced Labour and Forced Marriage](#) prepared by the ILO, Walk Free and IOM and published in 2016 offer estimates at the regional and global levels, not at the national level. The Global Estimates provide the best available data and information about the scale and distribution of forced labour and forced marriage today. But there remains a need for more and better data, improved capacity of national data collection, and refinement and improvement in the measurement of modern slavery and forced labour.

At the 19th International Conference of Labour Statisticians (ICLS) in 2013 [a resolution was adopted](#) recommending that the ILO “set up a working group with the aim of sharing best practices on forced labour surveys in order to encourage further such data gathering exercises in more countries”.

The result of this international working group will be presented at the 20th International Conference of Labour Statisticians in October 2018. In parallel, discussions are ongoing to strengthen Sustainable Development Goal indicators related to modern slavery.

Types of Forced Labour

The ILO’s approach includes certain [operational definitions](#):

“Forced labour of adults is defined... as work for which a person has not offered him or herself voluntarily (concept of ‘involuntariness’) and which is performed under the menace of any penalty (concept of ‘coercion’) applied by an employer or a third party to the worker. The coercion may take place during the worker’s recruitment process to force him or her to accept the job or, once the person is working, to force him/her to do tasks which were not part of what was agreed at the time of recruitment or to prevent him/her from leaving the job...forced labour of children is defined as work performed by children under coercion applied by a third party (other than by his or her parents) either to the child or to the child’s parents, or work performed by a child as a direct consequence of their parent or parents being engaged in forced labour. The coercion may take place during the child’s recruitment, to force the child or his or her parents to accept the job, or once the child is working, to force him/her to do tasks which were not part of what was agreed at the time of recruitment or to prevent the child from leaving the work. If a child is working as a direct consequence of his or her parents being in a situation of forced labour, then the child is also considered to be in forced labour.”



Global Estimates typology

The typology developed for the [Global Estimates](#), building on these operational definitions, is based on three main categories of forced labour defined as follows:

- “Forced labour exploitation, imposed by private agents for labour exploitation, including bonded labour, forced domestic work, and work imposed in the context of slavery or vestiges of slavery.”
- “Forced sexual exploitation of adults, imposed by private agents for commercial sexual exploitation, and all forms of commercial sexual exploitation of children. This encompasses the use, procuring, or offering of children for prostitution or pornography.”
- “State-imposed forced labour, including work exacted by the public authorities, military, or para-military, compulsory participation in public works, and forced prison labour.”
- Additionally, “forced marriage refers to situations where persons, regardless of their age, have been forced to marry without their consent. A person might be forced to marry through physical, emotional, or financial duress, deception by family members, the spouse, or others, or the use of force, threats, or severe pressure. Forced marriage is prohibited through the prohibitions on slavery and slavery-like practices, including servile marriage. Child marriage is generally considered to be forced marriage, given that one and/or both parties by definition has not expressed full, free, and informed consent. However, there are exceptions. For example, in many countries 16 and 17 year-olds who wish to marry are legally able to do so following a judicial ruling or parental consent. It is important to be clear that for the purposes of these estimates, the measurement of forced marriage is limited to what was captured by the surveys.”

Survey Design Requirements Specific to the Measurement of Forced Labour

[As the ILO explains:](#)

“In statistical terms, the phenomenon of forced labour is rare and requires a survey design that minimizes the cost and effort involved in locating and surveying the target population. Because forced labour is universally condemned and outlawed, gaining access to victims may be difficult and, even once identified, potential victims may avoid giving truthful responses. Survey planning involves choosing both the type and the structure of the survey. Choosing the type of survey means deciding on the survey unit, i.e. whether the data will be collected at the household where the worker resides, at the establishment where they work, or through other units such as service providers, news reports, etc. Survey structure means the way the survey operations are organized, i.e. whether additional questions or modules are included in an existing survey, a standalone survey is implemented, or a combination of both is used for different elements of the survey.”

Sampling Rare and Hidden Populations



As the ILO explains:

“Sampling for such rare populations from a sampling frame of the general population can be extremely difficult, as there is no agreement on precisely what ‘rare’ signifies. For proportions of less than 1/100, the sample size required to achieve a reasonable degree of accuracy when estimating the size of the rare population can be very large. Moreover, the degree of accuracy of the estimate decreases rapidly with the disaggregation of the rare population into its component parts (sex, age groups, etc.).”

The hidden nature of forced labour “affects not only the observation stage of the survey process with non-response or misreporting, but also the sampling stage, as certain units may not appear in the sampling frame and therefore have zero chance of selection. This difficulty should be discussed during the preparation phase, so that it is part of the decision on the scope and type of the survey.”

Measuring Human Trafficking

The challenges in estimating human trafficking are similar to those of estimating forced labour. At the global level, [UNODC’s Global Report](#) “provides an overview of patterns and flows of trafficking in persons at global, regional and national levels, based primarily on trafficking cases detected between 2012 and 2014.”

“As for any crime, there is an unknown “dark figure” of criminal activity that is never officially detected. As such, the figures ... do not and cannot reflect the real extent of the crime of trafficking in persons, but rather, a sub-population of victims and offenders that can be used to infer some information on patterns and flows of this crime.”

“The quantitative and qualitative information that form the basis of the Global Report was collected by UNODC in two ways: through a dedicated questionnaire distributed to governments and by the collection of official information available in the public domain (national police reports, Ministry of Justice reports, national trafficking in persons reports, etc.). Countries that are not covered by the data collection did not respond to the questionnaire, and UNODC was also not able to locate official national data on trafficking in persons.”

“The analysis presented in the Global Report draws upon data on detected victims and cases which mostly reflect the ability of local authorities to detect and report trafficking cases rather than the full extent of the crime. Conclusions ... should be read with this limitation in mind.”

Estimating Human Trafficking: MSE

[Multiple Systems Estimation \(MSE\)](#) is an innovative statistical approach to estimate the size of hidden populations. Adapted from a method widely used in the biological science, known as “capture-recapture” method, MSE uses the overlap in lists of victims to estimate the size of the victim population. It has been used in the UK ([by the UK Home Office](#)), the Netherlands



([UNODC](#)) and is now being applied in other countries, to estimate the number of victims of modern slavery and human trafficking. These new estimates suggest that earlier estimates were too low.

Data Collection: Government Victim Assistance

As data collection becomes an increasingly common practice in the public sector, more and more data are available from diverse government entities. One way data collection and consolidation have been scaled up to add to what we know about human trafficking prevalence is through establishing National Referral Mechanisms.

[A National Referral Mechanism \(NRM\)](#) is a cooperative framework through which state actors fulfil their obligations to protect and promote the human rights of trafficked persons, coordinating their efforts in a strategic partnership with civil society. Recently, NRMs have served as essential [sources of information for governments](#) to collect data necessary to estimate the total number individuals victimized by human trafficking.

Data Collection: International and Non-Governmental Organizations

Civil society organizations (CSOs) focused on human trafficking victim assistance can serve as crucial sources of data through their ability to reach a population that is notoriously difficult to sample.

[Liberty Asia](#): Organizations like Liberty Asia have helped NGOs that assist survivors by establishing systems to collect and store victim data that can be used to tell a story about which types of industries are doing the exploiting and where individuals are being trafficked from, among other things.

[IOM Counter Trafficking Data Collaborative](#) (CTDC): The International Organization for Migration (IOM), Polaris and Liberty Asia have launched a global data repository on human trafficking, with data contributed by counter-trafficking partner organizations around the world.

Not only does the CTDC serve as a central repository for this critical information, it also publishes normed and harmonized data from various organizations using a unified schema. This global dataset facilitates an unparalleled level of cross-border, trans-agency analysis and provides the counter-trafficking movement with a deeper understanding of this complex issue. Equipped with this information, decision makers will be empowered to create more targeted and effective intervention strategies.

Data Collection: Prosecution Data



UNODC compiles a [global dataset](#) on detected and prosecuted traffickers, which serves as the basis in their [Global Report](#) for country profiles. This information is beginning to paint a picture of trends over time, and case-specific information can assist investigators and prosecutors.

Measurement of Related Issues

Human Development

[The Human Development Index \(HDI\)](#) is a summary measure of achievements in three key dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living.

The HDI has a range from 0 to 1 with higher scores indicating the average level of human development, based on living a long, healthy life, access to education, and availability of decent work. Less than 0.55 is considered LOW; 0.55-0.699 is MEDIUM; 0.7-0.799 is HIGH; and scores above 0.8 are considered VERY HIGH human development.

What does HDI tell us about vulnerability to exploitation?

Education:

Lack of education and illiteracy are key factors involved with the propensity of both children and adults toward exploitative labour conditions. As the seminal ILO report [Profits and Poverty](#) explains:

“Adults with low education levels and children whose parents are not educated are at higher risk of forced labour. Low education levels and illiteracy reduce employment options for workers and often force them to accept work under poor conditions. Furthermore, individuals who can read contracts may be in a better position to recognize situations that could lead to exploitation and coercion. Being educated and literate also leads to higher incomes that reduce the likelihood of falling into abject poverty, and hence reduces dependence on credits.”

ILO Labour/Income Measures

Labour income tells us about a household’s vulnerability. As the ILO explains in [Profits and Poverty](#):

“Poor households find it particularly difficult to deal with income shocks, especially when they push households below the food poverty line. In the presence of such shocks, men and women without social protection nets tend to borrow to smooth consumption, and to accept any job for themselves or their children, even under exploitative conditions. This can lead to heavy dependence on creditors, recruiters and unscrupulous employers who exploit their situation of vulnerability.”



ILO indicators that measure poverty with respect to the labour force include working poverty rate, disaggregated by age groupings and gender, with temporal coverage spanning from 2000 to 2016.

Labour Productivity Measures

“[Labour productivity](#) is an important economic indicator that is closely linked to economic growth, competitiveness, and living standards within an economy.” However, when increased labour output does not produce rising wages this can point to increasing inequality. As indicated by a recent [ILO report \(2015\)](#), there is a “growing disconnect between wages and productivity growth, in both developed and emerging economies”. The lack of decent work available increases the vulnerability of individuals to situations of labour exploitation.

[Annual Growth Rate of Output per Worker](#) (measured as GDP in constant 2011 International \$ in PPP):

“Labour productivity represents the total volume of output (measured in terms of Gross Domestic Product, GDP) produced per unit of labour (measured in terms of the number of employed persons) during a given time reference period.”

Safety and Health Measures

Data on occupational health and safety may reveal conditions of exploitation, even if exploitation may lead to under-reporting of workplace injuries and safety breaches. At present, the ILO collects data on occupational injuries, both fatal and nonfatal, disaggregating on sex and migrant status.

[As the ILO explains:](#)

“The recommended data sources for occupational injuries statistics are national systems for the notification of occupational injuries (such as, labour inspection records and annual reports; insurance and compensation records, death registers), supplemented by household surveys (especially in order to cover informal sector enterprises and the self-employed) and/or establishment surveys.”

Occupational injury and fatality data can also be crucial in prevention and response efforts. [As the ILO explains:](#)

“Data on occupational injuries are essential for planning preventive measures. For instance, workers in occupations and activities of highest risk can be targeted more effectively for inspection visits, development of regulations and procedures, and also for safety campaigns.”

There are serious gaps in existing data coverage, particularly among groups that may be highly vulnerable to labour exploitation. For example, few countries provide information on injuries



for migrant and non-migrant workers.

Vulnerable Employment

There are reasons to believe that certain types of labour and labour arrangements are more likely to lead to labour exploitation. [According to the ILO:](#)

“Own-account workers and contributing family workers have a lower likelihood of having formal work arrangements, and are therefore more likely to lack elements associated with decent employment, such as adequate social security and a voice at work. The two statuses are summed to create a classification of ‘vulnerable employment’, while wage and salaried workers together with employers constitute ‘non-vulnerable employment’.”

The [UN Department of Economic and Social Affairs](#) explains that:

“The share of vulnerable employment is calculated as the sum of contributing family workers and own-account workers as a percentage of total employment. The indicator of status in employment distinguishes between three categories of the employed, following the International Classification by Status in Employment (ICSE), approved by the United Nations Statistical Commission in 1958 and revised at the 15th International Conference of Labour Statisticians (ICLS) in 1993: (1) wage and salary workers; (2) contributing family workers; and (3) self-employed workers, including self-employed workers with employees (employers), self-employed workers without employees (own-account workers) and members of producers’ cooperatives.”

Groups More Vulnerable to Exploitation: Migrants

Research to date suggests that a major factor in vulnerability to labour exploitation is broader social vulnerability, marginalization or exclusion.

Amongst these, are migrants. According to the [2016 Global Estimates of Modern Slavery:](#)

“Almost one of every four victims of forced labour were exploited outside their country of residence, which points to the high degree of risk associated with migration in the modern world, particularly for migrant women and children. The fight against modern slavery is thus integrally related to global initiatives to promote orderly, safe, and regular migration, such as the global compact for safe, orderly and regular migration.”

[As IOM explains:](#)

“Although most migration is voluntary and has a largely positive impact on individuals and societies, migration, particularly irregular migration, can increase vulnerability to human trafficking and exploitation. Despite the growing prevalence of migration as a global phenomenon, migration governance frameworks are not adapting quickly enough to address the emerging protection challenges.”



UNODC similarly notes that:

“The vulnerability to being trafficked is greater among refugees and migrants in large movements, as recognized by Member States in the New York declaration for refugees and migrants of September 2016.”

Defining Groups: UNHCR’s populations of concern

Refugees include individuals recognised under the 1951 Convention relating to the Status of Refugees; its 1967 Protocol; the 1969 OAU Convention Governing the Specific Aspects of Refugee Problems in Africa; those recognised in accordance with the UNHCR Statute; individuals granted complementary forms of protection; or those enjoying temporary protection. Since 2007, the refugee population also includes people in a refugee-like situation.

Asylum-seekers are individuals who have sought international protection and whose claims for refugee status have not yet been determined, irrespective of when they may have been lodged. Internally displaced persons (IDPs) are people or groups of individuals who have been forced to leave their homes or places of habitual residence, in particular as a result of, or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights, or natural or man-made disasters, and who have not crossed an international border. For the purposes of UNHCR’s statistics, this population only includes conflict-generated IDPs to whom the Office extends protection and/or assistance. Since 2007, the IDP population also includes people in an IDP-like situation. For global IDP estimates, see www.internal-displacement.org.

Returned refugees are former refugees who have returned to their country of origin spontaneously or in an organized fashion but are yet fully integrated. Such return would normally only take place in conditions of safety and dignity.

Returned IDPs refers to those IDPs who were beneficiaries of UNHCR’s protection and assistance activities and who returned to their areas of origin or habitual residence during the year.

Stateless persons are defined under international law as persons who are not considered as nationals by any State under the operation of its law. In other words, they do not possess the nationality of any State. UNHCR statistics refer to persons who fall under the agency’s statelessness mandate because they are stateless according to this international definition, but data from some countries may also include persons with undetermined nationality.

Others of concern refers to individuals who do not necessarily fall directly into any of the groups above, but to whom UNHCR extends its protection and/or assistance services, based on humanitarian or other special grounds.

More information [here](#).



Measuring Social Protections

ILO Statistics on Social Protections

The seminal ILO paper on the economics of forced labour, [Profits and Poverty](#), explains the hypothesis that social protection can mitigate the risks that arise when a household is vulnerable to sudden income shocks, helping to prevent labour exploitation. It also suggests that access to education and skills training can enhance the bargaining power of workers and prevent children in particular from becoming victims of forced labour. And measures to promote social inclusion and address discrimination against women and girls may also go a long way towards preventing forced labour.

Measures of Social Protection

[As the ILO explains:](#)

Social Protections (at least one): Population covered by at least one social protection

Social Protection coverage rate: Share of the population actually receiving benefits of contributory and non-contributory social protection programmes or actively contributing to social insurance schemes. Preferred and/or most common source: Various types of administrative records.

Social Protections Pension: Proportion of older persons receiving a pension measured as a ratio of persons above statutory retirement age receiving an old-age pension to the persons above statutory retirement age

Social Protections Unemployment: Proportion of unemployed receiving benefits measured as a ratio of recipients of unemployment benefits to the number of unemployed persons.

Social Protections Children: Proportion of children covered by social protection benefits measured as a ratio of households receiving benefits for children to the total number of households with children.

Social Protections Most Vulnerable: Proportion of vulnerable persons receiving benefits measured as a ratio of social assistance recipients to the total number of vulnerable persons. The latter are calculated by subtracting from the total population all people of working age contributing to a social insurance scheme or receiving contributory benefits and all persons above retirement age receiving contributory benefits.

Social Protections Disabled: Proportion of persons with disabilities receiving benefits

[Disability Status as explained by the ILO:](#)



“For measurement purposes, a person with a disability is defined as a person who is limited in the kind or amount of activities that he or she can do because of ongoing difficulties due to a long-term physical condition, mental condition or health problem.”

Sources for data on social protection

The main data source is the [Social Security Inquiry](#), the ILO’s periodic collection of administrative data from national ministries of labour, social security, welfare, finance and others.

Since 1950, the ILO’s Social Security Inquiry has been the main global source of administrative data on social protection. Secondary data sources include existing global databases of social protection statistics, including those of the World Bank, UNICEF, UNWOMEN, HELPAGE, OECD and the International Social Security Association.

Measuring Government Response

[Walk Free Government Response](#) is based on an assessment of indicators of good practice, taking into account factors such as whether each country has the necessary laws in place, provides support to victims, and ensures the application of labour standards to vulnerable populations.

The framework for the measure consists of 98 indicators grouped into 28 activities, the level at which government response is rated. Positive indicators are scored on a 0 to 1 scale, negative indicators are scored on a 0 to -1 scale. Data is collected via desk research as well as surveys filled out by governments and NGOs. After a process of external expert verification, data analysis begins with the application of rating rules, review and validation, and clustering by GDPPP.

How to Generate Improved Government Responses

[Walk Free explains:](#)

“Crime prevention research...confirms that to reduce the prevalence of crime, including modern slavery, the government needs to:

- Reduce the opportunity for offenders to commit the crime;
 - Increase the risks of offending;
 - Decrease the vulnerability of potential victims;
 - Increase the capacity of law enforcement and other guardians; and
 - Address the people or factors that stimulate or facilitate slavery.
- Further, to prevent crime, governments need to create a climate that induces guilt or shame on those who commit the crime, and strengthen the moral condemnation of modern slavery by both local and global communities.”

